



ACCESSIBILITY AND MEDIA: TOWARDS AN EUROPEAN PLATFORM FOR INCLUSIVE MEDIA (ACCESSIBILITY CLUSTER)

Giacomo Inches (Content4All Project Coordinator)



European Strategy: where all started



ICT 19 – 2017 a)

a) INNOVATION ACTIONS (i)

- **New** solutions, services, technologies **around convergence** of media sectors, media sources and services.

- **Validated** via large scale demonstrations, pilots or close-to-market prototypes

- **On (non-exhaustive list):**

- i. Social media
- ii. Personalised user experience
- iii. Content interaction in a multiplatform scenario
- iv. Content accessibility

ICT 19 – 2017 a)

a) INNOVATION ACTIONS (ii)

- **Impact**

- New services around convergence of broadband, broadcast and social media
- Towards a fully personalised and interactive user experience

- Increase use of ICT technologies in the Media industry

- Clear barriers for the success of the Digital Single Market

sted ng	Call opens...	Call closes...
IC	10 May 2016	08 Nov 2016 17:00
E	10 May 2016	08 Nov 2016 17:00

ATTENTION!!
call opens 10 May 2016
and ends 8 Nov 2016



Horizon 2020 ICT-19 2017



Horizon 2020 Reflective Society 2015



ACCESSIBILITY

Report by: CONTENT4ALL

The discussions among project partners in the area of accessibility showed there are quite a lot of overlapping technologies especially for building the pilots. Also, the addressed market in the sense of exploitation activities is quite homogenous. Furthermore, all of the projects operate in the same eco-system of Stakeholders. Therefore, stronger cooperation among the partners towards joint development and exploitations seems to be a logical step. The partners agreed on further evaluate the possibility of building a formal cluster.

Member of the Cluster

- Imac
- easyTV
- C4All
- MediaRoad
- Sign-Hub (did not participate in the discussions)

Joint Exploitation & Innovation Assets

Projects within the accessibility agreed on building a cluster to enforce joint Exploitation to generate an eco-system rather than individual innovation elements. To reach this in the first step a joint list of Innovation of assets of all involved projects will be generated. Demonstrators will include technology from the other projects where possible and useful (e.g. the Avatar of Content4All to be used in the Imac VR environment).

SIGN-HUB is a 4-year research project (2016-2020) funded by the European Commission within Horizon 2020 Reflective Society 2015, Research and Innovation actions. It has been designed by a European research team to provide an innovative and inclusive resource hub for the linguistic, historical and cultural documentation of the Deaf communities' heritage and for sign language assessment in clinical intervention and school settings.

Although the Sign-Hub project is funded under a different theme, it seems to be a good idea to involve them for data collection towards generating an open data set for the collected sign language.

11

Standardization

Furthermore, the cluster, as a whole, will focus on standardization as a joint effort. Partners of the individual projects will use their established relationships to promote standards for all technologies/innovation assets of the cluster towards the scandalization bodies.

- ITSC (Fincons - mGiacomo)
- ITU-T / R (UAB , IRT)
- INR / ISO (UAB)
- HbbTV (IRT)
- EBU - AS Group (STXT- G.Linder, VRT)
- ANEC (www.anec.eu, UAB)

Involvement of the Deaf Community/User Group

In the area of accessibility, it is of special importance to involve the community represented by the nation and international NGOs actively. The aim is to involve regional and national NGOs through the national partners within the separate projects (e.g. SGB for STXT within Switzerland in the project Content4All).

International partners like the EUD would be involved by the cluster as a whole.

Follow-up-Meeting

The Coordinators of the projects decided to follow-up on the cluster building. Therefore, they decided to find a date and place to meet again to discuss the next steps Discussions on this potentially will take place end of March/beginning of April in Barcelona. The aim of this meeting would be to establish individual MOUs with the cluster members. The MOU will define the concrete role of the partner within the cluster and it will also define deliverables towards the formal cluster. Also, the MOU is written in a way that it is directly communicable to the stakeholders in the projects in the sense of a press release. Furthermore, the aim of the meeting is to define an action plan on how to move forward concerning the formal cluster.

