Design Summary

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CAPTURING THE VISION OF THE GAME

Capturing the Vision of the Game (Treatment, Look and Feel, …)

Implications of the User's Freedom of Choice

Perceptual Opportunities

Attractors and Maps

Other Visualization (Storyboards, …, stuff you know)

Splitting Up the G&VE Design Problem

Exercise

Defining the Vision

- A game is derived from a vision

- Vision drives and inspires Look & Feel, Audio Design, Game Play

- Collaboration between many experts

- Pitch: 1-page games proposal
  - the game idea and basic mechanics,
  - game genre,
  - some selling points,
  - team members and assigned roles

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Treatment

- AKA proposal, outline, spec sheet
- 4-8 pages
- Game genre, look & feel, key features
- Gameplay & interface
- Describe the experience the player will have
- "What's the wish or fantasy that's being fulfilled with this game?"
- Structuring, resourcing, engine, platform/s
- Characters
- Estimated budget

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Look & feel

- Visual language is the 'look & feel' of a design that communicates independently of the descriptive content of text and images

- Colour, letterform, shape, proportion, tone, texture, imagery

- These combine to create 'visual voice'

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Describing the 'Look'

Mega-Game will use an edgy, hyper-realistic style to portray a dark, alien, devastated look with some lighter environments used for balance and contrast. Each game environment will vary significantly from the others containing different music, sound F/X, colour schemes, backgrounds, and NPCs. The look will generally become darker, stranger and less "normal" as game play progresses. At the game start the look will resemble that of Star Wars, toward the end it will have a more post-apocalyptic Terminator 2 look.

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Describing the 'Feel'

The overall game ambience is crucial to Mega-Game. The backgrounds will be "alive" with activity; utilizing background animation, palette shifts, etc. The music and sound F/X will be used primarily to enhance this "live" and tensely realistic feel.

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Designing experience

- What emotional messages are we evoking?
- What is the effect on the user?
- Find a core vocabulary
  - Find 3-4 words that express the 'feel' you want for the game
- Express these visually & aurally

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IMPLICATIONS OF FREEDOM OF CHOICE

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Designing (for) Interaction

□ A hard problem

    ◘ I'm (mis)using the term "non-linear":

□ Cannot assume "linear" behaviour by users

    ◘ Have to think of the many branching possibilities

□ Need to script these possibilities

□ Need to steer users without appearing to do so.

    ◘ Clive Fencott provides a lot of ideas in this regard
www.fencott.com/Clive/

    ◘ Perceptual Opportunities

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The user is free to explore the world

- Tempting to design by saying things like: "The user goes and switches on the light and then sees the letter on the desk".
- You should always consider what the user *may* do
  - avoid thinking linearly
  - better to say:
    - "there is a light the user can switch on
    - *and* if the light is on, it is *likely* that the user may be attracted to the letter on the desk.
    - *If* the user is close enough to the letter, may pick it up."
- Seems a lot more effort to think of what the user *may* do
  - necessary to enable "user-freedom" — a feature!
  - May be better to say "visitor" (Fencott) rather than "user"

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A Useful Exercise

- To get to grips with user freedom
  - Play interactive 3-D game: Oblivion, Fallout 3, …
- Notice how designers:
  - have given you freedom
  - but not so much that you get frustrated and have no idea what the point is or what is available to do.
- Give visual/auditory "cues" about opportunities available for interaction
  - play on your curiosity.
  - objects for interaction often have visual cue — brighter or glow
  - or using sound
- Fencott (1999) calls these perceptual opportunities
  - Content and creativity in virtual environment design. VSMM '99 (www-scm.tees.ac.uk/users/p.c.fencott/vsmm99/welcome.html)

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The *Visitor* Can Tell a Linear Story

- The designer has to design for user freedom
- The overall experience of the user will probably form a linear story in their mind
  - Even when some moments of action may be recounted as non-linear or confused or chaotic
- However the next time they enter the same VE their overall "linear" experience will probably be different.

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PERCEPTUAL OPPORTUNITIES

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Other Visualization (Storyboards, …, stuff you know)

