
Design Goals & Design Methods

staffan.bjork@chalmers.se



Global Game Jam last weekend

- n Look at the local game jam site for the nice games done by people at our course
- n Look at the global game jam site for a lot of other interesting game ideas
- n Guest Lecture today: MIA?
- n All assignment 1 graded (nearly) but we teachers need to synchronize



Today's Lecture

- n Evolved & Designed Goals
- n Design Goals
- n Design Methods
 - n Will mention methods from book but no give detail from (chapters 6- 11,14)
 - n Expect that you read this
 - n *Needed for assignment 3*
- n Assignment 3
 - n *Consists of several parts*
 - n *The low-fidelity play test is part of assignment 3*
 - n *Supervision 13.00-15.00*



Evolved & Designed Games



Evolved & Designed Games

n Evolved Games

- n Games that have no documented original design
- n Many anonymous designers
- n Variant rule sets
- n Rule sets maintained through organizations or manufacturers



n Designed Games

- n Identified designer
- n Often commercial intent
- n Original rule set



Example evolved games - Bowling

- n Egyptian Tombs
 - n 5200 BC or 500 BC
- n Monasteries
 - n Metaphorical teaching tools in monasteries and church where the pins represented heathens
- n Medieval Europe
 - n Use in English courts gave rise to the concept of king-pin
- n United States
 - n Banned in the 19th century due to betting
 - n Nine- Pin Bowling changed into today's Tin- Pin Bowling



Sources:

Brasch, R., *How Did Sports Begin?*, Tynron Press, 1986

Levison, D. & Christensen, K. (eds.), *Encyclopedia of World Sports – From Ancient Times to the Present*, Oxford University Press, 1999.

[another example Chess]



Example designed Games - Basketball

- n James A. Naismith, 1891
- n Design criteria
 - n enjoyable by average people
 - n skill rather than strength or weight
 - n ball easy to handle, difficult to conceal
 - n no tackling



[another example Landlord]

Differences and Similarities between Evolved and Designed Games

n Differences

- n Serendipitous Design – Planned Design
- n Gradual improvement - Original idea
- n Improvised Gameplay - Intended Gameplay

n Similarities

- n Same general structures
 - n The games in both categories are all games...
- n Can be analyzed same way to look at gameplay
- n Claims to be in one category can be wrong



Sequels? Games developed in groups?



Design & Craft?



Differences between design and craftwork

- n Knowledge transferal
 - n Crafts are primarily learned by imitation
 - n Practitioners can not motivate why one does things one way
- n Unintentional trial- and- error experiments develop methods over periods spanning centuries
- n Information about designs are only recorded in the produced artifact
 - n Fragmented information about details and patterns are used to recreate the design



Differences between design and craftwork, cont.

- n Crafts do not work with sketches
 - n Experiments are done on the product itself
 - n Full- scale experiments
- n Craft typically making variants of previous work
 - n *Design goals* more static
 - n *Design goals* can be implicit



**What areas of
responsibilities do
designers have?**



Areas of responsibilities for designers

- n Identify and explore critical choices
- n Relate costs for research and cost for erroneous decisions
- n Plan activities in the work process in relation to the competences in the work group
- n Identify information sources and their reliability
- n Explore connections between the “product” and the environment in which it should be used
- n *Explore and satisfy the “needs” of the users*



Design Goals



Types of design goals

- n Goals related to pre-planned gameplay experiences
 - n Stressing, competing, group effort, etc.
 - n Types of fun according Marc LeBlanc
- n Goals related to the Game system
 - n Be something for players to explore and master
 - n Be a vehicle used to provide engrossment in gameplay or narrative
 - n Be a tool for gamers to create or choose their own gameplay experience
 - n Be a tool for gamers to make their own games
- n Goal related to Diegetic Presentation or Narratives
 - n Tell a story of character development
 - n Tell a story of player progress
 - n Create a believable/compelling/interesting fictional world
- n External Goal
 - n Serious Games, persuasive games, training games, advergames, etc.



Design goals can be seen as answers to questions

- n Questions that need to be answered to be able to start design work
- n Help structure one's work
 - n What should be changed?
 - n Why should it be changed?
 - n When should the change be completed?
 - n Who are the stakeholders?
 - n (How should it be changed?)



Questions that need to be answered during the design process

- n Why is it hard to answer these questions? (why cannot we answer the before the design starts?)
 - n One must use available information to predict a future that will not occur unless the predictions are correct
 - n The effect must be determined before the possibilities to reach them are – the designer must work backwards from an assumed effect to the causes that can “cause the effects”
 - n Sequences of cause and effect make it highly likely that new problems or better goals appear
 - n Shifting or changing the design goal(s)
 - n Possibly forcing the design process to be restarted



