

2<sup>nd</sup> Swiss Conference on Barrier-Free Communication  
Geneva, 9-10/11/2018

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# Making immersive media environments accessible: the ImAc project

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# ImAc project: challenges

Can immersive environment be accessible?





# ImAc: Goal

- To explore how accessibility services can be integrated with immersive media.
- To explore new deployment methods for these services (subtitles, audio description, audio subtitling, sign language) in immersive environments.



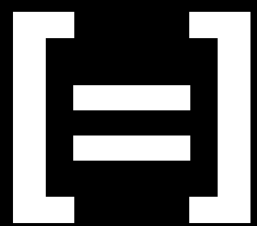
# ImAc: How?

- ImAc moves away from the constraints of the current technology, into a Hyper-Personalized environment where the consumer can fully customize the experience to meet his/her personal needs.
- Imac will ensure that immersive experiences are inclusive across different languages, addressing the needs of those with hearing or low vision problems, learning difficulties and aged.
- ImAc also foresee these services consumed by a wider audience for personal convenience, learning language and language therapy.
- As ImAc follows a user centered design, end & professional users are involved in each step of the design and implementation.



# ImAc project: methodology

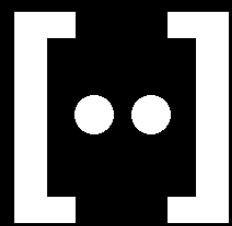




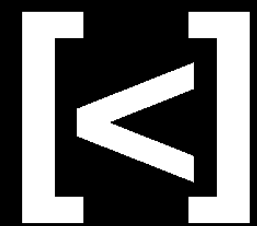
**SUBTITLES**



**SPOKEN  
SUBTITLES**



**AUDIO  
DESCRIPTION**



**SIGN  
LANGUAGE**

# ImAc Accessibility Production Tools

## Content Management System

The screenshot displays the ImAc Content Management System interface. The browser address bar shows the URL <https://imac.gpac-licensing.com/acm/cm/assets.php#>. The page title is "Asset list". The interface includes a search bar, a navigation menu with "Assets", "Bin", and "Reports", and a top navigation bar with "SM", "CM", "ED", and "PU" tabs. The main content area shows a grid of asset cards, each with a video thumbnail, "AssetID", and "Date created". The assets are:

Asset Name	AssetID	Date created
Polonia_360_CCMA_P2	287	2018-07-23 08:46:39
Participant 39	286	2018-07-23 08:02:26
Participant 38	285	2018-07-21 07:48:50
CCMA_P1	284	2018-07-20 15:19:53
Participant 37	281	2018-07-20 15:19:53
Participant 36	280	2018-07-20 15:19:53
Participant 35	279	2018-07-17 12:19:53
OPERA LQ LICEU	278	2018-07-17 12:19:53

On the right side, there is a video player with the title "Upload a video file:" and a "Drag & drop file here... (or click to select file)" area. Below the player, a video thumbnail is shown with a duration of "Duration: 00:03:35.000".





# ImAc Accessibility Production Tools

The screenshot displays the ImAc Web ST Editor interface. The browser address bar shows the URL: [https://imac.gpac-licensing.com/editor/videos.php?view=edit\\_subtitle&id=332](https://imac.gpac-licensing.com/editor/videos.php?view=edit_subtitle&id=332). The interface includes a top navigation bar with the ImAc logo, a task list, and a version indicator (Version 20). The main workspace is divided into several panels:

- Asset details:** ID: 315, Title: RBB\_I\_Philip\_H264\_1080x540\_audio\_stereo, Date created: 2018-08-22, Video size: 812.98 MB, Video duration: 00:14:44.01.
- Video controls:** A timeline showing 00:06:32.14 with standard video playback controls (stop, play, pause, next, previous, full screen, etc.).
- Subtitle controls:** Includes a "Global style" section with a checkmark icon, "Regions" with a "R1" button, "Alignments" with "center", "left", and "right" options, "Characters" with a plus icon, and "Move" controls with directional arrows and a "1 - 173" indicator.
- Asset actions:** Includes an "(auto)" toggle, a lock icon, and a back arrow.
- Subtitle list:** A table of subtitle entries with their start and end times and text content.