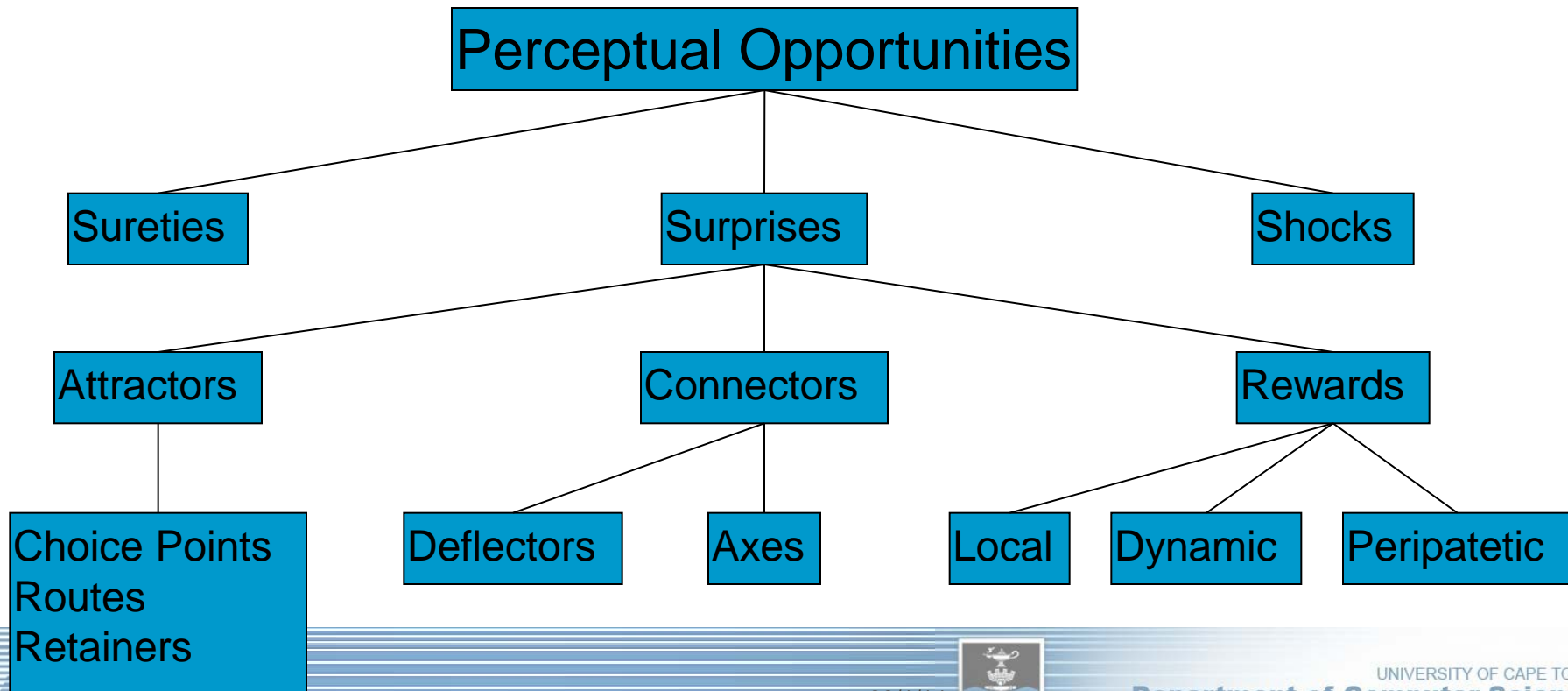Splitting Up the G&VE Design Problem

Exercise

Perceptual Opportunities

- Aspects of a 3-D world for gaining and holding attention through the senses
- Perceptual Opportunities arise naturally
  - act both consciously and unconsciously
    - Unconscious involvement is very desirable
    - $\Rightarrow$ fundamental acceptance of place or activity without thought
- Content $\equiv$ an organised set of perceptual opportunities
  - To let the visitor accumulate a set of experiences over time which create a sense of *purposeful* presence
- Creative design $\Leftrightarrow$ attracting attention via patterns of mediated stimuli
  - these will achieve the *purpose* iff the visitor perceives and responds to them as the designer intended.
- This is hard!
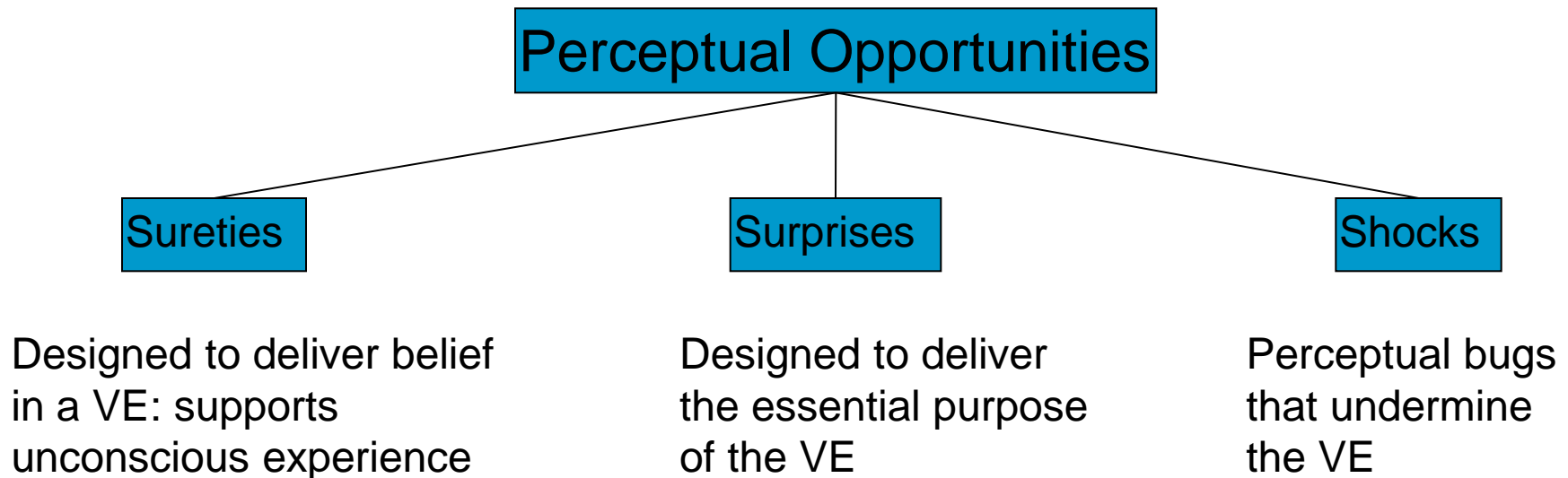 - why the design of Games and VEs is so difficult.

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Characterising POs   I

□ Perceptual opportunities may be broken down into three principal forms:

```
                    Perceptual Opportunities
                   /          |            \
            Sureties       Surprises        Shocks
              /          /      |        
        Attractors   Connectors         Rewards
           |           /    \          /    |     \
     Choice Points Deflectors Axes  Local Dynamic Peripatetic
     Routes
     Retainers
```

