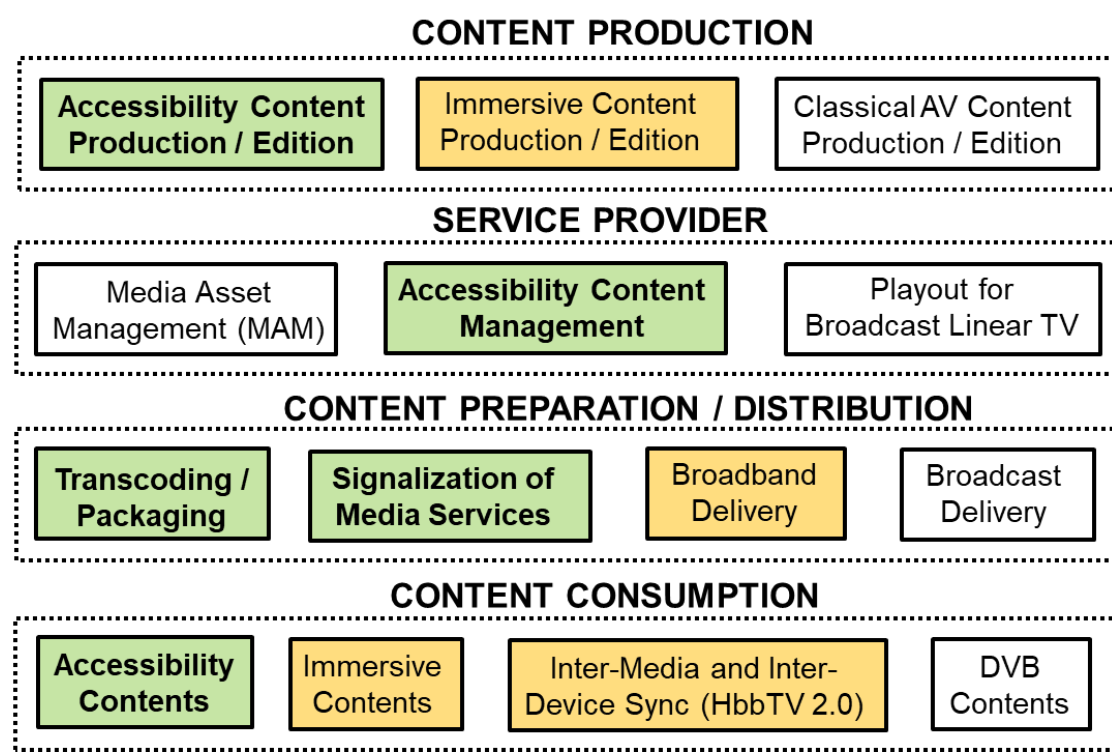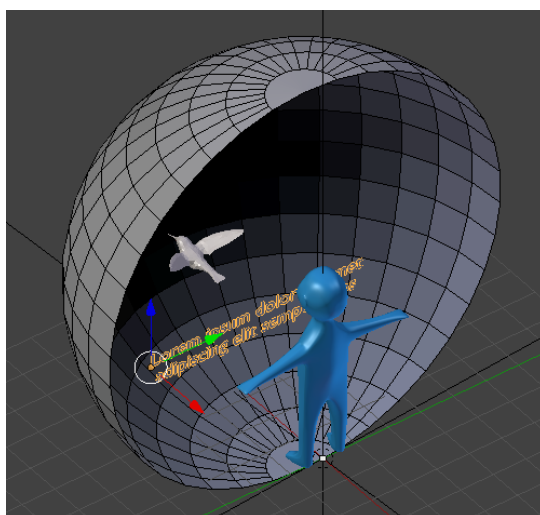# ImAc Immersive Accessibility

