



Audio-Driven Game Design

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GAME DEVELOPERS CONFERENCE March 14–18, 2016 · Expo: March 16–18, 2016 #GDC16



Introduction

- Henrik Engström
 - Senior lecturer/Programmer
 - PhD in Computer Science
 - Researcher and lecturer in Serious Games



Introduction

- Per Anders Östblad
 - Master's degree in Informatics with focus on audio games
 - Freelance sound designer
 - Researcher and lecturer in game sound design



Introduction

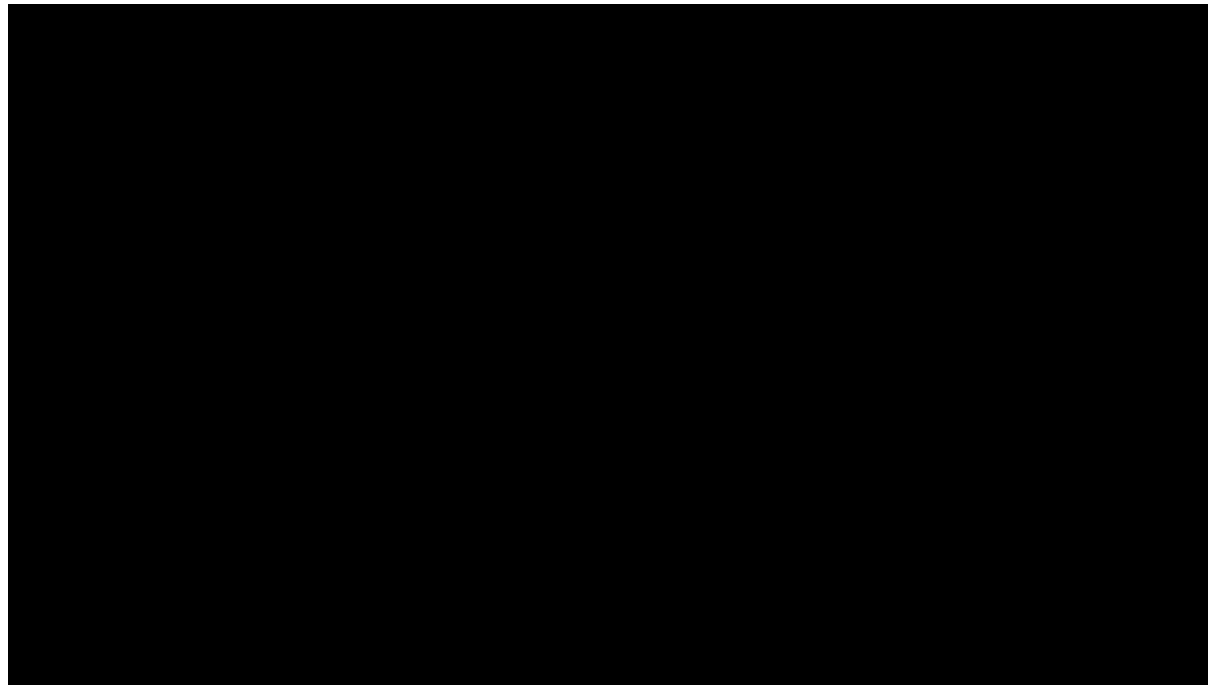
- University of Skövde
 - 5 bachelor programs in game development
 - 2 master programs in game related fields
 - 2 research groups working with games





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Introduction



Background

- The *Innovation for all* contest
 - The Swedish Post & Telecom Authority
- Developed a mobile game
 - Includes visually impaired players



Background

- Accessible through original design
- Same interface for all players
- No external tools
- A “regular game”
- Enable a shared gaming experience



