

Running head: User Experiences of Game Idea Generation Games

User Experiences of Game Idea Generation Games

Annakaisa Kultima, Johannes Niemelä, Janne Paavilainen & Hannamari Saarenpää

University of Tampere

### Abstract

In this paper, we introduce three idea generation games designed for the use of game designers and discuss about the feedback they received while used in the authentic production settings. Three games designed especially for generating game ideas were developed in the GameSpace project that studies methods for design and evaluation of casual mobile multiplayer games. According to our experiences, games can be considered as successful devices for idea generation. Game-based idea generation techniques provide an easily facilitated, focused but playful setting for coming up with new ideas. We would like to share the feedback of our games in order to inspire others to create similar tools for generating innovative ideas in the field of games or other industries alike.

## USER EXPERIENCES OF GAME IDEA GENERATION GAMES

### Introduction

In 2005, Screen Digest reported that the development costs for digital games are rising up with each new technology generation. It was estimated then that in 2008, only as low as 80 games per year would be actually profitable as the required market share gets higher (Gentile-Williams 2005). Not so surprisingly, these trends were discussed again in the Game Developer's Conference 2008 (Kumar 2008).

One of the strategies to stay ahead is to enhance the innovation process of game design. As one of the critical part of innovation, idea generation (Clapham 2004) and the ability to generate ideas is shown to be one of the characteristics of successful business ventures (Gabler et al. 2005). Game industry makes no exception to this. Although the industry is making profit with the existing intellectual property by producing sequels or sure hits, innovation is needed to create new IP and genres, attract new target groups and to evoke new gaming experiences (Gril 2007, Fullerton et al. 2006). Even though it is evident that game industries hold vast resources of highly talented and creative people, creativity is not an automated process. Even the most creative person can find herself struggling to fight against the repetition.

In this paper, we will discuss experiences of enhancing and supporting such processes with specific tools, or more specifically games that were developed in a game research project GameSpace. The aim of the GameSpace project has been to study methods for designing and evaluating casual mobile multiplayer games. This included the examination of the early phases of game design processes: ideation and conceptualization. As one of the research methods in the project, expert workshops were organized in order to discuss the features of casual, mobile and multiplayer games and creating new concepts of the corresponding topics. For the use of the

workshop attendees, we developed special idea generation tools supporting the subject matters. Some of the tools got a form of games itself and could be thus called idea generation games. Successfully during 2006 and 2007, over 240 new game ideas were documented in our workshops with the help of our tools. The workshop attendees expressed the interest to the tools and some companies tried out early prototypes in their production processes.

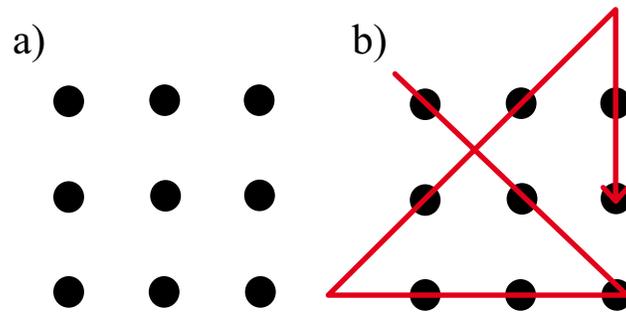
In order to gain deeper understanding of the use of such methods we conducted a pilot study, where the use of the tools were studied in the authentic production settings among four Finnish game companies. Based on our workshop experiences and the positive feedback that we gained within our pilot study, we argue that our idea generation games are actually successful tools for creativity. By playing GameSpace idea generation games, game designers were able to expand their imagination and create new game ideas that could be utilized within their work.

More over, we argue that the success of our techniques can be partially explored by the features that game play can bring into creative processes, thus concentrating in this paper to the three of our game-based tools. While designers are required to be creative on demand, successful creative processes requires relaxed and playful atmosphere (Mumford & Gustafson 1988). Such an atmosphere can be difficult to create in the busy and oppressive situations. This challenge is acknowledged in several studies of brainstorming; despite of the original idea of a free and fluent atmosphere, the sessions are disturbed by for example fear of evaluation (Furnham & Yazdanpanahi 1994). While in classical forms of brainstorming the right atmosphere is facilitated mentally in the minds of the participants, idea generation games succeeds in building the favorable atmosphere immediately and automatically when the players start to play.

### Enhancing Creativity

As games industries has grown into a serious business, it is, among others, seeking ways and means to enhance and develop their creative processes. One way to ensure the creative output in the form of successful products is to gather versatile and talented teams or provide supporting and inspiring atmosphere that will foster creativity. For the team leaders, the task of getting the most out of the staff can be difficult. It is always balancing between freedom and restrictions, order and chaos.