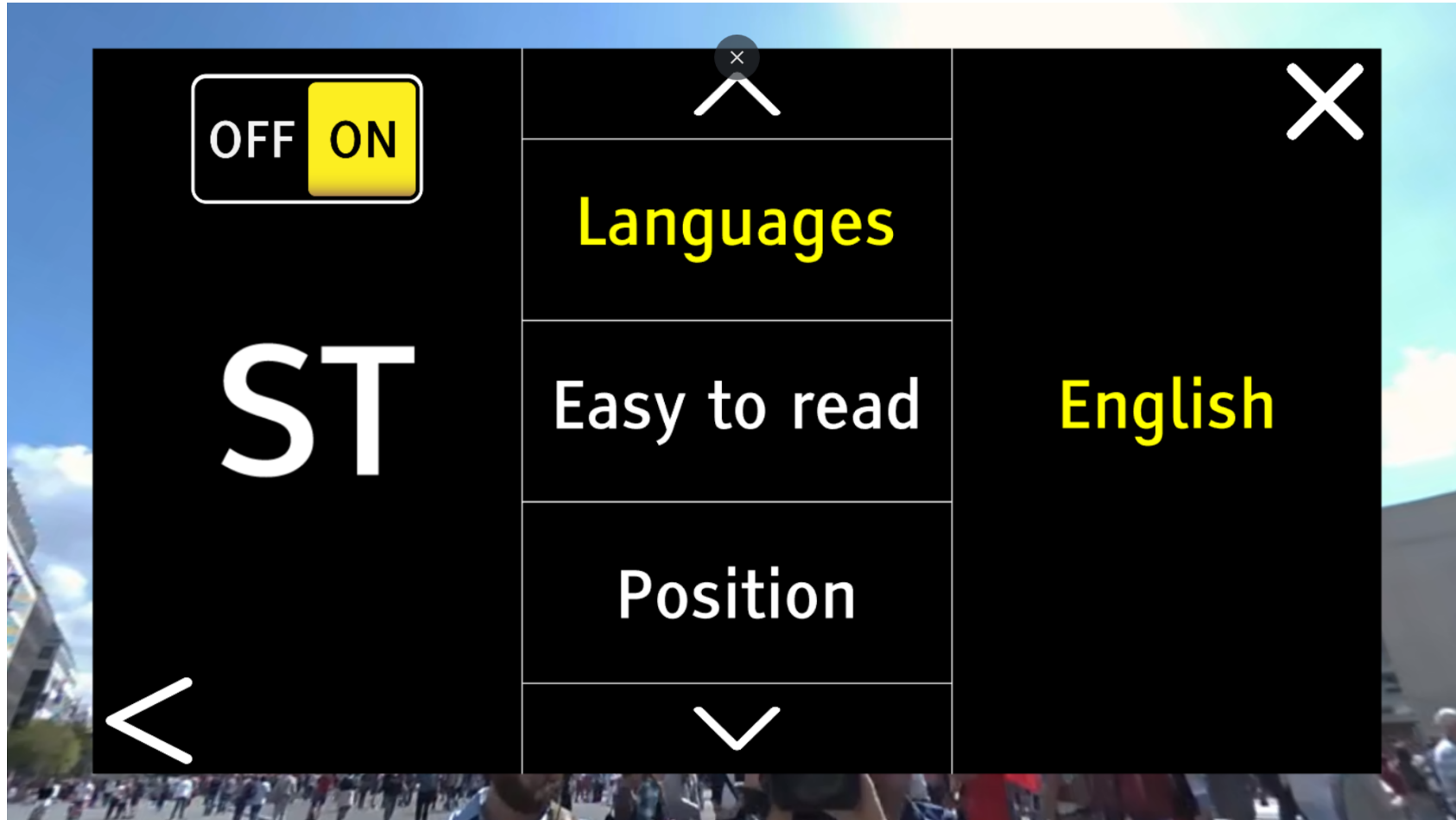
The central video player shows two men sitting on a couch in a living room. A subtitle "Quant temps fa que" is overlaid on the video. Below the video, a detailed view of a subtitle entry is shown:

Region	Start Time	End Time	Text	Lat	Lon	Char/Reg
81	00:06:09.11	00:06:14.19	" Sanglot "	16	-24	char/reg: S3/ R1
82	00:06:30.12	00:06:32.23	Quant temps fa que	10	53	char/reg: S3/ R1
83	00:06:33.00	00:06:34.15	(Mann) Un parell d'anys.	8	80	char/reg: S7/ R1