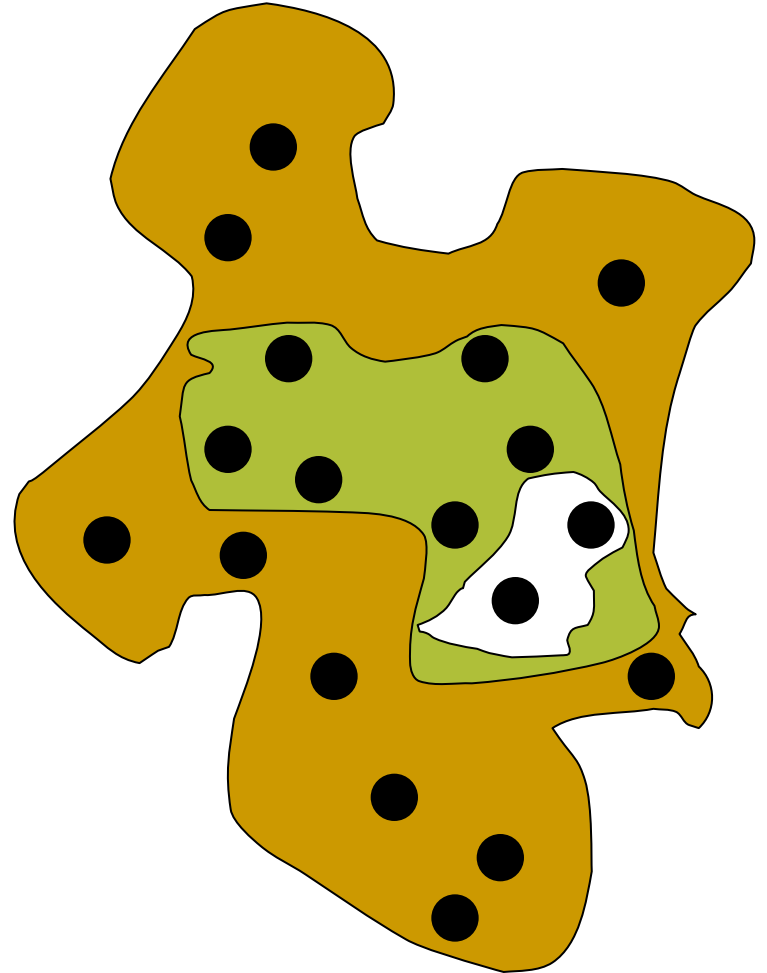
Stakeholders

- n Distributors
 - n Products – boxed packages
 - n Services – mediums
- n IP holders
 - n Companies
 - n Actors, authors, artists
- n Producers
 - n Project managers
 - n Programmers, artists, level designers, animators, sound artists,
 - ...
 - n Subcontractors
- n Players
 - n Expert players
 - n Novice players
 - n Fan communities
 - n Relatives
- n Interest organizations
- n Legislators
- n The designers



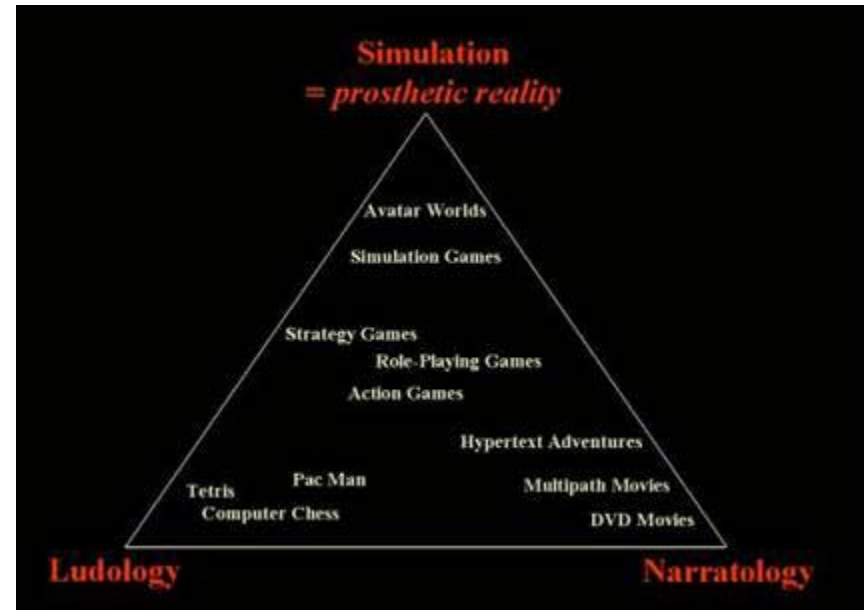
The Design Space of Games

- n All possible game designs can be said to describe a *design space*
- n Defining design goals can be seen as defining a subspace where the actual game design should be located
- n Previous design goals can be seen as external design goals – not based on what is interesting in the space
- n Design goals regarding gameplay can be seen as defining a subspace on areas that are interesting in relation to other areas



Ways of Creating Subspaces of the Design Space

- n Specifying required characteristics
- n Specifying forbidden characteristics
- n Note that this does not have to be seen as a negative way of design
 - n Creativity requires limitations



Ways of Creating Subspaces of the Design Space, cont.

- n Gameplay
 - n Game Design Patterns, Game Mechanics
- n Theme
 - n Humor, horror, political
- n Style
 - n Realistic, Sequential Art
- n Narrative
 - n Linear, hypertext, player-created, etc.



