Implementing subtitles in immersive media for a comfortable reading

TRANS MEDIA CATALONIA

WoRLD: Workshop on Reading, Language and Deafness
Belén Agulló • Pilar Orero • Anna Matamala
E-mail: belen.agullo@uab.cat | www.imac-project.eu

Departament de Traducció
i d'Interpretació i d'Estudis
de l'Àsia Oriental
UAB
Universitat Autònoma de Barcelona

1. INTRODUCTION

Current situation:

- Immersive contents (**cinematic virtual reality**) are starting to be **mainstreamed**.
- There is **no standard solution** to implement subtitles (or subtitles for the deaf and hard-of-hearing) yet.

Main issues:

- **Position**: where should subtitles be located?
- **Speaker location**: if there is no audio cue, how can the speaker be located and identified?

2. POSITION – POSSIBLE SOLUTIONS

HOW?

- **Fixed-positioned**: subtitles are placed in two or three fixed positions in the 360º sphere.
- **Always-visible**: subtitles follow head's movement and are always displayed in front of the viewer.

WHERE?

- At the **top** or at the **bottom**

3. SPEAKER LOCATION – POSSIBLE SOLUTIONS

- An **arrow** positioned next to the subtitle to indicate where the speaker is located. The arrow only appears if the speaker location is out of sight.
- A **radar** that is always displayed and indicates where the speaker is located (represented by a dot).
- An **auto-positioning** mechanism that automatically takes the viewer where the speaker is, forcing the change of perspective.

4. CONCLUSIONS

- The **position of the subtitles** will **depend** on the type of content. **Always-visible** is preferred among users so far.
- **Further testing** is needed for **speaker location** solutions.
- Subtitles in immersive media must be implemented following criteria of **accessibility**, **usability** and **immersion**.

5. REFERENCES

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