

Honours Project prep

- Human - Building interaction
 - Hamed S. Alavi
- Spatial augmented reality (SAR)
 - Ramesh Raskar - Interacting with SAR
- Combining SAR & Shape Changing interfaces - David Lindbauer

Narrative structure

(order & manner in which narrative is presented to a consumer)

story

plot

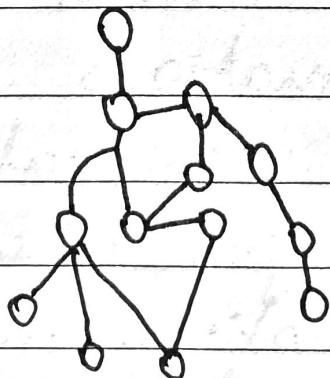
- dramatic action as it might be described chronologically.
- key conflicts, main characters, setting, events
- how the story is told
- How and at what stage do conflicts get resolved

Three - act structure

- ① The Setup - all main characters and basic situations get introduced. The problem gets introduced
- ② The Conflict - begins when a catalyst sets thing in motion. Characters go through major changes (character arc)
- ③ The Resolution - components of the story come together, leading to the end.

Categories of Narratives

- ① Linear narrative - events get portrayed in ^{the} order that they occurred
- ② Nonlinear narrative - events get portrayed out of chronological order or in other ways
- ③ Interactive narration - linear narrative where the user actively drives the narration (complete quests, etc.)
- ④ Interactive narrative - users make choices, which influence the narrative. Can be done through alternative plots with alternative endings.



Interactive Storytelling

- Storylines are not predetermined
- Author creates the setting, characters, situations
- User navigates as they please

A Storytelling program includes:

→ drama manager

- searching and executing story "beats" in a coherent seq.
- refining story events by providing new information and reconciling contradictory plots
- collaborating with the agent model to chose the best narrative

→ agent model

- generates possible actions for each non-player character

→ user model -

- keep track of the player's choices, so that the other 2 can cooperate in generating the best story

Strategies when developing interactive storytelling systems

-Chris Crawford 2012

- 1 Environmental approach - encourage actions that form a coherent plot
- 2 Data-driven approach - story components which are sufficiently general that they can be combined smoothly in response to user's actions

- 3 Language-based approaches - system & user share domain-specific language so that they can react to each other.

Planning systems get integrated to ensure narrative cohesion.

- AUTOMATED STORY DIRECTOR (ASD)
- Player Specific Automated Storytelling (PSAT)

User Interaction for Interactive Storytelling (IS)

- intelligence into the way user interactions are interpreted in terms of the real-world changes ~~and~~ they impose on the story world

1. Physical interaction - real-time recognition of interaction events.

Ex. - collision detection

Author's ex - micro-sitcom, stealing objects with narrative importance

- turning back on character - disinterested & negative emotional input

- objects that can be gifts affecting the story (object-mediated)

2. Multimodal interaction - language, body movement (MR)

3. Affective interaction - emotions from the user

Why?
is it important → Explain.
the relevant aspects → Assert.
the research direction

1. Intro to Lit Review

- ✓ - narratives used for conveying information
- ✓ - interactive storytelling becoming a more prominent research area
- Non-fiction needs to be explored in more detail *(Basagba N)
- The kinds of plots with active user participation *(Ryan M)
- The need for understanding MR's role in interactive narrative design *(Rouse R)

2. Narrative Generation

- Users tend to not follow predefined paths → need flexibility/prog. exp.
- Identify storytelling artifacts, anchor points * constraints *
- Thread facts into stories *
- Identifying factors that change the narrative *
- Repairing the storyline *

- Designing location-aware systems for mobile AR*

3. Augmented Reality Interactions

- Research tends to focus on generating the narrative, rather than interactions themselves
- Concepts for designing non-verbal interactions in AR* - include gestures, etc.
- Audio not really being beneficial
- Location as an interaction*
- Visual indoor AR* (context-aware)
- Design factors when considering UX*

4. User Experience

- The motivational appeal of IS*
- Objectively measuring an IS* PC^{3[1]*}
- The illusion of agency*
- Evaluating engagement*
- The dimensional model*

I-process, content, control, context

AR Foundation Snippets todo:

- image recognition
- dialog

Research todo

- AR testing specifics

- Methods of conduct

Story todo:

- Write out a branched narrative

- Head to footer

- Footer navigation

- Footer navigation

- Footer navigation

Media Studies MAR, ID @bitterwitz

- AR can redefine the relationship between physical / virtual
- AR Trail Guide - navigate from map to displayed AR
- argues about social aspect
- tactile-visual interfaces - rotate i.e. or slide finger
- struggle to be "here and there"

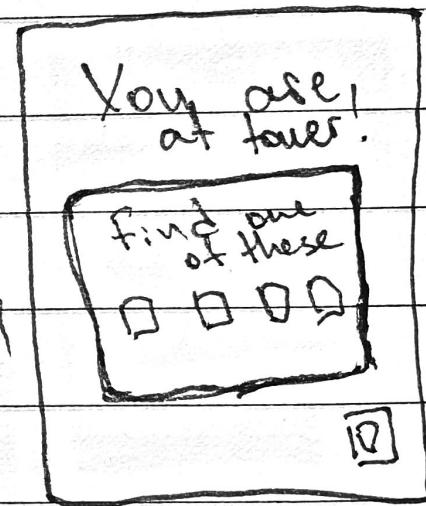
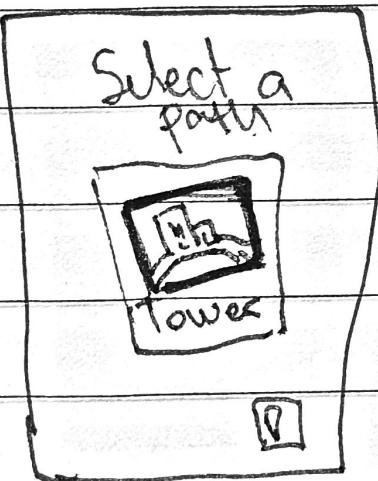
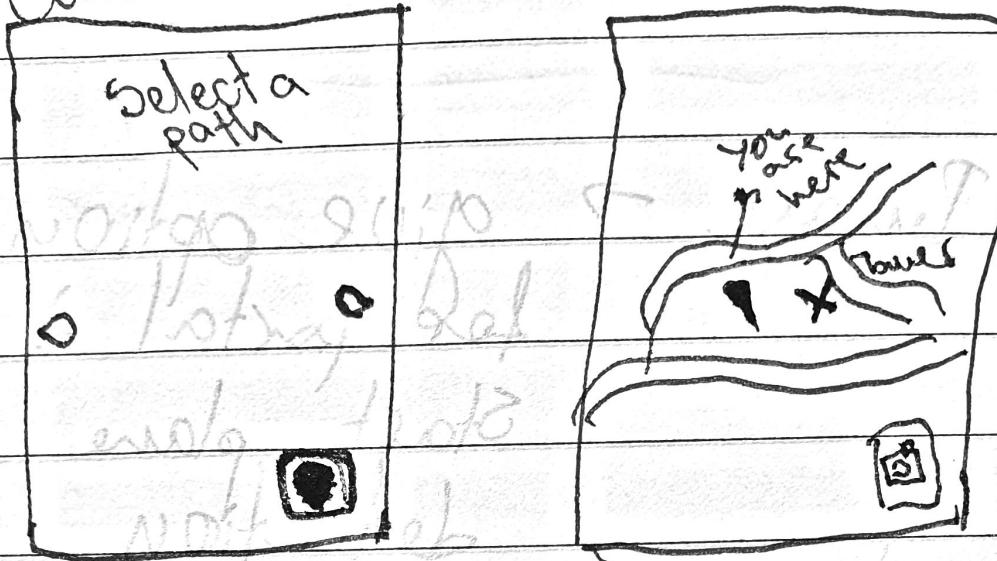
A framework for context immersion

@min203framework

- three dimensions of immersion in "context-aware" apps
 - time and location-based
 - Object-based
 - user-based
- mobility, relationship, interaction

1 Camera scene

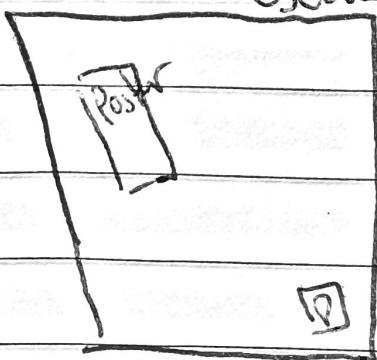
Map Scene 2



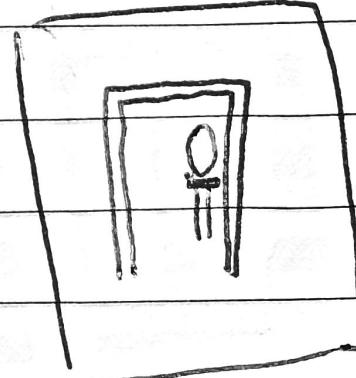
4 Choice selection

for NG!!!