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Characterising POs   II
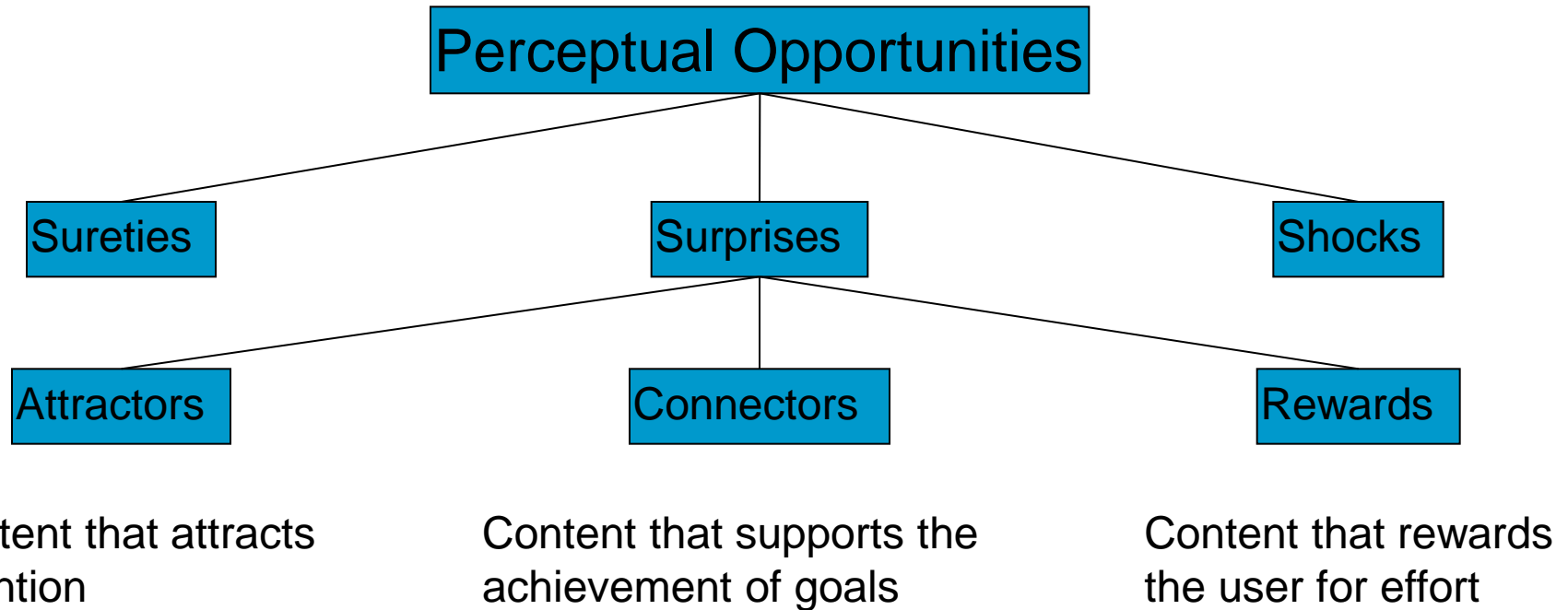
- Fencott, C. "A Methodology of Design for Virtual Environments"
  In: "Developing Future Interactive Systems"
  Ed. Maria-Isabel Sanchez-Segura. IGI Publishing 2004
  ISBN: 978-1-59140-411-8

```
                    Perceptual Opportunities
                   /           |            \
            Sureties       Surprises        Shocks
```

Sureties	Surprises	Shocks
Designed to deliver belief in a VE: supports unconscious experience	Designed to deliver the essential purpose of the VE	Perceptual bugs that undermine the VE