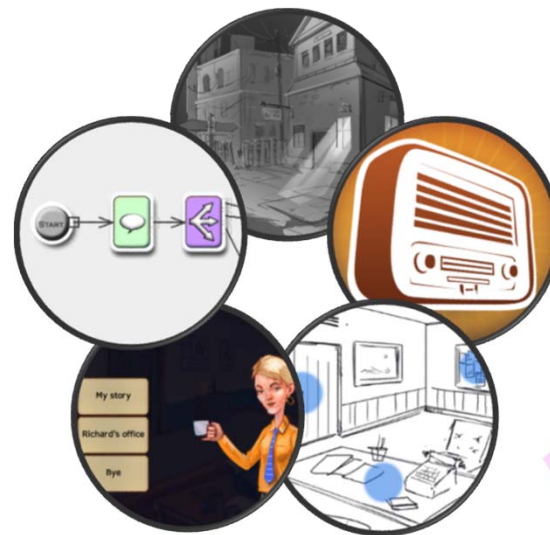
Audio-Driven Game Design

Everything told with audio →
audio-driven development



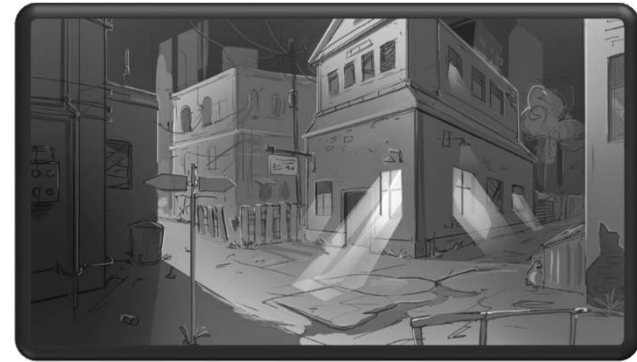
Audio-Driven Game Design

- Genre analysis
- Story development
- Art direction
- Interaction design
- Dialogue prototyping



Genre Analysis

- Why point-n-click adventure?
 - Simple mechanics
 - Easy to learn
 - 2D (in this case)
 - Main character narration



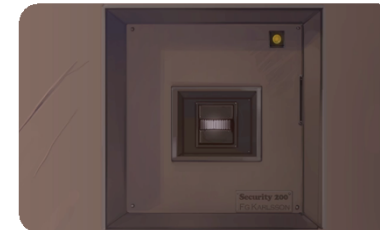
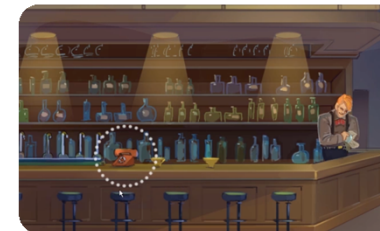
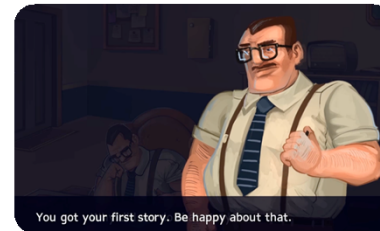
Genre Analysis

- Test a vertical slice
- Inventory problematic
 - Combining objects
 - Quick mental overview