Creativity can mean various things in our common vocabulary. Most common is to connect creativity with different ways of self-expression or artistic skills, such as drawing. As a modern notion of creativity, emphasis is on a certain kind of thinking processes. We talk about “thinking differently” or “thinking outside the box”. The latter expression is derived from a classical example of creative problem solving puzzle. This puzzle consists of nine dots in a formation of a square and the task is to draw four connecting straight lines between the dots without lifting the pen (Picture 1). As the brain is naturally efficient in creating patterns (de Bono 1970), it is usual to struggle with the task, interpreting the formation of the dots as a box that cannot be crossed.



Picture 1. The puzzle (a) and one of its solutions (b). Task of the puzzle is to connect dots with four lines without lifting the pen. Relatively easy puzzle becomes complicated when we interpret the formation of dots as a frame that cannot be crossed.

Creative thinking involves processes to think towards the wide variety of different solutions rather than targeting into a single one in order to break the patterns of the mind (de Bono 1970). However, creativity is a complex phenomenon that involves the operation of multiple influences and different stages, moving from the initial generation of an idea to the delivery of an innovative product (Mumford & Gustafson 1988). In order to create something new, one must also know critical things about the past and have relevant experiences to draw from. In this sense, creativity can be seen as a combination of insight and special thinking skills (de Bono 1970).

Although the processes of coming up with new ideas may feel mysterious, it is argued that idea generation as a relatively structured and explainable process (Perttula 2006). This enables systematic approaches for enhancing creative processes of coming up with new ideas. Generating new ideas may also feel as an easy task. One might feel that there simply is no need for enhancing the process. However, creative skills and tools matters. Studies show that creativity training has the highest impact on originality of the ideas (Clapham 2004) and the

amount of techniques for creating new ideas correlates with the amount of successful products (Parnes 1961, Sowrey 1989).

While it might not be common to use wide variety of formal approaches for improving ideation, one of the most popular techniques, Brainstorming, is known to be used also among game designers. Unfortunately Brainstorming is not a high road to innovation (McFadzean 2000), and there are reports about the disappointments with this method also within the field of game design (Gabler et al. 2005).

On the other hand, an interpretation of negative experiences with Brainstorming is not that simple. Brainstorming has a long history, originating from the late 1930s. For this date, brainstorming has become such a popular technique that it can refer to almost any kind of group ideation. Throughout the years several studies of this particular technique has been conducted. As well as the benefits, the problems of brainstorming are well known by the researchers. Most common difficulties are named to be production blocking, social loafing, and fear of evaluation – phenomenon problematic to any kind of group work (Furnham & Yazdanpanahi 1994). However, for the successful use of brainstorming, it is important how the session is instructed. One of the most important guidelines for the ideation sessions is to target the quantity instead of quality, thus letting the mind to explore the wide variety of possibilities. Careful following of guidelines also boils to the fact that the brainstorming session needs a strong facilitator that prepares and guides the process. (Rossiter & Lilien 1994.)

Despite the known problems in brainstorming, pivotal virtues of the technique has been successfully transferred into various brainstorming variants such as Brainwriting and original approaches such as SCAMPER. (Michalko 2006.) Features common to many techniques are for example equality among the participants and a relaxed playful atmosphere. Different techniques

provide versatile approaches for enhancing the creation of new ideas in addition to natural ways of ideation. Going through the implementation of different techniques to the design practices is recommended: studies indicate a strong relationship between the number of idea generation techniques and the number of successful products (Parnes 1961, Sowrey 1989).

Additional to the proven effects of systematic approaches, creative processes are also said to be domain specific (Baer 1994, Clapham 2004, Harkins & Macrosson 1990). Creativity performance in any domain requires domain-relevant skills, creativity-relevant skills and task motivation (Amabile 1990). Despite this, much of the research is concentrated on psychological or managerial factors of creativity. Relatively little studies has been conducted on a specificity of creative processes within game design, not to mention development of tools that improve especially such practice.

### Games for Creativity

Games and play creates a space that is, if not exclusively, at least characteristically special. This was already noted in 1938 by the Dutch culture historian Johan Huizinga. Huizinga introduces the magic circle and summarizes the formal characteristics of play in his *Homo Ludens – A Study of the Play Element in Culture* (Huizinga 1938). The definition of the magic circle consists of three main characteristics of play. First, play is free and voluntary activity. Second, play separates itself from the real life, which led Huizinga to create his theory on the magic circle. Thirdly, the magic circle is separated from the ordinary life spatially and temporally.

This separation gives a lot of power to the games as creativity techniques. Mood of the participants and the atmosphere of the idea generation session are critical factors for the success

of the session. One way to break the box of conventional thinking is to rely on the magic circle of games. According to Huizinga (1938), play contributes to the well-being of the group and the magic retains even after the session.