Mario Montagud, Juan A. Núñez, Sergi Fernández – Fundació i2CAT
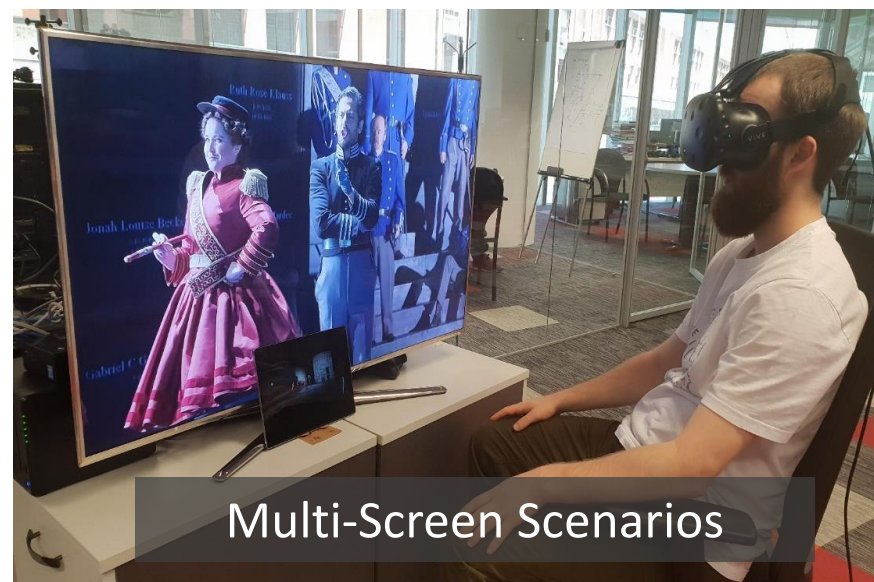**Pilar Orero, Anna Matamala – Universitat Autònoma de Barcelona (UAB)**

