Video Game Design

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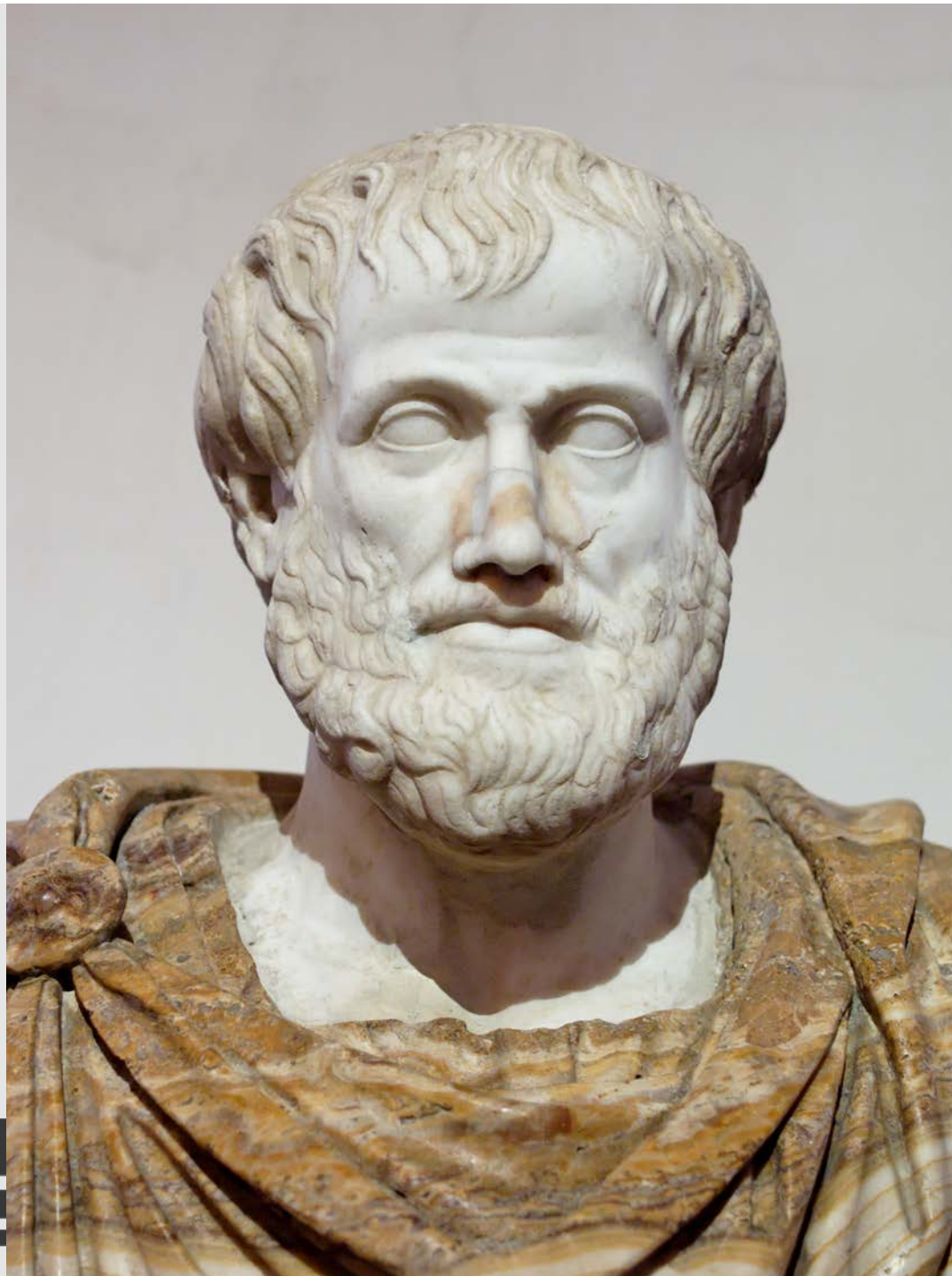
Narrative

Working with Dramatic Elements

- Chapter 4

Exposition/Premise

- Establishes the action of the game within a setting or metaphor
- Introduced in the exposition of the story (exposition sets up time and place, characters and relationships, the prevailing status quo, etc.)

Characters

- Agents through whose actions story is told
- Protagonist
- Antagonist
- Major/Minor
- Round – well-defined traits/realistic
- Flat – shallow personality
- Dynamic – personality changes
- Static – consistent personality
- Stock – recognizable stereotype
- Foil – contrasting character paired with another

Story

- Traditional storytelling involves linear narratives
- Move from one point of the story to the next as determined by the author

Kurt Vonnegut, Jr.

Simple Shapes of Stories

as told by Kurt Vonnegut
fed into the computer by David Yang

G Good Fortune / Wealth & Boisterous Good Health

B Beginning

I Ill Fortune / Sickness & Poverty

E Electricity

Man in Hole [1]

[1] but it needn't be about a man and it needn't be about someone getting into a hole

Boy Gets Girl [2]

[2] but it needn't be that, just a way to remember it

Most Popular Story in Western Civilization [3]

[3] everytime it's retold someone makes a million dollars

Start a little above average, why get a depressing person?

Start on an average day, average person, not expecting anything to happen, a day like any other.

It's a little girl... Her mother has died, Her father has remarried a violent tempered ugly woman with two nasty daughters, big daughters

Finds something wonderful!

Just loves it!

Oh goddamn it!

Somebody gets into trouble...

Goes to the party, dances with the prince, has a swell time.

Boring...

...boring...

...boring...

...boring...

... gets out of it again.

Got it back again.

Gives her a means of transportation

Gives her mascara

Gives her stockings

Gives her shoes

So the fairy godmother comes...

...boring...

...boring...

She poops along on this level until the prince comes along.

The shoe fits..

There's a slight inclination to that line as I've drawn it because it takes perhaps 20 seconds, 30 seconds for the grandfather clock to strike 12.

She achieves off-scale happiness. 😊

People like that! 👍

People love that story! ❤
They ever get sick of it!

∞

Story in Games

- Players are interactive participants who can (possibly) change the outcome of the game

- Games are usually nonlinear (or desired to be)

- Difficult to integrate traditional storylines into games

Story in Games

- In most games:
  - Story limited to backstory
  - Insert story chapters into the beginning of each game level
  - Gameplay does not affect story, other than failure means player won't see next part of story.
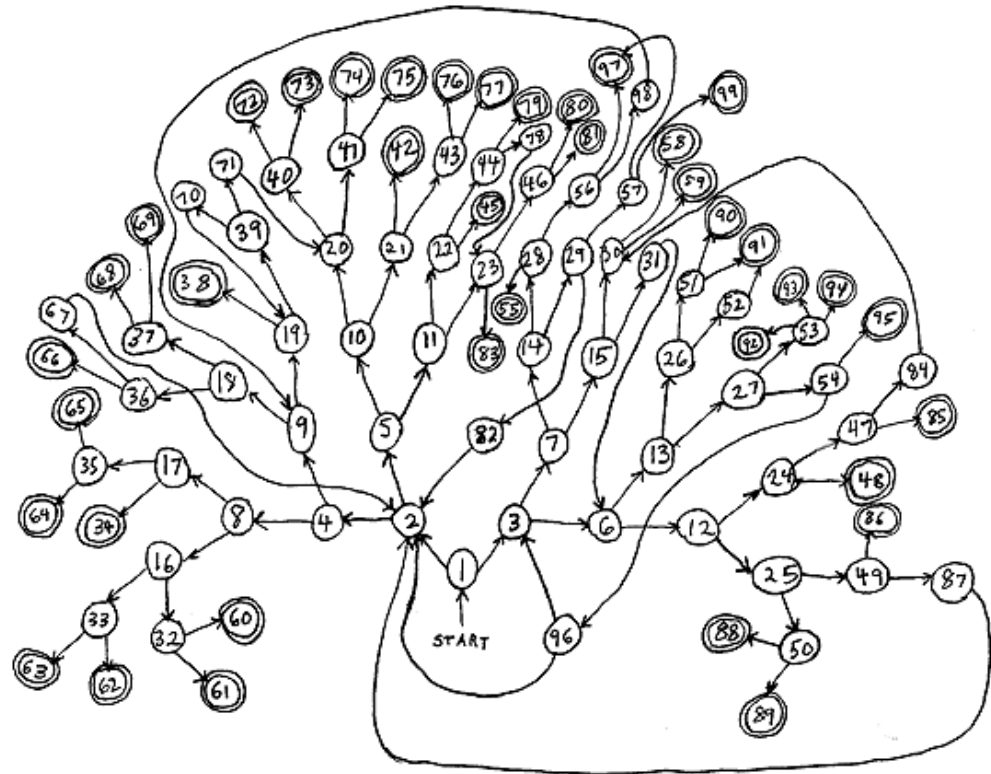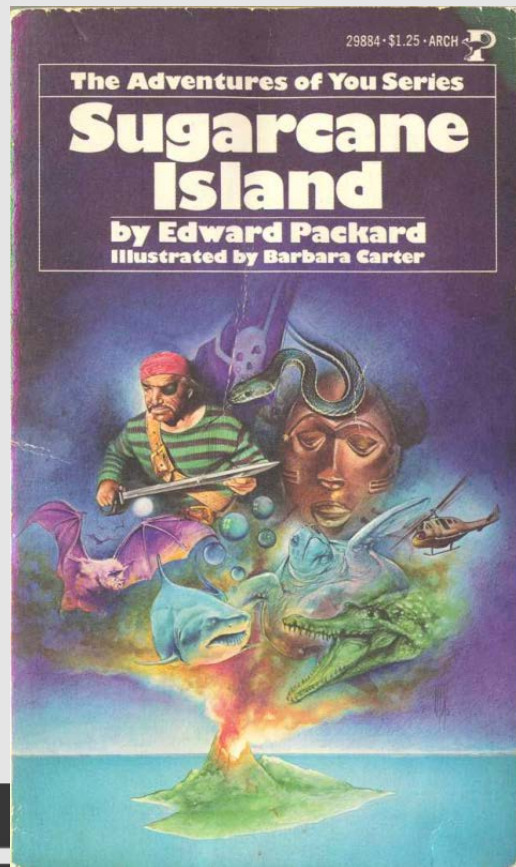 - Essentially linear story arch

