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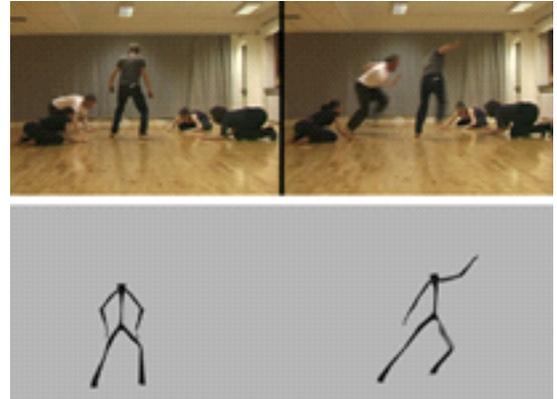

common playground

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Abstract

In this poster we present our experiences in using a computer game platform as a development tool in the areas of art, architecture and drama. Our approach has been to find ways to do quick prototyping and testing of ideas in a virtual space. We strive at building general applications independent of the 3D platform used for the specific case rather than getting stuck in a certain game engine or technological generation. The focus has been on the constant dialogue between the concept and its form. Today's Computer games seem very fit for our purpose.

Projects presented run at Space respectively Narrativity Studio, Interactive Institute in Malmö.

Keywords: art, drama, computer games, virtual space, avatar, body movement, collaborative drama, theatre

Project URL:
http://www.creativemotion.dk

1. Introduction

With the goal to produce and work interactive with virtual environment we found computer game technology as a suitable playground. In this poster we presented a concept of MoodBody used in the project Communicating Moods in Space, in the Narrativity studio.

2. Aims of Research

The project Communicating Moods in Space, defined in Narrativity Studio, aims at developing innovative metaphors for spatial expression and communication. To design a virtual narrative space, which combined with event scenarios, inspires collaborative creative processes and establishes a meaningful relationship between virtual space and reality. The mode of communication is physical rather than textual.

3. Half-Life as playground

For the purposes described above, a virtual environment to support: multi user environment, open SDK for application development, openness for character animation and behaviour control was needed. In collaboration with the Space studio Half-Life was chosen as first test platform. During the first half-year prototype focus has been on two areas:

- Pace in Space: How do we physically communicate and experience stories together in virtual space? How to create a virtual space that in a haptic sense inspires the pace in space.

- Trace of Pace: How to define dynamic drama structures, where space itself becomes an actor. In the role of actor the space may embody memories and let events and stories told integrate physically in space as trace of pace - the story and memories of actors pace as well as the space itself.

4. Moving between fiction layers

Working with drama creates a doubling of space and time as well as the double role as actor-spectator. To be active in both Roles gives the participants a wider view and stimulates thinking of the best for the whole and not only the

own performance as an individual. Working with presence and impact in virtual drama is a similar situation. It is important to have a clear contract and framing for actors to know if your inside or outside the dramatic fiction.

In first version I have worked with different view angles and character sound as representation/ identification by for actor-spectators. Another aspect of presence is how to communicate the Role to the actor: "How do I know I am a virtual wolf?" This game is confusing also in live version by the continuous role changing, which is the part of the quality - this make you alert and the surprise and change effect keeps you engaged in the game.

Staging collaborative drama in theatre/drama training for presence, collaboration and playful communication uses the quality of both being actor - spectator. This quality gives you as actor a constant reflection of the drama taking place both from inside and outside the drama as well as relation to the doubling of time and space [1].
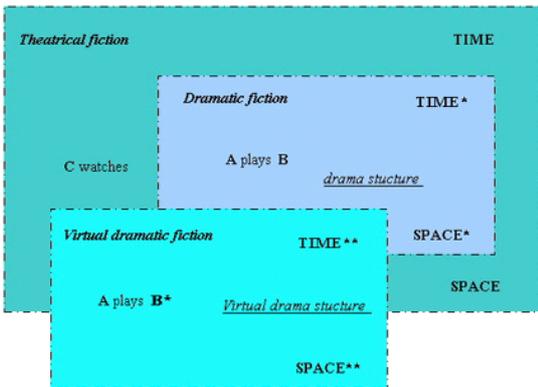
Working with drama in mixed reality gives an extra fiction layer – as an extra reflection level. As well as the inspiration of moving, cross communicating and playing with identities in those different fiction layers. To play in mixed realities are also experimented and discussed in the area of theatre and drama as for example playing "between and betwixt" for analyzing cultures and rituals for liminal and other cross border states. In this area there is also new expressions to be found using new media.