WORKSHOP ON READING, LANGUAGE & DEAFNESS — RESEARCH PERSPECTIVES · SAN SEBASTIAN · SPAIN · OCTOBER 18th & 19th, 2018 · WoRLD
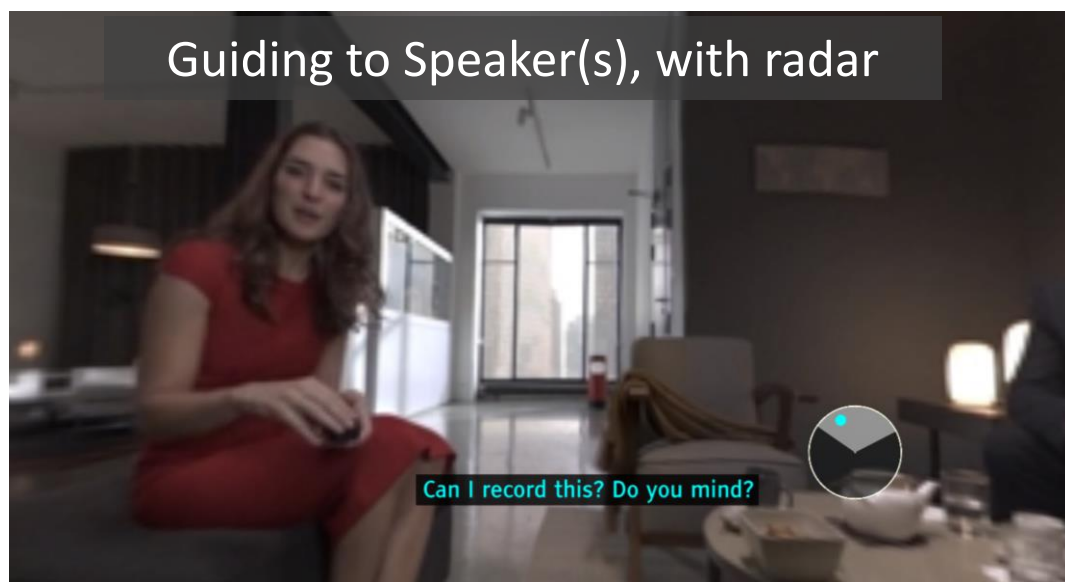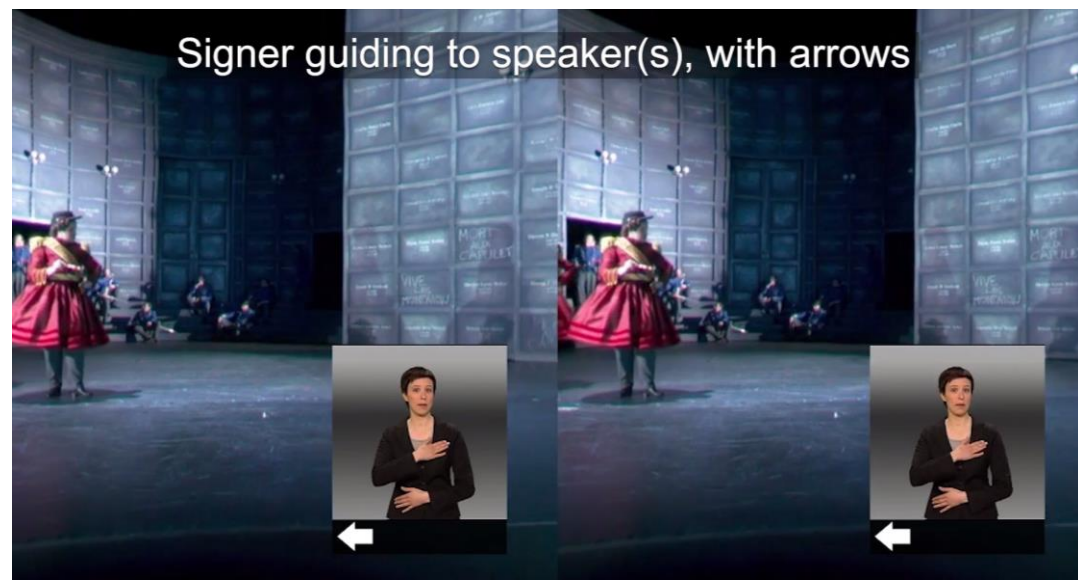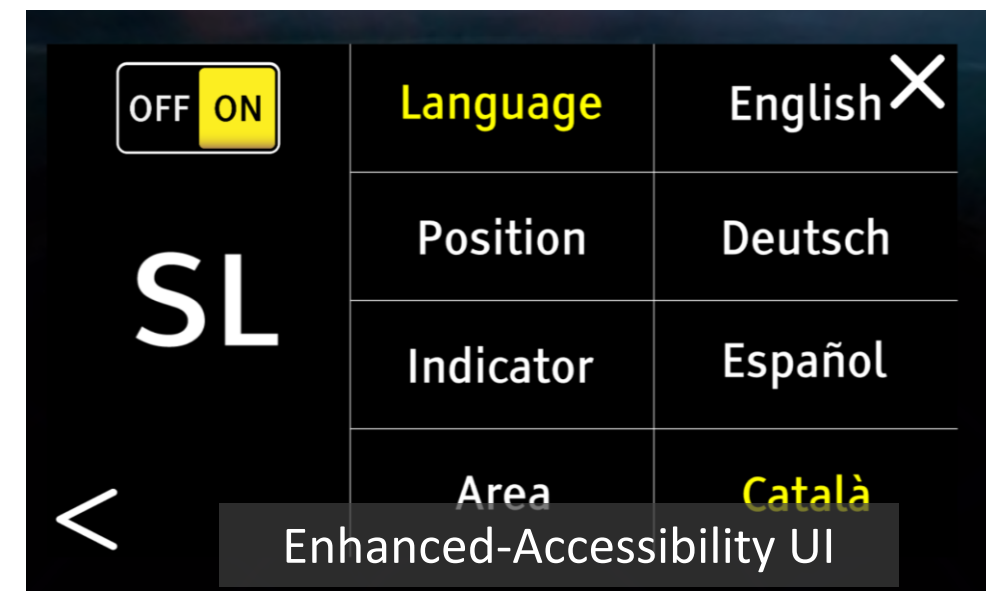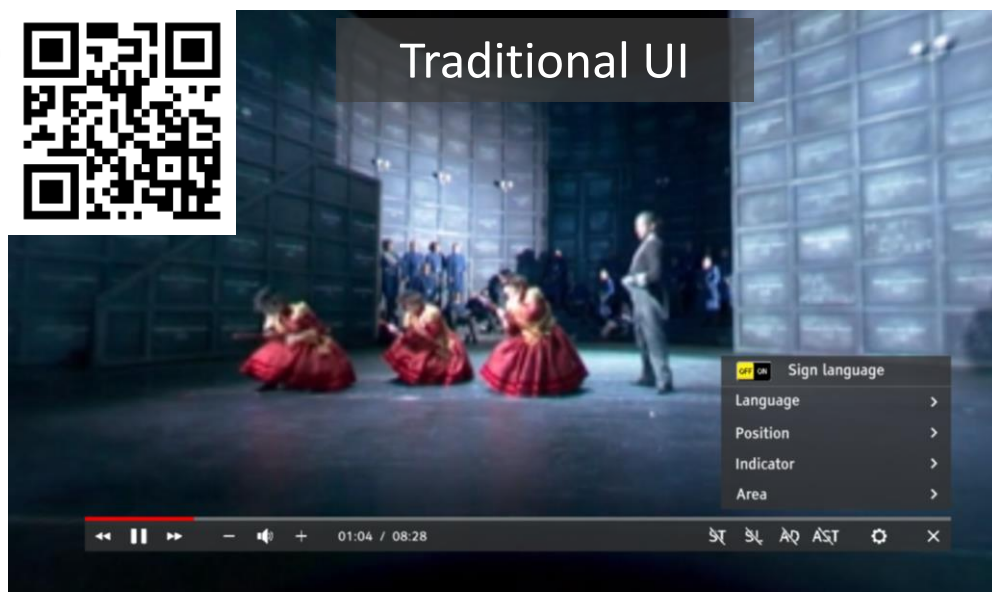
ImAc: Enabling Immersive and Accessible Media Services

