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Abstract:	In this report, we summarize results from the first phase of the CONVERGENCE user trials. End-users believe that CONVERGENCE can be potentially very useful for their business. However, they believe it still needs major improvements in terms of functionality, usability and performance. Developers are generally happy with the CONVERGENCE middleware, even if they had to face the fact that not all middleware functionality was available at the time of the experimentation. The report concludes with recommendations for the next phase of the trials.
Keyword List:	Usability, user testing, expert review, feedback, focus groups, questionnaires, user scenarios, performance

Executive Summary

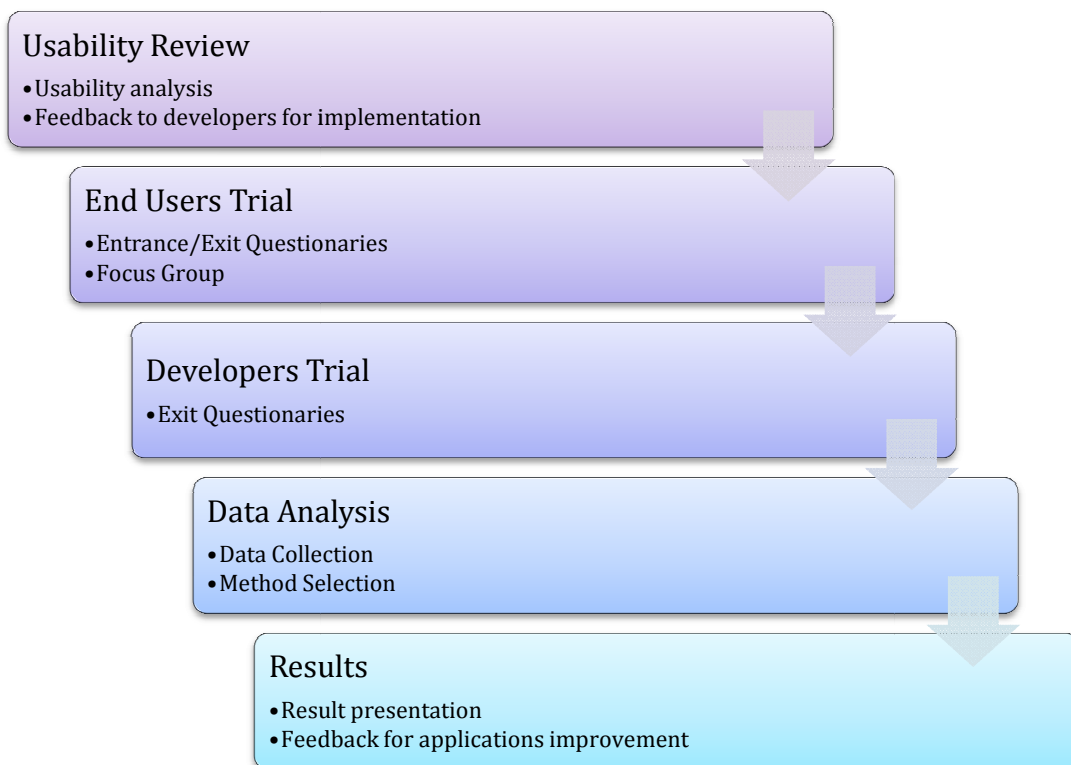
In this document, we report the results of the first end-user trial in the CONVERGENCE project (phase 1, track 1). As described in the project proposal and in D8.1, the trial consisted of a small-scale laboratory test for each scenario. The goal was to collect user feedback that developers could use for the second phase of the trials. In brief, the trial should be considered as a “formative evaluation”.

The trial involved five user scenarios defined in D2.2 and D8.1.

- Photos in the Cloud and down to Earth (Alinari)
- Videos in Cloud and Analysis on Earth (FMSH)
- Augmented Lecture Podcast (LMU)
- Smart Retailing (UTI)
- Smart Retailing (WIPRO)

Each trial involved a small set of CONVERGENCE applications. In later trials, these will be expanded in line with the schedule defined in D8.1.

The evaluation involved five steps, as shown below.



The expert usability review was conducted by XS in close collaboration with developers from LMU, ALI, FMSH, SIL, UTI, WIPRO. The tests revealed a number of usability issues and software bugs. All the most serious problems (some of which prevented users from using the software) were resolved prior to the start of the trials, as were the majority of the less serious problems.

The actual trials involved 59 participants – of which 52 end users and 7 developers - and collected a large amount of detailed feedback about their general impressions and about specific features of the CONVERGENCE applications. In general, end-users believed that CONVERGENCE could be potentially very useful for their business. However, they also expressed the view that the applications need major improvements in terms of functionality, usability and performance. Developers are generally happy with the CONVERGENCE middleware, even if they had to face the fact that not all middleware functionality was available at the time of the experimentation. The final section of the report summarizes this feedback. The main recommendations can be summarized as follows.

1. *Functionality*. The applications used in future trials should provide a much richer set of functionality than that tested in phase 1.
2. *Usability*. Implement suggestions from the expert review. Review all menu items, buttons and error messages. Review use of fonts and colours. Submit all applications to another round of expert review
3. *Aesthetics*. Use a graphics artist (not a programmer) to design the layout of interface and graphics elements¹. Test sketches of designs with potential users.
4. *Security*. Provide participants in future trials with more information about CONVERGENCE security (use of strong authentication, strong encryption, digital signatures etc.). Implement one or more of these features in the applications for the next round of trial². Ensure that these features are salient in applications and their user interfaces.
5. *Anonymity*. Communicate the message that CONVERGENCE can provide different levels of user authentication according to the needs of specific applications. Show these possibilities in CONVERGENCE applications, perhaps by allowing users to register with a simple click, without providing personal details (e.g. for the retail scenario), or by allowing users to certify they are a part of a group (e.g. LMU students) without providing their personal identify.
6. *Value for developers*. Fix bugs and performance issues. Provide better documentation with coding examples.

¹ The CONVERGENCE Consortium has decided to implement this recommendation.

² The applications for the first round of trials did not exploit CONVERGENCE security features.

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Glossary

Term	Definition
Access Rights	Criteria defining who can access a VDI or its components under what conditions.
Advertise	Procedure used by a CoNet user to make a resource accessible to other CoNet users.
Application	Software, designed for a specific purpose that exploits the capabilities of the CONVERGENCE System.
Business Scenario	A scenario describing a way in which the CONVERGENCE System may be used by specific users in a specific context or, more narrowly, a scenario describing the products and services bought and sold, the actors concerned and, possibly, the associated flows of revenue in such a context.
CA	Central Authority
CCN	Content Centric Network
CI_Auth_SC	Client Authentication with Smart Card (Challenge Response)
CI_Auth_User_Pw	Client Authentication with Username and Password
Clean-slate architecture	The CONVERGENCE implementation of the Network Level, totally replacing existing IP functionality. See “Integration Architecture” and “Overlay Architecture” and “Parallel Architecture”.
CoApp	The CONVERGENCE Application Level.
CoApp Provider	A user providing Applications running on the CONVERGENCE Middleware Level (CoMid).
CoMid	The CONVERGENCE Middleware Level.
CoMid Provider	A user providing access to a single or an aggregation of CoMid services.
CoMid Resource	A virtual or physical object or service referenced by a VDI, e.g. media, Real World Objects, persons, internet services. It has the same meaning of “Resource” and it is used only to better specify the term “Resource” when there is a risk of a misunderstanding with the term “CoNet Resource”.
Community Dictionary Service (CDS)	A CoMid Technology Engine that provides all the matching concepts in a user’s subscription, search request and publication.

CoNet Provider	A user providing access to CoNet services, i.e. the equivalent of an Internet Service Provider.
CoNet Resource	A resource of the CoNet that can be identified by means of a name; resources may be either Named-data or a Named service access point.
Content-based resource discovery	A user request for resources, either through a subscription or a search request to the CONVERGENCE system (from literature). See “subscription” and “search”.
Content-based Subscription	A subscription based on a specification of user’s preferences or interests, (rather than a specific event or topic). The subscription is based on the actual content, which is not classified according to some predefined external criterion (e.g., topic name), but according to the properties of the content itself. See “Subscription” and “Publish-subscribe model”.
Content-centric	A network paradigm in which the network directly provides users with content, and is aware of the content it transports, (unlike networks that limit themselves to providing communication channels between hosts).
CONVERGENCE Applications level (CoApp)	The level of the CONVERGENCE architecture that establishes the interaction with CONVERGENCE users. The Applications Level interacts with the other CONVERGENCE levels on behalf of the user.
CONVERGENCE Computing Platform level (CoComp)	The Computing Platform level provides content-centric networking (CoNet), secure handling (CoSec) of resources within CONVERGENCE and computing resources of peers and nodes.
CONVERGENCE Core Ontology (CCO)	A semantic representation of the CoReST taxonomy. See “CONVERGENCE Resource Semantic Type (CoReST)”
CONVERGENCE Device	A combination of hardware and software or a software instance that allows a user to access Convergence functionalities
CONVERGENCE Engine	A collection of technologies assembled to deliver specific functionality and made available to Applications and to other Engines via an API
CONVERGENCE Middleware level (CoMid)	The level of the CONVERGENCE architecture that provides the means to handle VDIs and their components.
CONVERGENCE Network (CoNet)	The Content Centric component of the CONVERGENCE Computing Platform level. The CoNet provides access to named-resources on a public or private network infrastructure.
CONVERGENCE node	A CONVERGENCE device that implements CoNet functionality and/or CoSec functionality.

CONVERGENCE peer	A CONVERGENCE device that implements CoApp, CoMid, and CoComp (CoNet and CoSec) functionality.
CONVERGENCE Resource Semantic Type (CoReST)	A list of concepts or terms that makes it possible to categorize a resource, establishing a connection with the resource's semantic metadata.
CONVERGENCE Security element (CoSec)	A component of the CONVERGENCE Computing Platform level implementing basic security functionality such as storage of private keys, basic cryptography, etc.
CONVERGENCE System	A system consisting of a set of interconnected devices - peers and nodes - connected to each other built by using the technologies specified or adopted by the CONVERGENCE specification. See "Node" and "Peer".
Dec_Key_Unwrap	Key Unwrapping and Content Decryption
DIDL	Digital Item Description Language
Digital forgetting	A CONVERGENCE system functionality ensuring that VDIs do not remain accessible for indefinite periods of time, when this is not the intention of the user.
Digital Item (DI)	A structured digital object with a standard representation, identification and metadata. A DI consists of resource, resource and context related metadata, and structure. The structure is given by a Digital Item Declaration (DID) that links resource and metadata.
Domain ontology	An ontology, dedicated to a specific domain of knowledge or application, e.g. the W3C Time Ontology and the GeoNames ontology.
Elementary Service (ES)	The most basic service functionality offered by the CoMid.
Enc_Key_Wrap	Encryption and Key Wrapping
Entity	An object, e.g. VDIs, resources, devices, events, group, licenses/contracts, services and users, that an Elementary Service can act upon or with which it can interact.
Expiry date	The last date on which a VDI is accessible by a user of the CONVERGENCE System.
Fractal	A semantically defined virtual cluster of CONVERGENCE peers.
Group_Sig	Group Signature
ICN	Information Centric Network
Identifier	A unique signifier assigned to a VDI or components of a VDI.
Integration Architecture	An implementation of CoNet designed to integrate CoNet functionality

	<p>in the IP protocol by means of a novel IPv4 option or by means of an IPv6 extension header, making IP content-aware.</p> <p>See “Clean-state Architecture”, “Overlay Architecture”, “Parallel Architecture”</p>
IP	Identity Provider
License	A machine-readable expression of Operations that may be executed by a Principal.
Local named resource	<p>A named-resource made available to CONVERGENCE users through a local device, permanently connected to the network.</p> <p>Users have two options to make named-resources available to other users: 1) store the resource in a device, with a permanent connection to the network; 2) use a hosting service. In the event she chooses the former option, the resource is referred to as a local named-resource.</p>
Metadata	Data describing a resource, including but not limited to provenance, classification, expiry date etc.
MPEG eXtensible Middleware (MXM)	A standard Middleware specifying a set of Application Programming Interfaces (APIs) so that MXM Applications executing on an MXM Device can access the standard multimedia technologies contained in the Middleware as MXM Engines.
MPEG-M	An emerging ISO/IEC standard that includes the previous MXM standard.
Multi-homing	In the context of IP networks, the configuration of multiple network interfaces or IP addresses on a single computer.
Named resource	A CoNet resource that can be identified by means of a name. Named-resources may be either data (in the following referred to as “named-data”) or service-access-points (“named-service-access-points”).
Named service access point	A kind of named-resource, consisting of a service access point identified by a name. A named-service-access-point is a network endpoint identified by its name rather than by the Internet port numbering mechanism.
Named-data	A named-resource consisting of data.
Network Identifier (NID)	An identifier identifying a named resource in the CONVERGENCE Network. If the named resource is a VDI or an indented VDI component, its NID may be derived from the Identifier (see “Identifier”).
Overlay architecture	An implementation of CoNet as an overlay over IP.

	See “Clean-state Architecture” and “Integration Architecture” and “Parallel Architecture”
Parallel architecture	An implementation of CoNet as a new networking layer that can be used in parallel to IP. See “Clean-state Architecture” and “Integration Architecture” and “Overlay Architecture”
PKI	Public Key Infrastructure
Policy routing	In the context of IP networks, a collection of tools for forwarding and routing data packets based on policies defined by network administrators.
Principal (CoNet)	The user who is granted the right to use a <i>CoNet Principal Identifier</i> for naming its named resources. For example, the principal could be the provider of a service, the publisher or the author of a book, the controller of a traffic lights infrastructure, or, in general, the publisher of a VDI. A Principal may have several Principal Identifiers in the CoNet.
Principal (Rights Expression Language)	The User to whom Permissions are Granted in a License.
Principal Identifier (CoNet)	The Principal identifier is a string that is used in the Network Identifiers (NID) of a CoNet resource, when the NID has the form: NID = <namespace ID, hash (Principal Identifier), hash (Label)> In this approach, hash (Principal Identifier) must be unique in the namespace ID, and Label is a string chosen by the principal in such a way that hash(Label) is unique for in the context of the Principal Identifier.
Publish	The act of informing an identified subset of users of the CONVERGENCE System that a VDI is available.
Publisher	A user of CONVERGENCE who performs the act of publishing.
Publish-subscribe model	CONVERGENCE uses a content-based approach for the publish-subscribe model, in which notifications about VDIs are delivered to a subscriber only if the metadata / content of those VDIs match constraints defined by the subscriber in his Subscription VDI.
Real World Object	A physical object that may be referenced by a VDI.
REL	Rights Expression Language
Resource	A virtual or physical object or service referenced by a VDI, e.g. media, Real World Objects, persons, internet services.

Scope (in the context of routing)	In the context of advertising and routing, the geographical or administrative domain on which a network function operates (e.g. a well defined section of the network - a campus, a shopping mall, an airport -, or to a subset of nodes that receives advertisements from a service provider).
Search	The act through which a user requests a list of VDIs meeting a set of search criteria (e.g. specific key value pairs in the metadata, key words, free text etc.).
Serv_Auth	Server Authentication without Smart Card
Service Level Agreement (SLA)	An agreement between a service provider and another user or another service provider of CONVERGENCE to provide the latter with a service whose quality matches parameters defined in the agreement.
Sig	Signature
Smart_Card Role_Auth_SC	Role Authentication towards Smart Card
SP	Service Provider
Subscribe	The act whereby a user requests notification every time another user publishes or updates a VDI that satisfies the subscription criteria defined by the former user (key value pairs in the metadata, free text, key words etc.).
Subscriber	A user of CONVERGENCE who performs the act of subscribing.
Timestamp	A machine-readable representation of a date and time.
Tool	Software providing a specific functionality that can be re-used in several applications.
Trials	Organized tests of the CONVERGENCE System in specific business scenarios.
Un-named-data	A data resource with no NID.
Us_Reg_IP	User Registration to Identity Provider
Us_Reg_SP	User Registration to Service Provider
User	Any person or legal entity in a Value-Chain connecting (and including) Creator and End-User possibly via other Users.
User (in OSI sense)	In a layered architecture, the term is used to identify an entity exploiting the service provided by a layer (e.g. CoNet user).
User ontology	An ontology created by CONVERGENCE users when publishing or subscribing to a VDI.

User Profile	A description of the attributes and credentials of a user of the CONVERGENCE System.
Versatile Digital Item (VDI)	A structured, hierarchically organized, digital object containing one or more resources and metadata, including a declaration of the parts that make up the VDI and the links between them.

1 Goals and structure of this document

In this document, we report the results of the first end-user trial in the CONVERGENCE project (phase 1, track 1). As described in the project proposal and in D8.1, the trial consisted of a small-scale laboratory test for each scenario. The goal was to collect user feedback that developers could use for the second phase of the trials. In brief, the trial should be considered as a “formative evaluation”.

The trial involved five user scenarios, defined in D2.2 and D8.1.

- Photos in the Cloud and down to Earth (Alinari)
- Videos in Cloud and Analysis on Earth (FMSH)
- Augmented Lecture Podcast (LMU)
- Smart Retailing (UTI)
- Smart Retailing (WIPRO)

Each trial involved a small set of CONVERGENCE applications (see 2.2 below). In later trials, these will be expanded in line with the schedule defined in D8.1.

The rest of this document consists of four sections. Section 1 describes the evaluation methodology. Section two describes the results from the trial. The description is divided into three subsections dedicated respectively to: i) the expert usability review that preceded the start of the trials and the measures taken to implement its recommendations; ii) the users own evaluations (collected via questionnaires and an end-of-trial focus group); and iii) feedback from applications developers on the usability of the CONVERGENCE middleware. Section 3 describes the results of the trial, identifying the strengths and weaknesses of the applications at this early stage in its development and formulating recommendations for improvement. Section 4 summarizes our conclusions and formulates recommendations for subsequent phases of the trials. A series of annexes provide the questionnaires, scripts and presentations used in the trials and documents the detailed results.

2 Evaluation Methodology

This first phase of the evaluation consisted of a formative evaluation designed to “judge the worth of a program while the program activities are forming or happening” (<http://www.sil.org/lingualinks/literacy/ReferenceMaterials/BibliographyLiteracy/Bhola1990.htm>).

In other words, the goal was to identify critical weaknesses in early versions of the CONVERGENCE applications and to formulate recommendations for improvement. More specifically the aim was to:

- Identify technical, performance and usability issues that could prevent users from making effective use of CONVERGENCE applications.
- Identify user attitude/expectations that could facilitate or hinder take-up of CONVERGENCE applications.
- Identify new applications functionality/modifications that could increase the value of applications to users.
- Identify critical issues in the deployment of CONVERGENCE hardware/software and in integration with legacy software.
- Identify ways in which CONVERGENCE applications could improve current workflows.
- Identify new middleware functionality that would facilitate the development of applications.

The evaluation involved five steps, as shown in Figure 1. In what follows, we will describe these steps in greater detail.

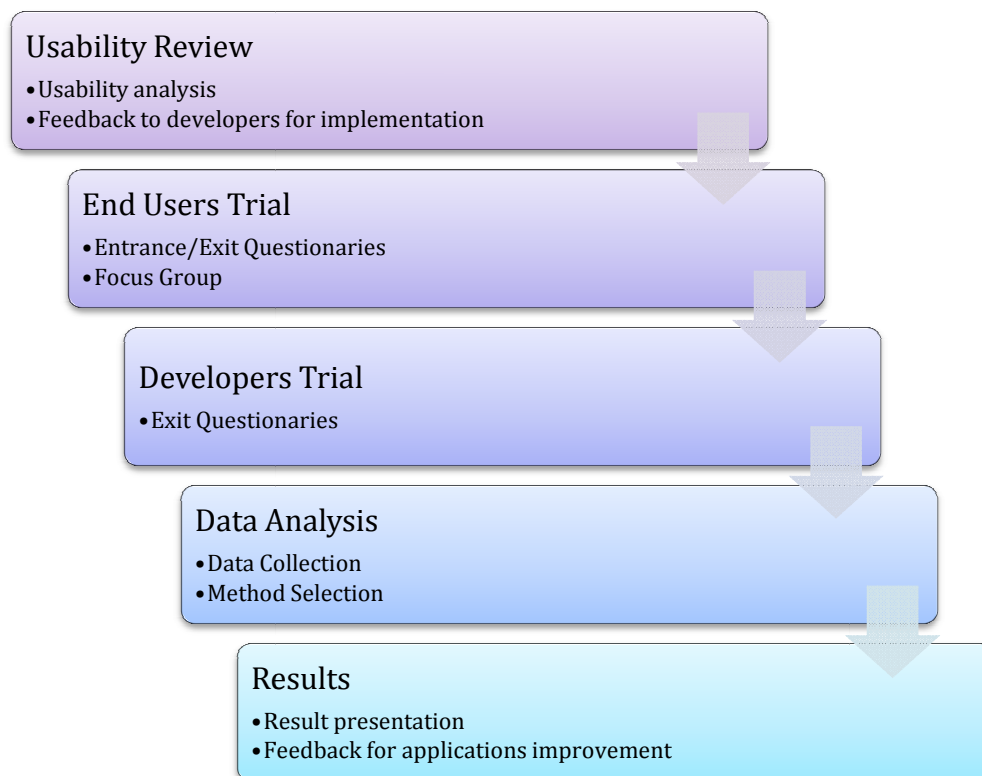


Figure 1 – Evaluation Process

2.1 Usability Expert review

The aim of this task was to test and improve the usability of the user interface of the applications before their release for use in trials.

The analysis, performed by a team from XS, focused on four aspects of the user interface:

1. Interaction: user interaction and interface consistency
2. Efficiency: the speed with which users could perform key operations and the accuracy of error messages
3. Graphics: colour readability and consistency of icons
4. Contents: consistency of data, possible redundancy

Each step in the usability analysis identified potential issues (menu structure, general user interface logic, naming, screen layouts etc.) making recommendations for improvement. These recommendations were passed back to development teams. The trials with the end user started only after all major issues and most minor issues had been solved.

2.2 End User Trial

For each user scenario, we recruited a small group of representative end users (users who might be likely to use the future CONVERGENCE application in their work). Each participant was assigned a “role” in the scenario. Under the supervision of MORPHO, the leader of the WP, XiWrite (XS), prepared a series of questionnaires, focus group scripts and report templates, designed to identify difficulties encountered by users during their use of the CONVERGENCE applications and to collect suggestions for improvement. To facilitate data collection, we published the questionnaires online. The trial took place in eight steps:

1. Initial presentation: the trial began with a meeting between the participants and at least two representative of the partner organizing the trial. In this meeting, the trial leader made a short PowerPoint presentation of CONVERGENCE, (see 5.5), followed by a presentation of the trial itself (goals and organization).
2. Pre-trial questionnaire: before the trial began, each participant was asked to fill in a brief online questionnaire describing his or her personal characteristics, capabilities and expectations.
3. Trial: each participant was asked to carry out a sequence of tasks following instructions from the trial leader. Tasks were personalized to the “role” of individual participants in the scenario. Table 1 below summarizes the tasks for each scenario. As participants performed the tasks, the second partner representative observed their performance, taking note of any difficulties they encountered.
4. Post trial: at the end of the trial, each participant filled in an online questionnaire providing information on:
 - His/her overall satisfaction with the applications tested in the trial
 - His/her satisfaction with specific functionality used in each task

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- His/her satisfaction with the overall usability and performance of the applications
 - The potential impact of the applications on his/her work
 - His/her opinion on the potential business impact
 - Technical, usability and performance issues encountered during the trial
 - Suggestions for new functionality/modifications in existing functionality
 - Other suggestions for improvement
5. Focus Group: trial participants were invited to take part in a focus group, designed to elicit specific suggestions for improvement.
 6. Developers feedback: at the conclusion of the trial, developers were also asked to fill in a questionnaire, eliciting information on:
 - Technical/performance issues related to the applications
 - Suggestions for improvement
 7. Data Collection: on conclusion of the trial .the data collected was inserted into a database, which was used for the subsequent data analysis. Qualitative information – in particular recommendations for improvement - was saved in report templates filled in by the trial coordinator.
 8. Data Analysis: given the small size of our samples, sophisticated statistical methods would have been out of place. The data analysis was therefore limited to the calculation of elementary descriptive statistics. In the next section, we outline the results for each scenario and for each specific target group. The final section draws some preliminary conclusions.

Task	Photos in the Cloud and down to Earth (ALINARI)	Videos in Cloud and Analysis on Earth (FMSH)	Augmented Lecture Podcast (LMU - Students)	Augmented Lecture Podcast (LMU - Lecturers)	Smart Retailing (WIPRO - Manufacturer)	Smart Retailing (WIPRO - Retailer)	Smart Retailing (WIPRO - Customer)	Smart Retailing (UTI - Retailer)	Smart Retailing (UTI - Customer)
1	Register to the application	Register to the application	Register to the application	Register to the application	Register to the application	Register to the application	Register to the application	Register to the application	Register to the application
2	Upload a new photo	Upload a new video	Search for lecture podcast	Create podcast components and lecture podcast	Create product VDI	Products creation	Subscription to product	Products promotion	Subscription to product
3	Publication of photo	Publication of video	Watch lecture podcast	Publish podcast components and lecture podcasts	View created product	Selling product using POS machine	Buying products using POS machine	View feedback of the customers	Information of promotion
4	Subscription to a photo	Subscription to a video	Annotate lecture podcast		Publish product VDI				
5			Subscription to annotation						

Table 1: Tasks used in trial by scenario and partner role

2.2.1 Evaluation tools

2.2.1.1 End-User Questionnaires

The evaluation used two *ad hoc* questionnaires designed by XS.

1. Pre-trial questionnaire (see 5.2.1). The goal of this questionnaire was to characterize the sample. The questionnaire was the same for all the scenarios and for all participants.
2. Post-trial questionnaire (see from 5.2.2 to 5.2.6). The post-trial questionnaires were designed to measure user satisfaction with the functionality provided and were specific for each scenario and to each user “role”.

Each questionnaire contained two categories of question:

- Multiple choice questions with answers on a Likert scale from 1 (not at all, very little) to 5 (a lot, excellent). This kind of question was used to elicit information on user satisfaction with specific functionality provided by the application
- Open questions. This kind of question was used to elicit suggestions for improvements to the applications

To facilitate data collection and the subsequent analysis, all the questionnaires were published online. Questionnaires for trial participants were anonymous with a numerical code making it possible to match pre- and post-trial questionnaires. Developer questionnaires were signed.

Trial participants were instructed to fill in the questionnaire step by step as they performed the sequence of tasks defined in Table 1. The data was collected in a dedicated database.

2.2.1.2 Focus Groups

After the end of each trial, participants were invited to take part in a focus group, coordinated by the two partner representatives, and based on a pre-defined script. The goal was to collect qualitative information on participants’ experience with the applications. Partner representatives took great care to ensure that the discussion focused on the key issues identified in the script. All focus groups were conducted in participants’ mother tongues and recorded for later analysis.

At the end of each session, the partner representatives filled in a report template, designed by XS. The reports were then analyzed scenario by scenario. This analysis made it possible to identify critical issues and to summarize participant suggestions for improvement.

2.3 Developer Questionnaires

In the original plans for the evaluation (D8.1), we had proposed to conduct individual interviews and/or focus groups with developers. However, practical considerations meant that different developers would have been interviewed by different interviewers, making it hard to compare the results. We therefore decided that the final step in the evaluation would consist of a questionnaire

for applications developers³ i.e. technical staff involved in the development of applications for the trial and/or interfaces to legacy software (see D8.1). The goal of this questionnaire was to identify any problems developers had experienced while using the CONVERGENCE middleware, and to collect suggestions for improvement. The questionnaire consisted of two sections:

1. A series of questions relating to common features of CONVERGENCE present in all the scenarios.
2. A series of questions on issues related to the specific functionality implemented in individual scenarios.

³ In CONVERGENCE the design and implementation of the applications used in the trials was separate from the design and implementation of the CONVERGENCE middleware. These developers, while obviously not independent of the project, can thus be considered as *users* of the middleware.

3 Results of the trials

3.1 Usability Expert Review

The expert usability review was conducted by XS in close collaboration with developers from LMU, ALI, FMSH, SIL, UTI, WIPRO. The review lasted for approximately a month, during which time developers corrected problems as soon as they were found, allowing the software to be retested. All the tests used the web interfaces to the applications “Photos in the cloud and down to earth” and “Videos in the Cloud and Down to Earth” or remote terminal sessions to the applications “Smart Retailing”, “Smart Retailing with POS” and “Smart Podcast”.

The tests revealed a number of usability issues and software bugs. All the most serious problems (some of which prevented users from using the software) were resolved prior to the start of the trials, as were the majority of the less serious problems. Significant problems, which were not resolved in this stage, will be dealt with before the second phase of the trials. Solutions for some minor problems may be postponed until a later stage.

The detailed results of the usability analysis are shown in the tables presented in Annex 1. For each problem identified, we provide a description of the problem, an estimate of its severity, recommendations for a solution, and the current status of work to implement the recommendation.

In all the scenarios, the worst problems encountered during the evaluation concerned the registration procedure, which was significantly harder to use than the procedures implemented by the majority of commercial systems. More specifically, there was no system to avoid typing errors while inserting a password (in most commercial systems users insert the password twice). Another problem was that the system did not check if two users chose the same userID. In some cases, the applications failed to test the content of files proposed for upload, allowing users to upload a video instead of a photo or *vice versa*. Last but not least, the system did not check the validity of dates chosen by users and did not warn users when they inserted non-valid dates. This exposed users to potentially serious errors. Most of these problems were resolved before the start of the trials.

In addition to these “severe” problems, the study also identified a number of “medium severity problems” (e.g. the use of popup windows to give feedback to the users). The majority of these problems were resolved prior to the start of the trials. However, a few were left over for later work. It was interesting to note that the majority of users detected the same problems, mentioning them in their questionnaires or during the focus groups. The main problems found were the following.

- *Navigation.* Applications often failed to provide users with a clear indication of the function they were using. Labels were often placed in positions that made them hard for users to find.
- *User management.* Applications had no procedure for users to view or update their personal data.
- *Links and menu items.* Many links and menu items pointed to functions that are not implemented in the current version of the software. Although this issue will be resolved in future releases, it was a potential cause of problems for this phase of the trials.

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- *Instructions and tips.* There were often no instructions or tips on how to fill in fields provided by the applications. This problem was particularly severe when the names of fields were expressed in technical language.

Finally, the study also detected a number of minor problems, with only a limited impact on the usability of the system. Examples include the following:

- *Data entry.* Data entry sometimes required the mouse; this made it less efficient than necessary.
- *Poor graphics design.* Applications often used multiple graphics and text styles and made excessive use of graphics with no functional purpose; in many cases icons were poorly designed.
- *Data visualization.* Very often graphics objects were displayed in inappropriate sizes and positions. In some cases visualizations contained very little data. In others, users were asked to handle lists of objects containing very large amounts of information.

3.2 The trials

3.2.1 Photos in the Cloud and down to Earth (ALI)

3.2.1.1 The scenario

The scenario for the trial was designed by ALINARI and implemented by SIL. The goal was to test whether CONVERGENCE can provide useful support for new business models in the professional photography business, making it easier for photographers to contribute and describe photos, improving access for users and generally facilitating the management of the services Alinari offers to its customers.

Participants in the trial used custom applications running on top of the CONVERGENCE framework and the CONVERGENCE network. These applications provided Alinari staff and freelance photographers with a user interface making it easy for them to create, publish, un-publish, describe, update and subscribe to photos (represented by Resource VDIs and Publication VDIs). Alinari staff could also retouch the photos and add them to the Alinari catalogue. End-users could view and buy photos using a local application connected to the Alinari server.

3.2.1.2 End-Users Trials

The trial, managed by Alinari, consisted of two separate sessions each involving seven participants. Of these participants ten completed all the planned tasks. The majority (6/10) were male, under the age of 30 (6/10). 7/10 had either an undergraduate or a master's level degree. 8/10 considered themselves to be expert users of PCs which they used for at least eight hours a day (8/10). 7/10 were also familiar with tablet and smartphone technology. 6/10 were students at the Florence School of photography. The other participants included 1 archivist, 1 project manager, 1 freelance photographer, and 1 researcher.

Below we describe the task the participants were asked to perform and the way they evaluated the functionality provided to them.

Task – 1: Register and login to the application: in this task the user had to create a new account, filling information such as his/her name, username, password, etc.

Register and login. Users considered the implementation of this function to be slightly better than adequate (3.1 points out of 5), and relatively easy to use (3.3). However, they gave the system a relatively poor mark for its error messages (2.7). Users suggested there should be more support functions (e.g. a system to recover lost passwords, online help, technical support via Skype). Several users suggested they would like to see improvements in graphics and general usability, and better error handling

Task -2: Upload a new photo (creation of R-VDI): In this task, the user was instructed to select a photo; fill in the appropriate metadata, such as title of the photo, caption, date, location, tags; specify license conditions and upload the photo to the service.

Uploading a new photo. All the participants in the trial had already uploaded photos to commercial photo services. The majority thought that this functionality was useful for their work. However the quality of the functionality provided and its usability were considered to be no more than adequate (functionality: 3/5; usability 3.1/5). Users were relatively negative about error messages (2.2/5). 4/10 users considered the implementation to be much worse than other systems they had used. 6/10 thought it was similar or slightly better. Several users stated that they would like to use the software in conjunction with other software such as Photoshop. Others suggested that the system should provide a preview of photos before they were uploaded. It was also suggested that the system should provide ontologies to help users in filling in metadata. Most users took a poor view of the general usability of the function, considered as difficult to navigate, hard to understand, relatively slow and lacking in adequate support functions (help etc.). It is possible that some of these difficulties were due to the poor performance of the Internet connection used for the trials.

Task -3: Publishing a photo (creation of a P-VDI). In this task, the user was instructed to publish a photo, creating a P-VDI. The user filled in the tags that CONVERGENCE used to match the publication VDI with subscription VDIs from other users.

Publishing a photo. 90% of participants reported that they had already published photos online and believed that this functionality was useful for their work (3.4/5). However, ease of use in the CONVERGENCE applications was considered to be less than adequate (2.6/5), in particular with respect to error messages (2.2/5). In general, the application was considered to be of lower quality than competing products (2.6). Users pointed to a number of specific problems. These included the impossibility of publishing a photo after a first attempt had failed, poor search functionality, poor graphics quality, difficulties in finding photos that had just been published and other issues related to navigation.

Task -4: Subscribing to photos (creation of an S-VDI). In this task, users were instructed to create a subscription to photos meeting user-specified search criteria. CONVERGENCE matched these criteria against photos present in the system and returned a list of photos. Users could click on an item in the list and see the photo and related information.

Subscription to a photo. Eight users out of ten reported that this functionality was useful for their work. These included three users who had never searched for photos online. Users reported that usability was less than adequate (2.7/5). Three believed the CONVERGENCE solution was worse than other applications offering the same functionality. Four thought that CONVERGENCE was as good as or slightly better than other solutions. Suggestions for improvement included requests to improve help and support functions; the possibility of targeting subscriptions to specific domains (e.g. sports photography, fashion etc.); the possibility of linking to social networks and compatibility with other software (e.g. Photoshop).

Final notes. 90% of users believed that CONVERGENCE provided functionality that would be useful for their work. 7/10 would recommend it to a colleague. Only one complained of poor performance and the small number of registered users. The majority would consider using CONVERGENCE in the future. The most important improvements requested by users were in performance (3.5), overall ease of use (3.1) and error messages (3.3)

Supervisor's report. According to the report from the trial supervisor, the system crashed several times while users were registering, uploading photos and publishing photos. It is possible that these problems were due to problems with the Internet connection.

3.2.1.3 Focus Group

At the end of the trials, participants were invited to take part in a focus group, designed to collect qualitative feedback on their overall experience and on the specific functions they had tested. In each trial, the focus group was led by the two partner representatives who followed a semi-structured script, prepared in advance (see 5.4).

The focus group reports showed that participants' main concerns were with the issues they had already raised in the questionnaires. In particular, several participants were critical of the system's general usability. Typical suggestions and comments included "*make the interface more intuitive*", "*the least attractive aspect of the system is the graphical layout*", "*it is not intuitive: the user needs instructions to be guided into the functionalities of the system*". Other users pointed to problems with the technology. For one user, "*It is a bit slow*"; another noticed that "*high resolution upload fails*". Another commented on the subscription function: "*To get a match the users has to put exactly the same keywords originally used to describe the image (the AND operation is not working)*". There were general calls for more extensive functionality. "*Add an ontology we can use to choose tags*" "*The browsing is poor*". "*There should be instructions to guide the user*".

Nonetheless, many users also thought that they might find the system useful for their work. For one participant "*It's not evident what is the difference compared to other systems*" Nonetheless he saw it as "*Promising well. An interesting concept for content harvesting*", a "*Good approach needing*

improvement in usability". For another user *"(it's)...very useful, the possibility of storing and sharing content and of synchronizing data is really useful"*. Nearly all the participants wanted to use the service in the future (*"When it will be available? I hope it will be a part of a simple to use package"*). They would also be willing to recommend it to their colleagues – always providing it offered more functionality and better usability than now. One participant suggested it might be *"Interesting as a companion for social networks like Facebook"*).

3.2.1.4 Summary

The data collected during the ALINARI trial suggests that CONVERGENCE could be extremely valuable for professional users such as those who participated in the trial. Nonetheless there are many usability and a few performance issues that need to be resolved. In general, participants in the trial would like to see a system that is easier to personalize, less rigid and more flexible. They also suggest the introduction of new functionality: for example, ontology support for tags, new functions to upload high resolution images, and new ways to target publications to specific populations, turning it into a new channel for advertising. Many users wanted to use the platform in synergy with other photo applications such as Photoshop or Picasa or with social network services such as Facebook and Flickr. There was general interest in sharing resources with other photography professionals on the CONVERGENCE network.

Despite these criticisms, the majority of users were aware that CONVERGENCE is still in an early stage of development and believe that future, enhanced versions could be extremely useful for their work. Many believe that with suitable improvements it could replace the systems they use at present.

3.2.2 Videos in the Cloud and Analysis on Earth (FMSH)

The second scenario tested in the trials was "Videos on the Cloud and Analyses on the Earth", by FMSH. In this scenario, CONVERGENCE is used to improve the management of audiovisual archives and to exploit the potential of semantic techniques, when the same video resources are exploited several times in different contexts of use (analyses using different domain ontologies, posting on different video channels). In the scenario, Video Material Owners (VMO) provide videos to the archive; Video Distributors (VD) receive notifications of new videos, which they then download, decrypt and make available for streaming. Analysts download the videos from CoNet, decrypting and analyzing their content. They then upload their analyses to CoNet and notify interested VCOs that they have done so. Video Channel Owners (VCO) manage video channels and content posted on the channels they own. Channel Holders (CH) receive notifications of new channels and new posts, update the channels and make them available on the Internet. Video Channel Users (VCU) explore the content of Channels, subscribe to new posts and browse channels.

3.2.2.1 End-User Trials

The trial involved nine participants, (five females and four males) covering a broad range of ages. Five of the participants came from outside the CONVERGENCE project but worked in the same

area of activity as the FMSH participants. The outside participants included one Communication Manager, one Computer technical support agent, one Film director, three Researchers, one Scientific Communicator, one Web developer and one Assistant. Eight out of nine had a university level education and used computers regularly in their work and leisure activities (on average for eight hours per day). All considered themselves to be expert users of computers. Knowledge of smart phones and tablets was less widespread. Only five out of nine participants considered themselves skilled in this area.

In the trial, participants were asked to play the role, either of Video Material Owners (VMO) or of Video Channel Users (VCU). During the trial participants tested the following functionality.

Task 1: Register and login to the application - users were asked to create a new account, filling in their name, username, password, etc.

Registration and login. Users expressed a relatively positive evaluation of this functionality. On a scale from 1 (very poor) to 5 (excellent), participants gave the functionality a score of 3.4 for general quality, 3.9 for ease of use and 3.2 for error messages. Users suggested that the application should provide more information during the registration process and provide better warnings for user errors. Other suggestions included caching the username in memory and adding a progress bar during uploads.

Task 2. Upload a new video - In this task, users were instructed to create a new video using the Video Manager, fill in the appropriate metadata, (title, subtitle, type, producer of the video), define specific licenses for Video Channel Users, Distributors, etc., and upload the video.

Uploading a video. Eight out of nine users had previous experience with uploading videos to the Internet and believed this was a very useful functionality for their work. However they were not impressed by the general quality of the CONVERGENCE implementation, which received a mean score of just 3.1/5. The mean score for ease of use was a 3.3; the score for error messages was just 3.2. According to participants in the trial, several improvements are needed to make the software competitive with other programs already on the market. They suggested the need for new functionality to update the information about a video after it had been uploaded, to modify parameters automatically set by the system (e.g. dates) and to request help from technical support. Most importantly of all, participants would like to see support for video encoding in different formats and better compatibility with other software, particularly Microsoft Office. Complaints about usability issues were generally minor.

Task 3. Publishing a video - Once they had successfully created the video, the users were instructed to publish it.

Publishing a video. Eight out of nine participants had already used other software to publish videos on the Internet and reported that the functionality offered by CONVERGENCE matched that of other programs. However the score overall quality was just 3.3. Users expressed a poor view of the application's error messages (3.1) but a relatively positive view of its overall usability (3.9). One participant proposed the use of tips to guide users during the creation of tags. Another suggestion was to allow users to modify videos after they had been uploaded without having to delete the old version. One user proposed to increase the space available for describing videos and to update the help function. Another suggested that the user interface should be more intuitive and more pleasant to use.

Task 4 Subscription to a video – Next, users were instructed to subscribe to a video. During the procedure users could also browse (and delete) their previous subscriptions. CONVERGENCE used the metadata inputted during the subscription procedure to match the subscription to publications.

Subscription to a Video. The majority of participants (6/9) had already used other services to search for videos on the Internet and considered this functionality to be essential for their work. In general, they considered the CONVERGENCE service to be slightly worse than the other services they had used, giving it a score of just 2.8/5. A third of the participants had never searched for a video before and considered searching less important for their work. These users gave it a score of 2.6/5. Ease of use received a score of 3.3. However, users criticized the system's ability to help users recover from errors, giving it a score of just 2.9. Suggestions for enhancement included the introduction of automatic systems for "tagging" and for auto-completion of input fields, mail notifications when a new publication matched a subscriptions, links to social networks (similar to those provided by Scoop.it or Netvibes) and improvements in the online help system. In general, participants found the system artificial, un-intuitive and un-attractive. They were nonetheless willing to make allowances for the fact it is still in an early stage of development.

Final notes. The majority of participants in the trial (eight out of nine) expressed the view that CONVERGENCE could be useful for their work. However, only four out of nine would recommend it to a colleague or use it to replace the software they have used up to now. Participants attach high importance to the quality of the software they use in their work (4.75/5), its ease of use (4.5/5) and its performance (4/5). They are not prepared to consider the CONVERGENCE application as a competitor for existing products until the development team resolves outstanding technical problems (bugs, poor performance etc.) and provides better user support.

During the trial the external observer witnessed several crashes, always associated with cutting and pasting from Microsoft Word. He noted that participants in the trial were intrigued by central CONVERGENCE themes such as MPEG-M, the VDI concept and Content Centric Networking. In

many cases they asked him for additional technical information. Several users also suggested that they would have liked more space in the questionnaire for “open” commentary.

3.2.2.2 Focus Group

At the end of the trial, participants took part in a focus group organized along the same lines as in the Alinari trial. As in the Alinari case, the results of the focus group matched those from the questionnaires.

Several participants criticized the way the application managed tags (*“After I publish a video, I cannot check the tags that will match with subscriptions because the metadata of the video and its publication are not clearly displayed.”*) and the lack of effective error support. Several asked for better, more diverse ontologies. (*“Where do the proposed tags and definitions come from? Could I use another ontology?”*). One user requested multi-language support. Another criticized the need to fill in the same information more than once (*“Why am I asked again for tags and name of the video? The application could at least fill those fields for me with the information I already provided”*). Several wanted a way of updating VDIs without having to delete the old version first. Another request was that the application should provide users with better explanations of the input fields (*“I thought that video type was video format. A description of the field would have been helpful”*). The most popular aspects of the application was its subscribe and notification functions, which were considered to be useful and well-designed. However, several users would have liked to see richer search functionality – for instance the use of specific tags for author, language, date, etc. Others wanted to be able to search without using tags. (*“Subscription is a very interesting feature, but it should be complementary to existing applications where I can browse the content without knowing exactly what I am looking for.”*). Users did not fully understand which information was stored in the Resource- and which in the Publication-VDI. One suggested it would be best to insert the video metadata directly in the metadata for the video resource. One user who did not usually work with web applications would like to download the VDI instead of the video resource, and then view the video and the metadata with a single VDI player (a desktop application). In general, users considered the application to be relatively unattractive and not yet mature for professional use. However, they also expressed their awareness that the application they had tested was a very early version and their appreciation of CONVERGENCE’s potential. Many considered that CONVERGENCE had interesting and innovative features. The examples cited included expiry dates (*“Expiry date is a strong point.”*), content tracing, features for sharing videos and metadata (*“It is very useful to receive notifications when a video about my subjects of interest is published.”*), publication/subscription mechanism (*“Publishing my video is very easy.”* and *“Subscription is a very interesting feature (...)”*), content certification, and licenses (*“The different kinds of licenses are very clear to me, I see exactly which kind of use they correspond to.”*). Participants saw these features as being potentially useful for their work and expressed a favourable view of their usability (*“The overall interface is easy and practical.”*).

Probably the most interesting ideas to come from the focus group were participants' views on future applications of CONVERGENCE. Participants perceived CONVERGENCE as a possible replacement for the current Internet. At the same time, however, they were sceptical that giants such as Google, Facebook, YouTube, etc.... would ever adopt CONVERGENCE-like solutions. In any case, there would always be an alternative to VDIs. Several participants expressed the fear that governments or large companies could use the technology to control content published on the network, erase dissident resources, rewrite history, etc. (*"I see that multimedia companies have a clear interest in controlling content, but I'm not sure this is in the interest of Internet users"*). One participant even compared CONVERGENCE to "Big Brother" (*"Homogenizing, centralizing and standardizing data can lead to a situation in which the strong control the data needed by the weak."*). These participants thought it would be dangerous to give organizations the right to revoke content or to delete the version history. They thought that CONVERGENCE could indeed be useful in a company setting (*"VDIs cannot run efficiently on the current Internet. They are interesting when running on smaller networks, such as an Intranet"*). However, they also suggested that the expense of adapting a large information system to CONVERGENCE could limit take-up. In general, participants did not believe that CONVERGENCE could be useful for the consumer at large (*"CONVERGENCE must be considered for precise domains. It is best targeted to professional users."*). In their view, the main advantages of the system are for specific target populations, such as teachers and students (*"As a service provider for researchers, I am interested in broadcasting and sharing the sensitive content that people provide me, and in having a tool that allows me to keep the control of how this content circulates and is used. This technology provides more guarantees than Creative Commons licenses, which do not prevent people from sharing and commenting videos on YouTube."*). One participant suggested that CONVERGENCE could be valuable for artists who could use it to manage their works without passing through an agency. Others objected that limiting access to a work with licenses and restrictions could end up by damaging sales. (*"Given that the majors already appropriate my content and use it commercially without my permission, I prefer that my content can circulate freely on the Internet, even if I don't get my authoring fees."*). Several participants expressed the fear that CONVERGENCE could be vulnerable to "cracking". However, another user pointed to the advantages of CONVERGENCE content tracing. *"Someone downloads a video for free, then publishes it on a website where he asks users to pay for viewing it: here is a good case where tracing the video with CONVERGENCE would be very interesting"*.

3.2.2.3 Summary

The analysis of the data from the FMSH trial shows that users were interested in CONVERGENCE and believed it had the potential to help them in their work. However, its lack of features and poor usability, combined with technical difficulties, mean it is not yet an attractive and competitive solution for professional use.

Participants in the trial were aware that CONVERGENCE is still at an early stage in its development and that the problems they observed will be resolved before the end of the project. The improvements they would like to see include richer and more diverse ontologies, as well as better interoperability with existing software (e.g. Microsoft Office, Picasa) and social networking services (e.g. Facebook, Flickr). Many users wanted to see improvements in the help system.

The discussion on the ethical implications of the system was very interesting – in particular the common perception that CONVERGENCE could be a danger for freedom of expression. Users' general impression was that CONVERGENCE does not fit the needs of the general user but that it could be extremely useful for specific target populations with a strong desire to control the content they produce, for example in research, education or art. Some participants nonetheless expressed the view that any restriction on access to content would end up by limiting sales.

3.2.3 Augmented Lecture Podcast (LMU)

This scenario is based on a web-based lecture podcast application that enables students to revise lectures by watching video podcasts with synchronized slides. CONVERGENCE provides a common basis for collaboration and information exchange. CONVERGENCE makes it possible to update one file and keep all related files in sync, ensuring that students always have access to the latest materials. Students who have downloaded files onto their local devices are notified of changes as soon as they connect to the CONVERGENCE network. The scenario involves the following categories of user:

- a) Lecturers: can create, store and publish Lecture Podcast VDI sequences, which are updated whenever videos or slides are modified, and retrieve statistical information about the use of Lecture Podcast VDIs (statistical information is collected by the service provider).
- b) Students: can search, subscribe to, download and watch Lecture Podcasts, receive notifications whenever the service makes available a new podcast or a new version of a podcast, create and publish annotations to specific portions of the podcast, receive notifications about published annotations, delete annotations.

3.2.3.1 End-User Trials

The LMU trial was the largest in this phase of our work. The sample consisted of seventeen participants (ten males and seven females) mostly (15/17) under the age of 30 (two lecturers were aged between 30 and 40). The majority already had a first degree, a masters degree or a Ph.D.. Six participants were undergraduates. All worked at LMU. All used computers regularly at work and in their leisure time, usually for many hours a day. In general, they considered themselves to be highly skilled (mean score: 4.47).

Within the sample, eight participants were students while nine were lecturers. Members of the two groups tested different aspects of the application. In what follows, we will report their results separately.

3.2.3.1.1 Students

The student sample consisted of eight participants (five female, three male) aged between 21 and 30. Two had already obtained their first degrees, six were undergraduates. All claimed a high level of skills in using computers (4.25/5) and the Internet (4.13), reporting that they used these technologies intensively in their studies and during their leisure time. Self-reported skills in the use of tablets and smart phones were slightly lower (3.75).

3.2.3.1.1.1 Student questionnaire

Task 1: Register and login to application - In the first task in the trial, participants were instructed to create a new account, filling in their first name, last name, email, password, etc.

Register and login. Participants gave the procedure a high mark for ease of use but a lower rating for general quality (3.5) and error messages (3.5). Users suggested the system should provide more information on the advantages of registration and that the registration procedure should avoid asking for unnecessary information such as first name. In general, they considered the design to be relatively unattractive.

Task 2: Search for lecture podcast – Participants were instructed to use the search field, to search for a podcast after which the system displayed the result of the search. Participants were instructed to watch a podcast that interested them.

Searching for lecture podcast. Seven out of eight participants reported they had already used this kind of search function in their work. For three out of seven, CONVERGENCE was better than services they had used previously. Ease of use received a high mark (4.25). However, participants were not satisfied with the error messages (3.13) and this affected their rating for the overall quality of the application (3.25). One suggested improvement was to provide more information on search results (name of author, expiration date etc.) and to provide extra advanced search functionality. Participants identified a number of usability problems such as small pop-up windows, and poor labelling of screen commands (e.g. the use of ENTER rather than SEARCH for the search command).

Task 3: Watch lecture podcast – After searching for the podcast, users were instructed to watch it by clicking play. While watching, they could navigate by clicking on annotations or the progress bar or the slide and chapter numbers shown in the dropdown menus.

Watching lecture podcast. All participants had already used this kind of application during their studies and reported that the CONVERGENCE application was below the standard of the services they had already used (2.25). They gave the application a good mark for ease of use (3.88) but were less satisfied with the error messages (3.00) and the general quality of the application (3,00). Participants would have liked to see more information on the video (e.g. the name of the author) and to have more control over the display (e.g. the possibility of resizing the display window). They would have also liked the possibility of choosing whether to download the VDI in audio or in video format. More generally, they found the application easy to use but did not think it was of

professional quality. Several users reported technical difficulties in opening the application with Firefox and with Chrome.

Task 4: Annotate lecture podcast – Users were instructed to annotate the podcast by clicking on a slide. The system would then respond by creating a dialog for the annotation, including a field for the expiry date. To publish the annotation the user clicks on the SAVE button.

Annotating lecture podcast. Only one of the participants had previously used a similar service and did not note any major differences with respect to CONVERGENCE. For seven participants this was completely new functionality, which they thought would be very useful for their work. Participants gave the application a good score for ease of use (3.63), but a poor mark for error messages (2.38). The overall mark for the application was not good (2.88). Participants suggested adding popup warnings and help for errors and improving it, by providing more information about the podcast (title, name of author etc.). Other users suggested it should be possible to share podcasts over social networks. Another suggestion was to give users more control over privacy options. Several users commented negatively about the layout and about technical incompatibilities with browsers (particularly Firefox).

Task 5: Subscribe to Annotation – Participants were instructed to subscribe to an annotation by clicking on the subscribe icon / link next to the title. Participants would then be notified of replies to their annotation.

Subscription to annotation. None of the participants had ever seen this kind of functionality in another application. In general, participants found it fairly useful. However, they were not satisfied by the quality of the implementation (2.88). Although they found it relatively easy to use (3.38), they were unhappy with the error messages (2.63). Suggestions for improvement included the addition of an UNSUBSCRIBE button, and compatibility with HTML5. Users reported that technical problems had prevented them from saving annotations on several occasions. Here again users reported issues with browser compatibility and requested better help functionality.

Final notes. All except one user thought that CONVERGENCE provided useful functionality. Five would be willing to use it, even in its current state of development, mainly because of its ease of use which they marked highly (4.40) considering it as the most important consideration in their evaluation. However, only two participants would recommend CONVERGENCE to others. The main reasons given were slow performance and the lack of a sufficient number of users.

The report from the external observer confirmed participant reports of compatibility problems with some browsers. The report suggested that participants had been very interested by

CONVERGENCE – in particular by the VDI concept – and reported participants’ impression that the application did not show all the work that had been done.

