

Gaming simulations for large groups of participants

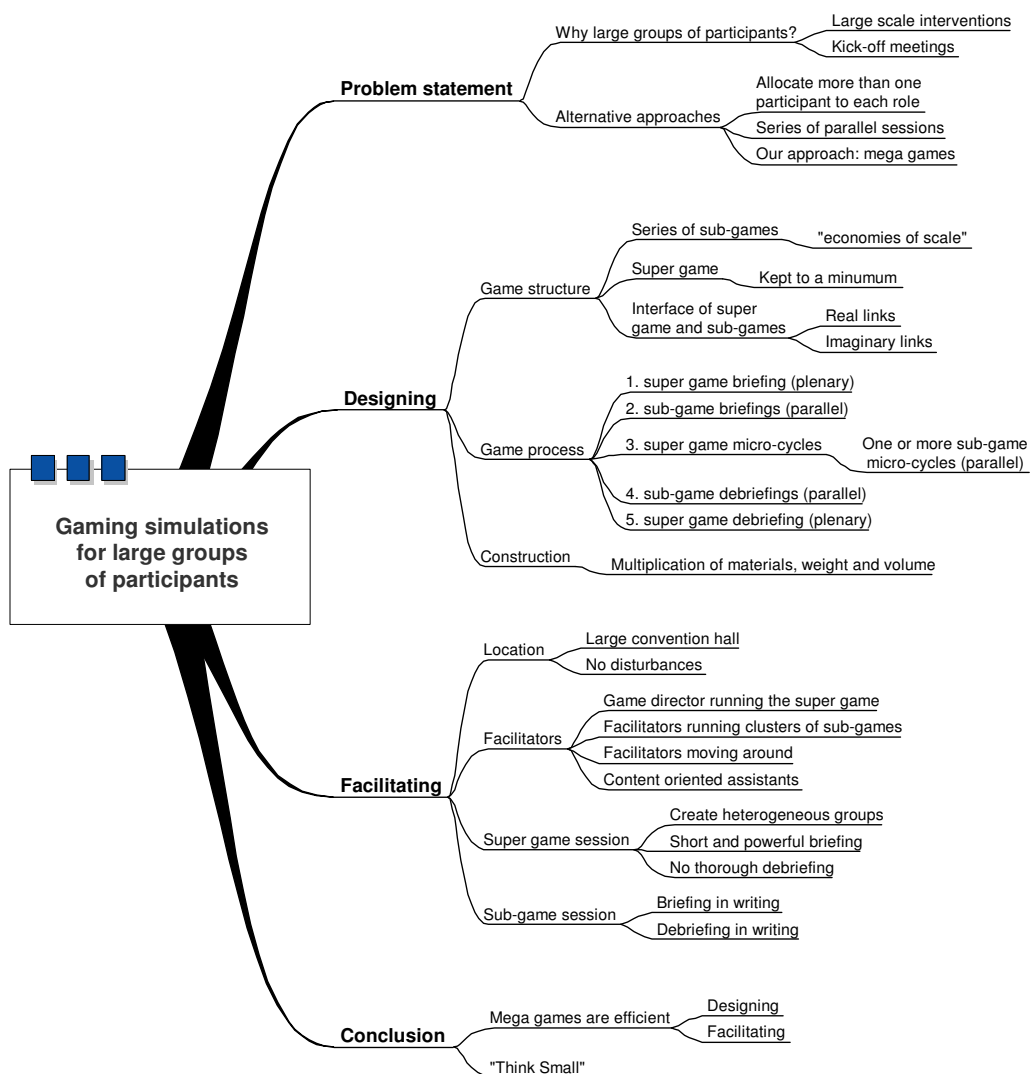
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Introduction

There is a clear need for gaming simulations in which large numbers of participants (50–500) interact simultaneously. One example might be a gaming session as part of a large-scale intervention during an organisational change process. Another might be a gaming session to serve as an introductory meeting for new university students.

In designing and running this kind of large gaming simulation we can rely partly upon our general knowledge and skill in the gaming field. But to accommodate such a large group of participants, special skills are required, both in the game design phase and during the game run.

