Photosensitive epilepsy warning: some light flashes in this video.

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Real-time audio description for live streamed games:

An early Minecraft prototype.

Background

- Live streaming

  a gamer sharing its gameplay to spectators by live streaming it

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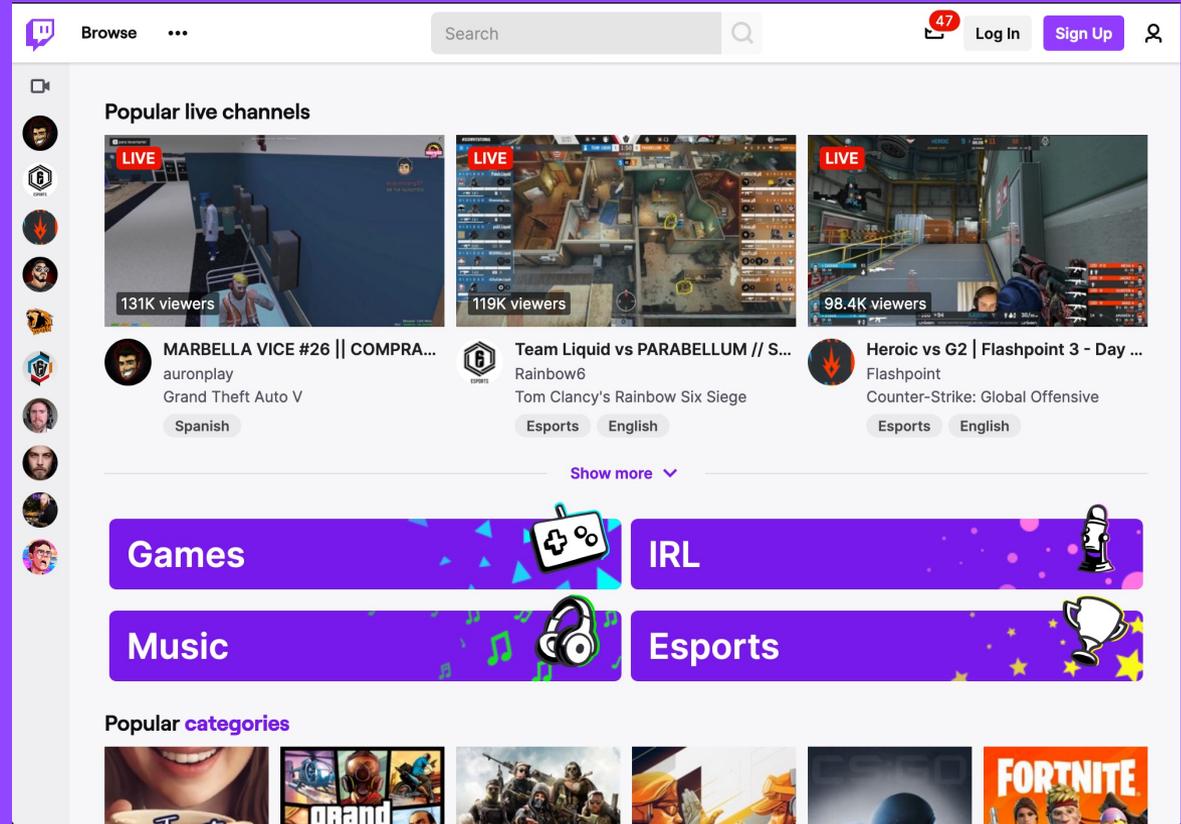
30

million daily visitors
on Twitch
(twitch.tv 2021)

