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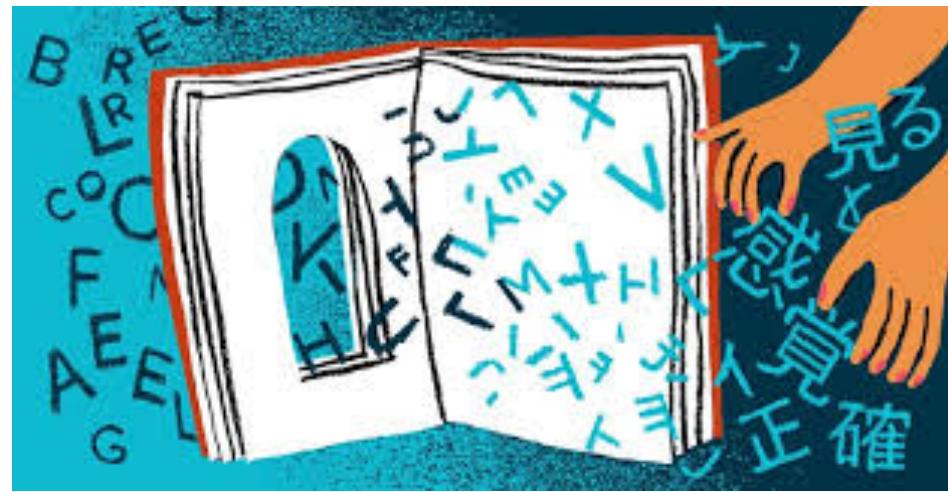


