Play Design: a collaborative design space based on digital game project

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Abstract

This lecture presents an 'open collaborative digital space' for the planning and good management of the stream of game design activities. This system design concept could be looked at as a shared toolkit among designers, researchers and artists that work with multimedia content and it aims to sustain the cogeneration of creative ideas for developing multimedia artefacts.

This software concept is the main contribution of my doctoral thesis in Industrial Design and Multimedia Communication at the *Politecnico di Milano* (Italy), which highlights the importance of the gameplay issue in interaction design. Gameplay design can dramatically improve the relationship between digital technologies and participatory culture and this practice suggests new directions where the benefits of collaborative design could be developed.

Introduction

Given the complexity of the interactive digital artefacts, the game design process could be an effective model to include a multitude of actors with diverse competencies and multiple intentions; at the same time digital games provide an opportunity for exploring more than just definitions and could be used by designers as a lens to understand the relationship between the role of digital systems and human play behaviours.

In this way the term *Play Design* is a necessary ambiguity in current design practices; it places the issue of game design between the sphere of real gameplay behaviours

and the sphere of mediated interactions. Play Design aims to extend the game metaphor beyond instrumental analogy, and to expose it as a teamwork ability to understand and organize complex, heterogeneous, dynamic realities of human interactions through digital systems.

As matter of fact, the world of interaction designers is linked to a large practice of experimentation in real and digital contexts and shows itself as a playground where practitioners - understanding systems and structures - embody methods and strategies that are fundamental to creative collaborative play. This argument demonstrates that designing and play are intensely interconnected activities; overlapping and complementary experiences are shaped by the instrumental and methodological evolution of creative design processes.

Motivation

Game design is relatively new term, the aim of involving mind, body and emotions through virtual worlds and making the mediated interaction more pleasant and seductive, is not new. The Hingham Institute Study Group on Space Warfare and their *Theory of Computer Toys* (Graetz 1981), the design philosophy of Ray and Charles Eames 'fascinated by play and pleasurable ways of learning' (Kirkham 1995: 146), and currently the William Gaver's *Ludic Design* (Gaver 2002) are paradigmatic cases that show the historical and cultural importance of play concept in design practice. I am referring to the multiple interpretation of gameplay as a process of mutual learning - where people and interaction technologies are profoundly intertwined - as an attitude, in which designers act and as a catalyst for design methods and co-operative tools.

Even if Interaction Design and Game Studies were born as interdisciplinary fields based on well-defined and organized practices, designers, during the design stage, are constantly involved in transforming and using tools and communication languages in a creative way. Thus tools and techniques depend on their consolidation in a long-term use and from the design and research focus of interest. This uncertain process is stressed in the traditional fixed design methods and shows several critical steps: first, the collaborative concept definition, especially in innovative projects where the design situation is unexplored; second, the monitoring of project evolution, multimedia artefacts are complex puzzles where by changing something will make something else move and transform the whole. The third point is

the possibility to reutilise materials and solutions: icons, images and gaming interfaces are part of our culture and they are a great reference library to understand the users' collective imagination and interaction habits.

Nevertheless, in this pluridisciplinary and fragmented research field, although traditional game design practice discloses itself as a fragile and strict process that follows the efficient logic of production, the emergent and experimental design practices show that the game goal or 'solution' is not only to achieve an object or software but to create synergetic actions among people through actual technologies. These projects, well known as mixed or pervasive games, serious games and independent games, amplify the possibility of interaction design among real, virtual and digital worlds and above all they reawaken the social interpretation of game as a public place of potential actions (Caillois 1981).

The experimental game design perspective includes design as not only instrumental but also as a thoughtful and structured combination of actions, choices and decisions that can significantly influence the way in which the participants interact and organize themselves. This elastic process of ideas and competence negotiation has to be developed in a positive and meaningful way.

Making visible the collaboration activity

All along, designing play activity is a seductive practice for interaction designers, but it's also a complex and larger design culture. It is profoundly merged with motivation, abilities and contexts both of the players and of the teamwork. The human ludic attitude of interaction depends on physical, cognitive and social states and it's hardly predictable and expected, indeed, people play games and digital systems in a personal way and share their experiences in unconventional places like blogs, forums and communities.

The traditional visual communication strategies aren't appropriate for the interactive project representation in it's whole complexity, and it is necessary to find other ways for improving dialogues among actors. The project communication has to be a hypertextual project itself that works with movies, texts, tags, images and so on.
In order for a design activity to encompass all these reflections, we need to promote a breathing space towards a collaborative creation process. This perspective has to take into account the clarity of the communication openness and the project legibility.

For that reason I have focused the discussion about a development system that allows an appropriate time for design thinking in advance.

Nowadays the quality of overall working experience remains in the capacity of the team to enhance the uniqueness of the different perspectives brought by the participants and to construct a mutual shared language. To support this collaborative and tacit practice, an open digital system could allow us to share, reusing our creativity through visual and digital materials.

Play Design system

The purpose of the Play Design system isn't to push existent design instruments, but to allow the creative co-construction of methods and techniques during the design stage. For encouraging the dialogue between people, tools and understanding design situation, the system is shaped on the *design process formalization.* The design process considered, follows all the game design phases: from the abstract concept definition to the explicit development techniques.

All parts involved in the game design process can be used to stimulate creative thinking (Löwgren 2007), to augment and consolidate collaborative design methods and tools such as design situation framing, envisioning maps, visual conceptual landscapes and network structure understanding.