4

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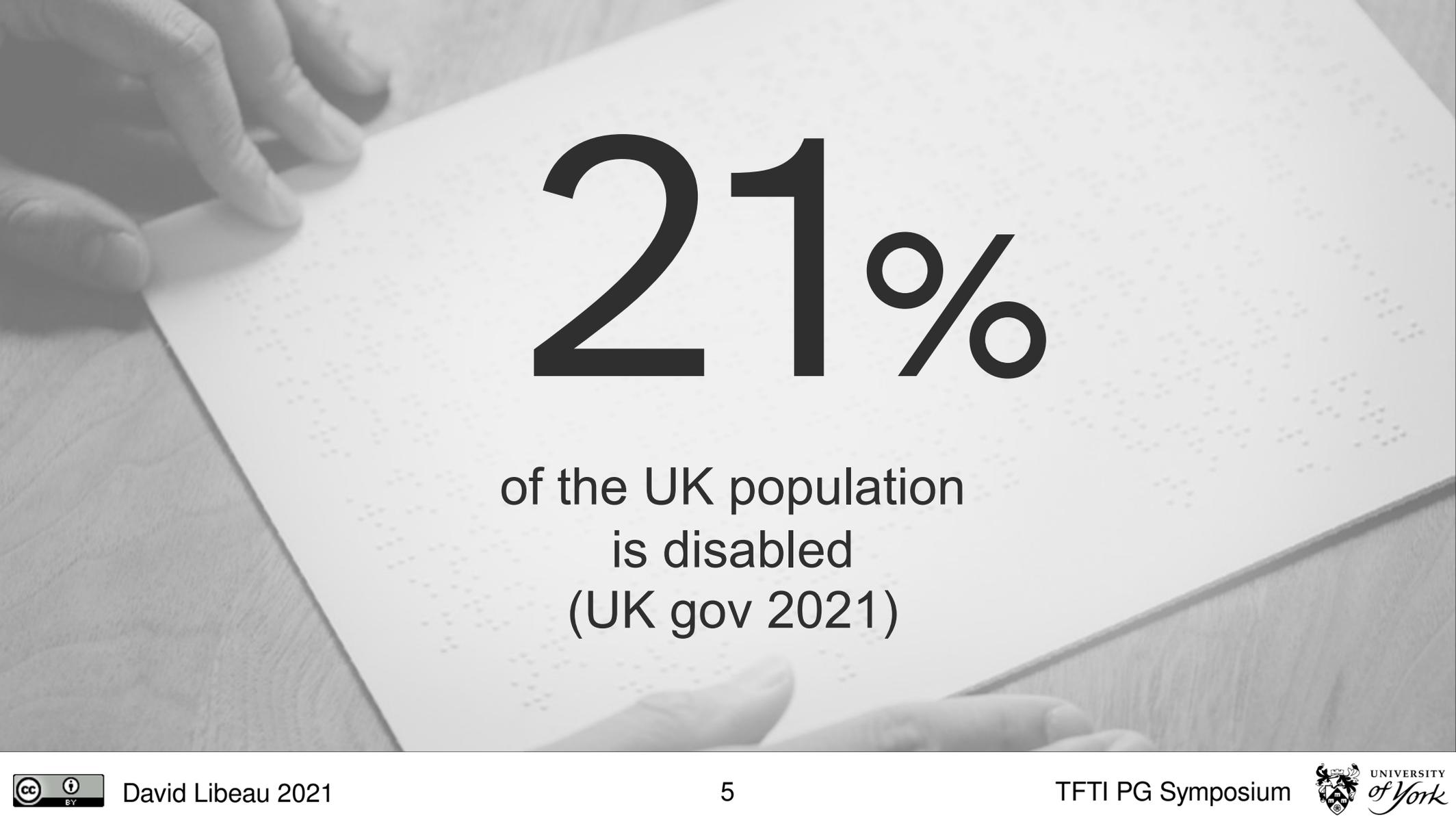
21%

of the UK population
is disabled
(UK gov 2021)

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Last modified on 03/30/2020

Twitch Accessibility Statement

You're already one of us.

As children, some of our earliest memories came from the playground. When we played together, we made cherished memories. *That's* what we want Twitch to be: A place where anyone can play and make memories together.

What are the guidelines?

To help us make the Twitch experience positive for everyone, we're committed to using the Web Content Accessibility Guidelines (WCAG) 2.2. The guidelines provide a framework to make our content more accessible for everyone.

WCAG has three levels of accessibility: A, AA, and AAA. We chose Level A as our target for the Twitch experience for 2020. In 2021 we plan to level up to AA.

How do we do this?

Here's a few things we're working on *right now*:

- Reducing accessibility defects
- Including accessibility documentation in our core components
- Inviting streamers with disabilities to provide feedback
- Setting up a resource group for employees with disabilities
- *And more!*

We're working hard on the Twitch experience and are on our way to our Level A accessibility goal.

Exceptions

Background

Exceptions

- An exception is WCAG Success Criteria 1.2.5: Audio Description. It's not feasible for us to create accurate audio descriptions for the millions of hours of video content streamed on our platform daily. We apologize for this inconvenience.

- Web, game, media accessibility?
→ Web Content Accessibility Guidelines (WCAG).
→ Live streaming is a new entertainment media.
→ Improving games' accessibility.

