

SDH in immersive environments: can subtitles be immersive at all?

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Languages & The Media, 2018

Belén Agulló García
Researcher

Virtual Reality is
dangerous.

- Steven Spielberg

Content must
be immersive

cinematic
virtual reality

Real-world images
stitched together with
video editing software
with a duration from 5
to 10 minutes

A new grammar
needs to be created
for cinematic virtual
reality.

Attracting audience's attention

- **sound**
- movement and lightning cues
- moving objects
- traditional film strategies

Genres

Journalistic

- News
- Life Stories
- Documentaries: Travel,
History, Culture, Science

Fiction is very limited.

**okay, okay...
but how about
subtitles**





Research & Development
White Paper

WHP 330

April 30, 2018

Exploring Subtitle Behaviour for 360° Video

A. Brown, J. Turner, J. Patterson, A. Schmitz, M. Armstrong, and M. Glancy

Position of the
subtitles

Speaker location

experimental
solutions

position of
subtitles

Follow head immediately

ImAc Project – Romeo & Juliet (Liceu Barcelona)



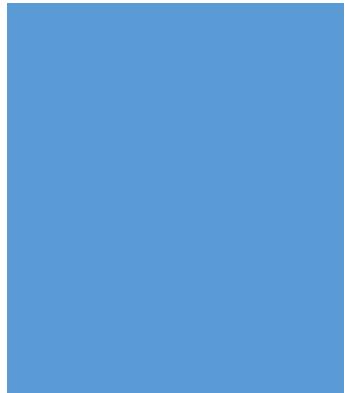
Evenly spaced

TNYT – The Displaced

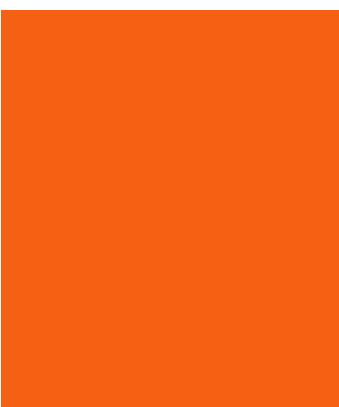
- Example:

<https://www.nytimes.com/video/magazine/100000005005806/the-displaced.html>

Speaker
location



Arrow



Radar



Auto-positioning

Arrow



Radar



Auto-positioning

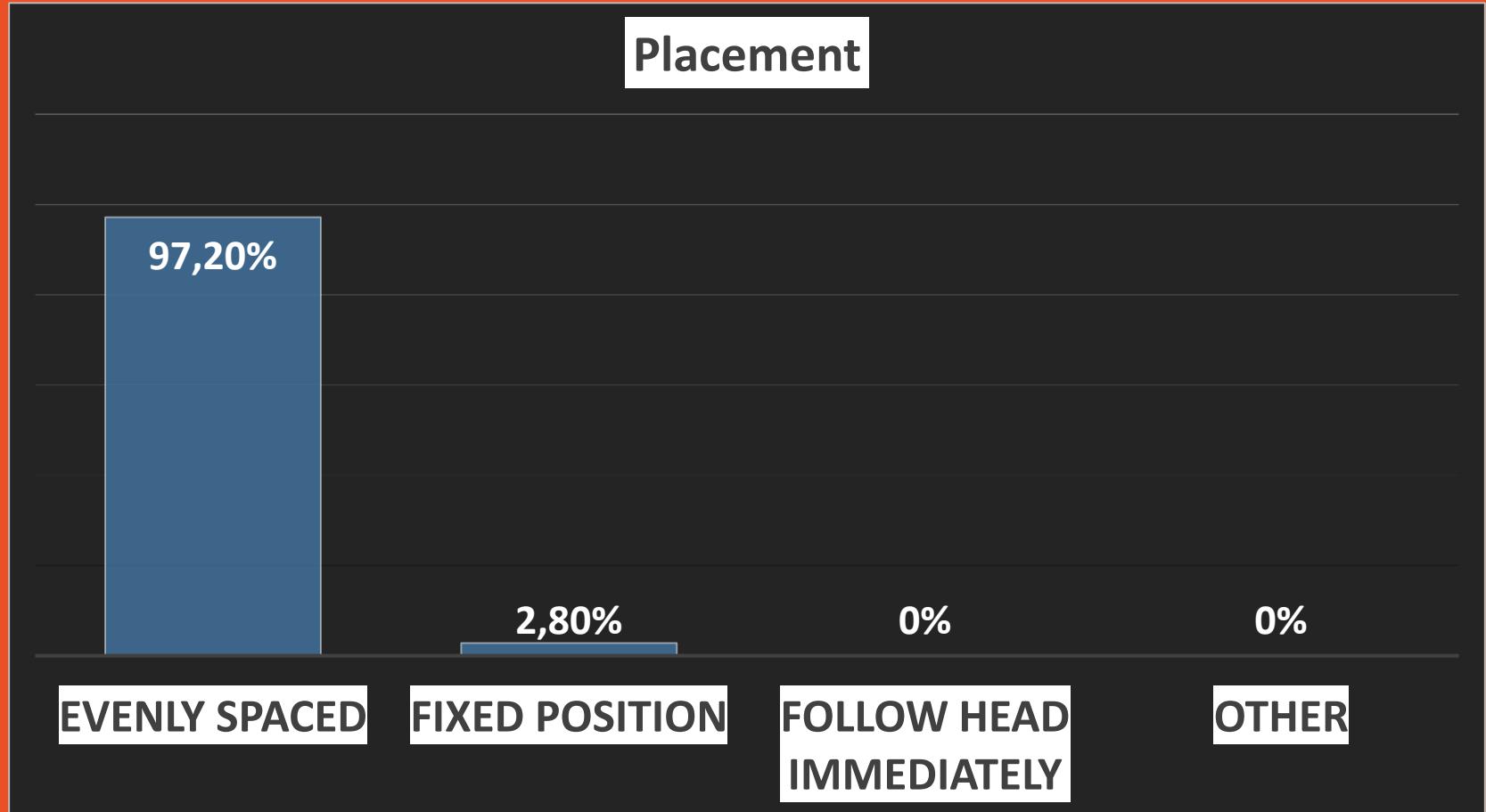
- The system takes you automatically to the speaker.