Another positive effect of games for idea generation is that they are bounded by rules. The rules make the game progress in an orderly fashion and provide a fair chance and equality for all the players. The game, the playing session and the rules provide a solid facilitator for the idea generation session. However, participation alone is not enough; with the use of certain technique one wants to accomplish something specific. Interestingly, Huizinga states that the element of tension is important part of play. This tension is a driving force for the players, because they want to solve the issue and conclude it. As Huizinga has phrased it: “The player wants --- to “succeed” by his own exertions.”

Though the notion of magic circle is useful, it has also some reservations. Huizinga says that the activity of play cannot produce anything material and there is no profit to be gained. Even though players of idea generation games are not producing anything material, ideas have value as immaterial and intellectual property. Another aspect why we cannot conform to the definition of the magic circle is that the session could be obliged by the employer. Employees can be pressured to use the techniques and this may endanger the freeness of the activity. However, this is not a problem exclusive for idea generation games.

Aim of an idea generation game is to free the thoughts of the designer from conventional thinking to the temporary world of the magic circle created by a game. Ideal game-based idea generation session is facilitated by a game in the fashion that the player can trust the playful activity within the magic circle to be eventually beneficial for the real world objectives. Game-

based idea generation can provide built-in stimuli and structure in order to accomplish these tasks. After the session the circle is abandoned and ideas are brought into serious function.

For the reasons mentioned above, game idea generation games can be considered as part of serious games, even though it may not be a typical such. One of the definitions of serious games considers the games of this area to include all games that have a purpose outside pure entertainment. Serious games have traditionally included games with educational or political purposes; that a game changes the way people think or teaches something new (Michael & Chen 2006). Peter Smith and Ben Sawyer from Serious Games Initiative state that “Most labels define a specific output ignoring the larger possibility space for serious games”. Thus serious games definition tend to be too narrow and is targeted only to achieve one, pre-set subject although games have the potential for so much more. Based on this realization, Smith and Sawyer have proposed new taxonomy for serious games that takes broader look into the serious domain (Smith & Sawyer 2008).

Idea generation games could be located into one of the categories Smith and Sawyer have presented: *games for production*. However, we argue that the examples that they present (remixed audio, unreal art, machinima) are usually by-products of the game rather than the main products, which is the case in our idea generation games. Thus idea generation games may be considered as even more suitable example of games for production.

The idea of using idea generation games to achieve creative edge is still quite rare. Our games prove that games really can be used in a serious sense as a tool for producing valuable outcome, such as original ideas. However, we are not the first ones to realize the power of games within the domain of creativity. Apart from the notion of Smith and Sawyer on “games of production”, one can also talk about design games (for example Brandt et al. 2008). For

example, Jess McMullin made this notion when talking about the games that help innovation process of different products (McMullin 2007).

We also point out two interesting precursors for our work: GameGame and ThinkCube. The latter is targeted to variety of innovation processes in a form of a game and the former is targeted especially for game design, but it also has the purpose of teaching what games are (Järvinen 2006). However, the GameGame succeeds in providing the game structures and creates the magic circle, but it lacks in stimulating the creative mind whereas the ThinkCube provides the stimulation, but it can be difficult to create the magic circle as the technique is hardly a game. In our opinion, game as a structure for the idea generation processes has the potential of creating easy flowing, but guided process with equal involvement among the participants, thus creating a successful idea generation sessions.

### User Experiences of Idea Generation Games

Additionally to our game-based techniques, several game specific idea generation tools in GameSpace project including computer programs, pen and paper –approaches, game specific brainstorming, toy-boxes, user enquires and mobile applications were designed and examined. In contrast to general idea generation techniques, we targeted to support specific domain of idea generation: casual mobile multiplayer games. Tools were implemented with game structures, game specific stimuli or user-centered approach. So far, the most successful approaches have been the techniques that were in the form of card and table top games themselves.

During the development phase, several iterations were made for the prototypes of our idea generation games to enhance their design utilizing our expert workshops as a suitable testing ground. Our main learning's from workshop settings were that the content of the stimuli guiding

towards the ideas had the impact to the originality of an idea: if the stimuli were too close to a complete game, it would be too difficult to transform the idea into something different. For example playing a board game preceding the idea generation session, evoked ideas similar to the game played. On the other hand, with general techniques lacking game specific stimuli, such as traditional Brainstorming was bit more difficult to get ideas flowing. In these cases stimuli was drawn from the environment such as poster on the wall, cloud on the sky or even a coffee mug on the table. The structure of the game also seemed to matter: when the ideas were built linearly within the technique, the end result was more likely an idea of an adventure game, first person shooter or other “narrative” game.