12



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https://www.mediaroad.eu/wp-content/uploads/2019/04/Report-Concertation-Meeting-6-February-2019_FINAL.pdf



MARIO MONTAGUD

ImAc

ImAc (Immersive Accessibility): EU H2020 project that is exploring how accessibility services can be efficiently integrated with immersive media

- ❑ Accessibility Services: subtitles, audio description, sign language
- ❑ Immersive Media: omnidirectional video (i.e. 360°) and audio

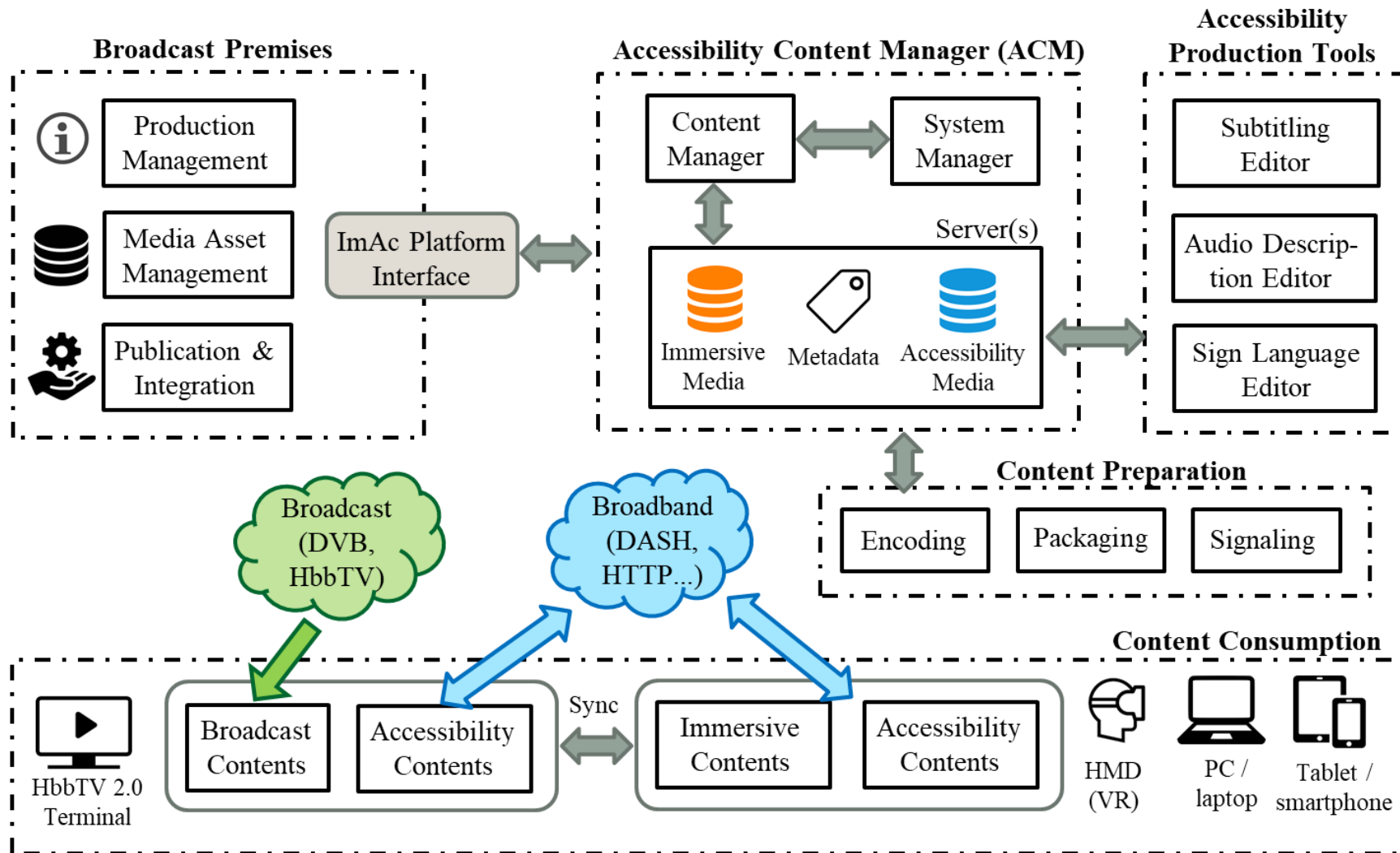
Premises:

- ❑ Accessibility is a must for **e-inclusion**
- ❑ **Accessibility** must not be considered as an afterthought, but as a **key aspect** in the specification and deployment of services
- ❑ Keep **compatibility** with current standard technologies / formats
- ❑ **User-Centric Methodology**

Info / Consortium: <http://www.imac-project.eu/>, @ImAcProject

Contact: mario.montagud@i2cat.net, sergi.fernandez@i2cat.net

End-to-End ImAc Platform



Key Components of the ImAc platform

- Accessibility Content Manager (ACM)
- Edition Tools (SaaS)
- Open-Source Web-based Player

Benefits

- Contributions very welcome by end-users, professionals & stakeholders.