Genre Analysis

- Focus on the essence
 - Story
 - Exploration
 - Puzzles

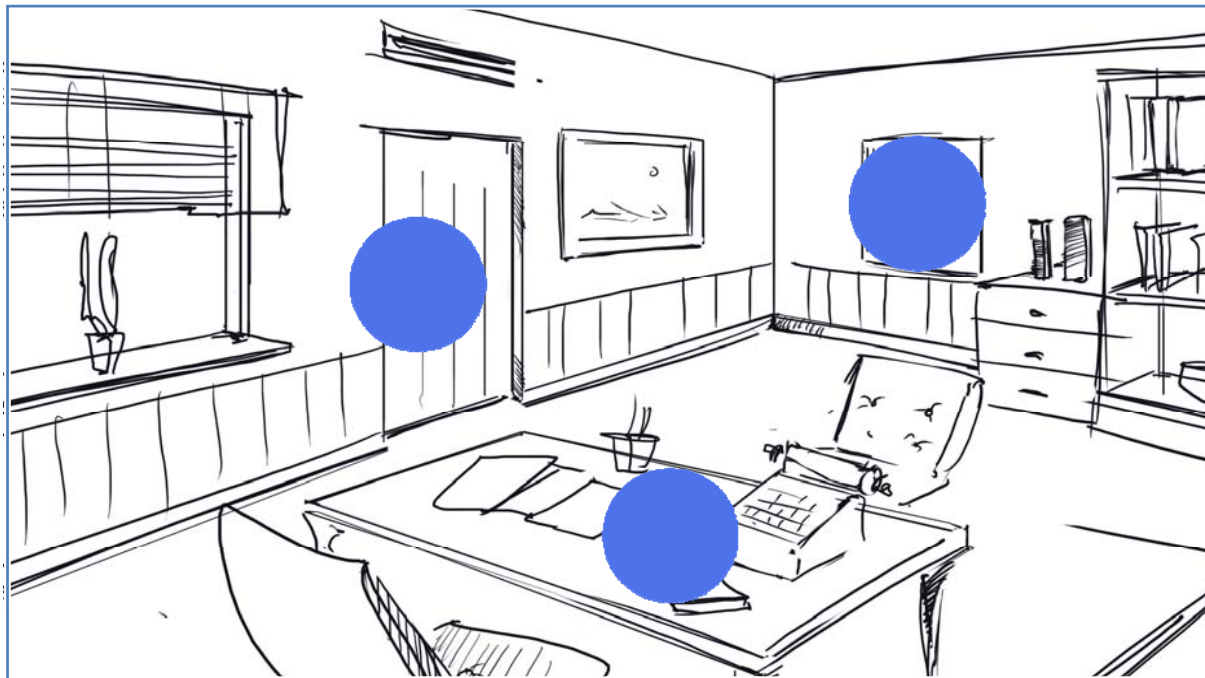


Story Development

- Set in the 60's / 70's
 - Iconic and interesting sounds
- Radio reporter
 - Audio theme
 - Part of job to narrate