Three of our idea generation games were finalized, among other tools, as research prototypes for a study package that was tested by four Finnish game companies. These companies included mobile, casual, social and money game developers. The idea generation games were sent along with the other techniques to be used in an authentic production environment. The duration of the test period was set to three months, starting from November 2007 and ending in the beginning of February 2008, in which time the companies used the techniques according to their needs.

The experiences from the test period were collected through three different channels. After the trial we collected data of the use experiences through an online survey and interviewing 2-4 participants per company face to face or by phone in a semi-structured manner. We also collected feedback from the methods via feedback cards that were dealt among the package to fill up after any session. The set was introduced to the companies before the trial, but then left for the independent use.

About half of the interviewees had tried the tool set 2-5 times after the three months. The test period was relatively short and was cut even shorter because of the Christmas holidays. Other reasons for not trying the set included lack of time and lack of allocation of time for the idea generation sessions or the specificity of our tools not suiting for the idea needs of one of the companies. Three companies successfully utilized the tools in their internal sessions during the period. Sessions consisted of couple of attendees to over 20 participants and duration of the trial sessions was as short as 30 minutes or as long as one-day idea workshops. Feedback of the trial period was mainly positive. All of the participants answering the survey would continue the use of the tools as well as recommend the set to the others. Ideas produced in the sessions were seen interesting, inspiring and even though the trial period was very short, approximately two-thirds of the participants of a survey considered that some of the ideas produced in the sessions, may lead to a new product. In the following chapters we will introduce the games of the study package and discuss about the feedback they received while used in the real production settings.

#### *VNA (Verbs, Nouns and Adjectives)*

Verbs, Nouns & Adjectives (VNA) is a fast and easy technique for creating high level game ideas. It can be used either alone or in a small group. VNA technique is based on three decks of cards, where each deck contains verbs, nouns or adjectives (picture 2). These different cards give a very broad starting point for the game idea. The players draw each type of card on to the table and describe the ideas that are inspired through association by the words. Goal of the VNA is to create shared high level game ideas with minimal effort, aiming at quantity and speed.



Picture 2. Example of VNA cards. VNA card decks contains verbs, nouns and adjectives for which are interpreted associatively and combined together randomly.

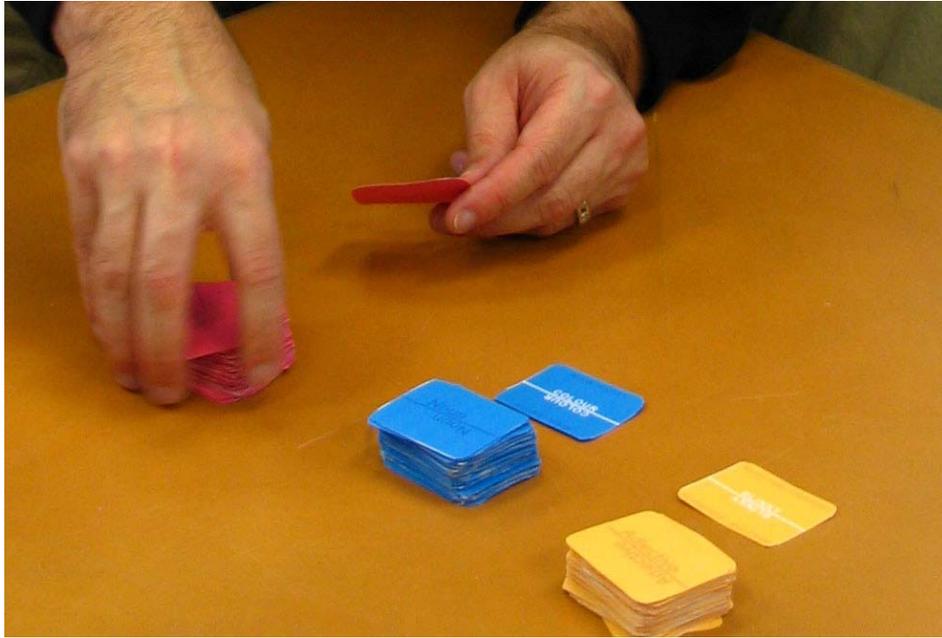
The process starts by placing the three decks of cards on the table. First player picks up a verb and shows it to everyone by placing it face up on the table. The player continues by describing the basic game mechanic based associatively on the verb she just picked up. Second player picks up a noun and continues to describe the game idea further on based loosely on the word. Third player picks up an adjective and finishes the game idea by merging the verb, noun and adjective together. After three cards have been drawn, the users may discuss about the game idea freely. After this, players can continue to create next idea by drawing another set of three different cards.