With a long-term goal of building a flexible and open application and not putting too much effort in Half-Life specific solutions, a Mixed Reality Platform was formulated. The aim of this platform is to create a flexible meeting point between physical and virtual space, an open environment and interface to different 3D engines as well as flexibility in relation to user interfaces. The platform consists of a protocol and a software package (API), based on the same protocol.
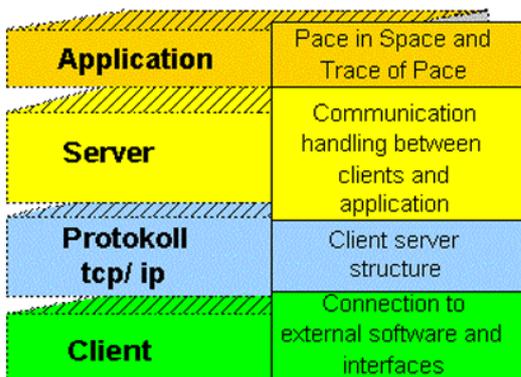

The protocol is to handle positioning, movements in virtual and physical environments and support several input devices and systems - in the range from microphones to tracking systems [2].

5. Creating Drama

The choice of drama structure is striving at finding ways of "fighting" for collaboration. This is the point of concentration in theatre improvisation and many traditional games. To implement the method of creating drama by establishing a conflict, I have chosen an old tagging game called "Stone, Wolf and Lamb" in the first prototype. The plot in short gives Wolf hunts Lamb. If Wolf gets Lamb they change roles. Lamb may jump over a Stone (also a Role character playing a stone), then Lamb becomes Stone, Stone becomes Wolf and Wolf becomes Lamb. This game is implemented as a multi player computer game in Half-Life, where actors interacts through Roles in first person view.

Specific for the chosen game is a constant change of Role. This gives the actor/ player different relation and point of view in the game played. This changing of roles also creates the circular dramaturgy where there is no winner.
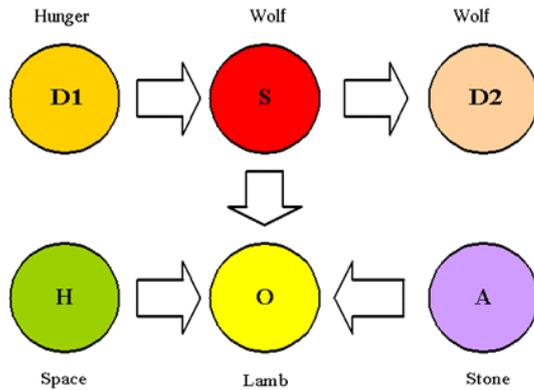
The theoretical model used for structuring the dramatic scenarios is Semantique Structurale [3], a structural interpretation of a narrative where a subject (S) with driving force and quest (destinateur D1) to get object (O), with the goal to satisfy receiver (D2). Added to this main story, there is the helper (H) who supports the main story and an antagonist (A) counter acting the main story – in all 6 actants.

Applying this structure for playing the tagging game in a virtual playground opens up for a dynamic environment introducing Fools (autonomous Roles), Space, "God-Role", Sound or groups of Roles acting as helper or antagonist to the main story with a common dramatic function.

A feature in the Mixed Reality Platform is a 2D overview of the playground and current active players in a LAN network. In relation to the dramatic structure this may be interpreted as a "God-Role" acting as director or Fate acting as different actants, but is not yet explored as part of the game.

This drama structure is also interesting when looking on definition of actor viewpoint. In what Role do you experience the story told? In the prototype I have chosen the actor to be as well of the three main characters Stone, Wolf or Lamb.

6. MoodBody – emotions in virtual space

The ways to communicate emotions as sorrow, fear, happiness are many. We laugh and hug each other using our body, but how do you communicate all this at distance, different time and space – in virtual space? The design of the MoodBody is inspired of physical theatre and focusing on body expression and communication rather than facial expressions. Striving for a non-realistic environment and scenario the movement design is in the field of extra daily behavior.