Characterising POs   III

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                    ┌─────────────────────────────┐
                    │  Perceptual Opportunities   │
                    └─────────────────────────────┘
          ┌──────────────────┼──────────────────┐
    ┌──────────┐        ┌──────────┐       ┌──────────┐
    │ Sureties │        │ Surprises│       │  Shocks  │
    └──────────┘        └──────────┘       └──────────┘
          │          ┌──────┴──────┐            │
    ┌───────────┐  ┌────────────┐       ┌──────────┐
    │ Attractors│  │ Connectors │       │ Rewards  │
    └───────────┘  └────────────┘       └──────────┘
```

Content that attracts attention

Content that supports the achievement of goals

Content that rewards the user for effort

ATTRACTORS AND MAPS

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Other Visualization (Storyboards, …, stuff you know)

Splitting Up the G&VE Design Problem

Exercise

Attractors

- Attractors are the means by which users are led to form intentions

- The perceivable consequences of attempting to realize an intention leads to rewards.

- This leads to new attractors, and so (we hope) the interaction progresses according to the designers intent.

- See Lecture on Attractor Maps in URU.

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Attractors in Flower

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Attractor Paths in Flower
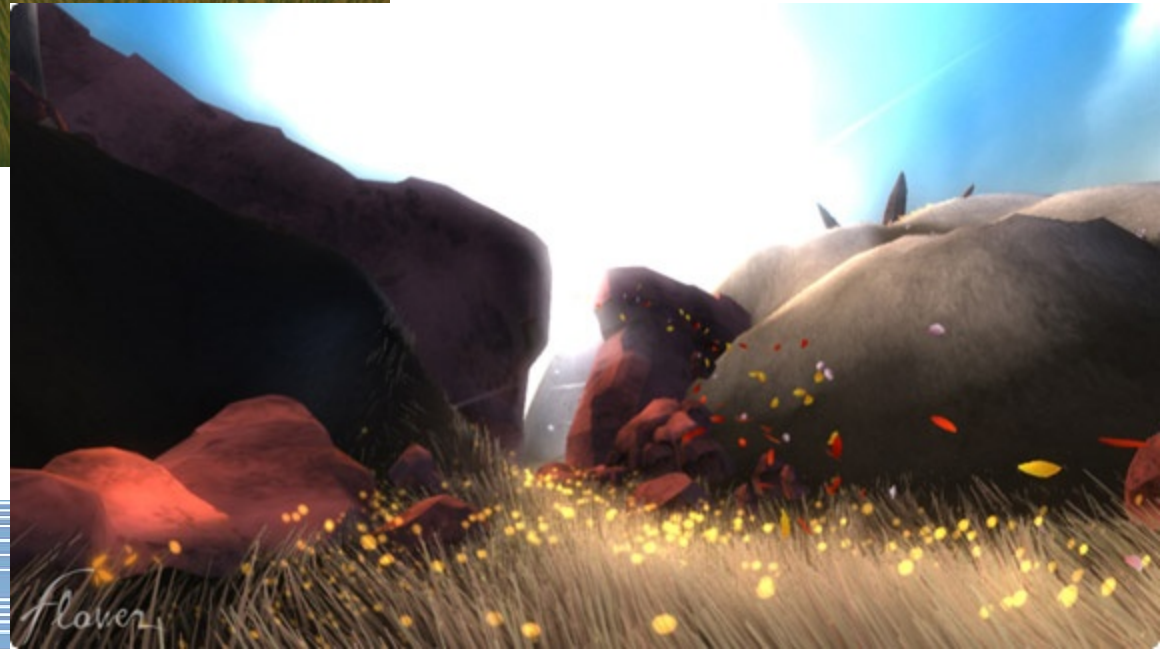
Attractors can also use Fear
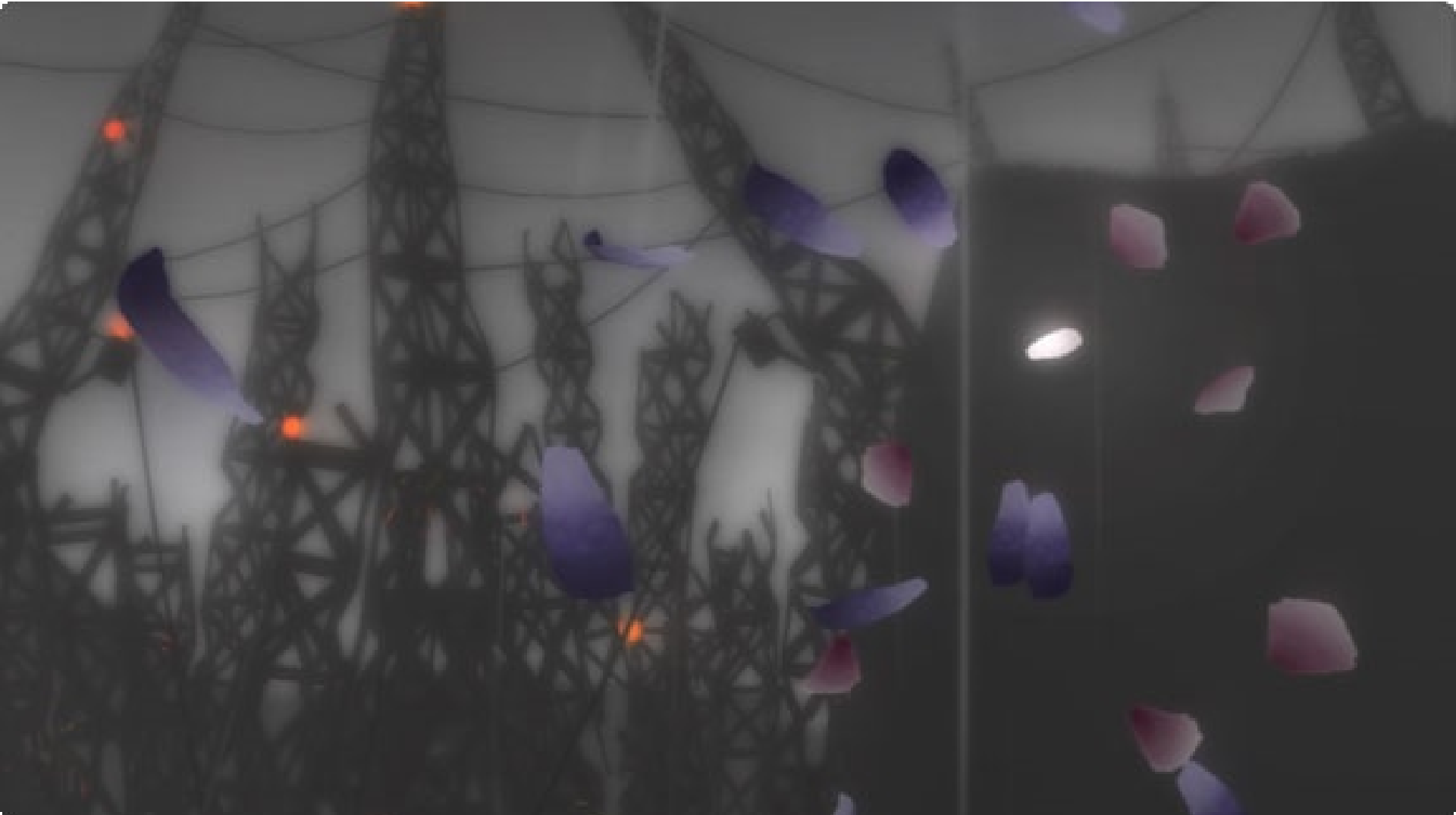
Perceptual Maps (or Plans)

- A number of Perceptual Opportunities are organized into perceptual maps (or Floor Plans, or simply Plans)