Branching Storyline

- Allow player to make critical choices
- Story is represented by a tree, decisions at branches determine path through story
- Role Playing (pen and paper)
- Choose you own adventure books (Sugarcane Island, Lone Wolf)
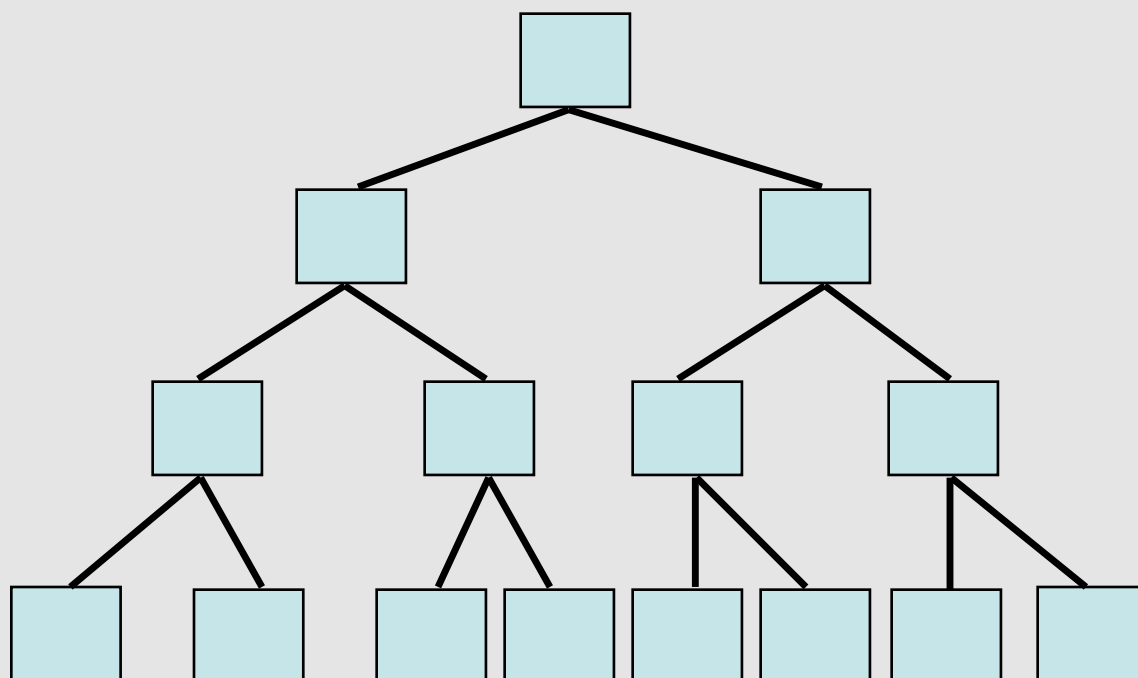
Sugarcane Island – Edward Packard

- From http://www.gamebooks.org/canediff.htm

Problems with Branching

- Storylines limited in their scope
- Player choices may be severely restricted
- Cause game to feel simplistic and unchallenging
- Some paths may create uninteresting outcomes
- User doesn't experience everything that they paid for unless they replay multiple times
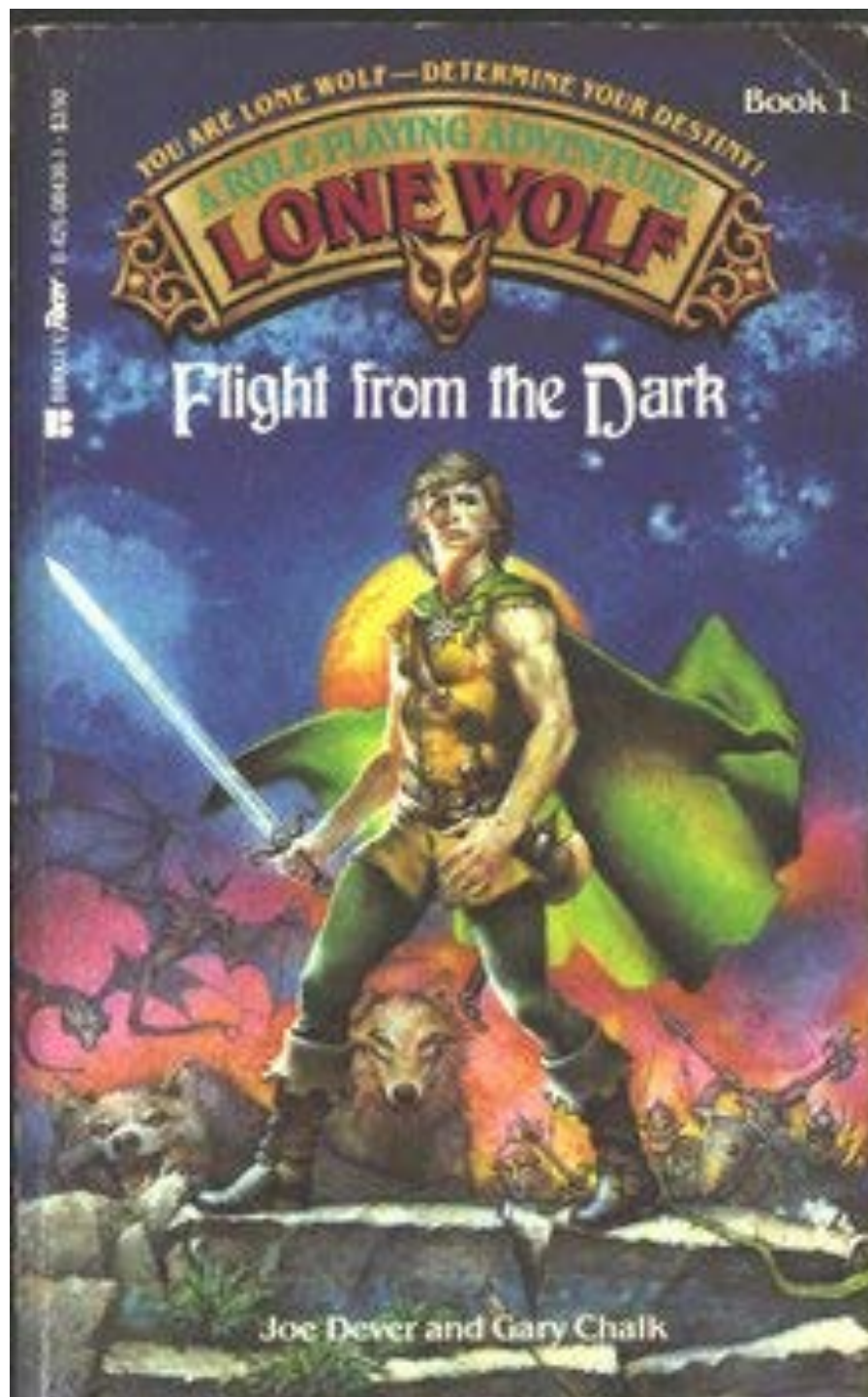- **Development becomes intractable as complexity increases**

Band-Aids for Branching

- Death Trap

- Merge branches – story arch converges back to game designer's intended story arch

- Allow out of order path through story paths (similar to merge)

- Self-contained mini-stories/side quests (think story stack)