Looking at virtual characters you may define three main categories: Virtual humans (focusing on realistic bodies, Virtual Personalities (focusing on social skills)

Avatars (focusing on representation of actor). The goal was to find a non-realistic "clean" character body, optimal for body expressions and with a neutral mask (avatar). These criteria's also to open up for the Role change transformations through metamorphosis. The 3D character models are developed together with Michael Johansson in the Space studio. My inspiration for character is simple line drawings by Carlo Blasis [4]

Character movement is designed in the context of the game. In the process of defining motion for expressing moods, I find it important to put the moods in context. Like in improvisation relations is as important for the development of the story as individual basic moods and emotions.

Looking for the essentials in an animated mood expression, it is not necessary with realistic perfected motion tracking. For formulation of emotions and relations of virtual bodies, our mode of motion capture for this first prototype were by shooting live workshops in video, which was the raw material for the 3D character animation. This gives a further

step in concentration of human movement. By formulating drama and relations in animation art, we learn about ourselves. Using and relating to the virtual spaces and bodies opens up for even further focus on formulation of expressive mode as MoodBody. Workshops were arranged in collaboration with Kent Sjöström, Malmö Theatre Academy.

7. Pace in space, Trace of pace and Space

The virtualplayground is a white rectangular space – narrow but with high roof staged by light and sound as ending in "heaven" and "hell" respectively.

The Pace in space implements the tagging game and MoodBody as the basic game rules, controlling the drama structure, multi user environment and the over all behavior and timing.

The Trace of pace is concerning "physical" embodiment of dramatic events, spatial events and Role behaviour. This is Space taking part in the drama as an actant. In the prototype traces are implemented for Role change, traffic in space and Wolf behaviour (a good or bad in relation to Role defined goal). As examples implemented, a role change will place a plant to grow, creating a jungle over time, movement in space as traffic will generate markers of different intensity and colour and Wolf getting tired in relation to the tempo and performance of his Lamb hunt etc.

Experiences in the Forsite project on Computer Games in Architectural Design did show inertia to make people move around when visiting virtual workplaces etc [5]. As an experiment to inspire actors/users experience space in an open-minded way, the method of drama was used. At an internal institute workshop on re-arranging our own studio workspace, the Stone Wolf and Lamb game was used as a "Design game" – an introduction to use and experience space as well as a motivation to learn the Half-Life interface in a playful way. This workshop focused on space design in relation to the dramatic structure – Space as helper / antagonist. In contrast to the original rectangular open space, a lot of effort where put in finding the object of desire when playing in a more complex and layered space, which need to be integrated and considered in relation to play structure.

8. Experiences of virtual play

Using VR as augmented imagination is stimulating when playing games. Playing in virtual space gives a unique opportunity to design exciting and dynamic play space as non-realistic, interactive and participating.

With actors playing in first person, the aspect of design for presence is important - to communicate the Role - "How do I know I am a virtual wolf?"

The neutral character bodies are designed in order to be open to actor's fantasy and interpretation. In this prototype the body language and character behaviour is not fully developed which gives the disadvantage of some confusion of identity. This is partly due to the game itself (it is really confusing also in material space, which is part of the game...).

For the final prototype state the Role identity is designed by character sound (Stone Wolf and Lamb), different view points and sound markers for Role change as well as Wolf using paw for hunting. Finally we worked with Role head to identify actors in Role. As long as actors not playing they keep their neutral body.

When focusing on body as expressive media and mood communicator, the question of alternative user interface is of big importance when finding solutions to integrate body and technology. Next step in project is to look at our relationship to technology and how technology integrates itself into the creative process, shapes content and potentially can assist in taking the work to a deeper level of consciousness where both form and content are interwoven.

In the development of this project I will look at group dynamic as input as a collaborative and more ambiguous interaction mode compared to for example individual direct input using body mask. When working with theatre and drama presence and collaboration is of great interest. As with the motion capture, the process of group dynamics will be experimented with, to formulate essentials also in relation to the virtual space and characters.

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