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# Accessibility and Inclusion in the Videogame Industry

Chapter 9 in IRIS Report “The regulatory framework for videogames”  
Thomas Westin 2024. Presentation in Strasbourg, November 2024.

## Presentation overview

- Games are both entertainment and tools
- Inclusive game design process and examples
- What EAA can mean for games, including XR
- To discuss: Questions about EAA for games



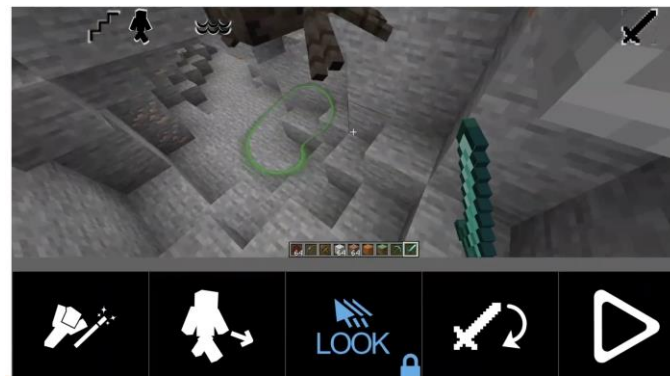
<https://oneswitch.org.uk/page/game-accessibility-info>

# Games are both entertainment and tools

- Player to developer continuum
- Accessible games, game studios and development tools

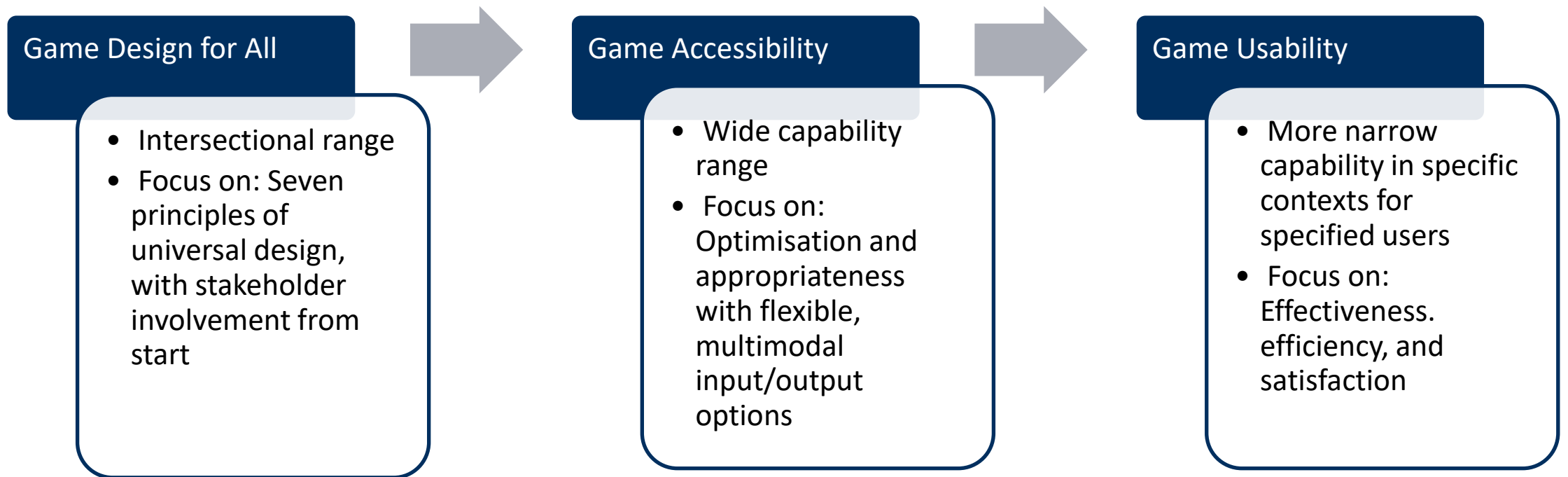


<https://www.minecraft.net/en-us>



<https://www.specialeffect.org.uk/how-we-can-help/eyemine>

## Inclusive game design process





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# STORY + COMBAT SUBTITLES

Ellie: Joel. There's a guy up on that second floor. Right there.



<https://blog.playstation.com/2022/08/26/the-last-of-us-part-i-full-list-of-accessibility-features/>



<https://blog.playstation.com/2022/08/26/the-last-of-us-part-i-full-list-of-accessibility-features/>

## CINEMATIC DESCRIPTIONS

She surveys the  
apartment

Her eyes wander to Joel

She steps past the  
couch

He wears the wristwatch  
Sarah gifted him which  
now has a cracked face



# European Accessibility Act (EAA) and Game Accessibility

- Interface accessibility across all digital platforms, including video games.
- Adopts Web Content Accessibility Guidelines (WCAG) principles:
  1. Perceivable
  2. Operable
  3. Understandable
  4. Robust





## Issues of WCAG for games

- Games can only be **optimised** to follow WCAG within limits of game rules, and
- WCAG does **not include** what is needed for accessible games

## Guidelines for web and games: main differences

Web Content Accessibility Guidelines (WCAG)	Game Accessibility Guidelines (GAG)
Web focus	Games focus
User agents, Assistive Technology, programmatic determined	More explicit and specific
Levels: A/AA/AAA	Basic / Intermediate / Advanced
Aims for universal accessibility	Accessibility limited by game rules
Conformance oriented	Best practice oriented

WESTIN, T., KU, J. J., DUPIRE, J. & HAMILTON, I. 2018. Game Accessibility Guidelines and WCAG 2.0 – A Gap Analysis. ICCHP 2018, 2018 Linz, Austria. Springer International Publishing, 270-279.