Design Methods

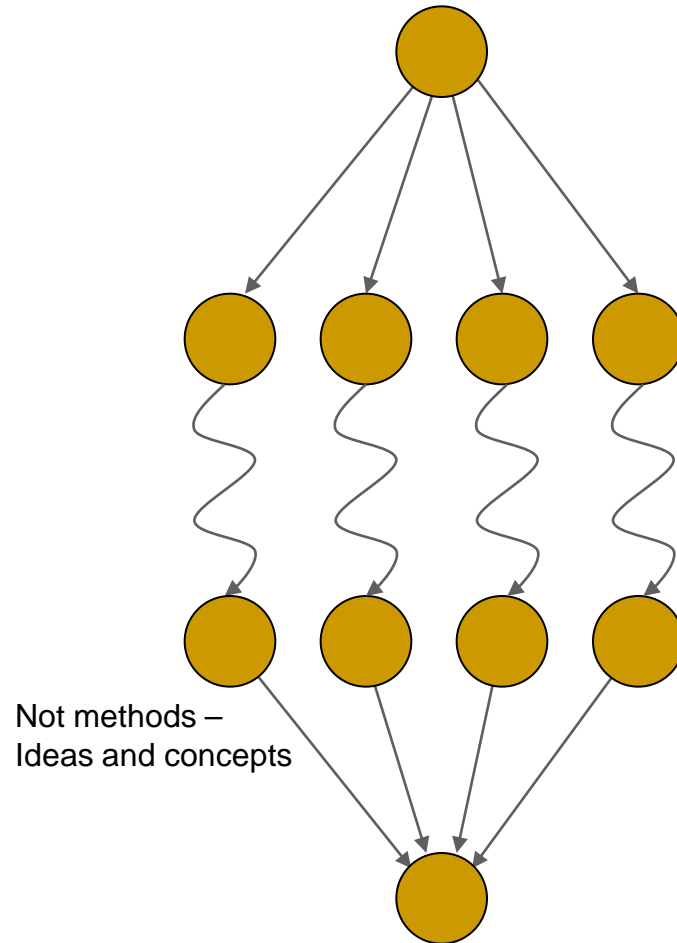


Jones' model of the design process



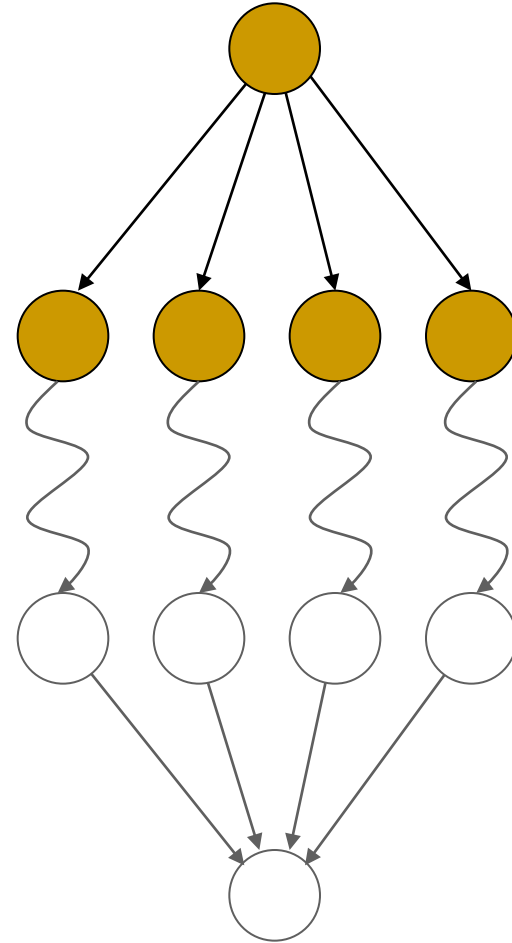
Jones' model of the design process

- n Divergence
 - n Find alternatives
- n Transformation
 - n Refine and understand alternatives
- n Convergence
 - n choose alternative through selection or synthesis
 - n Exact method depends on field, context, available resources and input



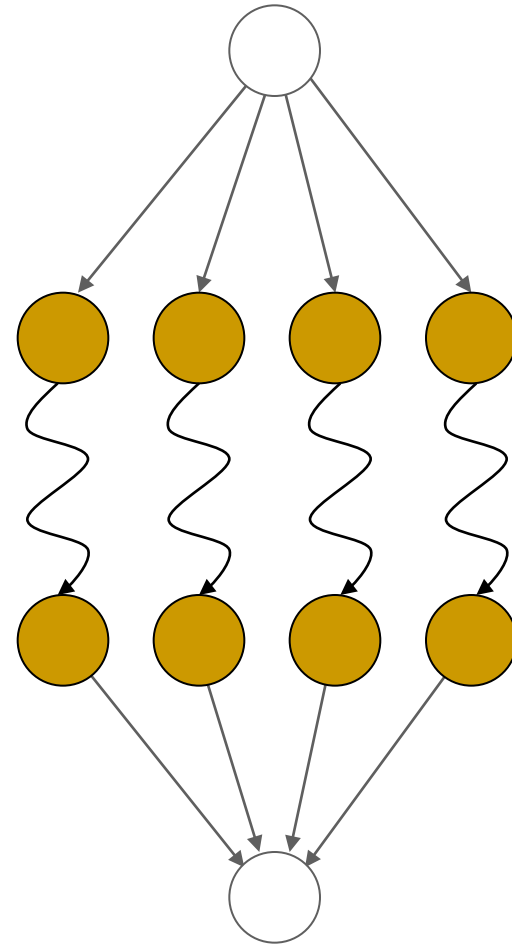
Divergence

- n Properties
 - n Unclear goals
 - n Problem area vaguely defined
 - n Evaluation not relevant
 - n Starts from a assignment or requirement specification
 - n Conscious goal to broaden design group's sphere of ideas
 - n Identify important stakeholders



