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EasyTV: Easing the access of Europeans with disabilities to converging media and content.

Report on Demographics for the Tests

EasyTV Project

H2020. ICT-19-2017 Media and content convergence. – IA Innovation action

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Disclaimer

The EasyTV Consortium consists of the following partners:

	Partner Name	Short name	Country
1	Universidad Politécnica de Madrid	UPM	ES
2	Engineering Ingegneria Informatica S.P.A.	ENG	IT
3	Centre for Research and Technology Hellas/Information Technologies Institute	CERTH	GR
4	Mediavoice SRL	MV	IT
5	Universitat Autònoma Barcelona	UAB	ES
6	Corporació Catalana de Mitjans Audiovisuals SA	CCMA	ES
7	ARX.NET SA	ARX	GR
8	Fundación Confederación Nacional Sordos España para la supresión de barreras de comunicación	FCNSE	ES
9	Sezione Provinciale di Roma dell'Unione Italiana dei ciechi e degli ipovedente	UICI	IT

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DEFINITIONS, ACRONYMS AND ABBREVIATIONS

ACRONYMS / ABBREVIATIONS	DESCRIPTION
CS	Companion Screen
DVB-SUB	Digital Video Broadcasting subtitles
GDPR	General Data Protection Regulation
GUI	Graphical User Interface
IR	Infrared
PC	Personal Computer
RGB	Red, Green, Blue
SUS	System Usability Scale
UIDLs	User Interface Definition Languages
UX	User interaction

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EXECUTIVE SUMMARY

This document is the first deliverable in WP6. It has been written by WP6 leader UAB, with the collaboration and the help of the other six technological partners from the project: MV, UPM, CERTH, ENG, ARX and CCMA.

Easy TV follows a user centred approach, which means users are consulted in many iterations through the duration of the project and in the many development stages. During the first phase of the project, for technical requirement drafting (WP1), users were defined according to persona and their requirement (D1.2). The main objective in this second stage is to profile to a higher degree of detail (D6.1) the users taking part in the tests. Each service being developed needs to be tested, with intended end users to assess its usability and to find out further requirements or possible improvements to be made. Services in EasyTV are designed as solutions to sensory impairments, so users with visual and hearing impairments are the intended population. EasyTV works within the framework of Universal Design, mainstreaming accessibility, hence other users without any functional diversity, such as elderly persons, immigrants and language students can also be considered as the intended population and take part in tests.

User profile for each test was decided following a bottom up approach. Each technology development partner was asked to define the services developed in relation to the intended user. Services were divided in six different groups of technologies: image technologies, audio narratives technologies, voice or speech technologies, gesture and gaze technologies, language technologies, and user interaction technologies. At the end of the document a table has been drafted summarising all the information contained in this report.

1. INTRODUCTION

This deliverable aims to provide demographic information which will be taken into consideration in tests that will be performed during the second phase of the project. Defining a sound profiling approach is crucial to achieve the project aims satisfactorily. Pilots in WP6 will allow testing and validation of WP2 to WP5 results (Figure 1) and further refine these requirements, functionalities and architecture in a second iteration of the EasyTV platform specification.

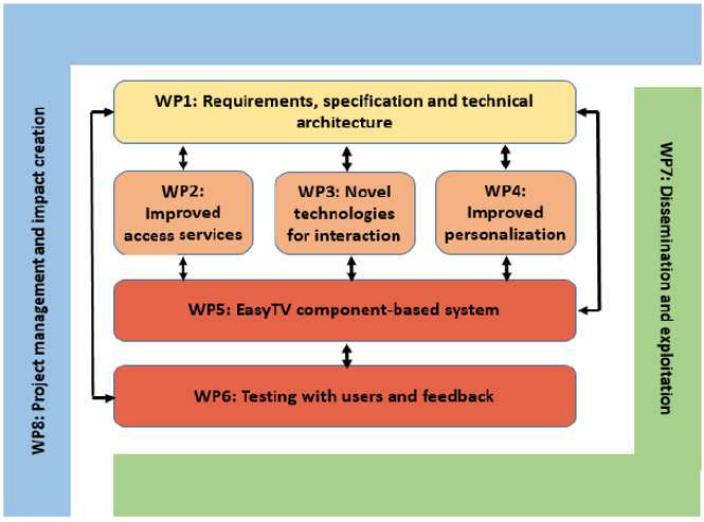

Figure 1. Work Package Dependencies

This deliverable is a report on the way user profiles will be defined to perform a series of tests and experiments the objective of which is assessing the usability[1] and quality of most services developed during the EasyTV project.

The methodology followed to draft this report has been technology oriented following a bottom up approach. This means technological partners (MV, UPM, CERTH, ENG, ARX and CCMA) were requested to define technologies to be tested along intended population.

The objective of the different demographics is to select the most suitable participants for each test, and the most suitable questionnaire, and prepare the project for the next tasks T6.2 and T6.3 scheduling the tests, and data gathering. To do that, all the partners involved in the development of any EasyTV service were asked about UX in the technologies involved, which aspect of those technologies they wanted to test and type of methodology, among other details. With the answers provided UAB drafted personalised demographic questions for each service.

Section 2 proposes five different questionnaires designed according to the services to be tested.

[1] According to Li & Looms (2016: 268-269) [3], “usability in the context of television is often associated with the attributes of the content itself: the intelligibility of the audio and the legibility of titles, on-screen text and subtitles”. Moreover, “[…] usability also applies to the television interface – how the viewer carries out the various TV viewing tasks effectively, efficiently and to his or her satisfaction”.

Section 3 is divided in subsections by services to be tested. The name of the EasyTV partner responsible for the development of that service is indicated in brackets. There is a description of each service and the testing methodology that the partners have proposed for that specific service. A brief explanation about the user profile best suited for that test (according to the indications provided by the partners) and a few notes about possible ethical and legal issues that may be considered when carrying out the experiments.

Conclusions has a summary table of all the services being tested by partners. Information about the methodology to be followed in each case, type of demographic questionnaire, possible languages and number of users and their profile along the ethical issues to be taken into account. As user models will include personal information (e.g. disabilities, etc.), data protection/privacy laws/guidelines (e.g. GDPR) must be taken into consideration. Informed consent documents will be adapted to users' profile i.e., they will be read aloud for the blind or visually impaired and signed either life or recorded in their mother tongue for the signing deaf. All the signed consent forms will be safely kept in custody by UAB.

Children will not be considered for the tests because the ethical requirements to be met in that case are stricter. Children were not included when UAB submitted all the documentation on the project's methodology and data gathering to UAB Ethical Commission for its authorisation.