Art Direction



Art Direction

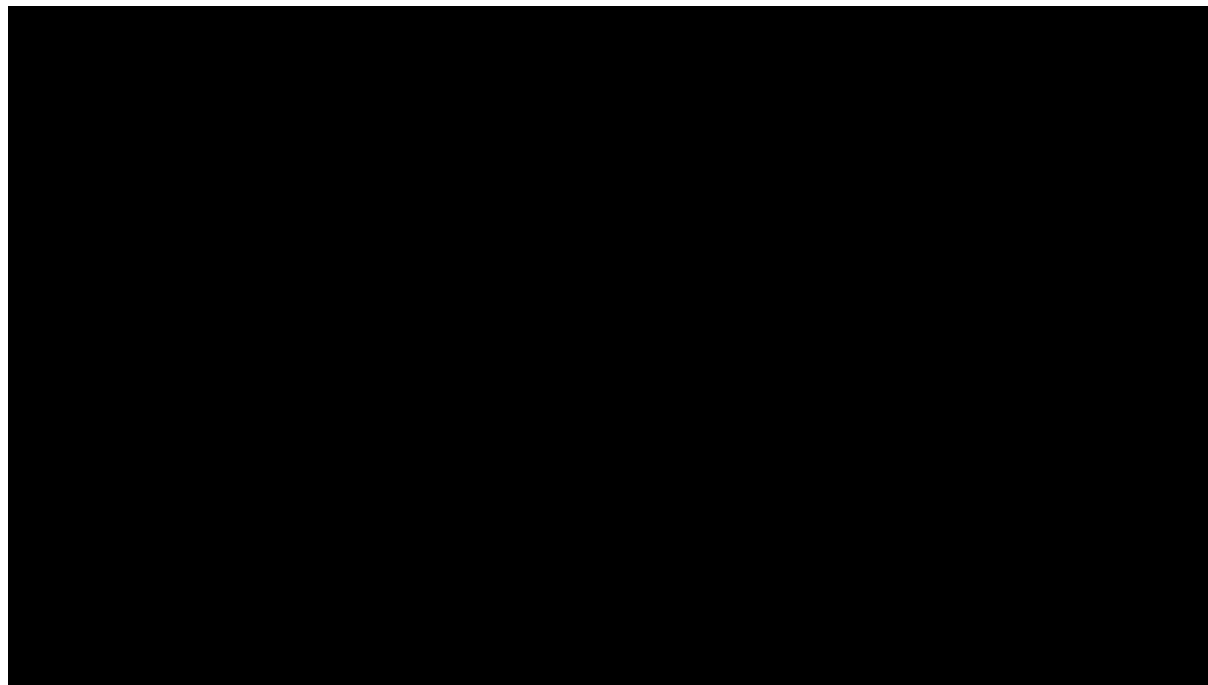


Interaction Design

- One interaction model
 - Drag one finger to search
 - Release to interact
- Used in all interface modes
 - Exploration
 - Dialogue
 - Puzzles

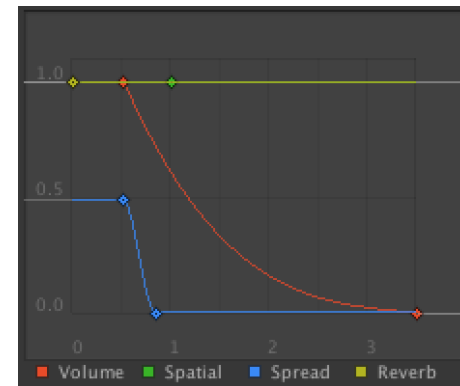


Interaction - Exploration



Interaction - Exploration

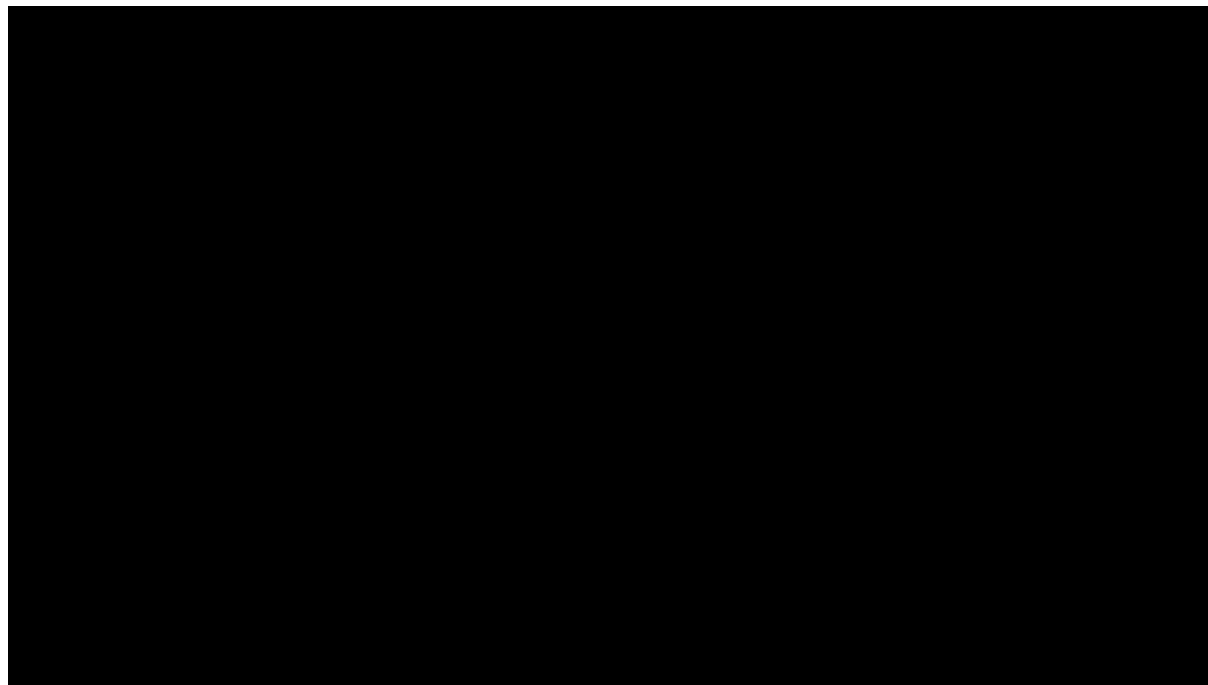
- Diegetic 3D sounds
 - For recognition and immersion
 - Creating a mental image together with ambience and music
- Distinct interface sounds