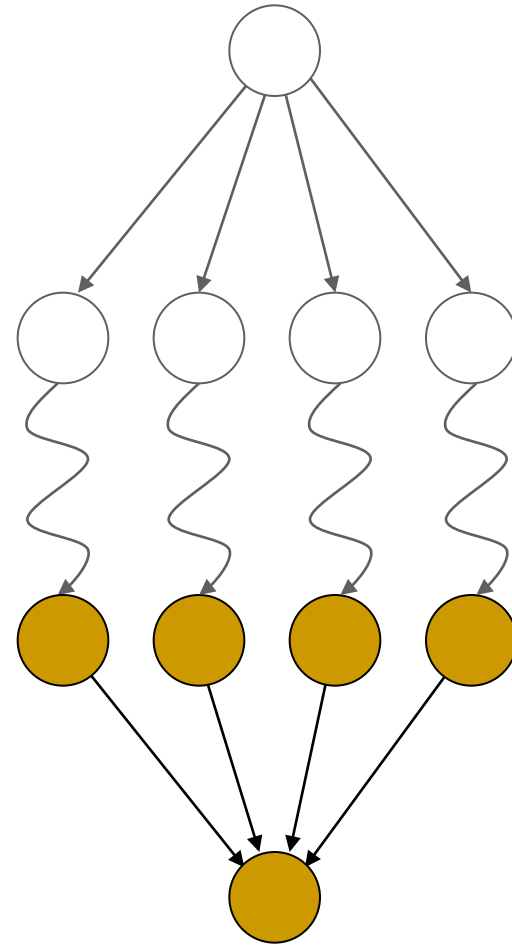
Transformation

- n Properties
 - n Find pattern from a number of alternatives
 - n Choosing goals
 - n Defining outer boundaries of problem and design space
 - n Identify critical variables
 - n Identify subproblems



Convergence

- n Properties
 - n Focus on reach a goal
 - n Endurance and methodic work
 - n Evaluate alternatives to choose which alternative to realize
- n Two categories
 - n Top- down
 - n Bottom- up
 - n Both can be used simultaneously