  - Choice Points: choice between intentions stimulated by attractors
  - Challenge Points: actions that need to be undertaken to satisfy intentions
  - Routes: linear sequences of attractors
  - Retainers: tightly coupled attractor-reward pairs (puzzles, mini-missions, etc)
- In this way the meaning of the Game or VE is expressed.

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Maps

- Visualize how space affects your design
  - Spatial information is needed by 3-D modellers, animators and programmers.
  - 2-D map or floorplan of your world
- Sketch it yourself by hand
- Draw it in a drawing tool
  - accurate and scaled drawing
- Can break up your VE into more than one set / level / episode
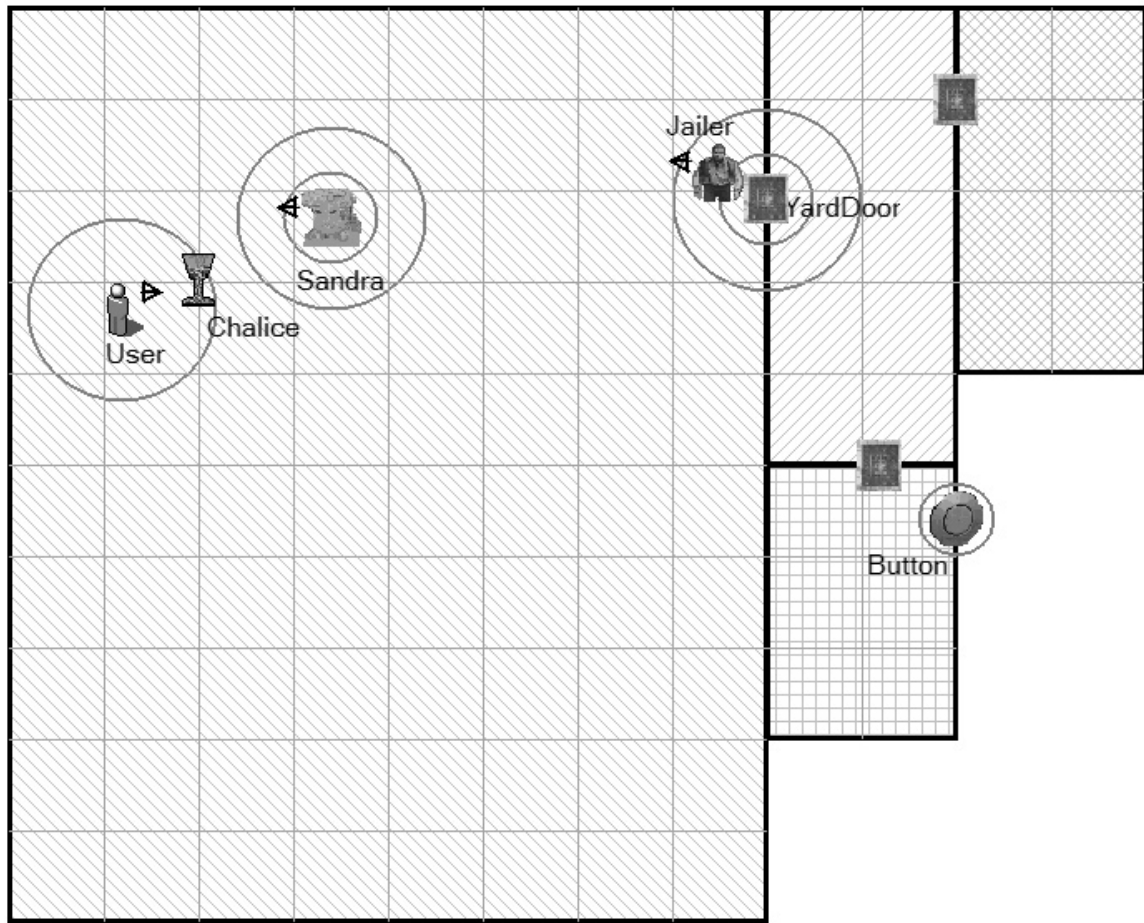 - need floorplan/map for each set

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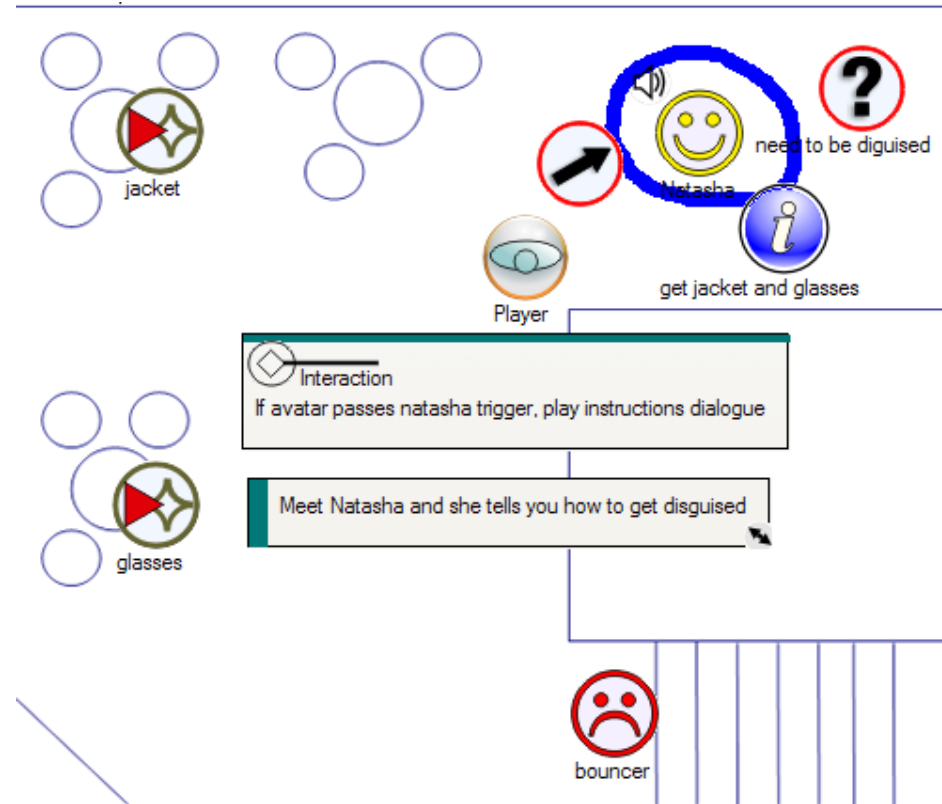
Level maps and Floorplans
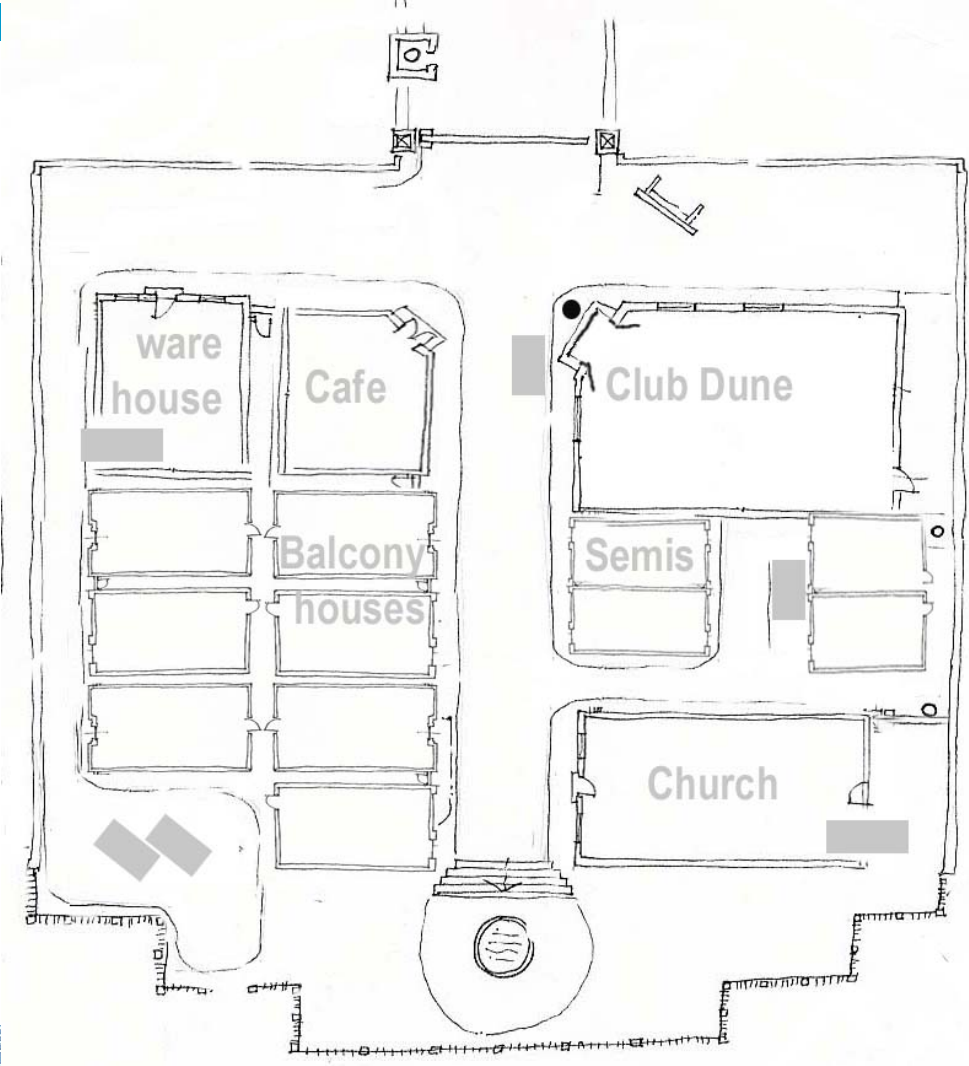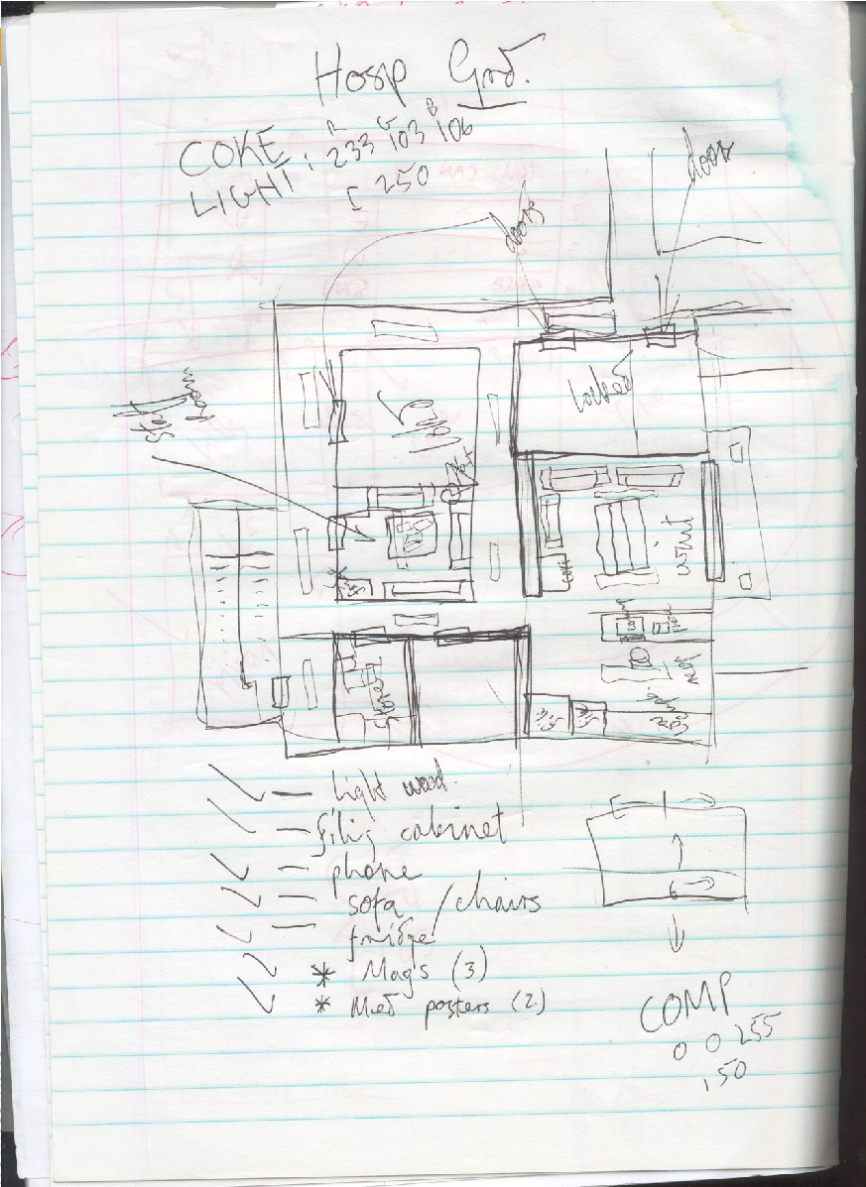
Floorplan of a Game

- Position and orientation of an object is indicated by an icon and directional arrow

- circles around an object correspond to proximity triggers

Legend
- Yard
- Entrance
- Cloakroom
- Freedom

Facing (Rotation around Y Axis)

90

180   0

270

Reset Floorplan

Scale: 1 gridblock = 1 metre; Horizontal = X Axis, Vertical = Z Axis; Upper Left = 0,0

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VISUALIZATIONS

Capturing the Vision of the Game (Treatment, Look and Feel, …)

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Splitting Up the G&VE Design Problem

Exercise

Visualisation