3.2.3.1.2 Focus Group

All the students who tested the application also participated in the focus group. All participants agreed that the CONVERGENCE application, while useful, was not sufficiently advanced to replace similar applications they were already using. Users reported a few technical and usability issues (e.g. incompatibility with some browsers, slow performance, lack of functionality to resize windows or to choose video formats). However, their main concerns were with the application concept and its implementation. The main issues raised were the lack of adequate user instructions, requests for unnecessary private information (e.g. first names), the impossibility of downloading VDIs, and the small number of users on the CONVERGENCE network. Participants perceived that the main innovations introduced by CONVERGENCE come on the programming rather than the end-user side. Nonetheless, they were unclear about the differences between CONVERGENCE and alternative systems. For one participant, CONVERGENCE “... is a mixture of Facebook and Dropbox in real life”. For another it “... seems like a distributed database”. For another a VDI “is a box with a lot of content.”. There was much discussion about the concept of traceability and its potential use as a “big brother”. Users were unanimous that they should be able to register anonymously (“I would never use CONVERGENCE if it meant that I would lose my anonymity.”). Several participants also pointed out what they saw as advantages, in particular the guarantee that information would always be up to date, accurate search results and clear content. Most, however saw CONVERGENCE as an extension of the current Internet, whose value would ultimately depend on users: “If people do not describe their content, Convergence will not work out.”.

3.2.3.1.3 Lecturer Sample

The lecturer sample consisted of research assistants at LMU and TU (Technical University of Munich) and included nine participants (two females and seven males) with ages between 21 and 40 (two were older than 30). All had a university degree and all considered themselves as highly skilled with computers (4.8) which they used intensively in their work and in their free time.

This group tested the CONVERGENCE Lecture Podcast Creator.

3.2.3.1.3.1 Lecturer Questionnaire

Task 1: Register and login to application – as in the other trials, participants were instructed to create a new account, filling in their first name, last name, email, password, etc.

Register and login. Participants were not satisfied with this procedure, giving it a lower mark (1.78) than any of the other functionality they tested. The lowest score was for the error messages. Ease of use and general quality also received low marks (2.89 and 2.44 respectively). Participants reported they had had major problems in recovering from errors and complained of a lack of

appropriate error messages. Suggestions for improvement included optimization of the procedures for specifying passwords, and improvements in navigation functions. Some of the most frequent negative comments concerned the poor quality of the graphics.

Task 2: Create podcast components and lecture podcasts

Participants were instructed to create a slide or a video component. To do this, they had to select the location of the resource and add metadata (the title of the lecture, the name of the author and keywords) for each component. They were then instructed to view a list of created slides and video components, select some of these and assemble the podcast, add a synchronization file (from their hard disk), add metadata for the podcast and publish it to the CONVERGENCE network.

Create podcast components and lecture podcast. All the lecturers reported that this was a useful function for their work (3.4). However, of the three who had used similar systems in the past, two rated these systems better than CONVERGENCE. Marks for ease of use, error messages and general quality were adequate but not high. Suggestions for improvement included better error messages, more information on the file formats supported by the system, and more information on input fields.

Final Notes. Eight out of nine participants considered that application could be useful for their work and six would be willing to use it in their work, even at its current stage of development. Four would recommend it to others. Only one user was seriously dissatisfied, complaining about too many bugs and inadequate error messages. Other users also noted these problems but considered them as less important for a product still an early stage in its development.

The external observer observed a number of minor technical problems during the VDI publication process and reported strong participant interest in technical aspects of the VDI concept, with several participants asking questions about the “VDI Life Cycle”.

3.2.3.1.3.2 Lecturer Focus Group

All participants agreed that creating and using podcasts is relevant to their work and most of them judged that, despite some issues, the CONVEGENCE application is easier to use than current systems. According to participants, its main strengths are automatic updating; good visibility of published content and effective author control over content. Participants expressed the view that CONVERGENCE could be especially useful for administrations, in particular because of its support for digital signatures and versioning. Participants saw its main weaknesses as its vulnerability to hacking, the loss of user anonymity – which they considered as a key advantage of the current Internet - third party control over content, and excessive complexity.

Privacy was a particular concern, (*“What happens to CONVERGENCE when it becomes possible to break the encryption algorithm, e.g. due to increases in computer power?”*). Users were not clear who had the right to modify or delete VDI content (*“I have control over my own data, but not over the data someone publishes about me.”*). They were also concerned about the way lack of anonymity could impact freedom of expression - (*“Does anonymity still exist in Convergence?”*).

Users liked the possibility of subscribing to new content. However, they were unhappy with the lack of feedback on task completion. There were many suggestions for improving the application. One user wanted to see a preview of the video before posting. Another wanted the ability to select the output file format for slides. There were suggestions to allow users to create links to supplementary materials and other third party services, if possible via drag and drop (*“Can you ‘like’ [like on Facebook] a VDI?”*). Several participants thought it would be helpful to have a VDI-viewer or a VDI-browser giving users an overview of the VDIs they had created and their respective properties.

Participants were unanimous that CONVERGENCE was best adapted to scenarios in which users or companies need to distribute large volumes of content (*“Convergence is like Dropbox without the need to register.”*). There was also a general awareness that CONVERGENCE is still in an early stage of development. Some participants would like to try it again when a more advanced version becomes available (*“For some use cases I would definitely try Convergence but it has to be fully reliable.”*).

Several participants thought that the trial did not properly demonstrate CONVERGENCE’s innovative features, which they saw as primarily technical (*I didn’t know that I was testing CONVERGENCE” and “I do not think I tested CONVERGENCE. I’m quite sure I just tested a very basic website”*).

3.2.3.2 Summary

The use of two different samples for the LMU trial made it possible to evaluate two distinct aspects of the scenario, namely the “augmented podcast” and “creating a podcast”. Given that the only function shared between the two trials was the login procedure, we analyzed the data separately. Nonetheless, there was a lot of overlap between the comments from the two groups. Both complained about performance and minor usability problems (incompatibility with some browsers and third party services, slow performance, poor help services, poor recovery from errors). Both found the interface unattractive, and in some occasions hard to read. Both groups also expressed doubts about privacy issues, in particular the lack of support for anonymous access (perceived as a major advantage of the current Internet), the danger that third parties could steal and/or exert control over content, as well as ambiguities in access control and licensing. Many users had the sensation they had not properly understood the basic concept underlying CONVERGENCE, which they saw as an add-on to the current Internet rather than a replacement. This perception was probably because the majority of innovations introduced by CONVERGENCE are technological, and not immediately visible to end-users.

Participants made positive remarks about the application's ease of use and about its usefulness for their work. Lecturers, in particular, considered CONVERGENCE to be slightly better than the systems they use at present.

Many participants believed that CONVERGENCE has the potential to become very valuable indeed and were fascinated by a presentation showing the features to be included in the final version of the system. Several asked to be included in the next round of trials.

All participants were aware that CONVERGENCE is still in an early stage of development and offered many suggestions for improvement. Many of these suggestions (e.g. compatibility with other browsers and third party software, a better user interface, support for new video formats, better help) had already been included in plans for the next version. Others were completely new (e.g. functions to download video and audio tracks separately, the idea of a VDI-browser, functions to resize windows, functions to add links to supplementary material).

3.2.4 Smart Retailing (UTI)

This scenario describes a smart retailing supply chain for electronic products. In the scenario, CONVERGENCE provides users with a wide range of services and operations. The users and beneficiaries are Retailers and Customers. Retailers subscribe to products from Manufacturers and advertise the products they sell with promotions, special offers, etc. Customers subscribe to, search for and compare products. Additional services improve Customers' shopping experience, allowing them to subscribe to information on specific products, receive notifications about the products and sales events and immediately look up information on a product by scanning its barcode.

3.2.4.1 End-Users Trial

The sample for the UTI trial consisted of four users (two males and two females) of which three were aged between 21-30 and one between 31-40. All participants had a university education. All reported that they had good computer skills and that they used computers regularly, both for work and in their leisure time. In general, their knowledge of traditional systems (4/5) was better than that of new devices such as smart phones and pads, which was nonetheless quite good (3.5). The scenario for the trial included three customers and one retailer. Each of these roles was taken on by one of the participants, as planned in D8.1. The roles of the three customers were played by a contract administrator, a business analyst and a translator, all from outside the project. The role of the retailer was played by an actual sales person, external to the project, who currently runs an e-commerce site.

3.2.4.1.1 Customer Questionnaires

Task 1: Register and login to application - as in the other trials, participants were instructed to create a new account, filling in their first name, last name, email, password, etc.

Register and login. Users were satisfied with all aspects of the procedure (ease of use, error messages, general quality) giving it an average mark of 4.11. The only negative remarks concerned

the requirement that users should provide a name during registration. This was considered as a disadvantage compared to the current Internet, which allows users to access web sites anonymously.

Task 2: *Subscribe to a product* – Participants were instructed to subscribe to product type VDIs with specific features or characteristics.

Subscription to product. All participants thought that this was a useful function, reporting that they had already used services providing this kind of functionality. In general they believed that CONVERGENCE was slightly better than other services they had used. Participants gave good scores (on average 4.11/5) to all aspects of the service (ease of use, error messages, general quality). The most common suggestion for improvement was that the service should offer a richer set of search criteria, perhaps allowing users to use free text, or to choose from a drop-down menu.

Task3: *Notification about products* – When a retailer publishes a product VDI that matches a customer’s search criteria the customer receives a notification.

Notification. Customers strongly appreciated this feature, giving it a mean score of 4.11 for all items in the questionnaires (ease of use, error messages, general quality). In general, they considered it slightly better than other services they had already used (4.0). One suggestion for improvement was to introduce a web archive allowing users to view the notifications they had received in the past.

Final notes. All participants thought that CONVERGENCE was very useful and that it could make a positive contribution to their productivity. Given that it satisfied their criteria for performance and general quality, they would be willing to use it as their main tool in this category of software.

The external observer noted that many participants (including the sales person) found it hard to exploit the new functionality offered by the application and that many tried to use it in the same way they would have used a classical search engine (such as Google). Participants were especially confused by the “Add Subscription” field, which they expected to fill in with free text. The observer suggested it might indeed be possible to use the field in this way. Once the user had inputted her free text, the system could then suggest search criteria corresponding to the text. In this way, the application would adapt to user needs.

3.2.4.1.2 Customer Focus Group

Participants who played the role of customers took part in a small focus group, discussing qualitative aspects of the CONVERGENCE system and the trial. In general they considered it very useful and were happy to use it (“*This is like many systems and services already found on the Internet, all brought together into a single system.*”). They found that searches were very fast and did not waste a lot of time (“*It would be awesome to find something almost instantly.*”) and

suggested new applications scenarios, including searching for a home to rent, searching for hotels with very specific details etc. They were pleased with the notification mechanism, the persistence of their subscriptions and the possibility of receiving immediate updates, a very important feature for this market.

More generally, they thought they would subscribe more often if there were better mechanisms to describe their subscription preferences. They were appreciative of CONVERGENCE notifications and liked the idea of being able to check that a product is genuine. At first, however, they had difficulties in understanding that this is not mandatory (*“What if I don’t want to buy something really genuine but I want something counterfeit?”*) and that CONVERGENCE actually allows users to search for any kind of goods including counterfeits. One interesting comment suggested that retailers might not like the efficiency of the system because it would reduce the time customers spent on their web sites.

Although they were generally satisfied with the technology, participants made a number of suggestions for improvement:

- Make the application adaptive: allow users to fill in a “free text” search box and then propose search criteria based on the content of the box (*“I would like to be able to search for something using my own description and my own words.”*).
- Let the client personalize the result list as she wishes: a client should be able to select the criteria used to sort results, e.g., retailer rating, price, relevance to the customer search criteria (*“I would like to sort the results as I wish, for example by price.”*)
- Create personal web folders where users can view their past notifications (*“It would be useful if you could store the notifications in an archive on the web.”*)

In summary, participants were willing to use CONVERGENCE and to recommend it to new users even though they knew it was still not complete. *“Personally I would use it. If you implement the text-based search and criteria selection, I would really use it.”*, *“You have a lot of work to do but I think it will be a good thing.”* and *“When will you finish this? Maybe I’ll be able to find a place to move then”*.

3.2.4.1.3 Retailer Questionnaire

Task 1: Register and login to application – like customers, the retailer was instructed to create a new account, filling in her first name, last name, email, password, etc.

Register and login. The retailer was satisfied with the login procedure giving it a mark of 4 out of 5 and considered it much better than other procedures she had used in the past.

Task 2: Product promotion over the internet- The retailer was instructed to import a Manufacturer Product VDI into her own database and to re-publish to the CONVERGENCE network, as a way of advertising a product.

Promotion of products over the Internet. The retailer considered this function to be essential to her business, giving a mark of 4 to all relevant items on the questionnaire (ease of use, error messages, general quality).

She suggested that to become a good tool for promoting products on the Internet the application needed a richer set of search criteria. She also observed that the “Promotion End Date” field was only useful for special offers and was not relevant to other kinds of promotion and product.

Task 3: Customer Feedback Management- The retailer was instructed to monitor customer feedback on a specific product.

Management of Customer Feedback. The retailer believed this function was useful for her work and considered that CONVERGENCE was slightly better than other services providing similar functionality. Here overall mark for this function was high (4/5). However, she would have appreciated a classification system, making it easier to read the results.

Final Notes. The retailer believed that CONVERGENCE could be useful for her work and thought it could improve her productivity. Given that CONVERGENCE met her quality criteria, she would be willing to recommend it to colleagues.

Like customers, the retailer had some difficulty in understanding the difference between CONVERGENCE and traditional search engines such as Google. The external observer noticed she was interested in learning how to structure her offering to satisfy customer searches. In general, this user was positively impressed, considering CONVERGENCE as a way of wrapping and integrating services already present on the Internet, in some cases improving their functionality.

3.2.4.1.4 Retailer Focus Group

During the focus group, the retailer expressed her satisfaction with the application (“*I like it! If it gets all these functionalities it would help me a lot!*” “*This is a very huge thing and a lot of work to do but it could turn into something very good at the end.*”). The CONVERGENCE feature, which most interested her, was the mechanism providing her with notifications when a product matched a customer’s search criteria. She also liked the concept of an authorized retailer - the ability of a retailer to prove that a product is “original” (“*I would like costumers to trust that the products I sell are genuine without having to go to the manufacturer – as they would have to do at present. If an authorization mechanism could get customers to trust me, it would help me a lot.*”).

The retailer also made several suggestions for improvement:

- Include a ranking mechanism and a rating field

“If a client subscribes to a product another retailer also has, who should be the first in the results list? You should add some kind of ranking to the system.”

-
- Add a report on customer search
 - “I would like to be able to find out what consumers are searching for*
 - Standardize search criteria and provide a broader range of descriptors
 - “Could this system tell me what the clients are searching for?”*
 - Add an attribute that identifies the availability of the product (in stock / not in stock / available on order)
 - Add a notification mechanism for the retailer including:
 - o data about customer subscriptions that did *not* match his products – the most frequently used search criteria
 - o data about search criteria used by customers – the products most frequently searched for
 - Specify the “Promotion End Date” only for special offers (in other situations, it doesn’t make sense)

The retailer believed that CONVERGENCE could be a major opportunity for small retailers, who are not usually visible in Google-like search results. This raises the prospect that large commercial companies could see CONVERGENCE as a threat to their hard-won visibility and try and block its expansion (*“I’m sure that sites like Amazon will do their best to bring CONVERGENCE down.”*). In these conditions, it is essential to exploit the advantages of CONVERGENCE. These include the possibility of collecting information about user subscriptions and making it available to retailers. As the retailer in the trial put it, this information would let me *“...improve my business changing the products that I sell or their description.”*

3.2.4.2 Summary

The results of the trial suggest that customers and retailers both appreciated CONVERGENCE, even though they were aware that it is still in an early stage of development. All the participants would be willing to use a later version of CONVERGENCE when it becomes available, making many suggestions about how to improve the application. On the customer side, the main demand was for greater freedom to personalize and classify search results. On the retailer side, the most important suggestion was that the application should provide more information about customers and their subscriptions (customer preferences, previous purchases etc.).

All participants appreciated the CONVERGENCE “authorization system” (the system used to certify the authenticity of VDIs) and the subscription service. There were several interesting comments on the practical implications of deploying CONVERGENCE.

- Customers suggested that CONVERGENCE could reduce retailer sales by cutting the time they spent on retailer web sites.
- The retailer argued that CONVERGENCE could be advantageous for small businesses, improving their visibility with respect to larger firms.

3.2.5 Smart Retailing (WIPRO)

This scenario, similar in many respects to the scenario tested in UTI, involves the application of CONVERGENCE to a smart retailing supply chain for electronic products. The users and beneficiaries are Manufacturers, Retailers and Customers.

Manufacturers create, store, publish and certify Product Type VDIs containing information about their products (e.g. the name of a product, a general description, physical and technical characteristics of the product). Manufacturers can also benefit from new flexible mechanisms for selling products to authorized Retailers.

Retailers: subscribe to Product Type VDIs published by Manufacturers; create and publish Retailers' Product Type VDIs, augmenting Manufacturer Product Type VDIs with information about Retailer promotions, special offers, sales, etc., and create Product Instance VDIs including new information such as customer ID, serial number and warranty details. The use of Product Instance VDIs when selling to customers gives retailers better control over the products they sell and better knowledge of their Customers.

Customers: search and subscribe for product VDIs, receive notifications about updates on product VDIs they have subscribed to, consult certified, reliable information about products; special services allow them to manage technical information about their products, warranties, information on repair services etc. Another special service allows them to buy a product using a POS.

3.2.5.1 End-User Trials

The sample for the WIPRO trial consisted of nine participants (seven male and two female) all with a university or other form of higher education. The trial population was relatively young with three participants in the 21-30 age group and six aged between 31 and 40. All had a good level of computer skills, using computers regularly both in their work and in their leisure activities. Like all the other participants in the trials they reported better skills on computers (4.44/5) than on tablets and smartphones, though even here they had relatively high skills (3.56). In the trial, two participants acted as customers, three as manufacturers and four as retailers. All participants were connected to WIPRO (as an employee, a customer or a supplier) but external to the project. The participants included one Business Analyst, one Business Consultant, one Customer, one Innovation Manager, one Manufacturer, one Project Engineer, two Project Managers and one Systems Analyst. The roles of the two additional manufacturers and one additional customer were played by three of the WIPRO employees.

During the trial one user dropped out – but later took part in the focus group playing the role of a customer.

3.2.5.1.1 *Manufacturer Questionnaire*

Task 1: Register and login to application - as in the other trials, participants were instructed to create a new account, filling in their first name, last name, email, password, etc.

Register and login. The three participants playing the role of manufacturers gave this function an average mark of 3.67 for ease of use, error messages and general quality.

Task 2: Create product VDI. In this task, the user was instructed to fill in the create product form with product information, including dimensions, weight, features, characteristics, etc. During the procedure, the user also has to define the type of license offered to Retailers who subscribe to the product.

Create product VDI. All the participants in the trial had already used services providing this kind of functionality, which is essential for their work. In general they perceived CONVERGENCE to be slightly better than these services (3.67), and gave it a good mark for general quality (4.0). One user suggested that the product could be improved by implementing a system to generate VDIs automatically, using file description files generated off-line.

Task 3: View created product. Once the user had created the product VDI, she was instructed to display it.

View created product. All participants had already used similar services but considered CONVERGENCE to be better (4.33). The scores for the different items on the questionnaire were good (mean: 3.78).

Task 4: Publish product VDI - In this task, the user was instructed to publish the VDI to the CONVERGENCE network. To do this, she had to select the product VDI and fill in a form containing the following items: name of the product; tags for Retailers, e.g.: Samsung LCD, HP Laptop). As part of the procedure she also defines the license terms for retailers subscribing to the product.

Publish product VDI. None of the participants had ever used a similar service before. However they all thought it was useful and gave it a very good score for ease of use (4.33). One interesting suggestion was to notify end-users when the VDI was published.

Final notes. According to participants, CONVERGENCE could make a useful contribution to their productivity, and might in fact replace the software they currently use. They would thus be willing to recommend it to their colleagues.

3.2.5.1.2 Retailer Questionnaire

Task 1: Register and login to application – This procedure was identical to the procedure for manufacturers.

Register and login. Users gave this procedure a high score for all items on the questionnaire (mean: 4.67). The only suggestion for improvement was to add a system for recovering lost passwords.

Task 2: Product creation - Once retailers had registered and logged, they were instructed to create and publish a new Product VDI, augmenting the Manufacturer Product Type VDI with information about promotions, etc.

Product creation. Two participants had already used this kind of service. For the other two, it was a novelty. There was general agreement that the general quality of the service was good (4.42) and better than that of the services participants had used previously (4.5). Suggested improvements included better ontologies and the introduction of two new functions, the first to display a list of suppliers, the second to display a list of recently published VDIs.

Task 3: Selling products using POS machine – When a customer buys a product using a POS machine, the application creates a new Product Instance VDI including the customer ID, the serial number of the product and warranty details.

Selling products using POS machine. Three participants reported that they had already used services providing this kind of functionality, which they considered useful for their business. For the remaining participant, it was a novelty. She later said she would like to introduce it as a way of expanding her business. Participants gave CONVERGENCE a good score on all the items in the questionnaire (mean: 4.08) and considered it to be better than other systems they had used previously (4.0).

Final notes. In general, participants strongly appreciated the application, thought it could be very useful for their business, and were willing to recommend it to others.

3.2.5.1.3 Customer Questionnaire

Task 1: Register and login to application. This procedure was identical to the procedure for manufacturers and retailers.

Register and login. Customers were satisfied with the procedure giving it an average score of 4 for the different items on the questionnaire. There were no requests or suggestions for improvement.

Task 2: Subscription to product. The customer was requested to subscribe to all product type VDIs with certain features or characteristics.

Subscription to product. One participant reported she had already used a similar system but that CONVERGENCE was slightly better. Other participants had never used anything similar. In general customers thought the subscription service was very useful, giving it a good score for all items on the questionnaire (mean 4).

Task 3: Buying products using POS machine –customers were instructed to choose a product from a list, display information about it and buy it using a simulated POS machine⁴.

Buying products using POS machine. Having already bought products online, participants appreciated this function, giving the CONVERGENCE application a good score for all the items on the questionnaire (mean score: 4.0), and judging it to be slightly better than other services they had used previously. One user expressed concern about the security of services made in this way.

Final notes. In general, customers appreciated the CONVERGENCE application, considered it as slightly better than other similar applications they had used previously, and were willing to recommend it to others. Users agreed that CONVERGENCE could facilitate and optimize online purchases.

The only problem noted by the external observer was an issue with the connection to the network that sometimes impacted performance.

3.2.5.2 Focus Group

In this trial, unlike the trial in UTI, the focus group brought all the participants together in a single group. During the focus group, participants expressed strong interest in the concepts underlying CONVERGENCE and its potential role in the retail industry. Their opinion of the application was highly positive (“*As a customer I would start using CONVERGENCE immediately!*”). Given, however, that the POS machine has yet to be implemented they would like to look at the product again, at a later stage in the development process. The participants very much liked the idea of the VDI as a container for digital data and thought that the use of the MPEG standard was a guarantee of quality. The features that interested them most were those making it easier to match supply to demand – in particular the use of expiry dates for publications and subscriptions, and the possibility of receiving notifications about product VDIs published after the date of a subscription. Some of the participants compared this feature to an RSS feed. Users thought the idea of making purchases through a POS was cool. However they were not confident in giving a final evaluation until they

⁴ The actual POS machine that will be used in the later stages of the trials is still in the implementation phase.

could test an actual implementation. All of them showed strong interest in CONVERGENCE technology, asking for more information about CONVERGENCE technology for licensing and digital signatures and about VDIs' internal data structure. One asked, *"Can I define my own VDI structure?"* and suggested the project should publish the information on its web site. However, they were also sceptical of the idea of a new content-centric network to replace today's Internet. (*"Are you really going to try to change the way the Internet works nowadays? How will you do that?"*).

The two issues where participants were most critical were the CONVERGENCE implementations of ontologies and security. As far as concerns ontologies, participants thought they needed to be much richer and better structured (*"Why don't you use a product domain ontology when you create product VDIs?"*). It should also be standardized (*"The retail industry really needs standardize the product information shared between manufacturers and retailers"*). As far as concerns security, participants pointed out that transactions often involve sensitive private information that needs to be very well protected.

At the end of the focus group, participants made a number of suggestions for improving CONVERGENCE. In general, they thought that it was extremely important to attract big manufacturers (e.g. Sony, Samsung) to the system. In their opinion, the only way of making CONVERGENCE into a success would be to attract the support of this kind of company. One user asked, pointedly, *"What is your strategy to attract big manufacturers to CONVERGENCE?"*

For several participants, CONVERGENCE'S main attraction is that it integrates several different technologies in a single system, reducing costs for retailers. However they thought it would be even more attractive if automation were pushed still further, making the system easier to use, reducing the cost of operating a CONVERGENCE system, in time and in money, and improving retailer satisfaction. (*"You should study how much money retailers can save by integrating CONVERGENCE with their systems"*). Participants suggested CONVERGENCE should incorporate neural network-based data mining, making it easier for users to classify and search for VDIs. Another possible improvement would be to provide improved support when a product is lost or stolen. (*"If a product of mine is stolen, can I prove it is really mine through its VDI ownership?"*). This is an issue tightly connected to questions of security (*"How can I be sure that all the data inside my VDIs is secure?"*). What would happen if a user used her smart card and it had been compromised by a virus? Users expressed concern that this would be especially dangerous if the system were used to carry out economic transactions.

3.2.5.3 Summary

The participants in the WIPRO trial were positively impressed by CONVERGENCE services and made no serious criticism of the functionality on offer. Readers should recall that participants saw only a preliminary version of the system and that some functionality – notably the working of the POS – was simulated. However, participants in the trial were aware of these limitations and focused primarily on the match between CONVERGENCE functionality and the needs of the retail industry.

During the focus group, there was still a degree of worry and confusion about some aspects of CONVERGENCE, notably security (“who guarantees that my data is really secure”; “who guarantees that I am still the owner of my VDIs even if they are stolen or I lose them?”). These doubts led to queries about legal and regulatory issues. From the point of view of future development the main demands were for better-structured ontologies, shared between all actors in the value chain (manufacturers, retailers and customers), a more attractive human computer interface and higher performance.

Participants nonetheless saw several advantages in the CONVERGENCE offering, in particular the integration of a range of services and technologies into a single platform. They were all attracted by the idea of using just one platform to publish product catalogues, search for products, and sell products via a POS, and collect customer feedback – a solution which could lead to major savings in time, money and effort. Participants suggested that CONVERGENCE’s success in the retail industry would depend on how far it could automate these services. This, they thought, was the only way CONVERGENCE could attract large manufacturers and become a serious success.

In sum, interest in CONVERGENCE was so strong that several participants asked to test the product again, once it was more mature and expressed the view that many of their colleagues would also be interested in testing the product.

3.3 Developer Feedback

The final stage of the evaluation consisted in the collection of feedback from developers who had worked on the development of the applications used in the trials. Readers should note that these were not the same programmers who developed the CONVERGENCE middleware and that they came from different partner organizations. For obvious reasons, the number of participants was small (seven). Nonetheless their responses provide interesting insights into the process of developing applications with the CONVERGENCE middleware. The details of their responses are provided in Annex 2.

In general, applications programmers had no difficulties in using CONVERGENCE’s numerous APIs to access CONVERGENCE tools. They also experienced no major difficulties in understanding the methods exposed by the APIs. The main problems experienced by developers were a consequence of the relative immaturity of the software. Some complained about a lack of coding examples and inadequate documentation. As a result the initial learning curve was steep. Developers believed that some aspects of the system still required optimization. In some cases, they had experienced difficulties in connecting engines – perhaps because CONVERGENCE offered more than one way of doing this. In others, they found that methods were empty or did not return the expected result. The fact that the specification of the middleware had been driven by a set of highly diverse user scenarios meant that not all functionality was implemented equally well. Finally, developers noted a shortage of adequate security options. There was general agreement that the middleware needed better documentation with more coding examples. Another common

demand was for methods to acquire VDI information linking it by its ID. In what follows, we summarize developer feedback on specific aspects of the system.

USER REGISTRATION (Common Tool)

Developers reported that this tool suffered from bugs and unimplemented features. Suggestions for improvement included better support for customization, and support for Safari, Firefox and IE Explorer as well as Chrome. Developers also requested support for anonymous access and better security mechanisms.

CONTENT REGISTRATION (Common Tool)

Developers found this tool very easy to use. Although they also found some bugs they considered the functionality it offered as sufficient for their needs. Here too the main complaints were about poor documentation and a lack of coding examples. The main suggested improvements were better security mechanisms and browser compatibility.

PUBLISH VDI (Common Tool)

This tool – essential for the publication of VDIs and the correct orchestration of relevant engines - was considered to be more stable than the others. Nonetheless there were several requests for improvement. Developers considered that the performance of the function was slow. One suggestion for improvement was that the tool could memorize tags used during the publication of VDIs and re-use them as hints when users have to set the metadata for other VDIs.

UNPUBLISH VDI (Common Tool)

Developers considered that this tool has bugs and still needs a lot of implementation work. The tool was released only shortly before the trials and for this reason was not included in the trial applications. Developers pointed out that it could be very useful, providing support for the concept of digital forgetting and for the revocation of VDIs from the CoMid.

REVOKE VDI (common tool)

Developers were similarly critical of the Revoke VDI tool, which as, a superset of Unpublish VDI, suffered from the same problems. Developers believed that this tool is of great strategic importance for the future Internet.

SUBSCRIPTION VDI (Common tool)

Developers agreed that this is a mature tool, with no major problems. They also stated that it had made a major contribution to their productivity by handling the matching between subscriptions and publications automatically. The tool is simple with very few methods and makes it easy to create subscriptions to content present or likely to appear in the cloud. Suggestions for change include improvements to the way information is recovered after a match and the introduction of new functionality.

BROWSE EVENT REPORT (common tool)

Developers found this an effective tool with few implementation issues. Developers were especially impressed by the efficiency with which the tool parsed ERR and ER. Developers suggested it would be useful to introduce new options for the channels used to transmit Event Reports and the intervals at which they are sent. Another suggestion was to provide parsing and browse event functionality for publications as well as subscriptions.

CREATE ANNOTATION REPORT (Common Tool)

Developers were satisfied with this tool and found no serious problems with the implementation. There was general agreement that applications should make broader use of this tool, which would allow them to add annotations to any VDI present in a particular scenario (e.g. VDIs for photos, videos, podcasts and products).

Questions to developers on the applications.

At the time of writing, the applications to be used in the trials are at a relatively early stage in their development. Developers therefore considered that they had nothing to add with respect to the feedback they had already given about the common tools.

In the next phase of the evaluation, we will eliminate this part of the questionnaire leaving the evaluation of the applications to end-users.

4 Conclusions

As planned, the first stage of the CONVERGENCE trials involved about 60 participants (52 end users and 7 developers). Many participants expressed the view that CONVERGENCE applications could be potentially valuable for their businesses, once they had reached a more mature stage in their implementation. This is a strong point in favour of the project.

However, the trial also detected a number of problems, which we summarize below. As the reader will discover some concerned the *substance* of CONVERGENCE and the applications. Others concerned *the way this substance is communicated* to participants in the trials. In what follows, we formulate a series of recommendations on both counts.

1. *Functionality*. The goal of the CONVERGENCE project has never been to produce advanced end-user applications or complete information systems but to develop and test new techniques of content-centric networking. However, the transparent nature of CONVERGENCE (a desirable feature!) meant that users did not always appreciate the underlying features of VDIS and of CONVERGENCE. Furthermore, the functionality shown in the first phase of the trials was not sufficiently rich to illustrate the full advantages of the system,

Recommendation. The applications used in future trials should offer the full set of functionally specified in D8.1. In addition to this functionality it may be helpful (only for the trials – not for real-life applications) to create pop up text boxes providing additional information about what CONVERGENCE is doing when the user performs a particular action (e.g. creating a VDI, adding metadata to the VDI, defining a license for a VDI, publishing a VDI, subscribing to a VDI etc.). The same functionality would be extremely useful for demonstrations.

2. *Usability*. Participants in the user trial gave the CONVERGENCE relatively poor marks for usability, reporting that even simple functions like login and register lacked essential features found in successful commercial applications. Many participant complaints concerned issues already identified during the expert review but which were not resolved in time for the trial.

Recommendation. Implement all suggestions from the expert review. Review all menu items, buttons and error messages. Review use of fonts and colours. Submit all applications to another round of expert review, and implement recommendations before releasing them for the next stage of the trials.

3. *Aesthetics*. Several participants in the user trial found the CONVERGENCE applications to be visually unattractive.

Recommendation. Use a graphics artist (not a programmer) to design the layout of interface and graphics elements. Test sketches of designs with potential users.

Note: The Consortium has already decided to implement this recommendation

4. *Security.* Many participants expressed concern about the security of CONVERGENCE applications, (which was not shown in this phase of the trials). We believe this is not an issue with CONVERGENCE itself but with the way information on CONVERGENCE security was communicated to users.

Recommendation. Provide participants in the next phase of the trials with more information about CONVERGENCE security (use of strong authentication, strong encryption, digital signatures etc.). Design the applications to demonstrate some or all of CONVERGENCE'S security features. Ensure that these features are salient in applications and their user interfaces.

5. *Anonymity.* In several of the trials, participants expressed concern that CONVERGENCE implied a loss of anonymity, taking on a big brother role. This is partly a communications issue with the information provided to users (in reality, CONVERGENCE allows for fully anonymous access), but it is partly a question of substance (none of the applications showed this feature).

Recommendation. Communicate the message that CONVERGENCE can provide different levels of user authentication according to the needs of specific applications (for instance full authentication for payments services, anonymous access for applications where this is necessary to meet user requirements). Show these possibilities in the next round of CONVERGENCE applications, perhaps by allowing users to register with a simple click, without providing personal details (e.g. for the retail scenario), or by allowing them to certify they are a part of a group (e.g. LMU students) without providing their personal identify.

6. *Value for developers.* Developers were generally happy with the functionality provided by the CONVERGENCE middleware, in some cases considering that it made a significant contribution to their productivity. The main requests were for bug and performance fixes and for improved documentation.

Recommendation: fix bugs and performance issues. Provide better documentation with coding examples.

5 ANNEX

5.1 Expert Review usability issue tables

The table below lists all usability issues identified during the usability analysis. The table summarizes the severity of the issue from a user point of view, suggested solutions and the status of the implementation in the software.

Legend

- **Type** – Indicates the type of issue found
 - o *Interface* – Graphical/Ergonomy issues
 - o *Logic* – Issues due to logic in the procedure
 - o *Data*–Issues due to lacking of controls in user data entry
- **Severity** – Indicates the severity of the issue
 - o *Major* –Issues that could prevent the user from using the software
 - o *Medium* – Issues causing annoyance
 - o *Minor* – Minor issues
- **Description** – Short description of the issue
- **Suggested solution** – Proposed solution for solving the issue
- **Status** – The status of the issue

- *Solved*⁵
- *Pending*⁶
- *Not considered*⁷

5.1.1 “Photos in the cloud and down to earth” (ALI)

Severity	Description	Recommendation/Notes	Status
Major	It is possible to register with the same email but with two different username		Solved
Major	No validity check before uploading picture	It is also possible to upload movie	Solved
Major	Subscription Date in the past	Consider to avoid to allow subscription date in past	Pending
Major	No double check for password in registration form		Solved
Medium	Password recovery is missing	Consider using email as login username	Pending
Medium	No possibility to change user profile /password/email		Pending
Medium	The list of recent publications is badly ordered and doesn't show more than 5 pictures	Is this meaningful if hundreds of users upload million pictures? Consider using a random selection of pictures (as in Flickr)	Solved

⁵ Issues are deemed to be solved when they have been satisfactorily resolved by a new software release

⁶ Issues are deemed to be pending when work on a solution is in progress and the solution will be included in the final release

⁷ The “Not Considered” status indicates that the issue has been identified but it has been decided for a trade off in the software implementation.

Medium	Top logos lead to the Jboss menu	Unlink	Solved
Minor	No message if login/registration fails	Provide message (i.e. existing login name, existing email, ...)	Solved
Minor	Ratio between photo and info are odd	Increase the photo size for example decreasing the info box size (seconds are probably not useful)	Solved
Minor	Font colours lack of contrast (white over light gray – gray over dark grey)	Use proper set of colours to increase readability	Pending
Minor	Too much detailed information (time/data)	Consider using the approach – today hh:hh – Yesterday hh:mm – dd/mm/YY hh:mm	Pending
Minor	Cancel button missing in publication and subscription	What can I do if I entered there and I don't want to do nothing?	Solved
Minor	Name for licensing option are too much technical	Make them more understandable for users and supply help text	Solved
Minor	Missing user help or field description	It would be helpful to have a description for fields where users are asked to insert data	Pending
Minor	Tag and Owners button, allow to insert a new field also if no tag or owners are added	This creates confusion. There is no distinct separation between fields	Solved
Minor	No error indication after a failure	Provide an indication of the error close to the field	Solved
Minor	Photo thumbnails are small	Considering to enlarge a bit	Solved
Minor	Photo cannot be rendered at full resolution	Store a resized version for faster rendering	Solved

Minor	There is no button for content creation in the single view	Consider adding “create video” button in my video view, and a “create notification” button in my notifications view	Solved
Minor	Two title lines in the top line is redundant than the title of view	Consider to eliminate one	Pending
Minor	The style of the Home icon is incoherent with other menu items	Consider using only the icon, or only the text, or both	Pending
Minor	Multicoloured band doesn't allow to perceive right picture colours	Consider using a single colour, eventually a gradient, but not from 0% to 100%	Pending
Minor	Issue in scrolling browser windows	If the size of the windows is smaller than contents, if the scrollbar is used the content is not redrawn	Pending
Minor	Back button is missing Registration Failed	Consider inserting	Pending
Minor	Lists for field (Localization, Spoken Languages)	Consider to let user choose from a precompiled list	Pending
Minor	Title filed accept also blank spaces before the name, but in reality they are deleted	Consider to improve the coherence check	Pending

5.1.2 “Videos in the Cloud and Down to Earth” (FMSH)

Severity	Description	Recommendation/Notes	Status
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Major	It is possible to register with the same email but with two different username		Solved
Major	No validity check before uploading picture	It is also possible to upload movie	Solved
Major	Subscription Date in the past	Consider to avoid to allow subscription date in past	Solved
Major	No double check for password in registration form		Solved
Major	Password recovery is missing	Consider using email as login username	Pending
Medium	No possibility to change user profile /password/email		Pending
Minor	Button Label in registration form is "login"	Change label with "Register"	Pending
Minor	Missing a "cancel" button in registration form	Consider to put a button to come back in the login page other than back page with browser	Pending
Minor	Incoherent naming pages/button in subscription menu	i.e. notification in menu – my notification in page Due to the fact that the page are personal consider to remove "my" from the various menu	Pending
Minor	Lists for field (Localization, Spoken Languages)	Consider to let user choose from a precompiled list	Pending
Minor	Tag Suggestions	Consider to format as bold the tag keyword	Pending
Minor	Title filed accept also blank spaces before the name, but in reality they are deleted	Consider to improve the coherence check	Pending

Minor	In “my subscription” table date indicates the end of subscription	Consider to rename it in “end of subscription”	Pending
Minor	No message if login/registration fails	Provide message (i.e. existing login name, existing email, ...)	Solved
Minor	Position of the notification box	Clicking the video menu the new commands are stacked below the notification box and it creates some confusion. Consider using a dropdown menu from the top menu	Pending
Minor	Sometimes it has been recorded some delay in system reply	Consider to insert some sort of indicator (like spinner) to give a feedback to the user	Pending
Minor	Fonts are different	Considering to use the same characters for all the application	Pending
Minor	Cancel button missing in publication and subscription	What can I do if I entered there and I don't want to do nothing?	Solved
Minor	Name for licensing option are too much technical	Make them more understandable for users and supply help text	Solved
Minor	Missing user help or field description	It would be helpful to have a description for fields where users are asked to insert data	Pending
Minor	Tag and Owners button, allow to insert a new field also if no tag or owners are added	This creates confusion. There is no distinct separation between fields	Solved
Minor	No error indication after a failure	Provide an indication of the error close to the field	Solved

5.1.3 “Smart Podcast” (LMU)

Severity	Description	Recommendation/Notes	Status
Major	No validity check for input fields	Consider to check the data consistency in any input field (i.e. kind of file to upload for podcast creator service)	Solved
Major	Subscription Date in the past	Consider to avoid to allow subscription date in past	Solved
Major	Not working link	Remove the not working menu/function	Solved
Medium	Feedback for operation on pop-up is missing	Do to some delay in activities there is no indication for user that the operation has been started. Consider to put some kind of flag or spinner to indicate this status.	Solved
Medium	Pop-up use	It can be considered an annoyance by users; consider to eliminate or in alternative warn the user in the JavaScript activation in manual or in a screen note	Solved
Minor	Wrong indication in login failure	For name or password error the message return that both are wrong	Solved
Minor	Missing an indication about how to create an annotation	Consider to add somewhere a proper message, visible as long as the functionality is working.	Solved
Minor	Text “search for lecture podcast” doesn’t disappear whenever the user try to insert text	It creates a possible problem in writing the words and slow down the user interaction	Solved
Minor	Title of page	Consider to put somewhere the title the information related to the lesson	Solved

Minor	Few lines in the annotation for a good navigation	Consider to increase numbers of lines and to add the possibility to see all annotation's list all together. In principle for a lesson it can be tents of annotation per seconds.	Solved
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5.1.4 "Smart Retailing" (UTI)

Severity	Description	Recommendation/Notes	Status
Major	No validity check for input fields	Consider to check the data consistency in any input field	Solved
Major	Subscription Date in the past	Consider to avoid to allow subscription date in past	Solved
Major	Home button brings back to "global" main menu	The two stage clients-retailers must be split during trials and in general The home button brings the application to the root of both the possibilities. Also the home button works as a sort of logout. Consider to put a logout menu for bring back to the initial screen and a home button for the main menu of single application (retailer/client)	Solved
Medium	Popup use	It can be considered an annoyance by users; consider to eliminate or in alternative warn the user in the JavaScript activation in manual or in a screen note	Solved
Medium	Retailer Import menu	Due to the low interaction needed for the user consider to automatize the process for trials and do not ask the user to enter and click in menu	Pending

Minor	Back icon in the upper menu cycles through menu	Consider to delete, or change in a more understandable command	Solved
Minor	Icons lack of clearness	Consider to use 2D icon or substituting with text menu	Solved
Minor	Email dispatching	Consider to give the user the opportunity to digest the notification email (immediate, per hour, per day, per week...)	Pending
Minor	Sometimes it has been recorded some delay in system reply	Consider to insert some sort of indicator (like spinner) to give a feedback to the user	Solved
Minor	Title of page	Consider to put above the title of the application and make it enhanced	Solved
Minor	Cancel button in login is not evident	The "x" cancel button should be put in the same level of login and in the same style	Solved
Minor	Bullet point not aligned in menu	Consider to put inline or to delete	Solved
Minor	Free text search in browse menu lacks of information	If available Boolean search or wildcards and in general, put a description of how to use the field.	Solved
Minor	Number of results selector	The search should be automatically repeated when the number of result is chosen	Solved
Minor	End of promotion	To improve the usability of the field consider to add also a countdown (i.e. two days and 5 hours are missing)	Solved
Minor	Adding a TAG in "add" menu	Tag button should refer directly to the tag line. Consider to put an empty text field close to tags and the icon or text directly to the right of line	Solved

Minor	Menu lack of clearness	Consider to put the name of the function directly above the menu of the possible operation (i.e. Add Subscription /-Add /-List)	Pending
Minor	Empty tags allowed	Consider to avoid the possibility to add an empty tag	Solved
Minor	Cells size	Consider to verify how the cells contains larger text than in the demo, consider to resize the data columns allow	Solved

5.1.5 “Smart Retailing” (WIPRO)

Severity	Description	Recommendation/Notes	Status
No double check for password in registration form	Major		Solved
Subscription Date in the past	Major	Consider to avoid to allow subscription date in past	Solved
No validity check before a reference	Minor	Consider at least a check on file extension	Pending

Password recovery is missing	Minor	Consider to use email as login username	Pending
No possibility to change user profile /password/email	Minor		Pending
Red message on successful actions	Minor	Consider to use red color only for errors	Pending
Missing main title for input form	Minor	Consider to add a title to the input form (i.e. Subscription Form, Product Creation, ...) or in alternative to highlight the active menu button	Pending
Not indication for the user in which menu is	Minor	Consider to add some navigation indication	Pending
Missing explanation for input forms	Minor	Consider to use tooltips for additional help and main objectives for the function	Pending

Add tag button allowed on empty tag field	Minor	Consider to let add a tag field only if the field is already filled	Pending
Coherence check missing	Minor	Consider to add a coherence check for any field in the various forms	Pending
Product resources should be shown	Minor	Actually resources can only be download, consider to add a preview	Pending
Title filed accept also blank spaces before the name, but in reality they are deleted	Minor	Consider to improve the coherence check	Pending
Logo positions occupies space for forms	Minor	Consider to move logos in other position without wasting space for forms	Pending

5.2 End Users Questionnaires (Templates)

5.2.1 Pre-Trial Questionnaire (For All Scenarios)

<i>ID</i>	
<i>Gender</i>	<input type="checkbox"/> <i>M</i> <input type="checkbox"/> <i>F</i>
<i>Age</i>	<input type="checkbox"/> <21 <input type="checkbox"/> 21 to 30 <input type="checkbox"/> 31 to 40 <input type="checkbox"/> 41 to 50 <input type="checkbox"/> >50
<i>Highest Educational qualification</i>	<input type="checkbox"/> <i>High school leaving certificate</i> <input type="checkbox"/> <i>Ph.D</i> <input type="checkbox"/> <i>Bachelor's degree</i> <input type="checkbox"/> <i>Master's degree</i> <input type="checkbox"/> <i>Other</i>
<i>Occupation</i>	

Use of computers during your work

<i>I use computer/internet in my work</i>	<input type="checkbox"/> <i>Yes</i> <input type="checkbox"/> <i>No</i>
<i>For how many years have you used computer/internet in your work?</i>	<input type="checkbox"/> <3 <input type="checkbox"/> from 3 to 8 <input type="checkbox"/> >8
<i>How many hours a day do you use the computer/internet?</i>	<input type="checkbox"/> <3 <input type="checkbox"/> from 3 to 8 <input type="checkbox"/> >8

Use of computers during your leisure time

<i>I use a computer/internet during my leisure time</i>	<input type="checkbox"/> <i>Yes</i> <input type="checkbox"/> <i>No</i>
<i>For how many years have you used computer/internet in your leisure time?</i>	<input type="checkbox"/> <3 <input type="checkbox"/> from 3 to 8 <input type="checkbox"/> >8
<i>How many hours a day do you use computer/internet in your leisure time?</i>	<input type="checkbox"/> <3 <input type="checkbox"/> from 3 to 8 <input type="checkbox"/> >8

Other information

<i>How would you rate your skill in using</i>	<i>Very low</i>	<i>Low</i>	<i>Average</i>	<i>High</i>	<i>Very high</i>
<i>Computer</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>The Internet</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Smart phones/Tablets etc.

Now you have filled in this initial form you can start the trial

5.2.2 Post-Trial Questionnaire for ALINARI

“Photos in the Cloud and Down to Earth”

WARNING:

Please don't close this window, in the online version.

If you close it, you have to refill totally this form.

ID

<i>To participate in the trial you had to register and login. Please give us your impression of these procedures:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have.</i>					

<i>Before using CONVERGENCE had you ever uploaded a new photo using a computer?</i>					<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>
	<i>How would you score CONVERGENCE in comparison with other systems you have used to upload photos in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>How would you score CONVERGENCE photo upload with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE had you ever published a photo using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used to publish photos in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE photos publishing with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE had you ever subscribed to a photo using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used to publish photos in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE photo subscriptions with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

		<i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i>				<input type="checkbox"/> No <input type="checkbox"/> Yes	
IF NO		<i>Too slow</i>				<input type="checkbox"/>	
		<i>Too many bugs/problems</i>				<input type="checkbox"/>	
		<i>Too complicated to use</i>				<input type="checkbox"/>	
		<i>Inadequate error messages/too difficult to recover from errors</i>				<input type="checkbox"/>	
		<i>I already use a better system</i>				<input type="checkbox"/>	
		<i>There are too few users</i>				<input type="checkbox"/>	
		<i>Other</i>					
	<u>FORM COMPLETEThank you!</u>						
		<i>Would you consider using CONVERGENCE instead of the applications you use today?</i>				<input type="checkbox"/> No <input type="checkbox"/> Yes	
IF YES	IF NO	<i>Too slow</i>				<input type="checkbox"/>	
		<i>Too many bugs/problems</i>				<input type="checkbox"/>	
		<i>Too complicated to use</i>				<input type="checkbox"/>	
		<i>Inadequate error messages/too difficult to recover from errors</i>				<input type="checkbox"/>	
		<i>I already use a better system</i>				<input type="checkbox"/>	
		<i>There are too few users</i>				<input type="checkbox"/>	
		<i>Other</i>					
		<u>FORM COMPLETEThank you!</u>					
IF YES			<i>Not at all</i>	<i>A little</i>	<i>Like any other program</i>	<i>A lot</i>	<i>A huge amount</i>
	<i>How much do you think CONVERGENCE could contribute to your productivity at work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<i>In your choice how important is CONVERGENCE's</i>	<i>Not important at all</i>	<i>Not very important</i>	<i>So and so</i>	<i>Important</i>	<i>Very important</i>
	<i>Performance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<i>Ease of use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<i>Error messages/ease of recovering from errors?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<i>Overall quality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<i>I would recommend CONVERGENCE to a colleague</i>				<input type="checkbox"/> Yes	<input type="checkbox"/> No
<u>FORM COMPLETE.....Thank you!</u>						

5.2.3 Post-Trial Questionnaire for FMSH

“Videos in the Cloud and Down to Earth”

WARNING:

Please don't close this window, in the online version.

If you close it, you have to refill totally this form.

<i>ID</i>	
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<i>To participate in the trial you had to register and login. Please give us your impression of these procedures:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have.</i>					

<i>Before using CONVERGENCE had you ever uploaded a new video using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE video upload with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>What features would do you add?</i>	
<i>What features would you eliminate?</i>	
<i>Please add any other comments you may have</i>	

<i>Before using CONVERGENCE had you ever published a video using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used to publish videos in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE video publishing with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>What features would do you add?</i>	
<i>What features would you eliminate?</i>	
<i>Please add any other comments you may have</i>	

<i>Before using CONVERGENCE had you ever subscribed to a video using a computer?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
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IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>
	<i>How would you score CONVERGENCE in comparison with other systems you have used to publish videos in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>How would you score CONVERGENCE video subscriptions with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					

<i>What features would you eliminate?</i>	
<i>Please add any other comments you may have</i>	

<i>Before using CONVERGENCE had you ever subscribed to a video using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used to publish videos in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE video subscriptions with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					

Please add any other comments you may have

<i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i>		<input type="checkbox"/> No <input type="checkbox"/> Yes				
IF NO	<i>Too slow</i>	<input type="checkbox"/>				
	<i>Too many bugs/problems</i>	<input type="checkbox"/>				
	<i>Too complicated to use</i>	<input type="checkbox"/>				
	<i>Inadequate error messages/too difficult to recover from errors</i>	<input type="checkbox"/>				
	<i>I already use a better system</i>	<input type="checkbox"/>				
	<i>There are too few users</i>	<input type="checkbox"/>				
	<i>Other</i>					
<u>FORM COMPLETEThank you!</u>						
<i>Would you consider using CONVERGENCE instead of the applications you use today?</i>		<input type="checkbox"/> No <input type="checkbox"/> Yes				
IF YES	IF NO	<i>Too slow</i>	<input type="checkbox"/>			
		<i>Too many bugs/problems</i>	<input type="checkbox"/>			
		<i>Too complicated to use</i>	<input type="checkbox"/>			
		<i>Inadequate error messages/too difficult to recover from errors</i>	<input type="checkbox"/>			
		<i>I already use a better system</i>	<input type="checkbox"/>			
		<i>There are too few users</i>	<input type="checkbox"/>			
		<i>Other</i>				
<u>FORM COMPLETEThank you!</u>						
IF YES		<i>Not at all</i>	<i>A little</i>	<i>Like any other program</i>	<i>A lot</i>	<i>A huge amount</i>

<i>How much do you think CONVERGENCE could contribute to your productivity at work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>In your choice how important is CONVERGENCE's</i>	<i>Not important at all</i>	<i>Not very important</i>	<i>So and so</i>	<i>Important</i>	<i>Very important</i>
<i>Performance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ease of use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from errors?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I would recommend CONVERGENCE to a colleague</i>				<input type="checkbox"/> Yes	<input type="checkbox"/> No
<u>FORM COMPLETE.....Thank you!</u>					

5.2.4 Post-Trial Questionnaire for LMU

“The Augmented Lecture Podcast”

5.2.4.1 Student

WARNING:

Please don't close this window, in the online version.

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<i>ID</i>	
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<i>To participate in the trial you had to register and login. Please give us your impression of these procedures:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have.</i>					

<i>Before using CONVERGENCE had you ever “searched for lecture podcast” using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE this application with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE had you ever “watched lecture podcast” using a computer?</i>					<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE had you ever “annotated lecture podcast” using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE had you ever “subscribed to annotation” using a computer?</i>					<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

		<i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i>					<input type="checkbox"/> No <input type="checkbox"/> Yes
IF NO		<i>Too slow</i>					<input type="checkbox"/>
		<i>Too many bugs/problems</i>					<input type="checkbox"/>
		<i>Too complicated to use</i>					<input type="checkbox"/>
		<i>Inadequate error messages/too difficult to recover from errors</i>					<input type="checkbox"/>
		<i>I already use a better system</i>					<input type="checkbox"/>
		<i>There are too few users</i>					<input type="checkbox"/>
		<i>Other</i>					
	<u>FORM COMPLETEThank you!</u>						
		<i>Would you consider using CONVERGENCE instead of the applications you use today?</i>					<input type="checkbox"/> No <input type="checkbox"/> Yes
IF YES	IF NO	<i>Too slow</i>					<input type="checkbox"/>
		<i>Too many bugs/problems</i>					<input type="checkbox"/>
		<i>Too complicated to use</i>					<input type="checkbox"/>
		<i>Inadequate error messages/too difficult to recover from errors</i>					<input type="checkbox"/>
		<i>I already use a better system</i>					<input type="checkbox"/>
		<i>There are too few users</i>					<input type="checkbox"/>
		<i>Other</i>					
		<u>FORM COMPLETEThank you!</u>					
IF YES			<i>Not at all</i>	<i>A little</i>	<i>Like any other program</i>	<i>A lot</i>	<i>A huge amount</i>
	<i>How much do you think CONVERGENCE could contribute to your productivity at work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>In your choice how important is CONVERGENCE's</i>	<i>Not important at all</i>	<i>Not very important</i>	<i>So and so</i>	<i>Important</i>	<i>Very important</i>
<i>Performance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ease of use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from errors?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I would recommend CONVERGENCE to a colleague</i>				<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>
<u>FORM COMPLETE.....Thank you!</u>					

5.2.4.2 Lecturer

WARNING:

Please don't close this window, in the online version.