# From paper to digital: Accessibility as the new context for Translation Studies

## Pilar Orero

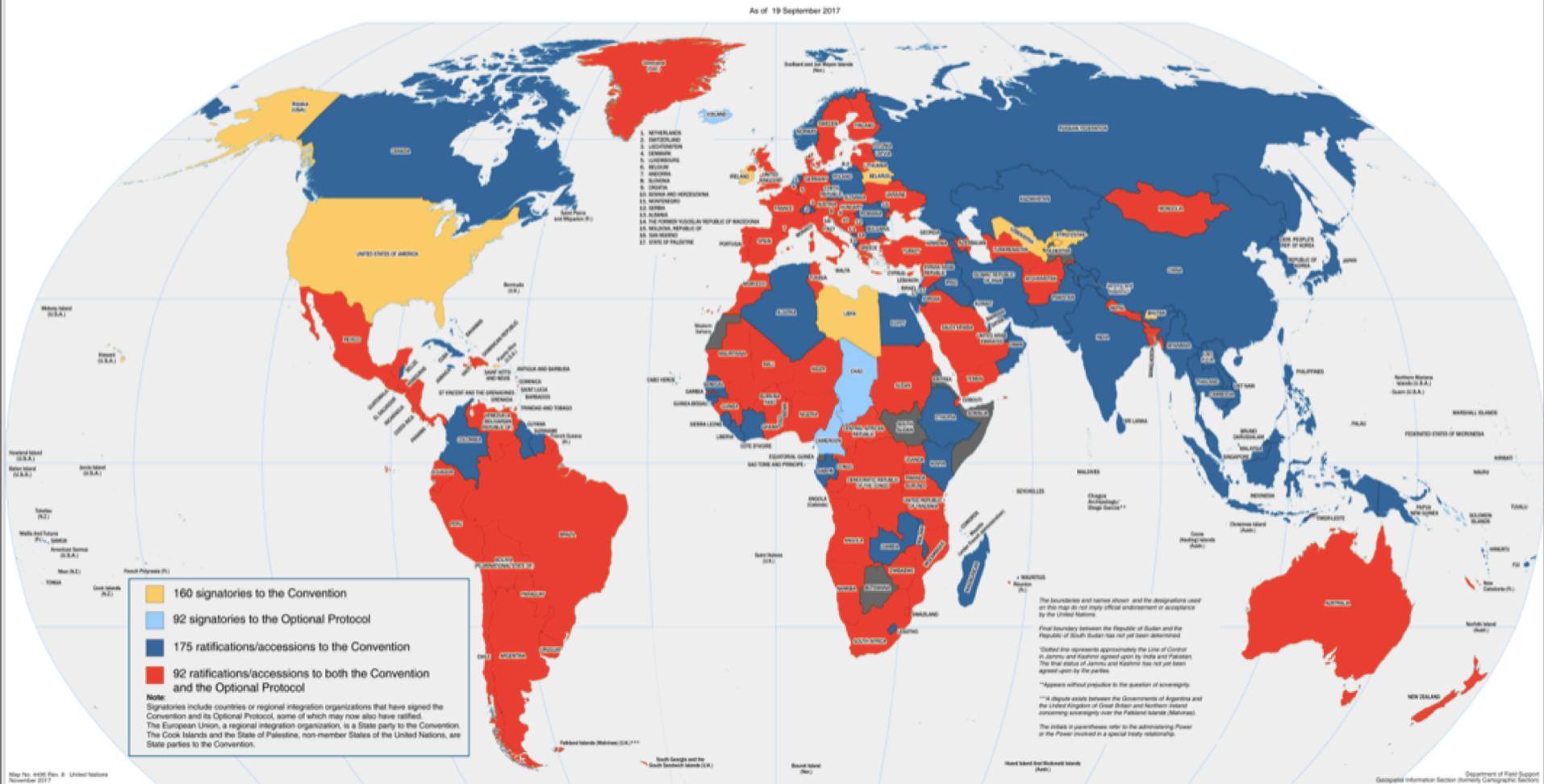


THESE PROJECTS HAVE RECEIVED FUNDING FROM THE EUROPEAN UNION'S  
HORIZON 2020 RESEARCH AND INNOVATION PROGRAMME UNDER GRANT  
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004218 and -IT02-KA203-024311



# CRPD and Optional Protocol Signatures and Ratifications

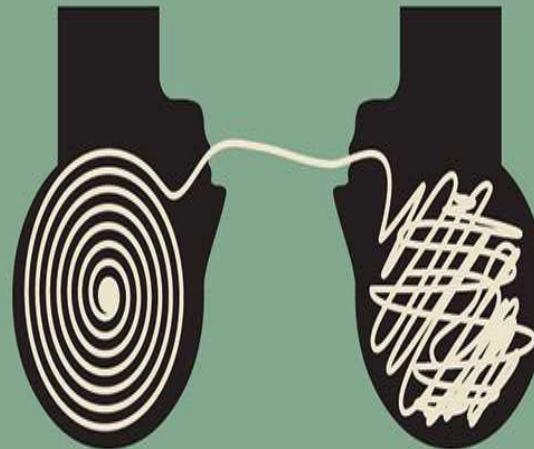
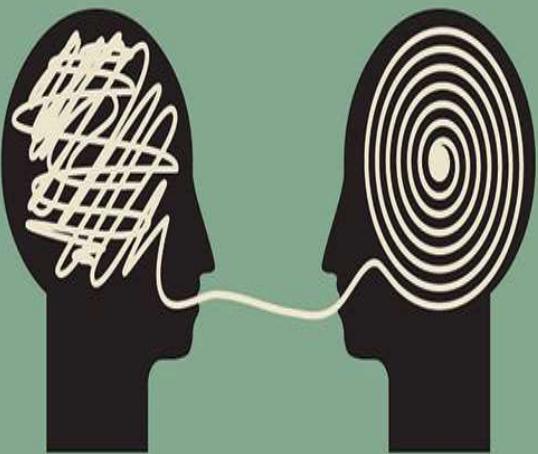
■ Not Signed ■ Signed Convention ■ Signed Convention & Protocol ■ Ratified Convention ■ Ratified Convention & Protocol





# Accessibility

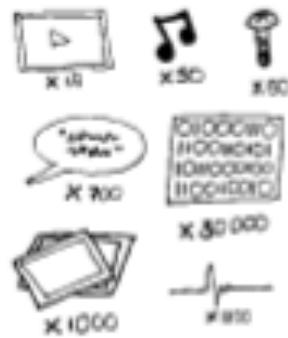




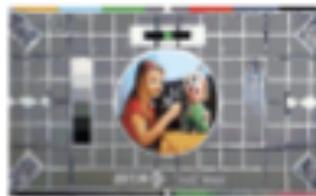
# Traditional Broadcasting

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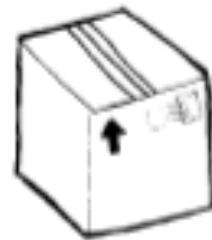
## ADDITIONAL BROADCASTING



2



3



4



The programme is made in the traditional way.