- Explore how accessibility services (subtitling, audio description and **sign language**) can be efficiently integrated with **immersive media** (VR, 360º video)
- User-Centered Methodology
- End-to-End Workflow
- Challenges: Temporal + **Spatial** Information (Freedom to explore the VR Environment)
- **Assistive Technologies**
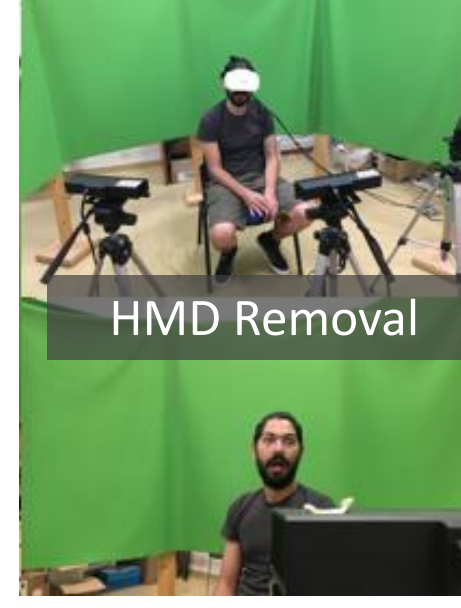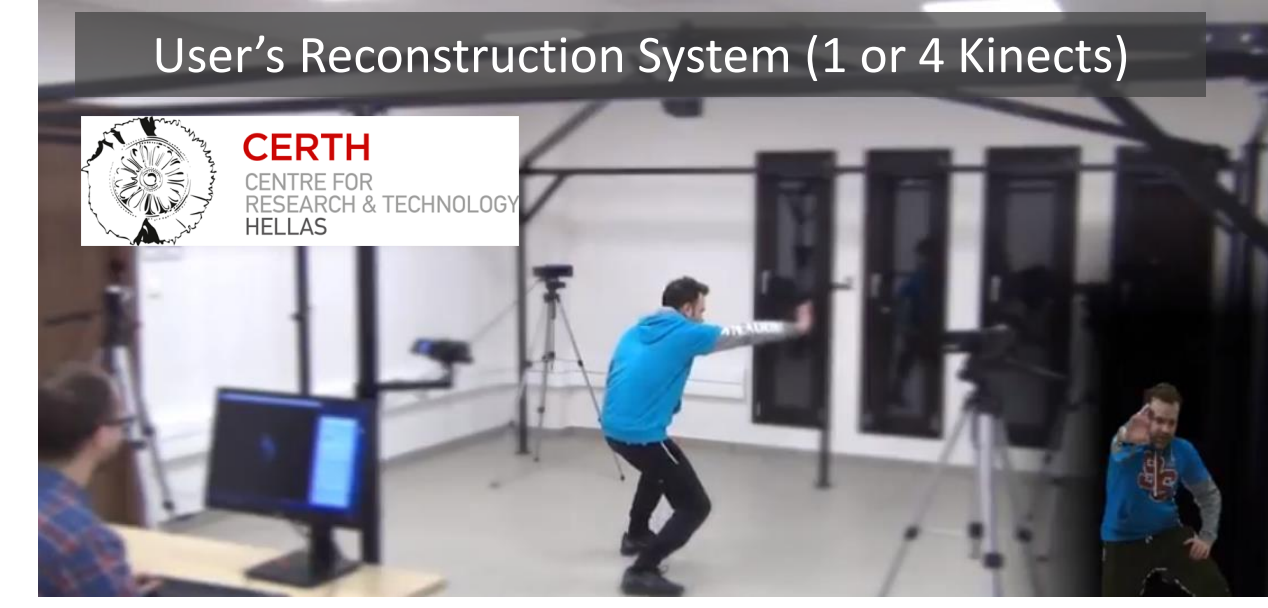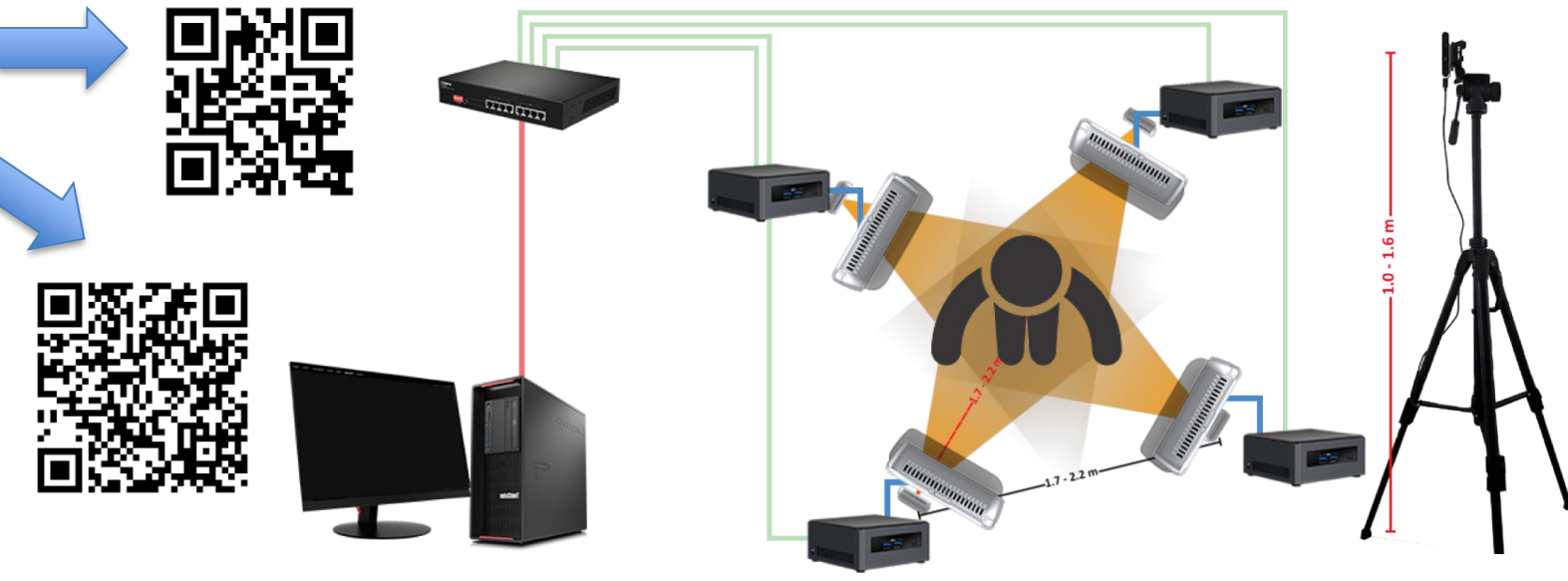- Audio/Video Processing Techniques