The VNA is based on rapid idea generation by producing initial game ideas focusing on the game mechanic and action (verb), game entity (noun) and describing the game theme element or properties (adjective). The VNA offers random and surprising stimuli which force the player to think outside the box thus resulting to ideas that would not necessary come up otherwise. Turn based flow allows everyone to have their say into the game idea, ensuring that no one is left behind in the idea generation process and giving everyone equal opportunity to participate.

*User experiences of VNA.* Among all of the methods in the study package, VNA was considered as one of the most favorite techniques of the set by over than half of the users participating to the pilot study. VNA was rarely disfavored. Only one of the interviewees expressed that particularly this method did not suite to him. The rules of the games were reported to be slightly varied with all of the game-based idea tools, but with VNA the variations for the instructed action (see for example picture 3) was reported less than in the others. As positive feedback, VNA was reported to be fast, easy and fun tool for coming up with new ideas. Other game-based methods had similarities with VNA, but some users considered VNA as the most efficient.

Even the word set of VNA gained interest in two of the testing companies. The assembly of the words was perceived working well towards the easy flowing of game ideas. Potential was seen also in the variation of the word set into another. For example money games could be supported with such related words as “jackpot” or “bet”. However, the word set was not seen as forcing ideas to one direction only: ideas varied from casual to hardcore and was also reported among with another idea generation game, GameBoard to produce a lot of crazy ideas along with applicable ones.

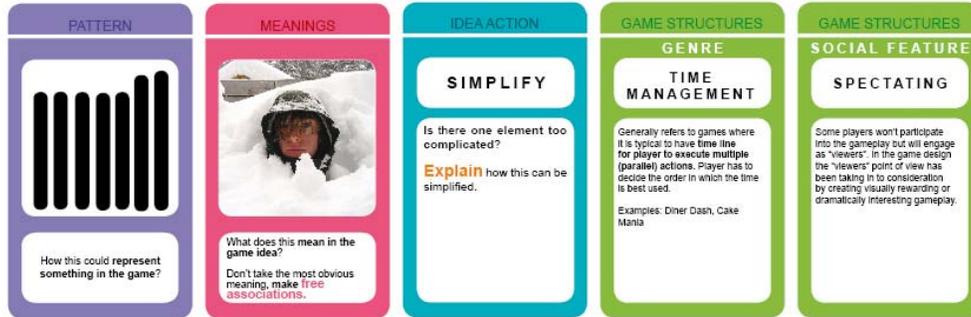
Reasons that led one designer discard the VNA game as not fitting to him could be potential reasons for others also not choosing to continue the use of this tool. As for some the production of small and high-leveled ideas were seen a virtue, the same feature can be seen as a downside of the VNA: ideas produced with it are “too small and too abstract to deliver cohesive ideas”, as the user with negative experiences would express. One other user was also worried, whether the word set would become too repetitive in the long run.



Picture 3. Game designer drawing a verb from a VNA deck while testing the opposite direction of the words: first drawing an adjective, then a noun and lastly a verb.

### *GameSeekers*

GameSeekers is a collaborative card game with four different types of cards: red cards with photos of objects, people or abstract themes, purple cards with different black and white patterns, green cards with description of casual game genres or social aspects and blue cards with possible operations that can be done during the game (picture 4).



Picture 4. GameSeekers has cards with abstract patterns, pictures, genre and social features as well as cards that operate the game play, such as a card that can be played if one wants to simplify one element of the game idea.

GameSeekers is played similarly to UNO® by dealing certain amount of cards for each player and placing one card on the table by taking turns. There is no winner for the game, but one can try to reach for the status of “idea dictator” which can decide to finalize the idea without the content of the others by being the first one laying the last card on the table. Otherwise the idea is finished after every player has passed their turn without taking any actions.

The generated idea is built on associations that the players make with the cards in their hand at the same time creating connections to the existing cards on the table. Operative cards of the game can be used to remove an existing card, refine the whole game idea or simplify elements in the idea. During the game play, one shared game idea is developed visually to the table similarly to mindmapping process.

*User experiences of GameSeekers.* GameSeeker was among the VNA and GameBoard tools that were tried most eagerly. One of the reasons for this may be that game designers saw game-based tools most interesting on behalf of their professional interests. On the other hand, some of the

other tools were reported as slightly inefficient or bit more difficult to approach. Out of the three of our idea generation games, GameSeekers was the one that did not gain any first place as a favorite. However, the tool gained some second places and positive feedback. It was said to be producing interesting combination of ideas and giving inspiration to other ideas or features to be used in the on-going productions. As a negative side, the rules of the game were complained to be too complicated and the ideas often times too scattered and expanded (see for example pictures 5&6) which also could be seen as a difficulty for the documentation of the idea.