The programme is turned into a piece of linear media.

This is broadcast to everyone.

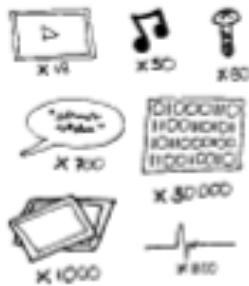
The same content is played back on devices, resulting in compromises on some devices.

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# HbbTV

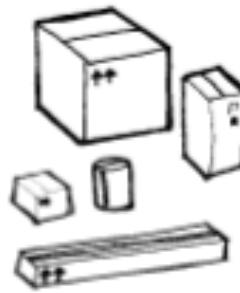
## OBJECT BASED BROADCASTING

1



The programme is made in the traditional way.

2



The programme is turned into a collection of media objects along with some metadata to describe how it should be assembled. All of this data is broadcast to everyone.

3



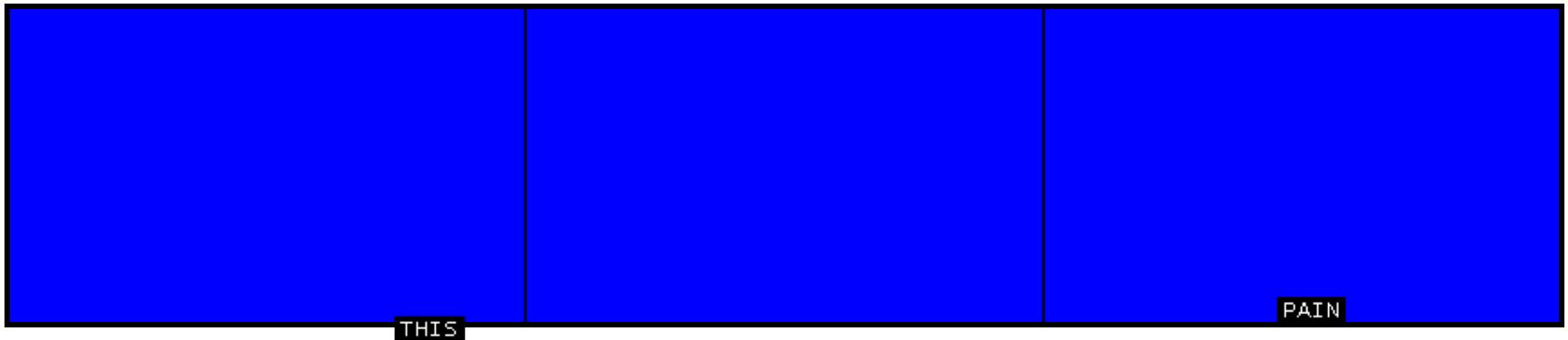
The device inside the viewer's home re-assembles the media objects according to the metadata.

4



The objects can be assembled differently (based on the original metadata), optimising the experience depending on local factors relating to the device, environment and viewer.