This deliverable will be followed by a more detailed explanation of how each test will be developed, the testing itself —which will be carried out based on a calendar— and the results gathering (D6.2.2) in M27.

Finally, this deliverable sets the terminology to be used during the project. While in the past Deaf and hard of Hearing people, and Blind and Low Sighted people were used, as in the DoW a change of terminology is now adopted by UN were "people/person is written before the disability". Also impairment or disability carry negative connotations, and the formula "people/persons with x loss" is the preferred term.

To adopt these terms we have followed:

1. https://adata.org/factsheet/ADANN-writing

2. Recent change of name of Royal National Deaf Association to Action for Hearing Loss, where Deaf and Hard of Hearing are referred as "people with hearing loss"

https://www.actiononhearingloss.org.uk

3. Royal National Institute for the Blind also make reference to People with sight loss.

2. DEMOGRAPHIC QUESTIONNAIRES

Five different questionnaires have been prepared to gather demographics for all the services. A table has been created where all the questionnaires are gathered along services and partners in pages 37-40.

2.1 Questionnaire related to sight loss

1. What is your age?
2. Highest level of studies reached:
   - ☐ Lower than primary education
   - ☐ Primary education
   - ☐ Secondary education
   - ☐ Advanced vocational education
   - ☐ First cycle university education (diploma, degree or graduate studies)
   - ☐ Second cycle university education (master, postgraduate or doctoral studies)
   - ☐ Prefer not to tell
3. What is your occupation?
4. Which of these best describes your sight with glasses or contact lenses if you normally use them but without any low vision aid? Imagine you are in a room with good lighting and answer yes (Y), no (N) or uncertain (U) to each part, please. Can you see well enough to:
   - (Y/N/U) Tell by the light where the windows are?
   - (Y/N/U) See the shapes of the furniture in the room?
   - (Y/N/U) Recognise a friend across a road?
   - (Y/N/U) Recognise a friend across a room?
   - (Y/N/U) Recognise a friend if he or she is at arm's length?
   - (Y/N/U) Recognize a friend if you get close to his or her face?
   - (Y/N/U) Read a newspaper headline?
   - (Y/N/U) Read a large print book?
   - (Y/N/U) Read ordinary newspaper print?
   - ☐ Prefer not to tell
5. When did your impairment start?
6. Who do you live with?
   - ☐ Alone
   - ☐ With family
   - ☐ Other:
   - ☐ Prefer not to tell
7. In case you live with other people, do you sometimes need their help when using technology?
   - ☐ Yes
   - ☐ No
   - ☐ Prefer not to tell
8. Do you have an Internet connection at home?
   - ☐ Yes
   - ☐ No
   - ☐ Prefer not to tell
9. Do you own both a SmartTV with HbbTV and a tablet/smartphone?

- ☐ Yes
- ☐ No
- ☐ Other:
- ☐ Prefer not to tell

10. What type of content do you like to watch on TV (multiple options are possible)

- ☐ News programs
- ☐ Kids programs
- ☐ Sports programs
- ☐ Fiction (films and TV series)
- ☐ Entertainment programs (quiz shows, reality shows…)
- ☐ Documentaries
- ☐ Other:
- ☐ Prefer not to tell

11. Are you capable of holding a tablet/smartphone and using your hands to interact with the screen without any difficulty?

- ☐ Yes
- ☐ No
- ☐ Other:
- ☐ Prefer not to tell

12. Do you have previous experience with similar technology?

- ☐ Yes
- ☐ No
- ☐ Prefer not to tell

13. If so, with which technology?

14. If so, how often do you use it?

- ☐ Every day
- ☐ At least once a week
- ☐ At least once a month
- ☐ Other:
- ☐ Prefer not to tell

15. Is there anything you would like to add?

2.2 Questionnaire related to hearing loss

1. What is your age?

2. Highest level of studies reached:

- ☐ Lower than primary education
- ☐ Primary education
- ☐ Secondary education
- ☐ Advanced vocational education
- ☐ First cycle university education (diploma, degree or graduate studies)
- ☐ Second cycle university education (master, postgraduate or doctoral studies)
- ☐ Prefer not to tell

3. What is your occupation?

4. Are you…?

- ☐ Deaf
- ☐ Hard of Hearing

(If you know, please indicate your hearing level in decibels: _____)

- ☐ None of the above
- ☐ Prefer not to tell

5. When did your impairment start?

6. Who do you live with?

- ☐ Alone
- ☐ With family
- ☐ Other:
- ☐ Prefer not to tell

7. In case you live with other people, do you sometimes need their help when using technology?

- ☐ Yes
- ☐ No
- ☐ Prefer not to tell

8. Do you have an Internet connection at home?

- ☐ Yes
- ☐ No
- ☐ Prefer not to tell

9. Do you own a SmartTV with HbbTV and a tablet/smartphone?

- ☐ Yes
- ☐ No
- ☐ Other:
- ☐ Prefer not to tell

10. What type of content do you like to watch on TV (multiple options are possible)

- ☐ News programs
- ☐ Kids programs
- ☐ Sports programs
- ☐ Fiction (films and TV series)
- ☐ Entertainment programs (quiz shows, reality shows…)
- ☐ Documentaries
- ☐ Other:
- ☐ Prefer not to tell

11. Are you capable of holding a tablet/smartphone and using your hands to interact with the screen without any difficulty?

- ☐ Yes
- ☐ No
- ☐ Other:
- ☐ Prefer not to tell

12. Do you have previous experience with similar technology?

- ☐ Yes
- ☐ No
- ☐ Prefer not to tell

13. If so, with which technology?
14. If so, how often do you use it?
    - ☐ Every day
    - ☐ At least once a week
    - ☐ At least once a month
    - ☐ Other:
    - ☐ Prefer not to tell
15. Is there anything you would like to add?

2.3 Questionnaire related to expert users

1. What is your occupation?
2. Do you have previous experience with similar technology?
    - ☐ Yes
    - ☐ No
    - ☐ Prefer not to tell
3. If so, with which technology?
4. Have you ever assessed the qualitative or quantitative indicators of a text-to-speech technology? If so, please indicate which one?
5. Is there anything you would like to add?

2.4 Questionnaire related to Sign Language

1. What is your age?
2. Highest level of studies reached:
    - ☐ Lower than primary education
    - ☐ Primary education
    - ☐ Secondary education
    - ☐ Advanced vocational education
    - ☐ First cycle university education (diploma, degree or graduate studies)
    - ☐ Second cycle university education (master, postgraduate or doctoral studies)
    - ☐ I don't want to answer
3. What is your occupation?
4. How would you define yourself?
    - ☐ I'm a deaf sign language user
    - ☐ I'm a hard of hearing sign language user

    (If you know, please indicate your hearing level in decibels: _____)

    - ☐ I'm a hearing sign language user
    - ☐ Other (please, indicate):
    - ☐ Prefer not to tell
5. When did your impairment start?
6. Which sign language (or languages) do you know? How would you describe your proficiency level?