5 Image screen



6 Portal w/ UI



Go for this set
look her
more
(ut)

III

MVP definitions

- 1-
 - offscreen marker (like in ARElements)
 - button toggle between map & camera view
- 2-
 - "you are here" marker
 - destination marker
 - "visited places" markers - a)
- 3- Real-world poster with building image that you click to select path b) c)
- 4- Shows you things to look for (scan) with Augmented Images,
 - each one leads to different path in AR, same path in static
- 5- Scan image → overlay on top of it saying "place portal on the ground" or gives "select path" screen (1)
- 6- portals filled with info

Good to have SVM

(start/quit with network message ->
a) click on marker \rightarrow shows info
about building

b) image put in the direction
of building

c) floating animation

locations

(1, 1)

Path1

Path2

0, 0

1, 1, 3

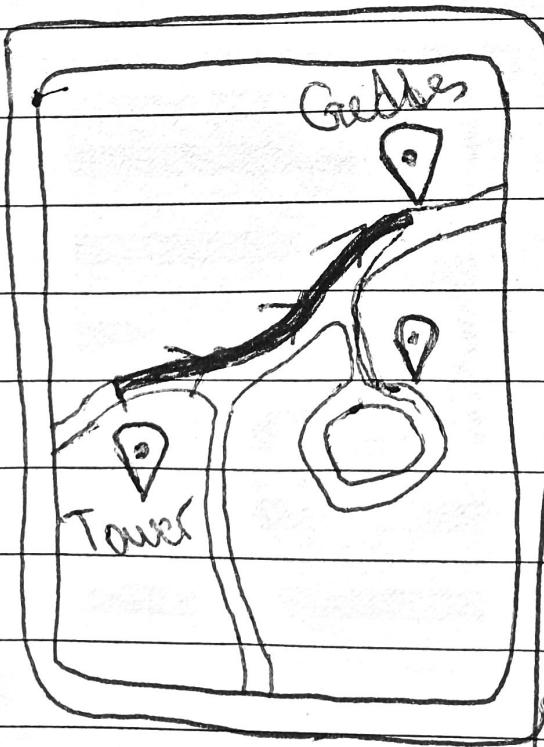
(-1, 3)

(3)

Path3

→ pass all 3
coords to
API for
map1

→ Can have two paths on screen
the display



1. Application Start

2. Show map → "Map
(all markers)"

"Your way to any
location"

3. At Location - ~~vibrate~~

- vibrate

- open camera view

- show "find these objects" screen

Each object can unlock a path

After first object scan, show
select path button

4. Select path screen

- each frame is in

colour of map now
path

- Colour

- ~~JSON~~ test route JSON

- POI words

scription

= Thingstodo[]

To do

(360, Museum, Floating Object,

eg Scan)

des: ~~Color~~ Scene Id

abs / Scene

Physical Sciences 709 -
Math Sciences → maths,
Computer
Social Sciences 709 -
Applied Sciences → engineering
and design

[] 709
[] 709
[] 709

Fab & Design
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709 just took circuit and logic P

709 just took circuit and logic P

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Life Sciences

- School of Life Sciences
- School of Medicine
- School of Dentistry

Subject list

- Biological and Biomedical Sciences
- Anatomy and Human Identification
- Dentistry
- Medicine
- Nursing & Health Sciences

Physical Sciences

- School of Life Sciences (Chemistry)
- SSEU (Physics)
- School of Social Sciences (Geography)

Subject list

- Biological and Biomedical Science
- Physics
- Geography / Environmental

Todo

- "Please get to one of the locations" on startup
- clicking on building again makes text disappear
- ~~make~~ all buttons invisible on startup
- change path colours
- * → change marker actions
 - pressing camera button only shows a camera view
- select path button only available on hubs
- When selecting path
- !!! Scene switch button needs to be fixed

Obs: talk about videos

- Space was a problem
- placed elements in wrong direction so they can explore stepwally
- took them a while to figure out turning them and not the device

- video was a focus point
- space was a problem
- mostly watched videos

- vertical surface detection
- mostly photosphere