

# Integrating a Multi-User Game with Dramatic Narrative for Interactive Television

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## Abstract

One question in the design of program content for interactive television is how to provide interesting game-like interaction. Because television as medium has established traditions for how it is used, which are not likely to change drastically overnight, the context of viewing has to be considered when developing new concepts. One interesting solution is to integrate a game with a traditional television series so that the game has effect on series and vice versa; one can watch only the series or play only the game but doing both adds something special to the experience of both watching and playing. We implemented this kind of concept as a prototype called Footprints of Power. The concept was tested with 27 players and test results indicate that this approach could enhance the experience of both playing and watching.

## Keywords

Game, dramatic narrative, television culture

## Introduction

One agenda around digital television has been the production of interactive television content. The focus has been on both the technical and the content production side, and the goal: interactive television with lots of new interesting things to do for the audience. Kelly et al. [1997] depict a new medium, which combines both push (television, broadcast) and pull (Internet, search) elements seamlessly and state, that television as we know it, will change. However, we believe that it will probably not be a very sudden change. A survey of British digital television users indicates that people aren't very eager to use interactive services and also quite slow to change their viewing habits towards interactive watching [Theodoropoulou, 2002]. In another survey, interactive television was judged as hard to use, with a considerable gap between ITV and the ordinary TV [Freeman & Lessiter, 2001]. Although the television as a device provides (and is likely to do even more so) different forms of activities for the viewer, such as browsing teletext and playing by means of video gaming consoles, a significant amount of viewers are still accustomed to use their TV in a comparatively passive and easy way: just by watching. Most importantly, people change slowly and they will prefer the old and reliable to the new and suspect, until the new medium becomes more familiar [Campbell, 1992]. Television relies

on audiences, so most probably it will also change slowly and, instead of change overnight, transform bit by bit as it lends and adapts from other media as suggested by Bolter and Grusin [2000].

## *Narratives and game-like interaction*

According to Van Dijk & De Vos [2001], the context of television is that it is a public medium, with produced content, viewed by a relatively large audience. Even in its future interactive form, television will probably preserve fundamentals of this transmission nature [Jensen, 2001, 386-387]. A very commonly used form of produced content in television is the dramatic narrative, especially segmental narratives, i.e. series and serials [Ellis, 1992, 120].


One approach to combining dramatic narrative and interaction has been the production of so called branching stories or interactive fiction, in which the viewer(s) chose the next turn of the story [e.g. Jensen, 2001, 358]. These concepts vary in the amount of choice viewers have (how many options and how often the story branches) and also in the way the branch is determined (based on individual or majority decisions). However, there are many arguments against branching stories, one being that the production of multiple parallel and branching sub-stories is very costly. Another critique is that giving the viewer choice of the storyline inevitably makes a less intriguing story;

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Hannu Virta	2	Päivän Sa				
Helena Salo	0	Päivän Sa				
Oona Lehtonen	5	TViisi				
Ville Suolahti	4	TViisi				
Kristiina Karhu	3	TViisi				
Niko Sillanpää	2	TViisi				
Vanja Eskola	2	TViisi				
Elina Aarrevaara	0	TViisi				
Helinä Vihtavuori	4	Lehti-ilta				
Tapani Salo	3	Lehti-ilta				
Johannes Villi	1	Lehti-ilta				
Kia Valkila	1	Lehti-ilta				
Tytti Ranta	4	Radio Ma				
Ulla Mononen	2	Radio Ma				
Sebastian Tosi	1	Radio Ma				
Veijo Takala	4	Poliisi				
Karoliina Vesasto	3	Poliisi				
Isto Nummenmaa	3	Poliisi				
Juhani Ventonen	2	Poliisi				

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Figure 1: Footprints of Power, the game interface

in George Lucas' opinion, the place for interaction is in games [Kelly & Parisi, 1997] and others agree [e.g Costikyan, 2002].

Games can be shown as such on TV, but they aren't always that enjoyable to watch. An approach that lets the viewer watch a dramatic series, while those who want to can play on their time, is to provide viewers with a chance to bet on what will happen next on the series, like the betting agency arranging bets on which character will die next in Sopranos (www.betts.com, autumn 2002), or so called fantasy-league concepts (e.g. www.fantasyleague.com). This is an approach towards interactivity, which stays within the context of a dramatic narrative, but without messing with the viewing experience of those, who really just want to watch.