- ☐ Spanish Sign Language. ☐ Native speaker ☐ Other: _____
- ☐ Catalan Sign Language. ☐ Native speaker ☐ Other: _____
- ☐ Greek Sign Language. ☐ Native speaker ☐ Other: _____
- ☐ _____ ☐ Native speaker ☐ Other: _____
- ☐ _____ ☐ Native speaker ☐ Other: _____
- ☐ _____ ☐ Native speaker ☐ Other: _____
- ☐ Prefer not to tell

7. Do you have an Internet connection at home?
   - ☐ Yes
   - ☐ No
   - ☐ Prefer not to tell
8. Do you own any piece of equipment able to do motion capture analysis?
   - ☐ Yes
   - ☐ No
   - ☐ Prefer not to tell
9. If so, which one?
10. Do you have previous experience using motion capturing technology?
    - ☐ Yes
    - ☐ No
    - ☐ Prefer not to tell.
11. If so, which technology?
12. How often do you use it?
    - ☐ Every day
    - ☐ At least once a week
    - ☐ At least once a month
    - ☐ Other (please, indicate how often):
    - ☐ I don't want to answer
13. Is there anything else you would like to add?

2.5 Questionnaire related to Multilanguage

1. What is your age?
2. What is your nationality?
3. Highest level of studies reached:
   - ☐ Lower than primary education
   - ☐ Primary education
   - ☐ Secondary education
   - ☐ Advanced vocational education
   - ☐ First cycle university education (diploma, degree or graduate studies)
   - ☐ Second cycle university education (master, postgraduate or doctoral studies)
   - ☐ Prefer not to tell
4. What is your occupation?

5. Which of these best describes your sight with glasses or contact lenses if you normally use them but without any low vision aid? Imagine you are in a room with good lighting and answer yes (Y), no (N) or uncertain (U) to each part, please. Can you see well enough to:

(Y/N/U) Tell by the light where the windows are?
(Y/N/U) See the shapes of the furniture in the room?
(Y/N/U) Recognise a friend across a road?
(Y/N/U) Recognise a friend across a room?
(Y/N/U) Recognise a friend if he or she is at arm's length?
(Y/N/U) Recognize a friend if you get close to his or her face?
(Y/N/U) Read a newspaper headline?
(Y/N/U) Read a large print book?
(Y/N/U) Read ordinary newspaper print?

- ☐ Prefer not to tell

6. Are you…?

- ☐ Deaf
- ☐ Hard of Hearing

(If you know, please indicate your hearing level in decibels: _____)

- ☐ None of the above
- ☐ Prefer not to tell

7. When did your impairment start?

8. Are you a native speaker of the local languages?

- ☐ Yes
- ☐ No
- ☐ Prefer not to tell

9. If not, how would you describe your language proficiency?

- ☐ Beginner (CEFR level A1)
- ☐ Basic or elementary (CEFR level A2)
- ☐ Intermediate (CEFR level B1)
- ☐ Upper-intermediate (CEFR level B2)
- ☐ Advanced (CEFR level C1 or higher)
- ☐ I don't know
- ☐ Prefer not to tell

10. Who do you live with?

- ☐ Alone
- ☐ With family
- ☐ Other:
- ☐ Prefer not to tell

11. In case you live with other people, do you sometimes need their help when using technology?

- ☐ Yes
- ☐ No
- ☐ Prefer not to tell

12. Do you have an Internet connection at home?

- ☐ Yes
- ☐ No

- ☐ Prefer not to tell

13. Do you own a SmartTV with HbbTV and a tablet/smartphone?
    - ☐ Yes
    - ☐ No
    - ☐ Other:
    - ☐ Prefer not to tell
14. Do you have previous experience with similar technology?
    - ☐ Yes
    - ☐ No
    - ☐ Prefer not to tell
15. If so, with which technology?
16. If so, how often do you use it?
    - ☐ Every day
    - ☐ At least once a week
    - ☐ At least once a month
    - ☐ Other:
    - ☐ Prefer not to tell
17. Is there anything you would like to add?

3. INFORMATION FOR THE TESTING PHASE

This section has been organised by the technologies developed in the EasyTV project. Information related to the services provided by these technologies, the testing methodology to be followed, the user profile, and number of users are included. All these details are essential for the partners to carry out the tests satisfactorily and to gather relevant data to elaborate feedback and improvements to the technical activities of the project.

Related to issues such as number of users and languages to be used, they will be defined in the next iteration. Still, Table 1 shows some basic numbers which will be applied:

Table 1. Basic data regarding the methodology that will be applied in EasyTV

Type Intervention	Format	Number Users	Methodology	Ethical requirements
Interviews	Face to face	1	Qualitative	Yes
Focus groups	Face to face	>5	Qualitative	Yes
Questionnaires	Face to face/online	>20	Quantitative	Yes

3.1 Image technologies

3.1.1 Service 1: Image magnification (UPM)

Description

This service allows three actions: (a) screen zooming, by which the user is capable of selecting a specific area to be enlarged; (b) face zooming, by which the system, based on an automated face detection algorithm, is capable of enlarging the area where a face is detected; and (c) text detection, which allows the text in the video to be detected and converted to a subtitle (or audio subtitle).

Test methodology

Towards UX testing a bespoke SUS questionnaire will be administered either through individual face-to-face or online interviews.

Criteria for user profiling

End users with various degrees of visual impairment are required to carry out the tests, which focus on the usability of the technology for UX. Since elderly people can also benefit from this service, it can also be tested with elderly people with visual impairments.

The end user has to operate the Companion Screen (CS) and select the area to be magnified, so it is important to know the level of familiarity with these devices in order to detect if the problems in the interaction are related to the application usability or to the user. Therefore, previous knowledge of similar technologies is important.

It would be interesting to know living conditions and degree of personal autonomy. If the user lives alone or with other people that could help at some point would have any kind of implication. Other variables that can affect user interaction to access this service is the user educational level and their preferences regarding the type of TV content.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally to the users participating in the test.

3.1.2 Service 2: Image adaptation (UPM)

Description

The user is capable of changing the subtitle parameters such as colour, font and size in order to increase their readability, as well as some parameters from the sign language video that is shown together with the content, such as position and size. The graphical aspect of the second screen application to access EasyTV services is prepared to be customizable too.