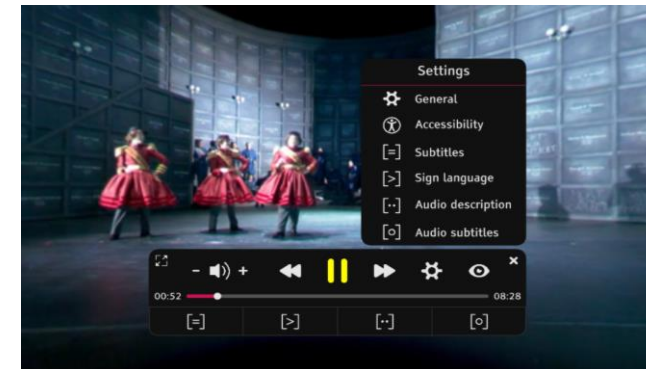
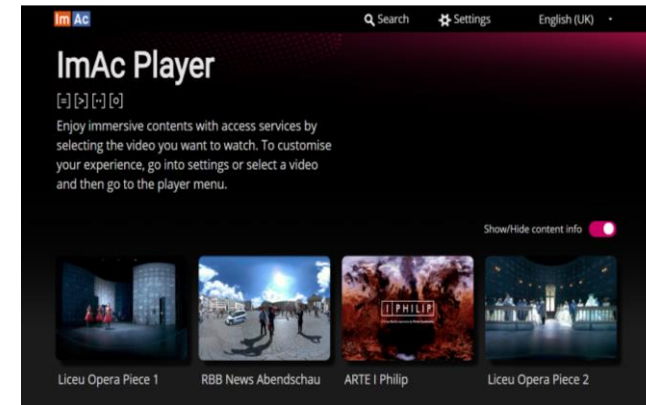
Dissemination

- High-Impact Publications
- Events / Fairs / Workshops

Contributions to Standardization

- MPEG, W3C, ISO, ITU...

Player URL: <https://imac.gpac-licensing.com/player/>



FEDERICO ÁLVAREZ

EASYTV

EASYTV objectives

▪ Target

- to foster **wider availability of accessible media** offerings to everybody
- to provide **equal access to audio-visual services for all users**, especially for persons with various degrees of disabilities (focused to visual, hearing and mobility impaired).

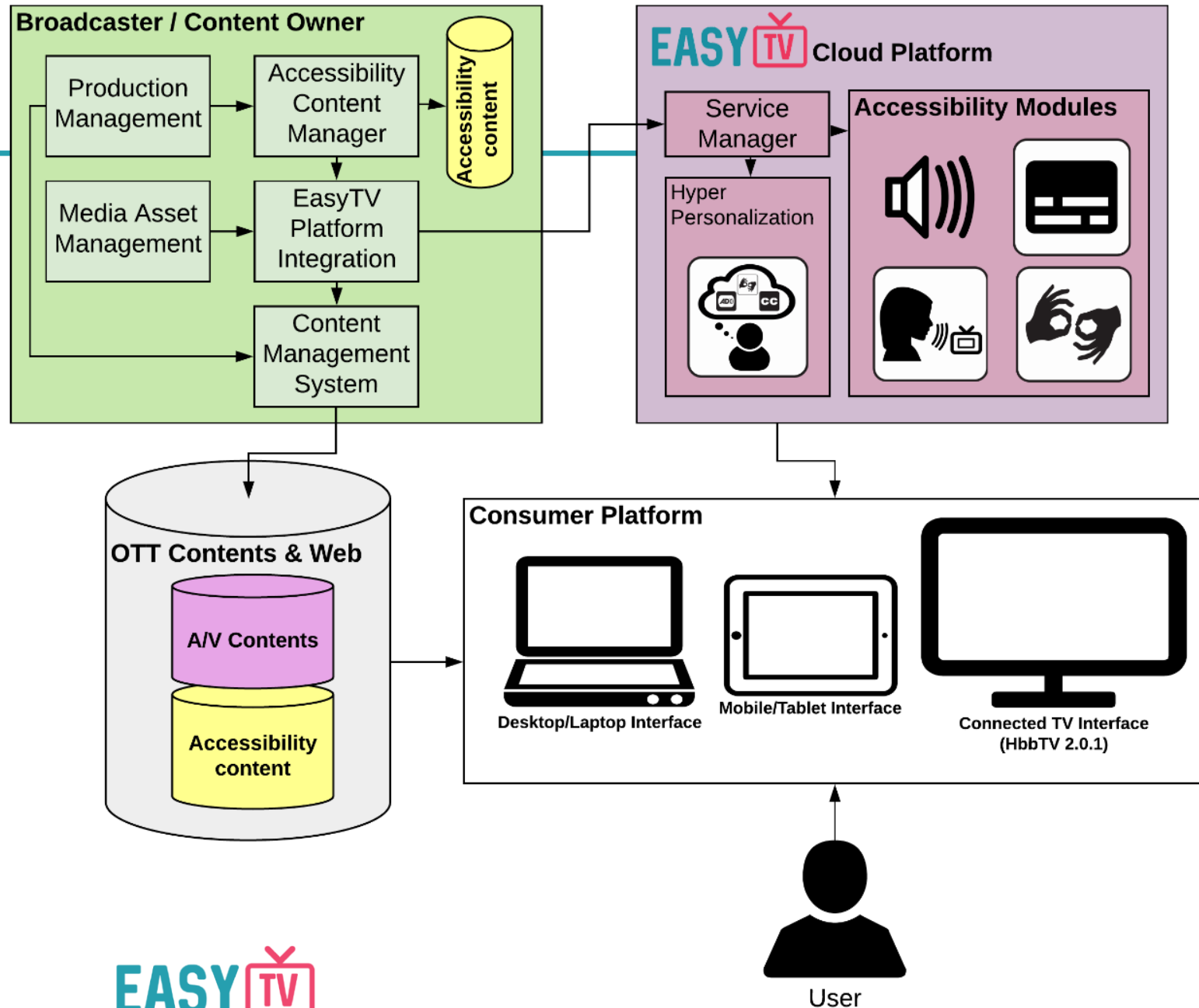
▪ How ?

