Concept Proposal Climate Game

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This proposal describes the basic game structure by describing its key elements. It is concluded with a motivation for this proposal.

Turn-based

The game is structured in turns (in in-game time), with no ("real world") time restriction on completion. The latter is meant to give the player time to retrieve (in-game) information and contemplate on the decisions that have to be taken. In other words, the player is not rushed and thus can take any time they need to play. Within each turn, events occur, and the player chooses the decision(s) he/she wants to take.

Events

Events occur at the beginning of a turn, so that they can be considered when making decisions.

Two types of events can be distinguished:

- Randomly generated: not, or in very minimal terms related to underlying parameters/previous decisions of the player
- Contextually generated: directly related to underlying parameters/previous decisions of the player (e.g. a decision has had positive or negative effect, or more loosely the previous decision provides a context for a next event)

Events provide:

- A possible reason for action (e.g. decision making based on knowledge)
- A possibility for learning from provided contextual information (when presenting the event)

Decisions

Decisions are the way in which the player influences the underlying model/parameters (e.g. the environment). For reasons of consistency, and thus learnability, we propose using a "standard toolkit". This toolkit consists of a small number of categories in which decisions are grouped. The availability of these decisions varies, depending on the current state in the game.

It would be preferred to have one or two decisions per turn. This helps the player in seeing what influence his/her decisions have on the environment. More decisions would contribute to a mix of influences and thereby a lesser understanding of decision – reaction (see for example our notes on the BBC Climate Challenge game).

A second point is that the influence of decisions should not be directly shown beforehand, i.e. in status bars etc. If a player directly sees a preview of what a certain

decision would change in an overall score/status bar/parameter, he/she is tempted to skip the content for the sake of focusing on getting a better score (in numbers, not due to knowledge based on provided information). (This is also noted in our BBC Climate Challenge analysis). For the game this means that the player cannot see the direct results of his/her decisions in advance, because otherwise it would be easy to choose the best answer. It is possible (e.g. by reviewing content) to provide information about the decision. Direct manipulation of resources leads to the problem that the player will only focus on the resources and not on the information, so the player does not learn as much from it. In short, this means that there is no direct resource management.

Parameters

As hinted above, a limited number of parameters (either shown or not), based on an underlying model, should provide the user with feedback on decisions taken and provide thresholds in a number of areas. This can be divided in:

- An overall score (such as "power" in Haroen's document), and
- Parameters/factors and related weights based on which the overall score is computed

Onscreen, this means showing a number of indicators to support decision – reaction feedback and the recognition of certain important areas that make up "the climate". This asks for a sound underlying model!

Example:

overall score = f1*w1 + f2*w2 + f3*w3 + … + fn*wn

fx is factor influencing overall score
wx is weight of the factor in model

Climate sensitivity influences all weights (or a subset of these), and can be seen as a difficulty setting (see notes on meeting 20/02/2007). Note that the difficulty setting is chosen before the game starts and cannot change during the game.

Story-based

The player follows a storyline that is created with the building blocks mentioned above (turns, events and decisions). As opposed to using an unrelated (temporal, thus in time) sequence in time, the "storyline" is supposed to immerse the player in a context in which he/she is contributing (implying that everyone can contribute to climate change). This would ultimately create a sense of involvement.

Scenarios

A set of scenarios provides for different starting and ending points, and possibly influence the events that take place. The initial idea (from Haroen's document) is to

present different regions of the world as different scenarios. A scenario would typically start with a dramatic event, to stimulate the player to take action immediately. One could also think of choosing starting points as scenarios: for instance by starting out as a local politician, working your way up to being a world leader, or starting as a world leader immediately. Another idea is to see possible strategies (sequences of decisions) as different scenarios. An example could be the choices between mitigation and adaptation. This has to be discussed.

Content/information/media

An important part from a knowledge/learning perspective is the role of contextual information in the game. The foremost "compulsory" form of presenting information is when presenting an event (short text, video, image). The reason is twofold: firstly it enables the player to partly and possibly base a decision on this information, and secondly it draws the player into the storyline, by providing a culminating amount of contextual information (purely by the fact that over time, the player has seen an increasing amount of events).

However, it also seems important to provide additional, optional information. A lot of information is held back when "short and understandable" events are presented, which might be far from sufficient for the (more than averagely) interested player.

A short note on video: this (accompanied by explanatory text) seems to add to the feeling of personal attachment to the issues at hand, more than images and text alone. Long texts should be avoided, as people tend not to read these onscreen.

Knowledge testing

Apart from providing a basis on which to build knowledge by presenting reactions (events) on the decisions taken, concrete knowledge testing could be done with a quiz element and possibly small mini-games.

A quiz would test knowledge about a certain topic, providing a bonus of some sort upon successful completion. Within the game, a number of quizzes could be provided, i.e. when a decision has to be taken, or when an event occurs (for example, comments on an decision in a quiz presented as a press conference). This might also be a point in the game in which to optionally provide extra information, so that the possibility for complete failure is rather limited (players rate/like a game that is positive about them better than a game that is negative about them). An important point to be discussed is whether or which quizzes should be optional or compulsory.

Another idea for knowledge testing is to provide a number of mini-games. In such a minigame, the player has to perform a "simple" task (which will, if made correctly, not be so simple), with only minimal information provided beforehand. After task completion, feedback is given on what should have been done (if not completed successfully). Think of building dams, heat proofing a house, etc. The idea is to derive

knowledge from solving practical problems, of which the effect is directly visible (within the minigame).

Motivation for climate game proposal

The main draw of the climate game is based on making decisions. This allows the player to think and learn about the specific topic of climate control, in different contexts. The different contexts are provided in the form of so-called scenarios. Each scenario places the player in a certain role. For each scenario, the decisions taken have different effects.

Another important aspect of the proposal for the climate game is its modular approach. This makes it possible to start out small by initially providing a limited number of scenarios and events and a limited amount of media (text, images, videos etc). The game can eventually be expanded by adding new scenarios, events and media.

Finally, involvement is very important. Involvement is the way the player is drawn into the game through interaction. Customization (in one form or another) and providing relevant and interesting information (text, photos, videos) are the main ways to realize this.