Test methodology

Towards UX testing a bespoke SUS questionnaire will be administered through either individual face-to-face or online interviews

Criteria for user profiling

End users with various degrees of visual or hearing impairment are required to carry out the tests, which focus on the usability of the technology for UX. Since elderly people can also benefit from this service, it can also be tested with elderly people with visual or hearing impairments.

The end user has to operate the Companion Screen (CS) so it is important to know the level of familiarity of these devices in order to detect if the problems in the interaction are related to the application's usability or to users performance. Therefore, previous knowledge of similar technologies is important.

It would be interesting to know if the fact that the user lives alone or with other people that could help at some point would have any kind of implication. Other variables that can affect user interaction to access this service are the user's educational level and their preferences regarding the type of TV content.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally, if necessary, to the users participating in the test.

3.1.3 Service 3: Converting image subtitles into text by means of an existing OCR technology (MV)

Description

Conversions of subtitles in graphic format (e.g. DVB-SUB bitmaps) into text by means of an existing OCR system.

Previous user interaction with similar technologies is not very important. The service is very intuitive and easy to use so everybody should be able to use it without any help.

Test methodology

First, focus? groups will be organised to explain and inform users. Then, users will interact individually with the system. Finally, users will fill in an online speech interface-voice enabled SUS questionnaire to gather usability information.

This test will be executed with users that interact with the speech application on a second screen. Also, a questionnaire will be submitted to gather more specific information.

Criteria for user profiling

Expert and end users with various degrees of visual loss will be required. Elderly users can also benefit from this service. The age of users can be an item relevant to be asked so that the different behaviours of users during executions of the tasks can be tested.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally to the users participating in the test.

3.1.4 Service 4: Adaptive menus and graphical interface using models (CERTH)

Description

This service concerns hyper-personalisation and adaptation of user interfaces based on user models that will be used for the definition of user needs and preferences, including also the disabilities and functional limitations of the user. Automatic turn on and configuration of accessibility features that are built into different TV operating systems, applications and embedded devices will be supported. The use of well-known UIDLs like UsiXML, which will enable the formal and standardised description of user interfaces, will be also considered.

Another variable to be considered for the test is contextual information (e.g. environmental conditions like luminance, environmental sounds, adjustments supported by each smart TV, etc.) as, for instance, a user may denote in the user model that (s)he wants the volume of the TV to be adjusted at 35%, but in cases where there is a lot of environmental noise, the volume level has to be higher than 35% in order for the user to be able to hear the provided content.

Test methodology

Towards UX testing a bespoke SUS questionnaire will be administered through individual online questionnaires. The data to be gathered concern mainly the following user characteristics: needs, preferences, disabilities and functional limitations. A web-based tool that will enable the easy creation and editing of EasyTV user models through intuitive web forms will be implemented for this purpose.

Criteria for user profiling

The user profile for this test is both expert and end users of different ages with visual or hearing loss. Although it could be probably easier for an elderly living with young relatives to access the service, this should not be a prerequisite.

Depending on the user interface to be adapted, basic user interaction may be needed. Although it shouldn't be a prerequisite, previous user experience in adjusting various TV settings could be useful. It is expected that people with previous knowledge of similar technologies will be able to interact with this service in a more intuitive manner.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally, when necessary, to the users participating in the test.

3.1.5 Service 5: Accessible Graphical Interface HbbTV (CCMA)

Description

The new accessible graphical interface will ease the access to HbbTV services not only for people with visual impairments, but also for foreign language users which want to consume contents.

Test methodology

Focus groups with at least six people, three persons with visual loss and three users without any sensory impairment will take part in the tests. Towards UX testing a bespoke SUS questionnaire will be administered individually through face-to-face interviews.

Criteria for user profiling

The tests will be aimed at end users from all ages (young, adult and elderly) to study the different behaviours and reactions according to the acquired technological knowledge. The interface is not only helpful to the functionally diverse, but also to speakers of foreign languages who want to consume contents in the local languages.

What needs to be tested is basic user interaction e.g., searching one soap opera episode or a night news programme from three days ago, play content and activate or deactivate different accessibility services.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally, when necessary, to the users participating in the test.

3.1.6 Service 6: Subtitles customization on HbbTV (CCMA)

Description

The user is capable of customize the subtitle parameters such as colour, font and size in order to increase their readability on HbbTV 2.0.1 SmartTV.

Test methodology

Focus group with at least six people: four with visual loss or hearing loss and two users without any kind of sensory impairment will take part in the tests. Towards UX testing a bespoke SUS questionnaire will be administered individually through face-to-face interviews.

Criteria for user profiling

The tests will be aimed at end users from all ages (young, adult and elderly) to study the different behaviours and reactions according to the acquired technological knowledge.

Basic user interaction e.g., changing the subtitles for a better reading or changing the subtitle colour for the colour blind will be tested.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally, when needed, to the users participating in the test.

3.2 Automated audio narratives

Automated audio narratives will share the same demographic questionnaire.

3.2.1 Service 1: Automated audio narratives (UPM)

Description

The system will be capable of providing additional information about a content by analysing the related information (such as metadata, etc.) and including the processing of textual information inside the content.

Test methodology

Towards UX testing a bespoke SUS questionnaire will be administered individually through face-to-face interviews.

Criteria for user profiling

End users with various degrees of visual impairment are required to carry out the tests, which focus on the usability of the technology. Elderly people can also benefit from this service.

The end user has to operate the CS, so it is important to know the level of interaction of these devices in order to detect if the problems in the interaction are related to the application's usability or to user capability. Therefore, previous knowledge of similar technologies is important.

It would be interesting to know if the fact that the user lives alone or with other people that could help at some point would have any kind of implication. Other variables that can affect user interaction to access this service are the user's educational level and their preferences regarding the type of TV content.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally to the users participating in the test.

3.3 Voice/Speech technologies

3.3.1 Service 1: Clean Audio (UPM)

Description

The user is capable of selecting different audio tracks which will represent the voices and the background sound. Moreover, it will be also possible to control the volume of each track individually (i.e., the content audio and the audio guide). Finally, the system will produce different audio equalizations in order to increase their intelligibility.

Test methodology

Towards UX testing a bespoke SUS questionnaire will be administered individually through face-to-face interviews

Criteria for user profiling

End users with various degrees of hearing impairments are required to carry out the tests, which focus on the usability of the technology. Elderly people can also benefit from this service.

The end user has to operate the CS so it is important to know the level of operation of these devices in order to detect if the problems in the interaction are related to the application's usability or to user capability. Previous knowledge of similar technologies is important.