- Developing media improved access services
- Making distribution of novel accessibility features with enhanced multimedia visual and sound experience.
- Making the production, management and distribution more easy, more flexible and more cost-efficient.
- Improving the personalization and interaction experience for all.

-> Integration in
broadcasters' chain
irrespective of the mean

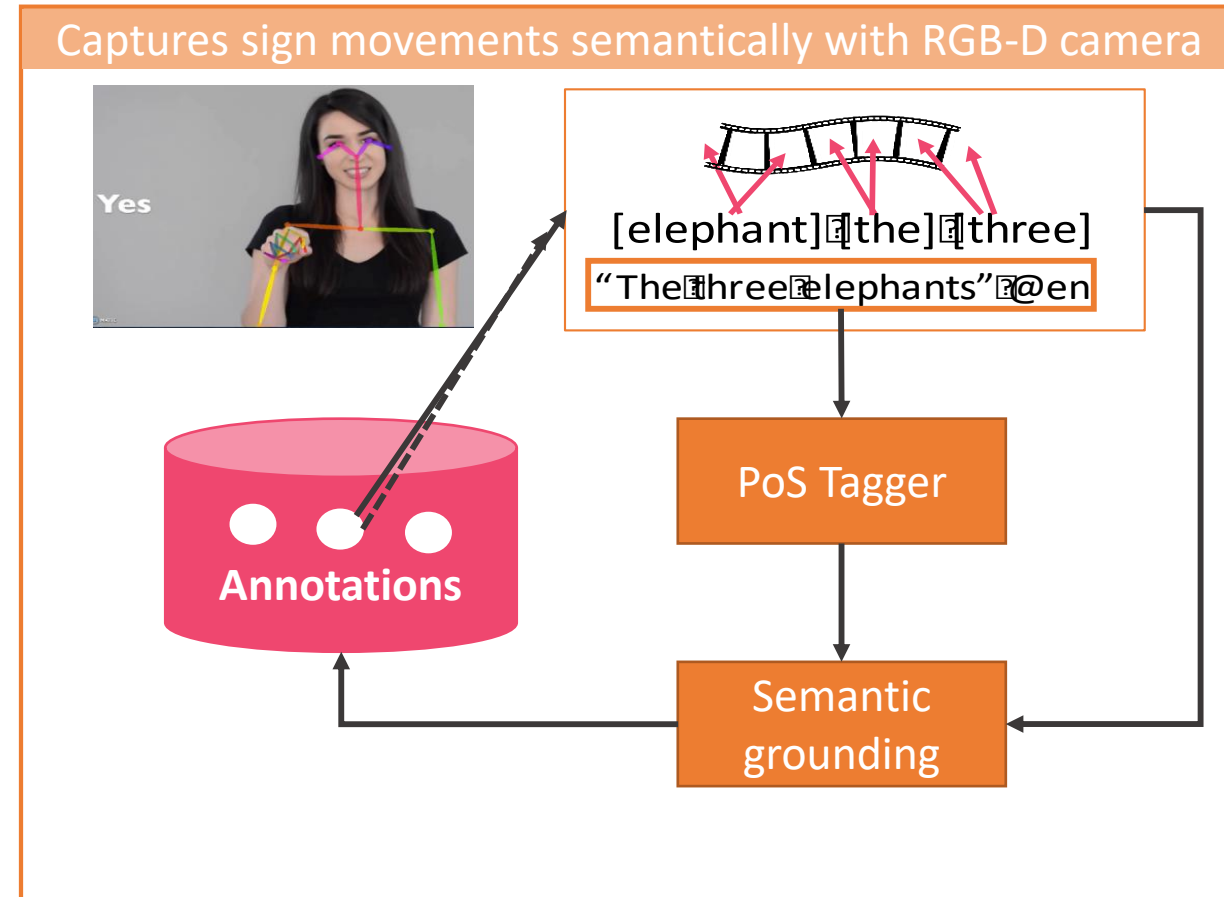
-> Use of a
crowdsourcing platform
to refine the services
and gather users input