- Camouflage – use elements of fun or dramatic elements to hide when player cannot affect storyline; when choices can be made, less likely to stick out like sore thumb
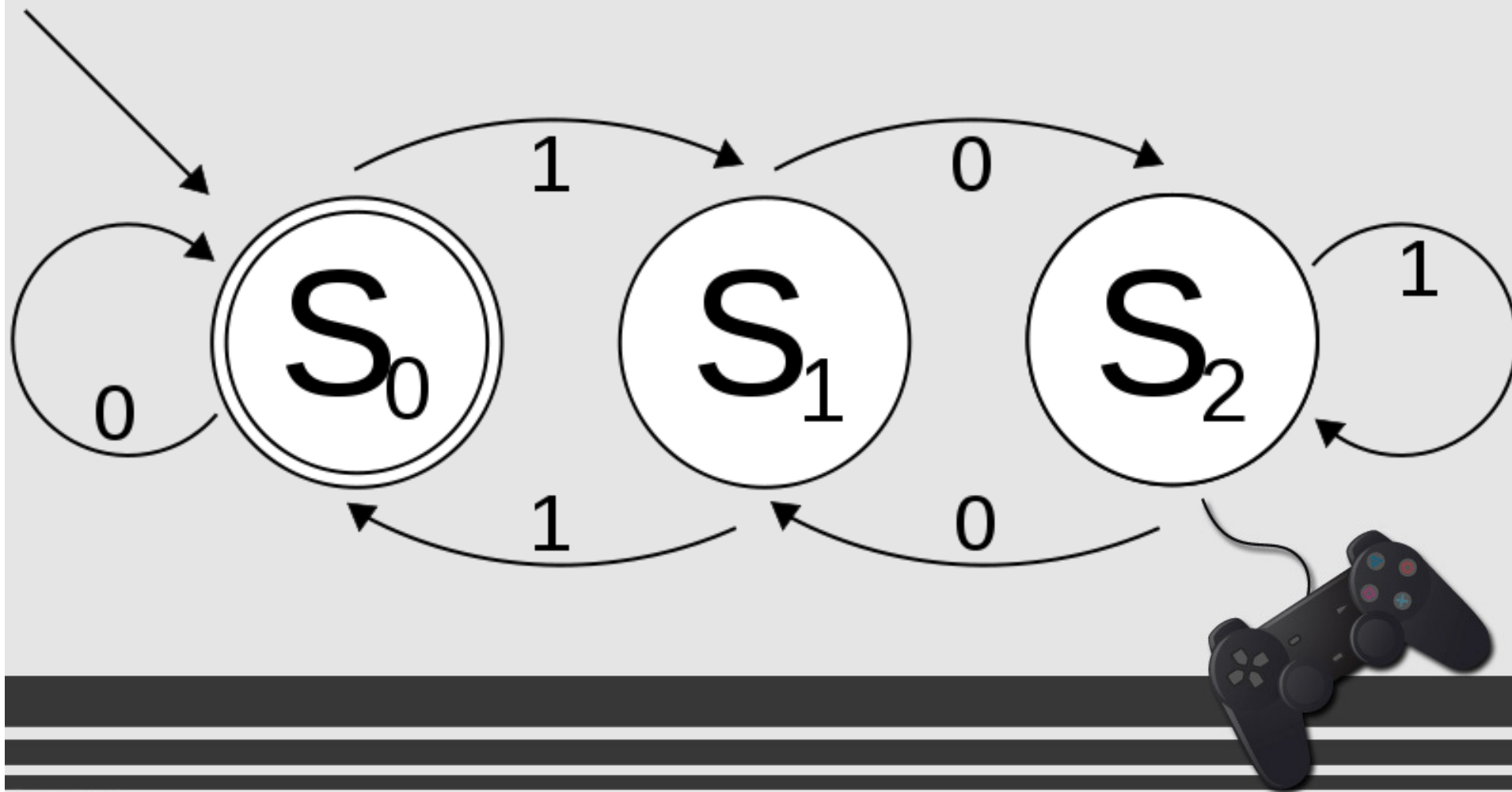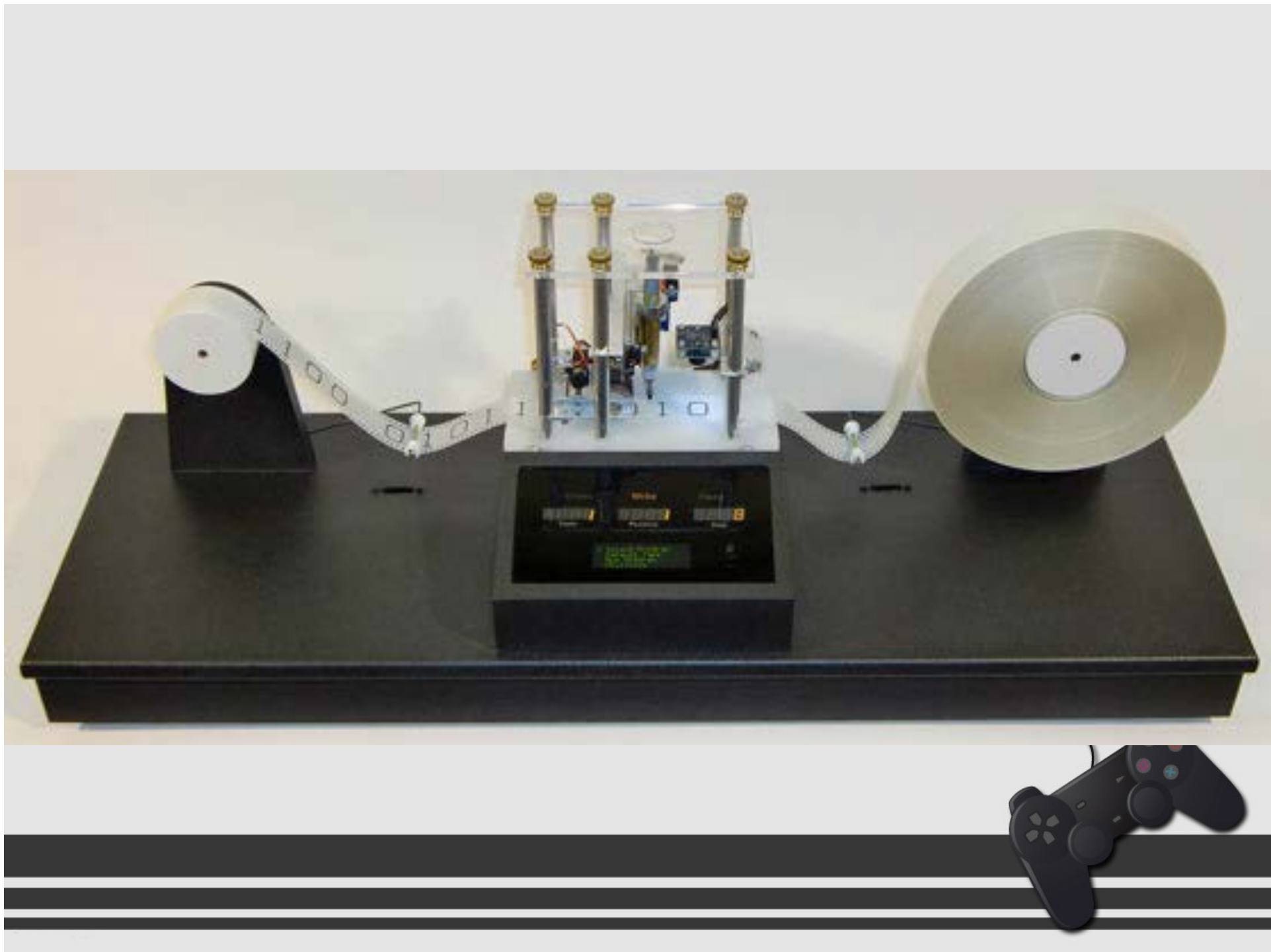
YOU ARE LONE WOLF—DETERMINE YOUR DESTINY!