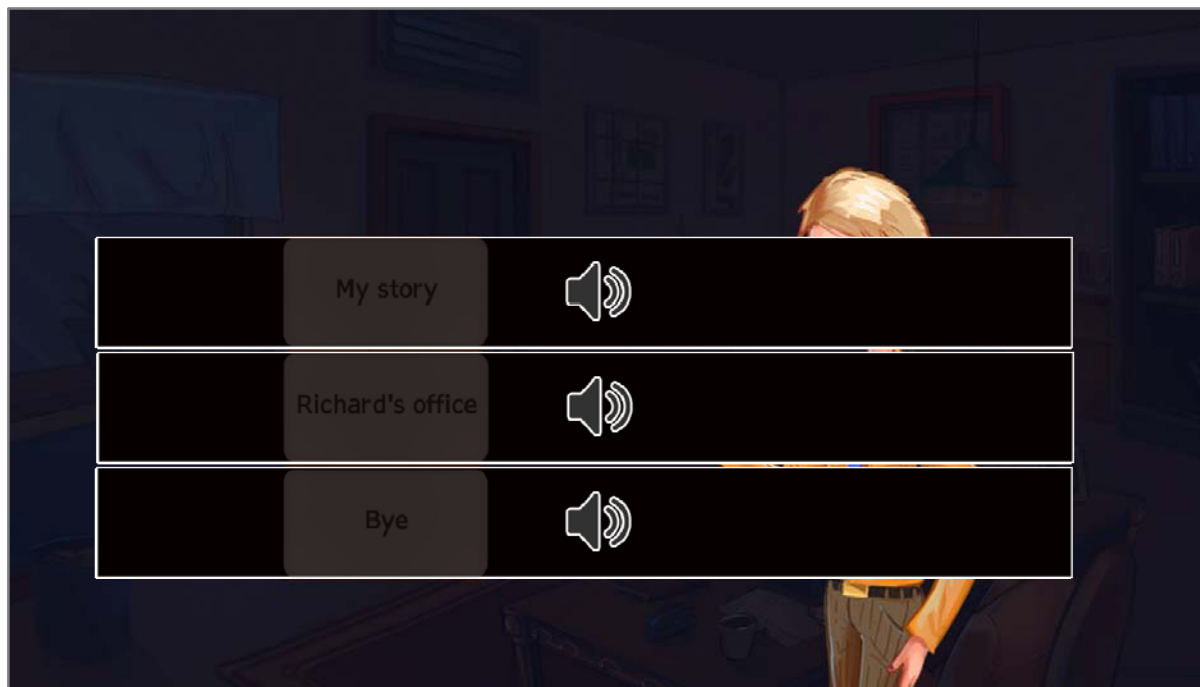
Interaction - Exploration



Interaction - Dialogue



Interaction - Dialogue

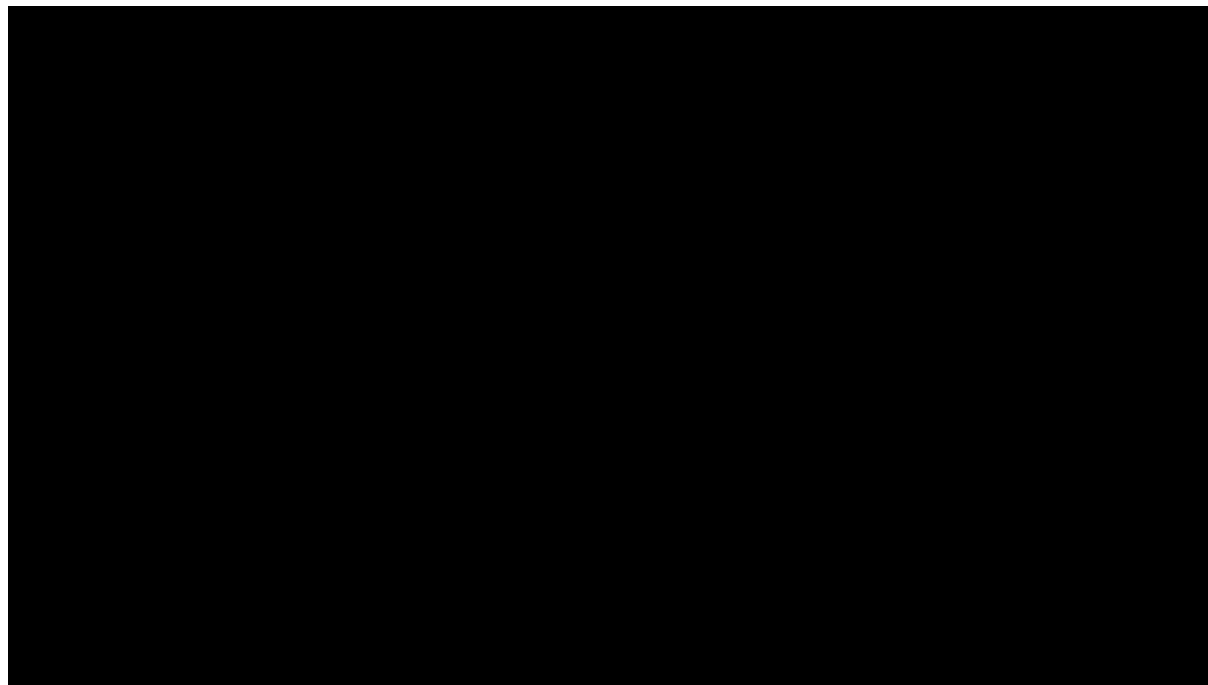


Interaction - Dialogue

- Same model as exploration
 - Similar interface sounds
- Voice actors instead of text-to-speech
 - For immersion



Interaction - Puzzles



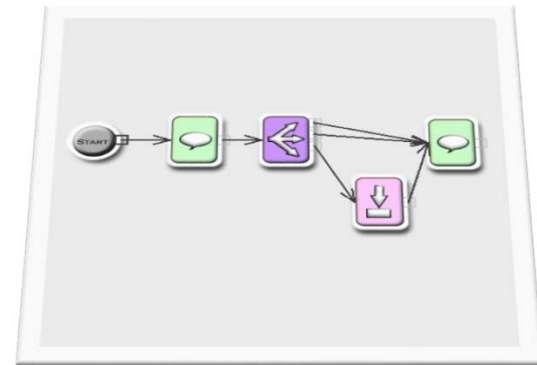
Interaction - Puzzles

- Players using graphics
 - More challenging than audio-only players
- Play testing and iteration is key