In this paper we first present our problem statement and argue the need for a new concept. We then discuss our design considerations, which lead into our solution that, for convenience, we here call a mega game. The specific characteristics of running and facilitating such mega games are then described and we end with our conclusion.



Problem statement

Why large groups of participants?

There is a clear need for gaming simulations in which large numbers (50 – 500) of participants interact simultaneously. Such games can serve a variety of purposes. One could be to give the participants a physical impression of the size of their group, a common experience (an ‘event’) to talk about and an occasion for face-to-face contacts. In this case, formal training and education are not the purpose of the game.

In organisational change processes, so-called large-scale interventions become much more popular when all members of the organisation are involved in one or more phases of the process. A gaming simulation can be a good instrument for facilitating such large-scale involvement (van der Hijden, 1996). The arguments for having the participants play simultaneously are both methodological and practical. Having all members of the organisation involved at the same moment, in an activity that is part of the organisational change process, stimulates a feeling of unity and common interest that can significantly raise the level of commitment in all organisation members. On a practical level, and especially for production organisations, it is often better to shut down the business process for one day and to have all members participate in a large-scale intervention simultaneously than to have activities extending over a longer period for smaller parts of the organisation.

A very different reason for running a gaming simulation for a large group is exemplified Harlequin, a one-day introductory event for 500 new students, which was commissioned by the Nijmegen School of Business (The Harlequin Game, Peters et al., 2000). Other examples are: Slogan, a game originally designed by Richard Duke for groups of up to 36 participants, but which we run with 200+ participants as a kick-off event prior to large-scale interventions; and Lumière, by Vincent Peters et al. (1996), a business simulation that runs for three weeks and can accommodate 200+ students.

In designing and running this kind of large gaming simulation we can rely partly upon our general knowledge (Duke, 1974) and skill in the gaming field. But to accommodate such large groups of participants special skills are required, both in the game design phase and during the game runs.

A typical mega game will have the following features:

- the number of participants will be large, 50+ to several hundred
- the participants will vary in number, background and motivation to play
- the game will be run at the same location, at the same time, and involve all the participants.

Alternative approaches

One way to run a game for a large group of participants is to use a regular game and allocate more than one participant to each role. This variant of an existing game is easy to design and not too complex to facilitate. However, the roles are diluted and the extra communication required tends to slow the game down. The interest and motivation of the participants might also be significantly reduced.

Another approach is simply to organise a series of parallel sessions, each playing the same regular game. Again, this solution is easy to design and, providing you have enough facilitators, easy to run. But the feeling of being part of a whole is obviously lost.

Our approach to mega games aims to combine the advantages of these two approaches while avoiding their limitations.

Designing

Game structure

Designing a game for a large number of participants can be a very complex process. Since in practice the budget for this type of game is usually limited, we have to find an efficient way to deal with the complexity.

As so often, the key to handling complexity is modularisation. We do not have to design one complex game accommodating all the participants, we ‘only’ have to design a range of sub-games for smaller groups and then glue them together into a super game. If we can limit the differences between the sub-games to a few parameter values and their initial states, the sub-games can even be identical. By using identical sub-games, the design effort can be limited to designing a single sub-game, the super game and the interface between the two.

Series of sub-games

The participants should be divided into relatively small groups, each of which will play a sub-game. These sub-games should be simple to set up, easy to learn, self-managed and require only modest space. For design efficiency the sub-games should have an identical structure. When variation is a must, some parameter values and the initial state can be different.

The use of identical sub-games allows for ‘economies of scale’. Constructing the game materials can be a simple, repetitive job. Buying game materials in large quantities is easier and maybe even cheaper (although buying 400 cheap scissors overnight is not necessarily easy!). The ‘economy of scale’ can also extend to the facilitators. Once they know how to run one sub-game, they know how to run them all. Facilitators then can run several sub-games at the same time.

The sub-game will be linked to the super game (see below). However, the sub-game will not be dependent on this link. During a session, some malfunction outside any given sub-game should not block its progress.

To give an example: in the Harlequin game we designed sub-games in which groups of 15 participants each form a company to produce harlequin puppets. There were almost 30 of these companies. Some of them were organised in functional groups, others in two business units, and others as teams. Except for these organisational principles, all the companies had the same objectives, targets, means and resources. The rules were also the same for all groups/ sub-games.