If you close it, you have to refill totally this form.

<i>ID</i>	
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<i>To participate in the trial you had to register and login. Please give us your impression of these procedures:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have.</i>					

<i>Before using CONVERGENCE had you ever “created podcast components and lecture podcasts” using a computer?</i>					<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>
	<i>How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

		<i>Now you have seen CONVERGENCE do you think it could be useful for you work?</i>				<input type="checkbox"/> No <input type="checkbox"/> Yes	
IF NO		<i>Too slow</i>				<input type="checkbox"/>	
		<i>Too many bugs/problems</i>				<input type="checkbox"/>	
		<i>Too complicated to use</i>				<input type="checkbox"/>	
		<i>Inadequate error messages/too difficult to recover from errors</i>				<input type="checkbox"/>	
		<i>I already use a better system</i>				<input type="checkbox"/>	
		<i>There are too few users</i>				<input type="checkbox"/>	
		<i>Other</i>					
	<u>FORM COMPLETEThank you!</u>						
		<i>Would you consider using CONVERGENCE instead of the applications you use today?</i>				<input type="checkbox"/> No <input type="checkbox"/> Yes	
IF YES	IF NO	<i>Too slow</i>				<input type="checkbox"/>	
		<i>Too many bugs/problems</i>				<input type="checkbox"/>	
		<i>Too complicated to use</i>				<input type="checkbox"/>	
		<i>Inadequate error messages/too difficult to recover from errors</i>				<input type="checkbox"/>	
		<i>I already use a better system</i>				<input type="checkbox"/>	
		<i>There are too few users</i>				<input type="checkbox"/>	
		<i>Other</i>					
	<u>FORM COMPLETEThank you!</u>						
IF YES			<i>Not at all</i>	<i>A little</i>	<i>Like any other program</i>	<i>A lot</i>	<i>A huge amount</i>
	<i>How much do you think CONVERGENCE could contribute to your productivity at work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>In your choice how important is CONVERGENCE's</i>	<i>Not important at all</i>	<i>Not very important</i>	<i>So and so</i>	<i>Important</i>	<i>Very important</i>
<i>Performance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ease of use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from errors?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I would recommend CONVERGENCE to a colleague</i>				<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>
<u>FORM COMPLETE.....Thank you!</u>					

5.2.5 Post-Trial Questionnaire for UTI

“Smart Retailing Trials”

5.2.5.1 Retailer

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<i>ID</i>	
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<i>To participate in the trial you had to register and login. Please give us your impression of these procedures:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have.</i>					

<i>Before using CONVERGENCE, have you ever promoted your products on the Internet (except your website)?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE had you ever been able to monitor the feedback of the customers to your promoted products?</i>					<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>
	<i>How would you score CONVERGENCE in comparison with other systems used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

		<i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i>				<input type="checkbox"/> No <input type="checkbox"/> Yes	
IF NO		<i>Too slow</i>				<input type="checkbox"/>	
		<i>Too many bugs/problems</i>				<input type="checkbox"/>	
		<i>Too complicated to use</i>				<input type="checkbox"/>	
		<i>Inadequate error messages/too difficult to recover from errors</i>				<input type="checkbox"/>	
		<i>I already use a better system</i>				<input type="checkbox"/>	
		<i>There are too few users</i>				<input type="checkbox"/>	
		<i>Other</i>					
	<u>FORM COMPLETEThank you!</u>						
		<i>Would you consider using CONVERGENCE instead of the applications you use today?</i>				<input type="checkbox"/> No <input type="checkbox"/> Yes	
IF YES	IF NO	<i>Too slow</i>				<input type="checkbox"/>	
		<i>Too many bugs/problems</i>				<input type="checkbox"/>	
		<i>Too complicated to use</i>				<input type="checkbox"/>	
		<i>Inadequate error messages/too difficult to recover from errors</i>				<input type="checkbox"/>	
		<i>I already use a better system</i>				<input type="checkbox"/>	
		<i>There are too few users</i>				<input type="checkbox"/>	
		<i>Other</i>					
	<u>FORM COMPLETEThank you!</u>						
IF YES			<i>Not at all</i>	<i>A little</i>	<i>Like any other program</i>	<i>A lot</i>	<i>A huge amount</i>
	<i>How much do you think CONVERGENCE could contribute to your productivity at work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>In your choice how important is CONVERGENCE's</i>	<i>Not important at all</i>	<i>Not very important</i>	<i>So and so</i>	<i>Important</i>	<i>Very important</i>
<i>Performance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ease of use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from errors?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I would recommend CONVERGENCE to a colleague</i>				<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>
<u>FORM COMPLETE.....Thank you!</u>					

5.2.5.2 Customer

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<i>To participate in the trial you had to register and login. Please give us your impression of these procedures:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have.</i>					

<i>Before using CONVERGENCE had you ever “subscribed to product” using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE had you ever been digitally informed about the promotions of products that you are interested?</i>					<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

		<i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i>				<input type="checkbox"/> No <input type="checkbox"/> Yes	
IF NO		<i>Too slow</i>				<input type="checkbox"/>	
		<i>Too many bugs/problems</i>				<input type="checkbox"/>	
		<i>Too complicated to use</i>				<input type="checkbox"/>	
		<i>Inadequate error messages/too difficult to recover from errors</i>				<input type="checkbox"/>	
		<i>I already use a better system</i>				<input type="checkbox"/>	
		<i>There are too few users</i>				<input type="checkbox"/>	
		<i>Other</i>					
	<u>FORM COMPLETEThank you!</u>						
		<i>Would you consider using CONVERGENCE instead of the applications you use today?</i>				<input type="checkbox"/> No <input type="checkbox"/> Yes	
IF YES	IF NO	<i>Too slow</i>				<input type="checkbox"/>	
		<i>Too many bugs/problems</i>				<input type="checkbox"/>	
		<i>Too complicated to use</i>				<input type="checkbox"/>	
		<i>Inadequate error messages/too difficult to recover from errors</i>				<input type="checkbox"/>	
		<i>I already use a better system</i>				<input type="checkbox"/>	
		<i>There are too few users</i>				<input type="checkbox"/>	
		<i>Other</i>					
		<u>FORM COMPLETEThank you!</u>					
IF YES			<i>Not at all</i>	<i>A little</i>	<i>Like any other program</i>	<i>A lot</i>	<i>A huge amount</i>
	<i>How much do you think CONVERGENCE could contribute to your productivity at work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>In your choice how important is CONVERGENCE's</i>	<i>Not important at all</i>	<i>Not very important</i>	<i>So and so</i>	<i>Important</i>	<i>Very important</i>
<i>Performance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ease of use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from errors?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I would recommend CONVERGENCE to a colleague</i>				<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>
<u>FORM COMPLETE.....Thank you!</u>					

5.2.6 Post-Trial Questionnaire for WIPRO

“Smart Retailing Trials”

5.2.6.1 Manufacturers

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<i>To participate in the trial you had to register and login. Please give us your impression of these procedures:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have.</i>					

<i>Before using CONVERGENCE had you ever “created product” (or similar) using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE, could you see the characteristics of the product created?</i>					<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE had you ever “published products” using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

		<i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i>				<input type="checkbox"/> No <input type="checkbox"/> Yes	
IF NO		<i>Too slow</i>				<input type="checkbox"/>	
		<i>Too many bugs/problems</i>				<input type="checkbox"/>	
		<i>Too complicated to use</i>				<input type="checkbox"/>	
		<i>Inadequate error messages/too difficult to recover from errors</i>				<input type="checkbox"/>	
		<i>I already use a better system</i>				<input type="checkbox"/>	
		<i>There are too few users</i>				<input type="checkbox"/>	
		<i>Other</i>					
	<u>FORM COMPLETEThank you!</u>						
		<i>Would you consider using CONVERGENCE instead of the applications you use today?</i>				<input type="checkbox"/> No <input type="checkbox"/> Yes	
IF YES	IF NO	<i>Too slow</i>				<input type="checkbox"/>	
		<i>Too many bugs/problems</i>				<input type="checkbox"/>	
		<i>Too complicated to use</i>				<input type="checkbox"/>	
		<i>Inadequate error messages/too difficult to recover from errors</i>				<input type="checkbox"/>	
		<i>I already use a better system</i>				<input type="checkbox"/>	
		<i>There are too few users</i>				<input type="checkbox"/>	
		<i>Other</i>					
		<u>FORM COMPLETEThank you!</u>					
IF YES			<i>Not at all</i>	<i>A little</i>	<i>Like any other program</i>	<i>A lot</i>	<i>A huge amount</i>
	<i>How much do you think CONVERGENCE could contribute to your productivity at work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>In your choice how important is CONVERGENCE's</i>	<i>Not important at all</i>	<i>Not very important</i>	<i>So and so</i>	<i>Important</i>	<i>Very important</i>
<i>Performance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ease of use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from errors?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I would recommend CONVERGENCE to a colleague</i>				<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>
<u>FORM COMPLETE.....Thank you!</u>					

5.2.6.2 Retailer

WARNING:

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<i>ID</i>	
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<i>To participate in the trial you had to register and login. Please give us your impression of these procedures:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have.</i>					

<i>Before using CONVERGENCE, could you see the characteristics of the product created?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE had you ever “bought products” using a POS Machine?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

		<i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i>					<input type="checkbox"/> No <input type="checkbox"/> Yes
IF NO		<i>Too slow</i>					<input type="checkbox"/>
		<i>Too many bugs/problems</i>					<input type="checkbox"/>
		<i>Too complicated to use</i>					<input type="checkbox"/>
		<i>Inadequate error messages/too difficult to recover from errors</i>					<input type="checkbox"/>
		<i>I already use a better system</i>					<input type="checkbox"/>
		<i>There are too few users</i>					<input type="checkbox"/>
		<i>Other</i>					
	<u>FORM COMPLETEThank you!</u>						
		<i>Would you consider using CONVERGENCE instead of the applications you use today?</i>					<input type="checkbox"/> No <input type="checkbox"/> Yes
IF YES	IF NO	<i>Too slow</i>					<input type="checkbox"/>
		<i>Too many bugs/problems</i>					<input type="checkbox"/>
		<i>Too complicated to use</i>					<input type="checkbox"/>
		<i>Inadequate error messages/too difficult to recover from errors</i>					<input type="checkbox"/>
		<i>I already use a better system</i>					<input type="checkbox"/>
		<i>There are too few users</i>					<input type="checkbox"/>
		<i>Other</i>					
		<u>FORM COMPLETEThank you!</u>					
IF YES			<i>Not at all</i>	<i>A little</i>	<i>Like any other program</i>	<i>A lot</i>	<i>A huge amount</i>
	<i>How much do you think CONVERGENCE could contribute to your productivity at work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>In your choice how important is CONVERGENCE's</i>	<i>Not important at all</i>	<i>Not very important</i>	<i>So and so</i>	<i>Important</i>	<i>Very important</i>
<i>Performance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ease of use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from errors?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I would recommend CONVERGENCE to a colleague</i>				<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>
<u>FORM COMPLETE.....Thank you!</u>					

5.2.6.3 Customer

WARNING:

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<i>ID</i>	
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<i>To participate in the trial you had to register and login. Please give us your impression of these procedures:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have.</i>					

<i>Before using CONVERGENCE had you ever “subscribed to product” using a computer?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

<i>Before using CONVERGENCE had you ever “sold products” using a POS Machine?</i>						<input type="checkbox"/> Yes	<input type="checkbox"/> No
IF NO		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IF YES		<i>Not at all</i>	<i>Slightly useful but not very</i>	<i>Useful</i>	<i>Very useful</i>	<i>Essential</i>	
	<i>Do you think that this functionality is useful for your business?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<i>Much worse</i>	<i>A bit worse</i>	<i>The same</i>	<i>A bit better</i>	<i>A lot better</i>	
	<i>How would you score CONVERGENCE in comparison with other systems you have used in the past?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>How would you score CONVERGENCE this functionality with respect to:</i>	<i>Very poor</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very good</i>
<i>Ease of use</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from mistakes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>What features would do you add?</i>					
<i>What features would you eliminate?</i>					
<i>Please add any other comments you may have</i>					

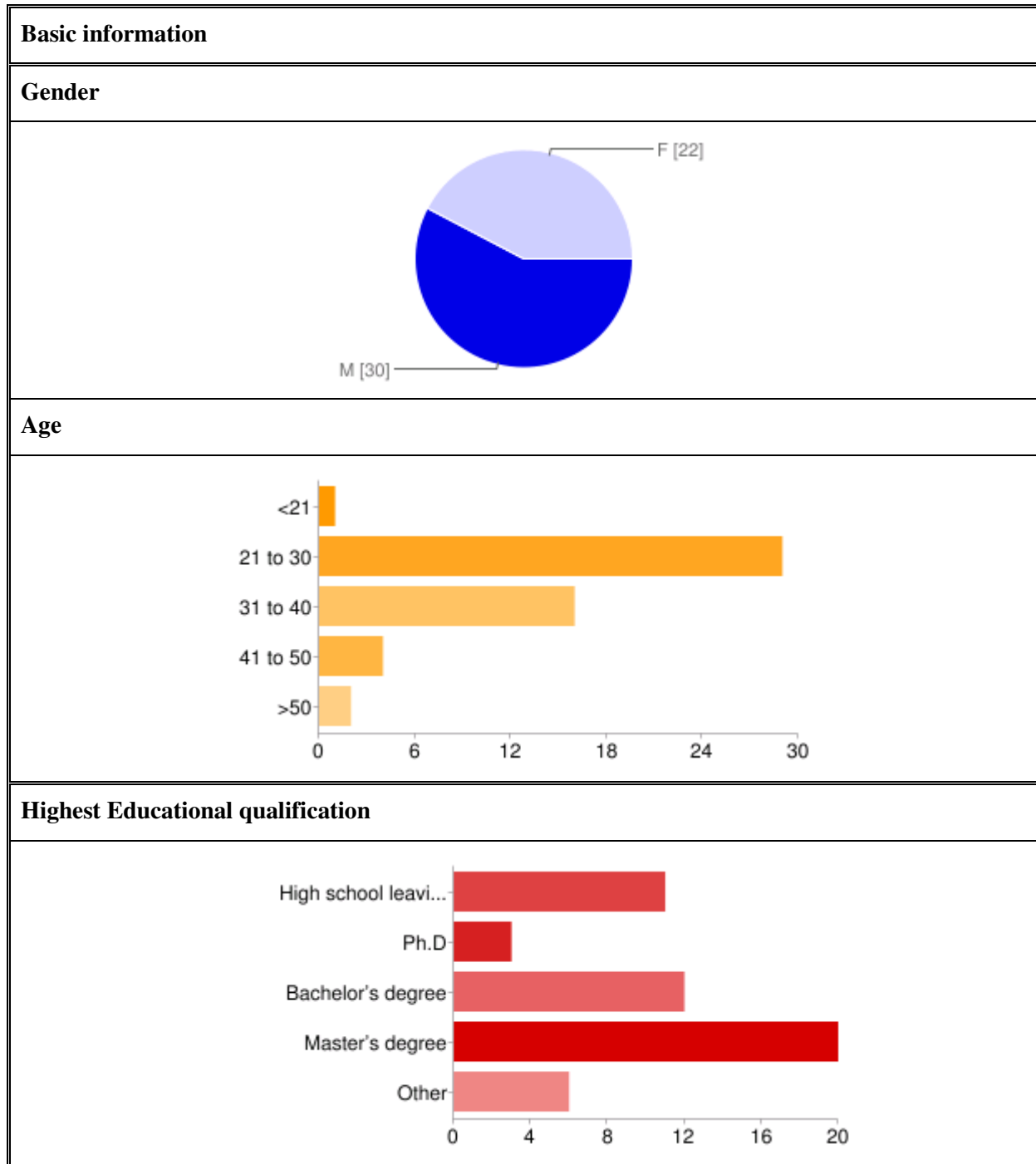
		<i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i>					<input type="checkbox"/> No <input type="checkbox"/> Yes
IF NO		<i>Too slow</i>					<input type="checkbox"/>
		<i>Too many bugs/problems</i>					<input type="checkbox"/>
		<i>Too complicated to use</i>					<input type="checkbox"/>
		<i>Inadequate error messages/too difficult to recover from errors</i>					<input type="checkbox"/>
		<i>I already use a better system</i>					<input type="checkbox"/>
		<i>There are too few users</i>					<input type="checkbox"/>
		<i>Other</i>					
	<u>FORM COMPLETEThank you!</u>						
		<i>Would you consider using CONVERGENCE instead of the applications you use today?</i>					<input type="checkbox"/> No <input type="checkbox"/> Yes
IF YES	IF NO	<i>Too slow</i>					<input type="checkbox"/>
		<i>Too many bugs/problems</i>					<input type="checkbox"/>
		<i>Too complicated to use</i>					<input type="checkbox"/>
		<i>Inadequate error messages/too difficult to recover from errors</i>					<input type="checkbox"/>
		<i>I already use a better system</i>					<input type="checkbox"/>
		<i>There are too few users</i>					<input type="checkbox"/>
		<i>Other</i>					
		<u>FORM COMPLETEThank you!</u>					
IF YES			<i>Not at all</i>	<i>A little</i>	<i>Like any other program</i>	<i>A lot</i>	<i>A huge amount</i>
	<i>How much do you think CONVERGENCE could contribute to your productivity at work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>In your choice how important is CONVERGENCE's</i>	<i>Not important at all</i>	<i>Not very important</i>	<i>So and so</i>	<i>Important</i>	<i>Very important</i>
<i>Performance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ease of use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Error messages/ease of recovering from errors?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Overall quality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I would recommend CONVERGENCE to a colleague</i>				<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>
<u>FORM COMPLETE.....Thank you!</u>					

5.3 End User Questionnaires Data

In the following we report some tables, summarizing the answers to the questionnaires for all scenarios and in a detailed form.

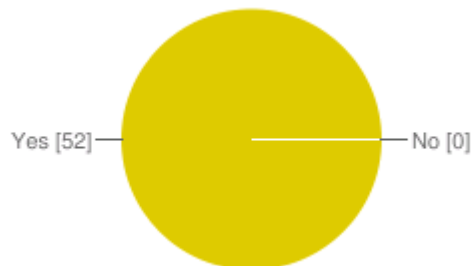
5.3.1 Pre-Trial Questionnaire



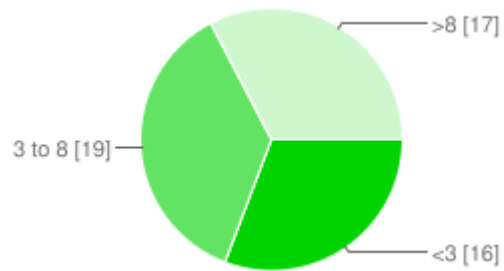
Occupation

- Scientific communication
- Web developer
- Research engineer
- Computer technical support
- Researcher
- Communication
- Manager
- Research
- Engineer
- Assistant
- Film director and sociologist
- Post-doc
- Wiss. Mitarbeiter
- Phd student
- Research assistant
- Student
- Employee
- Photographer
- Head r&d alinari
- Consultant
- Archivist
- Retailer
- Translator
- Contract administrator
- Business analyst
- Project manager
- Systems analyst
- Manufacturer
- Business consultant

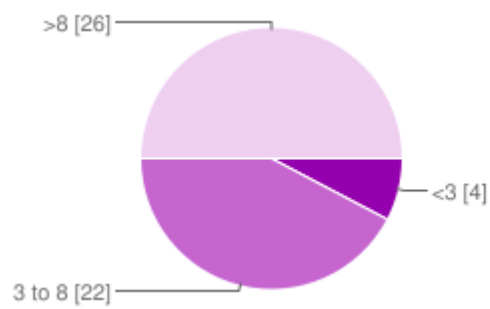
I use computer/internet in my work



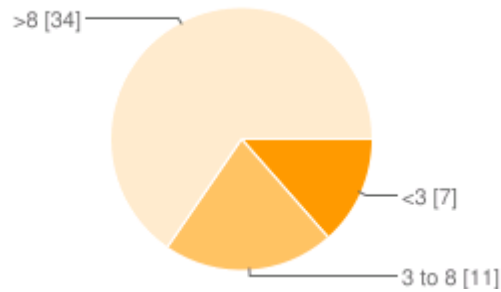
For how many years have you used computer/internet in your work?



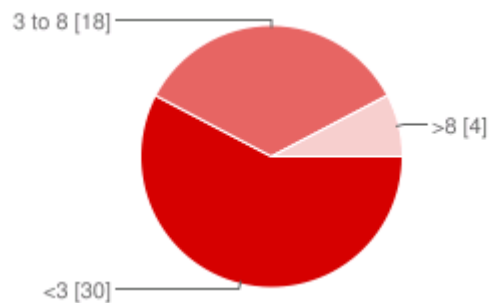
How many hours a day do you use the computer/internet?



I use a computer/internet during my leisure time

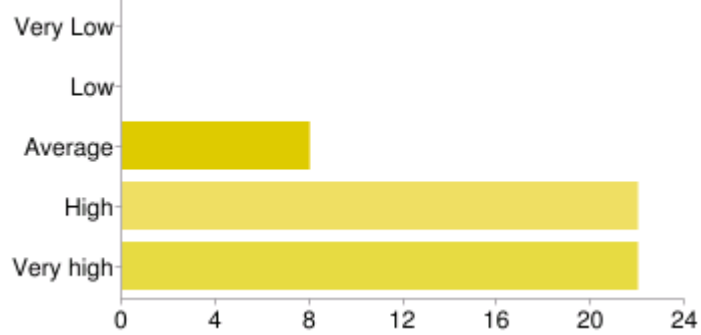


How many hours a day do you use computer/Internet in your leisure time?

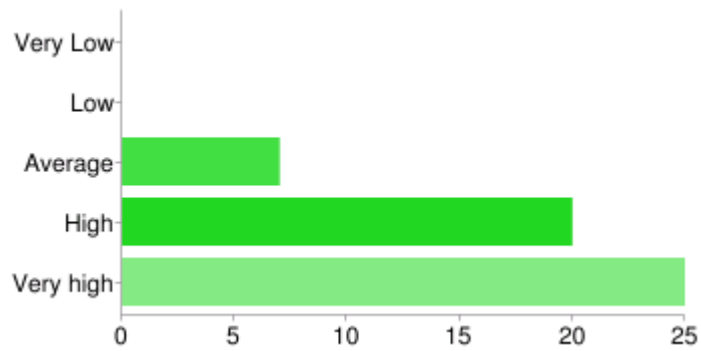


How would you rate your skill in using

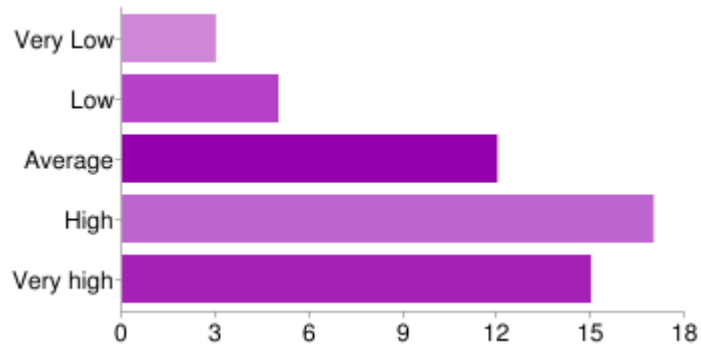
Computer



The Internet



Smart phones/Tablets etc.

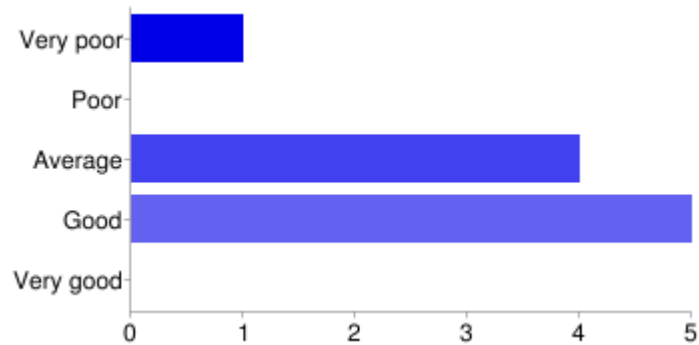


5.3.2 “Photos in the Cloud and down to Earth” (ALINARI)

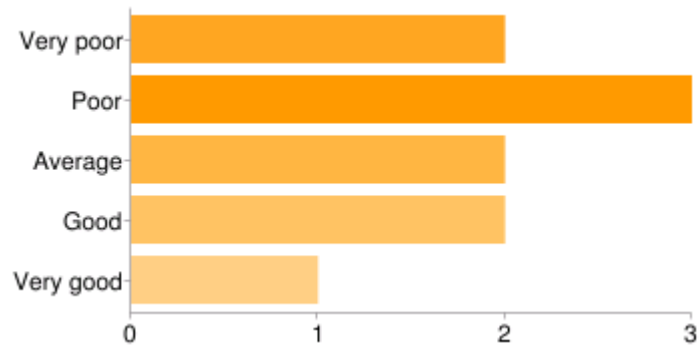
Registration and login

To participate in the trial you had to register and login. Please give us your impression of these procedures:

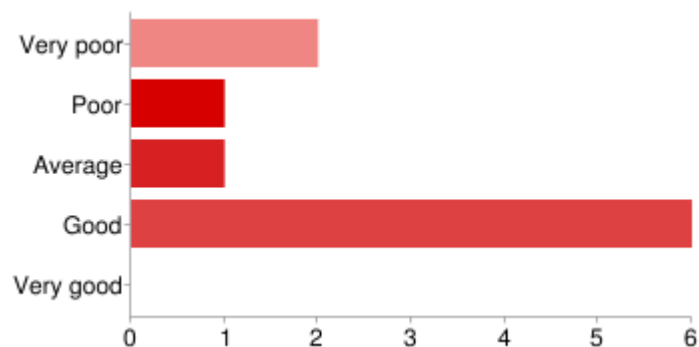
Ease of use



Error messages/ease of recovering from mistakes



Overall quality

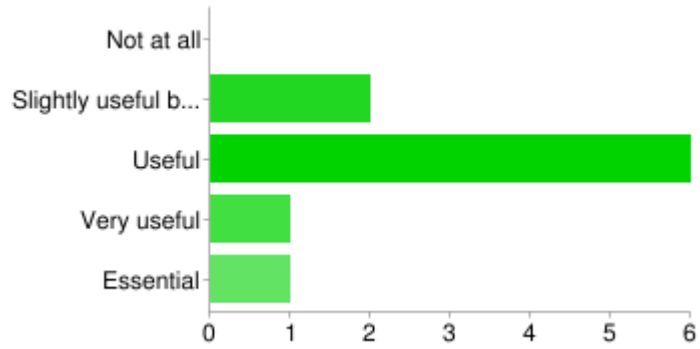


What features would do you add?

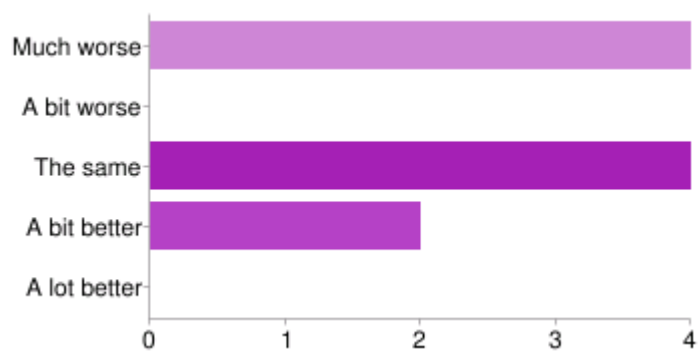
- Easy contact to other users
- I would add contents from the platform and not only from users

<ul style="list-style-type: none"> • Username and password recovery batch processes high res upload features drag and drop connection to my photoshop sw (plug-in) services to advertise my pictures: can i advertise to alinari and other co my collections? Better annotation features: i do not want to annotate by hand each picture. Navigation tools possibility to define my personal licence models and attach the model release to the image • ONLINE ASSISTANT, SKYPE INSTANT CONTACT FOR SUPPORT.
<i>What features would you eliminate?</i>
<ul style="list-style-type: none"> • No one • There are still few features to eliminate further features. • Error to login or to register. I had to register over and over again several times- after successful registration i had to re-register if i had to use the system after few days. System did not recorded my reg. Settings.
<i>Please add any other comments you may have.</i>
<ul style="list-style-type: none"> • Improve graphic • Poor usability impossible to make changes the licences are not realistic: what do you mean with 'download' licence? It has no sense. The license is for the USE, not for the interaction with the file.

Uploading a new photo	
<p>Before using CONVERGENCE had you ever uploaded a new photo using a computer?</p>	
	<i>IF NO - Do you think that this functionality is useful for your business?</i>
	<i>IF YES - Do you think that this functionality is useful for your business?</i>

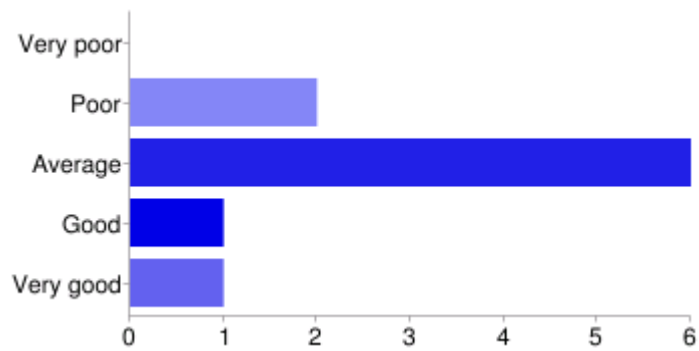


IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

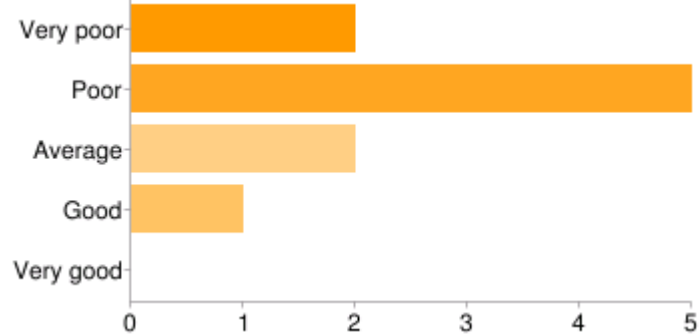


How would you score CONVERGENCE this functionality with respect to:

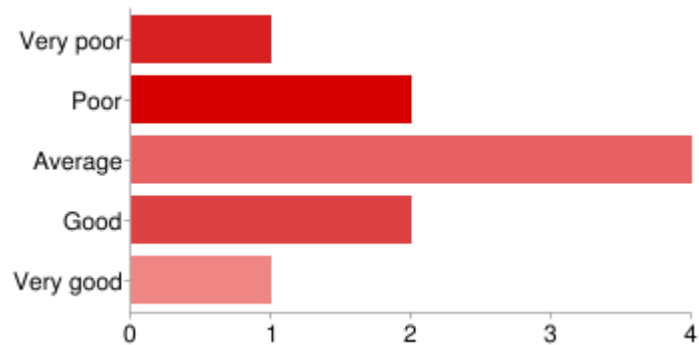
Ease of use



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

- Possibility to modify, update, batch upload, automatic uploads in connection with my photoshop tools (I would like to put images in the folder and it automatically makes the upload)
- Often the system went into loop or stand by probably because slow web server connection. Time out error was frequent. A faster web access will solve some of my issues. A much more user interface will make the trials more attractive too.
- Preview during the upload of the picture
- Add the choice of tags among a given ontology

What features would you eliminate

-

Please add any other comments you may have

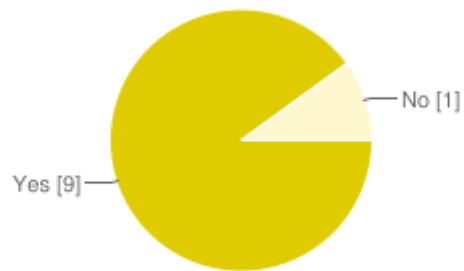
- The upload is very elementary. I use to upload my pictures to professional sites and they allow me to position my collection in their directories and allow my uploads to be reviewed by other professionals and managers. I can add, edit, change, add licences (or define good and realistic licenses) to my uploads... I would like some place where to make my personal album (as i do elsewhere), with my name or nik.
- Lack of navigation logic. Did not know where to go at first., many commands in the menu

where in the white bar, hard to read/see.

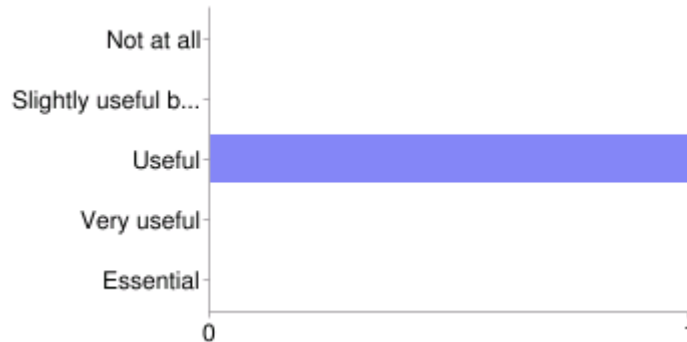
- Add explanations in order to guide the user to the next i.e: come back to the home page
- The system is low

Publishing a photo

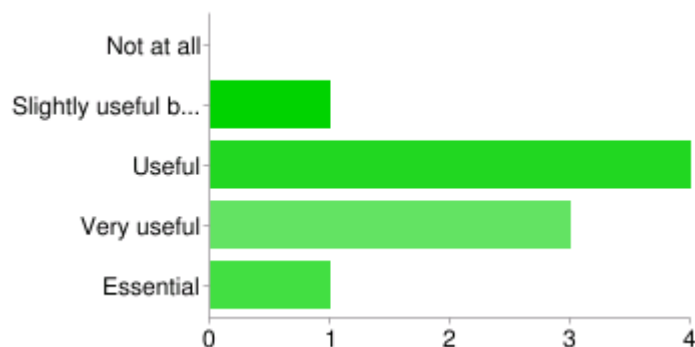
Before using CONVERGENCE had you ever published a photo using a computer?



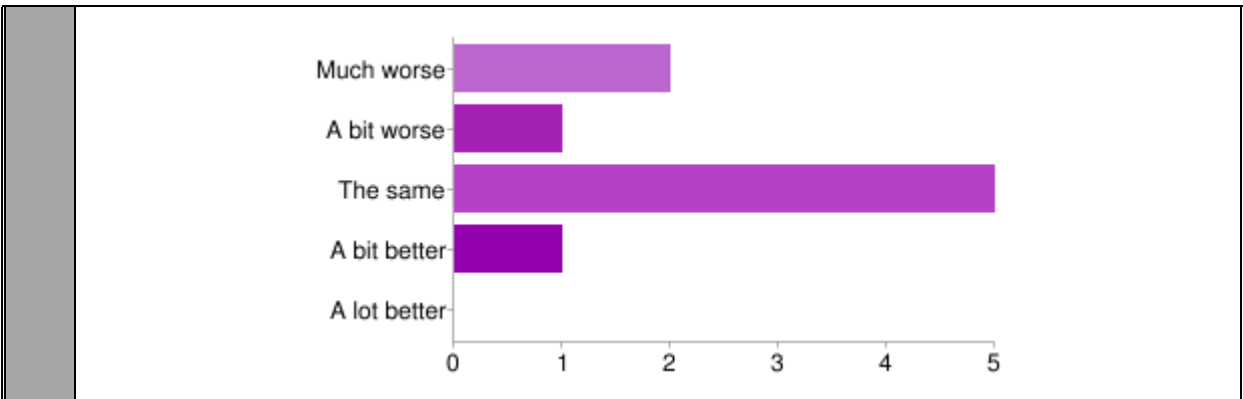
IF NO - Do you think that this functionality is useful for your business?



IF YES - Do you think that this functionality is useful for your business?

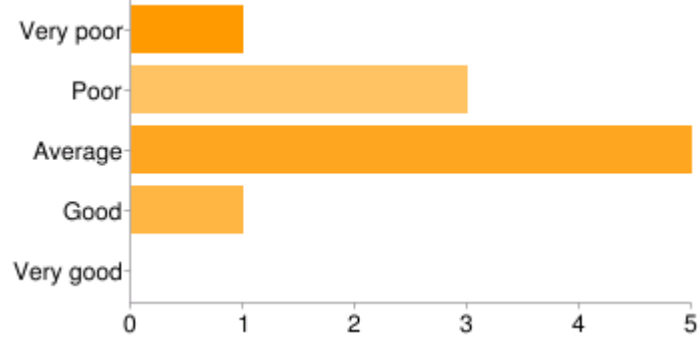


IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

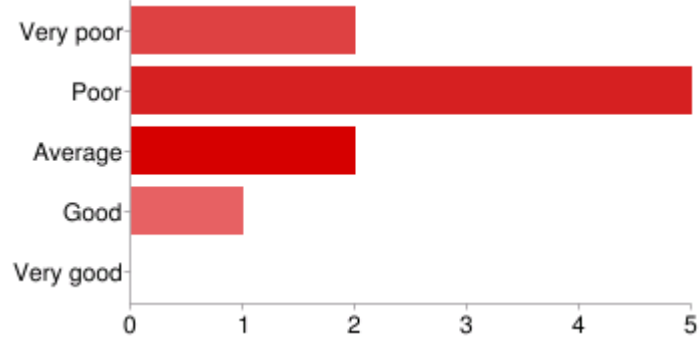


How would you score CONVERGENCE this functionality with respect to:

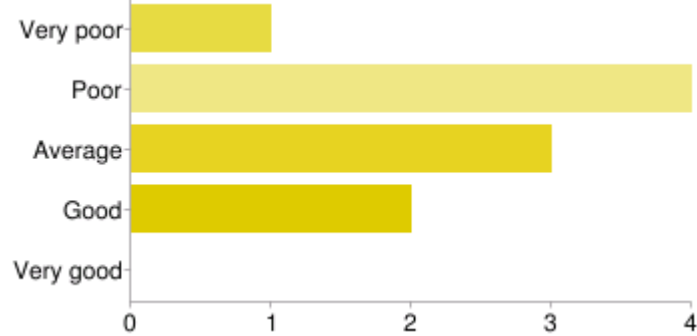
Ease of use



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

- The system should give another chance to publish if first try did not work
- The publish does not work well: I searched for the keys I wrote in the upload phase and was not able to retrieve the same image as after, using the one of the keys added. I would like also tools for automated annotation and categorization and ways to improve my publishing activities. Convergence does not find even those I wrote myself, not so good!

What features would you eliminate

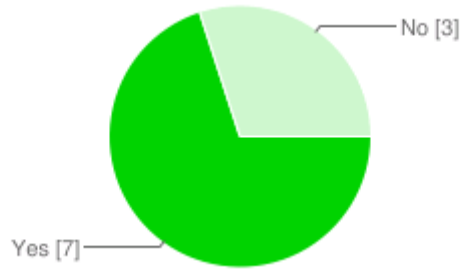
- There are too few features to decide what I can eliminate.
- Colourful bar on the right side is no meaning. Better to replace with a picture or some text info

Please add any other comments you may have

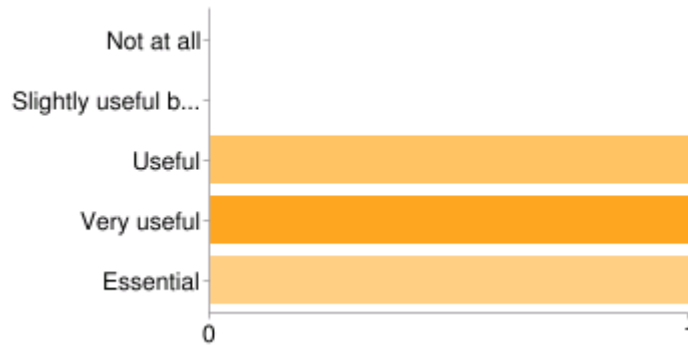
- The photos are not well visualized after publishing
- I understand 'publish' as an action which makes my collection visible to the community and i should be able to advertise the link to my collection. Convergence instead puts me in the darkness, even towards myself (i cannot find one picture i just uploaded, imagine once i'll upload 1000 images in a week work!
- Poor user interface, hard to navigate, did not know where to go, i felt lost in my trials.
- Not easy to understand

Subscription to a photo

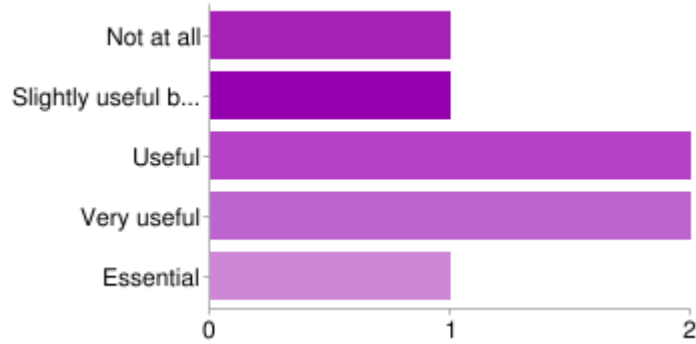
Before using CONVERGENCE had you ever subscribed to a photo using a computer?



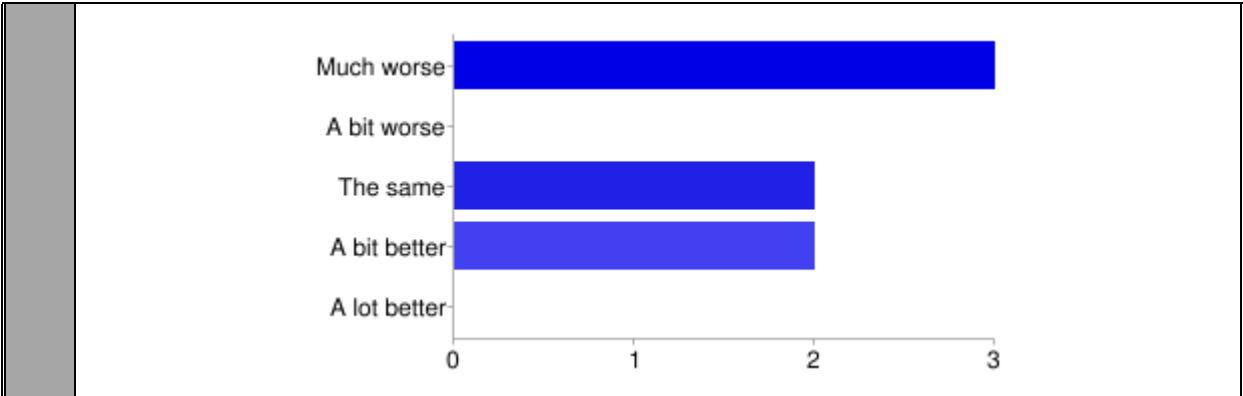
IF NO - Do you think that this functionality is useful for your business?



IF YES - Do you think that this functionality is useful for your business?

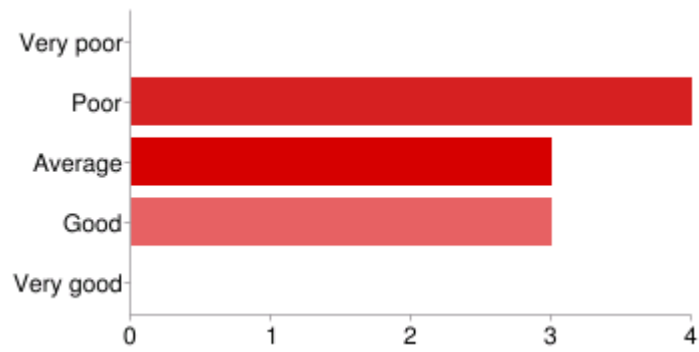


IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

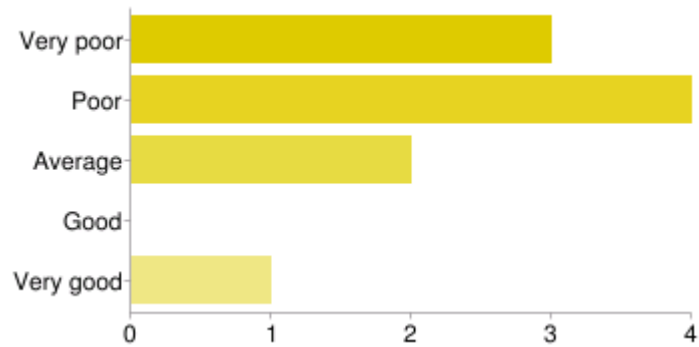


How would you score CONVERGENCE this functionality with respect to:

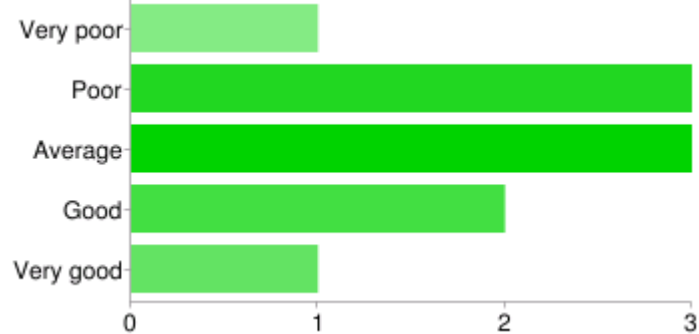
Ease of use



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

- Explanations
- A kind of light box of my searches. The possibility to have selective subscription: I do not want mass results but in some cases only from special sources (professional and authoritative). I would like a communication tool with these sources. I would like a personalization service: renaming and reorganizing the subscriptions.

What features would you eliminate

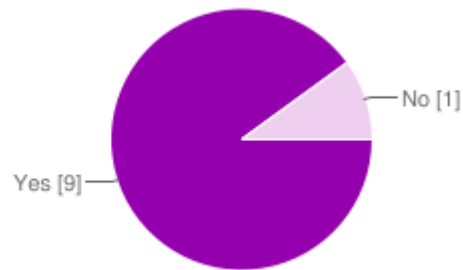
- Too few to eliminate any

Please add any other comments you may have

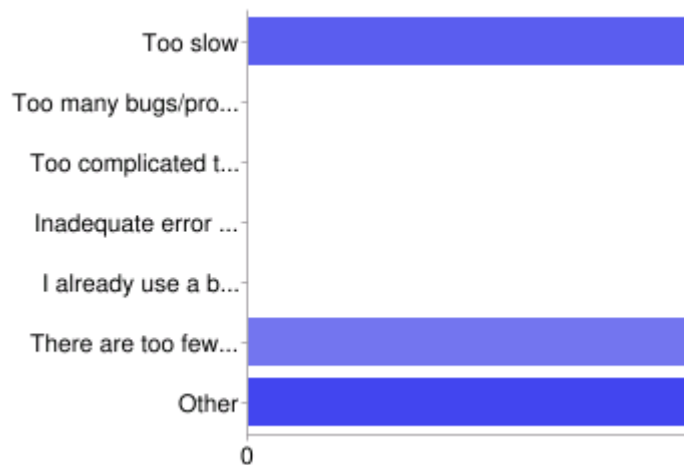
- The subscription does not work well: I searched for the keys I wrote in the upload phase and was not able to retrieve the same image after, using the same keys. I would like the system to be able to connect users subscribing groups and associations (I see some images but I do not see other users). I need to connect to my social sites (facebook flickr, picasa). I would like to subscribe to these sources too. I would like comparing my collection with others professional users. I would like my collection to be more visible and easily searched.

Final Notes

*Now you have seen CONVERGENCE
do you think
It could be useful for you work?*



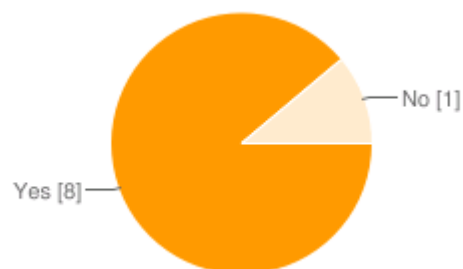
IF NO

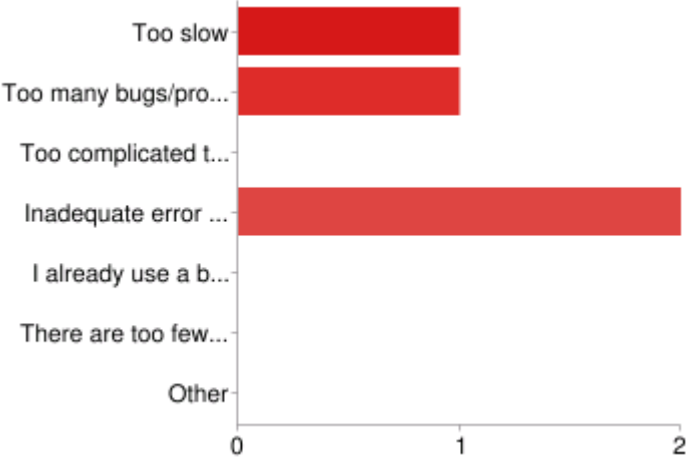
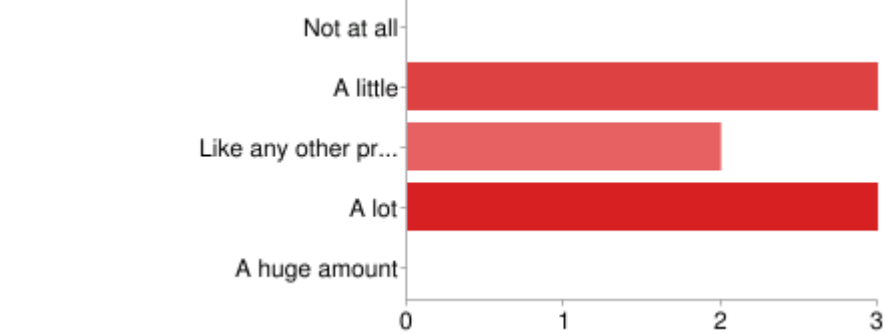
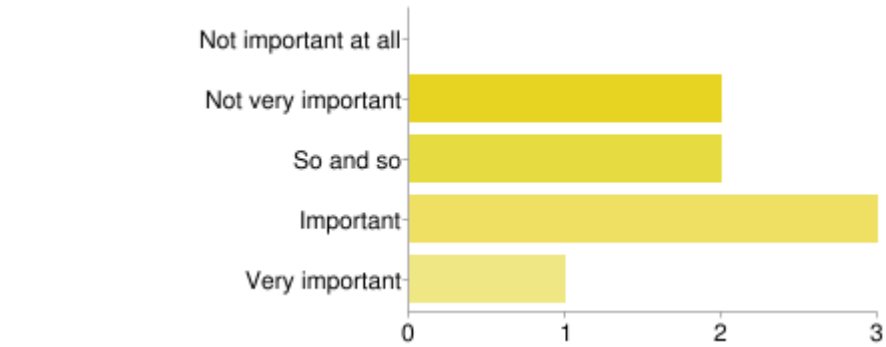


Other

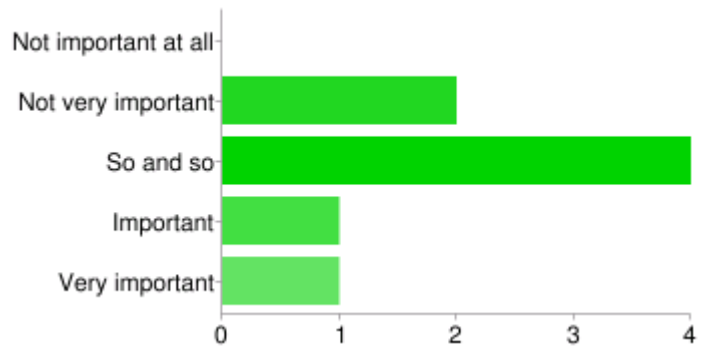
- You need to consider my notes. The subscription could be interesting for my work if it responded to my requests. I would like 1- automated annotation tools 2- advertise to agencies my albums 3- socialize with other professional photographers and users 4- navigate better in the contents (mine and external sources) 5-be connected to my profile 6-more personalization 7-being able to upload batch and images of higher res if i need and also documents

*IF YES - Would you consider
using CONVERGENCE instead
of the applications you use today?*

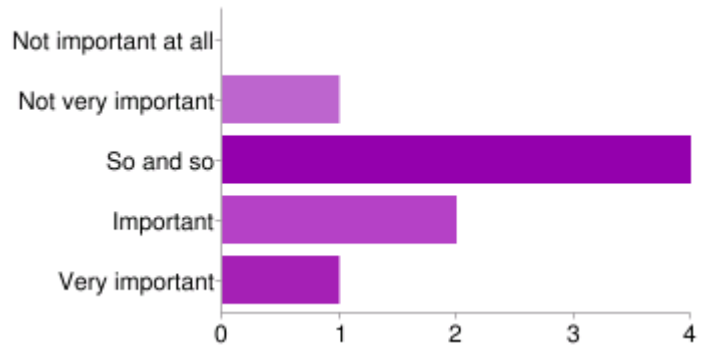


	<p><i>IF NO</i></p>																
	 <table border="1"> <thead> <tr> <th>Reason</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Too slow</td> <td>1</td> </tr> <tr> <td>Too many bugs/pro...</td> <td>1</td> </tr> <tr> <td>Too complicated t...</td> <td>0</td> </tr> <tr> <td>Inadequate error ...</td> <td>2</td> </tr> <tr> <td>I already use a b...</td> <td>0</td> </tr> <tr> <td>There are too few...</td> <td>0</td> </tr> <tr> <td>Other</td> <td>0</td> </tr> </tbody> </table>	Reason	Count	Too slow	1	Too many bugs/pro...	1	Too complicated t...	0	Inadequate error ...	2	I already use a b...	0	There are too few...	0	Other	0
Reason	Count																
Too slow	1																
Too many bugs/pro...	1																
Too complicated t...	0																
Inadequate error ...	2																
I already use a b...	0																
There are too few...	0																
Other	0																
	<p>Other</p>																
	<ul style="list-style-type: none"> • 																
	<p><i>IF YES - How much do you think CONVERGENCE could contribute to your productivity at work?</i></p>																
	 <table border="1"> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Not at all</td> <td>0</td> </tr> <tr> <td>A little</td> <td>3</td> </tr> <tr> <td>Like any other pr...</td> <td>2</td> </tr> <tr> <td>A lot</td> <td>3</td> </tr> <tr> <td>A huge amount</td> <td>0</td> </tr> </tbody> </table>	Response	Count	Not at all	0	A little	3	Like any other pr...	2	A lot	3	A huge amount	0				
Response	Count																
Not at all	0																
A little	3																
Like any other pr...	2																
A lot	3																
A huge amount	0																
	<p>In your choice how important is CONVERGENCE's</p>																
	<p>Performance?</p>  <table border="1"> <thead> <tr> <th>Importance</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Not important at all</td> <td>0</td> </tr> <tr> <td>Not very important</td> <td>2</td> </tr> <tr> <td>So and so</td> <td>2</td> </tr> <tr> <td>Important</td> <td>3</td> </tr> <tr> <td>Very important</td> <td>1</td> </tr> </tbody> </table>	Importance	Count	Not important at all	0	Not very important	2	So and so	2	Important	3	Very important	1				
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Not important at all	0																
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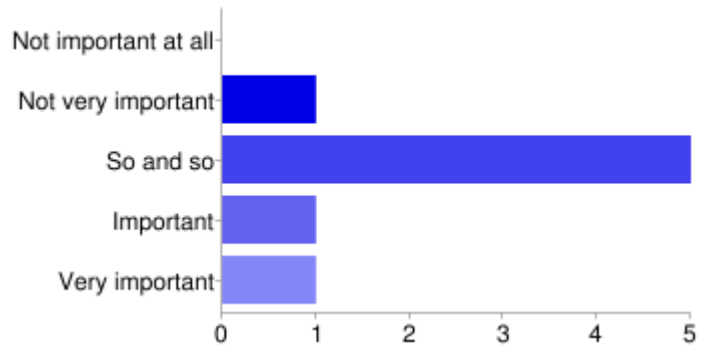
Ease of use?