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AD))) for games

- Narrator features

→ Some prototypes with full audio description (i.e. 2D puzzle games).

→ Commercial games may start with cut-scenes.

→ In-game communication (mandatory).

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Research question

To what extent could generated audio description be used to make live streamed games accessible to visually impaired people while ensuring a balance between information and entertainment?

Exceptions

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Technological challenges
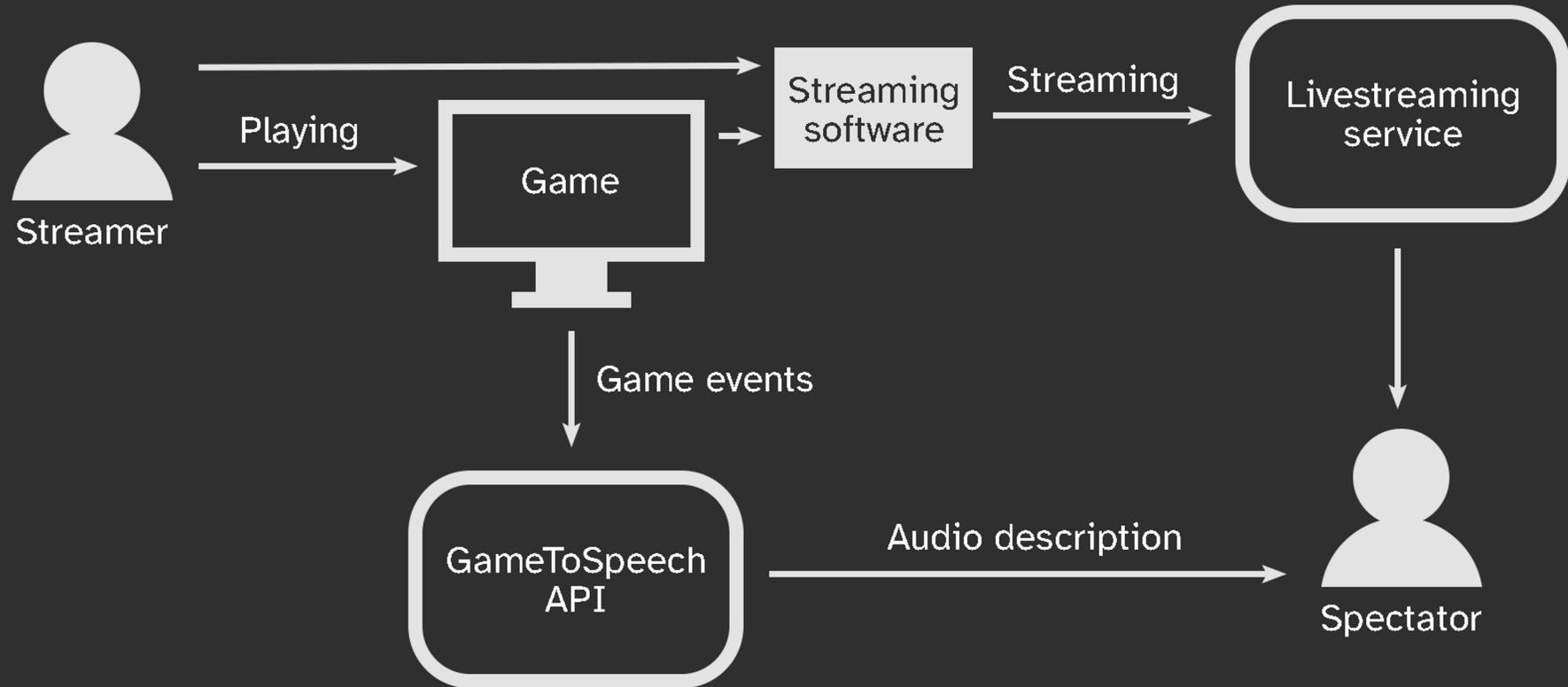
Technological challenges

. How to get game data?

| Send direct requests to a server	Get data via telemetry SDKs	Retrieve data with public game APIs	Mod an existing game
+ lowtech	+ easy implementation + wider availability	+ available for eSports games	+ not only recent games
- game developers are responsible	- game developers are responsible	- not all games - data quality?	- not all games - game developers not involved