Super game

The structure of the super game needs to be kept to a minimum. Its primary function is to collect intermediate results from the sub-games, to aggregate them and to prepare an overall score. The super game is also required to generate and distribute new events to the sub-games. Further, it can provide the sub-games with common services, such as an exchange market. The super game players have contacts with representatives of the sub-games. Their main purpose is to keep the whole mega game running. Although these super game roles could be played by participants, it would be wiser to use trained assistants. The super game players are, in fact, the ears and eyes of the game director.

Interface of super game and sub-games

The interface between the sub-games and the super game is very important. By mutually linking the sub-games, which are then linked to the super game, the participants become part of the large group - one of the main reasons for designing a super game in the first place. To promote this social objective, the linking would ideally be highly elaborate. For reasons of efficiency and control, however, the linking should be kept to a minimum.

We make a clear distinction between real links and imaginary links. The real links constitute the basic connections necessary to run the super game. Examples are: the reports that sub-games send to the super game; events that the super game generates for the sub-games; the overall scoreboard that is prepared by the super game and issued to the sub-games; markets and other meeting points where the sub-games interact with each other. These links should be loose: i.e. if at any moment a link is not available or not used, both the super game and the sub-game must be able to continue. To avoid large numbers of participants being held up by the slowest group, or having to wait for some problem to be solved, this loose connection is vital.

The imaginary links form part of the participants' experience. They do not, however, have any material influence on the progress of the game. Examples are: the need to queue at a common window; the introduction of clusters of sub-games using appropriate names or colours. Imaginary links are in fact placebo's that compensate for the minimal number of real links.

Game process

Generally speaking, the mega game process consists of the following steps:

1. super game briefing (plenary),
2. sub-game briefings (parallel),
3. super game micro-cycles, each consisting of one or more sub-game micro-cycles (parallel),
4. sub-game debriefings (parallel),
5. super game debriefing (plenary).

A micro-cycle of the super game can (but does not have to) coincide with micro-cycles within the sub-games. Suppose the sub-games run micro-cycles of one simulated year. To prevent the linking becoming too frequent, the super game might collect progress reports and distribute new events (say) every five years.

Construction

The designer of a mega game should also take various construction issues into consideration. Just as a normal game kit should be packed, stored, and transported in a convenient way, so should a mega game kit. The number of sub-games creates a multiplication of materials, weight and volume. The reusable materials (used during subsequent runs) should therefore be small and light, while the disposable materials (new for each run) should preferably be composed of standard office supplies that are available in any local shop.

The multiplication factor also applies to make-or-buy decisions. If not managed properly, your budget for buying and your time spent making things can easily get out of hand.

Facilitating

Facilitating a mega game is an interesting experience. Careful attention should be paid to the location of the game, the facilitators, the system of facilitating, and the facilitating process.

Location

A mega game should preferably be run in a single large convention hall. Because the game itself tends to be complex and noisy, disturbances from the outside world should be avoided. Mobile phones should be banned and catering services provided inside the gaming hall if possible. Audio and video facilities are needed to make the game director heard and seen, to present the overall scoreboard and to publish general messages.

External traffic should not be allowed and internal traffic kept to a minimum. The sub-games each should have their own location inside the hall. Navigation and signing is therefore an issue. Further,

all the paperwork can be distributed in advance. Since the complexity of the mega game prohibits the flexible use of event cards, these too can be distributed in advance, in sealed envelopes of course. A clever room layout can minimise walking distances.

Facilitators

A single game director is not enough to run a mega game. On the other hand, a special game facilitator for each of the sub-games would be very expensive. The solution is a game director running the super game and a small army of other facilitators running clusters of sub-games. A further group of facilitators are on the move all the time, acting as communication agents between the game director and the sub-games. The facilitators are mainly process-oriented. Together they are extensions of the game director and, with the super game players (see above, 2.1.2.), act as his/her eyes and ears.

Apart from the process-oriented facilitators, some content-oriented assistants can also be useful. The former need gaming and facilitating experience and may not be easy to find. The latter simply need to know the mechanics of the sub-game.