It would be interesting to know if the fact that the user lives alone or with other people that could help at some point would have any kind of implication. Other variables that can affect user interaction to access this service are the user's educational level and their preferences regarding the type of TV content.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered to the users participating in the test.

3.3.2 Service 2: Converting text format subtitles into speech audio format (MV)

Description

This service consists of conversion from text format subtitles (e.g., EBU-TT-D) in speech audio format using Text2Speech engines in various languages.

Test methodology

Both a quantitative and a qualitative approach to the data gathering methodology will be taken. Data gathering methodology will be based on logging results of translated subtitle files. Users will be required to interact individually with the system and then to fill in a bespoke SUS questionnaire.

Criteria for user profiling

Only expert users are required to carry out the tests. Whether they have an impairment or not is not

relevant. Their age is not important either, what matters is their level of expertise in terms of evaluation of qualitative and quantitative indicators.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered to the users participating in the test.

3.3.3 Service 3: Speech recognition remote control (MV)

Description

The speech platform is the component that will be used by blind and visually impaired users to interact with EasyTV content and services. The interaction can be done using a special voice enabled remote control (equipped with a microphone and a Push-To-Talk button) or directly using audio microphone and speakers available on the client device. The remote control will communicate with the client device through a Radio Frequency connection that allows the user to control the EasyTV applications remotely, even from a different room.

Test methodology

Both a qualitative and a quantitative approach for data gathering will be taken. Notes will be taken during user sessions and logging data from the speech platform for quantitative indicators will be compiled.

Users will be gathered in groups to inform them. Then, they will interact individually with the system (they will be asked to execute specific tasks) and will have to fill in individually an online bespoke SUS questionnaire to gauge usability information.

Criteria for user profiling

Both expert and end users will be required for the testing phase. They need to be with visual loss. Elderly people and people that are not used to interact with new technologies and devices can also benefit from this service. Knowing the age of the users is very important in order to test their different behaviours during the execution of specific tasks. It is not necessary to know who users live with because the interaction should be easy enough for everybody to carry it out on their own.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally to the users participating in the test.

3.4 Gesture and gaze technologies

3.4.1 Service 1: Gesture and gaze recognition remote control (CERTH)

Description

This service concerns the delivery of automatic gesture and gaze recognition that will be integrated in the universal accessible remote control and allow the disabled to control the TV.

Test methodology

Both a quantitative and a qualitative approach for data gathering will be taken. Quantitative data will be gathered using gesture recognition databases (image acquisition via RGB & depth sensor).

Towards UX testing a bespoke SUS questionnaire will be administered in individual face-to-face interviews

Criteria for user profiling

For this test, both expert and end users with visual or hearing impairment from different ages are needed. It will be important to test the interaction of older users, as younger ones might already have some experience with similar technologies (Nintendo Wii, Xbox Kinect, etc.). Although previous experience with this kind of interaction can help the user, knowledge of similar technologies shouldn't be necessary.

It could be interesting to know who do the elderly users live with, as an elderly user living with young relatives could receive help from them. Other variables to consider during the tests are room lighting conditions and distance between the users and the sensors.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally, when necessary, to the users participating in the test.

3.5 Language Technologies

3.5.1 Service 1: Sign language capturing technology (CERTH)

Description

This service consists of an accurate hand, facial, and body capturing technology that when delivered to remote users enables the creation of the EasyTV crowdsourced sign language platform and repository.

Test methodology

Both a qualitative and a quantitative approach will be taken for data gathering. On the one hand, towards UX testing a bespoke SUS questionnaire will be administered individually through face-to-face interviews with a range of 2 to 10 users. On the other hand, quantitative data will be gathered using image acquisition via RGB & depth sensor by comparing the detected key points to "ground truth" key points created using 3D animation software.

Criteria for user profiling

For this test, expert signing users provided by sign language organizations from ages comprised between 18 and 60 will be needed. A technical expert (e.g. IT support) from those organizations can help with the technical details of the capturing process.

The technology requires user interaction based on human motion analysis, familiarization with such technology can help the user interact with it. Also, basic knowledge of motion capturing procedures is necessary for the technician and experts responsible of conducting the experiments.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered to the users participating in the test.

3.5.2 Service 2: Sign language 3D avatar (CERTH)

Description

This service will animate signer avatars focusing on realism in order to increase sign comprehension and offer an increased experience. A holistic approach to sign language animation will be followed through the joint animation of both face and hand motions and their embedding into graph topologies. This service will receive the animation data through broadband and animate a synthetic avatar that will be rendered on top of the broadcast delivered content.

Test methodology

Both a qualitative (e.g. general comments, impressions by users, etc.) and quantitative (e.g. number of signs correctly identified by users, number of errors, etc.) approach will be taken. One the one hand, towards UX testing a bespoke SUS questionnaire will be administered individually through face-to-face interviews to be completed.

Criteria for user profiling

The users for this test are going to be signing end users whose age is not important. The end user is a passive receiver of the signs provided by the avatar, so previous experience with this kind of technology is not necessary.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered in sign language to the users participating in the test.

3.5.3 Service 3: Multilingual sign language interpretation in a crowdsourcing platform (CERTH)

Description

This service consists of a crowdsourcing platform that enables multilingual sign language translations by creating a repository of 1-to-1 mappings between the signs recorded and captured, the text corresponding to the signing, and the concepts in the multilingual ontology.

This test will require basic user interaction in a crowdsourcing environment, and the equipment needed is a standard PC with internet connection.

Test methodology

Towards UX testing a bespoke SUS questionnaire will be administered individually through face-to-face interviews

Criteria for user profiling

The users needed in this test are signing users who are experts in crowdsourcing technologies, as knowledge of this working procedure is essential to carry out the test. The age of the user is not relevant as long as they meet the previous requirement.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered to the users participating in the test.

3.5.4 Service 4: Multilanguage subtitle production/translation (CCMA)

Description

EasyTV tool for the automatic translation and human assisted production of multilanguage subtitles.

Multilanguage subtitling service will allow generate subtitles in different languages bringing access into the contents consumption to those people that do not understand its spoken language, regardless of whether they have any kind of sensory loss. This feature will enable the engagement of an audience who normally do not understand the original language of the contents and will also allow promotional actions targeted to integrate immigrants through information technologies.

Test methodology

Towards UX testing a bespoke SUS questionnaire will be administered individually through face-to-face interviews to three professional (expert users) and three non-professional users (end users).

Criteria for user profiling

In this test both expert and end users are needed. Users should be adults with more than eight years of education. Expert users (professional subtitlers) will interact with the subtitle production tools and end users will test the reception of multilanguage subtitles.