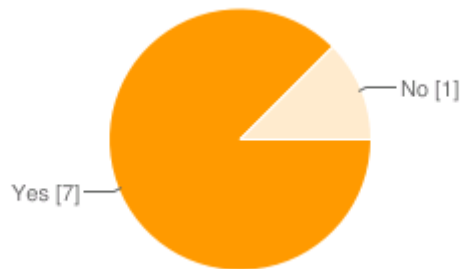
Error messages/ease of recovering from errors?



Overall quality?



**I would recommend
CONVERGENCE to a
colleague**

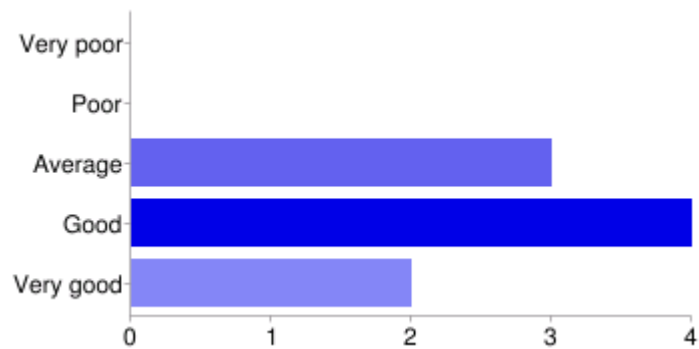


5.3.3 “Videos in the Cloud and Down to Earth” (FMSH)

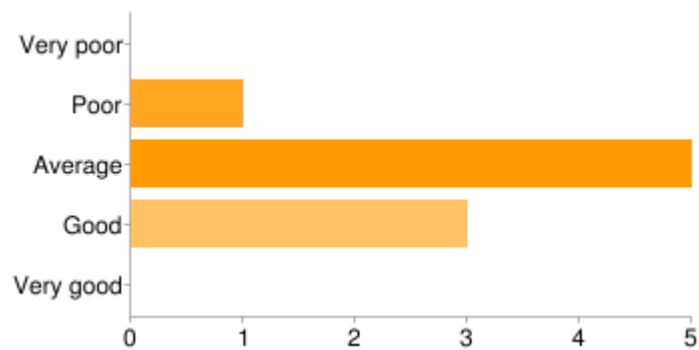
Registration and login

To participate in the trial you had to register and login. Please give us your impression of these procedures:

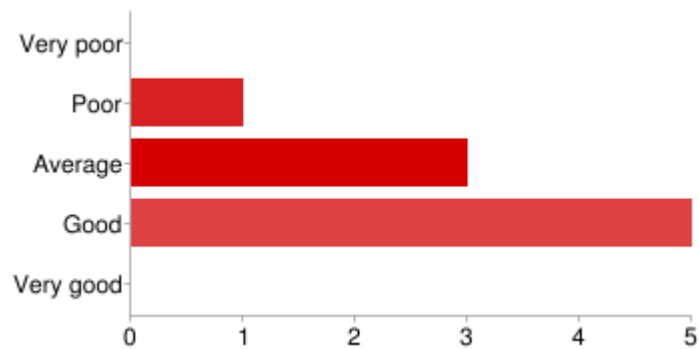
Ease of use



Error messages/ease of recovering from mistakes



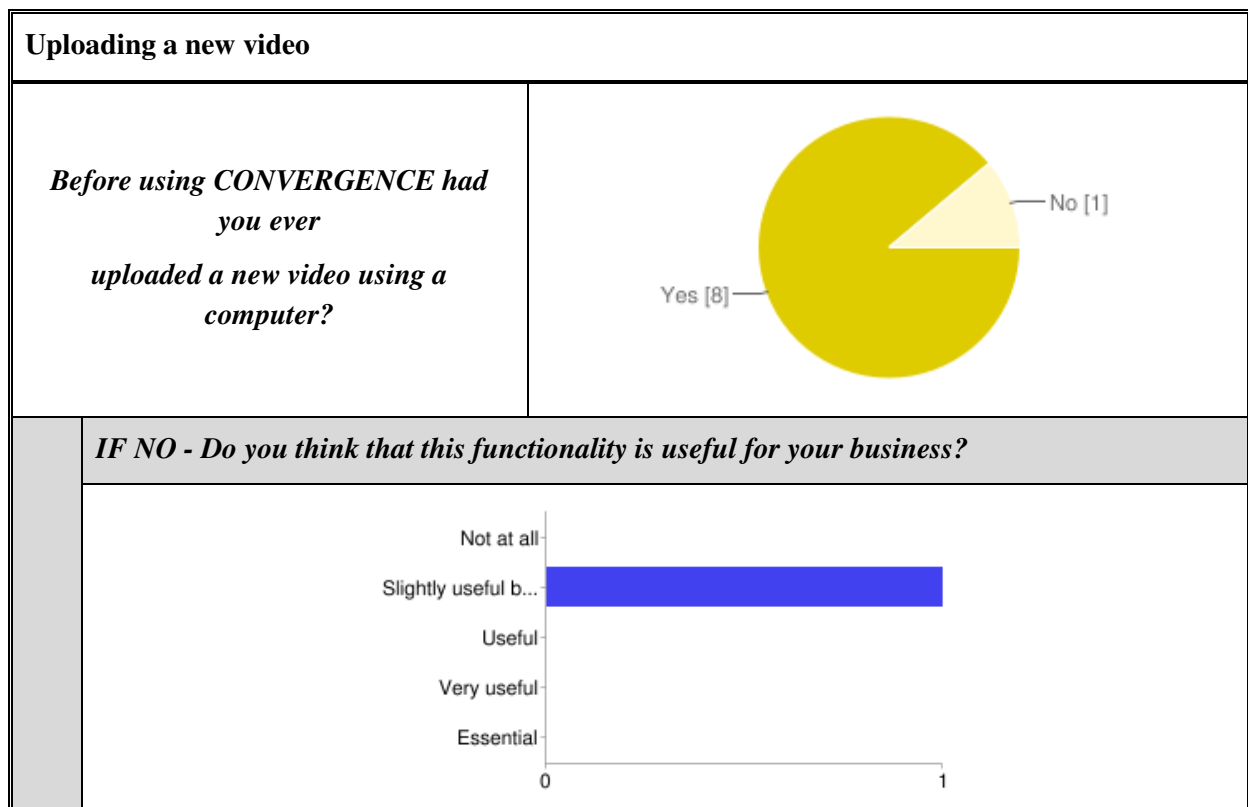
Overall quality



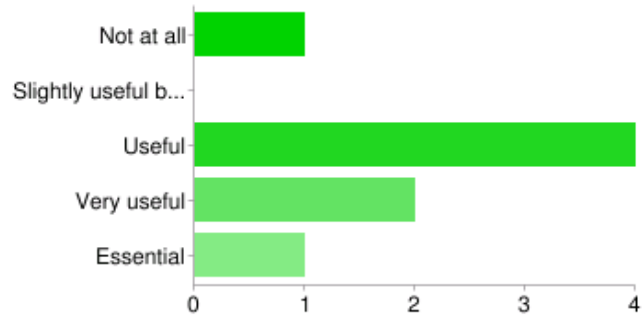
What features would do you add?

- Modify movie information after upload

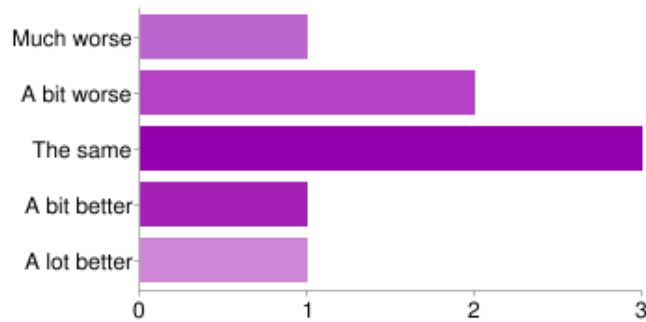
<ul style="list-style-type: none"> • keep my username in memory • A progress bar when uploading Updating video rights Unpublishing a video without deleting it • try to improve the matching between tags produced during the creation/publishing process and tags produced during the subscription process. For instance if in the subscription you precise "Peru + weaving", you only get videos that are tagged as "Peru + weaving (+)". But the tags produced during the subscription process can also be understood in the sense of "both or, at least one of both item".
<p><i>What features would you eliminate?</i></p>
<ul style="list-style-type: none"> • I would suggest to rename "Video manager" - maybe in something like "Video up-loader" or "This functionality". • Nothing.
<p><i>Please add any other comments you may have.</i></p>
<ul style="list-style-type: none"> • It's impossible to forbid downloading a video. • Very nice application - and useful, I think. • It seems easy to register. • The system of registering is not really intuitive. The system of uploading much better.



IF YES - Do you think that this functionality is useful for your business?

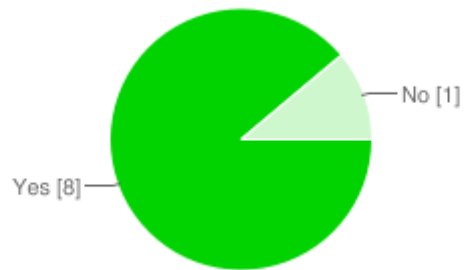


IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

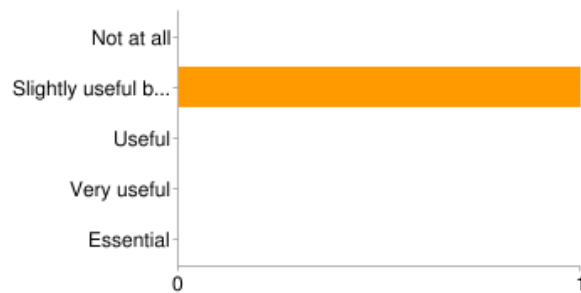


Publishing a video

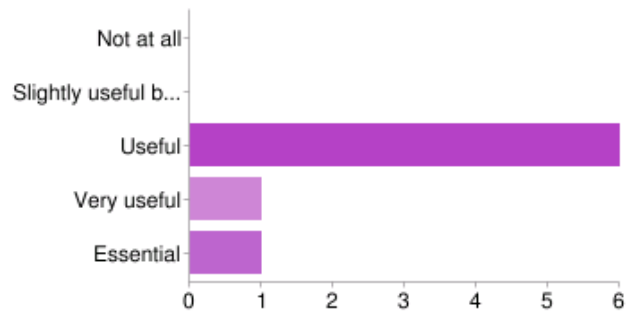
Before using CONVERGENCE had you ever published a video using a computer?



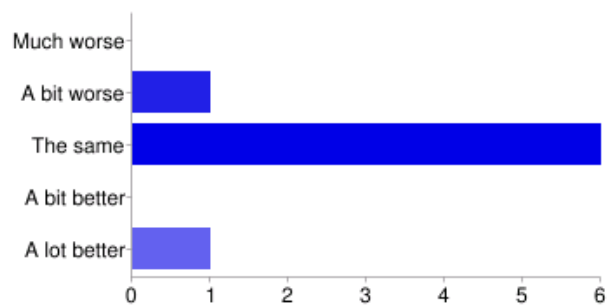
IF NO - Do you think that this functionality is useful for your business?



IF YES - Do you think that this functionality is useful for your business?

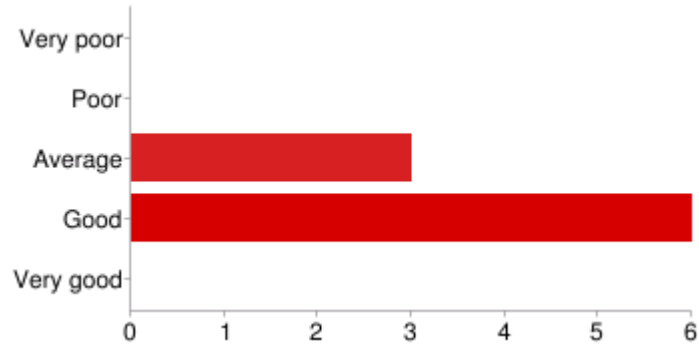


IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

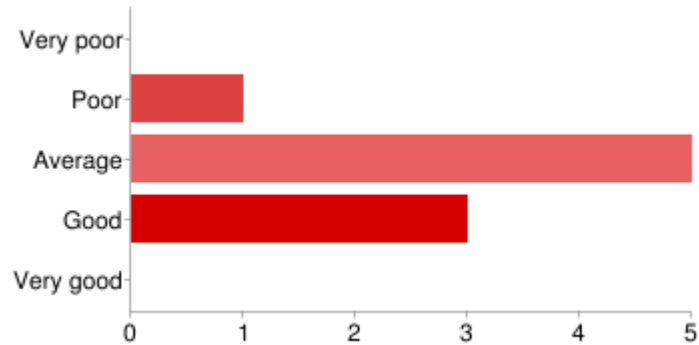


How would you score CONVERGENCE this functionality with respect to:

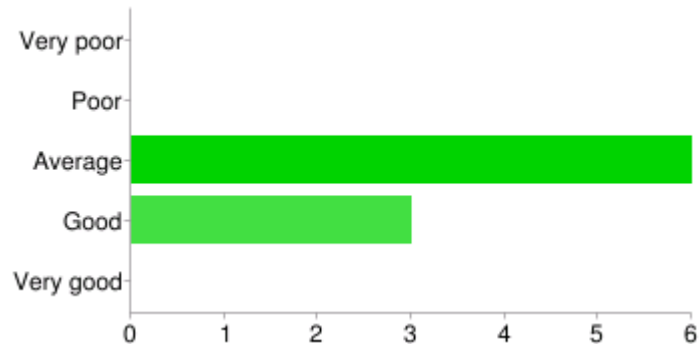
Ease of use



Error messages/ease of recovering from mistakes



Overall quality

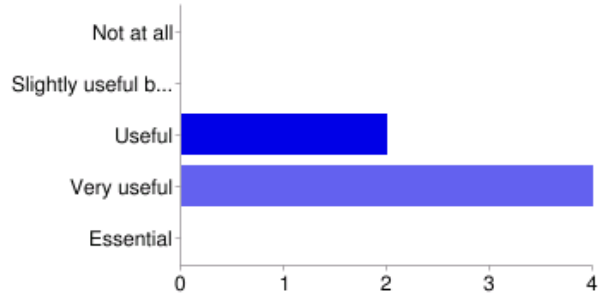


What features would do you add?

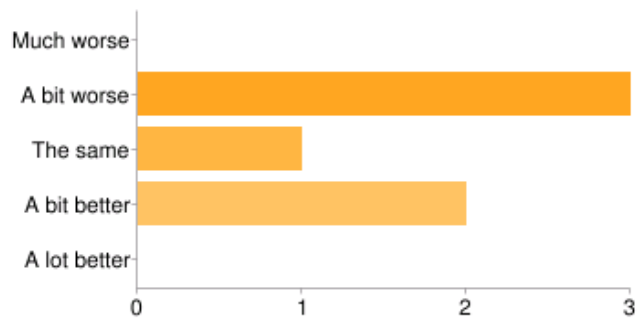
- Should propose by default the title of the uploaded video should propose the tags already put at the uploading, with possibility to add or delete a tag
- Updating video unpublishing a video without deleting it
- It would be good to enable the publisher to add semantically typed comments. For instance "suggestion", "warning", "see also", ... Maybe the semantic types could be adapted to the specific user role.
- Provide more explanation, add online help. For example, it is not easy to understand the

<p>distinctions between the "tags" used in the creation and publication, if any ?</p> <ul style="list-style-type: none"> • This hard to answer
<p><i>What features would you eliminate</i></p>
<ul style="list-style-type: none"> • Non • Nothing
<p><i>Please add any other comments you may have</i></p>
<ul style="list-style-type: none"> • It should be possible to edit a publishing in order to modify or add a tag for example, or modify the title... • You have to choose same tags for uploading and publishing. • Same comment as previous question (create a video) • The interface should be more pleasant to watch or intuitive to use, but i guess this is just a trial version

<p>Subscription to a video</p>													
<p><i>Before using CONVERGENCE had you ever subscribed to a video using a computer?</i></p>	<table border="1"> <caption>Subscription Data</caption> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>6</td> </tr> <tr> <td>No</td> <td>3</td> </tr> </tbody> </table>	Response	Count	Yes	6	No	3						
Response	Count												
Yes	6												
No	3												
<p><i>IF NO - Do you think that this functionality is useful for your business?</i></p>													
<table border="1"> <caption>Usefulness for 'NO' Subscribers</caption> <thead> <tr> <th>Usefulness Level</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Not at all</td> <td>0</td> </tr> <tr> <td>Slightly useful b...</td> <td>1</td> </tr> <tr> <td>Useful</td> <td>2</td> </tr> <tr> <td>Very useful</td> <td>0</td> </tr> <tr> <td>Essential</td> <td>0</td> </tr> </tbody> </table>		Usefulness Level	Count	Not at all	0	Slightly useful b...	1	Useful	2	Very useful	0	Essential	0
Usefulness Level	Count												
Not at all	0												
Slightly useful b...	1												
Useful	2												
Very useful	0												
Essential	0												
<p><i>IF YES - Do you think that this functionality is useful for your business?</i></p>													

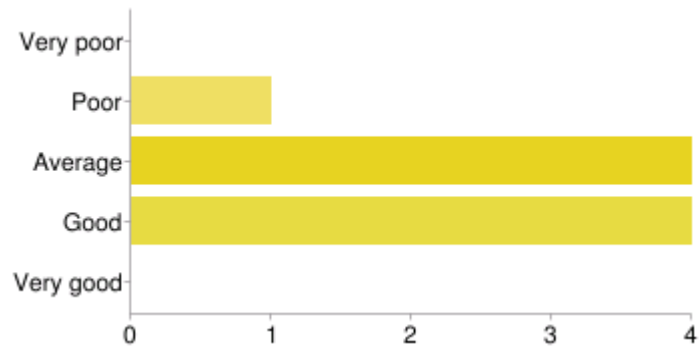


IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

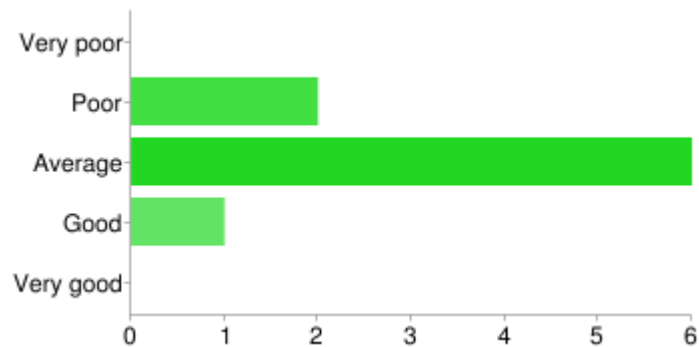


How would you score CONVERGENCE this functionality with respect to:

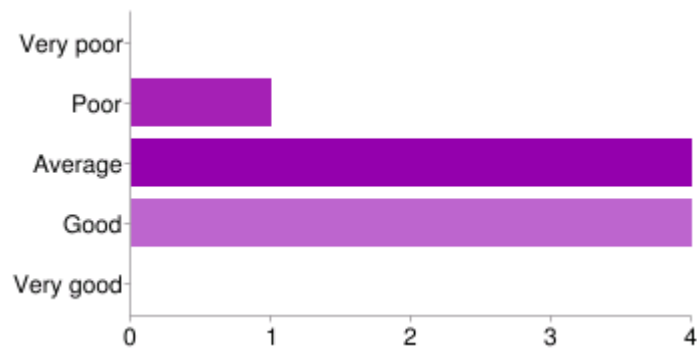
Ease of use



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

- Tags seems to not work well.
- Auto completion for owner name
- Notification by mail if a new relevant video is uploaded also possibility to integrate a subscription in social media tools such as Scoop.it or netvibes
- Always produce more explanations with an online help.

What features would you eliminate

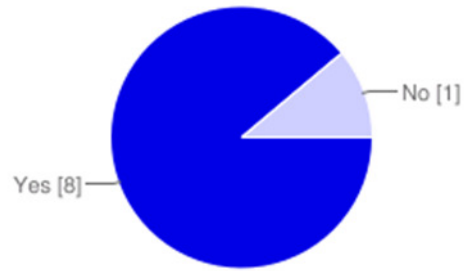
- Non
- Nothing

Please add any other comments you may have

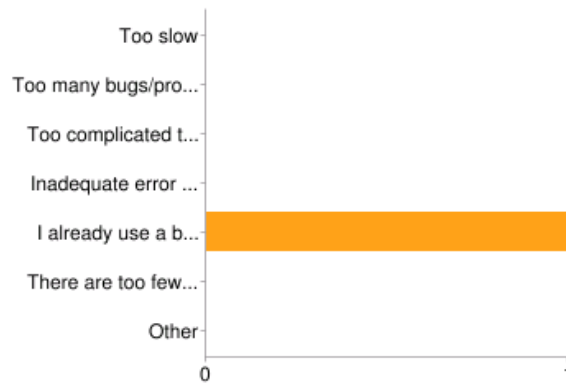
- What exactly is the difference between subscription name and owner ?
- Toujours pas eu l'occasion de voir de message d'erreur -pourquoi ne pas mettre prénom + nom pour "owner"? Ce serait plus précis. Bcp de noms de famille se ressemblent... -date : de quoi? De réalisation? De publication?
- The searching by tags is not quite good. The syntax must be exact, but when you search a video on internet, the orthograph is in general hazy... We can't find informations about a general subject, it need to be too precise from the beginning.

Final Notes

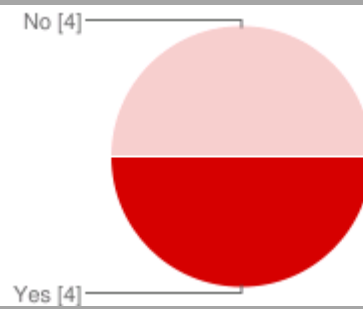
*Now you have seen CONVERGENCE
do you think
It could be useful for you work?*



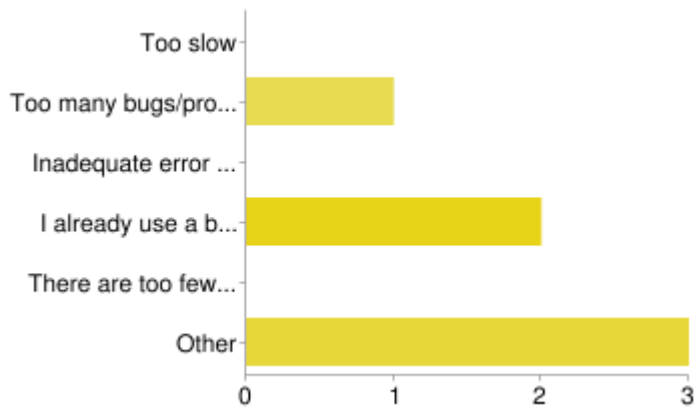
IF NO



*IF YES - Would you consider
using CONVERGENCE instead
of the applications you use today?*



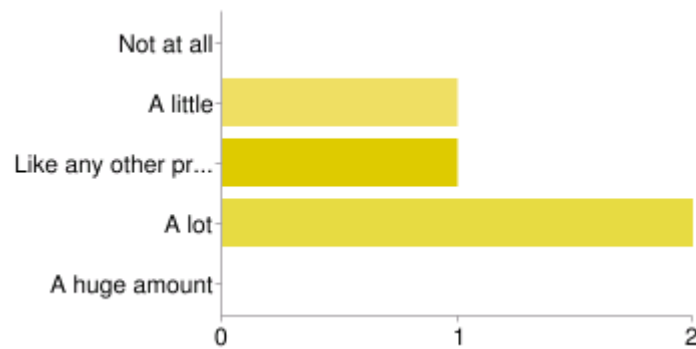
IF NO



Other

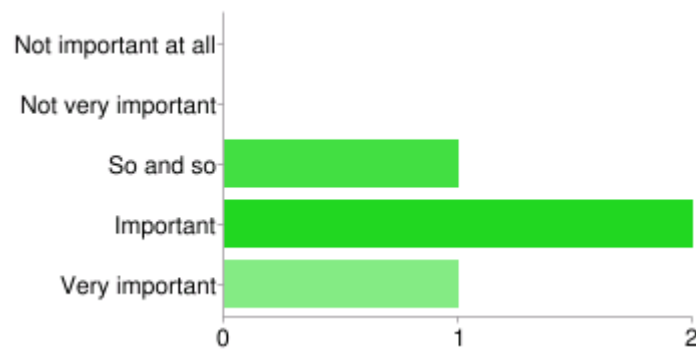
- Others are more user friendly.
- -Question de la "primauté", l'"exclusivité" du contenu de notre site actuel : par ce système, tout est / peut être publié sur plusieurs sites web en même temps, donc notre site d'unité perdrait de sa rareté -Mais par ailleurs, ça nous permettrait de récupérer du contenu d'habitude réservé à d'autres sites (mais sans la fiche descriptive remplie par l'auteur... Donc on récupère la vidéo, mais on doit entrer de nouveau toutes les informations.)
- For now, convergence seems to pose very serious problems regarding questions of centralisation of applications and data.

IF YES - How much do you think CONVERGENCE could contribute to your productivity at work?

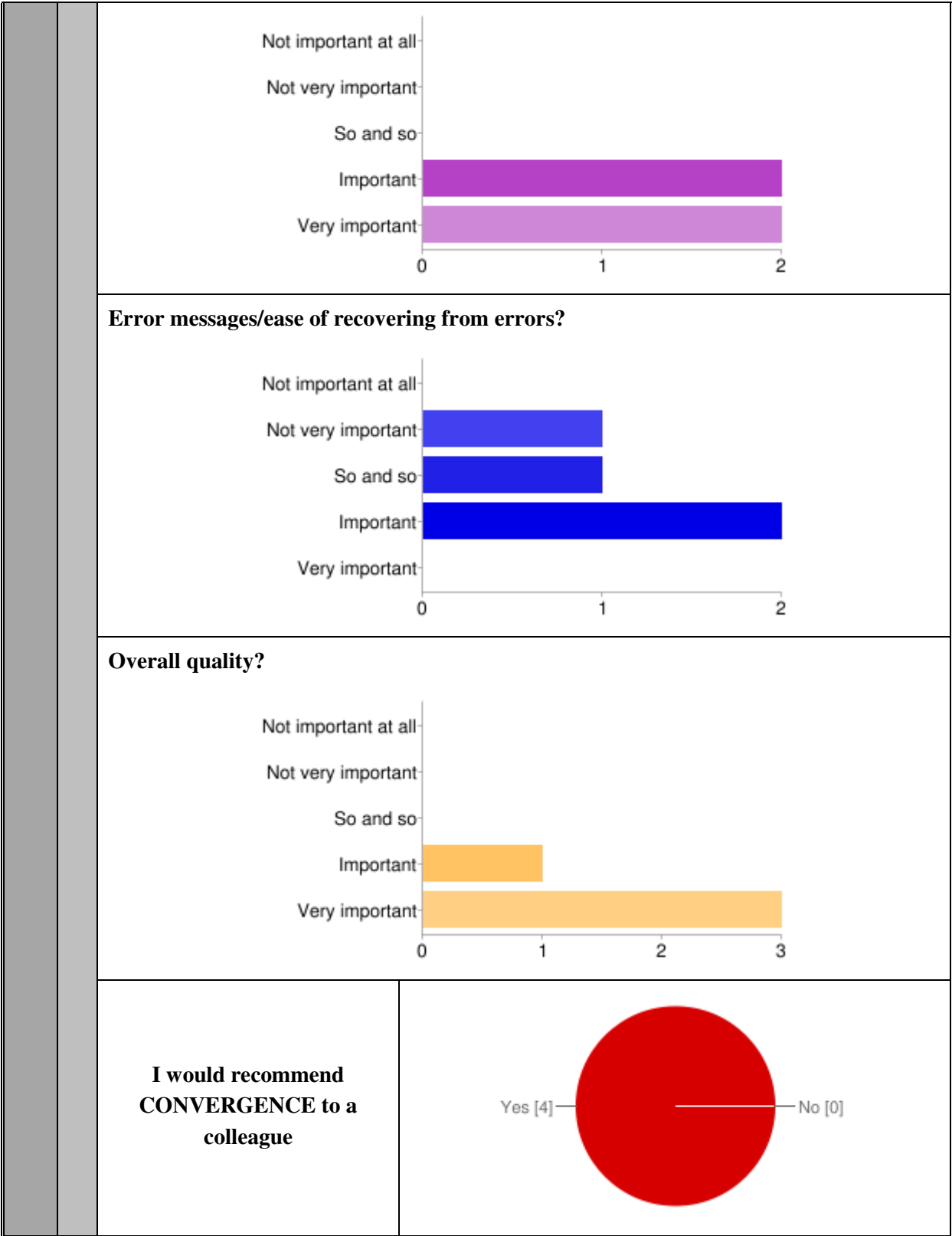


In your choice how important is CONVERGENCE's

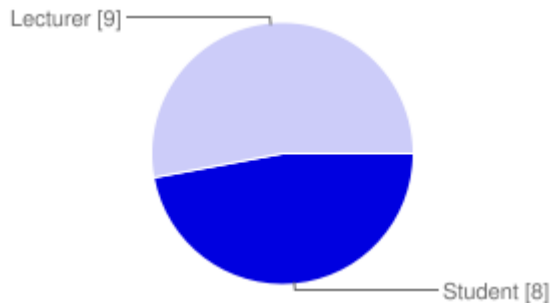
Performance?



Ease of use?

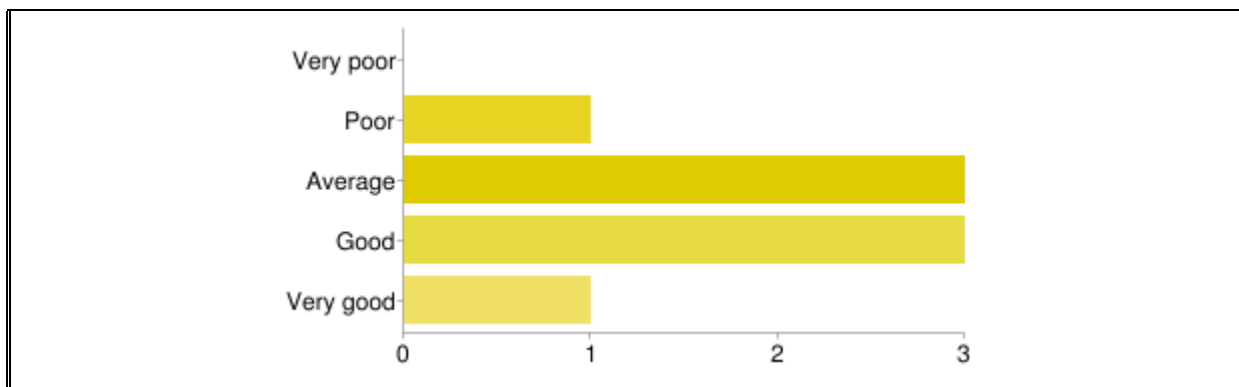


5.3.4 “Augmented Lecture Podcast” (LMU)



5.3.4.1 Students

Registration and login												
To participate in the trial you had to register and login. Please give us your impression of these procedures:												
<p><i>Ease of use</i></p> <p>A horizontal bar chart showing the distribution of ratings for 'Ease of use'. The y-axis categories are Very poor, Poor, Average, Good, and Very good. The x-axis represents the number of responses from 0 to 5. The bars are orange.</p> <table border="1"> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Very poor</td> <td>0</td> </tr> <tr> <td>Poor</td> <td>0</td> </tr> <tr> <td>Average</td> <td>1</td> </tr> <tr> <td>Good</td> <td>2</td> </tr> <tr> <td>Very good</td> <td>5</td> </tr> </tbody> </table>	Rating	Count	Very poor	0	Poor	0	Average	1	Good	2	Very good	5
Rating	Count											
Very poor	0											
Poor	0											
Average	1											
Good	2											
Very good	5											
<p><i>Error messages/ease of recovering from mistakes</i></p> <p>A horizontal bar chart showing the distribution of ratings for 'Error messages/ease of recovering from mistakes'. The y-axis categories are Very poor, Poor, Average, Good, and Very good. The x-axis represents the number of responses from 0 to 5. The bars are red.</p> <table border="1"> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Very poor</td> <td>0</td> </tr> <tr> <td>Poor</td> <td>0</td> </tr> <tr> <td>Average</td> <td>5</td> </tr> <tr> <td>Good</td> <td>2</td> </tr> <tr> <td>Very good</td> <td>1</td> </tr> </tbody> </table>	Rating	Count	Very poor	0	Poor	0	Average	5	Good	2	Very good	1
Rating	Count											
Very poor	0											
Poor	0											
Average	5											
Good	2											
Very good	1											
<i>Overall quality</i>												



What features would do you add?

- Proof of email-address
- I would add more information to inform the user why he should register and what advantages he has to be registered
- None
- Live password überprüfung -> stimmt passwort und passwort-wiederholung überein live balken zur anzeige der komplexität/sicherheit des passwortes

What features would you eliminate?

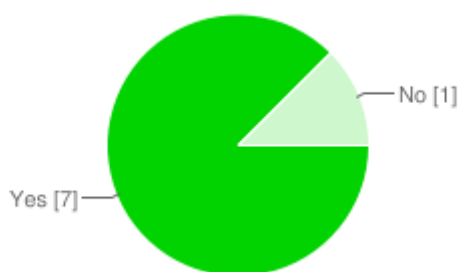
- Questions which are not required for Login, like name.

Please add any other comments you may have.

- A little bit more design
- Poor look, way too quiet, more eyecandy please ;-)

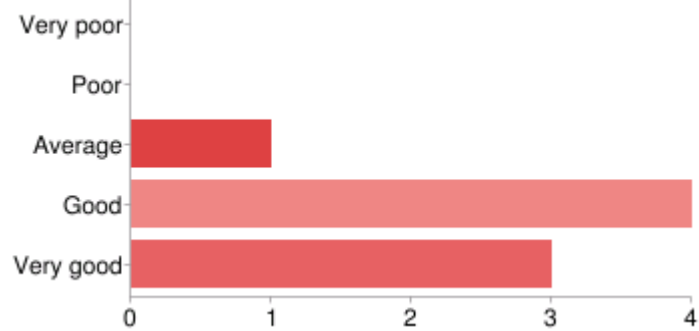
Searching for lecture podcast

Before using CONVERGENCE had you ever “searched for lecture podcast” using a computer?

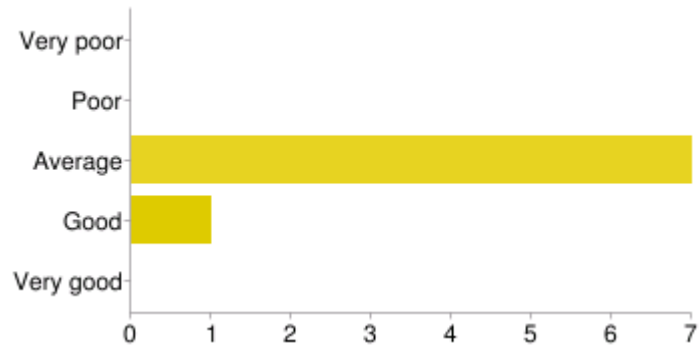


IF NO - Do you think that this functionality is useful for your business?

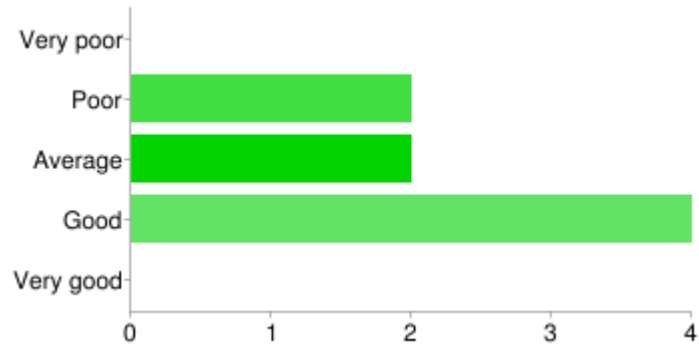
	<p>A horizontal bar chart with a y-axis labeled 'Not at all', 'Slightly useful b...', 'Useful', 'Very useful', and 'Essential'. The x-axis is labeled '0' and '1'. The 'Useful' bar is highlighted in orange and extends to the value 1. All other bars are at length 0.</p>
<p><i>IF YES - Do you think that this functionality is useful for your business?</i></p>	
	<p>A horizontal bar chart with a y-axis labeled 'Not at all', 'Slightly useful b...', 'Useful', 'Very useful', and 'Essential'. The x-axis is labeled '0', '1', '2', '3', and '4'. The 'Useful' bar is purple and extends to 3. The 'Very useful' bar is purple and extends to 4. All other bars are at length 0.</p>
<p><i>IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?</i></p>	
	<p>A horizontal bar chart with a y-axis labeled 'Much worse', 'A bit worse', 'The same', 'A bit better', and 'A lot better'. The x-axis is labeled '0', '1', '2', and '3'. The 'A bit better' bar is dark blue and extends to 3. The 'A bit worse' and 'The same' bars are medium blue and extend to 2. All other bars are at length 0.</p>
<p><i>How would you score CONVERGENCE this functionality with respect to:</i></p>	
<p><i>Ease of use</i></p>	



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

- Related Podcasts
- Give more information about search results
- If you type your podcast name into the search line, you are not able to press "ENTER" ,you have to push the "SEARCH" button
- I would add the feature of advanced search, for people you only wants to search for podcast or pictures etc.
- VDI information, like uploaded ID, expiration date...
- Autovervollständigung um oft gesuchte Begriffe schneller zu finden Enter Taste sollte auch gehen, wenn man suchen will: Suchbegriff -><enter>

What features would you eliminate

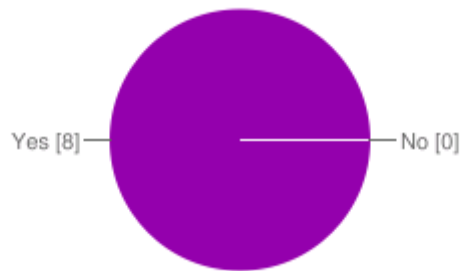
- The Pop Up window
- None

Please add any other comments you may have

- I cannot really decide if the search is better or worse because it is not too hard to find a certain lecture with the same name as the search word in a database which is probably not very big. To really find out if the search is working well or not you should have tasks which are more complicated for the search engine!
- "create annotation" window pops up very small.

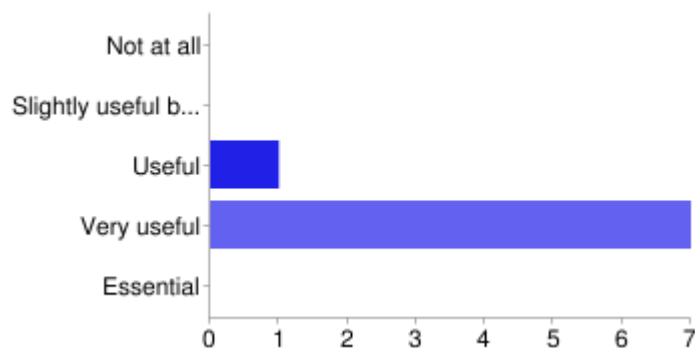
Watching lecture podcast

Before using CONVERGENCE had you ever "watched lecture podcast" using a computer?

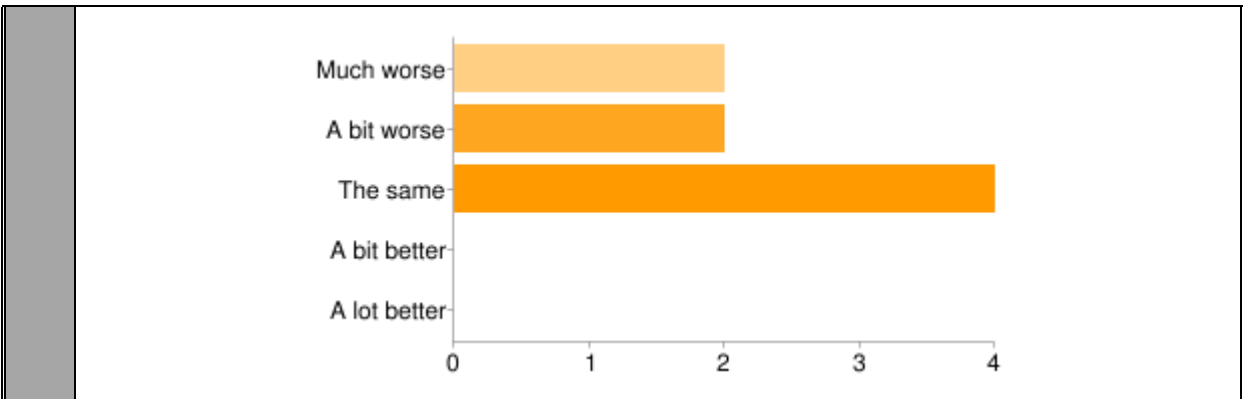


IF NO - Do you think that this functionality is useful for your business?

IF YES - Do you think that this functionality is useful for your business?

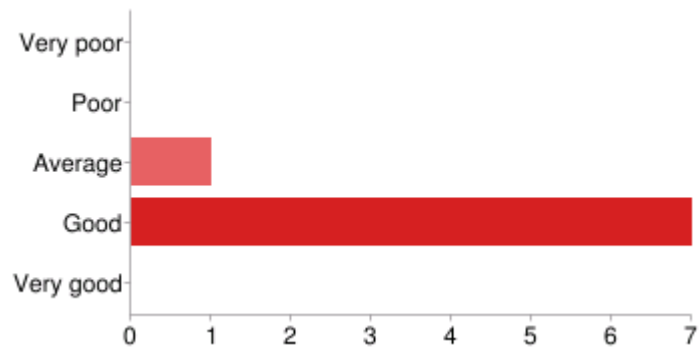


IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

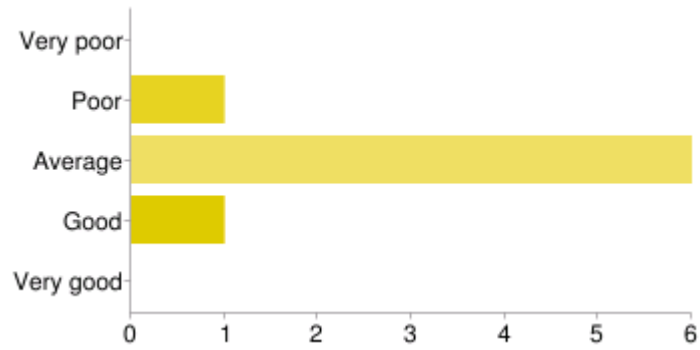


How would you score CONVERGENCE this functionality with respect to:

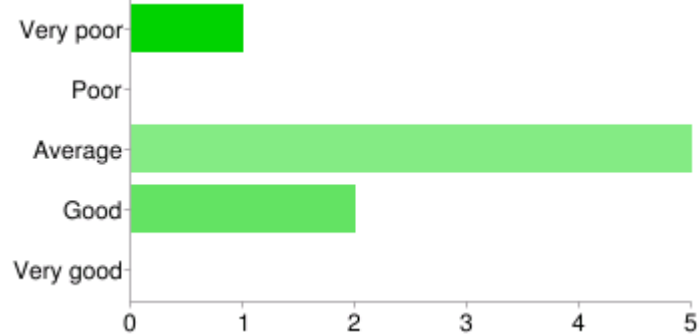
Ease of use



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

- Scaling of the podcast
- Details, links, author info
- - copy text from slides - version and date-
- I would like to choose the video quality or have the choice between video or only sound. - download the podcast-possibility to show slides bigger.
- -das video wird überhaupt nicht flüssig wiedergegeben!!!! -man sollte die kopplung von skript an video optionalisieren, falls man "zurückblättern" möchte solange das video weiterläuft und per setzen eines hackens live wieder einschalten können. -vollbild! (für folien & video [mit resize der aufteilung],folien und video) also jede kombination. -zusätzlic

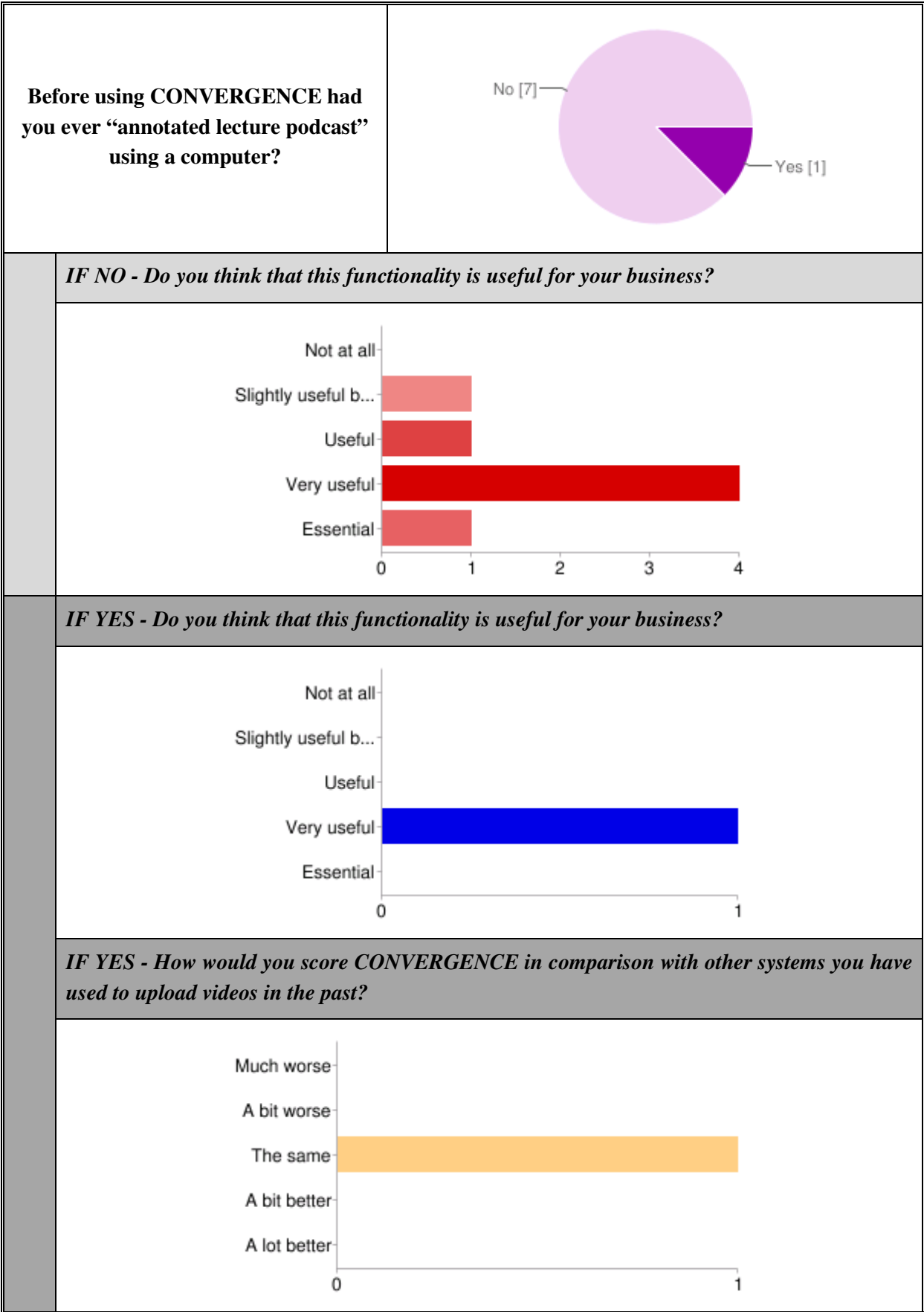
What features would you eliminate

-

Please add any other comments you may have

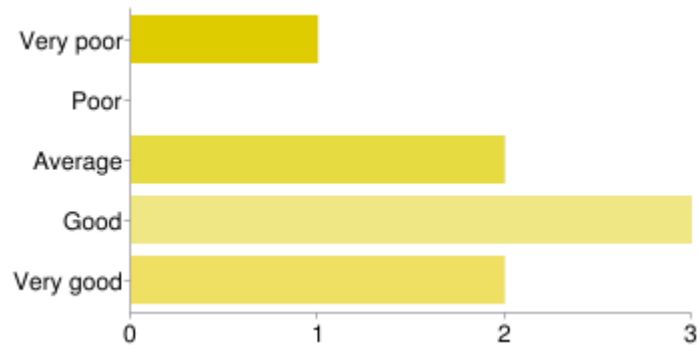
- The design is very easy and does not look professional
- Good but not innovative movie player, i don't see a difference. The video quality was poor.
- Didn't see the video cause of firefox
- Video didn't start in either firefox and chromium. There was no warning or error message at all. When using chromium i copied the url and had to login again. After this login in a different browser i didn't get connect immediately to the podcast but had to do the searching process again.

Annotating lecture podcast

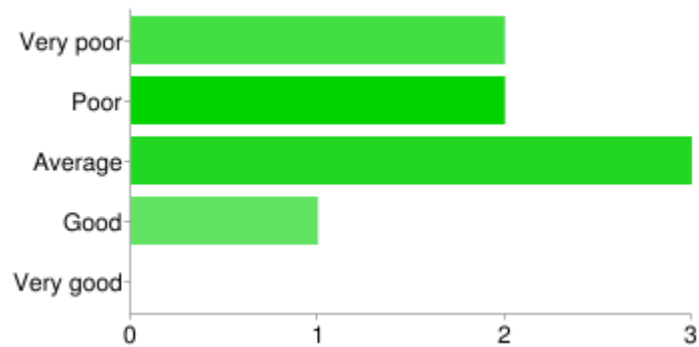


How would you score CONVERGENCE this functionality with respect to:

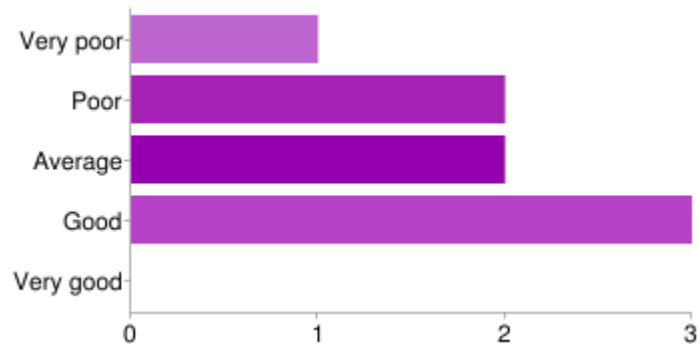
Ease of use



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

- Delete option
- Popup, notification etc. At related time point in video
- Show the title
- - add the date manual - privacy policy for some groups
- Error message if there is no html5 support in used browser.
- Man sollte auf annotations antworten können um so auch eine diskussion führen zu können...siehe facebook (post->antworten auf posts....)

What features would you eliminate

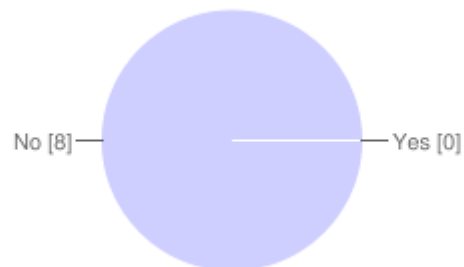
- The Invisible button from the calendar popup, where you can go to the next month. Hard to find!

Please add any other comments you may have

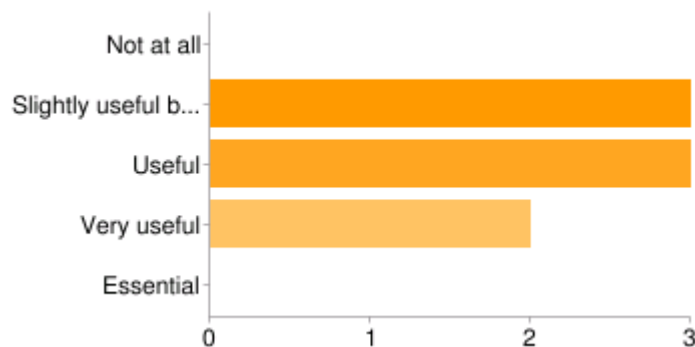
- Could not make an annotation using the Firefox web browser
- It wasn't clear what happens if I click on "subscribe", because the explanation which was given, said that this would subscribe information according to my keywords. But normally subscribe does subscribe you to the author.
- Cause of Firefox adding the annotation didn't work. Even after 5 minutes there was no error message
- Page doesn't show title of the annotation. Change that ;-)
- -Beim auswählen des Ablaufdatums sind die Pfeile unsichtbar um in den Monaten zu switchen
-Titel ist unnötig->erscheint nirgends

Subscription to annotation

Before using CONVERGENCE had you ever "subscribed to annotation" using a computer?



IF NO - Do you think that this functionality is useful for your business?