-> Use of
personalization to the
users to adapt the
experience



EASYTV – Service example for Sign Language

- **Novel technologies to break the Sign Language barrier**
 - Sign Language translation in different languages through a multilingual ontology that will map signs to ontology concepts.
 - Realistic avatar animation (at least in Greek, Spanish, Italian, English & Catalan)
 - The number of languages will be widened in the future by means of a crowdsourcing platform which will be able to refine accuracy by human curation.



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CONTENT4ALL

Project start: **1. September 2017** (to 30 August 2020)

Funding: **Horizon 2020 grant agreement no. 762021**

Call: **H2020-ICT-2016-2**

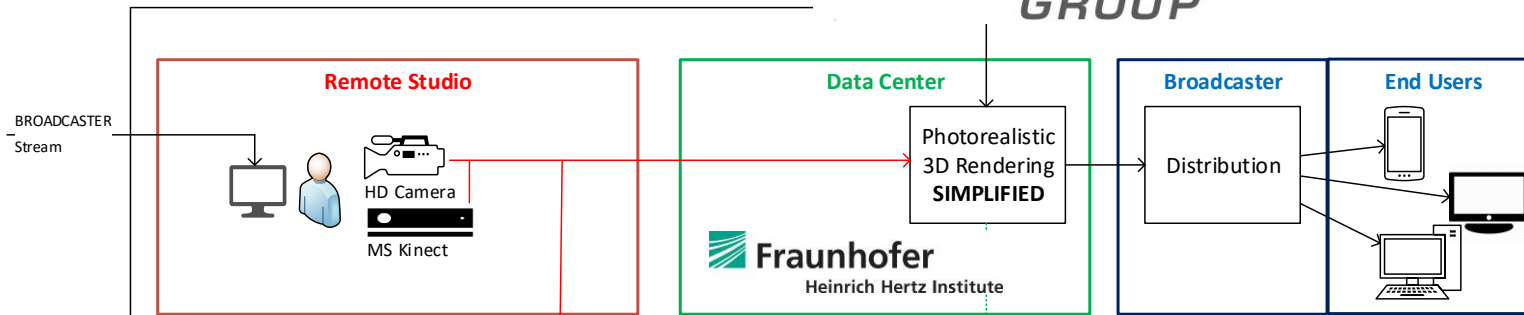
1. **Remote live virtual human to provide live signing** (market ready)
 - Enable the low-cost personalization of content for Deaf Viewers with no disruption to hearing viewers.
 - Use of a photorealistic 3D virtual human (realatar) for sign-interpreted content creation.
 - Delivery of personalized signed content to TV (HbbTV) and mobile devices
2. **Build a collection of live signed content** for further research projects or academic studies
3. Develop the necessary technologies and algorithms to **explore automatic sign-translation capabilities** (laboratory test)