User interaction with the tool while working in subtitle translation needs to be tested. Therefore, user experience with similar technologies is important. The tool will be accessible through GUI.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered to the users participating in the test. If necessary, it will be delivered in the user's sign language.

3.5.5 Service 5: Multilanguage subtitle production in a crowdsourcing platform (CERTH)

Description

Crowdsourcing platform will allow professional users and volunteers to log into the EasyTV platform and to input their profile. Every user will have access to different job tasks depending on his/her profile. Therefore, a professional subtitler will see a list of 'subtitling pending jobs', but will not see 'sign language jobs'.

The crowdsourcing platform is a ramp to direct users to different environments or working tools.

This test will require basic user interaction in a crowdsourcing environment, and the equipment needed is a standard PC with internet connection. The tool will be accessible through GUI.

Test methodology

Towards UX testing a bespoke SUS questionnaire will be administered individually face-to-face interviews to three professional and three non-professional users to gather their feedback about usability.

Criteria for user profiling

In this test expert users will be needed. The users should be adults with the required level of studies. Expert users will interact with the subtitling crowdsourcing platform. Knowledge or experience with this kind of working environments is necessary.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered to the users participating in the test.

3.6 User interaction technologies

3.6.1 Service 1: EasyTV catalogue for the user to choose the EasyTV services (ENG)

Description

The Easy TV catalogue will collect the EasyTV services that the end users will be able to choose when using the EasyTV multi terminal platform.

The catalogue will offer users the available services that can be searched and filtered according to their characteristics. The services will be described with reference sheets to allow users to identify those that meet their needs.

Test methodology

Both a qualitative and quantitative approach for data gathering will be taken. The data to be gathered concern mainly the efficiency, effectiveness and satisfaction of the user experience proposed by the EasyTV catalogue. Some data are based on facts and are treated as quantitative (count of tasks completed successfully, count of errors committed by user during task performance, time spent to complete each task, etc.), whereas the qualitative will depend more on the user's opinion and will be gathered through a SUS questionnaire with Likert scales rating the user's perception of the usefulness, effectiveness and efficiency of the service.

The test protocol will take place according to two different phases: the pre-test phase and the test phase. During the pre-test phase use cases to be proposed as tasks for the usability test and technical preparation of the test environment will be defined.

The individual test sessions will be managed as follows. First, the interviewer / moderator will introduce the purpose of the test and will collect personal data (computer skills, custom of use, modalities of use of the current services, etc.) from the users through a structured questionnaire. Second, (s)he will record users' feedback during the first impact analysis of the project (verification of the recognizability of the basic elements such as identity and purpose of the system, its general organization, etc.). Third, the test will proceed with the execution of the planned tasks. For each task, the moderator will propose the purpose to be satisfied and (s)he will record in video how the task is completed. Finally, the session will end with the debriefing where the researcher will administrate a semi-structured interview in which the user will be able to comment on his/her user experience and provide an overall review on the site.

During the whole test activity, the user will be stimulated to operate according to the think aloud protocol, in order to allow the recording of his/her reasonings and his/her expressions throughout the session.

Criteria for user profiling

End users with various degrees of visual or hearing loss are needed to carry out the test. These two different users' profiles are the ones that can benefit the most from this service. The age of the users can be an interesting parameter, especially if used to involve people not belonging to the group of digital natives. Therefore, users involved should be over 20 years old.

User interaction with EasyTV catalogue will require only a basic knowledge on the use of standard interfaces for scrolling lists, selecting options and consulting information cards. The interaction

system will be simple enough to allow anyone to use it on their own, without any further help. However, users should not only be familiar with the interactive catalogues offered by the various marketplaces on the web, but also will need to be familiar with the EasyTV platform in order to understand the content of the descriptions of the services offered. Actually, the variable that can determine the effectiveness of user interaction is the knowledge of the platform and its characteristics. This is why the services that will be proposed by EasyTV catalogue are grafted onto the EasyTV multi terminal technical platform.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally, when necessary, to the users participating in the test. It will also be delivered in sign language if signing users take part in the tests.

3.6.2 Service 2: Device interoperability (ARX)

Description

The users will be able to address the interoperability between devices within their home environment using an Android smartphone device. This service provides accessibility features that will assist people with sight loss to access this functionality.

User interaction is needed to test the technology.

Test methodology

A qualitative approach based on focus groups with at least five people will be taken.

Criteria for user profiling

The user profile is a blind or visually impaired end user of any age, although other users may benefit from the technology. It would be interesting to know who does the user live with and how that affects his/her experience.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered orally to the users participating in the test.

3.6.3 Service 3: EasyTV development kit (ARX)

Description

The EasyTV Service Development Kit (SDK) provides a set of tools, libraries, repositories and catalogues that allows third party developers to integrate the EasyTV services into their own products or develop new services and integrate them into the EasyTV platform.

The equipment needed for this test is a standard computer with Android studio. This software is provided by Google for free, so the cost to carry out the test is only that of the PC.

Test methodology

A qualitative approach based on focus groups with at least five people will be taken.

Criteria for user profiling

The user profile for this test is an expert user of any age with experience using similar development

kits. Users don't need to be impaired, but they need to have some knowledge of Android studio or the respective technologies related with the part of the SDK they intend to use.

Ethical and legal issues to consider

An informed consent form for both data and image protection will be delivered to the users participating in the test.

4. CONCLUSIONS

For this project a user centric approach is used across tasks. To gather demographics for tests this approach has been used departing from services and technologies developed in the project. This report gathers the questionnaires that will be used to test technologies and services, along the testing requirements from the technologies and services.

Table 2 summarises all the information about the technologies to be tested, users' profile, data gathering approach and methodology, number of users needed and ethical issues to be taken into account in each case.