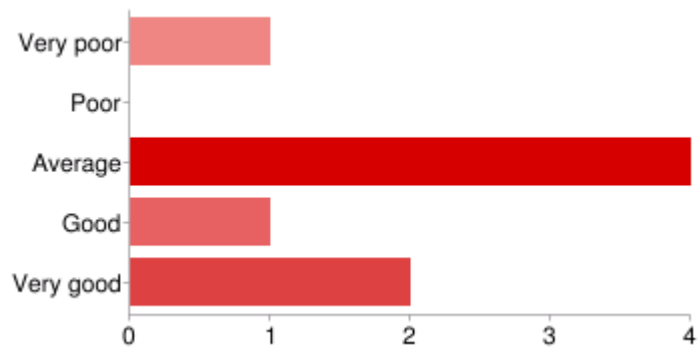


IF YES - Do you think that this functionality is useful for your business?

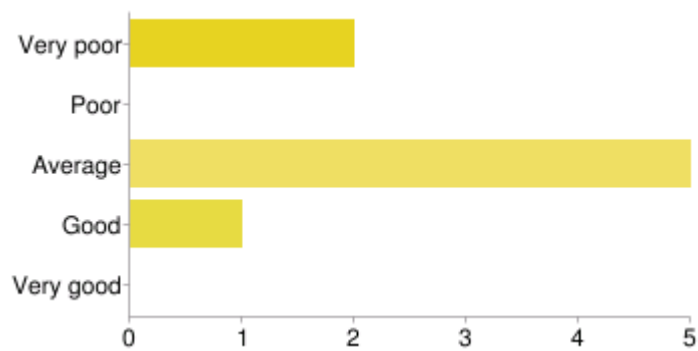
IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

How would you score CONVERGENCE this functionality with respect to:

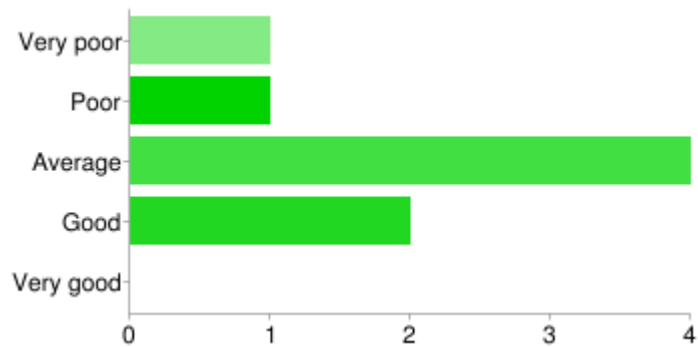
Ease of use



Error messages/ease of recovering from mistakes



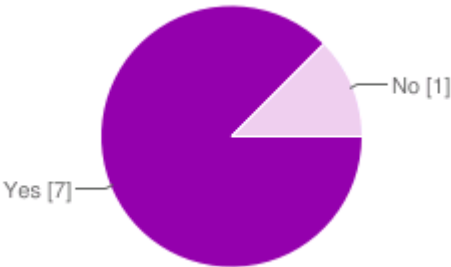
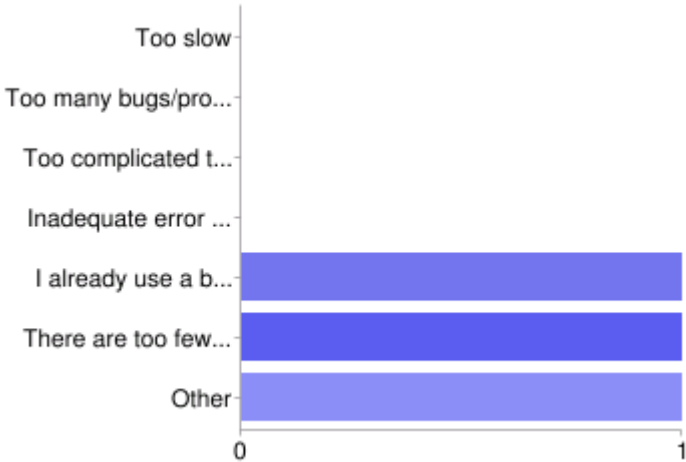
Overall quality

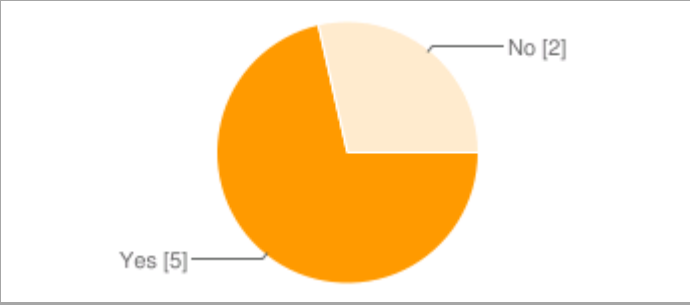
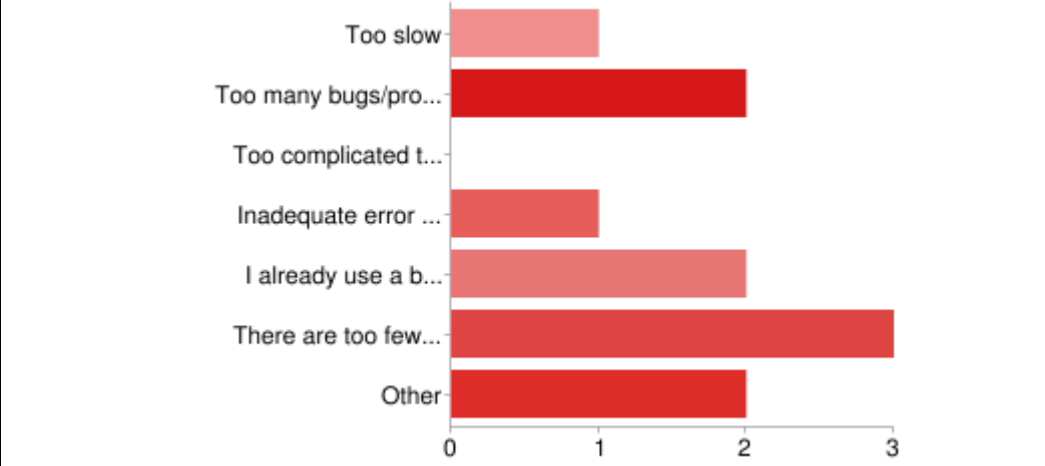


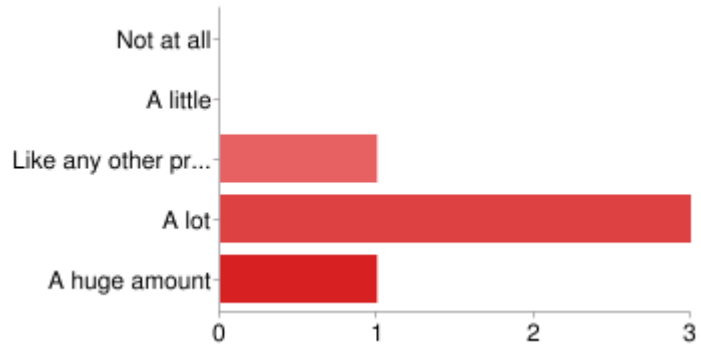
What features would do you add?

- Unsubscribed

<ul style="list-style-type: none"> • -That someone can comment you're annotation. Like a discussion or something. • It should be working with html5. • Ein Hilfstext/Fenster sollte man aufrufen klönnen, welches anzeigt was subscribed bewirkt/bedeutet
What features would you eliminate
•
Please add any other comments you may have
<ul style="list-style-type: none"> • Could not subscribe to annotation because the annotation could not be saved • All the functionalities need more information and descriptions • I couldn't save the annotation because i used firefox. • Couldn't create an annotation • Convergence sounds like a very cool idea!

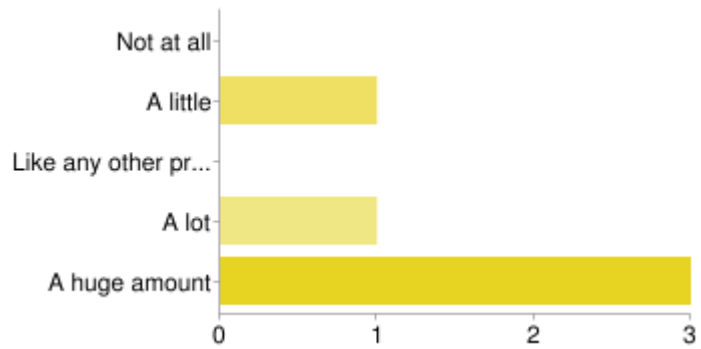
Final Notes																	
<p><i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i></p>	 <table border="1"> <caption>Survey Results</caption> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>7</td> </tr> <tr> <td>No</td> <td>1</td> </tr> </tbody> </table>	Response	Count	Yes	7	No	1										
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IF NO Why?																	
 <table border="1"> <caption>Reasons for 'No' Responses</caption> <thead> <tr> <th>Reason</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Too slow</td> <td>0</td> </tr> <tr> <td>Too many bugs/pro...</td> <td>0</td> </tr> <tr> <td>Too complicated t...</td> <td>0</td> </tr> <tr> <td>Inadequate error ...</td> <td>0</td> </tr> <tr> <td>I already use a b...</td> <td>1</td> </tr> <tr> <td>There are too few...</td> <td>1</td> </tr> <tr> <td>Other</td> <td>1</td> </tr> </tbody> </table>		Reason	Count	Too slow	0	Too many bugs/pro...	0	Too complicated t...	0	Inadequate error ...	0	I already use a b...	1	There are too few...	1	Other	1
Reason	Count																
Too slow	0																
Too many bugs/pro...	0																
Too complicated t...	0																
Inadequate error ...	0																
I already use a b...	1																
There are too few...	1																
Other	1																

	<p>Other</p> <ul style="list-style-type: none"> At the moment I dont see a difference between convergence and the normal web. there are lecture players which are better and have more functionalities, but I guess convergence is not just about podcast players! 																
<p>IF YES - Would you consider using CONVERGENCE instead of the applications you use today?</p>	 <table border="1"> <caption>Survey Results for 'IF YES'</caption> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>5</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </tbody> </table>	Response	Count	Yes	5	No	2										
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Yes	5																
No	2																
	<p>IF NO</p>  <table border="1"> <caption>Reasons for 'IF NO' Responses</caption> <thead> <tr> <th>Reason</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Too slow</td> <td>1</td> </tr> <tr> <td>Too many bugs/pro...</td> <td>2</td> </tr> <tr> <td>Too complicated t...</td> <td>0</td> </tr> <tr> <td>Inadequate error ...</td> <td>1</td> </tr> <tr> <td>I already use a b...</td> <td>2</td> </tr> <tr> <td>There are too few...</td> <td>3</td> </tr> <tr> <td>Other</td> <td>2</td> </tr> </tbody> </table>	Reason	Count	Too slow	1	Too many bugs/pro...	2	Too complicated t...	0	Inadequate error ...	1	I already use a b...	2	There are too few...	3	Other	2
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Too many bugs/pro...	2																
Too complicated t...	0																
Inadequate error ...	1																
I already use a b...	2																
There are too few...	3																
Other	2																
	<p>Other</p> <ul style="list-style-type: none"> No perceived advantage over other systems at this stage of development It's obviously not finished yet, so I wouldn't recommend it to anyone in this state. And I don't really like the fact that there is a must for registration with e-mail address and my real name. Why don't you use a message broadcasting system just with the personal ID of each person? Nobody will e able to be anonymous inside of the Convergence network, but name and e-mail is not necessary for the usage of Convergence. 																
	<p>IF YES - How much do you think CONVERGENCE could contribute to your productivity at work?</p>																

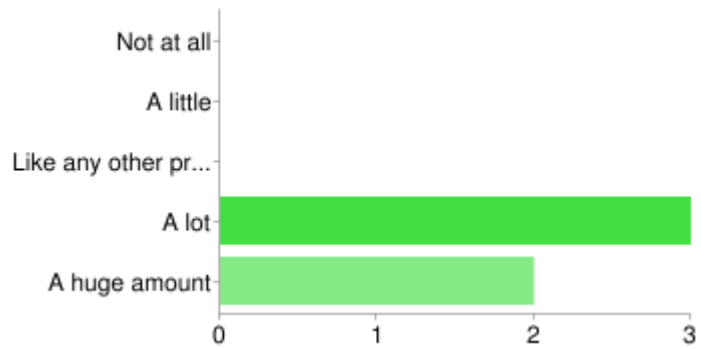


In your choice how important is CONVERGENCE's

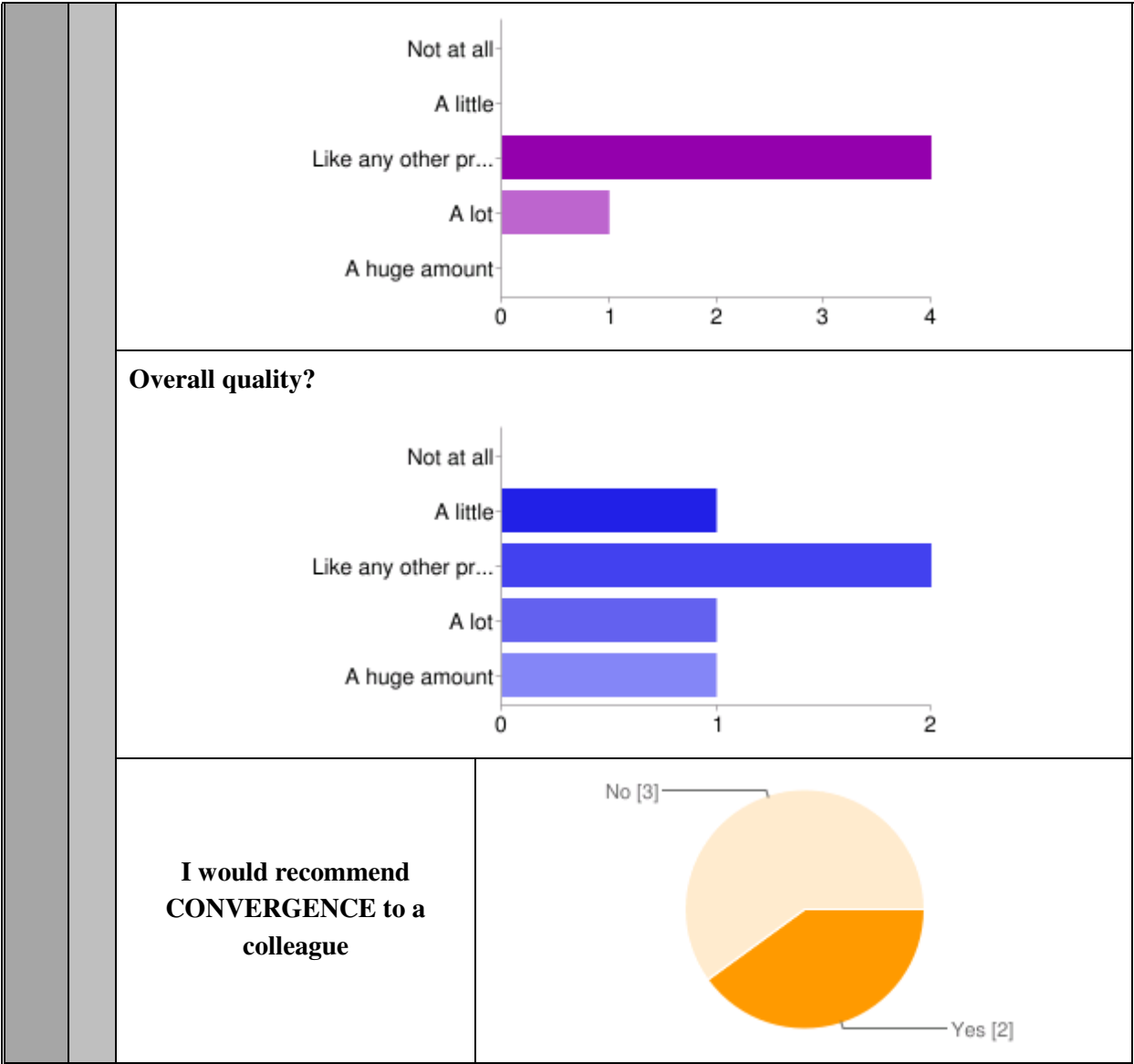
Performance?



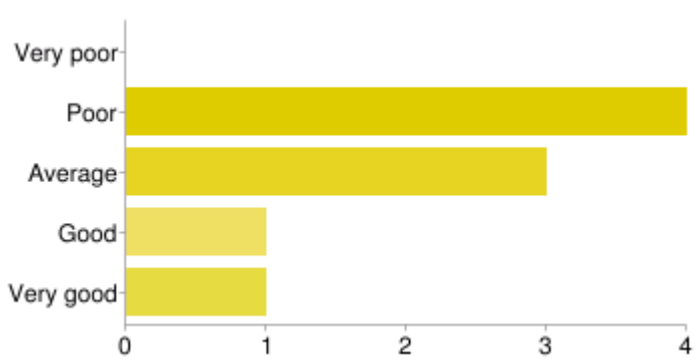
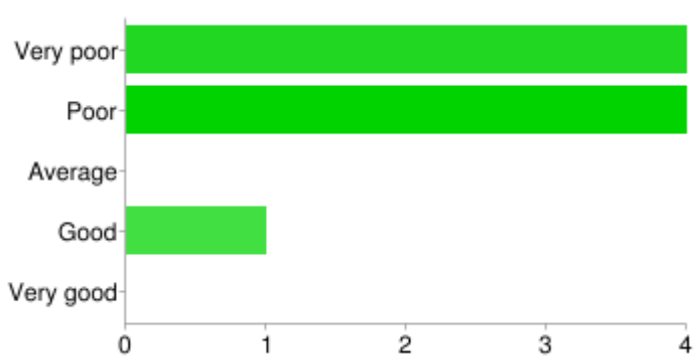
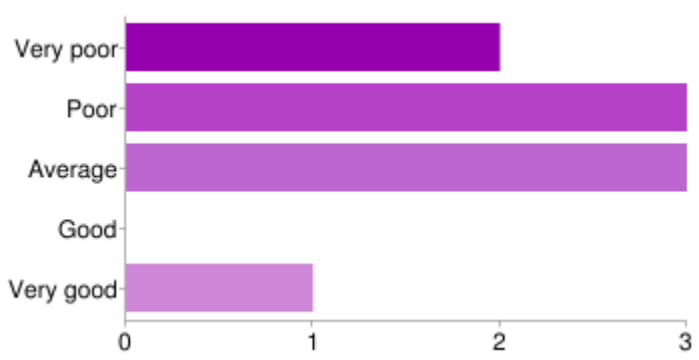
Ease of use?



Error messages/ease of recovering from errors?



5.3.4.2 Lecturers

Registration and login												
To participate in the trial you had to register and login. Please give us your impression of these procedures:												
<i>Ease of use</i>  <p>A horizontal bar chart showing the distribution of responses for 'Ease of use'. The x-axis represents the number of responses, ranging from 0 to 4. The y-axis lists five categories: Very poor, Poor, Average, Good, and Very good. The bars are colored in shades of yellow. The 'Poor' category has the highest count at 4, followed by 'Average' at 3, 'Good' at 1, and 'Very good' at 1. 'Very poor' has 0 responses.</p> <table border="1"><thead><tr><th>Category</th><th>Count</th></tr></thead><tbody><tr><td>Very poor</td><td>0</td></tr><tr><td>Poor</td><td>4</td></tr><tr><td>Average</td><td>3</td></tr><tr><td>Good</td><td>1</td></tr><tr><td>Very good</td><td>1</td></tr></tbody></table>	Category	Count	Very poor	0	Poor	4	Average	3	Good	1	Very good	1
Category	Count											
Very poor	0											
Poor	4											
Average	3											
Good	1											
Very good	1											
<i>Error messages/ease of recovering from mistakes</i>  <p>A horizontal bar chart showing the distribution of responses for 'Error messages/ease of recovering from mistakes'. The x-axis represents the number of responses, ranging from 0 to 4. The y-axis lists five categories: Very poor, Poor, Average, Good, and Very good. The bars are colored in shades of green. The 'Very poor' and 'Poor' categories both have a count of 4. 'Good' has a count of 1. 'Average' and 'Very good' have 0 responses.</p> <table border="1"><thead><tr><th>Category</th><th>Count</th></tr></thead><tbody><tr><td>Very poor</td><td>4</td></tr><tr><td>Poor</td><td>4</td></tr><tr><td>Average</td><td>0</td></tr><tr><td>Good</td><td>1</td></tr><tr><td>Very good</td><td>0</td></tr></tbody></table>	Category	Count	Very poor	4	Poor	4	Average	0	Good	1	Very good	0
Category	Count											
Very poor	4											
Poor	4											
Average	0											
Good	1											
Very good	0											
<i>Overall quality</i>  <p>A horizontal bar chart showing the distribution of responses for 'Overall quality'. The x-axis represents the number of responses, ranging from 0 to 3. The y-axis lists five categories: Very poor, Poor, Average, Good, and Very good. The bars are colored in shades of purple. The 'Very poor' category has a count of 2, 'Poor' has 3, 'Average' has 3, and 'Very good' has 1. 'Good' has 0 responses.</p> <table border="1"><thead><tr><th>Category</th><th>Count</th></tr></thead><tbody><tr><td>Very poor</td><td>2</td></tr><tr><td>Poor</td><td>3</td></tr><tr><td>Average</td><td>3</td></tr><tr><td>Good</td><td>0</td></tr><tr><td>Very good</td><td>1</td></tr></tbody></table>	Category	Count	Very poor	2	Poor	3	Average	3	Good	0	Very good	1
Category	Count											
Very poor	2											
Poor	3											
Average	3											
Good	0											
Very good	1											
<i>What features would do you add?</i>												
<ul style="list-style-type: none">• Message: "please register first"												

- Appropriate error message
- A redirect to the login page after the registration, so that the login works
- Password strength indicator and/or recommendations (like "characters and numbers")
- More error information. A label telling me I'm using convergence
- A redirect to the login page after the registration, so that the login works

What features would you eliminate?

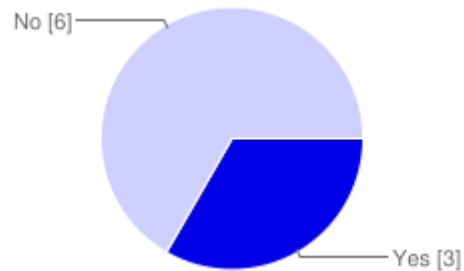
- None

Please add any other comments you may have.

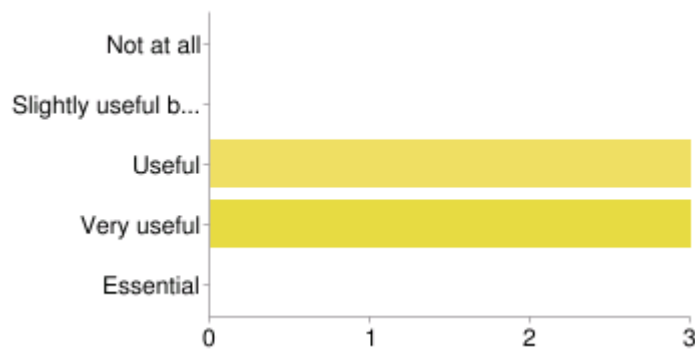
- Had problems with forwarding and missing feedback and interaction state
- The interface could be designed a little nicer and with more taste regarding fonts, colours, etc.

Creation postcast components and lecture podcasts

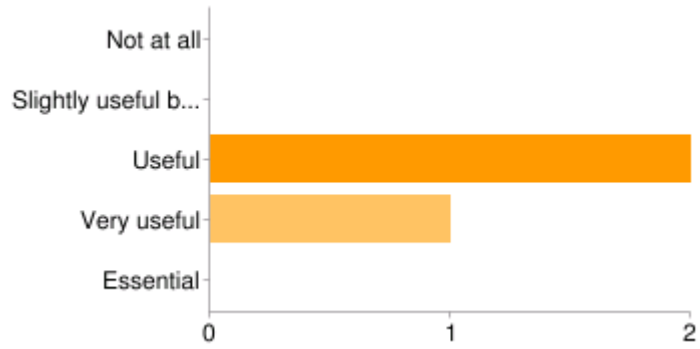
Before using CONVERGENCE had you ever “created podcast components and lecture podcasts” using a computer?



IF NO - Do you think that this functionality is useful for your business?



IF YES - Do you think that this functionality is useful for your business?

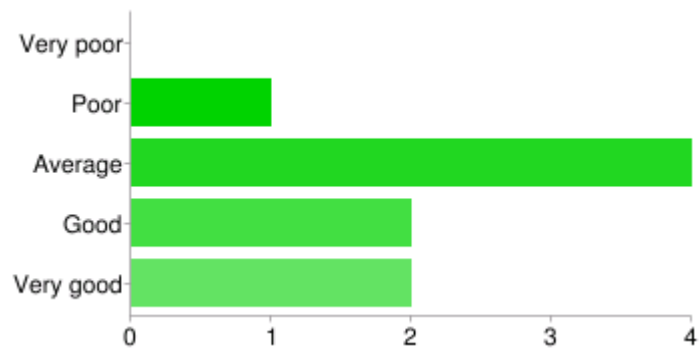


IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

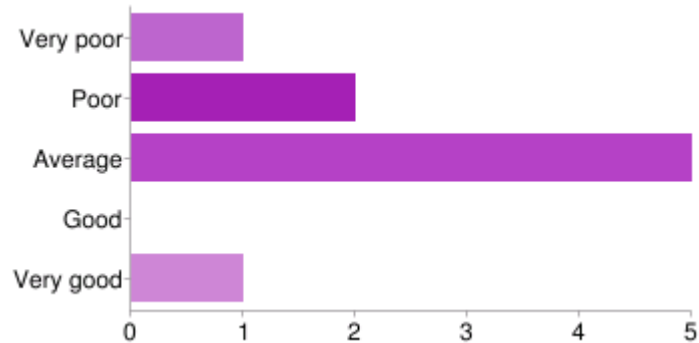


How would you score CONVERGENCE this functionality with respect to:

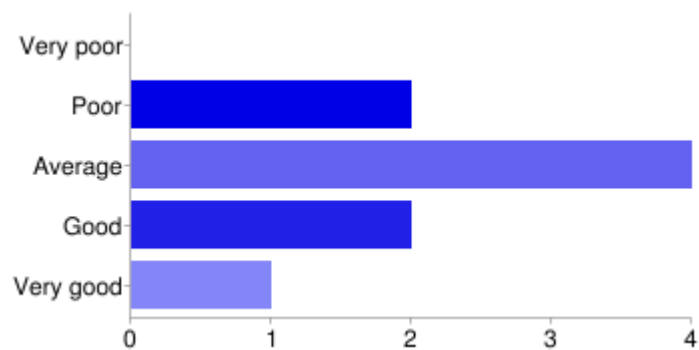
Ease of use



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

- Error-messages/ drop-downs/ feedback
- Author could be already filled out with my own name. It should be editable in case i am not the author.
- Error messages, real user interface components etc.
- The fields to upload slides, video and xml file could have infos on which file type is expected (pdf, mp4, xml), so that it's easier for users to fill out.
- File type filter for upload dialogs
- Not enough usage experience to give detailed advices
- Explain which file types can be added (pdf/ppt, mp4/mov/mpg ...)
- The fields to upload slides, video and xml file could have infos on which file type is expected

What features would you eliminate

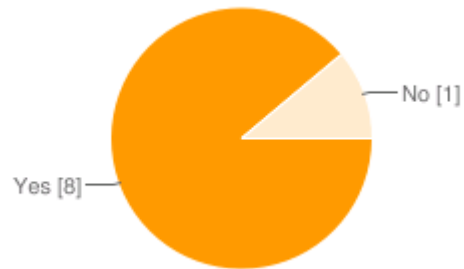
- There are no features
- None
- I would like to be able to add the date the podcast was recorded

Please add any other comments you may have

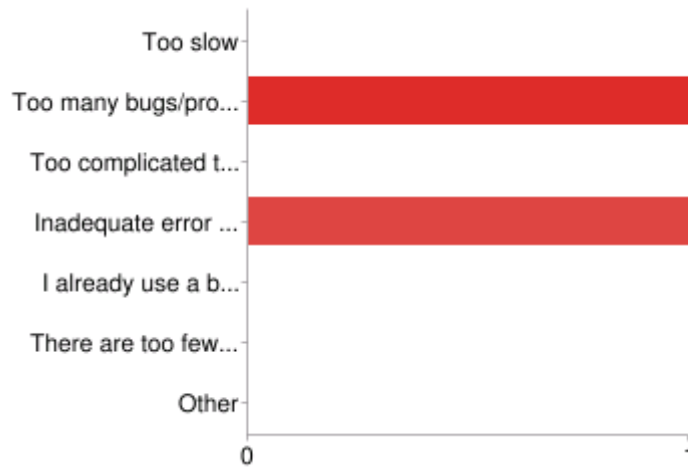
- Give feedback! E.g. Show results, show state of interaction, give preview
- I do not think i tested convergence. I am quite sure i just tested a very basic website.

Final Notes

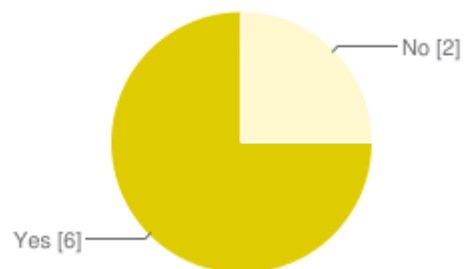
*Now you have seen CONVERGENCE
do you think
It could be useful for you work?*



IF NO

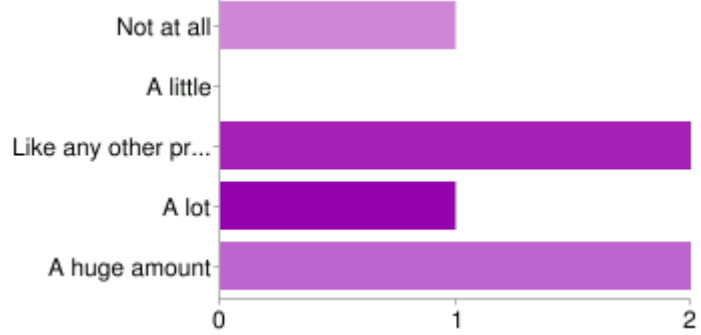


*IF YES - Would you consider
using CONVERGENCE instead
of the applications you use today?*

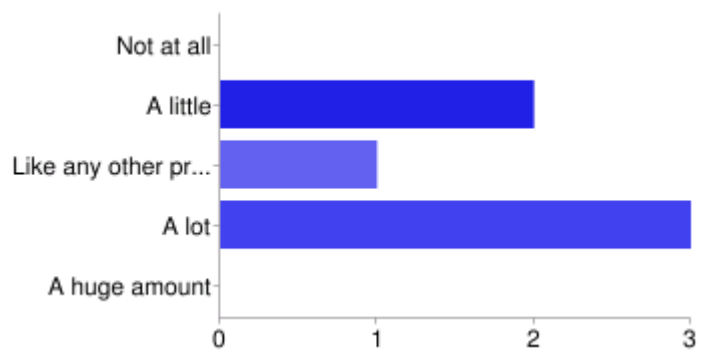


IF NO

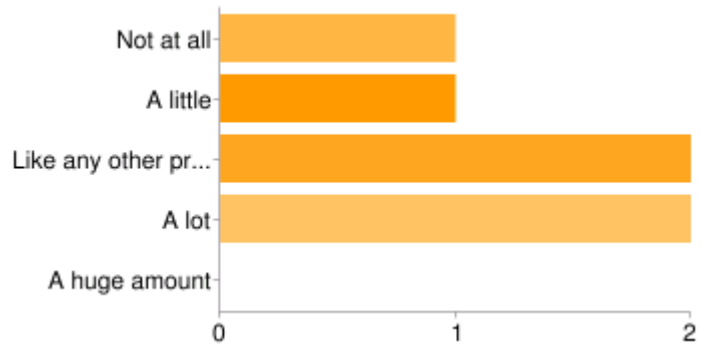
	<table border="1"> <caption>Reasons for not preferring Convergence</caption> <thead> <tr> <th>Reason</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Too slow</td> <td>0</td> </tr> <tr> <td>Too many bugs/pro...</td> <td>2</td> </tr> <tr> <td>Too complicated t...</td> <td>0</td> </tr> <tr> <td>Inadequate error ...</td> <td>3</td> </tr> <tr> <td>I already use a b...</td> <td>0</td> </tr> <tr> <td>There are too few...</td> <td>1</td> </tr> <tr> <td>Other</td> <td>3</td> </tr> </tbody> </table>	Reason	Frequency	Too slow	0	Too many bugs/pro...	2	Too complicated t...	0	Inadequate error ...	3	I already use a b...	0	There are too few...	1	Other	3
Reason	Frequency																
Too slow	0																
Too many bugs/pro...	2																
Too complicated t...	0																
Inadequate error ...	3																
I already use a b...	0																
There are too few...	1																
Other	3																
	<p>Other</p>																
	<ul style="list-style-type: none"> • Missing possibility to enter Meta-Infos such as length, content-description • The question is misformulated. I can't say that I would prefer Convergence over my other Podcast software because I do not use a Podcast software (which I also clicked before). • In the task there were no visible characteristics or benefits of Convergence. • The question is misformulated. I can't say that I would prefer Convergence over my other Podcast software because I do not use a Podcast software (which I also clicked before). 																
	<p><i>IF YES</i> - How much do you think CONVERGENCE could contribute to your productivity at work?</p>																
	<table border="1"> <caption>Productivity contribution of Convergence</caption> <thead> <tr> <th>Level</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Not at all</td> <td>0</td> </tr> <tr> <td>A little</td> <td>0</td> </tr> <tr> <td>Like any other pr...</td> <td>5</td> </tr> <tr> <td>A lot</td> <td>1</td> </tr> <tr> <td>A huge amount</td> <td>0</td> </tr> </tbody> </table>	Level	Frequency	Not at all	0	A little	0	Like any other pr...	5	A lot	1	A huge amount	0				
Level	Frequency																
Not at all	0																
A little	0																
Like any other pr...	5																
A lot	1																
A huge amount	0																
	<p>In your choice how important is CONVERGENCE's</p>																
	<p>Performance?</p>																



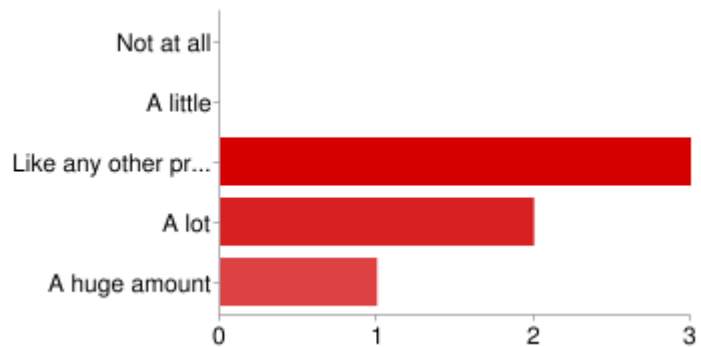
Ease of use?

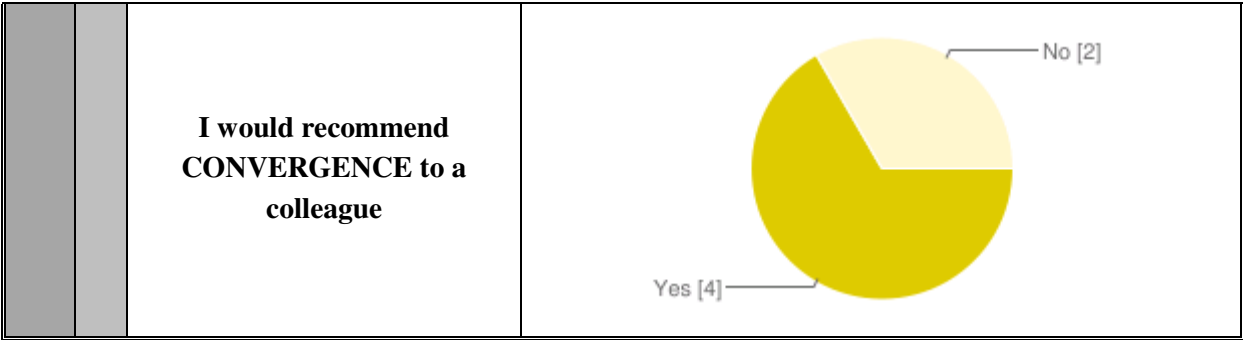


Error messages/ease of recovering from errors?

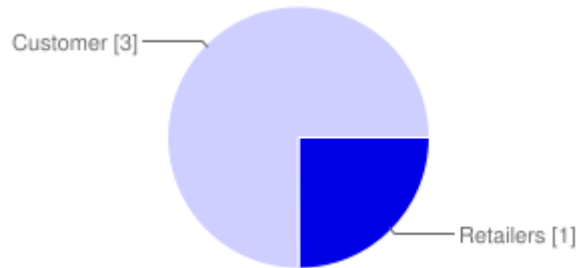


Overall quality?





5.3.5 “Smart Retailing” (UTI)



5.3.5.1 Retailers

Registration and login

To participate in the trial you had to register and login. Please give us your impression of these procedures:

Ease of use



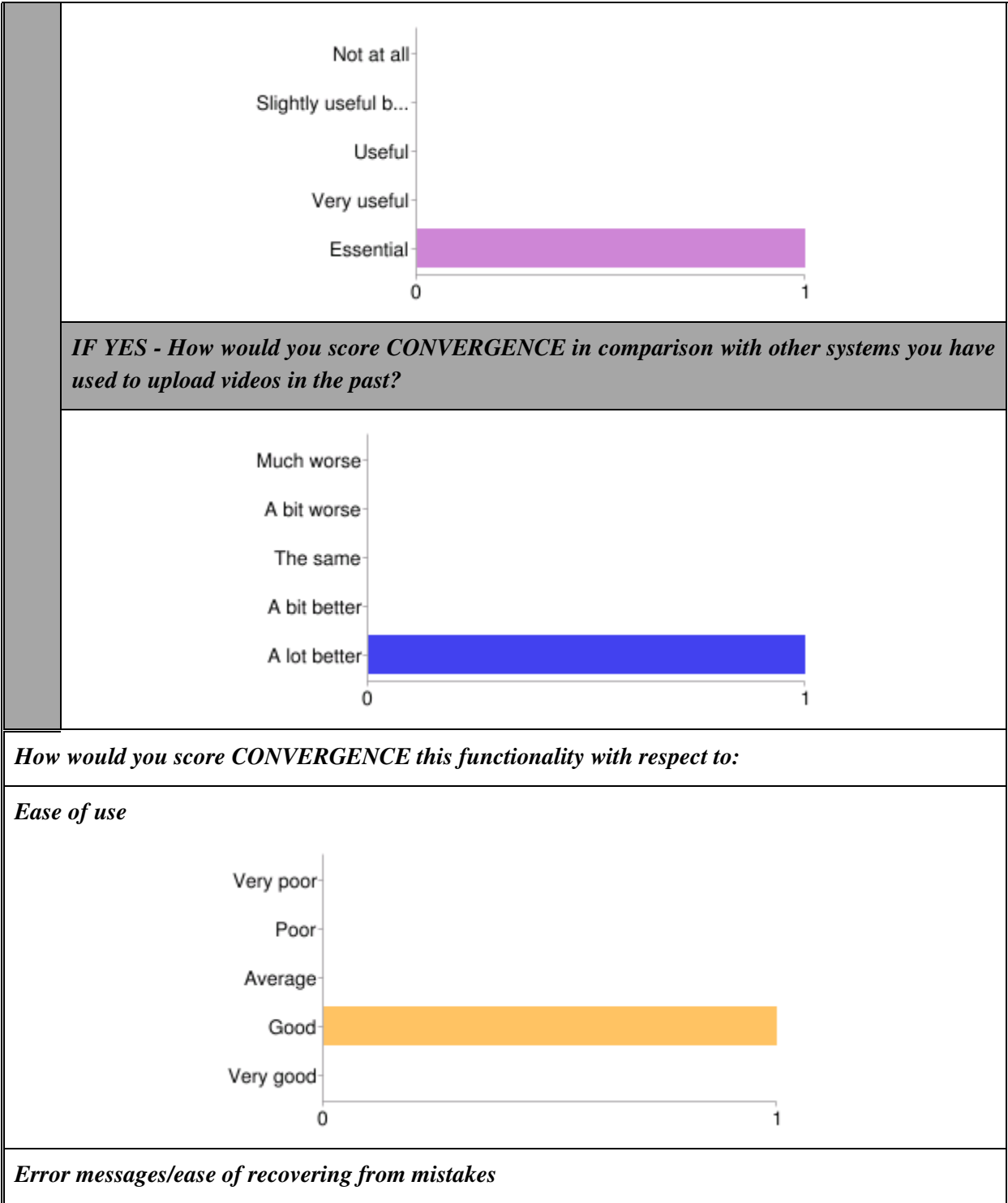
Error messages/ease of recovering from mistakes



Overall quality

<i>What features would do you add?</i>
•
<i>What features would you eliminate?</i>
•
<i>Please add any other comments you may have.</i>
•

Products promotion	
<p>Before using CONVERGENCE, have you ever promoted your products on the Internet (except your website)?</p>	
	<i>IF NO - Do you think that this functionality is useful for your business?</i>
	<i>IF YES - Do you think that this functionality is useful for your business?</i>



<p><i>Overall quality</i></p>
<p><i>What features would do you add?</i></p> <ul style="list-style-type: none"> • More search criteria; Monitor the search criteria
<p><i>What features would you eliminate</i></p> <ul style="list-style-type: none"> • Eliminate Promotion End Date for products (leave it only for offers and promotions)
<p><i>Please add any other comments you may have</i></p> <ul style="list-style-type: none"> •

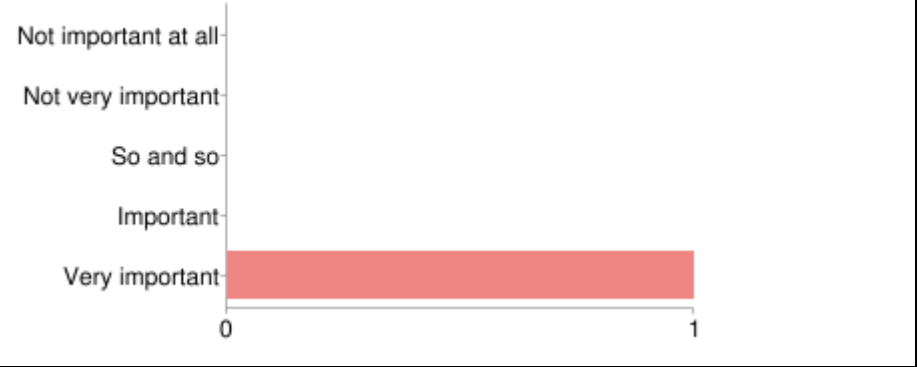
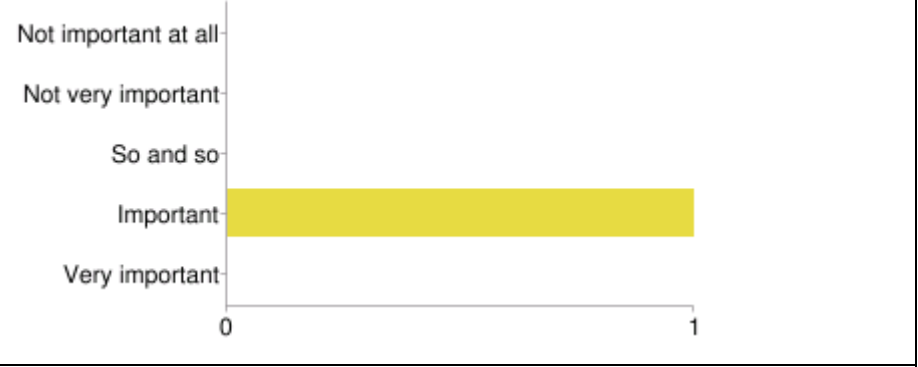
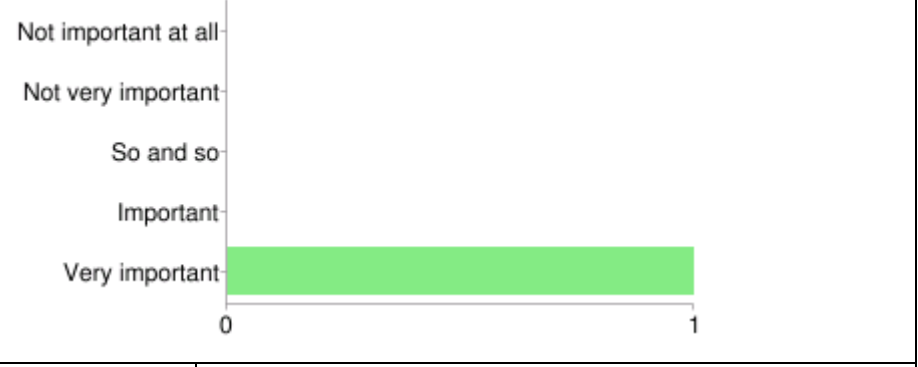
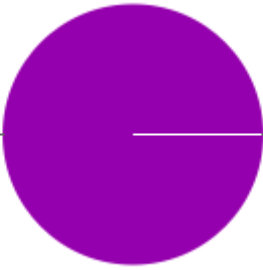
<p>Monitoring the feedback of the customers</p>	
<p>Before using CONVERGENCE had you ever been able to monitor the feedback of the customers to your promoted products?</p>	

<i>IF NO - Do you think that this functionality is useful for your business?</i>												
<i>IF YES - Do you think that this functionality is useful for your business?</i>												
<table border="1"> <caption>Data for 'IF YES - Do you think that this functionality is useful for your business?'</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Not at all</td> <td>0.00</td> </tr> <tr> <td>Slightly useful b...</td> <td>0.00</td> </tr> <tr> <td>Useful</td> <td>0.95</td> </tr> <tr> <td>Very useful</td> <td>0.00</td> </tr> <tr> <td>Essential</td> <td>0.00</td> </tr> </tbody> </table>	Category	Percentage	Not at all	0.00	Slightly useful b...	0.00	Useful	0.95	Very useful	0.00	Essential	0.00
Category	Percentage											
Not at all	0.00											
Slightly useful b...	0.00											
Useful	0.95											
Very useful	0.00											
Essential	0.00											
<i>IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?</i>												
<table border="1"> <caption>Data for 'IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?'</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Much worse</td> <td>0.00</td> </tr> <tr> <td>A bit worse</td> <td>0.00</td> </tr> <tr> <td>The same</td> <td>0.00</td> </tr> <tr> <td>A bit better</td> <td>0.95</td> </tr> <tr> <td>A lot better</td> <td>0.00</td> </tr> </tbody> </table>	Category	Percentage	Much worse	0.00	A bit worse	0.00	The same	0.00	A bit better	0.95	A lot better	0.00
Category	Percentage											
Much worse	0.00											
A bit worse	0.00											
The same	0.00											
A bit better	0.95											
A lot better	0.00											
<i>How would you score CONVERGENCE this functionality with respect to:</i>												
<i>Ease of use</i>												
<table border="1"> <caption>Data for 'Ease of use'</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Very poor</td> <td>0.00</td> </tr> <tr> <td>Poor</td> <td>0.00</td> </tr> <tr> <td>Average</td> <td>0.00</td> </tr> <tr> <td>Good</td> <td>0.95</td> </tr> <tr> <td>Very good</td> <td>0.00</td> </tr> </tbody> </table>	Category	Percentage	Very poor	0.00	Poor	0.00	Average	0.00	Good	0.95	Very good	0.00
Category	Percentage											
Very poor	0.00											
Poor	0.00											
Average	0.00											
Good	0.95											
Very good	0.00											
<i>Error messages/ease of recovering from mistakes</i>												

<p><i>Overall quality</i></p>
<p><i>What features would do you add?</i></p> <ul style="list-style-type: none"> • Ranking
<p><i>What features would you eliminate</i></p> <ul style="list-style-type: none"> •
<p><i>Please add any other comments you may have</i></p> <ul style="list-style-type: none"> •

<p>Final Notes</p>	
<p><i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i></p>	

IF NO	
IF YES - Would you consider using CONVERGENCE instead of the applications you use today?	
IF NO	
Other	
•	
IF YES - How much do you think CONVERGENCE could contribute to your productivity at work?	
In your choice how important is CONVERGENCE's	
Performance?	

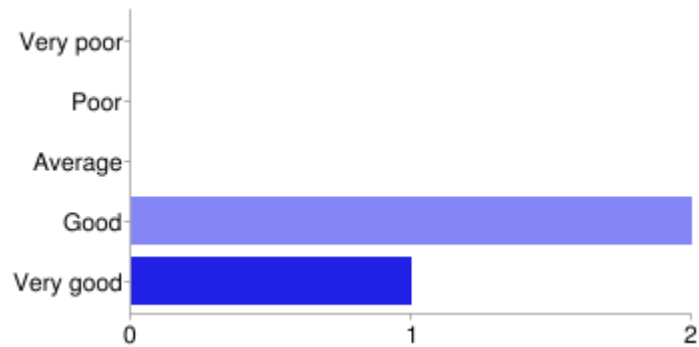
	<p>Ease of use?</p>  <p>A horizontal bar chart with a y-axis labeled 'Ease of use?' and a scale from 0 to 1. The y-axis categories are: Not important at all, Not very important, So and so, Important, and Very important. A red bar extends from the 'Very important' category to the value 1 on the x-axis.</p>
	<p>Error messages/ease of recovering from errors?</p>  <p>A horizontal bar chart with a y-axis labeled 'Error messages/ease of recovering from errors?' and a scale from 0 to 1. The y-axis categories are: Not important at all, Not very important, So and so, Important, and Very important. A yellow bar extends from the 'Important' category to the value 1 on the x-axis.</p>
	<p>Overall quality?</p>  <p>A horizontal bar chart with a y-axis labeled 'Overall quality?' and a scale from 0 to 1. The y-axis categories are: Not important at all, Not very important, So and so, Important, and Very important. A green bar extends from the 'Very important' category to the value 1 on the x-axis.</p>
<p>I would recommend CONVERGENCE to a colleague</p>	 <p>A purple circle representing a 100% 'Yes' response. The 'Yes' label is on the left with a count of [1], and the 'No' label is on the right with a count of [0].</p>

5.3.5.2 Customers

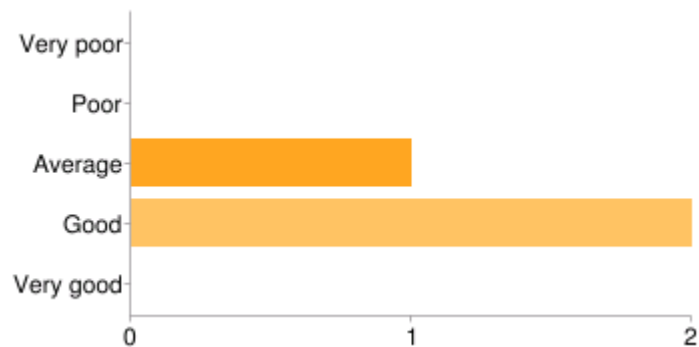
Registration and login

To participate in the trial you had to register and login. Please give us your impression of these procedures:

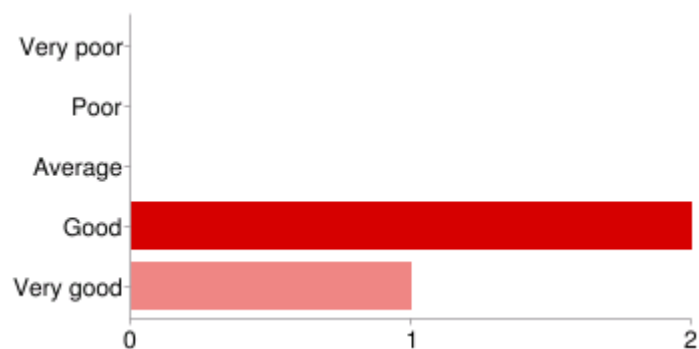
Ease of use



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

-

What features would you eliminate?

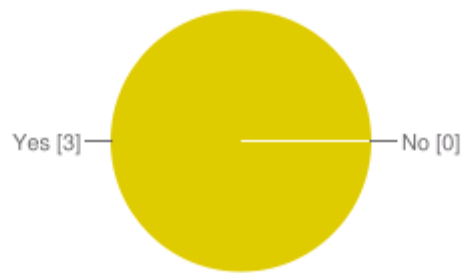
- The name in the register page is not necessary.

Please add any other comments you may have.

-

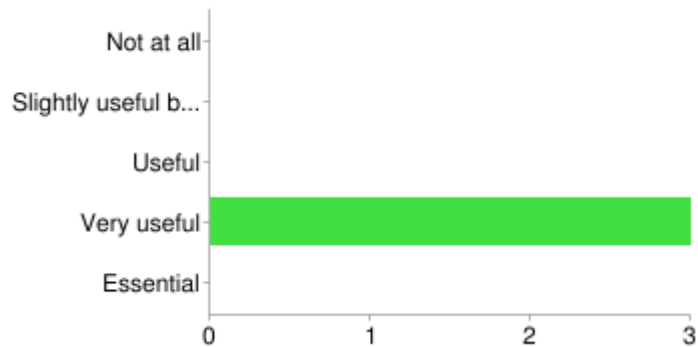
Subscription to product

Before using CONVERGENCE had you ever “subscribed to product” using a computer?

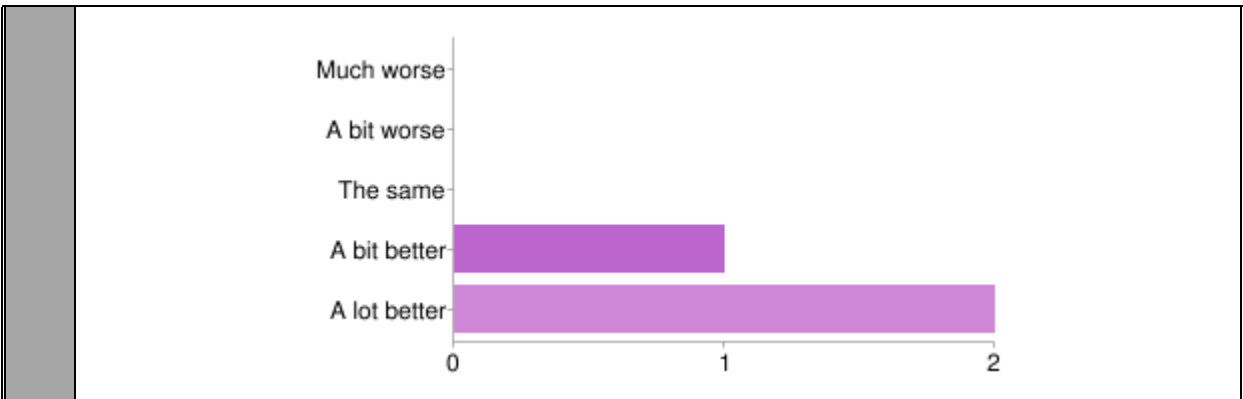


IF NO - Do you think that this functionality is useful for your business?