Book 1

A ROLE PLAYING ADVENTURE

LONE WOLF

Flight from the Dark

Joe Dever and Gary Chalk

Tales of the Arabian Nights

Game Design by
ERIC GOLDBERG

A FANTASY ADVENTURE GAME
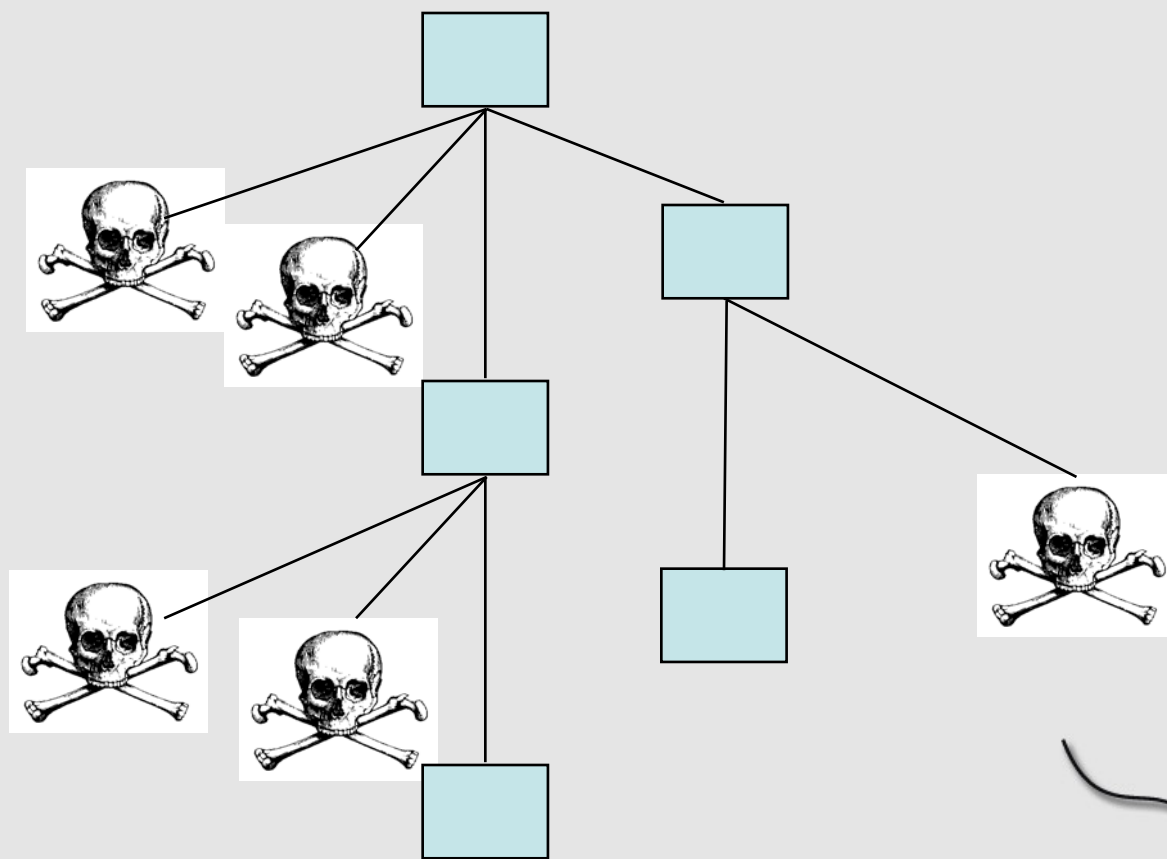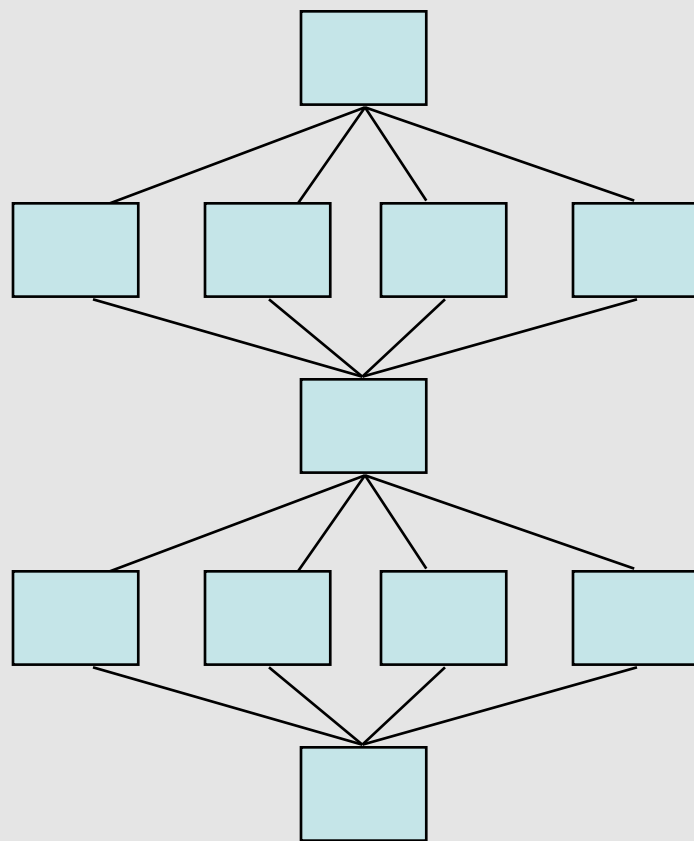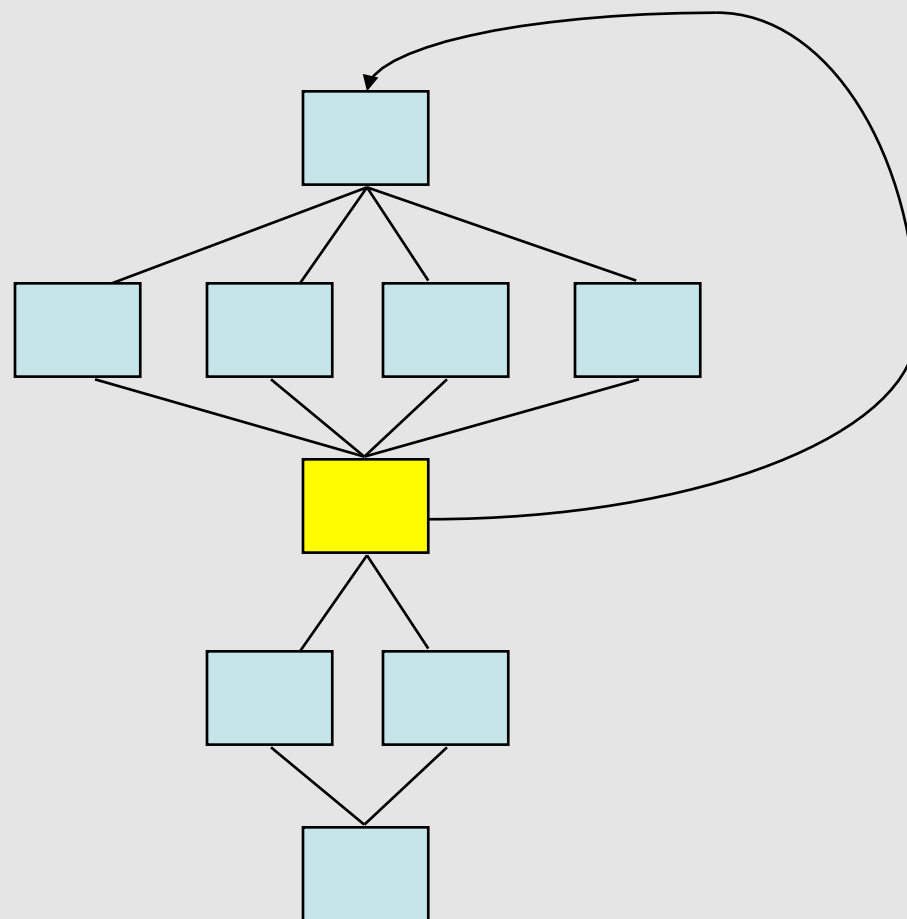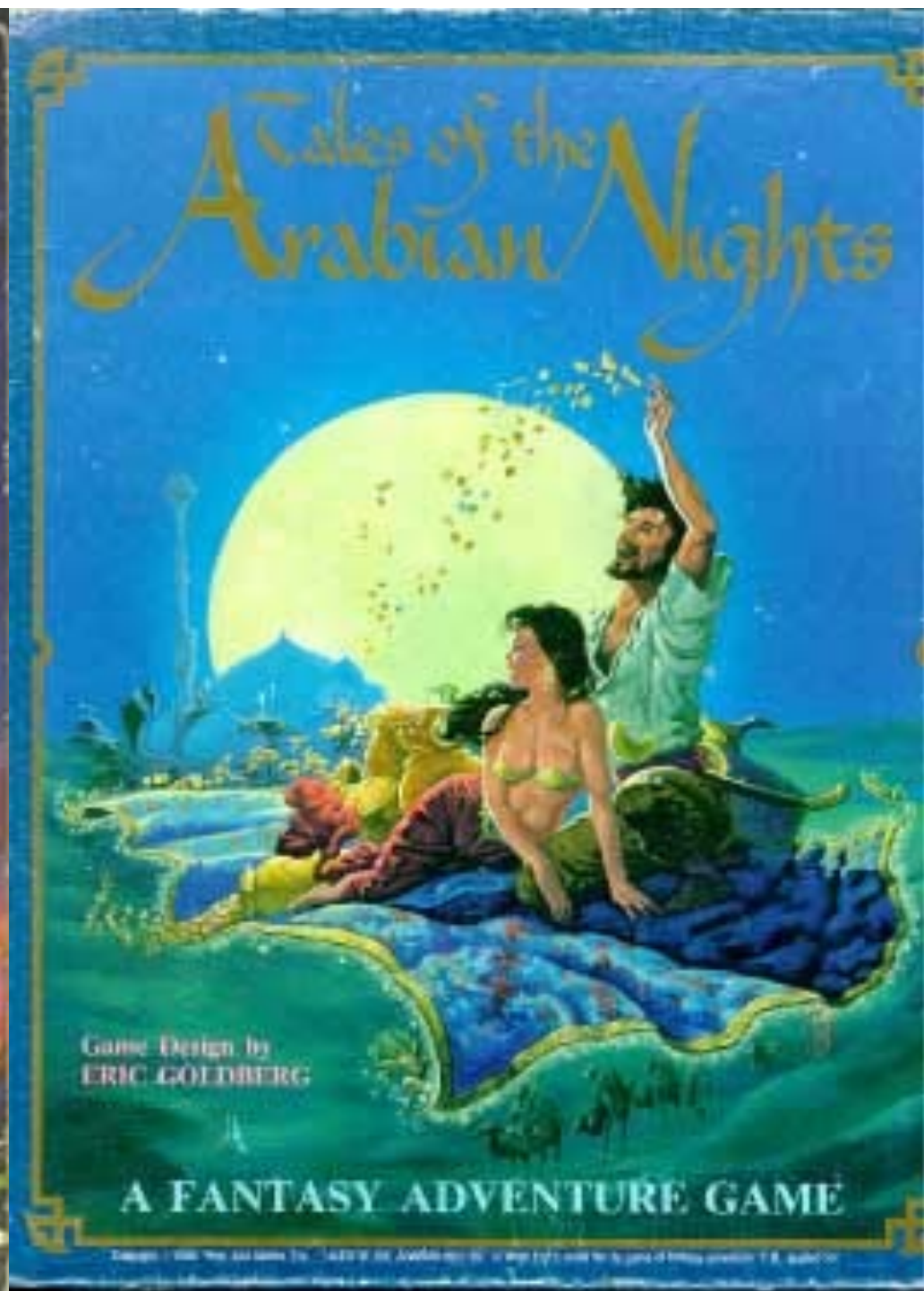
Interactive Fiction (IF): Text Adventures and Graphical Adventure Games

