# Interactive Fiction

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# Story Line

- Most games have one:
  - Might be simple back ground to enhance the game
  - Might be an entire script to create the interactive flow of the game
- Arcade games keep the story simple
- In role playing games their success depends on the story

# Games and Interactive Stories

- In general stories develop before the game – (continuity)
- Game elements add to the enjoyment of the story
  - Let user make some decisions
  - Make sure skills are required
  - Write in some puzzles and problem solving stuff

# Linear vs Non-linear

- Linear story
  - Story usually controlled by the author
  - No user choices affect outcome of story
- Non-linear stories
  - give the player more control over the plot at the least.

# Books

- Many books have been adapted to become games
- Most books have linear plots
- To become a good game may require changing the ending or allowing multiple endings
- Players love playing “what if …”

# Dramatic Unfolding

- Many games present the entire story all at once (in the manual or opening game screens)
- This spoils the ending for the user
- A well designed game should allow the user's actions to change the ending
- Better to deliver the plot in incremental details/manner

# Graphic Design Decisions

- 2D side scrollers
  - Arcade games
- 2D top down
  - Straight top down
    - Original Castle Wolfenstein
  - Top down/ side (map - top, side - room)
- 3rd person ¾ view
  - Sim City

# Graphic Design Decisions

- 3D point of view (“step” engine)
  - Walls pre-rendered
  - 90 degree turns
  - Depth 3 to  steps
- Point of view polygonal/ray caster
  - Doom or Castle Wolfenstein
  - 3D view of floors and wall
  - Smooth moves in terms of lighting and line of sight

# Graphic Design Decisions

- First person 3D point of view polygonal
  - Flight Simulator
  - Camera on forehead
- Third person point of view polygonal or pre-rendered
  - Tomb Raider
  - Multiple characters animated on screen at same time
  - Images pre-rendered and blitted on the screen

# Video vs Animation

- Video sequences
  - Takes lots of CD space
  - Easier for long linear scenes
  - Very realistic
- Interactive comics (e.g. cut scenes)
  - More flexible for actions or special effects
  - Easier to splice in extra action
  - Can control character detail

# Text-Based Games

- Use descriptive language to set the mood (be verbose)
- “Key word search” of some vocabulary list à simple grammars
- Some kind of data structure to represent the universe and objects inside it, database, cell based map
- Goals and enemies
  - Simple - solving puzzle
  - Complex - multilevel tasks

# Puzzles

- Its tough to get user involved when world must be opened by solving a puzzle
- Puzzles should be solvable from story
- Make sure there are real choices in outcome (death gets old fast)
- Game shouldn’t require excessive amount of time for user to solve small number of puzzles

# Character Creation

- Give character depth
  - What is their life like?
  - What are their likes and dislikes
  - Personality quirks?
  - Special talents?
  - Communications skills?
- Give character attitude
- Use of multimedia to add depth
  - Voice does this better than video

# Characters

- Give them simple models of plans (sequence of actions) to follow
- Give them emotions (state in FSM) and allow them to color decisions
- Define usable knowledge models of game domain (lists of external objects and their attributes) that can be used in plans

# Level Design

- What new characters and objects to introduce?
- What new obstacles?
- What is the basic layout?
- What is the design and color scheme?
- What about difficulty changes?
- New animation techniques?
- What types of new problems or puzzles?
- Scoring or physical barrier to exit level?

# AI vs Scripting

- Scripting is easier to implement
  - Game response is always the same
- AI algorithms can introduce non-determinism into games
  - Rule-based reasoning
  - Probabilistic reasoning
  - Neural networks

# Design Dilemmas

- How much detail do you need?
- When is a task a chore?
- Allow user to select level of realism?
- Are there any task bottlenecks?
- Can player lock game into steady state to accumulate resources?

# Common Failing

- Do not make the player entirely responsible for progress of plot
- Progress halts when puzzle solving stops
- Allow user to make contributions to plot direction
- User should be immersed in his or her character, while system handles other details