# Player

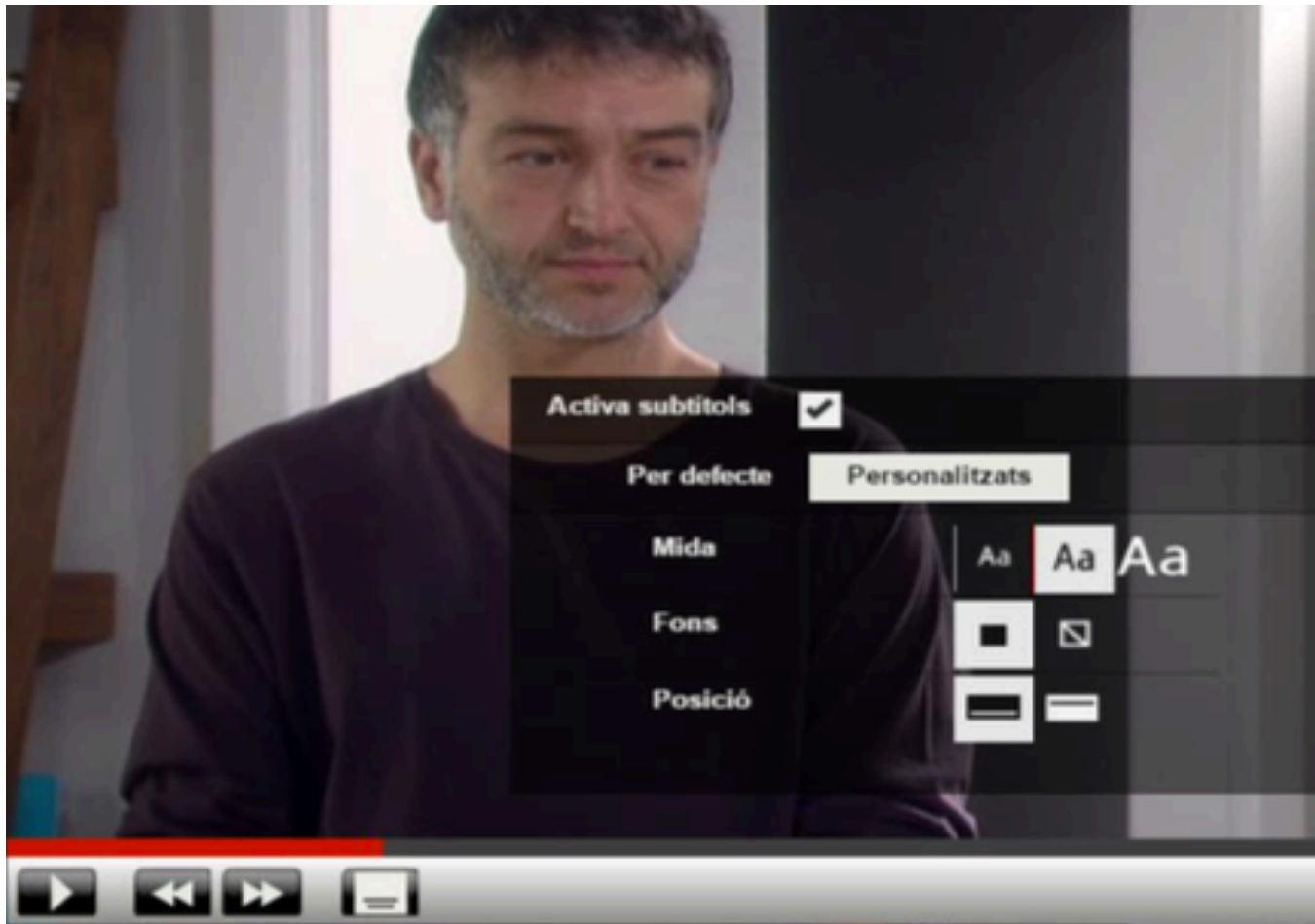


# Player: accessibility-enhanced menu





# [=] Subtitle position



# Player: accessibility-enhanced menu

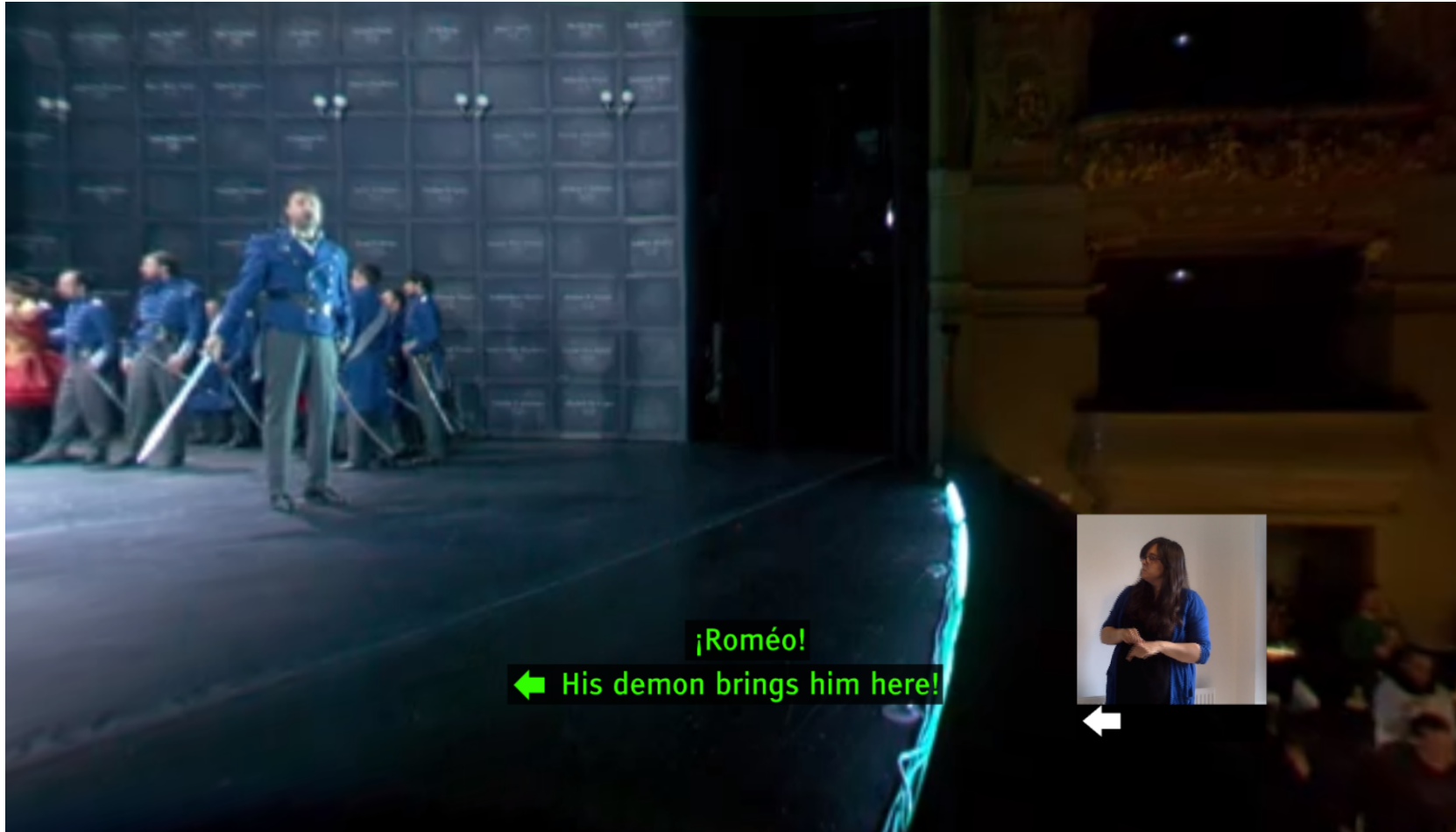




# Access services: [ < ] Sign Language



# [<] Sign Language



# [..] Audio description



<https://lab.irt.de/demos/object-based-audio/interactive/>



# [..] Object based sound





# [=] Subtitle rendering





# [=] Subtitles: presentation modes



# [=] Radar



# Disclaimer

TransMedia Catalonia is a research group funded by Secretaria d'Universitats i Recerca del Departament d'Empresa i Coneixement de la Generalitat de Catalunya, under the SGR funding scheme (ref. code 2017SGR113).

The project **ImAC** has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 761974.

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