- Focus on story and puzzles

- Typically linear, but also examples of branching, branch merging, side quests

- Story progress is reward

- Negatives: out of place puzzles, bad puzzles used to delay progress (mazes), dead-end branches ("You have died. Would you like to restart, reload, or quit?")
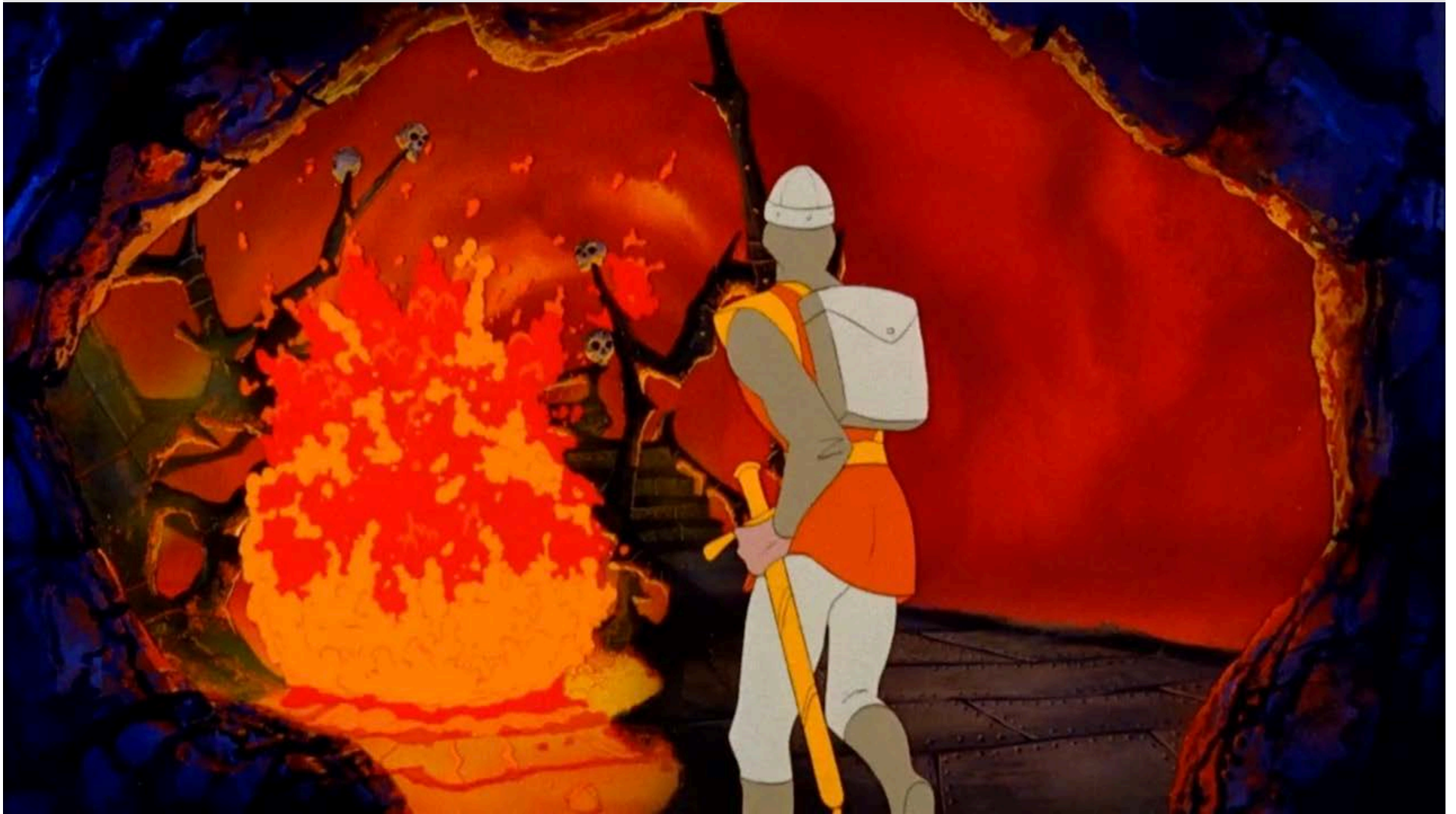
Text Adventures
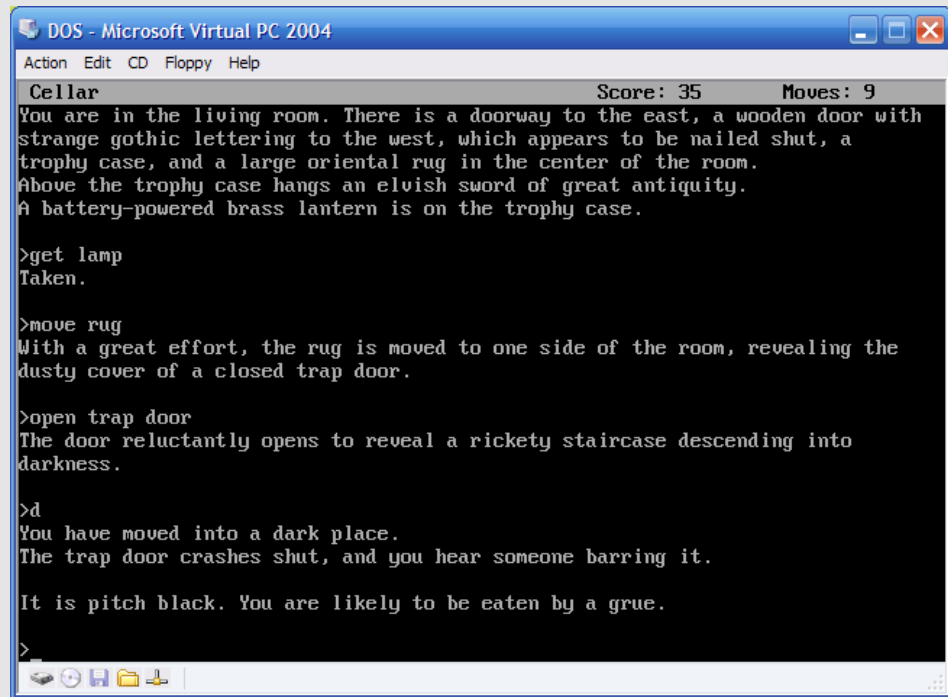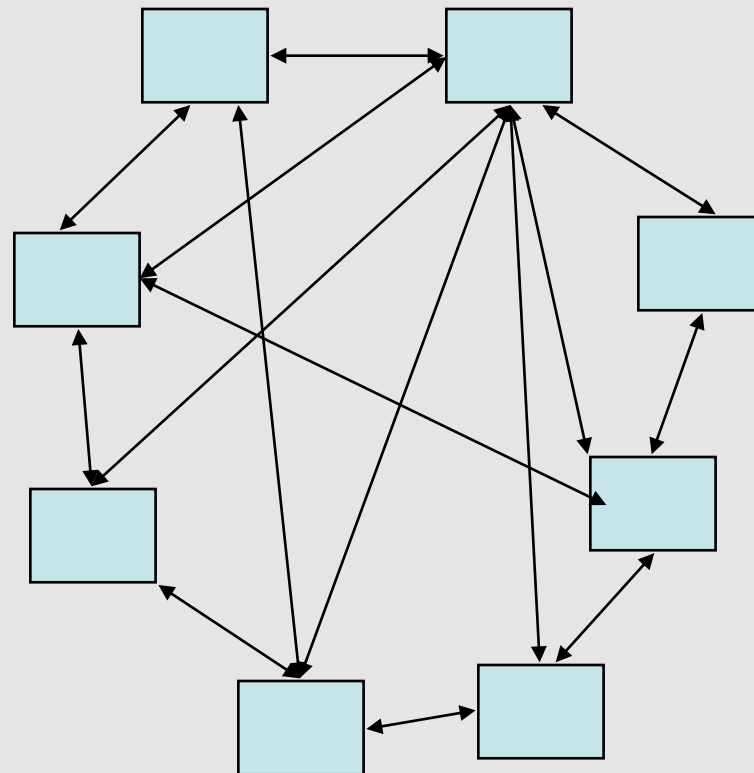
Graphical Adventures

Good Adventure Games Don't…

- …allow the user to progress past a point of no return without critical item/information necessary to complete the game

- …require brute force solving of puzzles (mazes, tower of hanoi, etc)

Don't kill the user

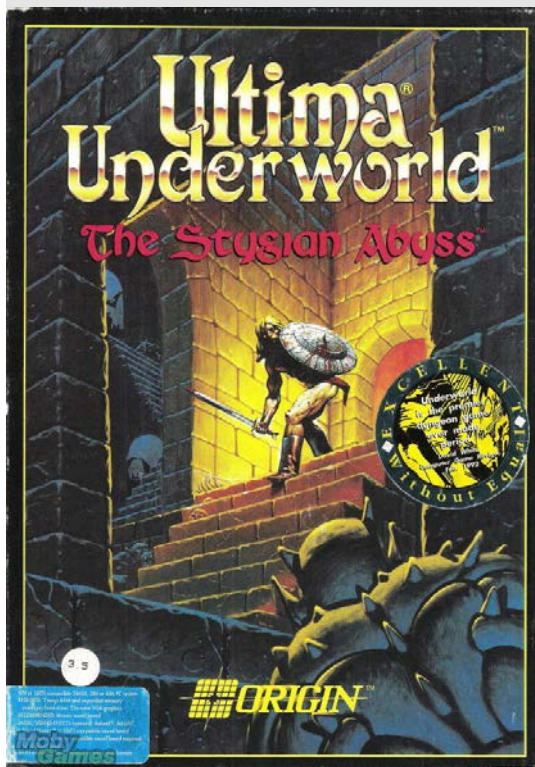- Or at least auto-save (puzzle-only versus action elements?)

You have dysentery.

Oh, no! You've really screwed up this time! Guess you'll have to start over! Hope you saved the game!