The New York Times

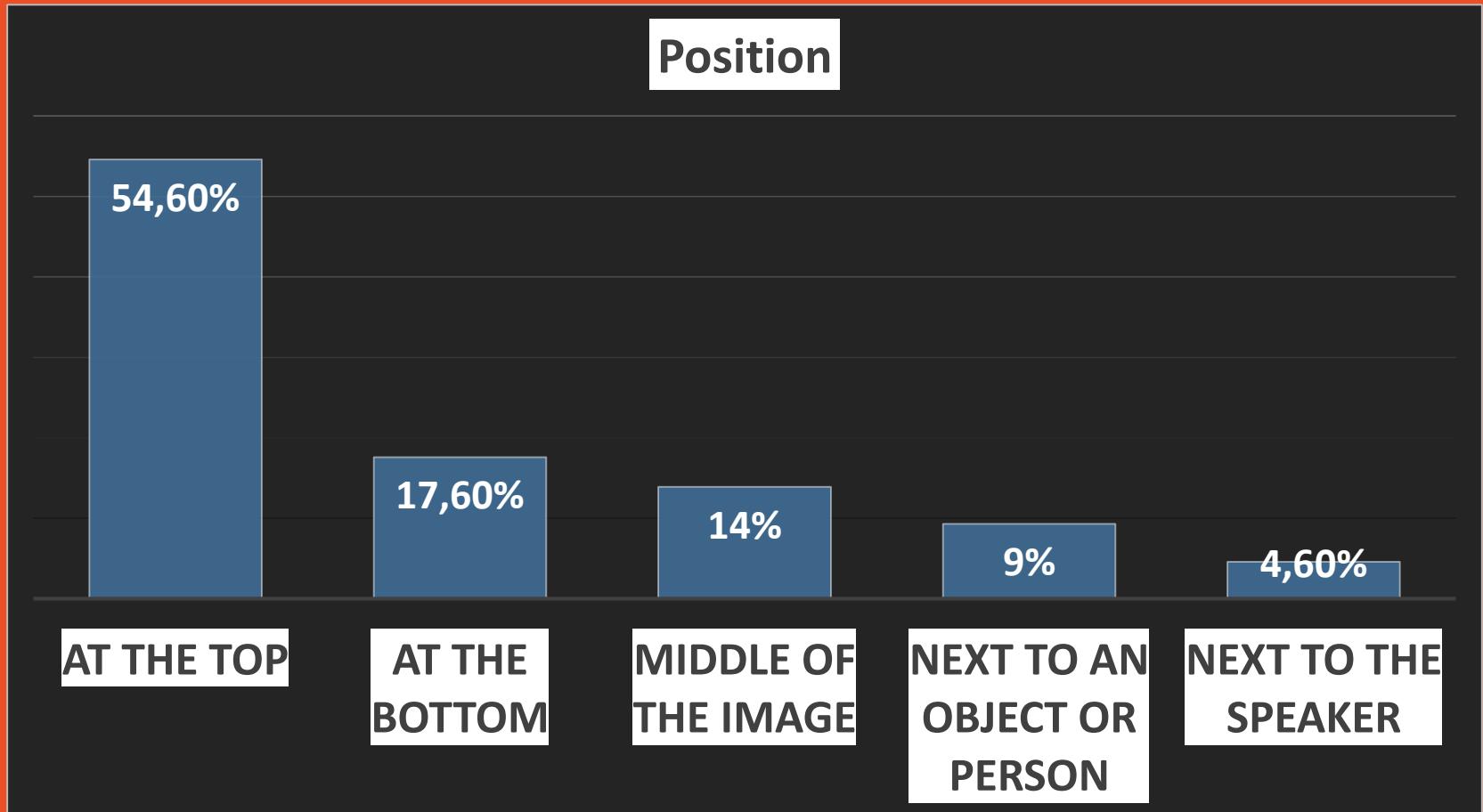


BBC

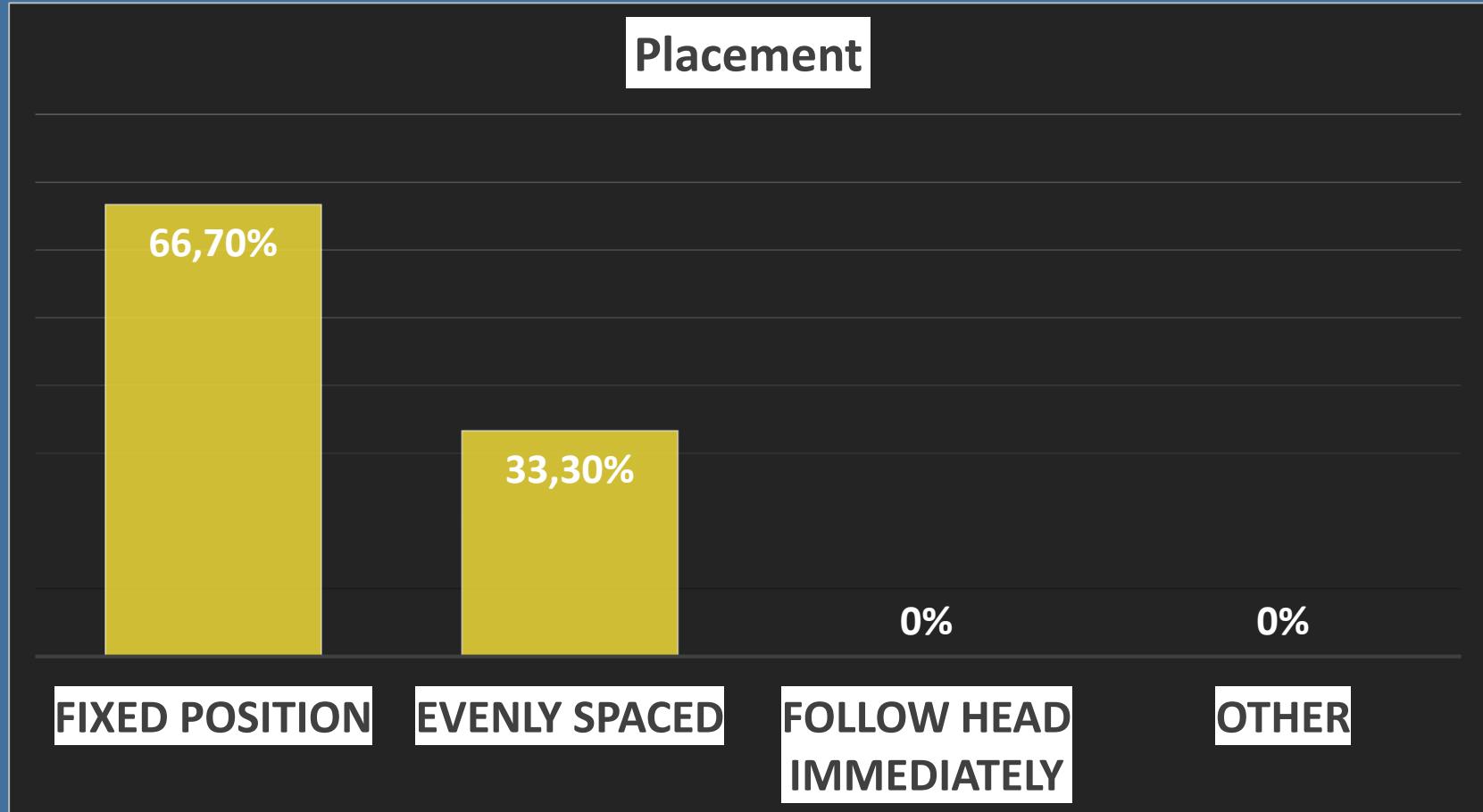
Placement – TNYT



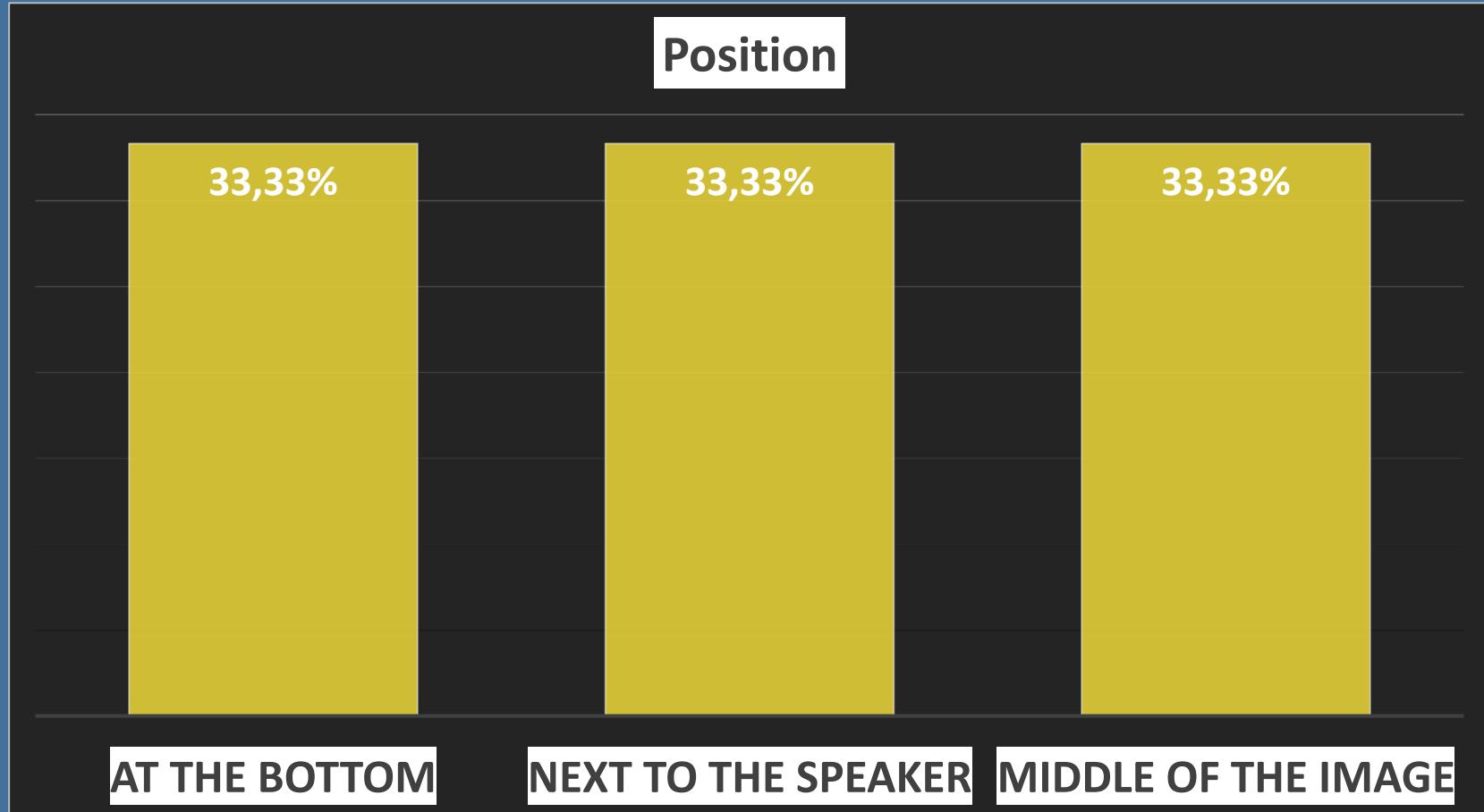
Position - TNYT



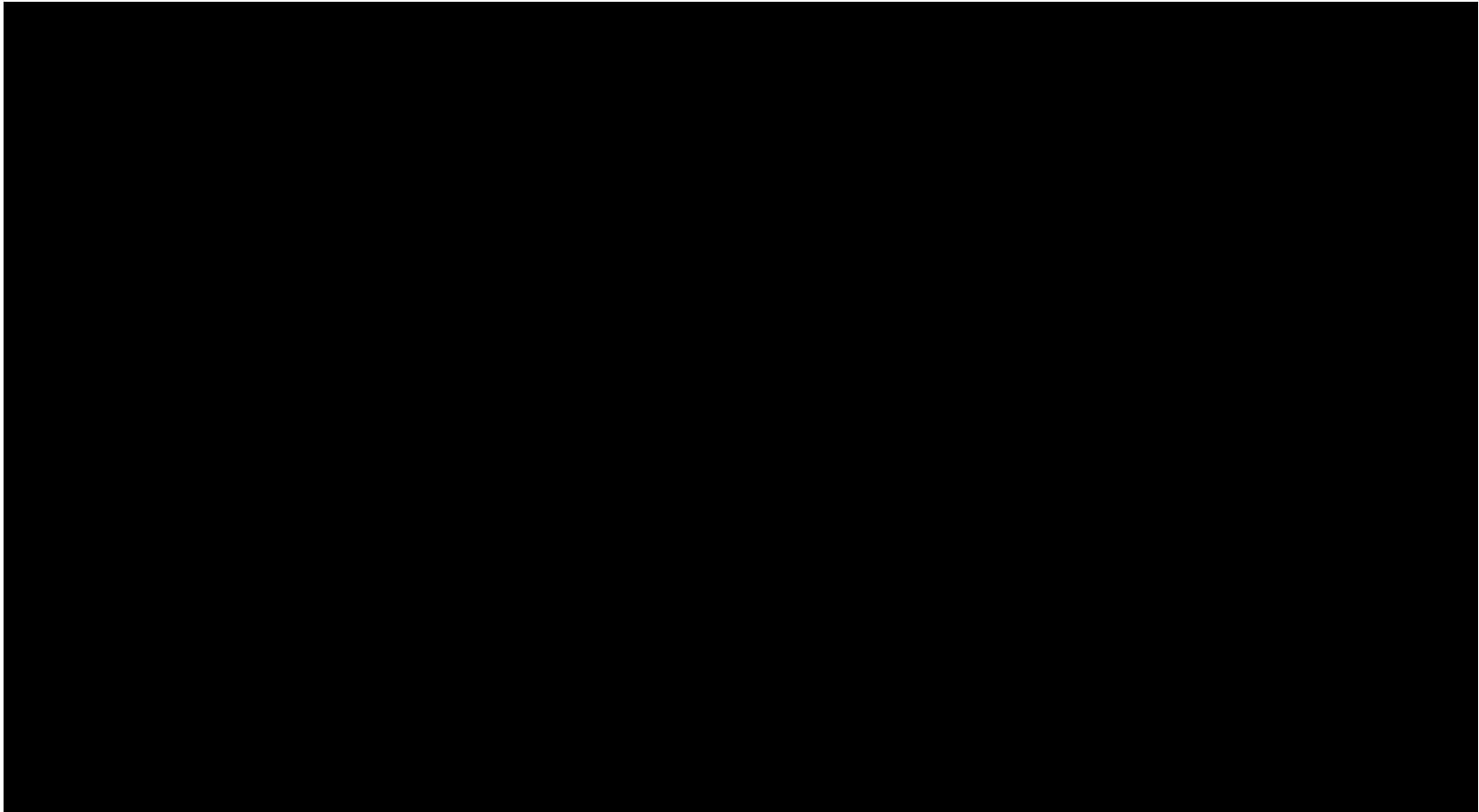
Placement - BBC



Position - BBC



No speaker location mechanism
found in NYT VR or BBC!



NYT VR – To main action

- TNYT VR browser includes a radar that takes the viewer to the main action.
- Example:

<https://www.nytimes.com/video/magazine/10000005005806/the-displaced.html>

BBC and TNYT

In some examples,
they used the titles to
indicate directions.

can
subtitles
be immersive



“Subtitles will never be disruptive for those who need them.

“ We just need to find an implementation for subtitles that is **immersive**...

and **usable**...

and **accessible**

**what we have learnt
so far.**

accessibility

- it is possible to integrate text in cinematic virtual reality content – TNYT & BBC did it!
- audio cues are a big deal in CVR narrative – speaker location systems are needed!

usability

- make subtitles in immersive media as similar as possible to traditional subtitles – “follow head immediately”, according to most users!
- make subtitles readable: size and background box
- at the top or at the bottom or both? we will need to wait and see how new grammar for CVR content is developed!
- **Loads of testing needed!**

immersion

- not disruptive if you need them
- “suspension of disbelief”

Thank you so much!

www.imac-project.eu

belen.agullo.garcia@gmail.com
[@Belen_Translate](https://twitter.com/Belen_Translate)

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Disclaimer

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