

Narrative Simulations for Museum visitors

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In our paper we try to find the solution whether interactive simulation can be immersive as real life communication. We are creating narrative interactive space for museums and let visitors play with the asset. Playing human – *homo ludens* plays through hers/his life. She builds up her world and existence from small pieces. She connects these fragments like in puzzle or crossword and composes wholeness after several playful efforts. (Reichstein) The chat-bot Sanelma, a demo for Finnish National Gallery made by students of UIAH Media Lab in MUMMI-study project fall 2003 is an attempt to make a simulation of real humanlike communication and use narrative structure in a digital application for museum. With small pieces of conversation user play a puzzle-like game, construct a picture from a special era of Finnish history.

Simulation of the human communication in the Museum

In-site media installations and on-line web-based e-learning services are largely used in museums with the aim to re-present their assets (see proceedings from ICHIM and Museum and the Web). With our chat-bot project we wish to present the spirit behind the assets, the era, the atmosphere of 1930^s in Finland.

Interactive and non-linear stories offer the user usually a limited selection of choices. Interactivity often means that all the choices for user are planned in advance. To be immersive, participatory, responsive and reactive – like natural human communication – interactive storytelling needs rules and regulations to work in a flexible way. Human communication is often irrelevant, includes pauses and skips from one thing to another. Only machines could communicate always with answer-response -style.

Simulations are imitative representation of the functioning of one system or process by means of the functioning of another (a computer simulation of an industrial process) b : examination of a problem often not subject to direct experimentation by means of a simulating device (Merriam-Webster). Simulation of human communication could be of course irrelevant and chaotic but also consist from small fragments. It's up to scriptwriter that user can have a whole picture out of these fragments.

Chat-bot Sanelma is based on a narrative structure, where different functions of narrative lead the dialogue (Propp, 1928). Chatting with Sanelma user could find out the story behind the dialogue and the structured narration and characterization between the phrases and lines of chat-bot. The narration is based on a story of a 26-year young lady Sanelma from 1932 who wishes to be independent but realizes that to

remain decent lady she has to marry. Sanelma is one of the skaters from Sulho Sipilä's painting "*Skating rink*". The interactive plot follows by Sanelma's quotations from different persons: three boyfriends, auntie Hetta and in the neighbor apartment an artist with his wife lives in Sanelma's surroundings. These persons present different functions of the story. By quoting these characters Sanelma happens to tell some vital things and details about the life in Helsinki in 1930. (Mäenpää et al.). From her lines user can collect a picture and an idea of the position of women, of the cultural life, of the standard of living, of the nightlife of Helsinki; prohibitionary liquor law has just revoked, jazz has come to Helsinki, European manners have strong influence in literature and art. In art exhibition museums usually presents concrete pieces of arts with the chat-bot we wish to present the spirit behind the painting –from individual but presumable true point of view.

Narrative Structure and Interactivity

Like Jesper Juul mentions a narrative is characterized by "fundamental distance between the events told and the discourse describing the events" (Juul, 1999, 29). Like in every story – it is possible to find two levels of narration: the story, events told – or by Propp's terminology *fabula* – and the discourse, sequence of things – in Russia *sjuzet*. Story is always told by describing someone lacking something. In our chat-bot-application Sanelma is lacking the husband. Sanelma's life and her striving to satisfy her lacking is our story. Discourse, or plot is generated by the words used by the users and by Sanelma. So we could say that interactivity appears on the level of discourse, level of *sjuzet*.

The models of interactive storytelling are widely studied area but interactive and un-linear stories – often described as "*The Garden of Forking Paths*" still offers user only a limited selection of choices. Interactivity means that all the choices for user are planned in advance. In the manuscript behind Sanelma we want to provide information about being woman, about the city culture of Helsinki from 1930 and about the artist Sulho Sipilä him self. Metadata connect these three themes together, and they are presented in the lines of Sanelma.

Chat-bot is a virtual character with whom user communicates textually. Chat-bot can easily be understood also as a simulation of humanlike communication. Chat-bot technology is based on the metadata of words and lines, a certain word or line written by the user gives certain answer from the chat-bot. (Maenpää & al).

Metadata is put to the index. Even the freedom of choice makes it human like and it's interesting to discuss with Sanelma the functions of various lines have to be well planned before. If index word A appears then must the lines (functions) D, E, F appear also.

Users input: Missä asut [Where do you live?]