# Personalisation



DIGITAL

vs

TRADITIONAL

MARKETING

# NEW MEDIA VS. OLD MEDIA

databank

www  
internet

# CROSS MEDIA

social media

webshop



webinar



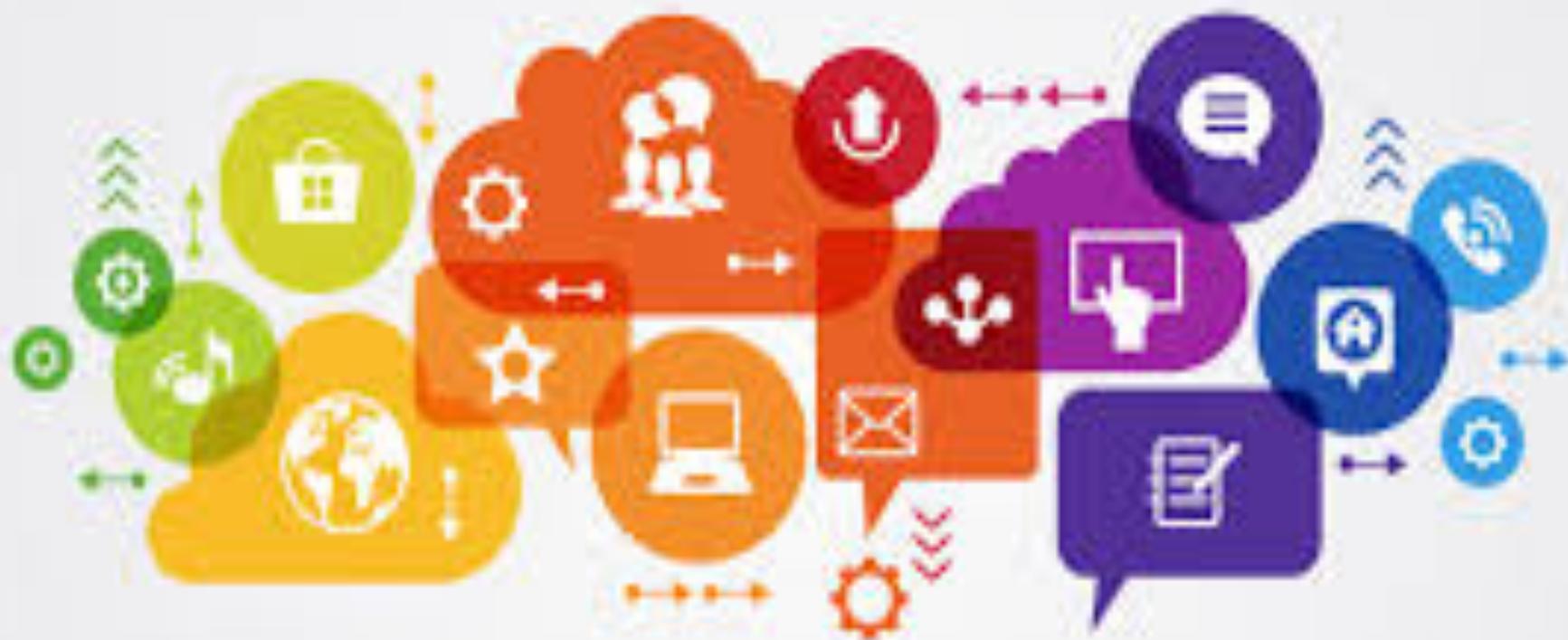
print



APP



# TODAY MEDIA CONENT





# CONTENT4ALL

Personalised Content Creation for the Deaf Community in a Connected Digital Single Market



# UMAQ

UNDERSTANDING  
MEDIA ACCESSIBILITY  
QUALITY



## LiveTextAccess European Project

Intralingual Real Time Respeakers and Velotypists



Co-funded by the  
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# BEYOND REALITY



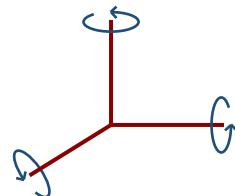
# IMAGES



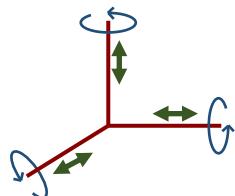
# 3 DoF vs 6 DoF

DoF = Degrees of Freedom

3 DoF = 3 Rotational Axes



6 DoF = 3 Rotational Axes + 3 Positional Axes



# 360 Video

- Panoramic video
- Uses special cameras
- Requires HMD



# Virtual Reality



Computer generated world

- Gaming
- CAD – Architects, Engineers
- Education - Simulation
- Virtual Galleries

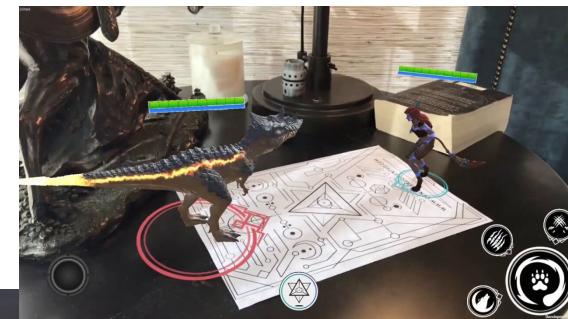
# Augmented Reality



Virtual objects placed in the real world

# Mixed Reality ?

- Definition seems interchangeable with AR
- Using real-world objects as 'anchors' for virtual objects?