"The twofold art of imagining through craft, and the revelation at what has been created"

Streamline production

Minimise later changes of plan

Come up with new visual, dramatic and interactive ideas

Sketches & Models

□ Some early concepts end up being changed drastically by the time they reach the final VE.
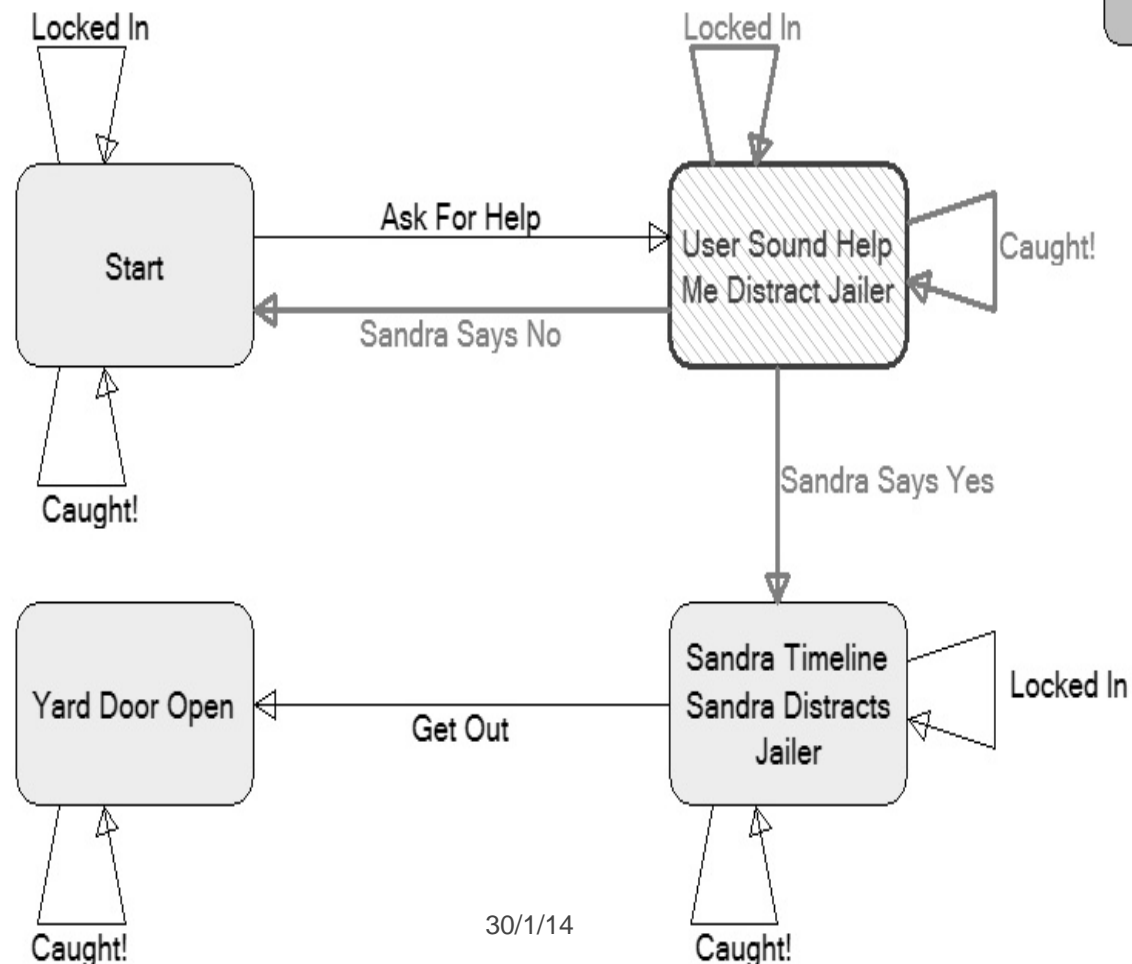

UXG: Interaction

Sequence Diagram of a VE: "help me distract jailer" state

Sequence diagram showing states and links.

- ◻ State is a point from which user interactions will have consequences,

- ◻ A link is a triggerset that can be executed from its originating state.
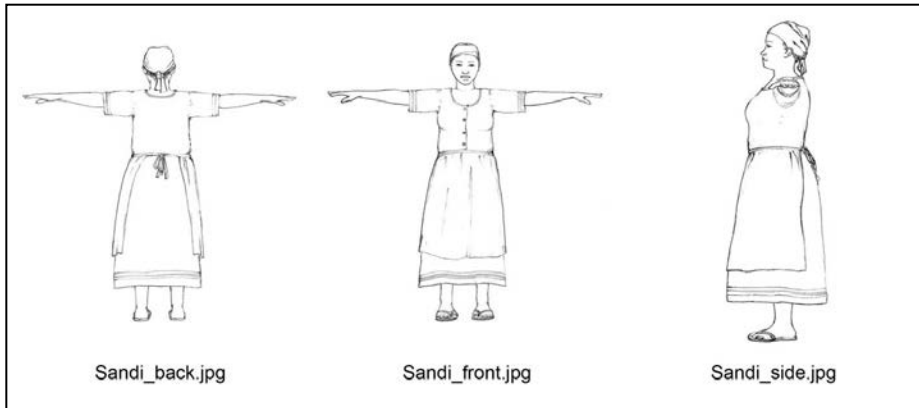
Turnaround Sheets & Sketch
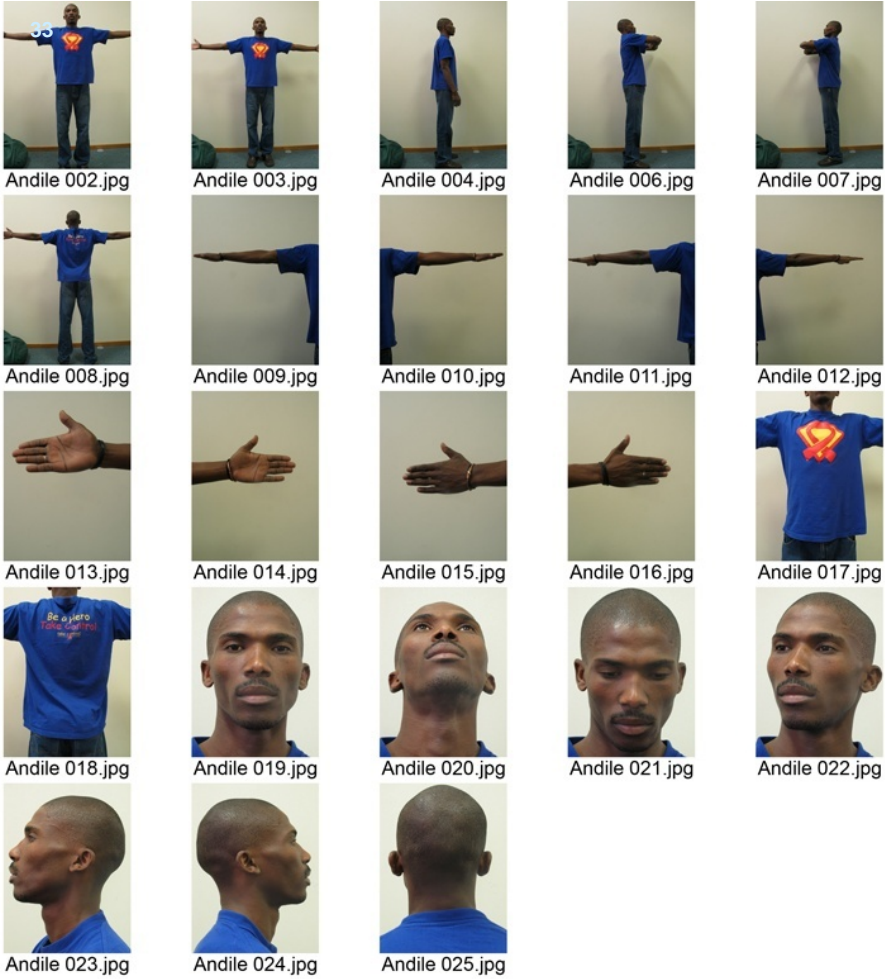
Sketches for the virtual actor in the kitchen.

An older woman was required, and it proved difficult finding an individual to photograph for this character.

Sandi_back.jpg   Sandi_front.jpg   Sandi_side.jpg

Sandi half way through the milk sub-scene

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Photo

Storyboarding

Actions: User begins at a pathway leading to a forest. Greeted by a person who introduces themselves.

The scene : A pathway in the forest at sunset.

Sound : Ambient night sounds, crickets chirping and the faint crackling of a fire in the distance.

Actions: Person asks the user to join them at the fire.

The scene : People sitting around a campfire.

Sound : The sound of the fire grows louder as the user approaches.

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3D visualisations and prototyping

Storyboard sequences help plan control of player viewpoint

Cardboard models

Simple 3D models:

- ◻ define the path,