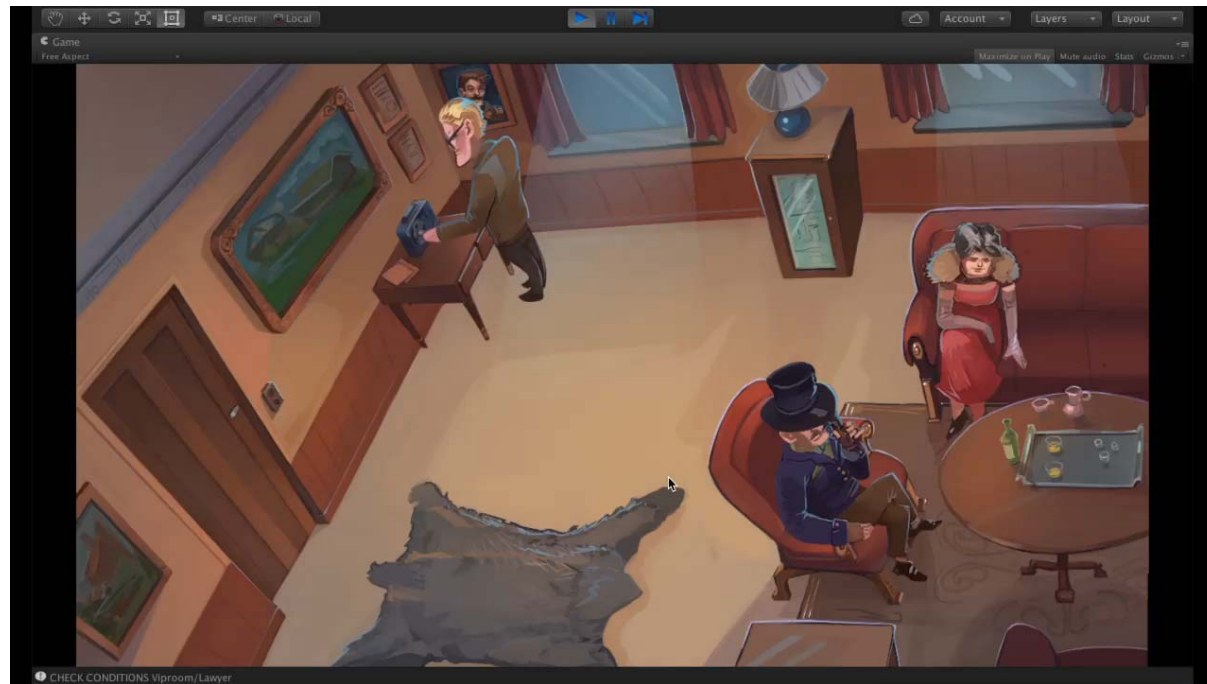


Dialogue Prototyping

- Iterative development
 - Custom editor with text-to-speech
 - Tests on target group
 - Voice acting last



Dialogue Prototyping



Summary

- Audio-Driven Game Design
 - Genre analysis
 - Story development
 - Art direction
 - Interaction design
 - Dialogue prototyping



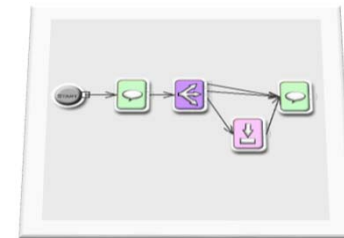
Insights

- Analyze your genre
- Don't start with the art
- Use audio to create a mental map



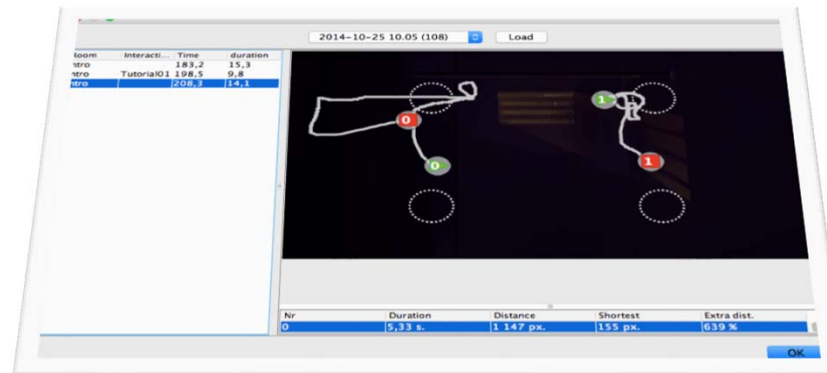
Insights

- Be consistent with sounds
- Delayed voice over in menus
- Prototype dialogue with text-to-speech