# EYEWARE

- <https://ts.catapult.org.uk/current-projects/eyeware/>

# AUDIO

## BARBER SHOP

- <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwi-3MT8jvDiAhWZwcQBHagUB5cQ3ywwAHoECAoQAw&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DIUDTlvagjJA&usg=AOvVaw3Ky5iH5moCMs9dvClbaADR>

## HELLBLADE: SENUA'S SACRIFICE

- <https://youtu.be/oBvDsrJ0D0o>

## SOUND DEMO

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

## PEARL

- [https://www.youtube.com/watch?v=M\\_8C7zDxf2g](https://www.youtube.com/watch?v=M_8C7zDxf2g)

# 4, Immersive audio

## Virtual Barbershop

- Created by Qsound Labs to demonstrate their Cetera algorithm
- A 'Dummy head' recording mimics human ears

## Gaming

- Hellblade: Senua's Sacrifice uses Binaural sound to simulate the main character's psychosis

# Audio Beacons

Microsoft Soundscape



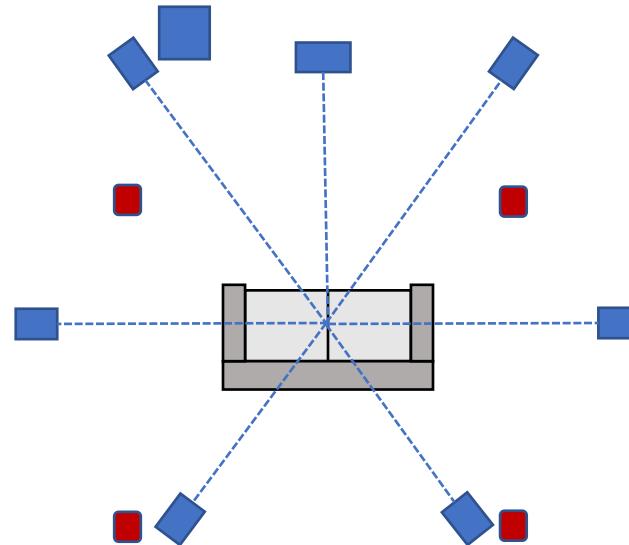
# Next Generation Audio

Places sounds around the user

- Channel Based Audio
- Object Based Audio
- Ambisonics
- Binaural

# Channel Based Audio

- Mono, Stereo, 2.1, 5.1, 7.1, 7.1.2, 7.1.4, 9.1 etc
- 1 track per speaker
  - Audio channels need to match speaker setup
  - Speakers placed around user



# Object Based Audio

Sound 'objects' contain metadata including

- Position, Label, Category

Personalised audio

- AD/no AD, alternate sports commentary, clear audio, Karaoke track?

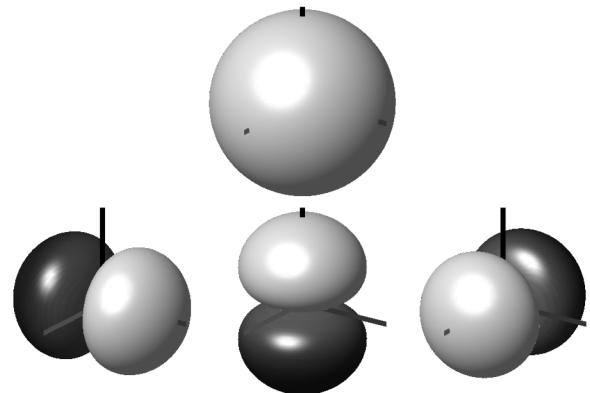
Position your own AD?

- Fraunhofer MPEG-H demo - pan and fade AD

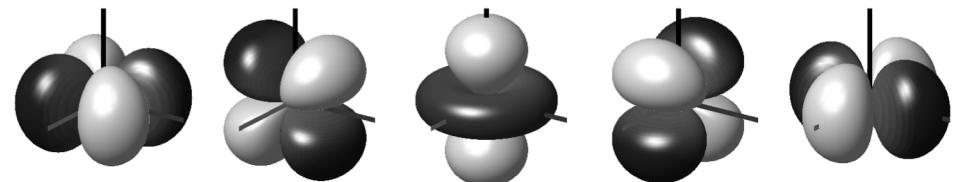
# Ambisonics

1<sup>st</sup> Order (4 channels)