An even more interesting approach, from our point of view, was used in *Insiders*, a show about stock exchange and brokers [Favre, 2000]. The settings were the same in the game, but here the players were the brokers and the goal to get rich. By watching the show, the players could get valuable hints about the stock market to use in their game. On the other hand, the players' actions in the game also affected the storyline of the series to some extent. However, a viewers choice not to play (or interact, to be more general), did not remove the satisfaction of just watching: the broadcasted content was still a TV-series, however actively some viewers played.

*Insiders'* connection between the game and TV-show was money and the rise and fall of the stock market. From a production point of view, the

problem here is that the selected connection is very specialized and it is hard to use with another setting. Our attempt has been to find a link between a game and TV-show that is more extendable.

Another aspect we wanted to highlight in the concept is the social nature of viewing television. Kelly et al. argue, that the power of television is how it has instantiated itself in every household. By watching television "[y]ou are participating in a ritual that links you to thousands of other citizens" [Kelly et al., 1997]. We wanted to make a game, which made the players play with and against each other, instead of being mostly invisible to what the rest of the people do, as they were in *Insiders*.

The concept is demonstrated by means of a fictive TV-series and multiplayer game prototype called *Footprints of Power*.

## Footprints of Power

*Footprints of Power* is a multiplayer game built on the principles of auction. To put it simple: Players use resources to place bids on different groups in the game. Every update the player who made the highest bid gets the ownership of the group. Some groups have abilities, e.g. they provide information about what other players are doing, adds to the value of some groups owned by the player, etc. Different groups have different values and abilities. The value of a player's groups calculated on update affect how many resources s/he will receive and also adds to their overall score. The players can send messages to each other via game and they can donate or trade resources to/with other players. The winner is the one with the highest score at any

predefined moment.

The series is about a young singer and her very glamorous and yet so troublesome life, as she is being slowly introduced to the “real” powers of society: the omnipresent bad guys of the business, all excellently networked and limitlessly funded. For testing purposes we produced a five-episode set of textual treatments of the series, each about 800 words of length.

As in the *Insiders* concept, events in the game can have impact on the series and vice versa. The effects from the series to the game are the ones most simply handled: players deal with characters that are present (to some extent) in the show, so the happenings of these characters can be transferred into the game by modifying the attributes of the characters (e.g. value, special attributes or position). The interesting part is the link between the game and the series, which is based on the owning relationships of the characters. So instead of relying on money (as is the case in *Insiders*), decisions on what happens in the series are based upon which characters relate with each other, i.e. which characters are owned by the same players. This significantly liberates the choice of domain for the game, as the abstract relate can be specified into a whole range of functions, e.g. “know”, “deal with”, “support”, “work for a common cause” or “have influence on”. Although the concept was tested and presented here by means of a drama, we have also explored its utilization on top of e.g. a soap, detective story or mystery.

What can change, then, in the narrative? Naturally, there must be some limitations on what effect the players can have on the story. Otherwise we end up with the same problems as when producing a branching story: infinitely complicated, multiple storylines with mediocre narrative potential. To answer this question, it is important to look at how a story is constructed in television series.

Television narratives can be seen as building on one of two story structures, which Ellis [1992] calls serial and series. Serials build on short-term storylines and a sense of continuity is produced mainly by means of using the same characters over and over again. The other extreme is series that have almost no episode storyline, but the purpose of each episode is to further the long-term story. Most television series go somewhere in between, and so try to build a solid story for each episode and at the same time develop the long-term storyline, which will bond the audience [Herkman, 2001, 140].

In this concept we make use of this division. The story we have produced is a mix of long-term and short-term stories. The goal was to produce a

script, which allowed some modifications but one that left the long-term storyline intact. What we did is to provide a story, in which we decide what will eventually happen, but the players can affect what specific actions lead towards that goal. The long-term goals lie in the fates of the main characters, while the changeable events are the happenings of certain more or less dispensable supporting characters, whose faiths in turn affect the life of our main characters. Dispensable does not mean useless or irrelevant, however. For the players who own those characters in the game, the happenings are important. Because the situation in the game shapes how players interpret the characters (and their motivations) in the series [Fiske, 1987, 149-178; Branigan, 1992, 72], the game should give some new flavor and interest for the supporting characters.