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Demo time

- Minecraft prototype
→ A mod that export data out of Minecraft.
→ Based on the *AccessibilityPlus* mod published in 2020 by Luis Sanchez.
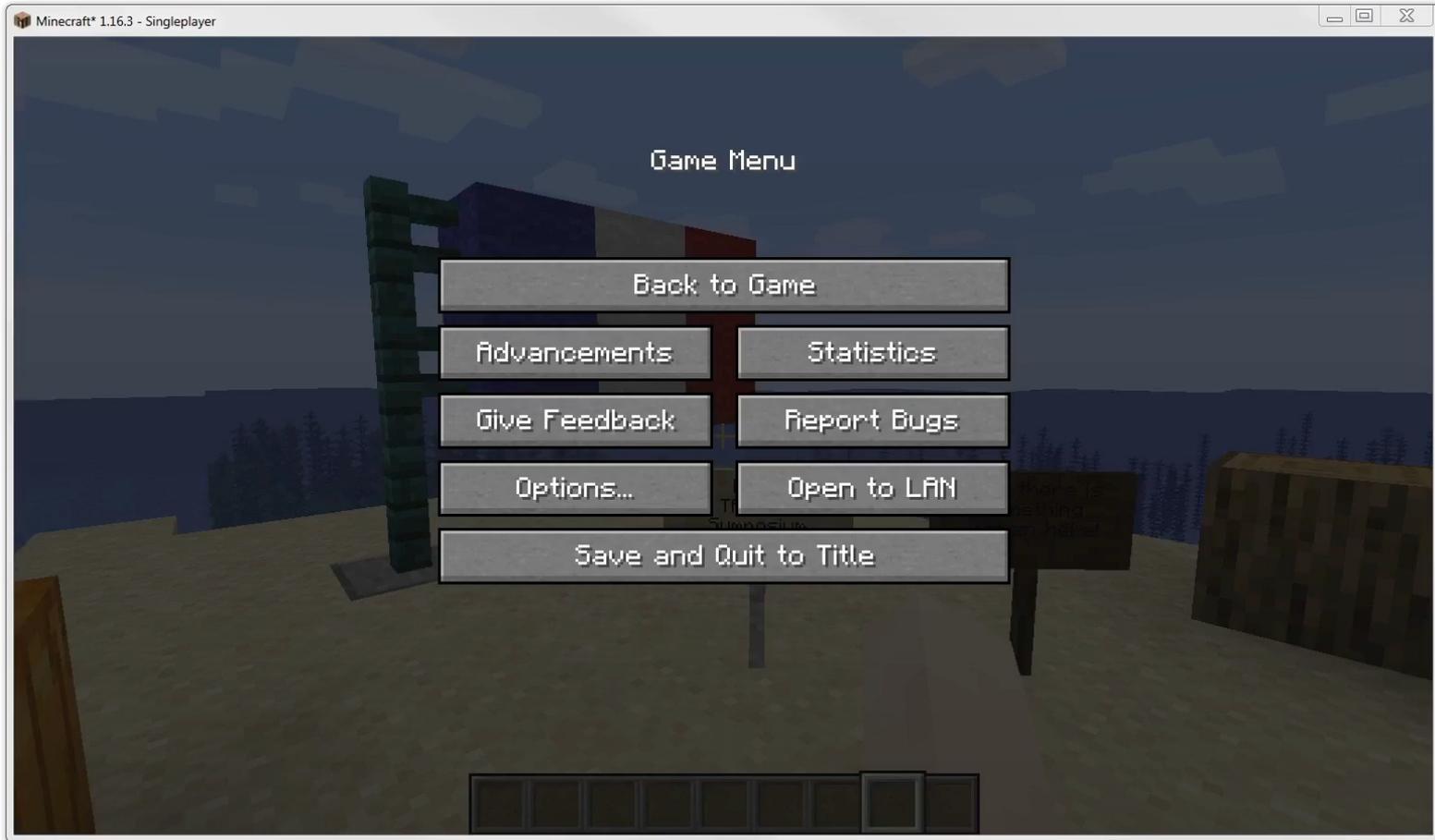
To be continued…

- A lot to do:
→ What to describe?
→ How to make the experience great?

Method

- User testing with visually impaired gamers.

- Vertical slice of the overall experience.

"Nothing about us without us"

– The accessibility community, always.

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Thanks for listening.

Questions? Ideas? Funding? Reference list?
Contact me: phd@davidlibeau.fr

Slides: dav.li/TFTIPGS21
Website: gametospeech.com