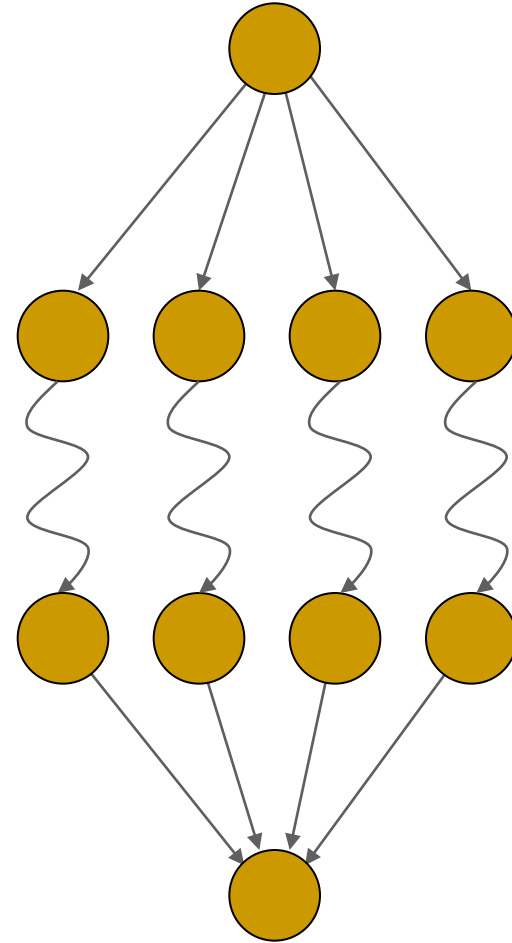


Methods for Game Design



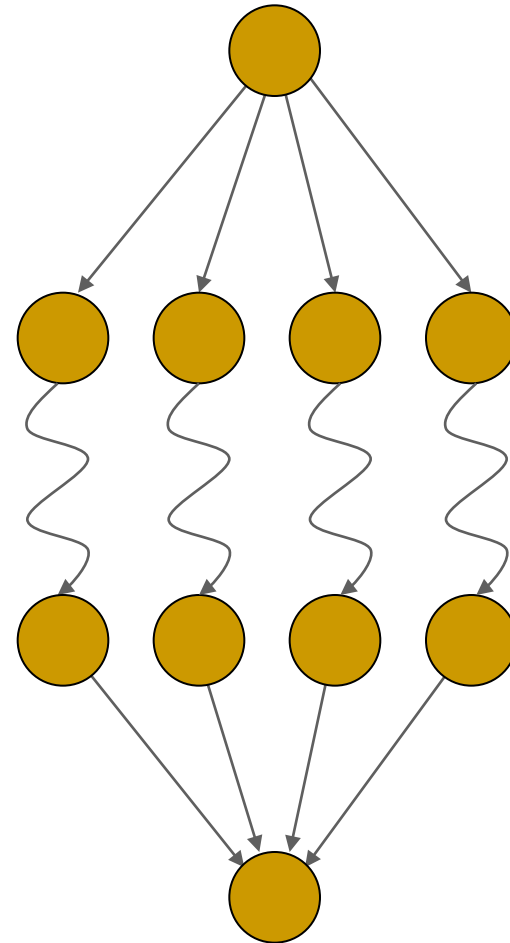
Game Design Workshop & Jones' model

- n Jones' model can be applied to explain overall design process
 - n Divergence
 - n Conceptualization - Chapter 6
 - n Transformation
 - n Prototyping - Chapter 7
 - n Digital Prototyping - Chapter 8
 - n Playtesting - Chapter 9
 - n Convergence
 - n Functionality, Completeness, and Balance - Chapter 10
 - n Fun and Accessibility - Chapter 11
- n But can also be described as narrowing the design space



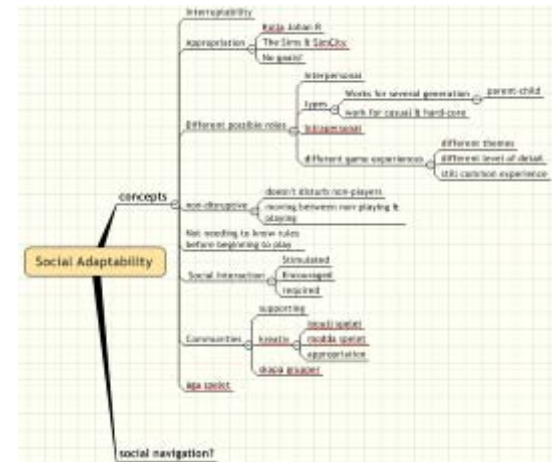
Jones' model applied to Conceptualization

- n Divergence
 - n Brainstorming
 - n List creation, Idea cards, Shout it out, Stream of consciousness, Randomize it, Research, Extreme measures
 - n Teamstorming
 - n *Interaction relabelling, cultural probes*
- n Transformation
 - n Editing & refining
- n Convergence
 - n Focus on formal elements



Conceptualization - Divergence

- n Functional roles
 - n observational, basic, dedicated, unique, supporting, meta
- n Social roles
 - n banned, outcast, recluse, motivator, negotiator, mediator, helper, violator, dominator, exhibitionist
- n Atomic gameplay actions
 - n Take OBJECT from POSITION, Place OBJECTS on POSITION, Give OBJECT to PLAYER/NON-PLAYER, Find OBJECT, Perform SKILL BASED ACTION, Randomize, Compute EVALUATION FUNCTION, Select OPTION from SET OF OPTIONS, Order PLAYER to perform TASK

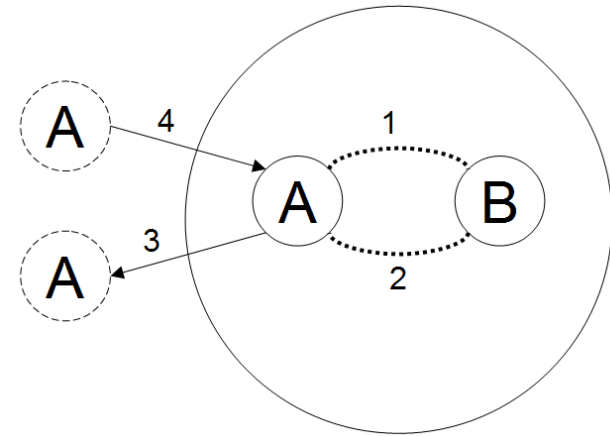


Conceptualization - Transformation

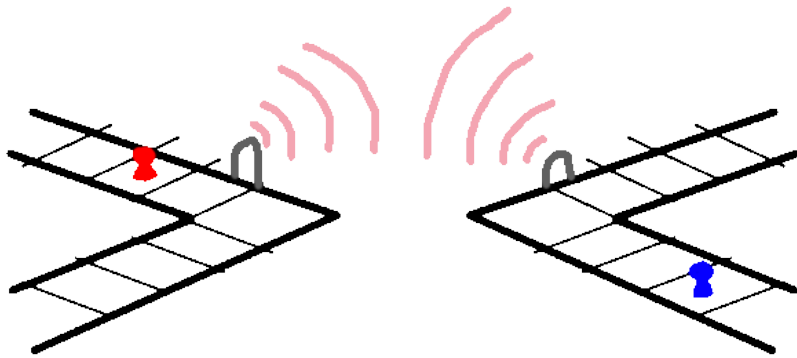
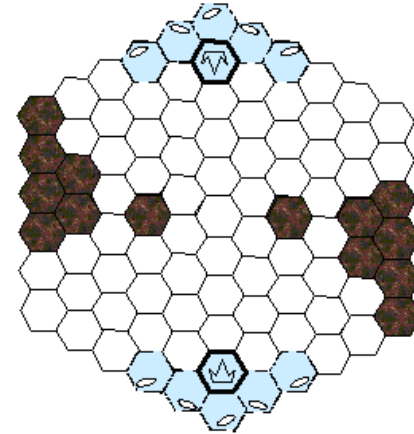
n Guidelines