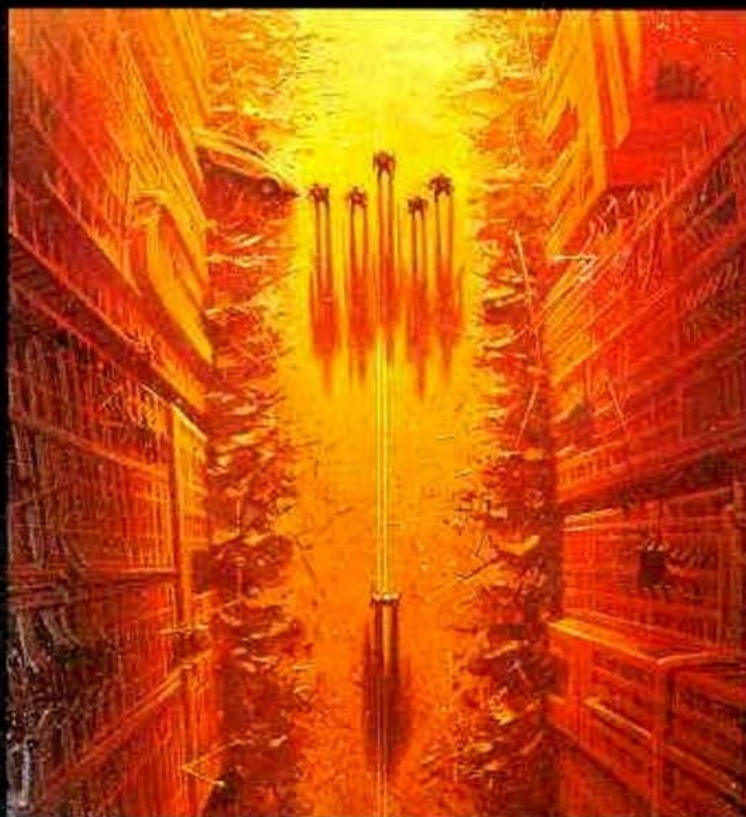Restore   Restart   Quit

"Baba Yaga is one tough magic user. If you're so stupid that you want to enter, perhaps we can make a deal."

WASTELAND

ADVENTURE IN POST-NUCLEAR AMERICA

IBM

ELECTRONIC ARTS®

Interplay Productions

11:19

Hell Razor, choose:

R)un
U)se
H)ire
E)vade
A)ttack
W)eapon
L)oad/Unjam

Wasteland Wa

i<1	NAME	AC	ARM	MAX	CON	WEAPON
1>	Hell Razor	0	6	28	28	M1911A1
2>	Angela Deth	0	17	27	27	VP91Z 9
3>	Thrasher	0	6	34	34	M1911A1
4>	Snake Vargas	0	18	31	31	VP91Z 9

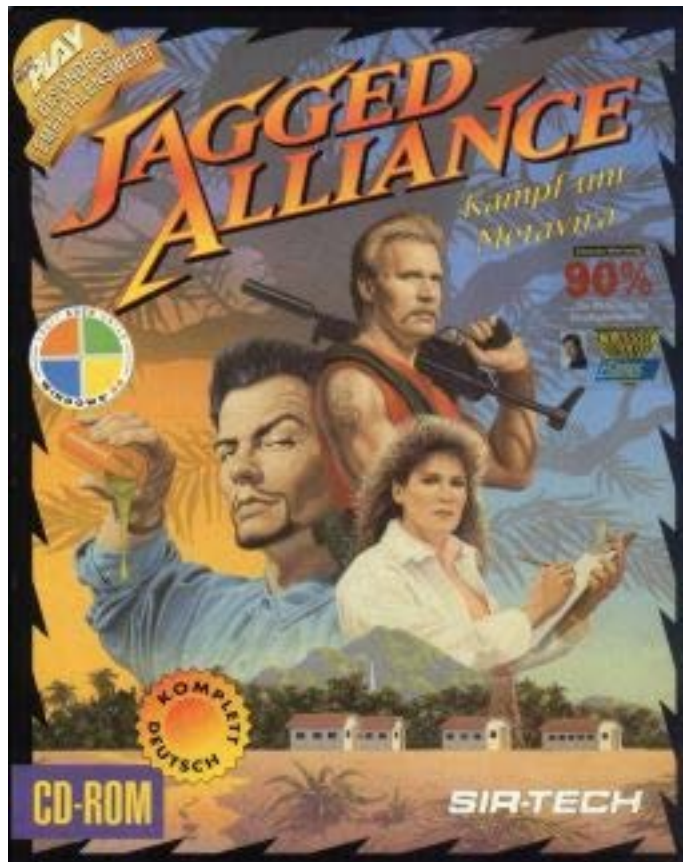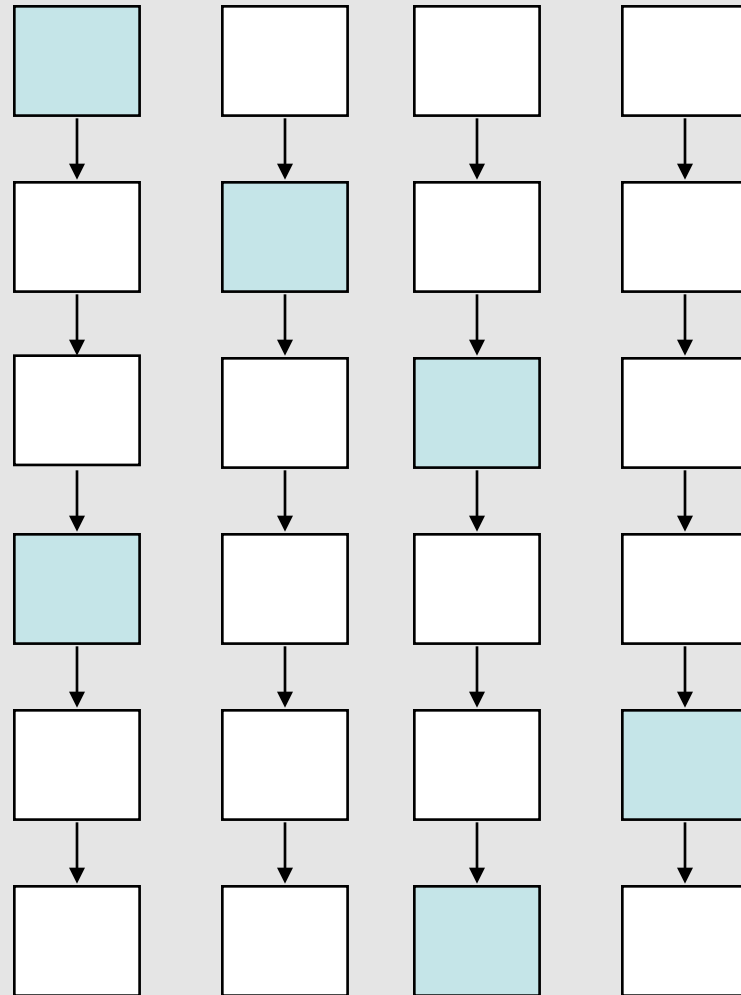Use Enc Order Disband View Save Radio

04:17

ROSTER ON

in the back.
This looks like a workshop. Old
machinery is nearby, and there's a cot
in the back.

USE ENC ORDER DISBAND VIEW SAVE RADIO

Jagged Alliance — Kampf um Metavira (SIR-TECH, CD-ROM)

Fire Emblem — Game Boy Advance

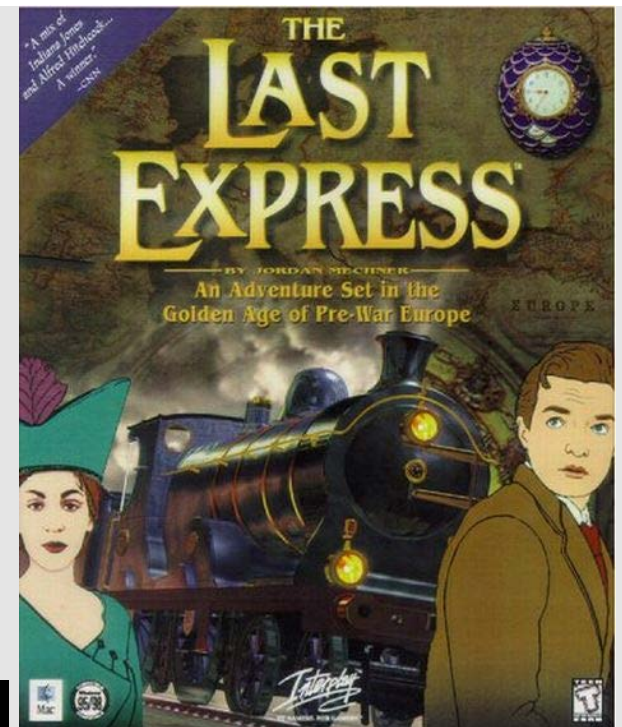Your Highness, I won't lie to you. This will not be an easy ride.