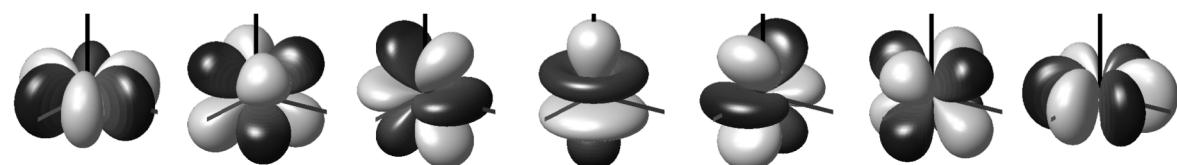
- Mono channel +  
Left/Right +  
Front/Back +  
Top/Bottom



2<sup>nd</sup> Order (9 channels)



3<sup>rd</sup> Order (16 Channels)



# Binaural Recording

- Using 'dummy head'
- Mimics the way our ears work



## Binaural Audio

- Means 'two ears'
- Attenuations and echos 'encode' position of sounds
- Sounds 3D through headphones
- Can be simulated with algorithm

# 5, AD with NGA

Different placement of audio description

- Classic (VOG)
- Static (Friend on Sofa)
- Dynamic (AD on Action)

# Classic (Voice of God)

- AD has no position associated
- AD style is more traditional



“Mal pulls a gun on Sheriff Nemo.”

# Static (Friend on Sofa)

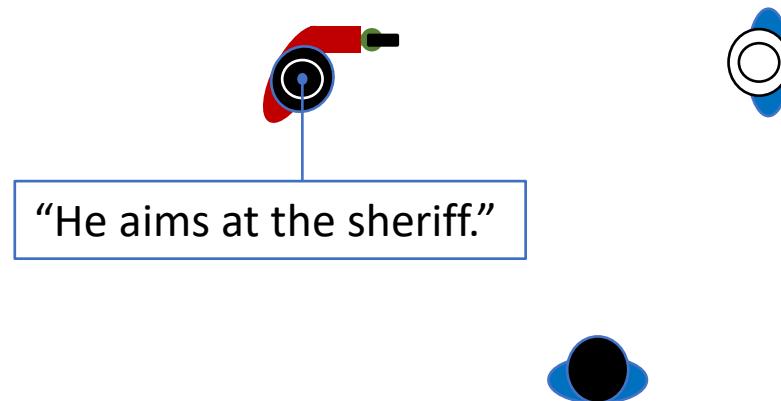
- 1<sup>st</sup> person
- AD comes from a static point in the scene
- Reminiscence (“that’s my friend...”, “We saw this...”, “The shop I was in was full of beads...” )



“That’s when he pulled a gun on me.”

# Dynamic (AD on Action)

- Short, “to the point” sentences
- 3D audio can mean less description



# 6, The Practical

## Audio Describe a video

### Classic

- when, where, who, what

### Static

- 1<sup>st</sup> person, past tense, make it personal

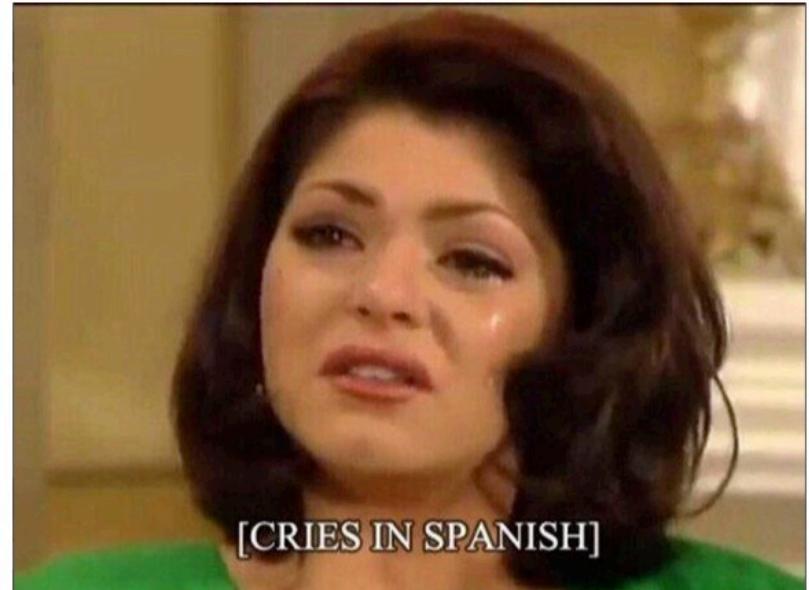
### Dynamic

- Just the facts

Thank you

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[CRIES IN SPANISH]