- n support interruptability
- n allow multiple communication channels
- n consider ambiguity
- n design for external events
- n allow modes of play based on social roles
- n minimize social weight
- n analyze intended player groups from several perspectives

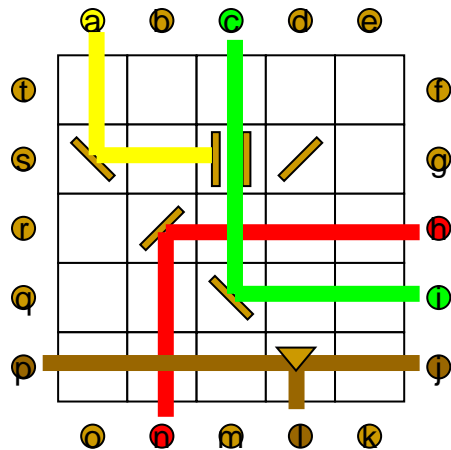
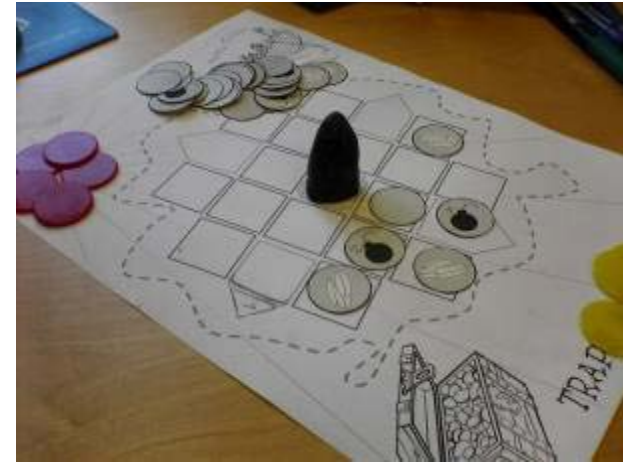
n Design experiments



Conceptualization - Convergence



Conceptualization - Convergence

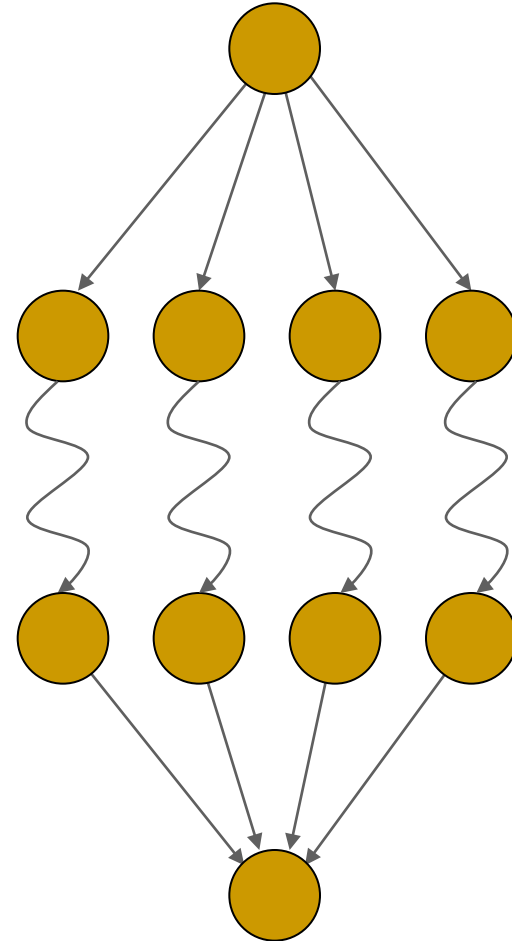


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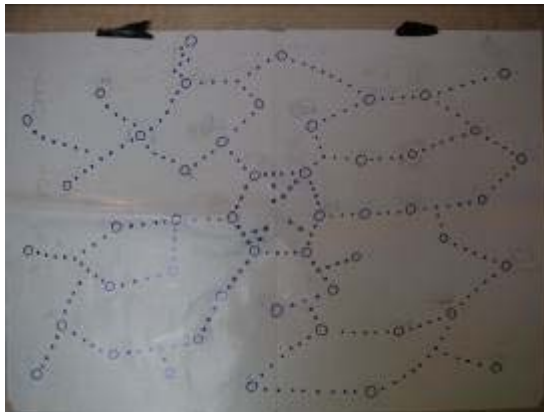
Jones' model applied to Prototyping