IF YES - Do you think that this functionality is useful for your business?

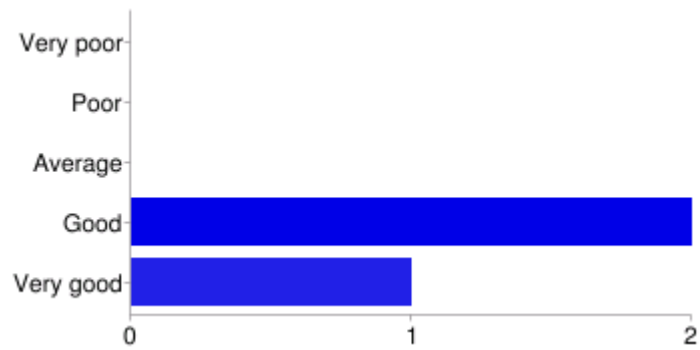


IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

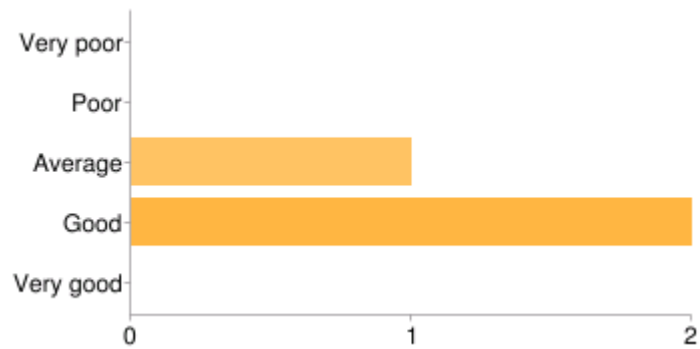


How would you score CONVERGENCE this functionality with respect to:

Ease of use



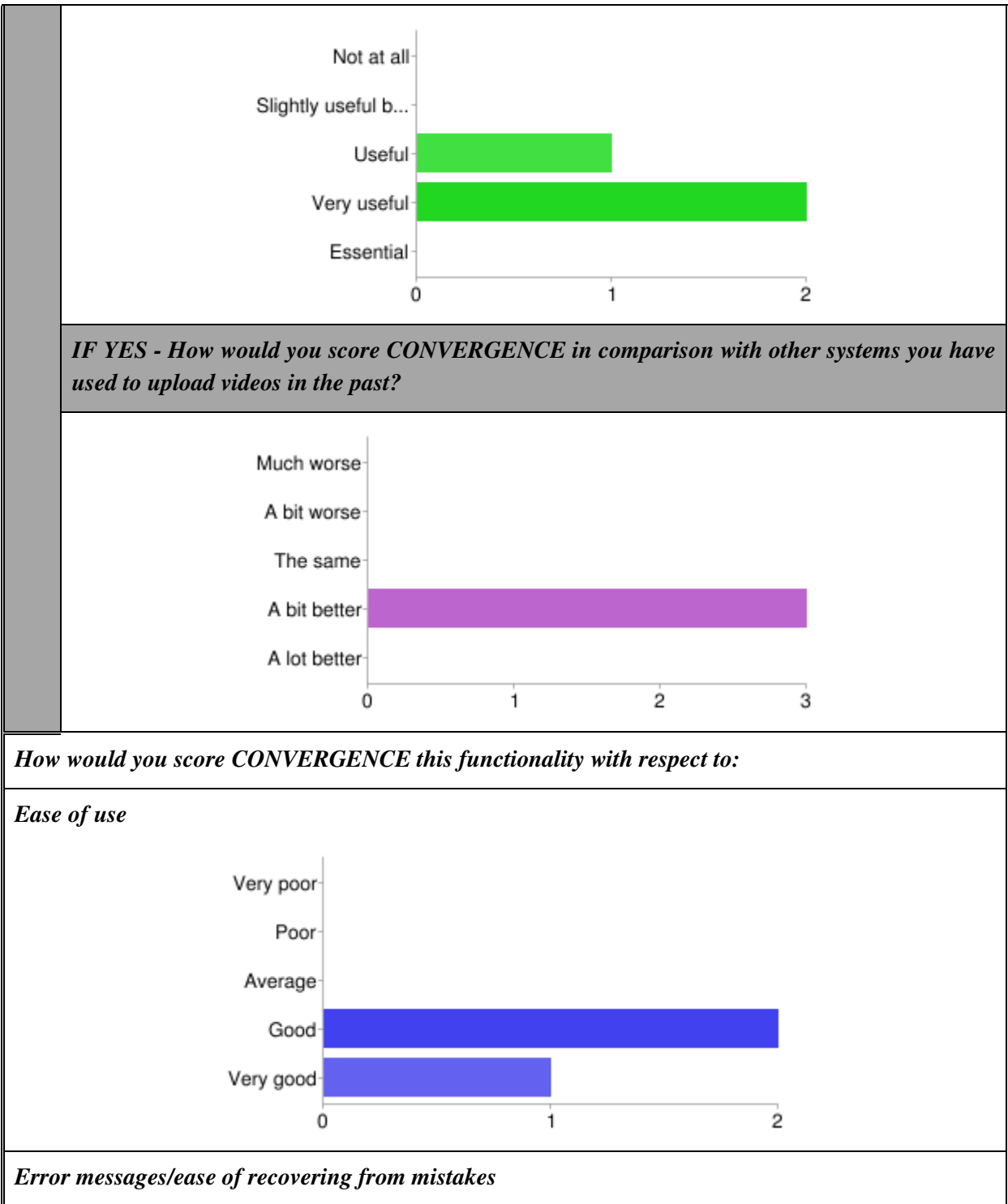
Error messages/ease of recovering from mistakes

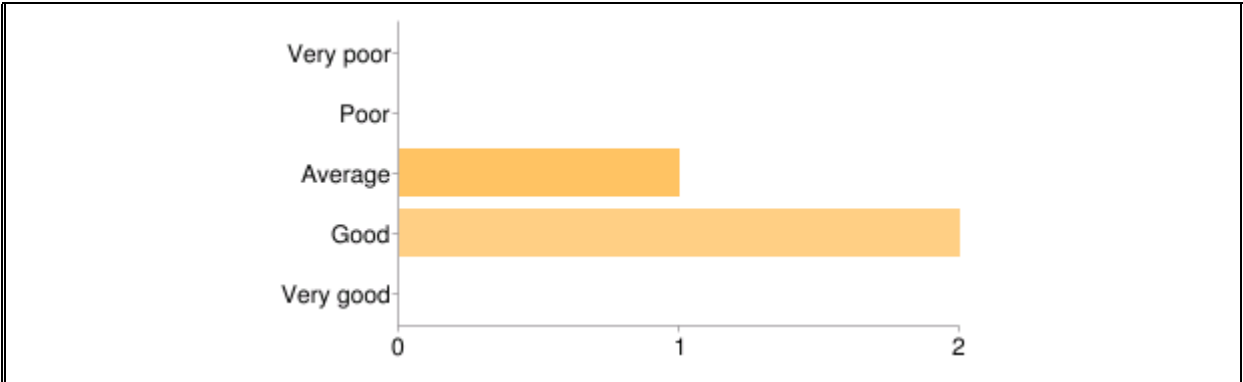


Overall quality

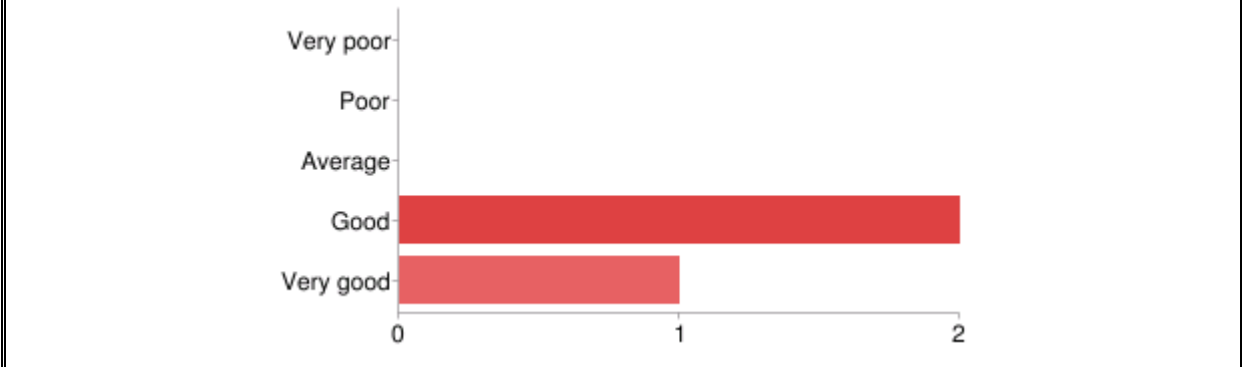
<table border="1"> <caption>Quality Rating Survey Results</caption> <thead> <tr> <th>Rating</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Very poor</td> <td>0</td> </tr> <tr> <td>Poor</td> <td>0</td> </tr> <tr> <td>Average</td> <td>0</td> </tr> <tr> <td>Good</td> <td>2</td> </tr> <tr> <td>Very good</td> <td>1</td> </tr> </tbody> </table>	Rating	Count	Very poor	0	Poor	0	Average	0	Good	2	Very good	1
Rating	Count											
Very poor	0											
Poor	0											
Average	0											
Good	2											
Very good	1											
<i>What features would do you add?</i>												
<ul style="list-style-type: none"> • As many search criteria as they can be. • Text-based drop-down selection. 												
<i>What features would you eliminate</i>												
<ul style="list-style-type: none"> • 												
<i>Please add any other comments you may have</i>												
<ul style="list-style-type: none"> • 												

Product information promotion							
<p>Before using CONVERGENCE had you ever been digitally informed about the promotions of products that you are interested?</p>	<table border="1"> <caption>Product Information Promotion Survey Results</caption> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>3</td> </tr> <tr> <td>No</td> <td>0</td> </tr> </tbody> </table>	Response	Count	Yes	3	No	0
Response	Count						
Yes	3						
No	0						
<i>IF NO - Do you think that this functionality is useful for your business?</i>							
<i>IF YES - Do you think that this functionality is useful for your business?</i>							





Overall quality



What features would do you add?

- To be able to create personal web folders to store and view my notifications, using an automatic archive of past notice

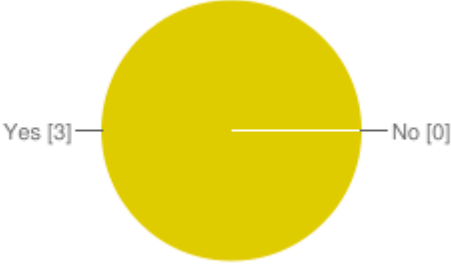
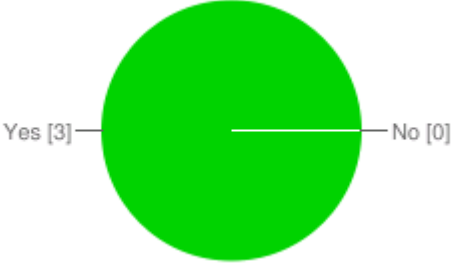
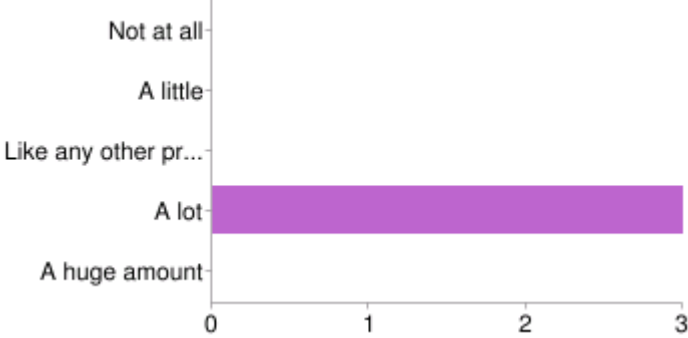
What features would you eliminate

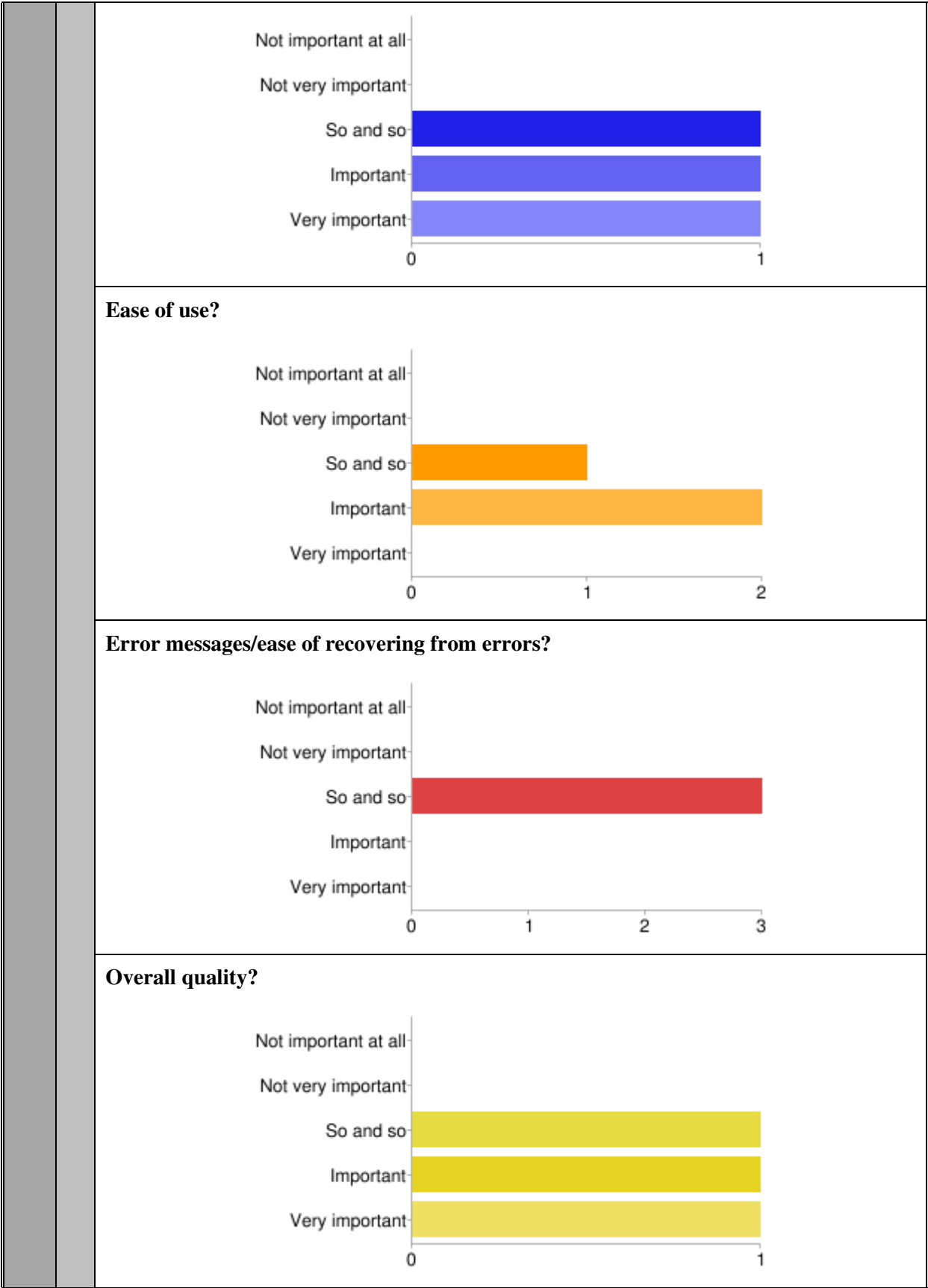
-

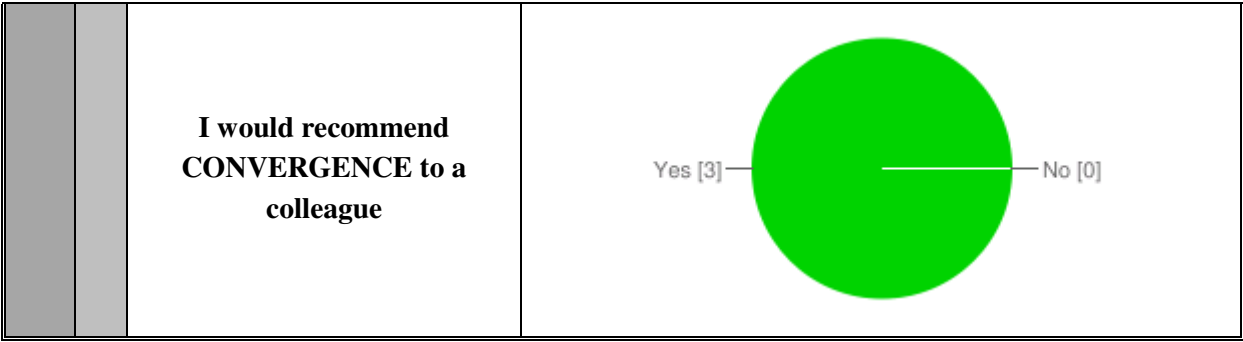
Please add any other comments you may have

-

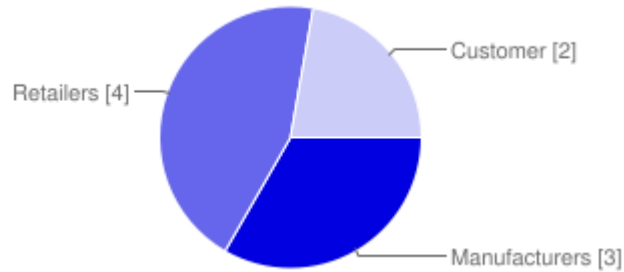
Final Notes

<p><i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i></p>	
<p>IF NO</p>	
<p><i>IF YES - Would you consider using CONVERGENCE instead of the applications you use today?</i></p>	
<p>IF NO</p>	
<p>Other</p>	
<ul style="list-style-type: none"> • 	
<p>IF YES - How much do you think CONVERGENCE could contribute to your productivity at work?</p>	
	
<p>In your choice how important is CONVERGENCE's</p>	
<p>Performance?</p>	





5.3.6 “Smart Retailing” (WIPRO)



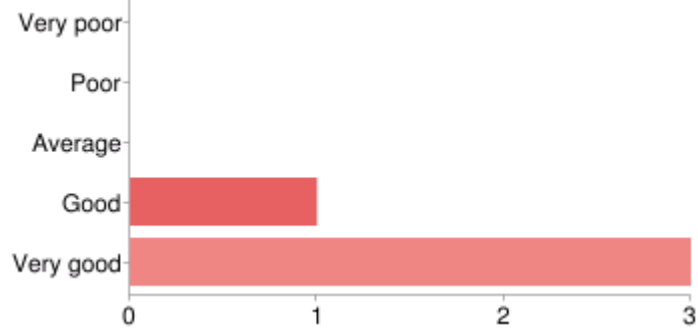
5.3.6.1 Retailer

Registration and login												
To participate in the trial you had to register and login. Please give us your impression of these procedures:												
<p><i>Ease of use</i></p> <p>A horizontal bar chart for 'Ease of use' with a scale from 0 to 3. The y-axis categories are Very poor, Poor, Average, Good, and Very good. The 'Good' category has a bar extending to 1, and the 'Very good' category has a bar extending to 3.</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Very poor</td> <td>0</td> </tr> <tr> <td>Poor</td> <td>0</td> </tr> <tr> <td>Average</td> <td>0</td> </tr> <tr> <td>Good</td> <td>1</td> </tr> <tr> <td>Very good</td> <td>3</td> </tr> </tbody> </table>	Category	Count	Very poor	0	Poor	0	Average	0	Good	1	Very good	3
Category	Count											
Very poor	0											
Poor	0											
Average	0											
Good	1											
Very good	3											
<p><i>Error messages/ease of recovering from mistakes</i></p> <p>A horizontal bar chart for 'Error messages/ease of recovering from mistakes' with a scale from 0 to 2. The y-axis categories are Very poor, Poor, Average, Good, and Very good. The 'Good' and 'Very good' categories each have a bar extending to 2.</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Very poor</td> <td>0</td> </tr> <tr> <td>Poor</td> <td>0</td> </tr> <tr> <td>Average</td> <td>0</td> </tr> <tr> <td>Good</td> <td>2</td> </tr> <tr> <td>Very good</td> <td>2</td> </tr> </tbody> </table>	Category	Count	Very poor	0	Poor	0	Average	0	Good	2	Very good	2
Category	Count											
Very poor	0											
Poor	0											
Average	0											
Good	2											
Very good	2											
<i>Overall quality</i>												

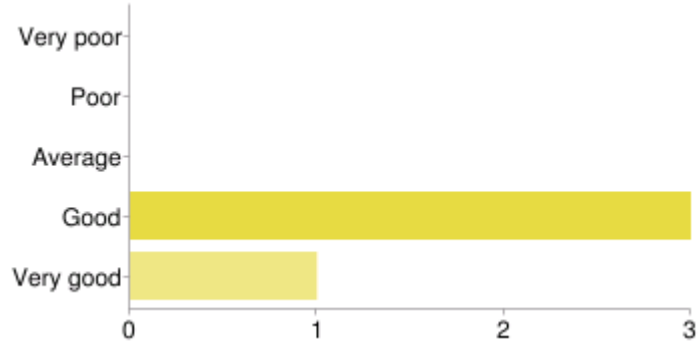
<p>A horizontal bar chart with a y-axis labeled 'Very poor', 'Poor', 'Average', 'Good', and 'Very good'. The x-axis is labeled '0', '1', '2', and '3'. The 'Good' category has a bar extending to 1. The 'Very good' category has a bar extending to 3. All other categories have no bars.</p>
<p><i>What features would do you add?</i></p> <ul style="list-style-type: none"> • Password recovery- • Nothing relevant • Password recovery
<p><i>What features would you eliminate?</i></p> <ul style="list-style-type: none"> • Nothing- • Nothing relevant • None
<p><i>Please add any other comments you may have.</i></p> <ul style="list-style-type: none"> • Nothing to add

<p>Product created characteristics</p>	
<p>Before using CONVERGENCE, could you see the characteristics of the product created?</p>	<p>A pie chart divided into two equal halves. The top half is light green and labeled 'No [2]'. The bottom half is a darker green and labeled 'Yes [2]'.</p>
<p><i>IF NO - Do you think that this functionality is useful for your business?</i></p>	

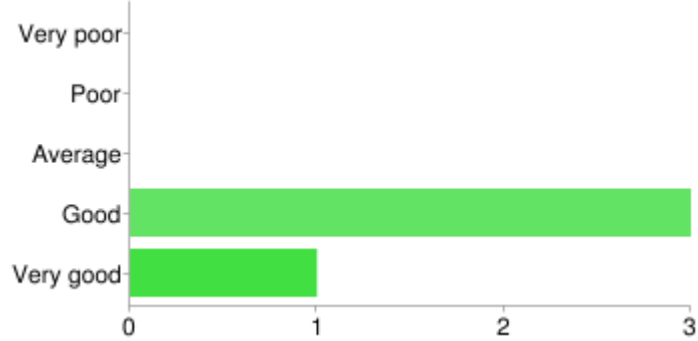
	<p>A horizontal bar chart with a scale from 0 to 1. The y-axis categories are 'Not at all', 'Slightly useful b...', 'Useful', 'Very useful', and 'Essential'. The bars for 'Slightly useful b...' and 'Very useful' extend to the 1.0 mark on the x-axis.</p>
<p><i>IF YES - Do you think that this functionality is useful for your business?</i></p>	
	<p>A horizontal bar chart with a scale from 0 to 1. The y-axis categories are 'Not at all', 'Slightly useful b...', 'Useful', 'Very useful', and 'Essential'. The bars for 'Slightly useful b...' and 'Very useful' extend to the 1.0 mark on the x-axis.</p>
<p><i>IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?</i></p>	
	<p>A horizontal bar chart with a scale from 0 to 1. The y-axis categories are 'Much worse', 'A bit worse', 'The same', 'A bit better', and 'A lot better'. The bars for 'A bit better' and 'A lot better' extend to the 1.0 mark on the x-axis.</p>
<p><i>How would you score CONVERGENCE this functionality with respect to:</i></p>	
<p><i>Ease of use</i></p>	



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

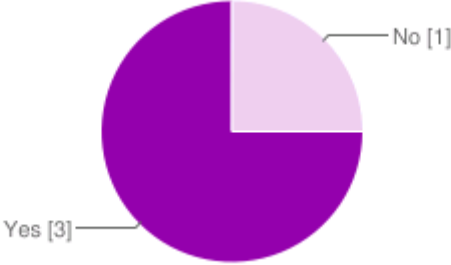
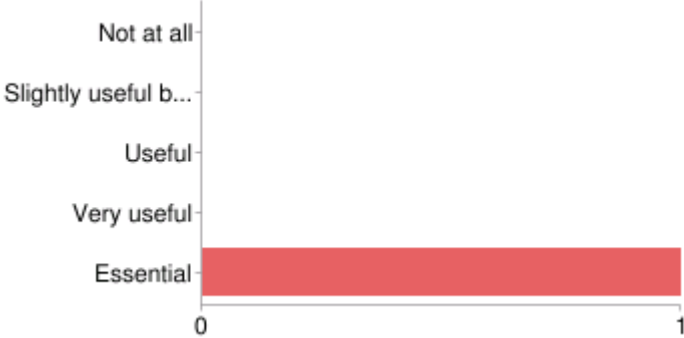
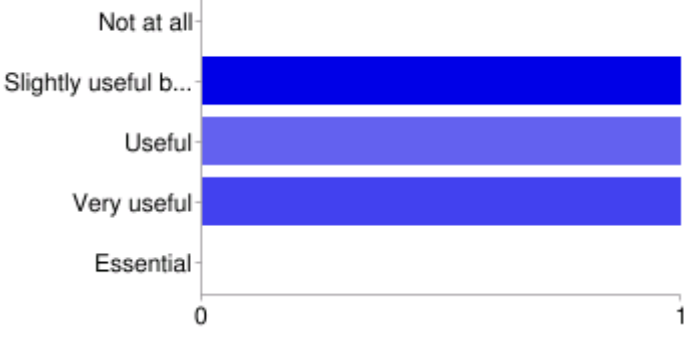
- Some kind of ontology for the creation of products in terms of hierarchy and description.
- Suppliers list and latest vdis
- Nothing to add
- More product characteristics, a product ontology to help the user fill in the form

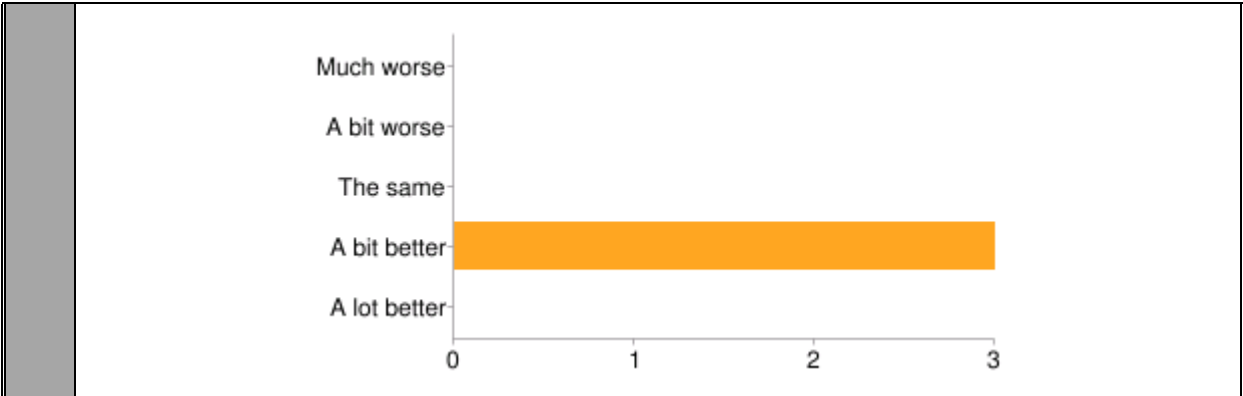
What features would you eliminate

-

Please add any other comments you may have

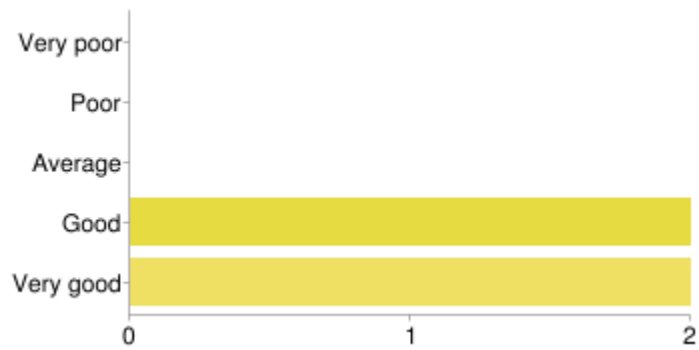
•

Selling products	
Before using CONVERGENCE had you ever “sold products” using a POS Machine?	 <p>A pie chart with a purple section representing 'Yes [3]' and a light purple section representing 'No [1]'. The 'Yes' section is approximately 75% of the chart, and the 'No' section is approximately 25%.</p>
<i>IF NO - Do you think that this functionality is useful for your business?</i>	
 <p>A horizontal bar chart with a y-axis labeled 'Not at all', 'Slightly useful b...', 'Useful', 'Very useful', and 'Essential'. The x-axis is labeled '0' and '1'. A red bar extends from 0 to 1 for the 'Essential' category.</p>	
<i>IF YES - Do you think that this functionality is useful for your business?</i>	
 <p>A horizontal bar chart with a y-axis labeled 'Not at all', 'Slightly useful b...', 'Useful', 'Very useful', and 'Essential'. The x-axis is labeled '0' and '1'. Three blue bars extend from 0 to 1 for the 'Slightly useful b...', 'Useful', and 'Very useful' categories.</p>	
<i>IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?</i>	

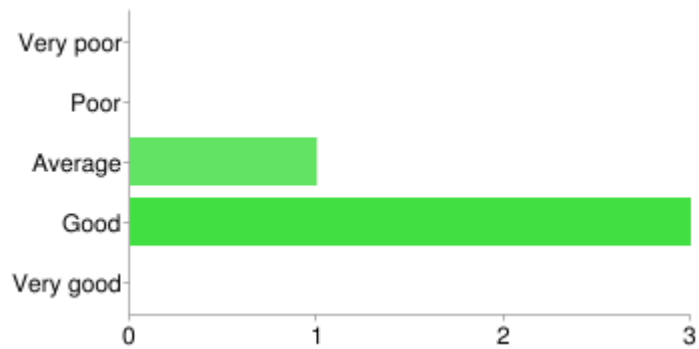


How would you score CONVERGENCE this functionality with respect to:

Ease of use



Error messages/ease of recovering from mistakes

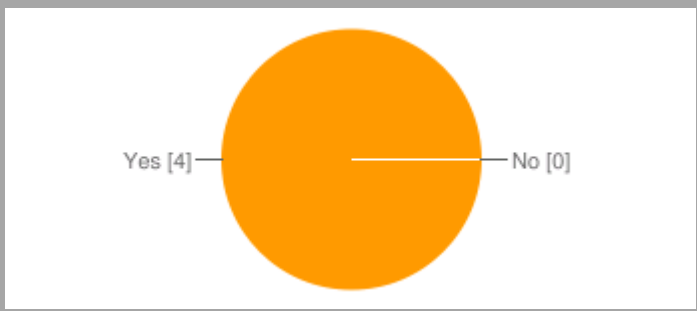


Overall quality

<i>What features would do you add?</i>
<ul style="list-style-type: none"> • Nothing to add • Maybe a feature to view the vdi of the product during the pos usage
<i>What features would you eliminate</i>
<ul style="list-style-type: none"> • Nothing relevant • None
<i>Please add any other comments you may have</i>
<ul style="list-style-type: none"> • Nothing relevant

Final Notes	
<p><i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i></p>	
IF NO	

IF YES - Would you consider using CONVERGENCE instead of the applications you use today?

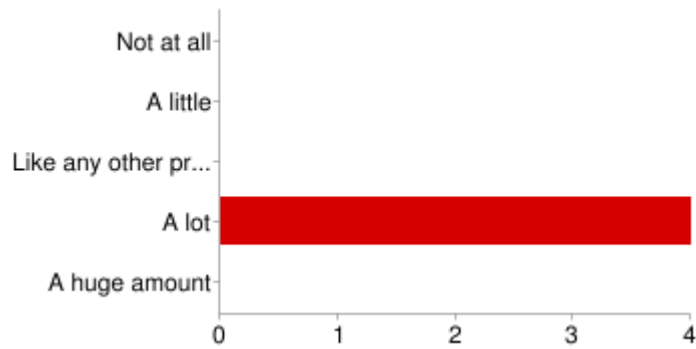


IF NO

Other

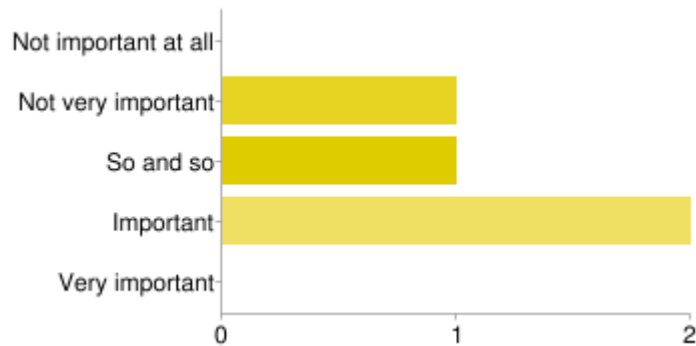
-

IF YES - How much do you think CONVERGENCE could contribute to your productivity at work?

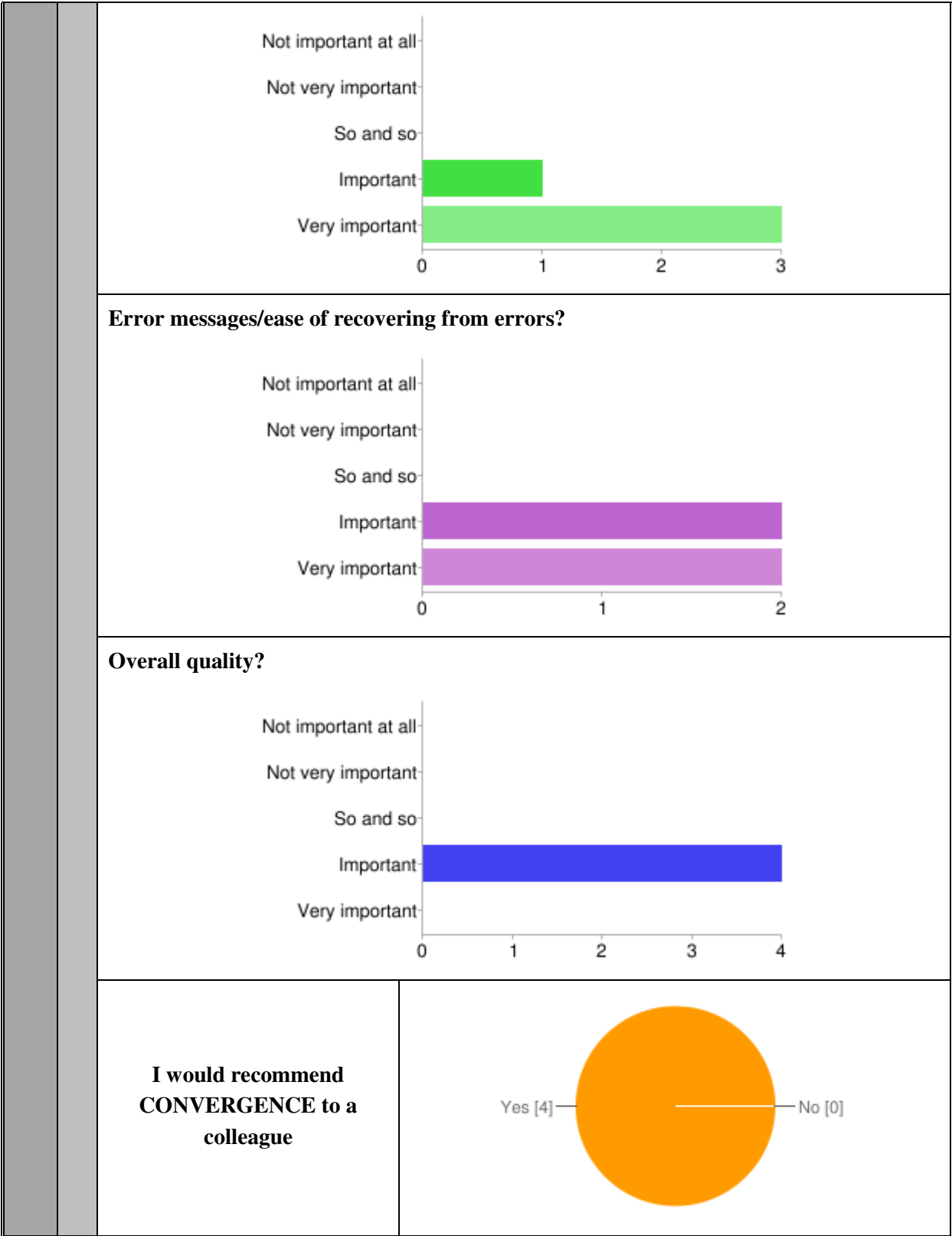


In your choice how important is CONVERGENCE's

Performance?



Ease of use?

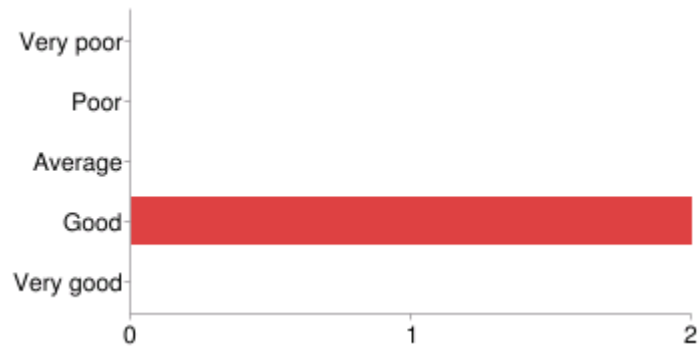


5.3.6.2 Customers

Registration and login

To participate in the trial you had to register and login. Please give us your impression of these procedures:

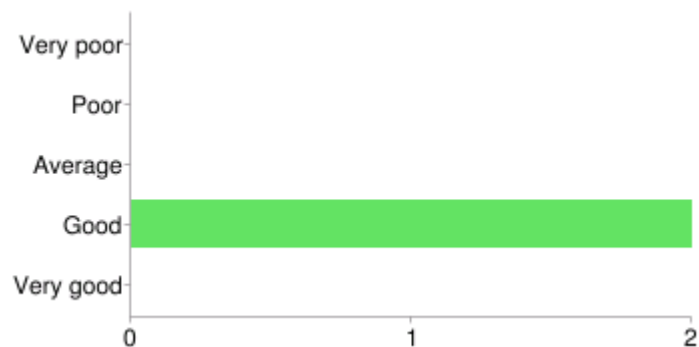
Ease of use



Error messages/ease of recovering from mistakes



Overall quality



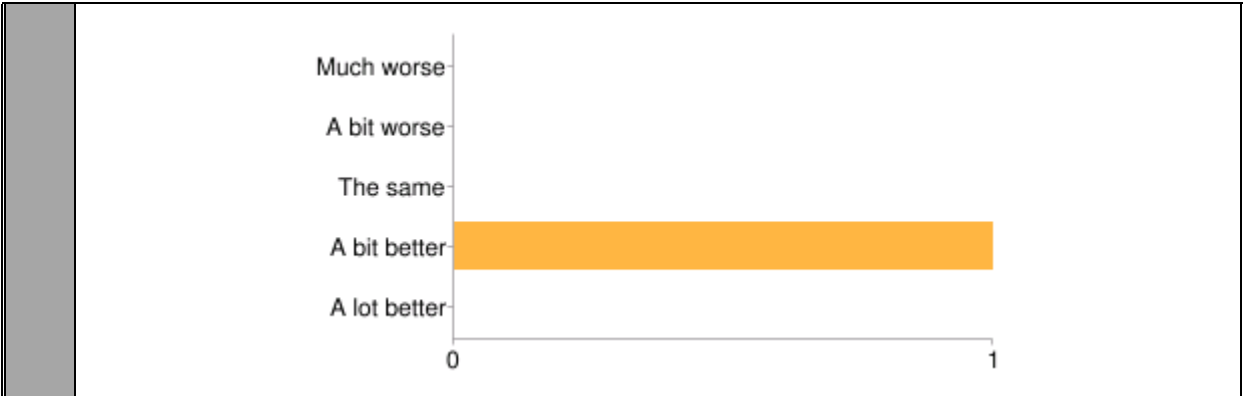
What features would do you add?

-

What features would you eliminate?

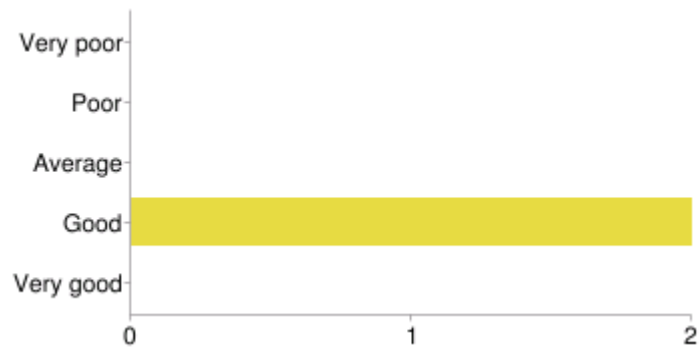
•
<i>Please add any other comments you may have.</i>
•

Subscription to product	
<p>Before using CONVERGENCE had you ever “subscribed to product” using a computer?</p>	<p>A pie chart with two equal halves. The top half is light purple and labeled 'No [1]'. The bottom half is dark purple and labeled 'Yes [1]'.</p>
<i>IF NO - Do you think that this functionality is useful for your business?</i>	
<p>A horizontal bar chart with a y-axis labeled 'Not at all', 'Slightly useful b...', 'Useful', 'Very useful', and 'Essential'. The x-axis is labeled '0' and '1'. A red bar extends from the 'Very useful' label to the '1' mark on the x-axis.</p>	
<i>IF YES - Do you think that this functionality is useful for your business?</i>	
<p>A horizontal bar chart with a y-axis labeled 'Not at all', 'Slightly useful b...', 'Useful', 'Very useful', and 'Essential'. The x-axis is labeled '0' and '1'. A blue bar extends from the 'Very useful' label to the '1' mark on the x-axis.</p>	
<i>IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?</i>	

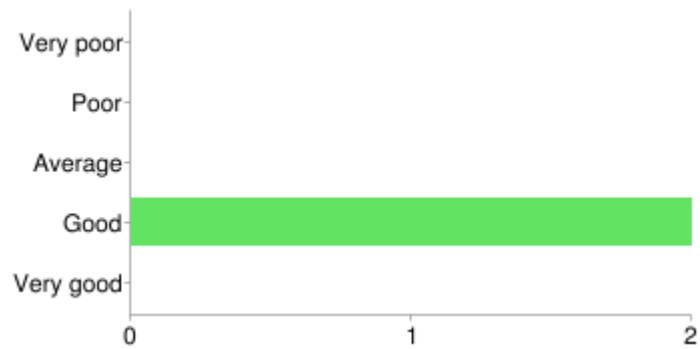


How would you score CONVERGENCE this functionality with respect to:

Ease of use



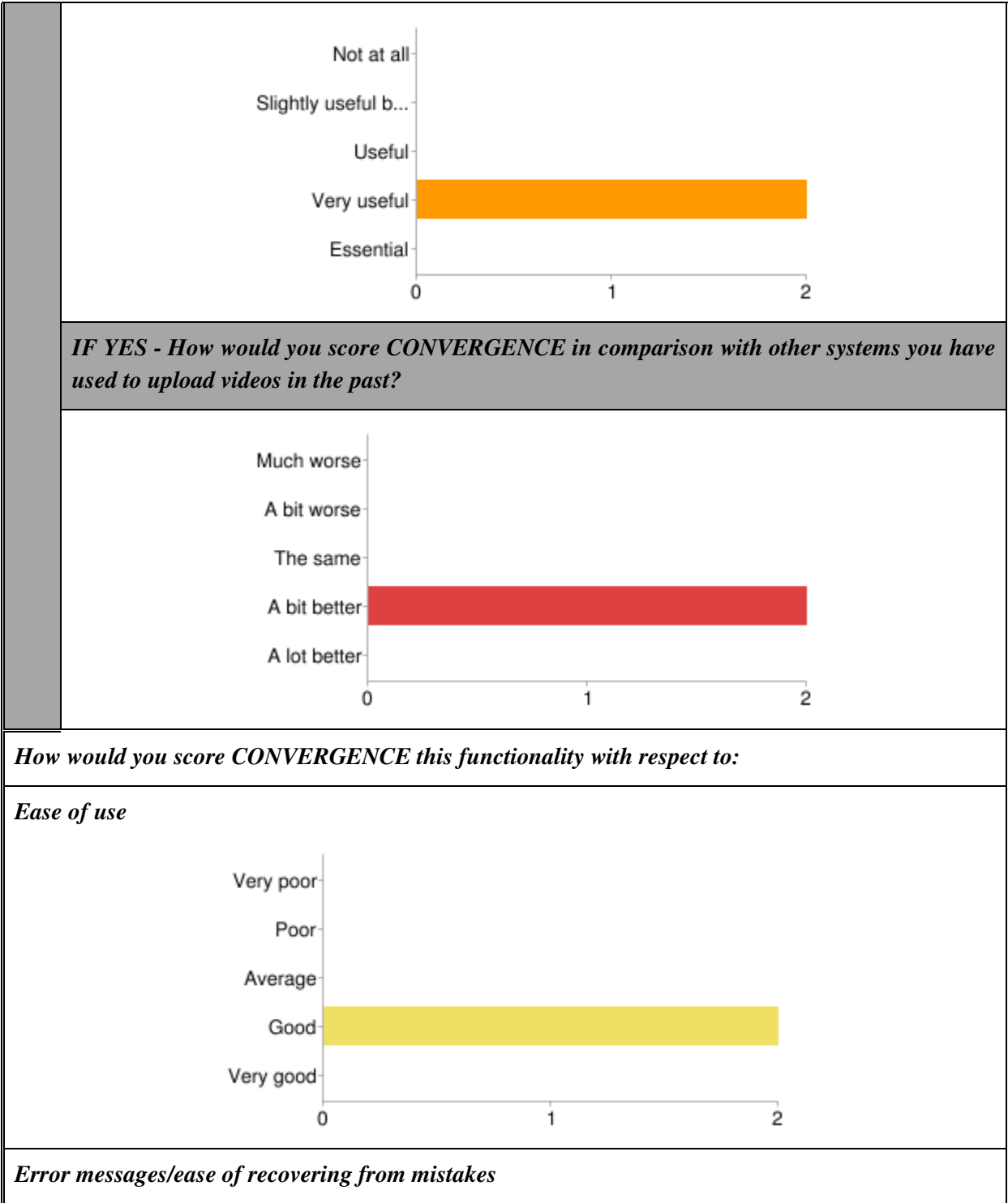
Error messages/ease of recovering from mistakes

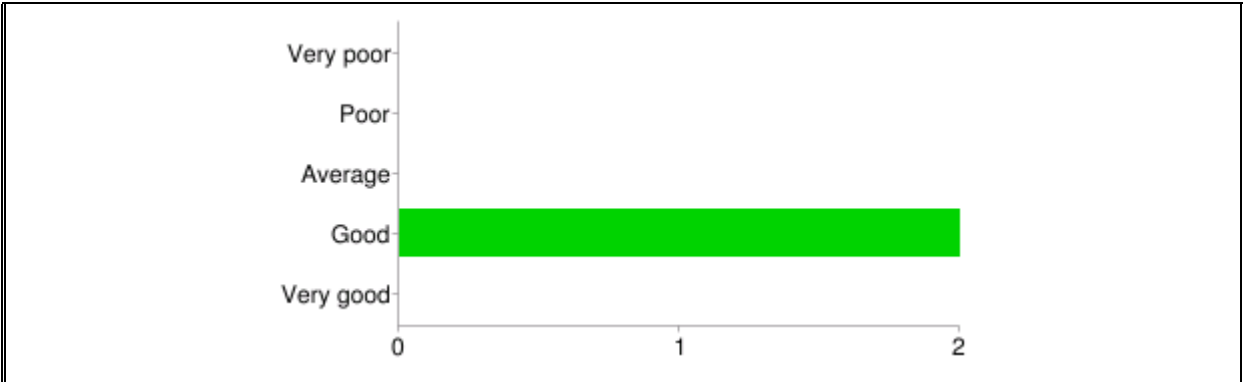


Overall quality

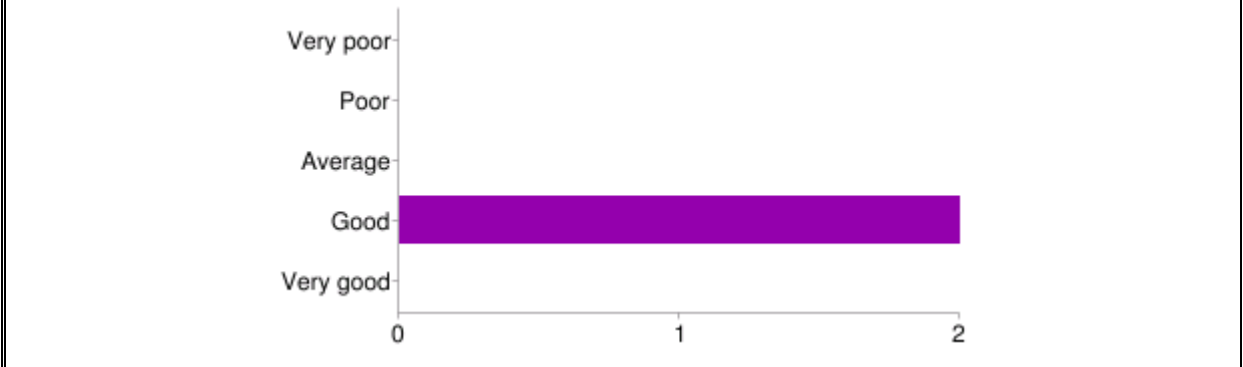
<i>What features would do you add?</i>
•
<i>What features would you eliminate</i>
•
<i>Please add any other comments you may have</i>
•

Buying products	
<p>Before using CONVERGENCE had you ever “bought products” using a POS Machine?</p>	
	<i>IF NO - Do you think that this functionality is useful for your business?</i>
	<i>IF YES - Do you think that this functionality is useful for your business?</i>





Overall quality



What features would do you add?

-

What features would you eliminate

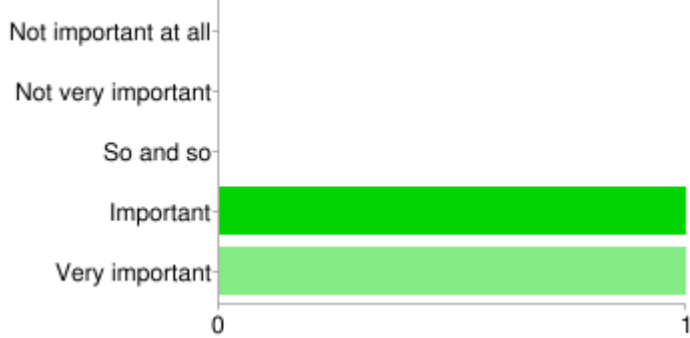
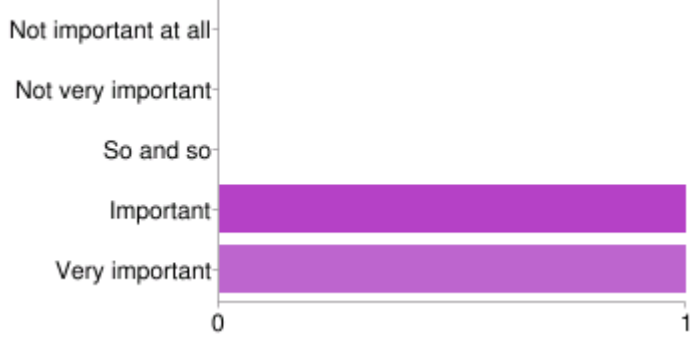
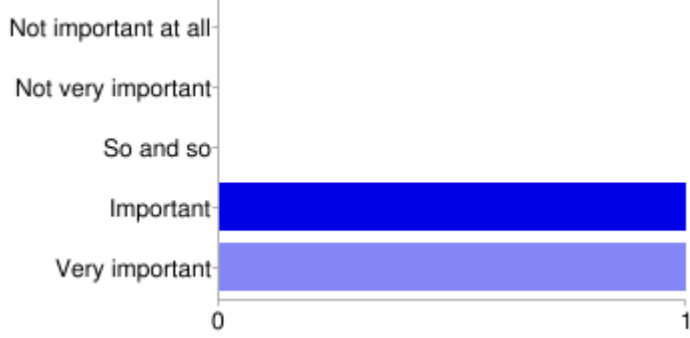

-

Please add any other comments you may have

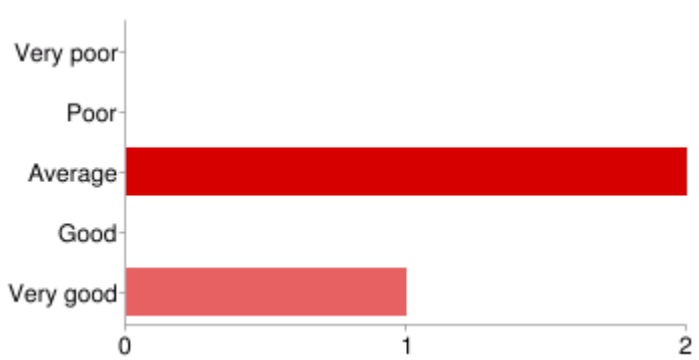
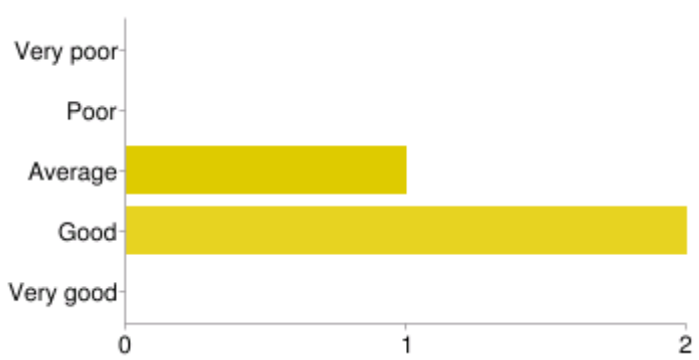
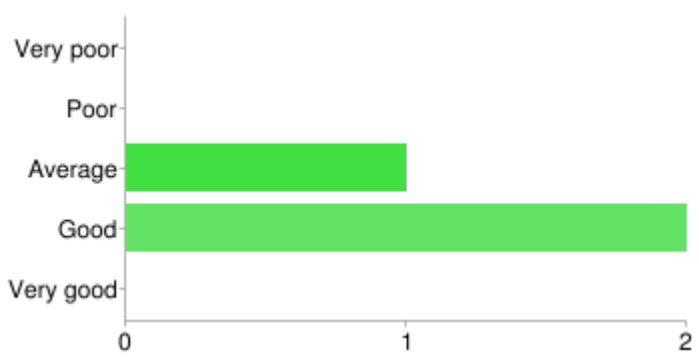
- For the end customer security is a concern.