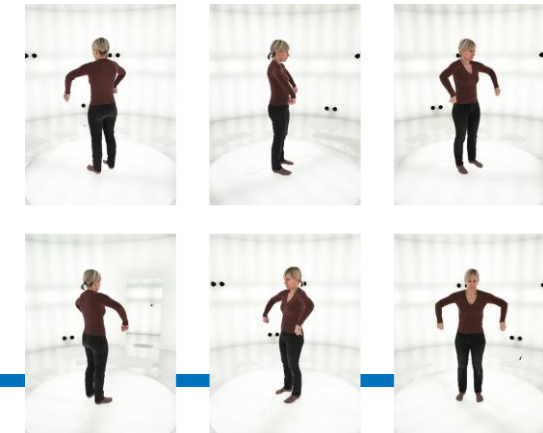
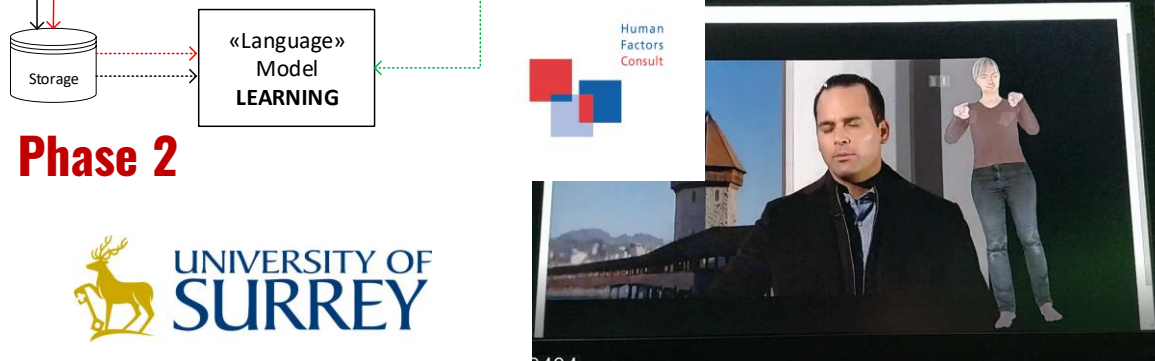
Remote live puppeteering to provide live signing (and beyond)



