Augmented Storytelling
Authoring Collaborative Narrative Experiences

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Why Stories?
AR and Storytelling fit “well”
Media, place and time intermingle
Locative E-lit tend toward nonfiction

• Jeremy Hight's 34 West, 118 North
Depictions in Popular Media
Interactive Storytelling

What kinds of storytelling can be considered “interactive”?

• Interactive Fiction
• Single-player RPGs
• Dungeons and Dragons
• MMORPGs
Interactive Fiction

Text-based electronic literature

• Puzzle solving
• Uses pre-authored text and command-line interaction
• Popular in 1990s through ____
• Modern example includes Blue Lacuna (Aaron Reed)
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Single-player RPGs

THE ELDER SCROLLS V: SKYRIM
BETHESDA SOFTWORKS / MULTIPLATFORM
MMORPGs

Massively multiplayer online roleplaying games

- Primarily uses paper and pencil
- Pre-authored universes and character sheets
- Basis for MMORPGs and Neverwinter Nights
MMORPGs

Massively multiplayer online roleplaying games

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Dungeons and Dragons

Tabletop based real-time roleplaying

- Primarily uses paper and pencil
- Pre-authored universes and character sheets
- Basis for MMORPGs and Neverwinter Nights
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Dungeons and Dragons
Augmented Storytelling

Dungeons and Dragons
Augmented Storytelling

Dungeons and Dragons
Digital Disconnect

Either a story takes place entirely on a computer, or it is entirely in players heads or on paper (D&D)
Outstanding Problems

What are the key elements? E.g. what problems will a system need to solve?

• Content Authoring
• System understands/processes all input
• System models player state & game state
Content Authoring

• How do we create interesting content for interactive stories?
• What constitutes interesting? Engaging, elaborative or responsive?
• When does that content get authored, and how much should be authored?
• Dialogue, storylines and other elements are still hard.
Understand/Process Input

• We communicate via:

  - Speech, dialogue, verbal cues
  - Actions (some with significance)
    - Gesture
    - Posture
    - Looks
  - Actions, Gestures
  - Code, Machine Language

Computers understand:
Model Player & Game state

– Can tell if player is frustrated, emotional
– Can’t easily tell if player engaged/having fun
– Can manage multiple players

Interested? Should we speed up?
Location? Where are we?
Hurt? Sad? Confident?
How close are we to solving these?

• Content Authoring:
  – Skyrim/Dialogues/Quest easy,
  – Façade-like content hard

• Understands input:
  – Movement easy,
  – Natural language/emotions hard

• Model of player state
  – Can tell if player is frustrated
  – Can’t easily tell if player engaged/having fun
Current Story Solutions

• Façade
  – Both AR Façade and Façade 2 being developed

• CiF (Comme il Faut)
  – Social physics engine with history

• GrailGM
  – Flexible quest management system

• Traditional RPG Engines
  – Manages health and position, genres

• Procedural Content Generation
  Tanagra, Diablo 3 and Skyrim
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Please Choose a Name

type the first letter
scroll with the arrow keys
press enter to begin

Rich

Instructions
Hints
About:
Comme il Faut

- Social Physics engine developed by McCoy et al
- Currently in “Prom Week”
  (www.facebook.com/promweek)
- Derived from engine used in Façade
GrailGM

- Flexible quest management system
- Developed originally by Anne Sullivan
- Currently deployed in Mismanor, basis for system
Traditional RPG Engines

- Manages health and position
- Developed using Unity
Procedural generated content

Examples include Tanagra, Diablo 3 and Skyrim
Others include Minecraft and Dwarf Fortress
Good at creating substantial assets according to rules
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Unity (w/ ARToolKit)
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AR Design Environments (ARDE?)
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AR Design Solutions
Augmented Storytelling

AR Design Solutions
mataio Creator
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D’Fusion Studio

Expressive Intelligence Studio
http://eis.ucsc.edu
What if we relaxed some constraints?

• Content Authoring:
  – Have a participant author content
  – Create content in real time & ahead of time

• Understands input:
  – Have only part of input handled by computer
  – Other part interpreted by human

• Model of player state
  – Computer doesn’t need to know for flow
  – Human participant can redirect/create content
Solving two problems at once

Address **digital divide** by using **augmented reality**
Address **hard problems** by using **procedurally elaborated templates**

**Hypotheses/Research questions:**

- Delayed authoring using **procedurally elaborated templates** gives insight into nature of narrative experience over traditional models of interaction.

- **Augmented reality** can be both a **medium** and **authoring tool**, enabling storytellers and players to maintain a **personal connection** and **awareness** of each other simultaneously with the narrative
Procedurally Elaborated Content

Template Database
- Discovery
- Ambush
- Introduce Character

Story Worlds
- Mismanor

Common
- GrailGM
- Comme il Faut

Plot Bank
Tabletop Interaction Design
In situ content assemblage
Hi! I’m the Colonel

Current Goals:
1. Find Colonel

Options:
Locative (GPS) Interaction Design

Server

Storyteller/GM Provides goals/locations for players.

Also direct virtual agents waypoints/behavior
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In situ content assemblage
You are in the parking lot. In front of you is a bloodstained crime scene.
Demo (if time)
Discussion Questions

Will players enjoy content creation as much as being “in game”?
What is the “right” amount of template UI?
Too little? Too much?
More?
Thanks!

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