As for some of the users, VNA ideas were too small, this method gave more to chew on. Proponents of VNA felt that GameSeekers was doing the same as VNA, but more slowly and that some of the cards, such as genre cards were experienced as “carrying too much into the idea”. However, some users felt that the pattern cards and picture cards had the high potential and could be used in a similar manner than VNA.



Pictures 5&6. Game designers playing GameSeekers.

### *GameBoard*

GameBoard is a competitive idea generation game for two to five players with two possible play modes; co-op play or solo play. In co-op play, all the players are working for one

mutual game idea. In solo play, every player is working with their own game idea. In this paper, we are generally referring to the co-op version, since it gained slightly more popularity.

The game is turn-based and the players allocate different cards from their hand into the game board, filling up slots that represent different aspects of the game idea. From the perspective of idea generation, the goal of the game is to produce applicable and well-structured game ideas. From a game experience perspective, the goal for the player is to win by collecting most score tokens by allocating cards into the game board.



Picture 7. GameBoard included two sets of cards, co-op and solo boards and tokens to mark the cards you have played as well as the amount of points you have received.

The game is based on two different decks of cards: the Core cards (Mechanics and Themes) and Gameplay cards (Structure, Feature, Joker and Special cards) (picture 7). The Core cards are used in the beginning for initializing the game idea. The Gameplay cards are used in-game as to complete and define the high-level idea. Players can describe structures such as goals, challenges; win conditions, and so on through the Gameplay cards. They can also describe technological features or focus solely on content. Lastly the players can remove cards from the table, draw new hand or do other actions that affect the processes of the game.

The game begins by drawing necessary Core cards and placing them into the game board. The players discuss about the game theme and mechanics quickly to produce a mutual understanding about the initial game idea (co-op mode), or decide by their own (solo mode). Four to five Gameplay cards are dealt for the each player, depending on the play mode. The players take turns and play the cards according to the rules. When a player places a card onto the game board, she must explain how the card affects the idea. For example, if a player places “Challenge” card onto the game board, she must explain the challenge element of the ideated game. The game ends when all the slots in the game board are full, players agree that the idea is ready or if someone plays the “Idea ready!” card. The player with most score tokens is the winner.

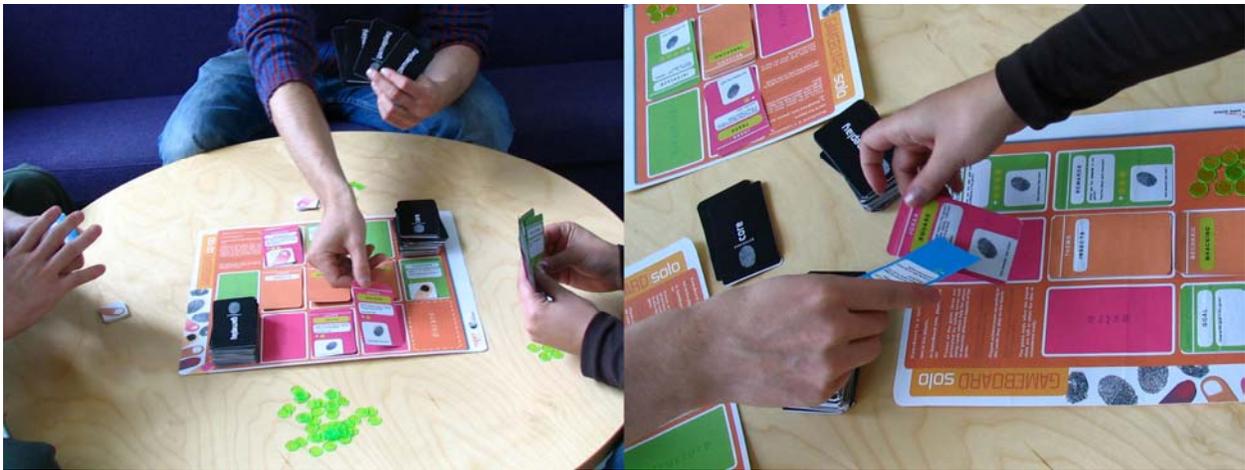
*User Experiences of GameBoard.* GameBoard was gaining only slightly less first places than VNA when we asked interviewees of their favorite methods, thus ending up on the second most favorite methods of the set (among all the methods in the set). Interestingly, this method was also expressed most frequently as the least preferred.

The fans of GameBoard reported most emphatically about the up-sides of the tool even though they felt that there was need for tweaking the rules of the game. The point system and player tokens were seen as unnecessary feature of the game for most of the users, but still some users reported that the point system motivated them slightly more to participate into the action. Others were irritated how some players played solely for the points and not for the good idea (see pictures 8&9 for GameBoard game play).