- n Physical & software prototypes
- n Divergence
 - n Consider mediums to use
 - n Paper, software, moddable engine
 - n Consider components to use
- n Transformation
 - n Test mediums
 - n Test components
- n Convergence
 - n Integrate components into system

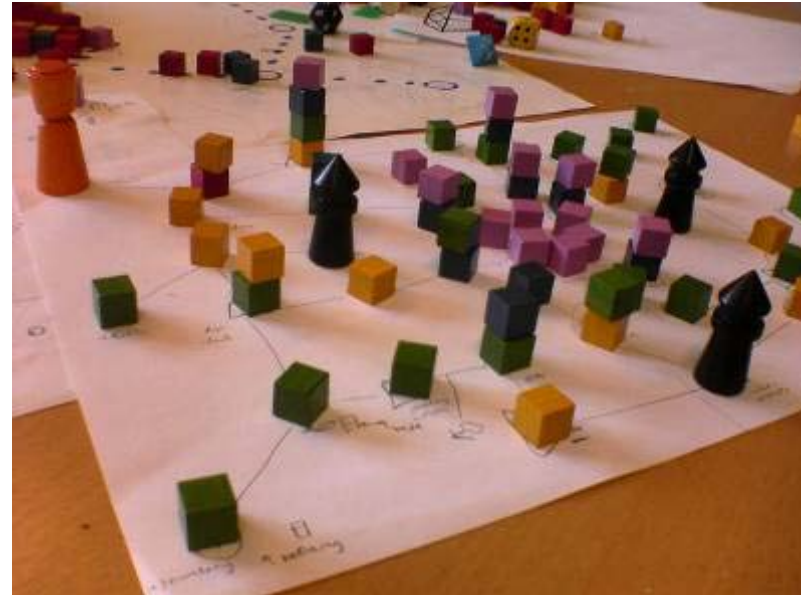


Prototyping – Divergence

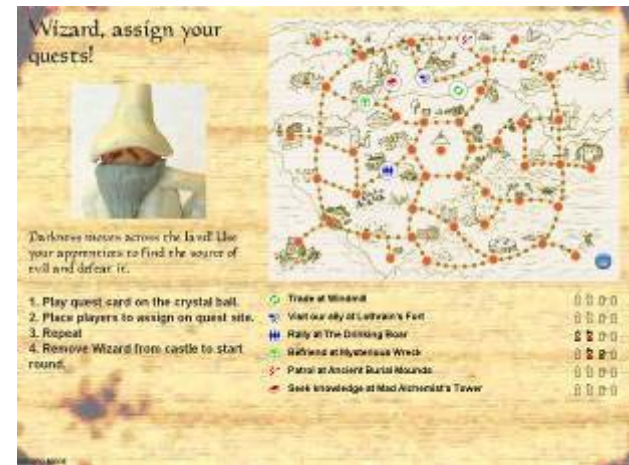
- n Identify technologies
- n Identify information structures
- n Identify interaction structures



Prototyping - Transformation

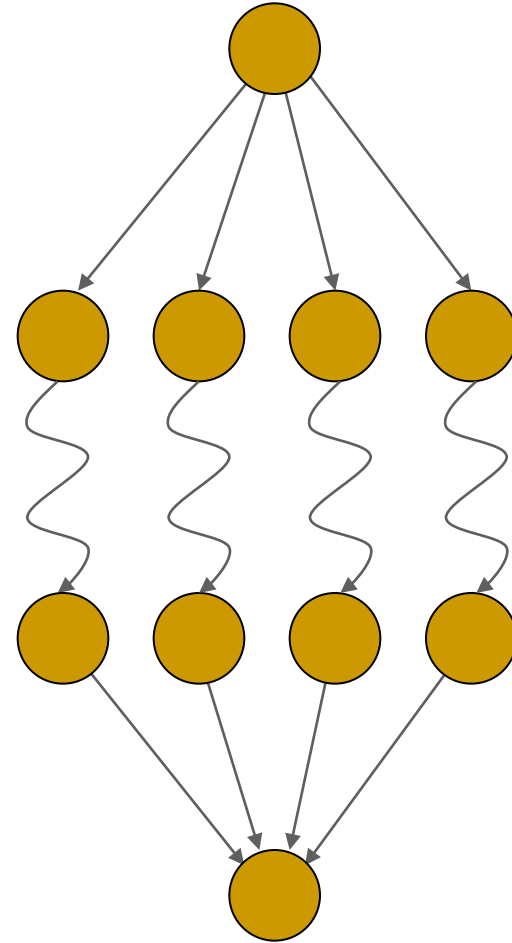


Prototyping – Convergence

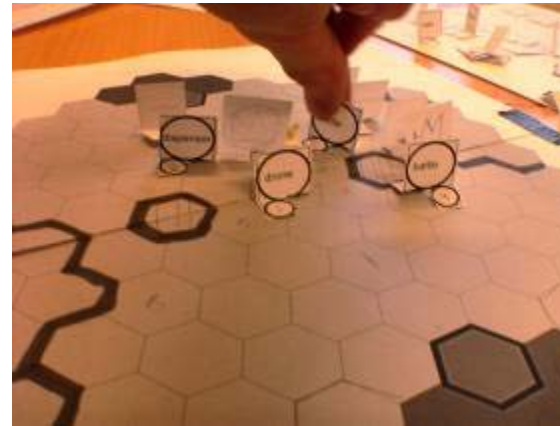


Jones' model applied to Playtesting

- n Self- testing, playtesting with confidants, playtesting with target audience
- n Divergence
 - n Find gameplay problems, emergent features
 - n Freeform, specific tasks, secondary tasks
- n Transformation
 - n Analyze problems and emergent features
- n Convergence
 - n Decide to try and keep or remove identified features