Final Notes	
<p><i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i></p>	<p>Yes [2] ————— No [0]</p>

IF NO	
IF YES - Would you consider using CONVERGENCE instead of the applications you use today?	<p>A pie chart with a single orange circle. A line points from the text 'Yes [2]' to the circle, and another line points from 'No [0]' to the circle.</p>
IF NO	
Other	
•	
IF YES - How much do you think CONVERGENCE could contribute to your productivity at work?	
<p>A horizontal bar chart with a red bar. The y-axis categories are 'Not at all', 'A little', 'Like any other pr...', 'A lot', and 'A huge amount'. The x-axis is labeled with 0, 1, and 2. The bar for 'A lot' extends to the value 2.</p>	
In your choice how important is CONVERGENCE's	
Performance?	
<p>A horizontal bar chart with two yellow bars. The y-axis categories are 'Not important at all', 'Not very important', 'So and so', 'Important', and 'Very important'. The x-axis is labeled with 0 and 1. The bars for 'Important' and 'Very important' both extend to the value 1.</p>	

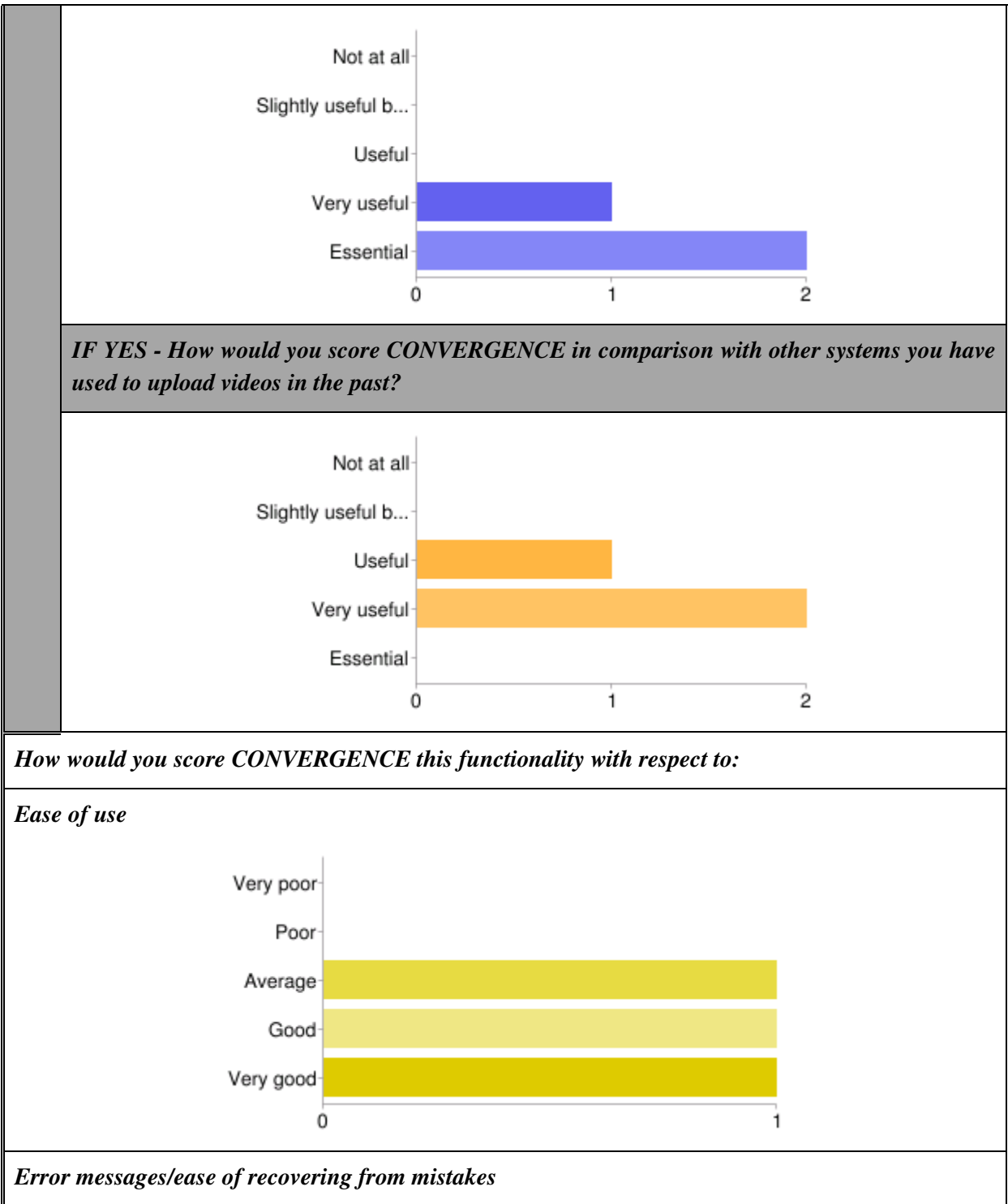
	<p>Ease of use?</p>  <p>Not important at all Not very important So and so Important Very important</p> <p>0 1</p>
	<p>Error messages/ease of recovering from errors?</p>  <p>Not important at all Not very important So and so Important Very important</p> <p>0 1</p>
	<p>Overall quality?</p>  <p>Not important at all Not very important So and so Important Very important</p> <p>0 1</p>
<p>I would recommend CONVERGENCE to a colleague</p>	 <p>Yes [2] No [0]</p>

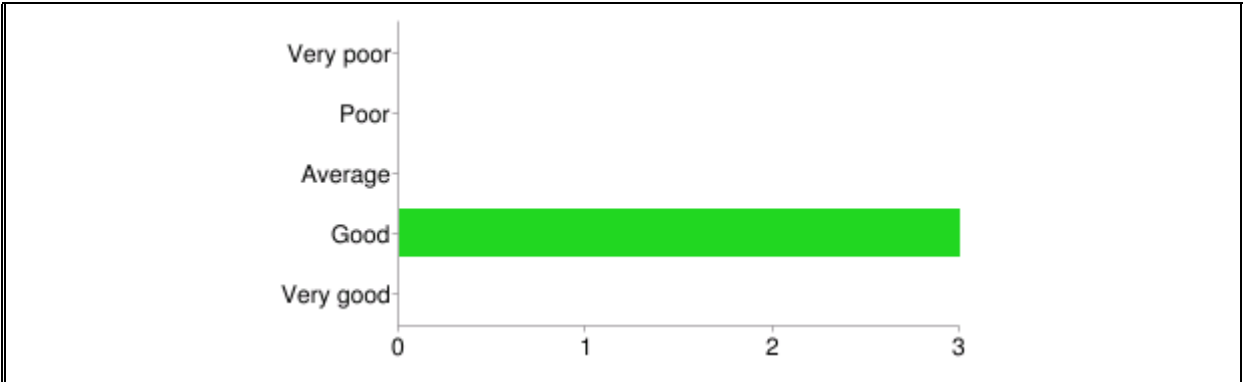
5.3.6.3Manufacturers

Registration and login												
To participate in the trial you had to register and login. Please give us your impression of these procedures:												
<i>Ease of use</i>  <p>A horizontal bar chart showing the distribution of responses for 'Ease of use'. The y-axis categories are Very poor, Poor, Average, Good, and Very good. The x-axis ranges from 0 to 2. The 'Average' category has a red bar extending to approximately 2.0. The 'Very good' category has a light red bar extending to approximately 1.0. All other categories have no bars.</p> <table border="1"><thead><tr><th>Category</th><th>Count (approx.)</th></tr></thead><tbody><tr><td>Very poor</td><td>0</td></tr><tr><td>Poor</td><td>0</td></tr><tr><td>Average</td><td>2.0</td></tr><tr><td>Good</td><td>0</td></tr><tr><td>Very good</td><td>1.0</td></tr></tbody></table>	Category	Count (approx.)	Very poor	0	Poor	0	Average	2.0	Good	0	Very good	1.0
Category	Count (approx.)											
Very poor	0											
Poor	0											
Average	2.0											
Good	0											
Very good	1.0											
<i>Error messages/ease of recovering from mistakes</i>  <p>A horizontal bar chart showing the distribution of responses for 'Error messages/ease of recovering from mistakes'. The y-axis categories are Very poor, Poor, Average, Good, and Very good. The x-axis ranges from 0 to 2. The 'Average' category has a yellow bar extending to approximately 1.0. The 'Good' category has a yellow bar extending to approximately 2.0. All other categories have no bars.</p> <table border="1"><thead><tr><th>Category</th><th>Count (approx.)</th></tr></thead><tbody><tr><td>Very poor</td><td>0</td></tr><tr><td>Poor</td><td>0</td></tr><tr><td>Average</td><td>1.0</td></tr><tr><td>Good</td><td>2.0</td></tr><tr><td>Very good</td><td>0</td></tr></tbody></table>	Category	Count (approx.)	Very poor	0	Poor	0	Average	1.0	Good	2.0	Very good	0
Category	Count (approx.)											
Very poor	0											
Poor	0											
Average	1.0											
Good	2.0											
Very good	0											
<i>Overall quality</i>  <p>A horizontal bar chart showing the distribution of responses for 'Overall quality'. The y-axis categories are Very poor, Poor, Average, Good, and Very good. The x-axis ranges from 0 to 2. The 'Average' category has a green bar extending to approximately 1.0. The 'Good' category has a green bar extending to approximately 2.0. All other categories have no bars.</p> <table border="1"><thead><tr><th>Category</th><th>Count (approx.)</th></tr></thead><tbody><tr><td>Very poor</td><td>0</td></tr><tr><td>Poor</td><td>0</td></tr><tr><td>Average</td><td>1.0</td></tr><tr><td>Good</td><td>2.0</td></tr><tr><td>Very good</td><td>0</td></tr></tbody></table>	Category	Count (approx.)	Very poor	0	Poor	0	Average	1.0	Good	2.0	Very good	0
Category	Count (approx.)											
Very poor	0											
Poor	0											
Average	1.0											
Good	2.0											
Very good	0											
<i>What features would do you add?</i>												
<ul style="list-style-type: none">• Automation in item approval												

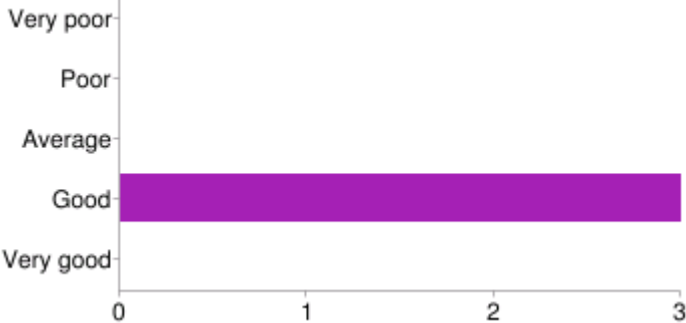
<ul style="list-style-type: none"> • RMS support for the Global product Id • N/A
What features would you eliminate?
<ul style="list-style-type: none"> •
Please add any other comments you may have.
<ul style="list-style-type: none"> • Good luck! • None • N/A

Creation product	
<p>Before using CONVERGENCE had you ever “created product” (or similar) using a computer?</p>	<p>Yes [3] ————— No [0]</p>
IF NO - Do you think that this functionality is useful for your business?	
IF YES - Do you think that this functionality is useful for your business?	





Overall quality



What features would do you add?

- Create new product based on an existing product Off-line retrieve of certification file | code

What features would you eliminate

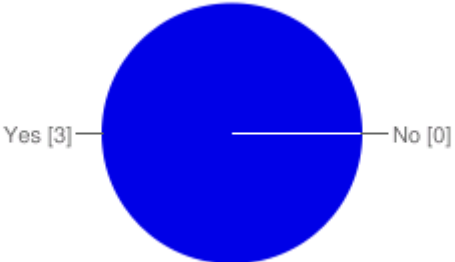
-

Please add any other comments you may have

-

Product created characteristics

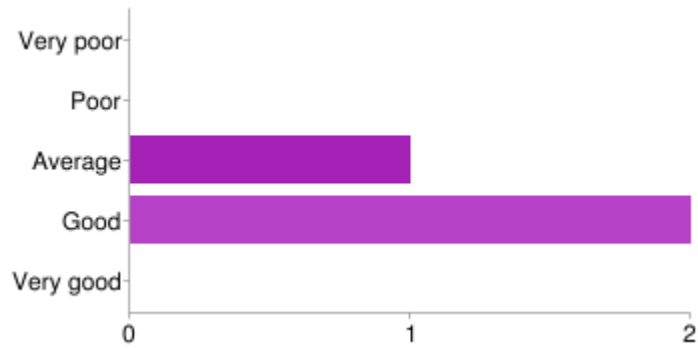
Before using CONVERGENCE, could you see the characteristics of the product created?



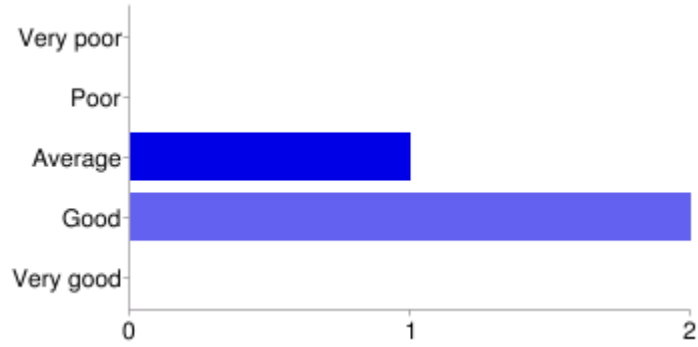
	<p><i>IF NO - Do you think that this functionality is useful for your business?</i></p>												
	<table border="1"> <thead> <tr> <th>Category</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>Not at all</td> <td>0</td> </tr> <tr> <td>Slightly useful b...</td> <td>0</td> </tr> <tr> <td>Useful</td> <td>1</td> </tr> <tr> <td>Very useful</td> <td>2</td> </tr> <tr> <td>Essential</td> <td>0</td> </tr> </tbody> </table>	Category	Score	Not at all	0	Slightly useful b...	0	Useful	1	Very useful	2	Essential	0
Category	Score												
Not at all	0												
Slightly useful b...	0												
Useful	1												
Very useful	2												
Essential	0												
	<p><i>IF YES - Do you think that this functionality is useful for your business?</i></p>												
	<table border="1"> <thead> <tr> <th>Category</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>Not at all</td> <td>0</td> </tr> <tr> <td>Slightly useful b...</td> <td>0</td> </tr> <tr> <td>Useful</td> <td>0</td> </tr> <tr> <td>Very useful</td> <td>2</td> </tr> <tr> <td>Essential</td> <td>1</td> </tr> </tbody> </table>	Category	Score	Not at all	0	Slightly useful b...	0	Useful	0	Very useful	2	Essential	1
Category	Score												
Not at all	0												
Slightly useful b...	0												
Useful	0												
Very useful	2												
Essential	1												
	<p><i>IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?</i></p>												
	<table border="1"> <thead> <tr> <th>Category</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>Not at all</td> <td>0</td> </tr> <tr> <td>Slightly useful b...</td> <td>0</td> </tr> <tr> <td>Useful</td> <td>1</td> </tr> <tr> <td>Very useful</td> <td>2</td> </tr> <tr> <td>Essential</td> <td>0</td> </tr> </tbody> </table>	Category	Score	Not at all	0	Slightly useful b...	0	Useful	1	Very useful	2	Essential	0
Category	Score												
Not at all	0												
Slightly useful b...	0												
Useful	1												
Very useful	2												
Essential	0												
	<p><i>How would you score CONVERGENCE this functionality with respect to:</i></p>												
	<p><i>Ease of use</i></p>												



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

-

What features would you eliminate

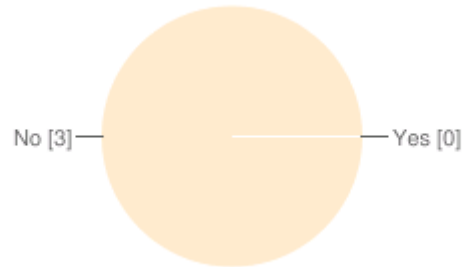
-

Please add any other comments you may have

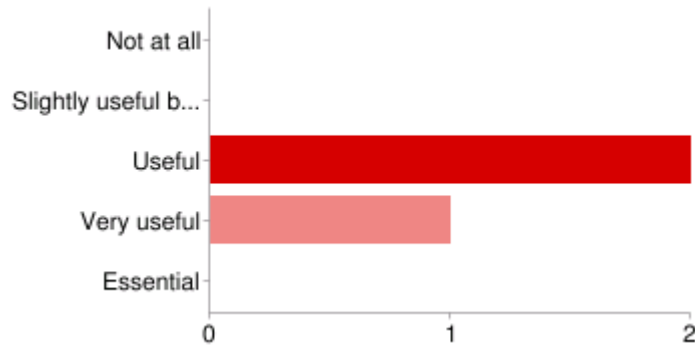
-

Publishing products

Before using CONVERGENCE had you ever “published products” using a computer?



IF NO - Do you think that this functionality is useful for your business?

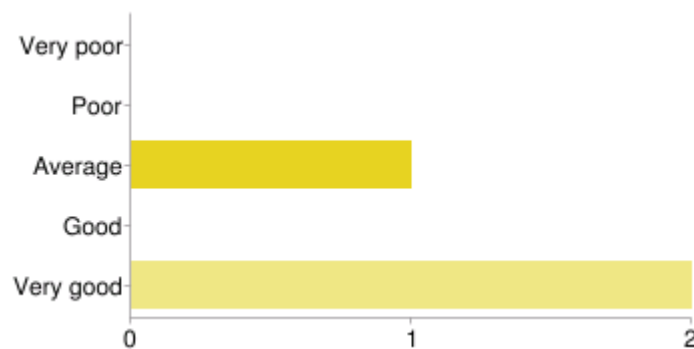


IF YES - Do you think that this functionality is useful for your business?

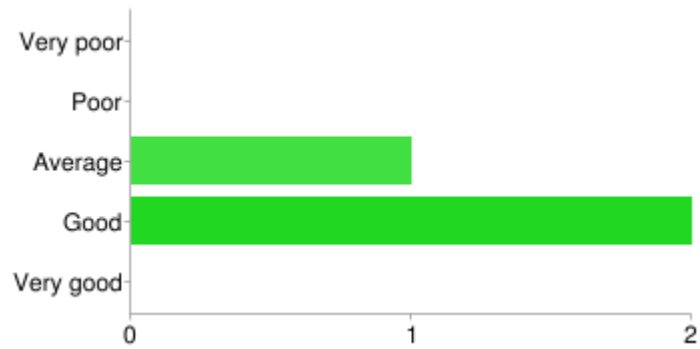
IF YES - How would you score CONVERGENCE in comparison with other systems you have used to upload videos in the past?

How would you score CONVERGENCE this functionality with respect to:

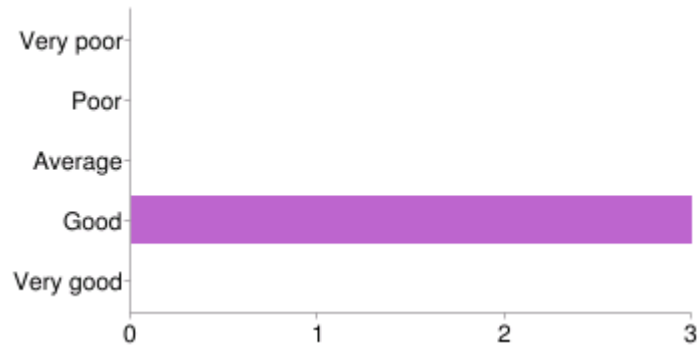
Ease of use



Error messages/ease of recovering from mistakes



Overall quality



What features would do you add?

-

What features would you eliminate

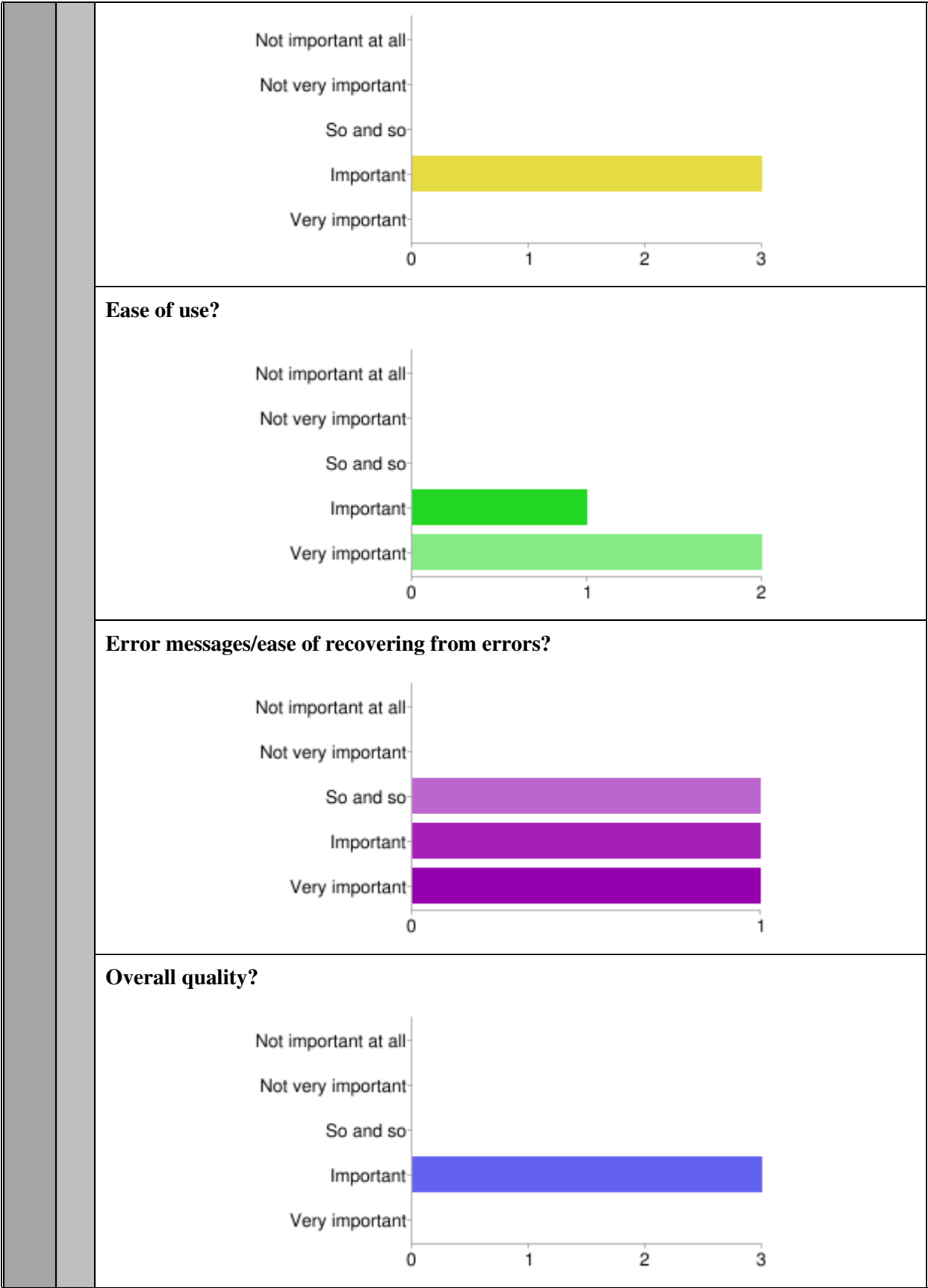
-

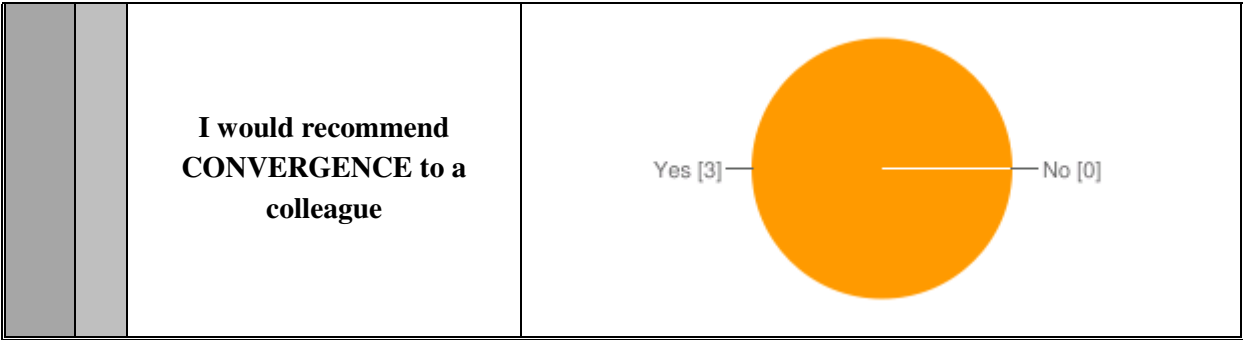
Please add any other comments you may have

-

Final Notes

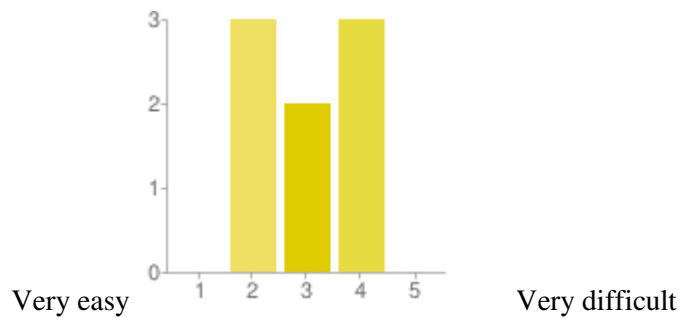
<p><i>Now you have seen CONVERGENCE do you think It could be useful for you work?</i></p>	
<p>IF NO</p>	
<p><i>IF YES - Would you consider using CONVERGENCE instead of the applications you use today?</i></p>	
<p>IF NO</p>	
<p>Other</p>	
<ul style="list-style-type: none"> • 	
<p>IF YES - How much do you think CONVERGENCE could contribute to your productivity at work?</p>	
<p>In your choice how important is CONVERGENCE's</p>	
<p>Performance?</p>	





5.3.8 Developers Questionnaire

<p>Basic information</p>												
<p>Gender</p>												
<p>A pie chart illustrating the gender distribution of the developers. The chart is divided into two segments: a large blue segment representing Male (M) with a count of 7, and a smaller light blue segment representing Female (F) with a count of 1.</p> <table border="1"> <thead> <tr> <th>Gender</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Male (M)</td> <td>7</td> </tr> <tr> <td>Female (F)</td> <td>1</td> </tr> </tbody> </table>	Gender	Count	Male (M)	7	Female (F)	1						
Gender	Count											
Male (M)	7											
Female (F)	1											
<p>Age</p>												
<p>A horizontal bar chart showing the age distribution of the developers. The x-axis represents the number of developers, ranging from 0 to 5. The y-axis lists age groups. The bars are orange.</p> <table border="1"> <thead> <tr> <th>Age Group</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>< 21</td> <td>0</td> </tr> <tr> <td>21 to 30</td> <td>5</td> </tr> <tr> <td>31 to 40</td> <td>3</td> </tr> <tr> <td>41 to 50</td> <td>0</td> </tr> <tr> <td>> 50</td> <td>0</td> </tr> </tbody> </table>	Age Group	Count	< 21	0	21 to 30	5	31 to 40	3	41 to 50	0	> 50	0
Age Group	Count											
< 21	0											
21 to 30	5											
31 to 40	3											
41 to 50	0											
> 50	0											
<p>Highest Educational qualification</p>												
<p>A horizontal bar chart showing the highest educational qualification of the developers. The x-axis represents the number of developers, ranging from 0 to 5. The y-axis lists educational qualifications. The bars are red.</p> <table border="1"> <thead> <tr> <th>Qualification</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>High school leavi...</td> <td>0</td> </tr> <tr> <td>Ph.D</td> <td>1</td> </tr> <tr> <td>Bachelor's degree</td> <td>1</td> </tr> <tr> <td>Master's degree</td> <td>5</td> </tr> <tr> <td>Other</td> <td>1</td> </tr> </tbody> </table>	Qualification	Count	High school leavi...	0	Ph.D	1	Bachelor's degree	1	Master's degree	5	Other	1
Qualification	Count											
High school leavi...	0											
Ph.D	1											
Bachelor's degree	1											
Master's degree	5											
Other	1											
<p><i>How difficult has it been to use the functionalities offered by the CONVERGENCE framework?</i></p>												



What do you find natural?

- The scope of each engine is very clear. It helps designing your application.
- Once the overall procedure is understood (which methods from which tool does one have to call in which order) it is quite easy to create and publish a VDI / content. The matching of VDIs is also very natural/easy, since it is automatically performed by the CONVERGENCE middleware.
- The VDI subscription part because it was the simplest.
- The way the methods/algorithms are called and structured, is easy to understand how they work. Also their names are well chosen, very clear and obvious.
- The rich set of APIs offered by the CONVERGENCE Tools.
- The publication/subscription mechanism.
- - Use of a set of core interfaces for the engines without having to know their implementation
- - Use of standard API
- - Use of tools interfacing complex middleware functionality
- Convergence API

What do you find difficult?

- It is difficult to connect the engines. There is more than one way to achieve the same goal.
- "It is difficult to understand what the different methods in each tool are doing. Sometimes there are empty methods or the methods do not return the expected results.
It was always difficult to keep the application code up to date with respect to tool and middleware functionality. Sometimes changes occurred, that rendered our code obsolete and we had to start anew.
Due to the many exceptions that appeared, it was hard to focus on application development. Most of the time we had to find the reasons for these exceptions with the help of middleware developers."
- The project is very big, huge. And because I never worked in project this big in terms of programming, sometimes is difficult to be aware about each and every functionality. Takes some time to learn and know the project as a whole.
- The definition of these APIs, as this task involved an in depth analysis of the CONVERGENCE scenarios in order to come up with a common set of APIs per functionality.
- The identification and design of abstract tools and their APIs to cover all application needs was a difficult process.

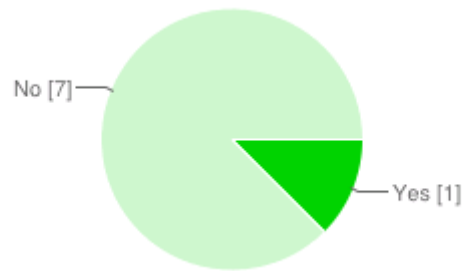
- - Combining different engines
- Setup of the needed development environment

What it is possible to improve

- Interfacing between engines. More example code and applications.
- "A better documentation of the tools (already provided) and keeping this documentation up-to-date.
Intensify the communication between application developers and middleware / tool developers (application developers have to give feedback and tell what they want and the other way around). For example: there are two VDI-tools: vdi and vdi_new. It was not clear, which of the tools to use."
- UI, online help is needed. Logic navigation approach (ie. step 1, step 2, step 3)
- "The matching in the publish/subscribe mechanism. We get a match for a subscription of something that was published, but in terms of programming we can't get all the data/information about thing that was published.
It should be possible to get the data/information in a vdi through its id, i.e. a method that receive the vdi id as an argument and returns the vdi and all its content."
- Flexibility of CONVERGENCE Tools
- Security features.
- - Documentation of the middleware
- It would be nice to have a Two Minute Tutorial (e.g. <http://xstream.codehaus.org/tutorial.html>)

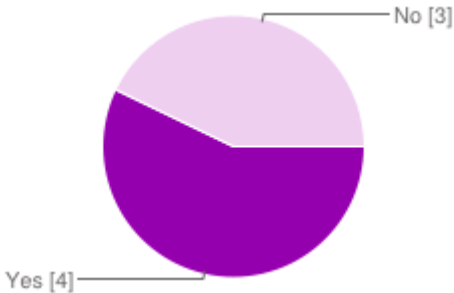
User registration

Does tool work well?



IF NO - What is the issue?

- We did not use the tool.
- It wasn't ready for the trials
- No issue, I didn't use CONVERGENCE user registration tool yet. I'm doing plain user registration using java.
- Not yet 100% functional

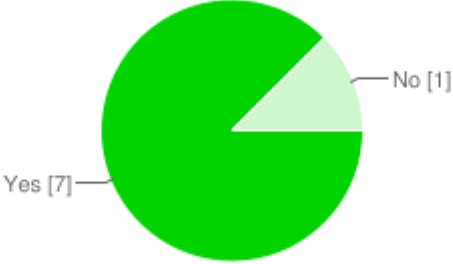
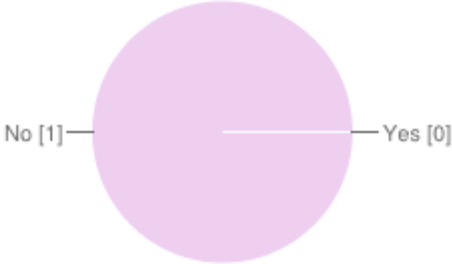
	<ul style="list-style-type: none"> • Integration of the tool with an abstract applications was never demonstrated. The tool functionalities are poor. Anonymity features missing. • The tool is not there • The tool has not been developed in time. 						
	<p>How would you improve of that?</p>						
	<ul style="list-style-type: none"> • We did not use the tool. • Cooperation among involved partners in order to deal with pending implementation issues. • A demonstration of the tool being used by an abstract application. Sophistication of the APIs. More functionalities for anonymity. • Implement it • It's all about team organization. 						
	<p>Is this functionality improving your developer's life?</p>						
	 <table border="1"> <caption>Survey Results: Is this functionality improving your developer's life?</caption> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>4</td> </tr> <tr> <td>No</td> <td>3</td> </tr> </tbody> </table>	Response	Count	Yes	4	No	3
Response	Count						
Yes	4						
No	3						
	<p>Why?</p>						
	<ul style="list-style-type: none"> • We did not use the tool. • Makes the work easier. • I didn't use it yet • The security mechanism offered by this tool will be extremely important for the developed applications, as it will enable secure data transactions. • The tool is lacking functionalities. • The tool is there • Interesting solution for registration 						
	<p><i>IF YES - How would you improve of that?</i></p>						
	<ul style="list-style-type: none"> • More customization 						
	<p><i>Is this functionality improving your developer's life?</i></p>						

	Why?
	<ul style="list-style-type: none"> Saves me coding

Content registration	
<p>Does tool work well?</p>	
IF NO - What is the issue?	
<ul style="list-style-type: none"> Security Tool is not 100% functional The tool usage by an abstract application was never demonstrated. APIs are very low level. It lacks of integration with the middleware. 	
How would you improve of that?	
<ul style="list-style-type: none"> See previous answer for user registration A demonstration of tool APIs would be very appreciated. Higher level APIs. Integration with middleware and other tools should be a priority task. 	
Is this functionality improving your developer's life?	

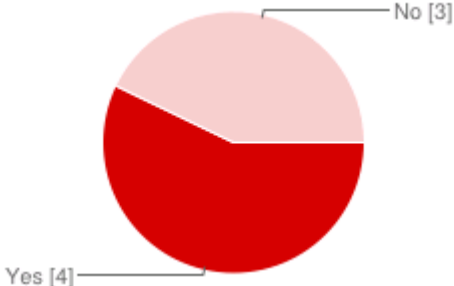
	Why?						
	<ul style="list-style-type: none"> • See previous answer for user registration • The tool is not mature enough to be used by an application. 						
	<i>IF YES - How would you improve of that?</i>						
	<ul style="list-style-type: none"> • More automatic • No suggestion. • Better naming schema • In the future the usage of ontologies can improve content registration • Simple -nothing to improve • No comment 						
	<i>Is this functionality improving your developer's life?</i>						
	<table border="1"> <caption>Survey Results: Is this functionality improving your developer's life?</caption> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>4</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </tbody> </table>	Response	Count	Yes	4	No	2
Response	Count						
Yes	4						
No	2						
	Why?						
	<ul style="list-style-type: none"> • Fundamental • The content registration is not visible for me as an application developer. It works fine, but I can't draw any comparison or judge, whether it improves my life as a developer. • Offering unique identifier of a VDI • In terms of certifying content and provide the end user that reassurance and guarantee. • I do not interface with middleware rather than a tool • I do not really have interacted with this tool. Its use appears to be transparent. 						

Publish VDI

<p>Does tool work well?</p>	
<p><i>IF NO - What is the issue?</i></p>	
<ul style="list-style-type: none"> • Many exception calls. I think the tool was not enough tested.. 	
<p>How would you improve of that?</p>	
<ul style="list-style-type: none"> • More tests for multiple usages. 	
<p>Is this functionality improving your developer's life?</p>	
	
<p>Why?</p>	
<ul style="list-style-type: none"> • coding not easy to read and to understand. 	
<p><i>IF YES - How would you improve of that?</i></p>	
<ul style="list-style-type: none"> • Improving handling of metadata • The creation and publication of a VDI does take a long time. If there is any possibility to accelerate the process, this should be done. • Better usage description • This tool could automatically inherit the data of the vdi that is being published to use as publication tags or keywords • Features related to security are not yet integrated. • Some methods of the tool are not fully implemented. e.g. setSignatue • Check for applications' requirements to provide more methods if needed 	
<p><i>Is this functionality improving your developer's life?</i></p>	

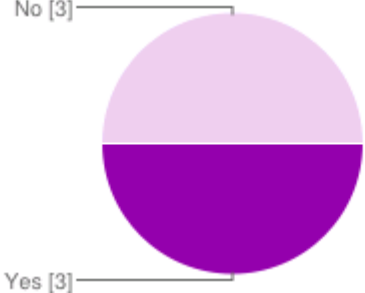
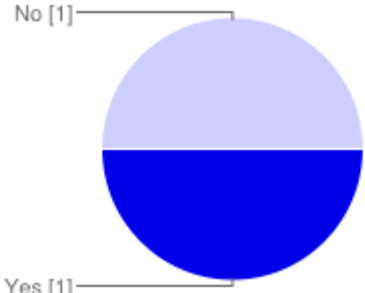
Why?	
<ul style="list-style-type: none"> • Fundamental • This is the first time I publish a VDI. So I can't say if it improves my life as a developer with respect to the publication of a VDI. If comparing this functionality with traditional implementations (e.g: creation of an annotation), I would say that there is no difference, whether I publish an annotation-VDI or whether I store it in a database. Both require the same effort. The advantage I see is in the description of the publication. This is easier and can improve the search results. • Abstracting the publication of a VDI • Makes very easier and quick to publish any content in the cloud • It will be possible to sign and authenticate a VDI • Publication of a VDI is a difficult process. • VDI publication requires many engines so a tool orchestrating all those engines is essential 	

Unpublish VDI	
Does tool work well?	
IF NO - What is the issue?	
<ul style="list-style-type: none"> • Still to be refined • We did not use the tool. • No issue, it wasn't used in the trial. • No issue, I didn't use it yet • The tool is not yet supported. 	

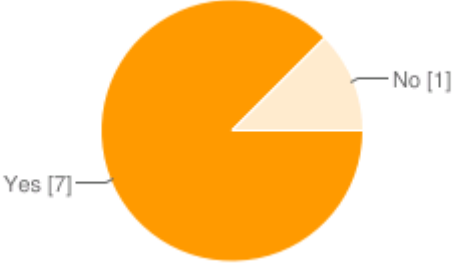
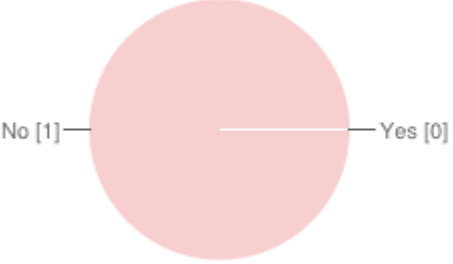
	<ul style="list-style-type: none"> • Tool implementation exists, but it was delivered late, so integration with applications was not done. It is not tested. • late delivery -not integrated 						
	<p>How would you improve of that?</p>						
	<ul style="list-style-type: none"> • Chached copies • We did not use the tool. • No issue, it wasn't used in the trial. • - • See previous comment about user registration • Test the tool and integrate it with an abstract application. • test it 						
	<p>Is this functionality improving your developer's life?</p>						
	 <table border="1"> <caption>Survey Results: Is this functionality improving your developer's life?</caption> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>4</td> </tr> <tr> <td>No</td> <td>3</td> </tr> </tbody> </table>	Response	Count	Yes	4	No	3
Response	Count						
Yes	4						
No	3						
	<p>Why?</p>						
	<ul style="list-style-type: none"> • I support digital forgetting concept • We did not use the tool. • Abstraction of the unpublishing process. • Didn't use it yet • Unpublish enables revokation of VDIs from CoMid and facilitates search and retrieval of results. • Delivered late, wasn't integrated with apps. • it is tested. 						
	<p><i>IF YES - How would you improve of that?</i></p>						
	<ul style="list-style-type: none"> • I did not have the opportunity to use this tool 						
	<p><i>Is this functionality improving your developer's life?</i></p>						

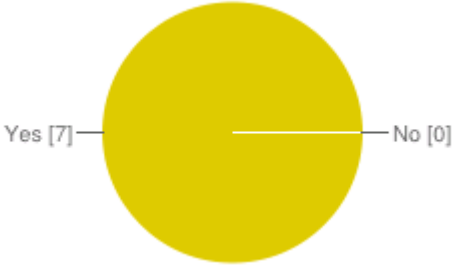
	<p>No [1] — Yes [0]</p>
	Why?
	•

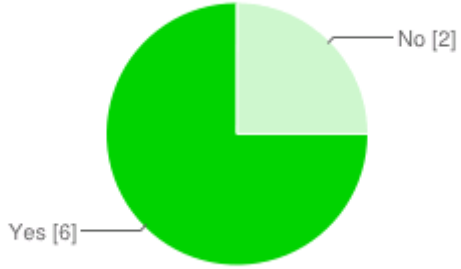
Revoke VDI	
Does tool work well?	<p>No [6] — Yes [2]</p>
IF NO - What is the issue?	
<ul style="list-style-type: none"> • We did not use the tool. • Not used in the trial, I think it was not ready. • Didn't use it yet. Not yet 100% functional • Same as Unpublish tool. • revoke is a superset of unpublish; hence, same with unpublish 	
How would you improve of that?	
<ul style="list-style-type: none"> • We did not use the tool. • Be ready for the next trials.-See previous comment about unpublish • Same as unpublish tool. • same with unpublish 	
Is this functionality improving your developer's life?	

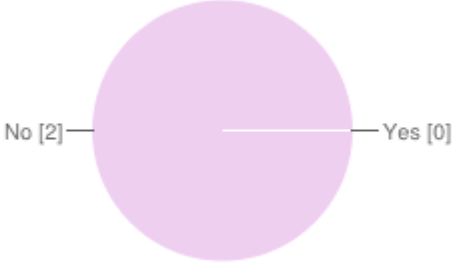
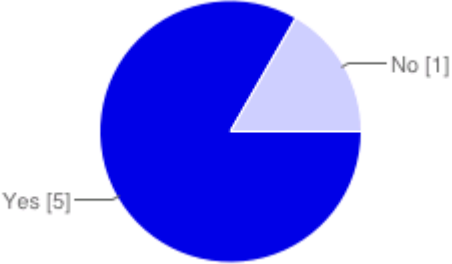
	 <p>No [3]</p> <p>Yes [3]</p>
	<p>Why?</p> <ul style="list-style-type: none"> • We did not use the tool. • Allows and abstracts the revocation process. • Didn't use it yet • Revocation of named content is tightly related to data protection, which is a key feature for future internet • Same as unpublish tool. • same with unpublish
	<p><i>IF YES - How would you improve of that?</i></p> <ul style="list-style-type: none"> • OK • I did not have the opportunity to use this tool
	<p><i>Is this functionality improving your developer's life?</i></p>  <p>No [1]</p> <p>Yes [1]</p>
	<p>Why?</p> <ul style="list-style-type: none"> • Fundamental

Subscription to VDI

<p>Does tool work well?</p>	
<p><i>IF NO - What is the issue?</i></p>	
<ul style="list-style-type: none"> Subscription by field-value-operation was not functional in time. 	
<p>How would you improve of that?</p>	
<ul style="list-style-type: none"> -. 	
<p>Is this functionality improving your developer's life?</p>	
	
<p>Why?</p>	
<ul style="list-style-type: none"> Nothing special in the implementation. 	
<p><i>IF YES - How would you improve of that?</i></p>	
<ul style="list-style-type: none"> More flexibility in metadata The match between subscription and publication works fine. However the retrieval of information about the match was not working for me. I could retrieve information about the id of the RVDI, but the retrieval of metadata (e.g. author) was not possible. Adding the ontology part. Key words are not enough. Create some kind of ontology that could be used to create the subscription, helping the end user fill in the form with is desired tags/keywords for the subscription As in publish VDI, security features should be integrated Integration with security features as the publication vdi tool. explore apps requirements to add more methods if needed 	
<p><i>Is this functionality improving your developer's life?</i></p>	

	
	<p>Why?</p> <ul style="list-style-type: none"> • Core functionality • The match between subscription and publication was handled automatically, so that I did not have to bother about that. • Allow content subscription. • Because it is a very simple tool, with a few method calls we easily create a subscription to any content that is or will be available on the cloud • See corresponding comment for publish VDI • Creating a Subscription VDI is a difficult process, and the tools hides the complexity. • covers more requirements

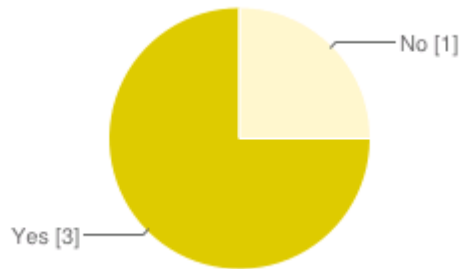
Browse Event Report	
<p>Does tool work well?</p>	
IF NO - What is the issue?	
<ul style="list-style-type: none"> • We did not use the tool. • Didn't use it yet 	
How would you improve of that?	
<ul style="list-style-type: none"> • We did not use the tool. 	
Is this functionality improving your developer's life?	

	 <p>A pie chart with a light purple color. The 'No' label is on the left with a count of [2], and the 'Yes' label is on the right with a count of [0]. The entire chart is filled with the purple color, indicating 100% of responses are 'No'.</p>
	<p>Why?</p>
	<ul style="list-style-type: none"> • We did not use the tool. • Didn't use it yet
	<p><i>IF YES - How would you improve of that?</i></p>
	<ul style="list-style-type: none"> • More options to configure how and when receive the reports • More event types to be added. • Additional functionalities such as parsing of Event Reports (ERs) for publications could be added. • It is possible to create ERRs for publications but not parse ERs for publications. • cannot browse event report for publication rather than for subscription • Developing the ER Tool according to MPEG specification. Existing implementation includes only the functionality needed to operate with the ER.
	<p><i>Is this functionality improving your developer's life?</i></p>
	 <p>A pie chart with a blue color. The 'Yes' label is on the bottom left with a count of [5], and the 'No' label is on the top right with a count of [1]. The chart is mostly filled with blue, representing approximately 83% 'Yes' responses.</p>
	<p>Why?</p>
	<ul style="list-style-type: none"> • Fundamental to publish/subscribe pattern • Allows and abstracts notifications when a match occurs. • It will be very helpful for application developers as well as for CONVERGENCE users to be able to browse the ERs related to publications. • Creation and parsing of a ERR and an ER is efficient. • i can browse ERs for publications • Nothing special in the implementation.

Create Annotation	
Does tool work well?	<p>A circular gauge chart with a light orange top half and a darker orange bottom half. A horizontal line across the center separates the two colors. The top half is labeled 'No [4]' and the bottom half is labeled 'Yes [4]'.</p>
<i>IF NO - What is the issue?</i>	
<ul style="list-style-type: none"> • We did not use the tool. • Not used. Specific to other trials. • Didn't use it • I did not have the opportunity to use this tool. 	
How would you improve of that?	
<ul style="list-style-type: none"> • We did not use the tool. • Not used. Specific to other trials. • Didn't use it • - 	
Is this functionality improving your developer's life?	
<p>A circular gauge chart that is entirely light red. A horizontal line across the center is labeled 'No [4]' on the left and 'Yes [0]' on the right.</p>	
Why?	
<ul style="list-style-type: none"> • We did not use the tool. • Not used. Specific to other trials. • Didn't use it • I did not have the opportunity to use this tool. 	
<i>IF YES - How would you improve of that?</i>	
<ul style="list-style-type: none"> • I did not test it 	

- This tool should be used to other applications as well and to give for example the possibility to add annotations to photo or product VDIs.
- Other applications should exploit this tool too, so the API and the functionalities of the tool should be assessed at a later point.
- needs to be integrated to other apps than podcast to check/enhance its functionality

Is this functionality improving your developer's life?



Why?

- Useful
- Not direct improvement, however it would be added value to create protected annotations for product or photo VDIs. Creating an annotation VDI is a complex process and the tool, seems to be efficient in doing this in an easy way.
- i can easily annotate rather than using directly the middleware

Final notes

Comments

- thanks
- The remarks for the different podcast applications were made with respect to the use of the Convergence technologies/tools and not the applications themselves. There are a lot of things to be improved on the GUI and functionality of the application. (Browser compatibility, Retrieval of podcast,...)
- More development coordination is needed. More development documentation is needed.
- Nothing to add-
- Middleware is very big and needs to be documented as it is now entering the final stage of development - Scenario leaders must give more technical feedback regarding the tools functionality, so that we do not have to go back and forth
- I thing the convergence middleware project would need better coordination.

5.4 Focus Groups

5.4.1 Photos in the Cloud and down to Earth (ALI)

5.4.1.1 Observation - Summary Report on Trial

PARTNER:	ALINARI	DATE:	25-01-2012	NUMBER OF PARTICIPANTS:	7
PARTICIPANTS					
<i>Add any observation on the composition of the group you feel may be relevant</i>					
The first group was made up of 7 people from the Florence School of photography , APAB. It was an homogeneous group of post graduate photographers.					
PROBLEMS ENCOUNTERED					
<i>Describe any technical or organizational problems you encountered during the trial</i>					
Mainly we encountered technical problems in the use of Mac system login devices to the school network used for the trials. (this kind of problem was not linked to CONVERGENCE). 2 Users encountered problems in the registration (the second time they the login it was not working) and in filling in the questionnaire (once finished it started again from the beginning) 2 users encountered problems using the “publication” functionality: the publication failed.					
OTHER					
The whole online questionnaire is considered too repetitive and too long.					

PARTNER:	ALINARI	DATE:	27-01-2012	NUMBER OF PARTICIPANTS:	7
PARTICIPANTS					
<i>Add any observation on the composition of the group you feel may be relevant</i>					
The second group was made of 7 users with different profiles: 2 archivist, 1 project manager in the field of professional photography, 1 photographer, 2 Graphic designers, 1 researcher. It was an heterogonous group of people working in the field of professional photography.					
PROBLEMS ENCOUNTERED					
<i>Describe any technical or organizational problems you encountered during the trial</i>					

2 Users encountered problems in filling in the questionnaire (once finished it started again from the beginning)

1 user encountered problems in uploading the images (the upload failed)

2 users encountered problems in the “publication”: the publication failed

OTHER

5.4.1.2 Summary Report

PARTNER:	ALINARI	DATE:	25-01-2012	NUMBER OF PARTICIPANTS:	7
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CONVERGENCE APPLICATION N:1⁸

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

All the Users found the task relevant to their work

At least 3 interesting quotes from user answers:

1: "Interesting application as companion for social networks like Facebook"

2. Good promises. Interesting concept for content harvesting

3. When it will be available? I hope it will be a part of a simple to use package...

CONVERGENCE APPLICATION N:2 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

4 users found that the solution offered by Convergence is a step forward compared to current system

⁸ The numbers (N :1, N :2 etc.) refer to the sequence of the tests in the trial.

At least 3 interesting quotes from user answers:

- 1. Interface simple and clean*
- 2. Did not know where to go or which command to execute first*
- 3. Nice options.*

CONVERGENCE APPLICATION N:3 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Convergence 's Strong points: useful to store images, useful to share images, useful the functionality of notification, simple to use.

Weak points:

- The graphic layout is not good
- It's still an early stage project

At least 3 interesting quotes from user answers:

- 1. User navigation not friendly*
- 2. Good approach but needs improvement in usability*
- 3. Server was very slow and refreshing window was sometimes providing wired responses like HTML page without update info.*

CONVERGENCE APPLICATION N:4 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Enrich the application to make it more relevant to their work:

- 2 users suggest to include a database of given images in order to choose among them
- 1 user suggested to have an online assistant support

At least 3 interesting quotes from user answers:

CONVERGENCE APPLICATION N:5:

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Would change:

-5 users suggest to make the interface more intuitive

Additional features:

-2 users suggest to Add an Ontology from where choosing tags

At least 3 interesting quotes from user answers:

CONVERGENCE APPLICATION N:6 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

6 users would Advice Convergence to a friend /colleague

At least 3 interesting quotes from user answers:

CONVERGENCE APPLICATION N:7 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

6 Want to use Convergence themselves

At least 3 interesting quotes from user answers:

1. Interesting solution
2. Did not know there is something like that?

3. I want to test it again once improved to the next version

IMPROVING CONVERGENCE:

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

-Words to describe Convergence to a colleague:

System of sharing and search images

-Most attractive aspects of the system:

Notification feature, simple to use

-least attractive aspects of the system :

The tagging mechanism is power

-advantages of convergence:

notification system very useful, possibility of store content and share content, synchronization of data is useful

-disadvantages of convergence

not intuitive

-New features that the users would like to see in convergence:

- Ontology to choose the tags
- Automatic tagging
- Instructions to guide the user
- Possibility of changing the tags of an image

At least 3 interesting quotes from user answers:

“the usability is simple , but not intuitive”

“I suggest to change the home page button: it is not visible”

The questionnaire is too long and too repetitive.