The game was praised for its structured form alongside the fact that it made the players to think outside the box and expand their scope for the games. Some users reported GameBoard bringing up the most enjoyable idea generation sessions, for which many agreed also under the

other games. In general games were seen as a fun approach to idea generation when compared to traditional approaches.

For some of the users the long list of rules was an obstacle for the use of the game and was making the session too long and slow to start. For others, the board felt intuitive and they made the game of their own by changing or simplifying the rules. Moreover negative feedback included also comments on balance issues of the gameplay, such as the amount of some particular cards or the effect of others.



Pictures 8&9. GameSpace team members demonstrating the adding of a card on a co-op version of GameBoard and removing a card from another players solo board.

### Discussion

In general, GameSpace idea generation games got positive feedback: users were eager to see improved versions of the games. The sessions were considered fun and inspiring as well as useful. Some users felt that ideas produced in the sessions were not ready to take into production, but interesting and valuable features or initial ideas that they would not come up with otherwise, was formed. Some of the users reported ideas that were already on their way to the production. Big part of the negative feedback consisted of issues to do with unbalanced game play, which

indicates that issues with GameSeekers and GameBoard could be solved. As the idea generation games become more complicated, the more difficult it becomes to polish the game play. Based on our experiences, GameSpace games have already become immersive enough for the players to free their thinking and letting the game to facilitate the process and keep the focus. The structure of these games is strong enough to support certain kinds of ideas, such as casual games. Designers can temporarily forget the focus and play these games even though other specific restrictions for game ideas are explicated in the beginning of the session. One could say that magic circle has been formed, but the challenge is to shape it.

Comparing to the similar setting of Brainstorming - VNA, GameSeekers and Gameboard create an easily facilitated idea generation session that get the ideas flowing immediately after the cards are dealt to the players. Typical brainstorming requires someone to shake up the participants in the beginning to loose them up and to guide the session in order to keep the focus. The playful atmosphere for the session is easy to achieve by idea generation games since they refer to the playful conventions familiar to anybody who has experiences on any card games, whereas typical brainstorming sessions seem formally more like serious business meetings. We are used to play card games by taking turns in an equal setting, usually in a non serious mode. Business meetings usually have a chairman that directs the activity through hierarchy and division of labor. Creativity is found in the settings familiar to the former, not the latter.

The test period was relatively short in duration, possibly covering only one chapter of the production cycle. One interviewee expressed that he did not have any need for new ideas at the moment, since the cycle was at its other half – on a phase where he worked on a ready set ideas. Also we conducted this study with selected companies, which may not represent a broader view on game idea generation. Already in this study, one could see that opinions vary strongly

according to the individual ideation manners and customs. Because of this, it should be emphasized the pilot nature of this study, which is setting directions for the future work. Results of this experiment indicates that even though the participants' opinions about the tools varied, game-based techniques rose as the most popular and favorite of the designers, resulting also as an interesting field for study. Even though the games gained also some negative opinions by the users and these tools are still in need for tweaking, the overall opinion of the whole package was positive and encouraging: all of the users would continue utilizing the tools. Even the ones that were, and may still be, slightly skeptic to the approach, are interested to see what more such tools can do.

It could be argued that game designers are most eager to test game-like approaches. Apart from being interesting pieces of games, ideation games do seem to have something special to offer to idea generation techniques: the structure. As Huizinga is mainly referring to play instead of games while introducing the notion of magic circle we could argue that in order to create the balance between the freedom and order, we need a facilitator for the play. Being as a facilitator for a brainstorming session is a demanding job and such professionals may not be available for the small game companies or at least for weekly or even daily sessions. Among one of the non-game techniques that we tested in our pilot study, box filled with toys was also introduced. This method was perceived by some designers, although very appealing, rather inefficient or at least difficult to device and for some it felt too embarrassing to use at the formal setting of the working places. As certain rules can provide facilitation of the preferable process, they may also provide a shelter for otherwise embarrassing, childish, activity.

Developing polished gameplay to balance between the structural aspects, such as features and rules of the games and creative aspects, such as freewheeling and randomness; one needs a

deeper understanding in both domains. As for future work, polishing the two latter games, GameSeekers and Gameboard, is needed and should be conducted in close connection with the industry professionals. It is also notable that the large variety of different kinds of games should be designed instead of one perfect game providing more options for the users to choose from and pushing the thinking patterns in different directions.

### Conclusions

Based on our experiences, we can say with confidence that our games VNA, GameSeekers and GameBoard are successful idea generation games for domain specific creativity, helping designers to generate new game ideas within the magic circle and bringing their ideas outside into the real practices. Game idea generation games provide an easy access to a playful mode, into a magic circle, that can be argued to be beneficial for creative thinking.