Phase 1



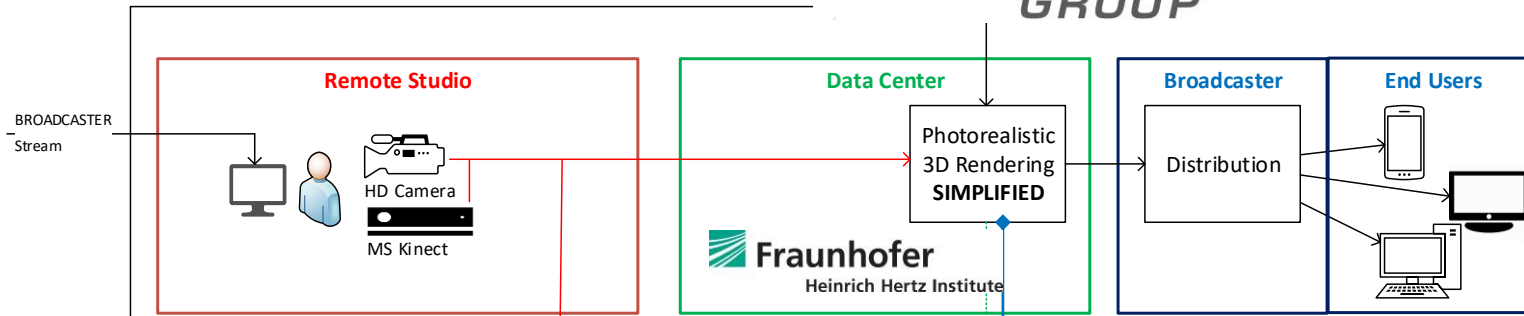
Phase 2



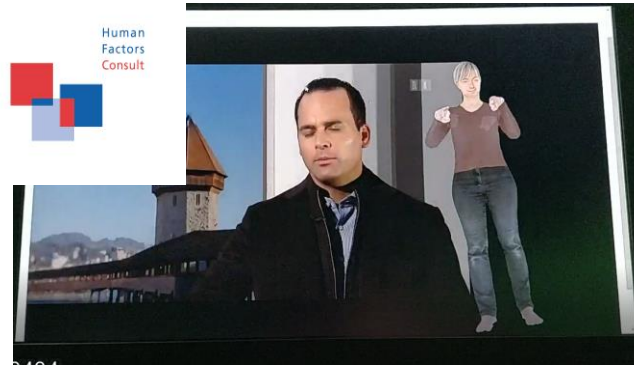
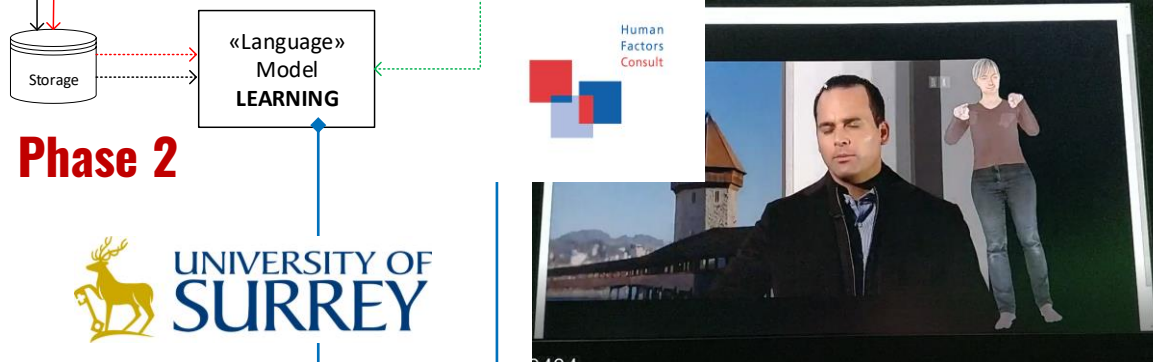
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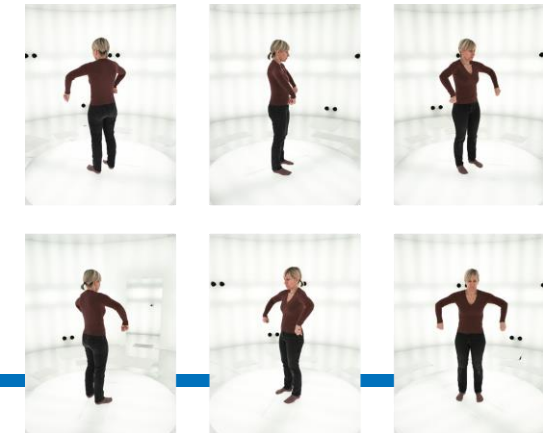
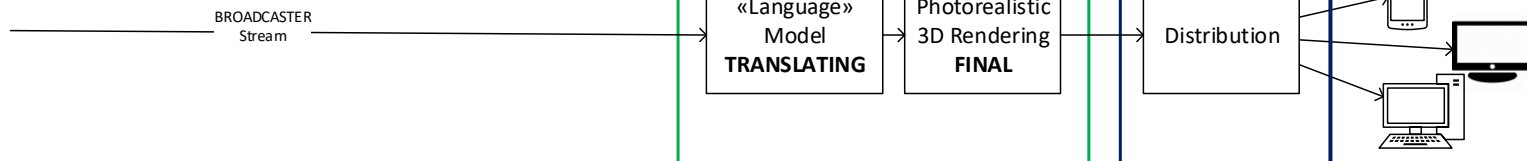
Phase 1



Phase 2



Phase 3



SIGN-HUB

The SIGN-HUB project

Preserving, researching and fostering the linguistic, historical and cultural heritage of European Deaf signing communities with an integral resource

Call: H2020 – Reflective Society

Starting date: March 2016

End date: March 2020



The SIGN-HUB project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 693349

FIVE OBJECTIVES

1. Creation of online grammars of 6 sign languages
2. Construction of a sign language Atlas
3. Development of tools for sign language assessment
4. Creation of a digital archive of elderly signers' linguistic and cultural heritage
5. Creation of a platform that hosts the contents generated in the project

PARTNERS

10 teams, 7 countries, 8 sign languages. Linguists working on sign languages and a technological partner (CINI)

- Pompeu Fabra University, Spain (coord.)
- University of Milan-Bicocca (Italy)
- University Ca Foscari Venice (Italy)
- CINI (Italy) – National Cross-university Consortium for Computer Science
- CNRS, Paris (France)
- University Paris 7 Diderot (France)
- University of Amsterdam (Netherlands)
- Göttingen University (Germany)
- Bogaziçi University (Turkey)
- Tel Aviv University (Israel)

One project vs. Cluster

Established Requirements (M/S)

General:

System is accepted and contains no advertisement

Technical:

Time & cost efficient with acceptable time synchronicity

Signer:

- *Signing:* HQ of signs, gestures and arms, hand, finger, body and facial movements and position
- *Looks:* Realistically looking signer, without disturbing elements