- ◻ show what will and won't be visible to the player,

- ◻ reveal what players will learn, and when,

- ◻ suggest what can be hidden from them and what will be revealed .

Indicate distribution of detail in environment.

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3D Prototyping Techniques

- ❑ Paper
- ❑ Flash (or other rapid prototyping systems)
- ❑ Wizard of Oz
    - ❑ Get a person to simulate complex systems (AI, UI)
    - ❑ Or another system, for example, mimic network delays

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SPLITTING UP THE G&VE DESIGN PROBLEM

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Exercise

Splitting up the Design

- VEs and Games are typically split up hierarchically
  - Helps user: break up interaction which could be overwhelming
  - Useful for designer: task can be tackled in manageable pieces
    - Chapters of the narrative
  - Useful for game implementers: workload is divided up
  - Useful for system: restricts what has to be loaded at once
- Games are frequently split up into levels and zones
  - Many other names used:
    - act, area, board, chapter, course, episode, game, landscape, locale, map, mission, phase, plan, round, section, stage, wave, world or zone
- We will talk of episodes and sets
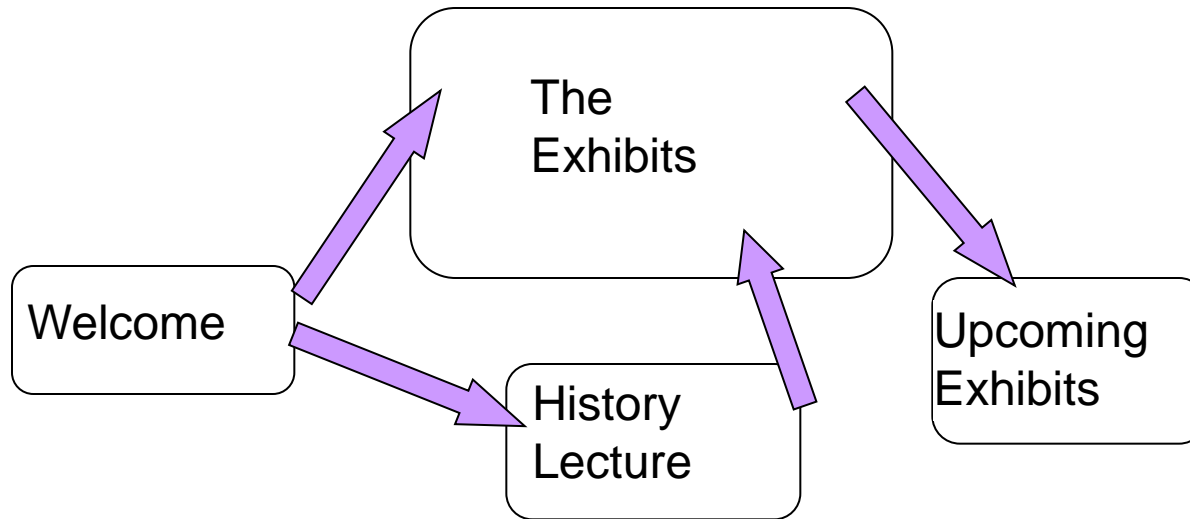 - "Design Examples", Charlene Beirowski & Edwin Blake

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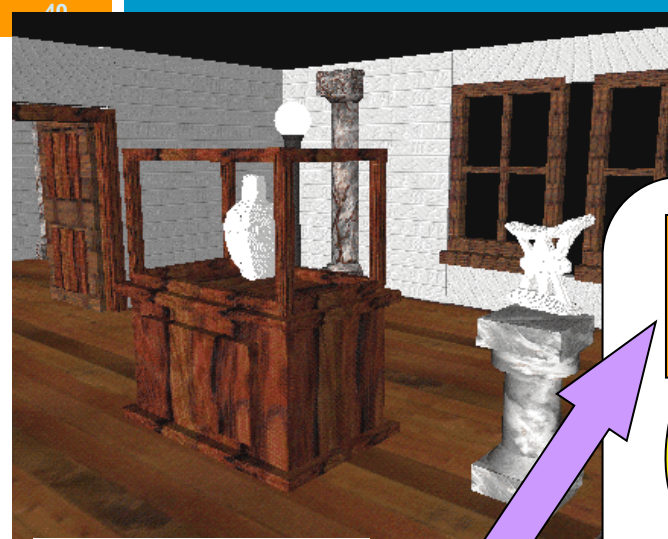
Art Exhibition Example: Episodes

□Curator wants:

- ◘ Uniquely South African 3-D Models
- ◘ Cape Town's Digital Paintings
- ◘ Mapungubwe as a Precursor of Great Zimbabwe"
- ◘ Also a lecture on the history of ancient art in Africa.