To give an impression: in the Harlequin game we had one overall game director, 8 facilitators (each focussing on a specific part of the super game), 10 staff members of the Nijmegen Business School (advising the participants as consultants when needed) and 15 students (who took care of logistics and supporting tasks, e.g. copying).

A mega game session may become so hectic that the facilitators do not have much time to think before they react. A blueprint describing the steps-of-play could serve as the synchronising mechanism for all facilitators.

Super game session

It is wise to allocate the participants to their sub-game groups before the super game briefing begins. A very efficient way to create heterogeneous subgroups is to allocate every next person to a different sub-game as they enter the gaming hall. This prevents close friends or colleagues, entering together, from ending up in the same sub-game.

The super game briefing should be short and powerful. All instructions should also be available in written form, so that participants can read them later. The basic message should be repeated in the sub-game briefing. During the game a large display should indicate the current cycle and/or step-of-play.

The super game debriefing will inevitably be very general, unless it is extremely well structured and prepared. In most of the situations where we use this kind of mega game, there is usually no need for a thorough debriefing. The game has provided a shared situation and shared experiences, which will be elaborated later on in the process (during the intervention or college course). But to draw maximum benefit from these experiences, it is very important to collect the reports made during the session, from which a final summary report can later be produced.

Sub-game session

Usually there are not enough facilitators to brief every sub-game group individually. The sub-game briefings must therefore be done via written documents that the participants find at their own game site. The facilitator then has only to start the sub-game. It is worthwhile taking time for a personal introduction and for making a list of group members, with names and e-mail addresses (for follow-up activities and possible future contacts).

The way the sub-game is debriefed depends on the purpose of the mega game session. Given the limited availability of facilitators, debriefing should be a self-managed process. Individual and group evaluation forms are valuable tools for structuring (and documenting) this process.

Conclusions

A mega game consisting of a super game and a series of identical sub-games is an efficient way to design and facilitate games for large numbers of participants. The mega game is a scalable game. Different participant numbers simply mean more or fewer sub-games. A mass-event can be created by organising a mega game session at a large site, like a convention hall.

The main conclusion that we have drawn from our experiences in this field, is that it is indeed possible to design and run gaming simulations for large groups. Our principle advice, both for designing and running such games, is: 'think small'. Paradoxical though this may appear, it is the only way to keep the process manageable. While designing a mega game, focus first on the sub-games, and only later on the links to the super game. The same principle applies to facilitating the game.

With large groups of participants it is clear that individuals may vary widely in terms of background and motivation. The sub-game has to allow for this and should not be too complicated. In many cases, participants will have to run their own sub-game. The great advantage of the mega game, however, is that information underload and delay are avoided, while each player enjoys a real role, rather than a diluted one.

For the game director the main challenge is to learn how to manage the session from a distance. It is like driving a car from the back seat. Or even more (since the game director has to steer a large group of facilitators and assistants) like driving a coach with 10 horses.

We invite gaming professionals to add the solutions presented in this paper to their gaming toolkits and to extend their repertoire of techniques by designing and facilitating their own mega games.

References

Duke R. (1974). *Gaming – the future's language*. Sage Press, New York.

Hijden, P. van der (1996). *Changes in the environment: challenges for gaming professionals*; in: Frances Watts and Amparo García Carbonel (eds.); *Simulation Now! / Simulación ¡Ya!*; Learning through experience: the challenge of change; El aprendizaje a través de la experiencia: el reto del cambio; Diputació de Valencia, Valencia.

Peters, V., Ansink, S., Ellens, E. (1996). *Lumière. A management game about how to run a company*. Nijmegen Business School, University of Nijmegen.

Peters, V., Kasteren, B. van (2001). *How to run a business. The management game Lumière as a teaching tool for undergraduate students of business administration*. Proceedings of the 30th Annual Conference of the International Simulation and Gaming Association (ISAGA), Sydney.

Peters, V., Westelaken, M. van de, Rouwette, E., Doezejager, E. (2000). *The Harlequin game. A management game about designing the production process*. Nijmegen Business School, University of Nijmegen.

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