Sign language:

- Using no word to word translation, correct vocabulary, and a reasonable signing speed
- Natural mimics transporting the atmosphere and emotions
- Can be switched on and off

(S/C)

General:

- Available on smartphones
- High resolution of audio-visual content

Signer:

- Wearing long, plain and contrasting sleeves

Interesting for further projects (C)

General:

Content is sectioned in several short videos

Technical:

Offering various applications that are beneficial to the users per se

Signer:

- *Looks:* Configurable Age, positioning and background of the signer or visually matching the content (realism, clothes)
- *Additional Features:* Multiple signers

Out of scope (W)

General:

Can be used without internet access

Signer:

Further visually matching multiple signers with the speaker

(C/W)

General:

Offering subtitles

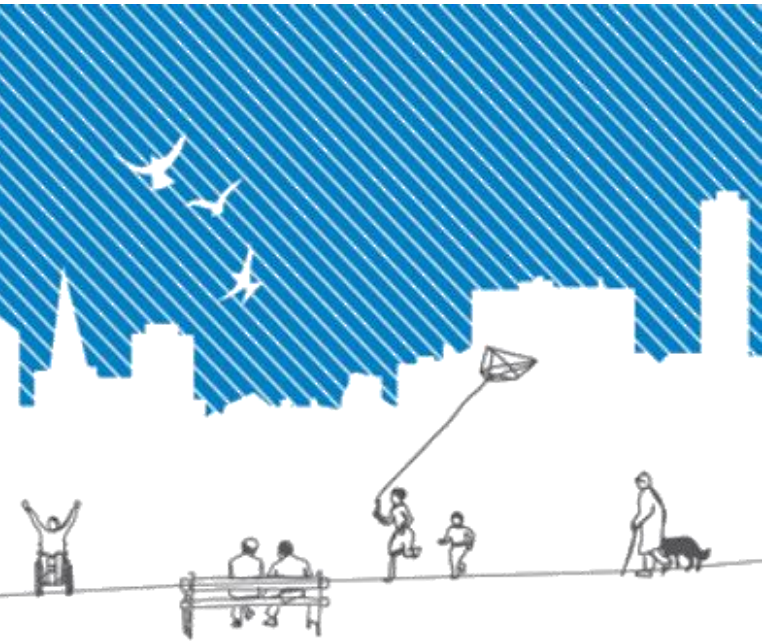
Signer:

- The user can choose between a fixed or a variable positioning of the virtual signer during the show
- Signing speed is adjustable

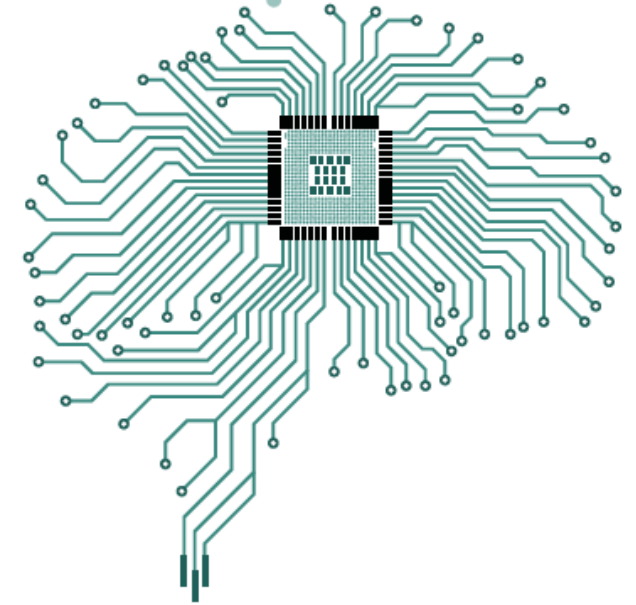
The user perspective



NOTHING ABOUT US WITHOUT US



- For persons with disabilities, **emerging technologies have the potential to increase inclusion, participation and independence** and in some instances, are already doing so.
- Persons with disabilities **should take part in this debate** so they can reap the benefits of technology like everyone
- Persons with disabilities are often **early adopters** of technology
- **None** of the respondents thought that **emerging technologies would have a negative impact** on their lives.
- **“The biggest gap is not in technology but in awareness and training”**



PLUG AND PRAY?

A disability perspective on artificial intelligence, automated decision-making and emerging technologies





Giacomo Inches, Fincons Group
(Content4All Project Coordinator)
giacomo.inches@finconsgroup.com

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