

Games: How *serious* can they be?

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Serious Games

- Playing games seriously?
- Making games seriously?
- Making 'games' serious?
 - Serious view / use of entertainment games?

- Games
 - Are violence perpetrator
 - Are distracting
 - Are engaging
 - **How to assess learning?**

Serious Gaming

- Not just players
- Not just technology
 - Making it real, exciting, addictive,...

Somebody out there with a 'serious' (*not for profit*) motive

Designer

Builder

Facilitator / Trainer / Administrator

MAGNUS Decision Area	Strategic Planning information	Management Control information
Marketing	Five-period forecast of sales of consumer product sales; Five-period forecast of competitor's marketing effort	Forecast of next period sales of consumer product sales; forecast of competitors' marketing effort next period
Production	Projected future plant capacity; projected cost of raw materials	Depreciation of plant capacity; quantity of inventory
Finance	Pro forma financial statements for five periods; Five year forecast of investment interest rates	Outstanding loans; investment interest rate

Examples of information for MAGNUS decisions

Clear learning goals – task specific

Learning by Doing

A situated learning experience has four major premises guiding the development of classroom activities (Anderson, Reder, and Simon 1996; Wilson 1993):

- learning is grounded in the actions of everyday situations;
- knowledge is acquired situationally and transfers only to similar situations;
- learning is the result of a social process encompassing ways of thinking, perceiving, problem solving, and interacting in addition to declarative and procedural knowledge; and
- learning is not separated from the world of action but exists in robust, complex, social environments made up of actors, actions, and situations.

Constructionism

Serious Issues

- Selecting simulations and games for different learning goals
- Creating the context
- Managing the learning process
- Facilitation skills and knowledge

- Focus on stimulating learner awareness
- Draw out the learning and always avoid 'telling' it their way
 - 'Teaching by not talking'
 - Waiting for learning to emerge
 - Giving feedback, when?



- **Assessment**

In-process assessment

From an experienced trainer/facilitator

Three phases of action

- The Briefing - Facilitator**
 - sets the scenario, invites participants to enter
 - defines the rules
 - Has all the power
- The Action - Participants**
 - are in charge of events
 - are observed by the facilitator
 - have the power (facilitator has reserve power)
- The De-briefing**
 - Facilitator and participants
 - Identify the learning
 - share the power
 - focus on transfer of learning

BRAIN Learning Strategic Decision Making, a Gaming Approach

Hong Kong	Hanoi	Beijing	Moscow	Singapore	Jakarta	Weight
Strategic Location	2.83	2.86	5.05	2.83	2.83	62.64
Enemy Ambition	4.31	4.31	1.54	1.54	1.54	9.49
Enemy Strength	4.47	2.76	2.21	3.22	3.22	6.32
Enemy Vulnerability	3.03	4.6	2.95	2.84	2.71	4.45
Enemy Skill	0.62	3.87	3.86	3.87	3.58	17.1
Score	270.509	324.1425	424.0473	291.051	285.5137	
				2		

Figure 7: MCDM score table

Scenarios in eLearning Simulation

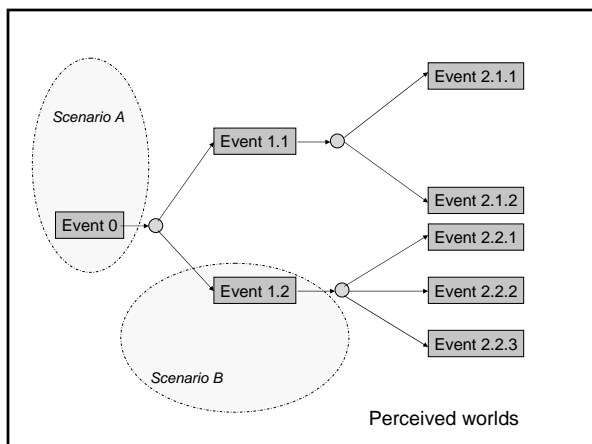
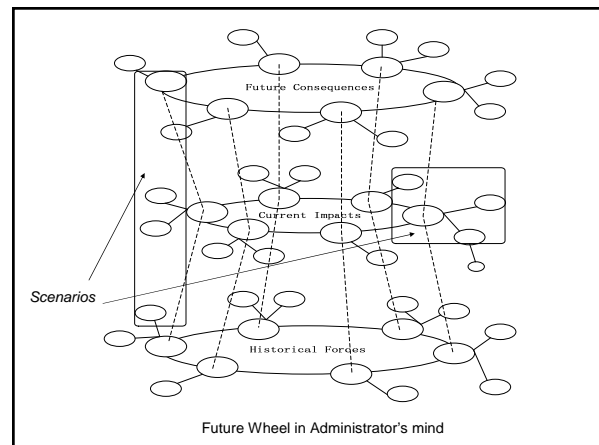
Administrator plans a scenario using