## WCAG conformance versus Best practices

- Best practices are recommendations or guidelines for accessibility that are not mandatory
- WCAG conformance means that the content satisfies the success criteria defined in the guidelines.
- WCAG has three levels of conformance:
  - **Level A:** The minimum level of accessibility.
  - **Level AA:** An enhanced level of accessibility.
  - **Level AAA:** The highest level of accessibility, which may not be achievable for all content.
- To conform to a specific level, the content must meet all the success criteria for that level

<https://www.w3.org/WAI/WCAG21/Understanding/conformance>

<https://www.w3.org/WAI/GL/WCAG20/WD-WCAG20-20060327/conformance.html>



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# Extended reality (XR) game accessibility

W3C XR Accessibility User needs and Requirements ([w3.org/TR/xaur](https://www.w3.org/TR/xaur))



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# Some XR issues for people with disabilities

Slides from one of my lectures about XAUR



# Over emphasis on motion controls

- Many motion controllers emphasise “using your body to control the experience”.
- “Some games with XR components may lock out traditional control methods when a VR headset is being used”
- → Enable use of a range of input mechanisms.



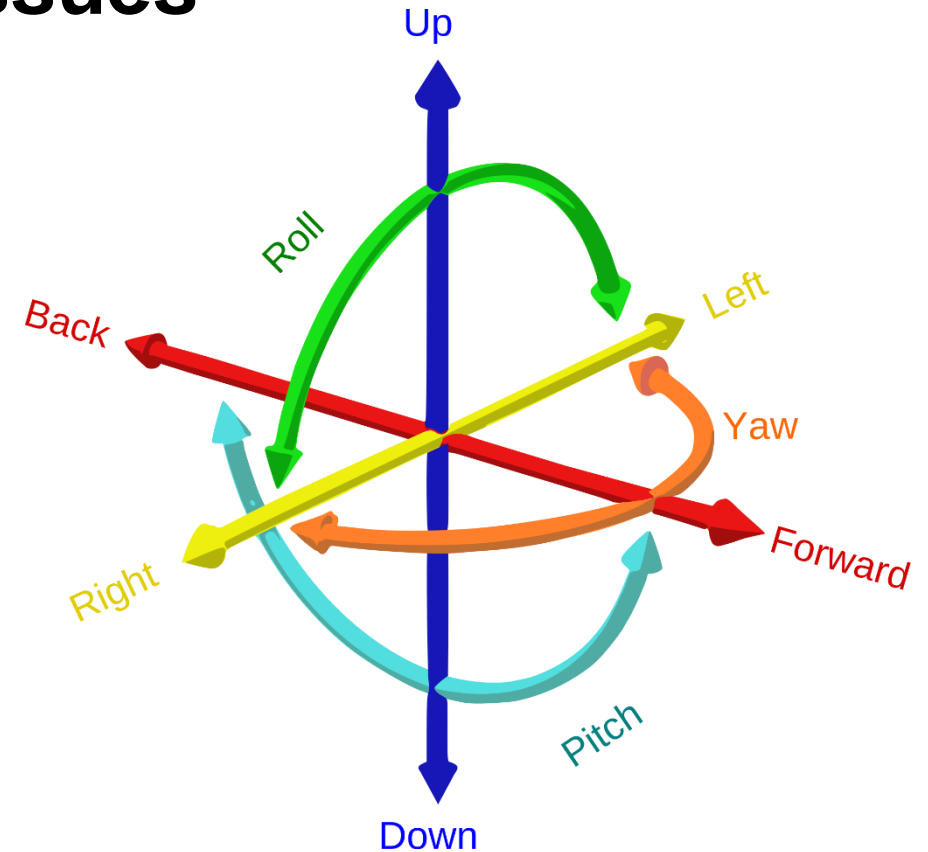
Body



Gestures

## 3DOF, 6DOF specific mobility issues

- “3DOF may have implications for people who have motor impairments **that affect the use of one or both arms**”.
- “6DOF may have implications for people who are **quadriplegic and for people that use a wheelchair or mobility aid for navigation**, where there is a need to move directionally in physical space or a higher emphasis on the lower extremity for movement”.



## VR Headsets need the user to be in a physical position to play.

- “The **user** should not have to be in a **particular physical position** such as standing or sitting to play a game or perform some action. Or there should be ability to **remap** these 'physical positions' to other controls (such as using [WalkinVRDriver](#)).”





## Games and hardware being locked to certain manufacturers

- “Consoles should **allow full button remapping** on standard game controllers - to different types of assistive technologies such as switches. “
- “These **remapping preferences should be mobile, and transportable** across a range of hardware devices and software.”



Gaze



Speech



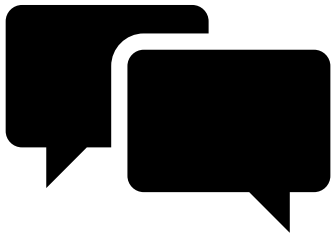
BCI



Mobile sensors

# Audio design lacks spatial accuracy

- “Sound design needs particular attention and can be critical for a good user experience for people with disabilities.”
- “**The auditory** experience of a game or other immersive environment **may 'be' the experience**”





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# Summary





## Questions to discuss

- What does EAA mean for (game) accessibility in extended reality (XR), where guidelines are only emerging in research?
- What consequences may or can EAA have for the (European) game industry? How can EAA with WCAG be applied to games by especially small to medium size game studios?
- In what ways can end-users (players with disabilities) be involved in the interpretation of EAA into national law?