Table 2 Summary of the technologies to be tested

Partner	Service	Demographic questionnaire no	Type of intervention	User profile	Ethical issues
UPM	Image magnification: Screen zooming Face zooming Text detection	2.1	Individual face-to-face & interviews	Persons with visual loss	Informed consent form (data & image) delivered orally
	Image adaptation	2.1/2.2.	Individual face-to-face interviews	Persons with hearing or visual loss Elderly	Informed consent form (data & image) delivered orally or in SL when necessary
	Automated audio narratives	2.1	Individual face-to-face interviews	Persons with visual loss Elderly	Informed consent form (data & image) delivered orally
	Clean audio	2.2	Individual face-to-face interviews	Persons with hearing loss Elderly	Informed consent form (data & image) delivered in SL when necessary

MV	Converting image subtitles into text by means of an existing OCR technology	2.1 + 2.3	Individual online questionnaires	Persons with visual loss Elderly Expert user	Informed consent form (data & image) delivered orally
	Converting text format subtitles into speech audioformat	2.3	Individual face-to-face questionnaires	Expert users	Informed consent form (data & image)
	Speech recognition remote control	2.1 + 2.3	Individual online questionnaires	Persons with visual loss Expert users Elderly	Informed consent form (data & image) delivered orally
CERTH	Sign language 3D avatar	2.4	Individual face-to-face interviews	Signing end users in 5 languages	Informed consent form (data & image) delivered in SL when necessary
	Sign language capturing technology	2.3	Individual face-to-face interviews	Signing expert users in 5 languages Technical expert	Informed consent form (data & image) delivered in SL when necessary

	Adaptive menus and graphic interface using models	2.1/2.2 + 2.3	Individual face-to-face interviews	Persons with hearing or visual loss Expert users	Informed consent form (data & image) delivered orally or in SL when necessary
	Multilingual crowdsourcing sign language platform	2.3	Individual face-to-face interviews	Signing expert users in 5 languages 1 moderator at least	Informed consent form (data & image) delivered in SL when necessary
	Gesture and gaze recognition remote control	2.1/2.2	Individual face-to-face interviews	Persons with hearing or visual loss	Informed consent form (data & image) delivered orally or in SL when necessary
ENG	EasyTV catalogue for end users to choose the services	2.1/2.2	Individual face-to-face interviews Think aloud protocol	Persons with hearing or visual loss	Informed consent form (data & image) delivered orally or in SL when necessary
CCMA	Accessible Graphical Interface HbbTV	2.1	Focus group Individual face-to-face interviews	Persons visual loss and persons with no impairment	Informed consent form (data & image) delivered orally or in SL when necessary

	Subtitles customization	2.1 + 2.2	Focus group Individual face-to-face interviews	Persons (hearing impaired + colour blind)	Informed consent form (data & image) delivered orally or in SL when necessary
	Multilanguage Subtitle Production/Translation	2.3 + 2.5	Individual face-to-face interviews	End users Expert users	Informed consent form (data & image)
	Multilanguage subtitle production in a crowdsourcing platform	2.3 + 2.5	Individual face-to-face interviews	End users Expert users	Informed consent form (data & image)
ARX	Device interoperativility	2.1	Focus group	Persons with visual loss	Informed consent form (data & image) delivered orally
	EasyTV Service development kit	2.3	Focus group	Expert users	Informed consent form (data & image)

5. REFERENCES

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6. APPENDICES

System Usability Scale (SUS Questionnaire) [6]

1. I think that I would like to use this system frequently

Strongly disagree				Strongly agree
1	2	3	4	5

2. I found the system unnecessarily complex

Strongly disagree				Strongly agree
1	2	3	4	5

3. I thought the system was easy to use

Strongly disagree				Strongly agree
1	2	3	4	5

4. I think that I would need the support of a technical person to be able to use this system

Strongly disagree				Strongly agree
1	2	3	4	5

5. I found the various functions in this system were well integrated

Strongly disagree				Strongly agree
1	2	3	4	5

6. I thought there was too much inconsistency in this system

Strongly disagree				Strongly agree
1	2	3	4	5

7. I would imagine that most people would learn to use this system very quickly

Strongly disagree				Strongly agree
1	2	3	4	5

8. I found the system very cumbersome to use

Strongly disagree				Strongly agree
1	2	3	4	5

9. I felt very confident using the system

Strongly disagree				Strongly agree
1	2	3	4	5

10. I needed to learn a lot of things before I could get going with this system

Strongly disagree				Strongly agree
1	2	3	4	5

Data gathering methods

In the following section, the characteristics of the two main data gathering methods used in the EasyTV project are presented, based on Fàbregues et al. (2016) [2] and Saldanha and o'Brien (2013) [5]. This way, partners can choose the method that better adapts to their objectives in the testing phase (see table 3).

Table 3. Data gathering methods

	Questionnaire	Interview
Approach	Mainly quantitative	Qualitative
Modality	Usually written (oral in some specific cases, such as with blind users)	Oral (sent by email is also possible in the case of structured interviews)
Objective	To collect very specific data or determine the frequency of occurrence of certain answers departing from some pre-established categories. They conditionate answers to some pre-established models.	To understand the reality from the user point of view. They allow to understand more deeply the object of study departing from the reflection and perspective of the interviewee.
Sampling	At least 30 participants (if statistically significant results are to be obtained). Aims to come up with a representative sample.	A reduced number of participants is acceptable. The sample does not intend to be representative.
Types	Structured (questions must be planned previously and cannot be changed or modified during the process).	Structured; Semi-structured (it departs from a script that predetermines the information you want to obtain); Non-structured (carried out without a previous script, it requires a lot of knowledge on the research topic from the interviewer's side).
Questions	Closed-ended and open-ended questions	Usually open-ended questions. Relatively long answers are expected.
Delivery method	Questions are written on paper or administered online. *It must be piloted first before delivery	Questions are asked orally and can be recorded on audio or video, transcribed on paper, etc. *It must be piloted first before delivery
Interaction	Only the informant is involved	Interaction between the interviewer and the interviewee(s)

Style	More formal	Relatively more informal
Individual or collective	It has to be administered individually	One-to-one interviews are an option, but also group interviews. Focus groups are a subtype of the group interview category. Focus groups give the opportunity to see how users interact with each other, stimulating their reflection on the object of study. The intention is not to achieve consensus.
Ethical issues	Permission from an Ethical Committee needs to be sought. Not to be too intrusive. The objectives and expectations of the study must be clearly explained. Consent form needed (also for online questionnaires), it must be written in an easy-to-understand and non-technical way. Copy of the consent form must be given to the participants for them to keep. Informants needs to be able to access the results of the study. The researcher is responsible for any third person involved in the process of administering/analysing the questionnaire. Questionnaires should be delivered in a perceivable and understandable way (e.g. questionnaire in Braille, oral questionnaires, questions translated into sign language…) The researcher must ensure the data is securely stored. Appropriate measures are always taken to guarantee the participant safety and well-being, and participants thought to be unstable or under the influence of drugs or alcohol are not admitted.	Permission from an Ethical Committee needs to be sought. Not to be too intrusive. The objectives and expectations of the study must be clearly explained. Consent form needed (image/audio, if recorded, and data obtained) from the users or their legal representative. It must be written in an easy-to-understand and non-technical way Copy of the consent form must be given to the participants for them to keep. Interviewees have the right to review the transcriptions. The researcher is responsible for the person in charge of carrying out the interview. The interviewer must guarantee equal opportunities to all the participants. The interviewer is responsible for securing the data gathered. Appropriate measures are always taken to guarantee the participant safety and well-being, and participants thought to be unstable or under the influence of drugs or alcohol are not admitted.
Pros	Once planned, it is quicker to administer. The researcher has more control on	Privileged access to a person's thoughts and opinions about a particular subject.

