

THE (IM)POSSIBILITIES OF AI for the production of audio description for film and television content

Research commissioned by:

Bartiméus Fund, Netherlands Blind Institute/NGO
CFAP, Netherlands Audiovisual film & tv producers
NPO Innovation, Dutch National Public Broadcaster



Services

- Focus on online videos (informative/educational content)
- Subtitles, AD, transcripts and sign language translation
- 17 (EU) languages
- PROs / Freelancers / Partners

Software

- Online video editor subtitles, AD (TTS), transcript
- Video publication tools for YouTube
- Fully accessible video player
- Integrations with Content Management Systems

We help organizations meet the - WCAG 2.2 AAA / European Accessibility Act - regulations



Audio description can be created with AI, right?

Market in need for a valid answer.

- Researcher: Wim den Herder (professional musician & mathematician)
- Research period: September 2024 to February 2025
- Material in Dutch: Short films & NPO TV content
- LLM AI Models: Gemini, Claude, Malmo, Mistal > Chat GPT 40 (best results in Dutch)
- Comparison of the human written AD with the AI generated AD (scored in %)
- Extra: Feedback round from both professional AD writers and AD-users on AI-AD results



AI - "An eager, but clueless assistant, that needs micro-management"

Presentation Language at the media 2024

- The more input the better the output
- · 'Magic' happens in prompt engineering
- Ask AI: what to do, how to do it (examples/wording/no repetitions), for who to do it etc.
- Ask AI: to improve its own results
- Its output is never the same! (refresh, refresh, refresh... until satisfied)



Methodology

- 'Phased' prompt engineering
- Identify AD-areas
 - reversed subtitle track
- Identify scenes within AD-areas
 - based on changed camera viewpoints with a max. 15. sec.
 - send in 40 frames per scene
- Identify (and name) main film characters
 - Al written descriptions of person characteristics
 - screenshots of character with their name
- Send along the film script, the film synopsis and the film subtitle file

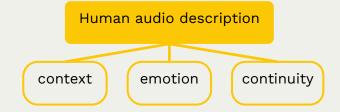


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Results - GPT 40

Impressive, but...

- AI has potential, but falls short when it comes to narrative content.
- Al has no overview of the listeners' perspective
 - It doesn't guide the listener A, B, C...
 - Information that's already known
- Al can't pick up on nuanced emotions, small gestures
- Al can't deviate from scene
 - No pre-announcements / ad after a scene
- Al is sensitive to errors
 - AI-AD can add to confusion
 - Trained on most likely scenario art usually deviates from norm





Example:

A curtain closes in a dramatic scene, but AI describes it as "opening" —changing the entire narrative!



Example AI audio description



Example human audio description



What professionals think

- Professionals fear for quality and creativity
- To rewrite AI AD will take more time than writing from scratch
- See potential in AI for documentaries where content is less dependent on narrative

What AD-users think

- Fragmentary lacks coherence
- Disruptive to the story
- AI-AD ads to the puzzle it is not a nice experience
- "Better than nothing"



Conclusion

- AI-AD is an interesting development, but todays model is not usable for (the production of) narrative content
- · There is potential for documentaires, provided human editor remains in lead
- AI development is moving in a ultra fast pace, so tomorrows model can deliver other results



What's next?

- Extended audio description
 - Add a editor feature to create EX AD
 - Video player that can support EX AD





Interested in our research? Let's talk!

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