- key uncertainties
- important predetermined trends
- behaviour of stakeholders

• Learners respond to a scenario

- interpreting the meaning
- planning action
- anticipating outcomes of action

Learning is achieved when resulting scenario matches with the expected scenario as the result of taking Administrator's generated scenario and expected action of Learners as input.



Scenario Analysis

MAGNUS Management Cases of NZ

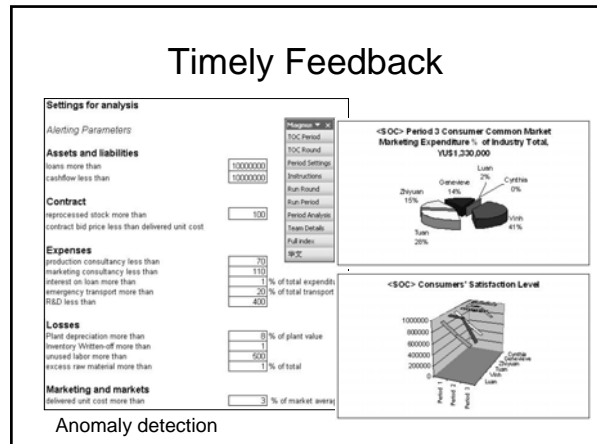
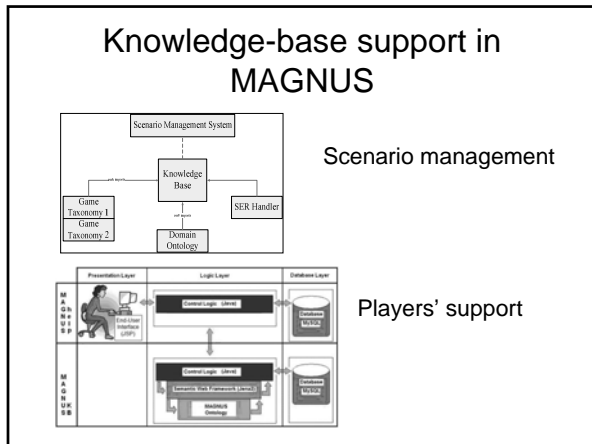
GameCode: DEM01 Copha C1

Information Purchase

Company Database

The economy takes a rapid downturn...

Account	Debit	Credit	Balance
Bank of New Zealand	100,000		100,000
Accounts Payable		50,000	50,000
Accounts Receivable	50,000		50,000
Inventory	100,000		100,000
Fixed Assets		100,000	100,000
Equity		100,000	100,000
Liabilities		100,000	100,000
Profit		100,000	100,000
Loss	100,000		100,000
Net Income		100,000	100,000
Net Loss	100,000		100,000
Net Assets		100,000	100,000
Net Liabilities		100,000	100,000
Net Equity		100,000	100,000
Net Income		100,000	100,000
Net Loss	100,000		100,000
Net Assets		100,000	100,000
Net Liabilities		100,000	100,000
Net Equity		100,000	100,000



Categorising Serious Games

- It is impossible to create a single categorising system to include all serious games
- They can be grouped in many different relationships

SGX : <http://www.ssagsg.org/SGX/>

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