Research

- Comparative study
 - 30 sighted and visually impaired players
 - First chapter



Research

- Spontaneous reactions:

"This type of game is interesting"

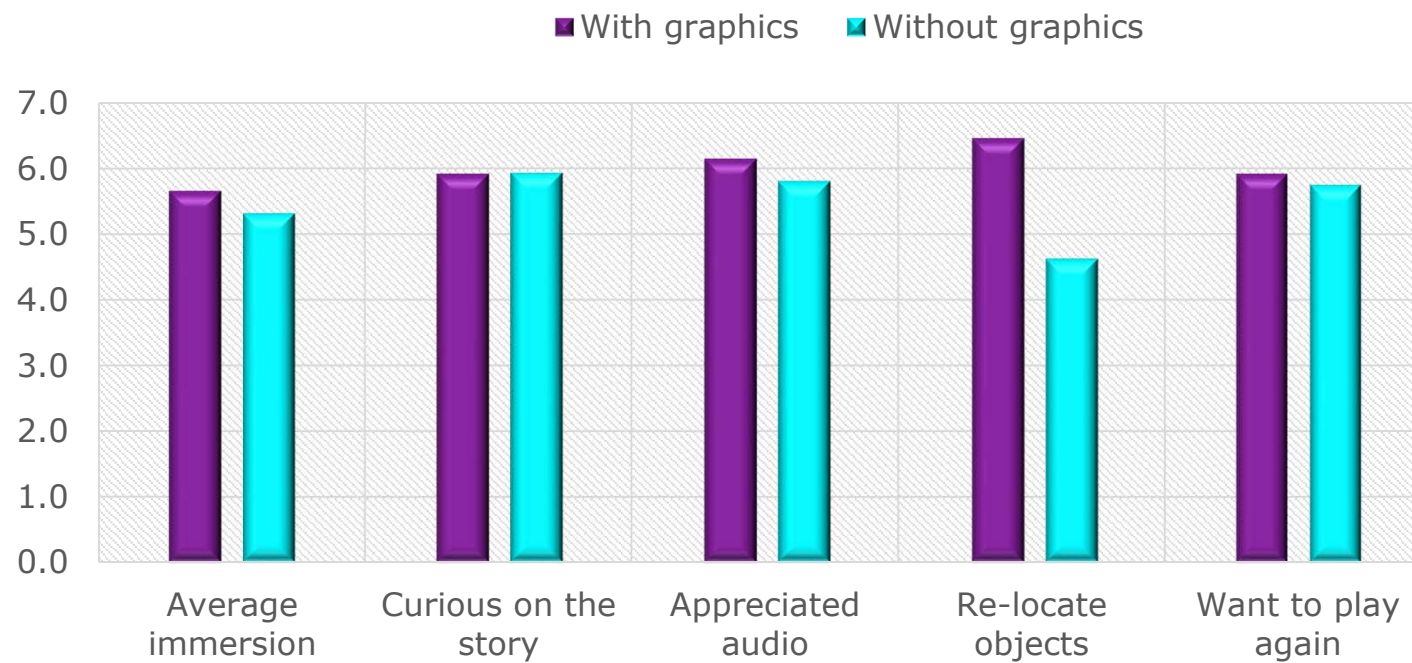
"I think the storytelling was better than usual in games"

"Appears to be a nice little adventure game. Easy to use standard tactics"

"Fun and exciting. Reminds me of Clue"



Research - immersion



Conclusion

- Game development can be audio-driven!
- Can enhance the game
- Can include a wider player base
 - Without alienating existing audience
- New insights into audio in games





Thank you for listening!