CONTENT PRODUCTION

Accessibility Content Production / Edition	Immersive Content Production / Edition	Classical AV Content Production / Edition

SERVICE PROVIDER

Media Asset Management (MAM)	Accessibility Content Management	Playout for Broadcast Linear TV

CONTENT PREPARATION / DISTRIBUTION

Transcoding / Packaging	Signalization of Media Services	Broadband Delivery	Broadcast Delivery

CONTENT CONSUMPTION

Accessibility Contents	Immersive Contents	Inter-Media and Inter-Device Sync (HbbTV 2.0)	DVB Contents

(Immersive + Accessibility) Contents Presentation, Scenarios

- Player: https://bit.ly/2IUJZaL
- 2 User Interfaces (UI)
- **Presentation Modes**: Arrows, Radar, Auto, Spatial Audio…
- **Personalization** (UI, Language, Position, Size, Voice Control…)
- **Multi-Screen Scenarios**

Traditional UI

Enhanced-Accessibility UI

OFF ON | SL | Language — English | Position — Deutsch | Indicator — Español | Area — Català

Signer guiding to speaker(s), with arrows

Guiding to Speaker(s), with radar
Can I record this? Do you mind?

Multi-Screen Scenarios

Extra Possibilities (feeling of *being there*, *togetherness*)

VRTogether

- Social VR scenarios with a photorealistic quality
- Users' **capturing** and re-construction using low-cost equipment (Kinect or RealSense).
- The body of the **Signer** (not an avatar!) can be **immersed in VR → high realism!**
- Demo of Social VR (2 users)
- Technology ready by November 2018

TNO innovation for life

User's Reconstruction System (1 or 4 Kinects)
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Captured User in a VR Scenario

HMD Removal

Consortiums

ImAc · i2cat · rbb RUNDFUNK BERLIN-BRANDENBURG · Corporació Catalana de Mitjans Audiovisuals.SA · University of Salford MANCHESTER · UAB · MOTION SPELL · ANGLATECNIC · IRT · RNIB Supporting people with sight loss · @ImAcProject

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