WRAPPING UP

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

-3 words to describe Convergence:

simple, quick, new

-4 users think that single best aspect of the system is the synchronization, 3 users think that the best aspect is the mechanism of store and share images

-single worst aspect of the system:

not intuitive

- all the users would use the system if were available and fully functional

At least 3 interesting quotes from user answers:

PARTNER: ALINARI **DATE:** 27-01-2012 **NUMBER OF PARTICIPANTS:** 7

CONVERGENCE APPLICATION N:1 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

6 Users found the task relevant to their work

At least 3 interesting quotes from user answers:

CONVERGENCE APPLICATION N:2 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

5 users found that the solution offered by Convergence is a step forward compared to current system

At least 3 interesting quotes from user answers:

CONVERGENCE APPLICATION N:3 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Convergence's Strong points: 3 users think that it is useful to manage a big image archive

Convergence's weak points: 4 users find the system slow

At least 3 interesting quotes from user answers:

One user states: "it's not evident the difference compared to other systems of image uploading"

CONVERGENCE APPLICATION N:4 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

-Enrich the application to make it more relevant to their work:

Put many images on the system: more images are on the database easier the result of your research

Add an ontology of terms

At least 3 interesting quotes from user answers:

"it is good the fact that the tags you put previously are then suggested, but it would be useful to add an ontology of terms"

CONVERGENCE APPLICATION N:5:

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

What would you change:

- High resolution upload fails.
- When the user uploads the image the visualization of the preview is distorted
- In Explorer the visualization is not correct
- The browsing is poor
- Home button : the button is little and not visible
- Not easy to visualize the images provided by the system (the user has to click his image to watch the list of images in the system)
- My notification My Photos My Subscription buttons: are not visible (the background colour is

too light and the white colour of the button has no contrast)

At least 3 interesting quotes from user answers:

- It is not intuitive: the user needs instructions to be guided into the functionalities of the system
- it is not easy to understand the concept of “subscription”
- Subscription: to get a match the users has to put exactly the keywords related to the image (the AND operation is not working)
- You have to put many tags in order to have more possibilities of searching for you image
- Data in the upload procedure: visualized at the American way(not clear)
- Not clear whether to put tags separated by , or – (no instructions).
- Add tag function is not clear , (blue colour doesn’t change once you have chosen it)

CONVERGENCE APPLICATION N:6 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

5 users would Advice Convergence to a friend /colleague

At least 3 interesting quotes from user answers:

CONVERGENCE APPLICATION N:7 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

7 Want to use Convergence themselves

At least 3 interesting quotes from user answers:

IMPROVING CONVERGENCE:

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Words to describe Convergence to a colleague

The system is able to store and share images and have synchronized results that match your research

-most attractive aspects of the system

notification system, store and sharing images

-least attractive aspects of the system:

graphical layout

-advantages of convergence

One user thinks that the system has a meaning if used within a company workflow, tailored to the exact needs of the company

-disadvantages of convergence

Not easy to upload an image, not intuitive

A bit slow

-New features that the users would like to see in convergence

The annotation of images Is manual (not automatic) and there is not a given ontology from where to start

At least 3 interesting quotes from user answers:

“I can publish images but it is not possible to unpublish (only delete image)”

“Notification functionality is good but you should have many users uploading images in order to have the match of the image you are looking for”.

WRAPPING UP

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

-3 words to describe Convergence: Easy/ambitious/synchronized

-single best aspect of the system:

Notification feature

-single worst aspect of the system :

Functionalities are not intuitive, the user is often disoriented

- all the users they would use the system it were available and fully functional

At least 3 interesting quotes from user answers:

5.4.2 “Videos in the Cloud and Down to Earth” (FMSH)

5.4.2.1 Observation - Summary Report on Trial

PARTNER:	FMSH	DATE:	27.01.2012	NUMBER OF PARTICIPANTS:	9
PARTICIPANTS					
<i>Add any observation on the composition of the group you feel may be relevant</i>					
<p>From the nine participants of the trial, five are external to the project.</p> <p>Since that for phase 1 the application only provides tools for Video Material Owners (VMOs) and Video Channel Users (VCUs), the participants take the both roles by creating and publishing videos, then subscribing and browsing notifications of videos. However, four participants have a profile of a VMO, five of a VCU.</p>					
PROBLEMS ENCOUNTERED					
<i>Describe any technical or organizational problems you encountered during the trial</i>					
<p>Some participants face unknown failures during video creations, which finally are identified as a critical bug when copying/pasting from video notices from Word. Then, participants stop to copy/paste and finish the trial on time.</p>					
OTHER					

About CONVERGENCE:

- Some participants ask who or which entity control groups for licenses
- Many participants ask what is a cloud and a Content Centric Network, and who can use such a network
- Many participants want to know the structure of a VDI, and from where the used ontologies come from
- Some participants want to learn more about MPEG-M
- Some participants ask questions about the versioning of published resources

About the trial:

- Some participants want to answer something else than “yes” or “no” to some questions of the questionnaire, or at least have a “comments” field.
- Most of participants do not understand why, during the focus group, they are asked to talk about the application since they already answered to the online survey.

5.4.2.2 Summary Report

PARTNER:	FMSH	DATE:	03.02.2012	NUMBER OF PARTICIPANTS:	8
CONVERGENCE APPLICATION N:1 : REGISTRATION					
<i>Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways</i>					
Most of users do not see the “register” link for creating an account, some of them even try to log in with their company identifiers, but finally all of them find the feature easy to use.					
<i>At least 3 interesting quotes from user answers:</i>					
CONVERGENCE APPLICATION N:2 : VIDEO CREATION					
<i>Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways</i>					
Most of users want to make changes to a R-VDI (or even a P-VDI), especially for adding new tags, but the application do not provide any “Update” feature.					

Some users don't know which video format to choose, and expect an automatic encoding during the upload. The upload bar is a feature appreciated by users.

Many users like the proposed tags with definitions communicating with CDS, and wonder if they can write tags in other languages or choose the ontology in use (and even use several ontologies) - because they notice that some tags are not in the proposed ontology.

Some users would like to fill in several authors, producers, languages, etc. but only one field is proposed. The proposed form fits to other users' needs, and the different kinds of licenses are well understood and attract their interest.

At least 3 interesting quotes from user answers:

“Where do the proposed tags and definitions come from? Could I use another ontology?”

“When I upload the video, are the metadata I filled inserted in the video resource?”

“Kinds of licenses are very clear to me, I see exactly for which kind of uses they correspond.”

CONVERGENCE APPLICATION N:3 : VIDEO PUBLICATION

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Many users like the fact that video creation/upload and publication are two separate processes.

All users find the publication process easy and quick.

Most of users wonder why they have to repeat during publication information that they already filled during the video creation (tags & title).

At least 3 interesting quotes from user answers:

“Why am I asked again for tags and name of the video? The application could at least fill those fields for me with the information I already provided.”

“Publishing my video is very easy.”

CONVERGENCE APPLICATION N:4 : SUBSCRIPTION & NOTIFICATIONS

Summary of user answers - where there were differences of opinion make these clear and give the

numbers who reply in different ways

Most of users find the subscription and notifications features very interesting and very helpful in their work to be notified of interesting published content. However, this is a way of searching content that implies to know what you're looking for: some users would like to browse the published content without subscribing and feel that they could miss an interesting content.

Many users ask how subscription match, especially using several tags and owner. Some of them also ask if the definition of tag is taken into account.

Some users would like to search for videos using other criterions than tags (author, language, date, etc.).

When browsing videos, it is not clear for users if displayed information concern the R-VDI or the P-VDI (title and tags) – which is something that all users try to do in order to understand why a subscription matched or not.

Some users notice that a video can be downloaded even when they do not give that right. They also suggest to insert the video metadata directly in the metadata of the video resource. One user who does not use to work with web applications would like to download the VDI instead of the video resource, then have a “VDI player” for watching both video and metadata with a desktop application.

At least 3 interesting quotes from user answers:

“After I publish a video, I cannot check the tags that will match with subscriptions because the metadata of the video and its publication are not clearly displayed.”

“I never fill correctly a form at the first time, that's why I need a feature for modifying a video or a publication.”

“It is very useful to receive notifications when a video about my subjects of interest is published.”

“Subscription is a very interesting feature, but it would be complementary to existing applications where I can browse the content without knowing exactly what I am looking for.”

CONVERGENCE APPLICATION N:5: OVERALL APPLICATION

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Some users do not always understand how to fill the forms (especially expiration date, owner of video, type of video; many users also try to separate tags with a “,”), and suggest to provide a help. On the other hand, other users find the application clear and easy to use!

For some users, the design & appearance of the application is not very attractive, and this could be a reason for them not to use the application (even if they perfectly understand that this is normal for an early prototype).

At least 3 interesting quotes from user answers:

“I thought that video type was video format. A description of the field would have been helpful.”

“The overall interface is easy and practical.”

IMPROVING CONVERGENCE:

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

The words describing CONVERGENCE:

online publication, rights, content, tracing (usage, content), appropriation, networking of Internet information, homogenization, centralization, convergence, standardization, content management, security, control, tools for developers.

Most of participants think that CONVERGENCE offers very interesting and innovative features, such as updating or revoking content located at different places, automatic revocation with expiry date, tracing content, sharing videos and metadata, publication/subscription mechanism, content certification, licenses. They better see them useful for their work rather than for personal uses.

However, some participants are not convinced that CONVERGENCE technology could be efficient against malicious users who could still misappropriate content by the use of screen captures, for example. One participant wonder what will be the guarantee that there will be no way for getting around VDI technology and how much could it cost for a company to fight against malicious uses, taking the example of DRM who have been finally given up because of their cost and their low compatibility with every device. Another participant retort that content certification in CONVERGENCE would be helpful to fight against misappropriation of digital identity.

Participants think more particularly that CONVERGENCE is useful for authors (video producers, artists, etc.) for tracing and managing themselves the diffusion and commercial licenses of their content.

However, some participants are not convinced that this technology would provide better payments to

authors, arguing that the experience has demonstrated that preventing people on sharing content (by technology or by law) did not led on this. On the contrary, the more a content is shared, the more it is sell. Two participants even see CONVERGENCE as against the open Internet.

Most of participants doubt that major Internet companies (Google, Facebook, Youtube, etc.) would be interested in using CONVERGENCE technology. More, they do not think that CONVERGENCE could replace the whole Internet, because even if major Internet companies would use this technology, other non-VDI solutions would be developed by people in favour of an open Internet.

More, some participants open a debate about the risks of providing such a technology to the “strongest”: governments, big companies, etc. CONVERGENCE could give to non-democratic governments an easier way to control the published contents, erase forever dissident resources, rewrite history, etc. One participant even compared CONVERGENCE to “Big Brother”.

Finally, everybody see CONVERGENCE as definitely suitable in specialized contexts, more particularly in educational and research contexts. CONVERGENCE could offer strong guarantees to filmed people (researcher, teacher, indigenous people) that their comments, views and image are respected, which is an important issue currently faced in documentaries or video channels. One participant recommends taking into account the Content Owners in the licenses. Another one adds that an institution providing such services - even public - has to deal with an economic model and needs tools for getting statistics of view & usages of the videos.

At least 3 interesting quotes from user answers:

“Expiry date is a strong point.”

“It would be useful to have a Firefox plugin that alert the user when he’s not on the genuine Paypal or Amazon website.”

“As an artist, I prefer that my content circulate freely on the internet, even if I don’t get my authoring fees, because big majors already appropriate my content and make a commercial usage of it”

“I like the fact that I can have a tracing of the usages of my videos, but this would not engage me to operate a control on my videos”

“Everything that is prevented on being shared do not generate buying acts as well.”

“Convergence is not about remuneration of authors, but about control of diffusion.”

“I see for multimedia companies clear interests in controlling their content, but I’m not sure this is the interest of Internet users”

“Even for a public institution, the idea of providing free content, without control, is unreasonable.”

“As a service provider for researchers, I find interesting to broadcast and share the sensible content that people commit me, and to have a tool that allows me to keep the control of how this content circulates and is used. This technology gives more guarantees than Creative Commons, which do not

prevent people on sharing and commenting videos on Youtube.”

“Homogenize, centralize & standardize data can lead to problems of control of data by the strongest on the weakest.”

WRAPPING UP

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Most used words when describing CONVERGENCE:

publication, content, tracing, usage, standardization, security, control.

All participants think that CONVERGENCE’s most attractive aspect is tracing content. Some of them think that the “control content” aspect of the project should be restricted to specific applications and networks. Most of them think that malicious users will always find a way to get around the technology as they always did, even if they notice that it would be more difficult.

Some participants think that with CONVERGENCE, authors can directly manage and control the broadcasting of their content, instead of institutions or companies. On the other hand, some participants do not agree, arguing that this technology will better beneficiate to companies rather than authors, since companies will lead the distant control to the content.

Some participants believe that it is dangerous to give to an entity the power of revoking content and history of the versions of the content.

All participants agree to say that CONVERGENCE has very interesting applications in research & education, for communities of teachers, students, artists, etc. – but not for any kind of user. An institution filming researchers, indigenous people, etc. needs to give to filmed people guaranties that the films will be used in specific contexts, and to prevent people on trying to make money with these films freely downloaded.

Finally, most of participants conclude that CONVERGENCE has interesting and useful applications in certain specific contexts and networks, but do not see the technology applicable for the whole Internet.

At least 3 interesting quotes from user answers:

“Tracing content is interesting for authors.”

“It has never been demonstrated that sharing prevent authors on being paid, but that it led to business

losses for big companies. It has been proved that the more a content is shared, the more it is sell.”

“With CONVERGENCE, an anthropologist films social practices, rites, etc. of indigenous people. After that, a person annotates it, then can only publish the annotation or the film in the contexts that have been authorized by those indigenous people.”

“CONVERGENCE is a tool for researcher to trace the evolution of his thinking.”

“Someone downloads freely a video, then publish it on a website where he will ask users to pay for viewing it: here is a good example where tracing the video with CONVERGENCE is very interesting.”

“VDI cannot run efficiently in current Internet. It is interesting when running in a shorter network (as an Intranet).”

“CONVERGENCE must be considered for precise domains. It is not something that, in general, will make converge the whole Internet in the use of the VDIs. It is more targeted to professional users.”

5.4.3 Augmented Lecture Podcast (LMU)

5.4.3.1 Observation - Summary Report on Trial

PARTNER:	LMU	DATE:	24.01.2012	NUMBER OF PARTICIPANTS:	9
PARTICIPANTS					
<i>Add any observation on the composition of the group you feel may be relevant</i>					
This group represents the “lecturers” in our trial. The Group consisted of research assistants at LMU and TU (Technical University of Munich)					
PROBLEMS ENCOUNTERED					
<i>Describe any technical or organizational problems you encountered during the trial</i>					
<ul style="list-style-type: none"> - Due to the very detailed presentation about VDIs (before the tasks), participants expected to see a complete new system and were a bit disappointed to not see a huge difference. One participant was very intrigued to see a VDI. - One participant had technical issues. Could not publish his podcast VDI. 					
OTHER					

- Participants were confused by the mixed language in the questionnaire (English/German/Italian).
- Participants had difficulties answering the questionnaires, since they did not really see Convergence
- One participant wanted to know, where the VDI is after publishing.
- One participant wanted to know how to delete the VDI / Podcast.
- One participant wondered why she could not set an expiration date.

PARTNER: LMU **DATE:** 25.01.2011 **NUMBER OF PARTICIPANTS:** 8

PARTICIPANTS

Add any observation on the composition of the group you feel may be relevant

This group represents the “students” in our trial. The Group consisted of students from LMU.

PROBLEMS ENCOUNTERED

Describe any technical or organizational problems you encountered during the trial

- Due to the detailed presentation at the beginning, participants had high expectations to see all features a VDI provides.
- Some participants had Browser issues, which influenced the different tasks

OTHER

- Participants were curious about the VDI they have been searching for. They wanted to get further information on the VDI.
- One participant wanted to see the structure of the VDI.
- One participant wanted to know, how old the VDI / result is, which was found by the system.
- Participants had difficulties in answering the questionnaires, since in their opinion they haven't seen anything about Convergence.
- One participant wanted to know more about the subscription to an annotation. They weren't clear, whether they subscribe to an author or to an annotation.

5.4.3.2 Summary Report

PARTNER: LMU **DATE:** 24.01.2012 **NUMBER OF PARTICIPANTS:** 9

CONVERGENCE APPLICATION N:1 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

All participants agreed that creating and using podcasts is relevant to their work.

Most of the participants agreed that creating podcasts with the Convergence application is easier than with the currently used system, though one participant pointed out some usability issues.

Strong points of the application: possibility to subscribe to new content.

Weak points of the application: no feedback on task completion in the application.

Three participants pointed out that they were not sure whether they were testing Convergence or the application.

Some features that the participants would like to add to the podcast application include: the possibility to receive additional information about the video and preview of the video before posting; possibility to see and select the output file format of the slides; drag & drop option for adding content; adding an expiry date and additional content to the podcasts such as links to external material.

In general for creating VDIs the participants stated that a VDI-viewer or a VDI-browser would be helpful – a possibility to receive an overview of all VDIs that a person has created and an overview of each VDI's properties.

The participants stated that it is hard to decide whether they would recommend the application with Convergence to a colleague or not because they have used it only for a very short time and it is not yet completely developed.

At least 3 interesting quotes from user answers:

"I didn't know that I was testing Convergence."

"Does anonymity still exist in Convergence?"

"What happens to Convergence when the encryption algorithms can be decrypted?" (e.g. due to increase in computer power).

IMPROVING CONVERGENCE:

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Words to describe Convergence to colleagues: VDI, beta, different, peer-to-peer, metadata. One participant pointed out that the description might differ in dependence to the people Convergence is described to.

Advantages of Convergence: well suited for certain use cases such as collaborative work and learning, administration, digital signatures or for keeping address and contact books updated.

Disadvantages of Convergence: infrastructure; overhead for changes.

All participants expressed their concerns about possible privacy problems – not clear how personal data is to be protected so that VDIs are not stolen from their owners and who exactly has the rights to change and delete what kind of content. Another stated problem was the fear of being controlled because there is no real possibility of anonymity.

Applications and features that could be supported by Convergence: a VDI-explorer that visualizes the VDIs created by a person and shows information such as creation and expiry dates.

In general, all participants agreed that they could better imagine Convergence as an additional tool or service instead of new Internet, because they see it as only suitable for certain scenarios. The advantages are seen for people and companies who create and distribute huge amounts of data and not so much for the average user.

At least 3 interesting quotes from user answers:

“You can no longer be a dog on the Internet.”

“I am scared to lose everything, I use to own.”

“I would like to see a preview of my VDI.”

WRAPPING UP

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Words that describe Convergence best: VDIs (most of the participants stated this), new Internet (2 participants stated this), up-to-date content (2 participants stated this, although one said that this should not necessarily be a good thing), container (2 participants stated this), metadata, peer-to-peer, standardization, distribution.

Best aspects of Convergence: good for some specific use cases (4 participants stated this); automatic updates (3 participants stated this); good overview over published content by a person; control over a person's own published content.

Worst aspects of Convergence: privacy concerns – it looks like the content in Convergence could easily be abused and possibly cracked (5 participants specifically stated this, although one said that in some cases the privacy issues might not be relevant); advantages of the current Internet such as anonymity might get lost; control over the content that is being posted by other people possible; Convergence seems very complex and might be confusing for the users.

Use the system if it were available and fully functional: in general the participants would try it. 2 said that it is hard to say at this point of development as they haven't seen much of the system.

At least 3 interesting quotes from user answers:

“Convergence is like Dropbox without the need to register.”

“For some use cases I would definitely try Convergence but it has to be fully reliable.”

“I have control over my own data, but not over the data someone publishes about me.”

“Can you “like” [like on Facebook] a VDI?”

PARTNER:	LMU	DATE:	25.01.2012	NUMBER OF PARTICIPANTS:	8
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CONVERGENCE APPLICATION N:1 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

The participants stated that all of them have used or are using regularly podcast applications and that they are relevant for their studies. Most of the participants said that they are using podcasts for repetition of the studied material.

No technical differences between the current application and the application with Convergence were reported. One participant pointed out that no comparison between the two applications can be made in regard of searching for specific content because the dataset in the Convergence application is still too small.

Some weak points of the application that were stated include: there is no creation date of the VDIs and the users couldn't see how up-to-date they were (3 participants stated this); the application windows are not resizable; subscribe option requires key words and is not automatic;

Some features that the participants would like to add to the application include the creation date of the VDIs; the possibility to download the podcasts; the possibility to adjust the size of each application window and the possibility to browse/search the slides without stopping the video.;

At least 3 interesting quotes from user answers:

“I would like to be able to download VDIs.”

“I am not sure that I have yet understood the concept of Convergence”.

“Comparing the Convergence application with other applications is like comparing apples to peas.”

IMPROVING CONVERGENCE:

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

Describing Convergence to other people: two participants stated specifically that it would be difficult to describe Convergence to people without technical background as many people have problems using even such services as Dropbox or Facebook. Convergence seems far more complicated. However, one participant pointed out that if the system is user friendly then the technical background is of no importance. One participant said that Convergence can be described as a huge Content Management System.

Advantages and disadvantages of Convergence: each person and each company have their own VDIs. This enables the owner to see who has seen their content. Half of the participants saw this as an advantage, while the other half said that they would prefer other people not to be able to see what they are doing on the Internet, so that they wouldn't feel as their actions are being controlled.

Other disadvantages included: no anonymity while surfing the Internet; overhead for the creation of metadata. A lot of the participants pointed out their concerns that the quality of Convergence would depend on the users who create the content and the metadata. So maintaining a good quality would be a complicated, time consuming and expensive process.

At least 3 interesting quotes from user answers:

“Convergence is a mixture of Facebook and Dropbox in real life.”

“For me a VDI is a box with a lot of content.”

“Really cool idea but I doubt that Convergence can replace the current Internet. The current Internet should not be replaced.”

“Convergence seems like a distributed database”.

“So if people do not describe their content, Convergence will not work out.”

WRAPPING UP

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

The best aspects of Convergence included: the up-to-date content and the information; more accurate search results and clarity of the content.

As worst aspects of Convergence the possible control and surveillance were stated. One participant even described Convergence as a possible “Big brother”.

Use the system if it were available and fully functional: the participants said that they are a little sceptical of Convergence. Nevertheless, they would like to try it out, especially if it is developed as an extension to the current Internet. However, one participant stated that the use of the system is out of question if it means that all anonymity is lost. Another one said that it would be advisable to see whether other people are using the system before deciding whether to give it a try or not.

At least 3 interesting quotes from user answers:

“I would never use Convergence if it meant that I would lose my anonymity.”

“Before testing it myself, I would wait until other users try it and what their experience is”

“Am I always connected to my user VDI?”

5.4.4 “Smart Retailing” (UTI)

5.4.4.1 Observation - Summary Report on Trial

5.4.4.1.1 Customers

PARTNER:	UTI	DATE:	20.01.2012	NUMBER OF PARTICIPANTS:	3
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PARTICIPANTS

Add any observation on the composition of the group you feel may be relevant

This group was formed of three users from outside the project, and none of them a technical person. They were one Contract Administrator, one Business Analyst and one Translator.

PROBLEMS ENCOUNTERED

Describe any technical or organizational problems you encountered during the trial

We observed the same pattern as the retailer: to resist to any change from the way they use Google to search for products.

OTHER

- Participants were confused about the name field in the “Add Subscription” page; they felt like that should be a “free text” search
 - o We should add a free text field that would let the user type whatever he wants, and we should make the application adaptive using this field as a source of modification for it: when the user types a word the interface shows him different search criteria that correspond to that word;
- They sustain the same idea as the retailer regarding the way Convergence will be seen by the big companies (like Amazon)
- They think that retailers will be disappointed because the users will find quicker what they are looking for and they won’t linger on their websites anymore

5.4.4.1.2 Retailer

PARTNER:	UTI	DATE:	20.01.2012	NUMBER OF PARTICIPANTS:	1
PARTICIPANTS					
<i>Add any observation on the composition of the group you feel may be relevant</i>					
The participants in this group represented the retailer for the application we developed. The group consists in two business partners who own two online shops.					
PROBLEMS ENCOUNTERED					
<i>Describe any technical or organizational problems you encountered during the trial</i>					

The retailer was stuck on the idea of SEO operations. It was very hard to explain to him that the system is not a “second Google”, but rather an “enhanced Google”. He was constantly trying to translate every string-based or non string-based descriptor (or other operations on descriptors) as another SEO operation.

OTHER

- As a first general impression, the retailer stated that some features of the system already exist as separate modules over the Internet. Some of them include: a search engine, a system that verifies the authenticity of a site, the notification mechanism (as a RSS feeder), automatic updates for products. He also stated that even if they are not new concepts in our days it is a very good thing that Convergence wraps them altogether and improves some of them.
- He had a problem with the ranking of the results, asking what would be the order in which the results will be returned to a customer; he proposed to use this as an add-on for Google and make it use the Google algorithms
- The retailer considered that, if there are only a few publishing/subscription criteria, then the system would not return fewer and more specific search results, but instead it would return more results because everything would be standard and the refinement would be missing; he then suggested to add many search criteria to specialize the searching
- The retailer was reticent about the popularity the tool will gain; he stated that big companies with a high rank on Google will fight against it
- There was an interesting discussion on the issue of “authorized reseller”. While the retailer really appreciated the possibility to automatically distinguish between authorized and non-authorized resellers in the sense that will give him a real competitive advantage, he wanted some specific information on how this certification process will be implemented. The idea that the manufacturer will certify the supplier and the supplier will then certify the manufacturer was generally accepted, with the remark that in some cases, the retailer would not want to publish the information that he is certified by a certain supplier because he doesn’t want to reveal his product source.

5.4.4.2 Summary Report

5.4.4.2.1 Customers

PARTNER:	UTI	DATE:	20.01.2012	NUMBER OF PARTICIPANTS:	3
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CONVERGENCE APPLICATION N:1 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

The participants feel encouraged to subscribe more if they can better specify their subscription preferences.

They appreciated the persistence of their subscriptions (the fact that they will be automatically notified when a new match occurs).

They suggested to add a “free text” box that would also modify the search criteria as the user types.

One participant said he would like to be able to create personal web folders, to store and view his notifications and have an automatic archive of past notice.

They liked the idea that the products they find can be verified to see if they are genuine, but they had difficulties at first to understand that this is not a mandatory thing and, if they want, they can search for any kind of products, including imitations.

At least 3 interesting quotes from user answers:

- “It would be awesome to find something almost instantly.”
- “Retailers would want customers to stay and browse their own web pages, this way they can be influenced to buy more, not only the thing they were looking for at the begging.”
- “This is like many systems and services already found on the Internet, but all brought together into a single one.”
- “What if I don’t want to buy something really genuine but I want something counterfeit?”

IMPROVING CONVERGENCE:

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

- Make the application adaptive: let it modify the criteria a user can search by along your typing into a “free text” search box.
- Let the client personalize the result list as he wishes: a client should be able to select the criteria (or more than one) that he wants the list to be ordered by (e.g. by the rating of the retailer, by the relevance of the products, by the price of the product etc.)

-
- Create personal web folders
 - Store and view past notifications in an automatic archive

At least 3 interesting quotes from user answers:

- “I would like to be able to search for something by my own description and with my own words.”
- “I would like to sort the results as I wish, for example by price.”
- “It would be useful if you could store the notifications in an archive on the web.”

WRAPPING UP

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

The participants found the system very useful and said they would use it.

They were pleased of the idea to find something quicker than usual, without searching and browsing for a long time.

They found particular cases in their own lives where they would be really happy to have such a system. Some of the examples include: searching for a home to rent, searching for hotels with very specific details when going in vacation etc.

They were pleased of the notification mechanism and the persistence of their subscriptions.

One participant appreciated the idea that everything is updated and said that it is very important in the goods request – offer market.

At least 3 interesting quotes from user answers:

- “When will you finish this? Maybe I’ll be able to find a place to move then.”
- “Personally I would use it. If you implement the text-based search and criteria selection, I would really use it.”
- “You have a lot of work to do but I think it will be a good thing.”

5.4.4.2.2 Retailer

PARTNER:	UTI	DATE:	20.01.2012	NUMBER OF PARTICIPANTS:	1
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CONVERGENCE APPLICATION N:1 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

The retailer was satisfied with the application, in the end saying it would help him improve his business. He thinks that this approach would give a chance to the small retailers also to prove themselves in front of the client.

His view over the whole ensemble of ideas was wrapped around the thought to have his products brought to the user at the beginning of the results page. He agrees that with Converge he has a chance to achieve this in front of a big and universal retailer.

He expressed significant interest in the monitoring of the matching of his VDIs. He was pleased to see that he can see what products were subscribed by clients and that he could get a statistic over this about the market. He also suggested notifying via email when a match is produced. He would also like to be notified via email about what products were subscribed but the notification should use criteria like: notification by category, by geographical zone, by product, or by season.

He would also like to be able to find the most used search criteria.

He demanded to have as many descriptors for searching as possible and he also expressed his worries about who builds and maintains such a huge ontology.

At least 3 interesting quotes from user answers:

- “This could be an add-on to Google. You could have a link in the corner that would say: <<Search by Convergence>>.”
- “It would result in a refined search engine.”
- “This is a very huge thing and a lot of work to do but it could be something very good at the end.”

IMPROVING CONVERGENCE:

Summary of user answers - where there were differences of opinion make these clear and give the

numbers who reply in different ways

- Include a ranking mechanism and a rating field
- Add a product wish list
- Add an attribute that identifies the availability of the product (in stock / not in stock / available on order)
- Add a notification mechanism for the retailer (using criteria also)
 - o should include data about subscriptions made by clients that didn't match his products – the most used search criteria
 - o should include data about search criteria used by costumers – the most searched products
- Standardize and include many criteria for searching (descriptors)
- Specify the “Promotion End Date” only for offers (because it doesn't make sense in other situations)

At least 3 interesting quotes from user answers:

- “If a client subscribes to a product that I have but another retailer also has it, who of us would be the first in the results list? You should add some kind of ranking to the system.”
- “I would like to be able to find out what and how the consumers search. This way I could improve my business changing the products that I have or their description.”
- “I would like the costumers to trust that the products I sell are genuine without the need to tell them to go and get the proof from the provider themselves, as this is the only way now. An authorization mechanism would help me a lot if this could get the clients to trust me.”

WRAPPING UP

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

From the point of view of a retailer the business would get better using Convergence, as long as he owns a small business. The biggest companies would lose because they wouldn't have the monopole anymore.

To make it work the engine should maintain a huge ontology with a lot of descriptors. This would make it possible for the costumer to search whatever he wants.

The system has a big advantage that it makes the search persistent, notifying the matches anytime. As an extension it should give the retailer as much feedback as it can: it should notify him about clients'

preferences and about searches in history.

The retailer said he would use the system and that he believes Convergence would help him improve his business.

At least 3 interesting quotes from user answers:

- "I'm sure that sites like Amazon will do their best to bring Convergence down."
- "Could this system tell me what the clients are searching for?"
- "I like it! If it would have all this functionalities it would help me a lot!"

5.4.5 "Smart Retailing" (WIPRO)

5.4.5.1 Observation - Summary Report on Trial

PARTNER:	WIPRO	DATE:	27.01.2011	NUMBER OF PARTICIPANTS:	10
PARTICIPANTS					
<i>Add any observation on the composition of the group you feel may be relevant</i>					
The group consisted of 7 Senior Retail Consultants from Wipro, simulating the role of Manufacturers and Retailers in CONVERGENCE. And 3 Project Engineers simulating the role of Customers.					
PROBLEMS ENCOUNTERED					
<i>Describe any technical or organizational problems you encountered during the trial</i>					
<ul style="list-style-type: none">- We had some network problems, that sometimes made the application run slower and resulted in some delays on the trial process					
OTHER					
<ul style="list-style-type: none">- None of the participants was familiar with the CONVERGENCE project, that resulted in some difficulties answering some of the questions in the questionnaires- One of the participants was very curious about CONVERGENCE security part and how it could make the users feel 100% safe about publish their VDIs in the cloud containing very					

important and confidential information

- Two of the participants were very interested in the structure of the VDI and how that structure was defined and assemble
- One of the participants referred that the publish/subscribe system of CONVERGENCE could only be successful having a common product ontology working behind it. If Manufacturers and Retailers used different product ontologies it would be a big problem
- One of the participants pointed out that the key factor for CONVERGENCE to prosper in the retail industry was to convince the major Manufacturers of consumer electronics that this will bring great advantages to them
- Some of the participants said that they would like to have CONVERGENCE apps as plugins inside their retail applications to help them in the data migration operations

5.4.5.2 Summary Report

PARTNER:	WIPRO	DATE:	27.01.2012	NUMBER OF PARTICIPANTS:	10
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CONVERGENCE APPLICATION N:1 :

Summary of user answers - where there were differences of opinion make these clear and give the numbers who reply in different ways

First using the web application for creating products VDIs, publishing and subscribe to them, all the participants stated that this is an essential factor of their business and also that the CONVERGENCE application is easier and faster when compared to the applications used by manufacturers and retailers nowadays. Nevertheless one of the participants affirmed that without a product ontology for the creation of products VDIs, the application is very limited in terms of reaching its full potential. Mainly because of the lack of standardization that occurs between manufacturers and retailers that could very well be solved by CONVERGENCE. One of the participants also said he really wanted to see how licenses and signatures would work in CONVERGENCE and inside the web application.

The publish tool of the application really kept the users attention. All of them asked questions about how this module of the application works: What happened to the product VDI after being published in the cloud? If everyone could access or get the VDI once it is published? If this could replace the products' catalogues that manufacturers use today?

For them this publish/subscribe module of CONVERGENCE can represent a big improvement for the retail industry. Mainly because how simple it will make the trade of products' information between manufacturers and retailers, speeding up all the process.

The majority part of the participants said they would like to have the possibility to edit their product VDIs after these have been created. And also besides seen the product information the VDI contains, they also would like to see a representation of the VDI structure in the web application, like an xml

viewer or something like that.

Another aspect of the web application that caught the participants' attention was the possibility to add an expiration date to the publications and subscriptions of product VDIs. Mostly related to the part when a retailer or a customer subscribes to a product and can decide for how long that subscription will wait for matches. The other thing they enhanced was this "future search" that is made every time a subscription is created, because you are not only searching for matches in that precise moment, but for all the matches that can occur with future publications. One of the participants even compared this functionality to a RSS feed that almost everyone uses nowadays in the internet.

Concerning the trial part involving the POS machine, all of the participants were very pleased to see CONVERGENCE integrated with our retail applications. In our opinion this was a very important part of the trials, of course it still is in an early stage regarding its full implementation, but beyond question it was very significant to prove that it was possible to incorporate CONVERGENCE in our business, i.e. with the core applications we work today. Also from the customer point of view the participants said it was a great asset for them to have a digital container with all the information about the product they just "bought".

At this stage one of the participants affirmed that all of this process (simulated in the trials), facilitated and automated with the help of CONVERGENCE implementation could result in retailers saving a lot of money in terms of the costs they spent today from the moment they create a product on their systems until the moment they sell that same product to a customer through a POS machine.

In the end the major part of the participants said they would recommend the use of CONVERGENCE to a colleague. But some of them said that first they wanted to see more about the project and its future developments in terms of functionalities, tools and applications. Because although they have been very enthusiastic about the whole idea, first they want to have a better sense of the project's full potential, essentially in all the advantages it can bring to the retail industry.

At least 3 interesting quotes from user answers:

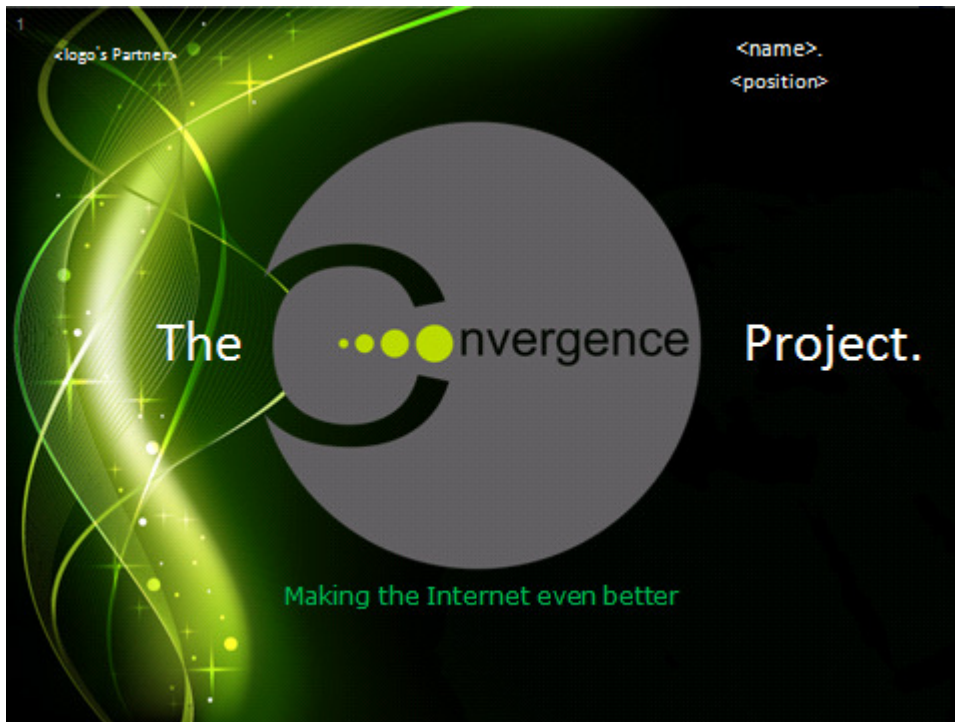
"The retail industry really needs to have a standardization in the product information shared between Manufacturers and Retailers"

"Why you don't use a product domain ontology in the creation of products VDIs?"

"As a customer I would start using CONVERGENCE immediately!"

"Can I define my own VDI structure?"

5.5 PowerPoint presentation of CONVERGENCE



CONVERGENCE and <name of company>

An EU-funded project to radically improve the internet

12 partners from six European countries

Goals

- Develop 'The CONVERGENCE system'
- Apply it in real-life business situations

<Name of company> will participate in trials

cnit

LMU

ALINARI

SATIRAN

1010.net

SingularLogic

ESCOM

UTI GROUP

FUTURE FORUM

WIPRO

INESPORTS

Xwrite

convergence

When the Internet Fails

Based on files with addresses on hosts

Very easy to find a file, much harder to find specific content

- Mr Smith's CV
- John Brown's song
- The spec sheet for your car

The page cannot be found

The page you are looking for might have been removed, had its name changed, or is temporarily unavailable.

Google

mr smith's cv

Time: 100-100 msec in 0.27 sec

Tutto

PHO content

Not Web

Pages in Italian

Pages in Italian

PHO content

Taylor Price v. Mr. Smith's Court Document from 105 - [Track search engine]

SHEPHERD OF GEORGETOWN & MR. SMITH'S MANAGEMENT COMPANY, INC. v. SMITH'S OF GEORGETOWN, Defendant Civil Case No. 20-04-01704-RMC ...

www.scribd.com / Taylor Price v. Mr. Smith v. Court Document from 10-5 - [Track search engine]

Amazing Mr. Smith - A to Z of comedians - [Track search engine]

The UK's largest collection of comedians biographies and photographs. more comedians to add please get in touch here. [Track search engine]

Mr. Smith - Accounting Curriculum Web - [Track search engine]

14 Oct 2010 - K. Smith Start Page Accounting, A&S Accounting, Work-Based Educational Center - SPA. Contact Mr. Smith - [Track search engine]

C. V. Starr & Co., Inc. - [Biographies] - [Track search engine]

Mr. Howard Smith is a Director and the Vice Chairman - Finance of C. V. Starr President, Mr. Smith was Vice Chairman and Chief Financial Officer of AIG ...

www.oxfordjournals.com/advance-article-abstract/doi/10.1093/oxfordjournals/oxfam.a0111111 - [Track search engine]

convergence

When the Internet Fails

Information on the web is just text

Easy to search for hotels in London. Much harder to search for hotels at a specific price
*Need to use proprietary services





When the Internet Fails



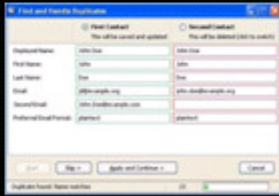

The same information is stored on many different sites and many different PCs

Impossible to keep in sync

Work in progress (project documents etc.)

Mr Smith's CV



My address book

When the Internet Fails

Once information is "out in the wild" it is there for ever

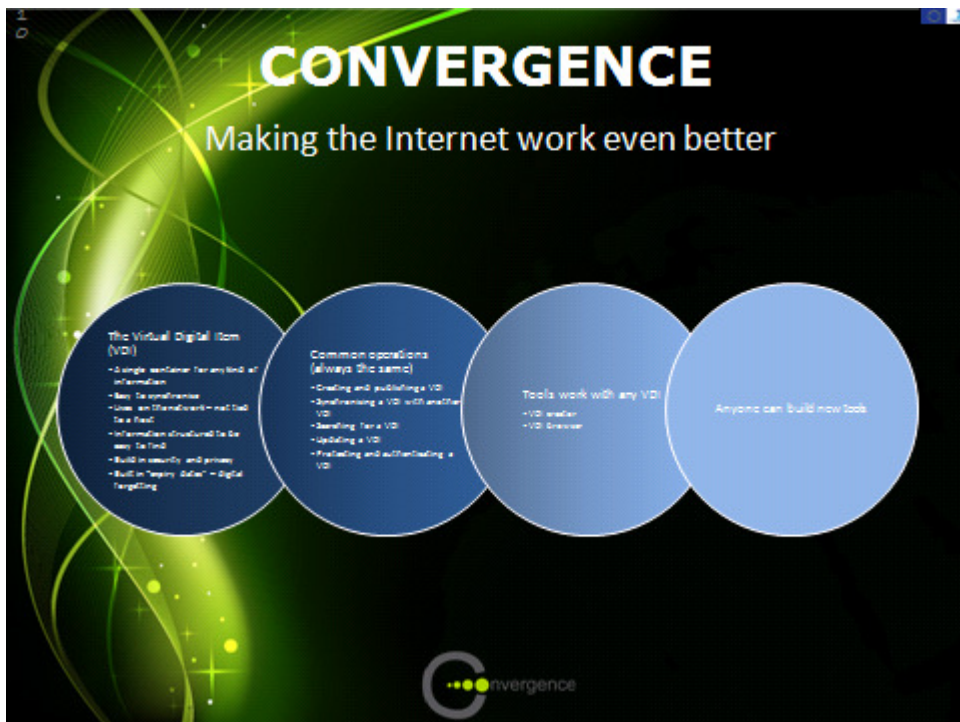
Impossible to delete information we would prefer people to forget...

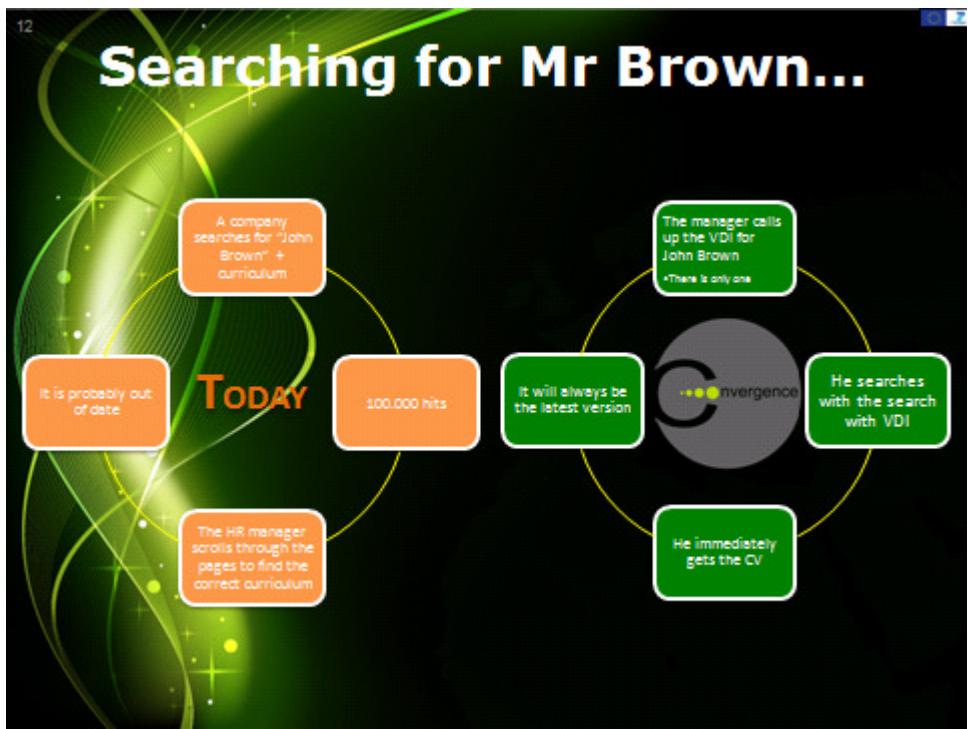
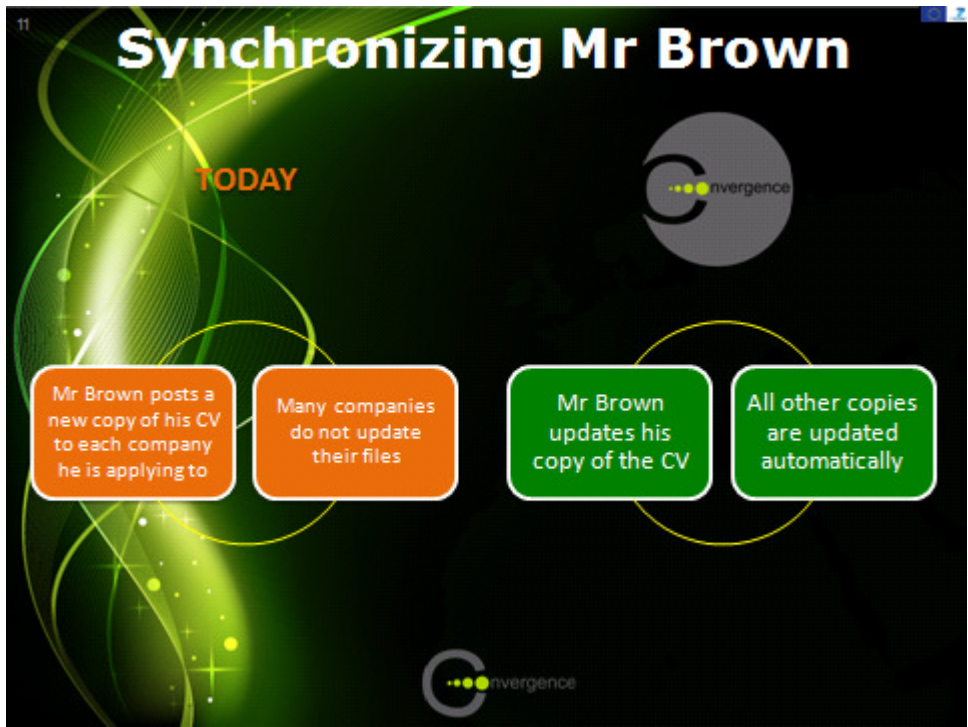



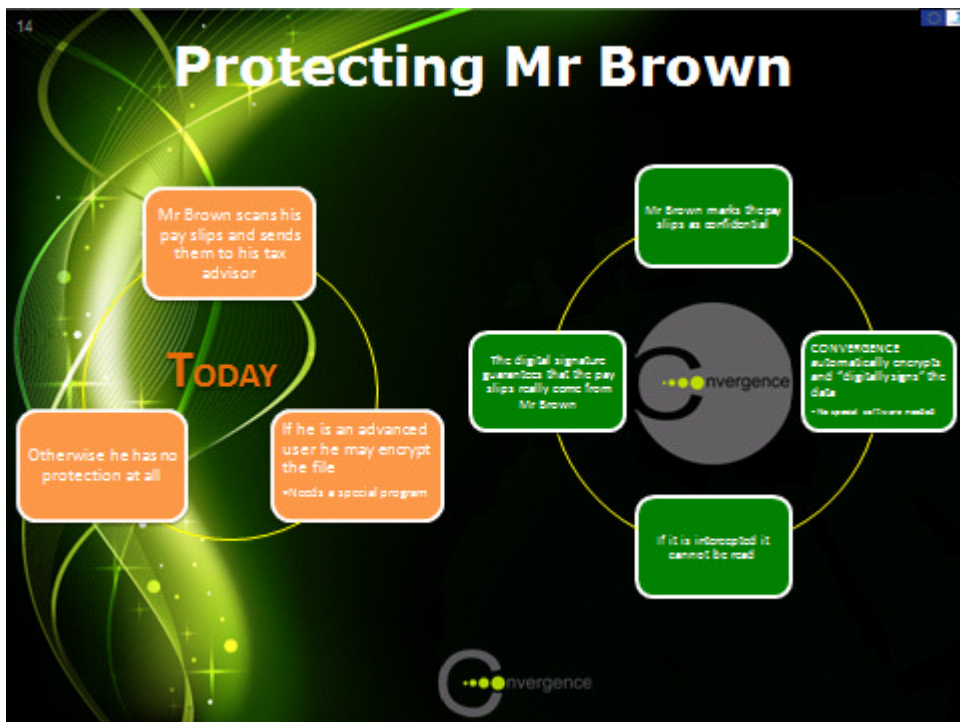
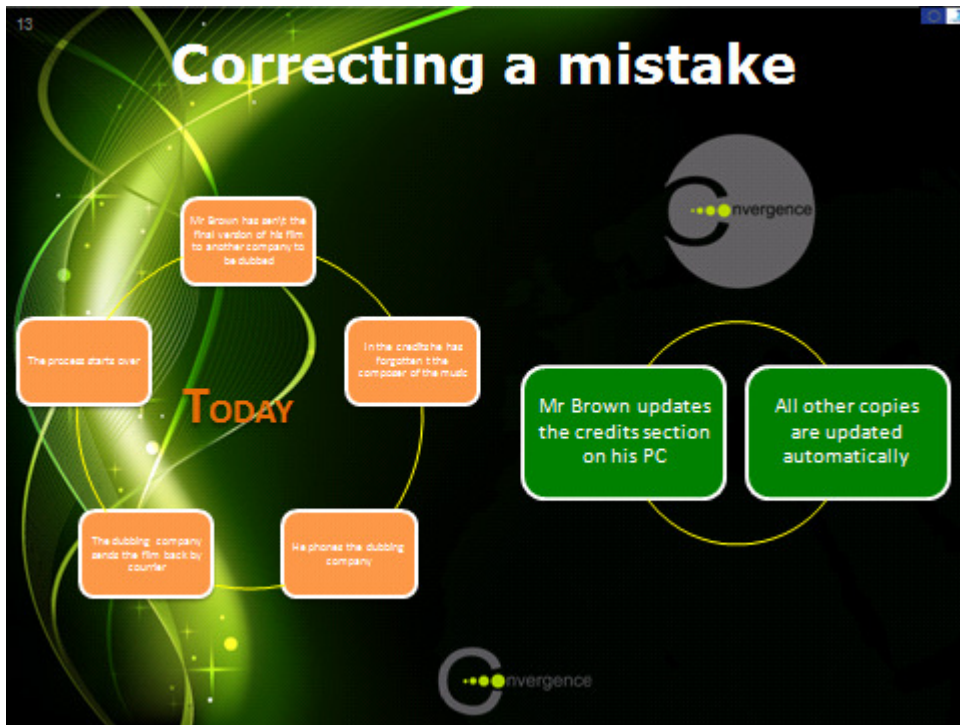
When the Internet Fails

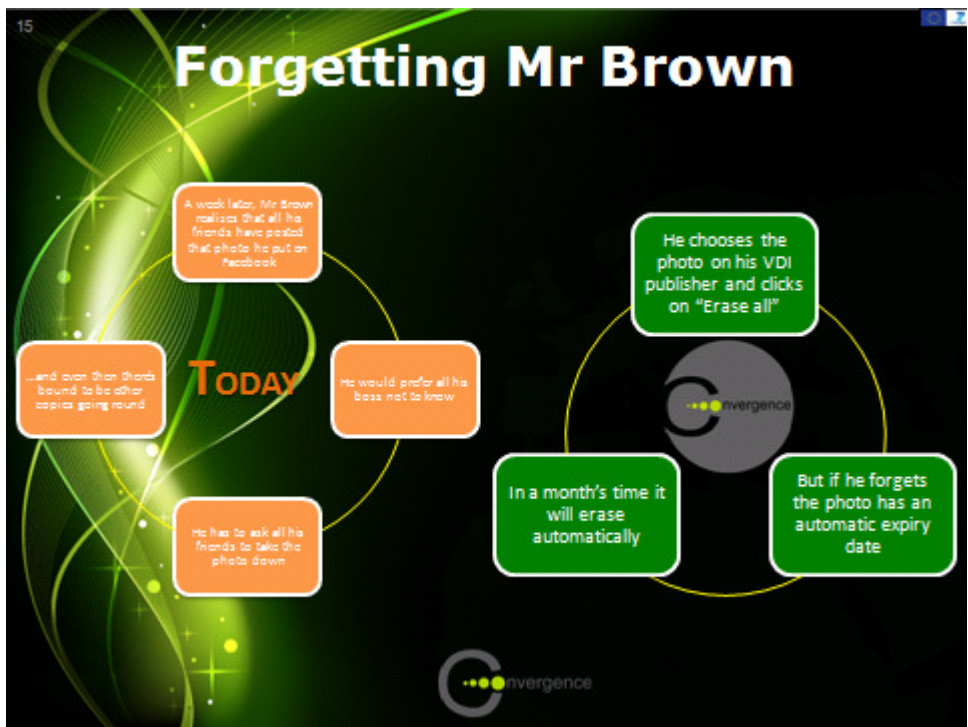
Impossible to know when a site is genuine









17

QUESTIONS?

Thank You

The  Convergence Project.

<Name>	→
<Partner>	→
Phone:	→
Fax:	→
e-mail:	→
www:	→