	the possible answers.	
Cons	It is easy to get the design wrong. They are not good to collect explanatory data (e.g. emotions, personal experiences, etc.) unless they are followed up by more in-depth interviews. Participants are constraint in their responses. If administered online, the risk of low responses is high. It is difficult to secure an appropriate sample of participants. Some errors can occur: coverage error, sampling error, nonresponse error and measurement error. Results rely on the honesty of the subject. With online questionnaires: it must be informed that no complete anonymity can be guaranteed + how to control one person does not answer more than once?	They are more time-consuming for both the researcher and the participant. Because of that, interviews usually rely on smaller samples and therefore are not that representative. Potential bias created by the proximity between the interviewer and the interviewee. Results rely on the honesty of the subject.

In case both questionnaires and interviews are considered, one way to do so is by following what was done in the EU-funded project Prosperity for All [4]. In its first stages, a survey was designed and administered to a list of users. End-users who were not able to use the online surveys were offered an option to complete the survey over a phone call and a scribe documented their responses. The surveys ended with a request for an opt-in interview. For users who opted-in to the follow-up, a semi-structured interview was used. Interviews were conducted either via Skype or phone calls. Participants were given an opportunity to choose their preferred language as well as the virtual means to conduct the interview. To select the interview participants, the survey results were analysed and a few individuals from each user group were selected and contacted for a more in-depth interview.

As a matter of fact, Coelho et al. (2016) [1] recommend data triangulation in any user-centered design process. It is the combination of different data sources that aims to achieve a result based on the agreement and disagreement among sources. Most of the tests carried out by EasyTV partners will take the form of triangulated studies that add and interpret the information gathered through questionnaires, interviews, thinking aloud protocols or focus groups. Using this mixed-method approach allows us to obtain a wide range of opinions at different levels of objectivity. This combination of multiple methods allows to cross-check findings and balance the pros and cons of the individual methods.

Test Information Sheet

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n: 761999

EasyTV: Easing the access of Europeans with disabilities to converging media and content.

Test Information Sheet

Main researcher: Federico Álvarez (UPM)

Ethical advisor: Pilar Orero

EasyTV's target is to foster wider availability of accessible media offerings to everybody and to provide equal access to audiovisual services for all users, especially for people with varying degrees of disabilities (focusing in visual and hearing impaired).

The test you're going to take part in consists of…

[Partner: please explain the service the user is going to test in an EASY-TO-UNDERSTAND and CLEAR way (avoid as many technical words as possible).]

The testing process will be as follows:

[Partner: please explain how the testing is going to be carried out (detail all the steps CLEARLY and in a CHRONOLOGICAL LIST. The user needs to be aware of the whole process).]

Your input will be used to check the usability of the services developed and to obtain feedback to see which changes and modifications are needed in order to customize the service to the user needs.

If your specific test can cause you any type of discomfort, the researcher will explain it thoroughly and you can stop at any time without prior justification.

Now please read the consent form.

Consent form (written version)

Project: EasyTV (Easing the access of Europeans with disabilities to converging media and content)

Your participation in the tests is absolutely voluntary.

You can discontinue your involvement in the study at any time without prior justification. This shall have no repercussions or negative consequences of any sort.

The information you provide will be used in the project but it will remain anonymous.

Easy TV is a European project led by Federico Álvarez, from the Universidad Politécnica de Madrid (Spain). The ethical adviser responsible of ethical procedures in this H2020 EC funded project is Pilar Orero. You can contact Pilar Orero at pilar.orero@uab.cat and ask her for more information about the project and the project results.

In the case that some physiological or eye-tracking apparatus are used to gather data, you will not experience any discomfort, since the apparatus used are the latest generation and are not invasive. Tests will be mostly developed in the project partner premises (research rooms, etc.) but other spaces will be considered (for instance, end user association premises) if this guarantees a better comfort and access for participants.

If the session is recorded, you will be asked to sign an additional consent form to this aim.

The researcher administering the test is ((NAME and SURNAME)).

If you are willing to participate, please confirm the following statements by signing at the end of this document.
• I have read and understood the information given for this research or have had the information read to me,
• I have had the opportunity to ask questions about the research.
• I consent to take part in the research sessions.
• (if applicable) I consent to being recorded in audio/video/(…) form.

Name of the participant Date Signature

_____

Name of the researcher Date Signature

_____

Name of the ethical adviser Date Signature

Consent form (alternative oral version, to be recorded)

Project: EasyTV (Easing the access of Europeans with disabilities to converging media and content)

Your participation in the tests is absolutely voluntary.

You can discontinue your involvement in the study at any time without prior justification. This shall have no repercussions or negative consequences of any sort.

The information you provide will be used in the project but it will remain anonymous.

If the session is recorded, you must sign an additional consent form to this aim.

Easy TV is a European project led by Federico Álvarez, from the Universidad Politécnica de Madrid (Spain). The ethical adviser responsible of ethical procedures in this H2020 EC funded project is Pilar Orero. You can contact Pilar Orero at pilar.orero@uab.cat and ask her for more information about the project and the project results.

In the case that some physiological or eye-tracking apparatus are used to gather data, you will not experience any discomfort, since the apparatus used are the latest generation and are not invasive. Tests will be mostly developed in the project partner premises (research rooms, etc.) but other spaces will be considered (for instance, end user association premises) if this guarantees a better comfort and access for participants.

The researcher administering the test is ((NAME and SURNAME)).

If you are willing to participate, please reply at the end of each question:
• Have you been read the information about the project and have you understood it? Please reply yes or no. (oral reply)
• Have you had the opportunity to ask questions about the research? Please reply yes or no. (oral reply)
• Do you consent to take part in the research sessions? Please reply yes or no. (oral reply)
• (if applicable) Do you consent to being recorded in audio/video/(…) format? Please reply yes or no. (oral reply)

Please indicate your name: (oral reply)

Please indicate the date: (oral reply)

Please indicate the researcher's name: (oral reply)

Please indicate the ethical adviser's name: (oral reply)

Template for general report on the testing sessions

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n: 761999

EasyTV: Easing the access of Europeans with disabilities to converging media and content.

Template for general report on the testing sessions

PARTNER	
TESTING DATE	
SERVICE TESTED	
NUMBER OF USERS	
ASSOCIATION PROVIDING THE USERS	
USER PROFILE	
COMMENTS	