Index word: asua, asuu etc. [to live, live, residence, accommodate, address etc.]

Sanelmas lines appear in certain order: Olen Sanelma Helsingistä. Onpa täällä ihana luistelukeli! Voisin kertoa sinulle tästä luistinradasta etc... [Hi! I'm Sanelma from Helsinki. There is wonderful weather for skating! I could tell you about this skating rink. | Didn't I introduced my self already? I'm Sanelma. I live in Helsinki in Punavuori. | Oh, did you ask where do I live? In Viiskulma, I'm going to skating rink

with my friend Armas. etc.]

The Mechanism of Interaction – Conclusions

When describing the relationship between the user/visitor/player of the simulation and the interactive storytelling Andy Cameron gives an interesting hint about potential events: “In its most fully realized form, that of the simulation, interactivity allows narrative situations to be described in **potentia** and then set into a motion – a process whereby model building supercedes storytelling, and the what-if engine replaces narrative sequence.”(Cameron, 1995) Narrative structures are constructed from potential worlds and events, and when user makes choice between all these potentias she/he is constructing the storyline, the road along the *Forking Paths* (Cameron also makes reference to Jorge Luis Borges).

The vital question here is whether there is an intentional story? Storytellers and scriptwriters intend users to discover that narrations behind the structures they have created. As users, we know this is sometimes very difficult. Even if people do have a attempt to create a story from even a very fragmentary plot, it's not always obvious that a story exists. Roger Schank asks a vital question: “*How do we find the stories that we wish to tell?*” And this question there follows another key question: *How does one know the one has a story to tell?*” (Schank, 2000, 84). As a key to understand how to interact and how does interaction work Schank gives indexing: “No matter how the story of Artificial Intelligent is told, no matter whose point is adopted about how the mind works or how a computer mind work, the problem always reduces to search.”(ibid, s.84)

In our chat-bot project we are collecting the users input and index-words to develop the communication further and to find out the interest areas of the users. To simulate human communication is still extreme difficult. One problem here comes from the means of communication. So far there is no possibilities to create a voice response program in Finnish and when people are chatting by written text with the computer keyboard they expect a computer-like communication. Multimodal, voice response program could be more human like and could let also users communicate like humans.

The conclusion leads to the opinion that the story and narration is found on the basis of this kind of simulations. Obviously, people can also make up stories, but the process of story creation and invention is one of adaptation rather than creation out of nothing (Schank, 1995). Even in SimCity the narration about certain kinds of types and their lives do exist – if it is a linear or Aristotelian – it's another story.

Cameron Andy (1995), *Dissimulations*. Millennium Film journal No 28. (Paper downloaded August 2004, URL: [HTTP://www.daimi.au.dk/~sbrand/mmp2/Dissimulations.html](http://www.daimi.au.dk/~sbrand/mmp2/Dissimulations.html))

ICHIM (2004) <http://www.ichim.org/> annual International Cultural Heritage Informatics Meetings

Juul Jasper, (1999) *A Clash between game and Narrative*. Final thesis for the Institute of Nordic Language and Literature, University of Copenhagen, February 1999. (PDF loaded august 2004, URL: [HTTP://www.jesperjuul.dk/thesis/](http://www.jesperjuul.dk/thesis/))

Merriam-Webster online dictionary <http://www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=simulation&x=15&y=14>

Museum and the Web (2004) <http://www.archimuse.com/mw2004/best/index.html> – annual Museum and the Web –conference is presenting and evaluating culture heritage Web-site design

Mäenpää Marjo, Tarja Toikka, Joanna Saad-Sulonen (2003): A Concept For Chatbot: “Sanelma” Building engaging relationship between the work of art and the exhibition visitor: <http://mlab.uiah.fi/mummi/sanelma/>

Propp Vladimir. (1998). *Morphology of the folktale*. Translated by Laurence Scott. 14. edition. University of Texas Press. (Alkuteos: Propp Vladimir, 1928. *Morfolgija skazki*, Moskva.)

Reichstein Alexander (2004), *Bestiarium Construendum*. Art exhibition in Amos Anderson 30.1 – 7.3.2004. A mission of the artist, read August 2004. URL: <http://www.amosanderson.fi/suomi/edellis.html>

Schank Roger C., Gary Saul Morson, Saul Morson (1995) *Tell Me a Story: Narrative and Intelligence (Rethinking Theory)*. Northwestern University Press