I have identified the critical steps of the process, mentioned before: visualizing ideas, the sketching process and the development process. These iterative loop phases could be supported by specific digital design tools, which participants could compose in relation to the specific design requirements. These modules allow framing ideas, sharing materials, and, to easily define and build the main properties of an interactive project.

The logic of composition follows the *pattern language*, pioneered in 1977 by Christopher Alexander (Alexander 1977). As well as architectural patterns clustering frequent design problems, likewise game patterns help in the analysis and building of interactive projects upon recurring game design arguments and activity. I suggest three kinds of patterns: construction elements, dynamics and relationships. As De Bono suggest 'the brain is not designed to think but to set up routine patterns of perception and behaviour and to make sure we do not deviate from these' (De Bono

1995: 12). Designing by patterns permits the organization of complex systems and focusing teamwork attentions.
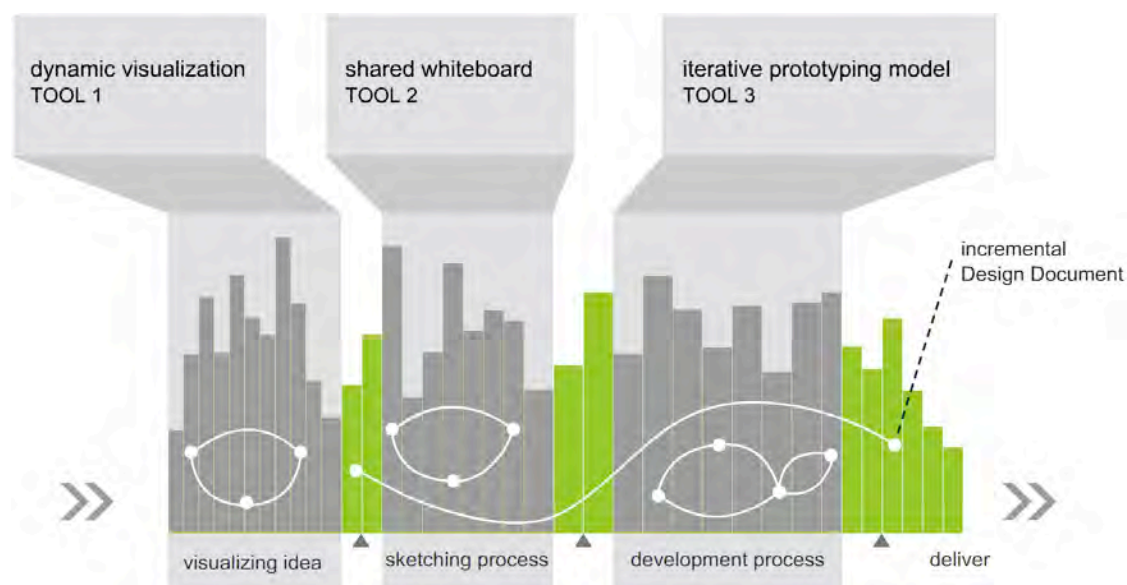

Figure 1. Archetypical game design pipeline composed by activity patterns. This image shows a possible design framework formalized in a sequential way. Each design process could be looked as unique consisted experience, managed by how participants match patterns and learn from each other.

To press on I will present three design tools of Play Design system. First a 'dynamic visualization interface' that permits brainstorming participants to connect project materials in narrative sequences in order to create a suggestive interface that allows connecting materials and identifies the preliminary project definition.

Like digital hypertext, this dynamic visualization tool permits authors to connect texts with links and other media and to construct a new approach to picture design space. The act of composition and juxtaposition of project elements over a virtual table, allows participants to generate a narrative assembly that starts a fruitful dialogue between physical and semiotic as a textual collage (Lunenfeld 2000: 160).

The second tool is a 'whiteboard interface' for supporting the collaborative sketching process during the preproduction phase. Unlike classic whiteboard, this tool permits the working team to upload drawings, sketches, diagrams and all that is useful to the collaborative project definition. Among the functions, this system should support individual techniques, for this reason it permits starting communication sessions

where authors can add critical virtual marks, and save the design history until the approval state.

The third tool is an 'iterative development model', just like an incremental project document editor that facilitates involved subjects, monitoring project development and testing. Designers, researchers and artists could implement several techniques of the player's participation and observation, like Ethnography or User Centred Design, for this reason gameplay design process needs iterative authoring systems that enforce the design processes through collaboration demonstrated by wiki logic. An open system conceived like this, permits the reuse of objects and arguements which enrich the diverse design perspectives involved.

Conclusion and open points

The discovery of the work team's similarity with the players' shows the gameplay design practice as a privileged place where designers, researchers and artists can share visions and tools, envision scenarios for interacting and draw tactical collaborative action strategies.

My concept intends to foreshadow the Play Design notion as a way of supporting the collaborative imaginative process by digital systems and to suggest an alternative key to reach the wanted synergy between ludic research and open design practices for the design of interactive multimedia artefacts.

Today's emergent experimental game design practices are early signals of a transformation process in creative activities and ludic interaction attitudes. The software concept discussed is a suggestion for playing with design tools that will reduce the rift between technical knowledge, hypertextual logic and human communication practices.

The open points of this research are: to sustain the research field interested in the relationship between play and design; to offer design tools suitable for the management of the interactive multimedia collaborative projects; and to share the contents of the project in order to reuse them according to research intentions. Future specific works on the Play Design digital system could help the collaborative teams in several ways: consolidating the co-operative design methods and

articulating the dynamic operative image of complex interactive projects as well as managing multiple design teamwork.

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