Intertwined Story Threads

- "Groundhog day"
- Legend of Zelda – Majora's Mask
- Redoing things integrated as time travel
- Failure/dead end initiates restart
- Experience events from different perspectives
- Provide rich story possibilities without a lot of branches or autonomy
 in the characters
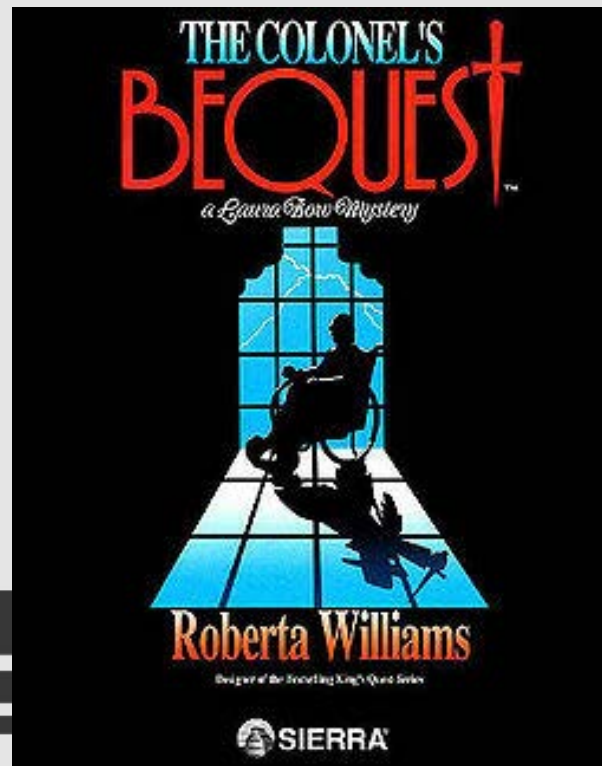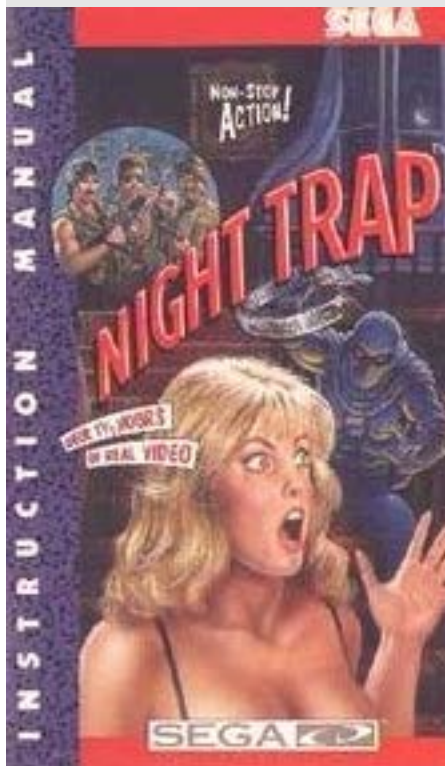
Machinima

- Machine cinema/animation
- Movie rendered in real-time
- Emerging form of artistic expression
- not usually interactive (perspective can be)
- Both creation and viewing is source of entertainment
- Similar to animatronics (Disney Pirates of the Caribbean)
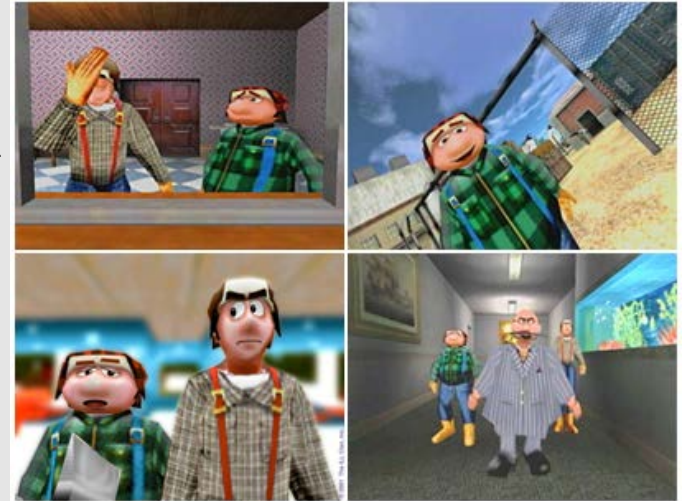
Machinima: "Demo Scene"

- Early '80s hacker/cracker scene
- Highly optimized real-time art/graphics/, music/audio/algorithms/programming showcases
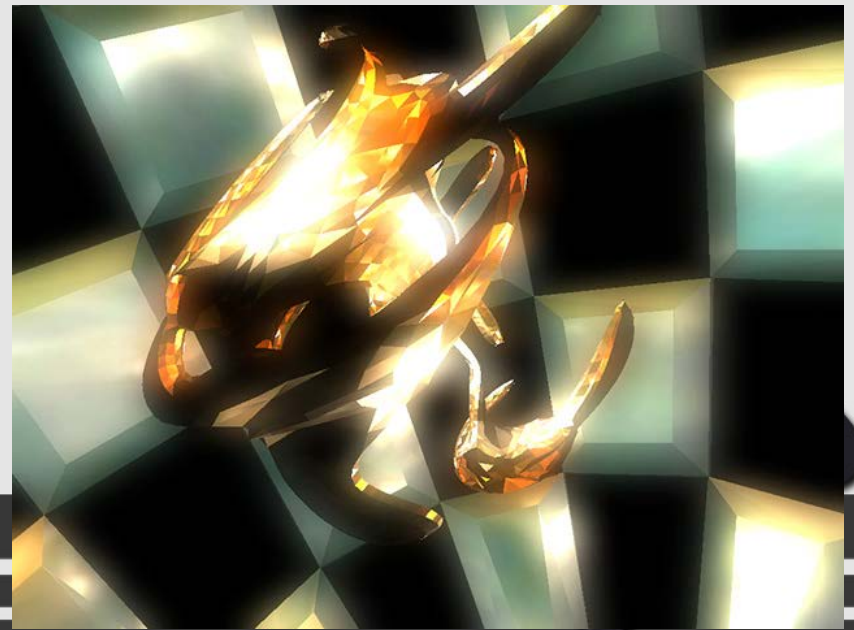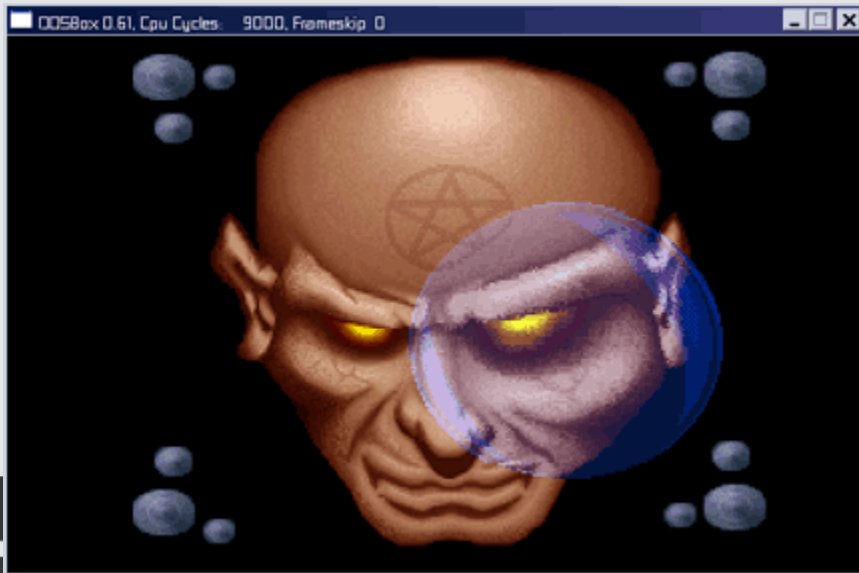
Machinima: entertainment as creation

- Hard Drivin' "ghost" (1989) (http://www.gamasutra.com/view/feature/1489/ hard_drivin_hard_bargainin_.php?page=1)

Machinima: entertainment as creation

- Stunts and Stunt Island
- The Movies

Machinima: entertainment as creation

- FPSs (Quake, Half-Life, Halo, etc.)

Machinima Cut scenes

- Real-time or in-engine cut scenes
- Half-Life 2

Machinima: Headed to Hollywood?

- Popularity of 3D graphic movies: e.g. Pixar
- Hollywood already targeting different displays (conventional screen, IMAX, stereoscopic)
- "Performance Capture" mo-cap, 3D scanning and Light-field rendering

Machinima: Hollywood?

- 3D graphic movies can be rendered real-time with drops in detail - Nvidia RT tech demo of Square's Final Fantasy movie - http://www.nvidia.es/object/final_fantasy.html

- Virtual texturing (see id/Carmack's Rage)

- Virtual geometry? (tessellation)

NVIDIA's GPU performance and memory bandwidth enable interactive rendering of each frame in real time.
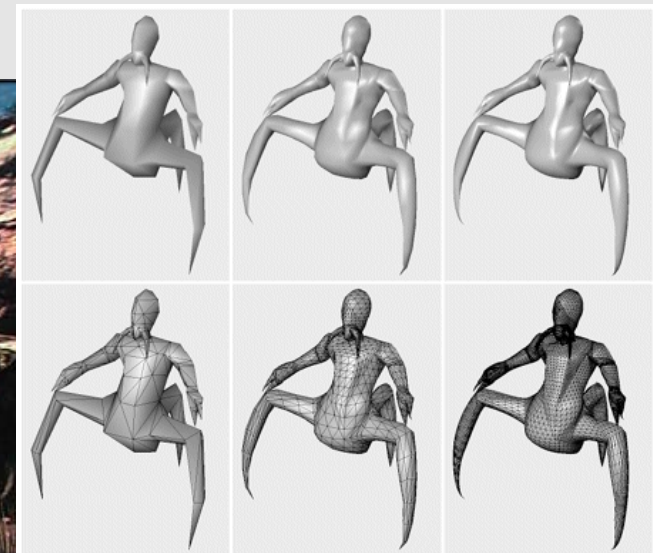
Machinima: Hollywood

- "Value added" entertainment
- Consider an interactive DVD with real-time rendering
  - Watch original cut
  - Or control the camera
  - Explore the world as story progresses
- Will it happen? (DVDs were touted as doing similar things with multiple camera angles)

Machinima: Limited

- Nice concept, but limited
- What gamers really want?
- Full interaction in a dynamic, immersive fantasy world including interaction with intelligent beings