### References

- Amabile, T. M. (1990) "Within you, without you: The social psychology of creativity, and beyond". In: M. A. Runco & R. S. Albert (Eds), *Theories of Creativity* (pp. 61-91). London: Sage
- Baer, J. (1994). "Generality of creativity across performance domains". *Creativity Research Journal*, 4, 23-39.
- Brandt, E., Messeter, J. & Binder, T. (2008) "Formatting Design dialogues – Games and Participation". *CoDesign*, Volume 4, Issue 1 March 2008 , pages 51 – 64.
- Clapham, M. (2003) "The Development of Innovative Ideas Through Creativity Training". In Shavinina, L.V (Ed.) *The International Handbook on Innovation*. Elsevier Science Ltd.

de Bono, E. (1970) *Lateral Thinking: Creativity Step by Step*. New York: Harper and Row.

Fullerton T. et al. (2006) "That Cloud Game: Dreaming (and Doing) Innovative Game Design"

*Proceedings of the 2006 ACM SIGGRAPH symposium on Videogames*.

Furnham, A. & Yazdanpanahi T. (1994) "Personality Differences and Group versus Individual Brainstorming". Elsevier Science Ltd.

Gabler K. et al. (2005) "How to Prototype a Game in Under 7 Days: Tips and Tricks from 4

Grad Students Who Made Over 50 Games in 1 Semester" Gamasutra. Available:

[http://www.gamasutra.com/features/20051026/gabler\\_01.shtml](http://www.gamasutra.com/features/20051026/gabler_01.shtml)

Gentile-Williams, M. (2005) "Games Software Publishing: Strategies for market success".

Screen Digest. Available: [http://www.screendigest.com/reports/05\\_games](http://www.screendigest.com/reports/05_games)

[\\_s\\_pub/NSMH-6HRDRU/sample.pdf](http://www.screendigest.com/reports/05_games_s_pub/NSMH-6HRDRU/sample.pdf)

Gril, J. (2007) "Innovation in Casual Games: A Rallying Cry". Gamasutra. Available:

[http://www.gamasutra.com/view/feature/1947/innovation\\_in\\_casual\\_games\\_a\\_.php](http://www.gamasutra.com/view/feature/1947/innovation_in_casual_games_a_.php)

Harkins, J. D. & Macrosson, W.D.K. (1990) "Creativity Training: An assessment of a novel approach". *Journal of Business and Psychology*, 5 (1), 143-148.

Huizinga, J. (1938/1971) *Homo Ludens – A Study of the Play Element in Culture*. The Beacon Press.

Järvinen, A. (2006) *GameGame Manual*. Available:

<http://gamegame.blogs.com/gamegame/GameGame-Manual-version2.0.pdf>

Kumar, M. (2008) "A Crazy Time To Start A Mobile Studio?" Games on Deck, Available:

[http://www.gamesondeck.com/news/1461/gdc\\_mobile\\_2008\\_a\\_crazy\\_time\\_to\\_.php](http://www.gamesondeck.com/news/1461/gdc_mobile_2008_a_crazy_time_to_.php)

McFadzean, E. (2000) "Techniques to enhance creative thinking". *Team Performance*

*Management: An International Journal*. 6 (3/4), 62-72. MCB University Press.

McMullin, J. (2007) "Using Design Games". Boxes and Arrows. Available:

<http://www.boxesandarrows.com/view/using-design-games>

Michael, D. & Chen, S. (2005) *Serious Games: Games That Educate, Train, and Inform*. Course Technology PTR.

Michalko, M. (2006) *Thinker Toys. A handbook of creative-thinking techniques*. Ten Speed Press.

Mumford, M.D., & Gustafson, S.B. (1988). "Creativity syndrome: Integration, application, and innovation". *Psychological Bulletin*, 103, 27-43.

Parnes, S. (1961) "Effects of extended effort in creative problem solving". *Journal of Educational psychology* 52.

Perttula, M.K. (2006), *Idea Generation in Engineering Design: Application of a Memory Search Perspective and Some Experimental Studies*. Doctoral Dissertation. Helsinki University of Technology, Department of Mechanical Engineering, Machine Design. Otamedia Oy, Espoo.

Smith P. & Sawyer B. (2008) Serious Games Taxonomy (work in progress). Available:

<http://www.dmill.com/presentations/serious-games-taxonomy-2008.pdf>

Sowrey, T. (1989) "Idea Generation: identifying the most useful techniques". *European Journal of Marketing* 24 (5), 20-29.

Rossiter J. R. & Lilien G. L. (1994) "New 'Brainstorming' Principles". *Australian Journal of Management* 19,1.