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                    ┌─────────────┐
                    │    The      │
        ┌──────────→│  Exhibits   │──────────┐
        │           └─────────────┘          ↓
┌─────────────┐                        ┌─────────────┐
│  Welcome    │                        │  Upcoming   │
│             │          ┌────────────→│  Exhibits   │
└─────────────┘          │             └─────────────┘
        │         ┌─────────────┐
        └────────→│  History    │
                  │  Lecture    │
                  └─────────────┘
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Art Exhibition Example: Sets and Portals

The Exhibits

Welcome

SA Exhibit

CT Exhibit

Mapungubwe Exhibit

Foyer

Lecture Room

Foyer

Upcoming Exhibits

History Lecture

EXERCISE

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Exercise

Exercise: how to change the system to make it better?

- Bad answers:
  - changes that would actually not improve the gameplay,
  - changes that would be costly to implement,
  - changes that would adversely impact on other systems.
- How would this be implemented?
  - Account for changes in other systems to complement this change.
  - Consider learning curve, how it would be staged in content.
  - Discuss getting buy-in from other team members, taking it around for input.
  - Specifically address the cost and possible trade-offs.

Exercise: how to improve the system cont.

- Further questions:
  - What aspect of the game could you cut to make the game better?
  - What system would you add to make the game better?

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