Façade

Grace, are you angry at Trip?
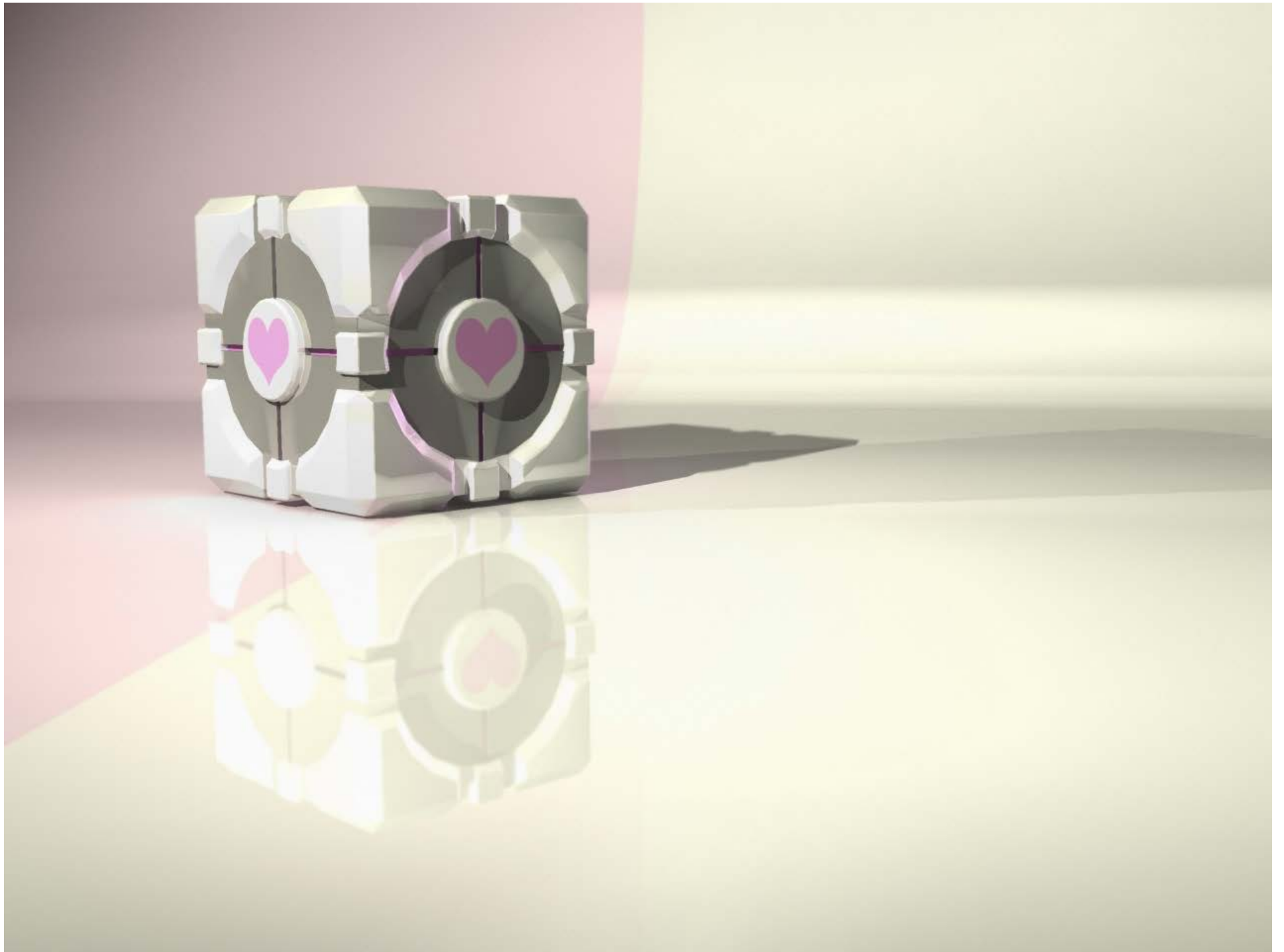
Façade

- Created by: Michael Mateas (GaTech) and Andrew Stern (game industry experience)
- ***Façade** is:*
  - "is an artificial intelligence-based art/research experiment in electronic narrative"
  - "an attempt to move beyond traditional branching or hyper-linked narrative to create a fully-realized, one-act interactive drama"
  - "engineered a novel architecture for supporting emotional, interactive character behavior and drama-managed plot"
  - "characters actively perform the story without waiting for you to click on a link or enter a command"

Façade

- involved three major research efforts:
  - "designing ways to **deconstruct a dramatic narrative** into a **hierarchy** of story and behavior pieces"
  - "engineering an **AI system** to reconstruct a real-time dramatic performance from those pieces that integrates the player's moment-by-moment interactions"
  - "understanding how to write an engaging, compelling story within this new organizational framework"

Façade

- "ABL (A **Behavior Language**), a special purpose programming language (technically, a reactive planning language), designed specifically for authoring personality rich, emotive autonomous characters."

- "A drama manager that dynamically sequences units of story (**dramatic beats**) in response to the history of the player's interaction."

- "A custom **rule language** for authoring robust **natural language understanding** rules."

- "A **discourse management framework** for keeping track of multiple conversational threads and deciding which response is appropriate in the current context."

Façade

- Problems:
- A lot of complicated work
- Consistency still difficult
- Still potentially have dead-end/uninteresting branch problem
- Must convince player to replay game to truly enjoy the richness
- Confuse user as to whether prior knowledge applies to replays (did Trip cheat or not?)
- Debugging difficulty (so many possibilities)

Storytron

- Chris Crawford – (founder CGDC, developed "Balance of Power")
- Interactive Storytelling technology – Storytron
- Released demonstration of authoring tool and demo story
- **(Failed effort)**

Storytron

- Claimed to allow for "lots of both story and interactivity"
- Utilizes custom scripting/character language (Deikto)

Scripting Concepts

- Verbs – actions that can be executed/ responded to
- Roles – actor allowed to respond/execute
- Options – choice of reactions to verbs
- Inclinations – weighting towards particular options (reaction to events)

Scripting Concepts

- Plans – verbs that actor plans to execute in the future

- Events – memory/history of events actor is aware of

- Stages – locations where story takes place
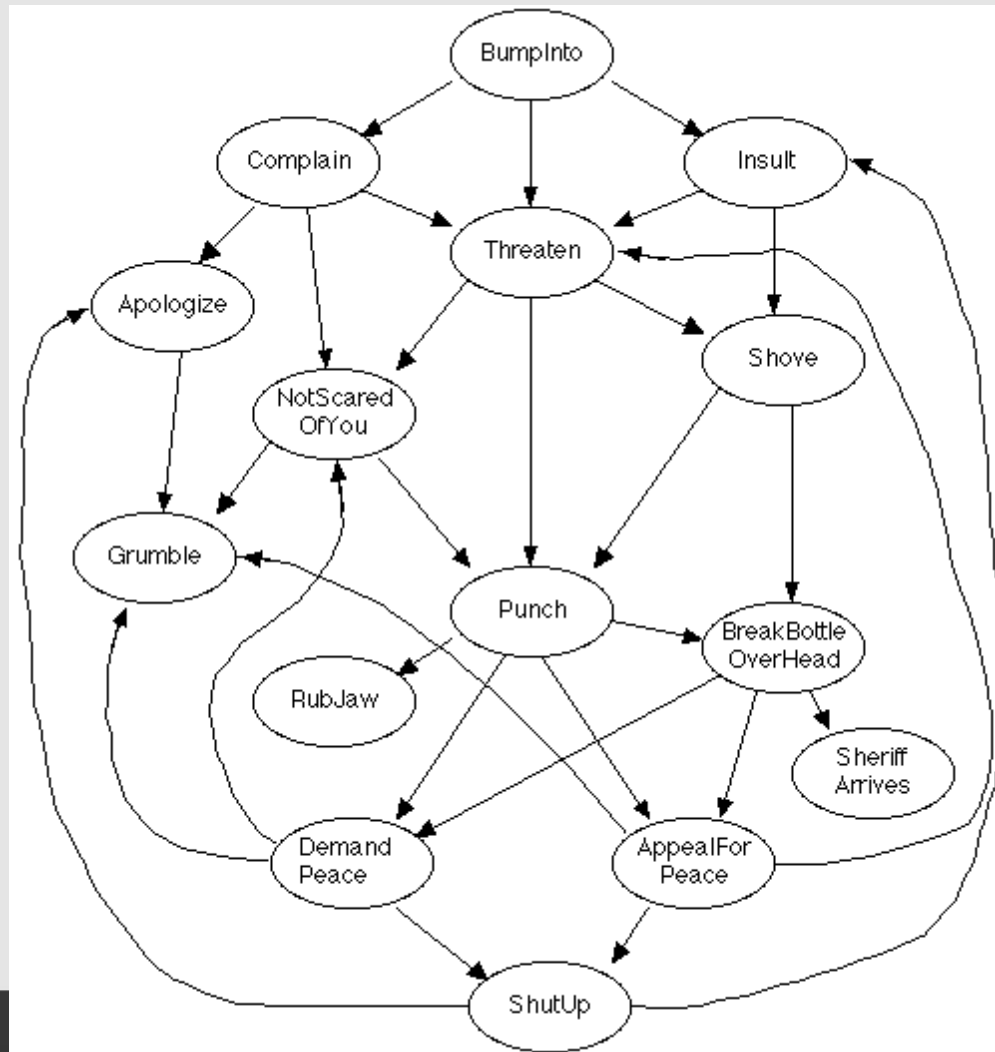
- Props – objects actors can interact with

Verbweb

- Verbs that can succeed in story

Verbweb

Swat

- Storyworld Authoring Tool (Swat)
- Tool for creating interactive stories

Storytron Business Model

- Provide tools for free
- Host/distribute storyworlds for free
- Commission authors based on storyworld popularity

Junction Point

- Warren Spector's new Co.
- Focus on player-driven narrative
- "improvisational gameplay in the context of a strong, traditional narrative."
- "tell stories with players, not to them, allowing them to craft unique experiences through in-game choices."
- Bought by Disney Interactive
- Completed Epic Mickey