Playtesting



Jones' model applied to Functionality, Completeness, and Balance

- n Divergence

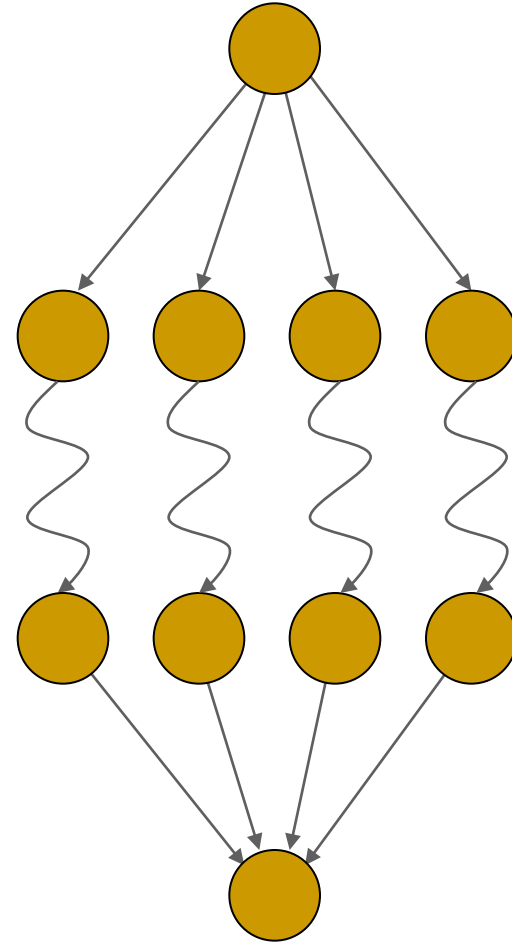
- n Find issues of functionality, internal completeness, balance, fun, and accessibility

- n Transformation

- n Explore issues and compare against each other

- n Convergence

- n Select issues & solutions to address



Functionality, Completeness, and Balance



Assignment 3

Now with no less than 4 parts...



Assignment 3a – Game Idea

n Task

- n Create brief of game idea
- n Groups of 3- 4
- n Deadline 20110211
- n 2 pages (preferably with some image)

n Report

n Brief

- n Theme and/or setting
- n Core gameplay mechanics / gameplay design patterns
 - n what one does **90%+** of the time while playing
 - n Unique Selling Points (what makes this game different from other games)
- n Competitors (i.e. similar game that the game is likely to be compared to)

n Process Description

- n What **methods** do you plan to use? Why?
 - n Define and describe plan before starting!
 - n Conceptualization - Chapter 6 (you may have done this **before** reporting)
 - n Prototyping - Chapter 7 (and possibly Digital Prototyping – Chapter 8)
 - n Play testing - Chapter 9
 - n Functionality, Completeness, and Balance – Chapter 10



Assignment 3b – Lo-Fi Play test

n Task

- n Develop and play test a Low-Fidelity a prototype based upon the brief in assignment 3A
- n Same group as in 3A
- n Takes place 20110218 between 10.00 and 15.00

n Conduct play test

- n Construct playable Lo-Fi prototype
 - n Not in the same medium / on the same platform as final intended one
 - n Highlighting core gameplay
- n Plan on what to test before testing starts
- n A facilitator running the tests
- n A note-taker making observations



Assignment 3c – oral presentation

n Task

- n Present your game concept
- n Same group as in 3A
- n Takes place 20110222 10.00- 12.00
- n 10 minutes per group

n Should contain

n Game concept description

- n Theme and/or Setting
- n Core gameplay
- n Competitors
- n Unique Selling points
- n Target Audience

n Process Description

- n Methods used
- n Thoughts behind the Lo- Fi prototype
- n Changes done since brief
 - n Especially due to the *play test* session
- n Next steps



Assignment 3d – written report

n Task

- n Describe your developed game concept

- n Same group as in 3A

- n 20110301

- n Minimum 16 pages

n Report (but create your own structure)

n Design document

- n Use component framework (lecture 3)

- n Not mechanically; *critically* and only *relevant* parts

- n Note how the game concept differs from existing games

- n Include target audience, theme, setting, and narrative elements

- n Thoughts about Interface Design and how players should learn the game

n Process description

- n Clearly state your design goals

- n What *methods* did you plan to use? Why?

- n What *methods* were used and how did they work?

- n Relate to chapters 6- 10 in the book

- n Describe the Lo-Fi prototype and how the play test changed the game concept



Thank you!