Just playing the game can provide the viewers with some interesting action. In addition to this, the TV-series has scripted hints of upcoming events, which can either affect the game directly or reveal to the player some future events in the show that s/he can intervene. The ideal is that every viewer, who is also a player, will watch the show through her/his own magic lens, that is, through the player’s position in the game and the possibilities to take action that are presented to her/him. This might encourage people to watch the show more regularly. Even if some television programs have almost same amount of viewers week after week, only half of the audience are the same people that watched the show the week before [Barwise & Ehrenberg, 1988, 39].

## Evaluation

The game used for testing was played with a WWW-browser. Players didn’t see the series as a TV-program; instead we used written treatments to give an idea of what is happening in series. The testing period was ten days, including one weekend, after which players answered a questionnaire with both closed and open questions concerning their gaming experience. In addition to the questionnaire, the game also automatically collected data. In this paper we focus on the question about the connections between the game and the series and analyze the data in relation to that.

## Results

Footprints of Power was tested by 27 players: 6 female and 21 male. The players’ ages ranged from 18 to 32 years (average 24.6). Because it is reasonable to assume that at least some of the persons to first engage in games in future television will be the ones playing actively now, we sought active gamers to test the concept. Thus, our test players

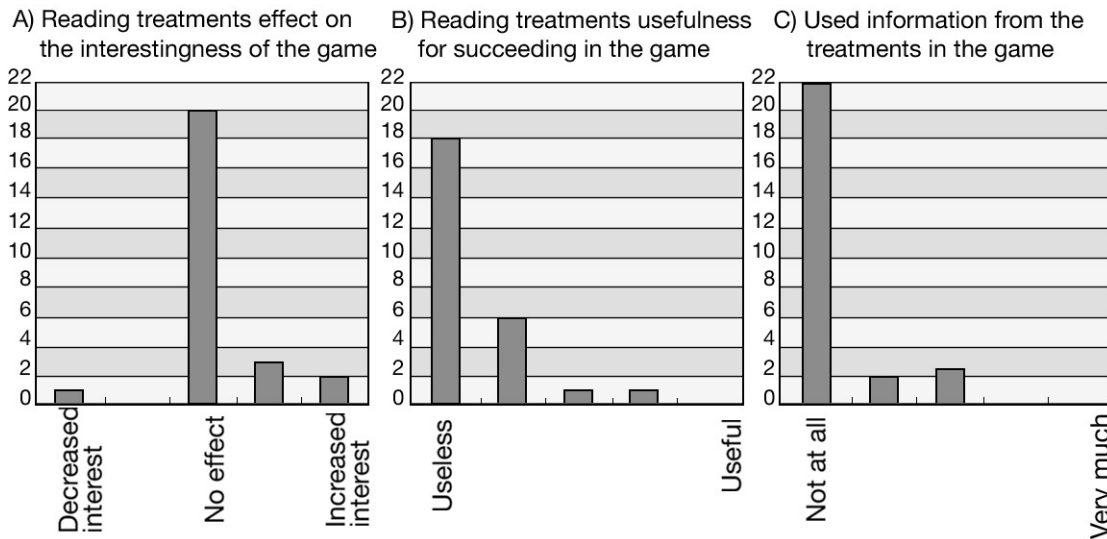


Figure 2: Frequencies of key answers.

were, with one exception, considerably frequent gamers of various kinds of games ranging from board games to computer games and 3 of these had jobs related to games (e.g. game journalist or game designers).

Most players thought (figure 2a) that treatments had no effect on how interesting the game was. The textual format was reported to be too exhausting to read, with too many characters to remember. Some players also reported that they initially had problems to understand how the game and series related to each other, and for some, this remained a question throughout the game (in search for reliable answers, players were on purpose deprived of any knowledge of the nature of the relations between the game and series). Because of this, the majority of the players didn't read treatments very carefully and thought they were of no use for the game. However, there were a few players that regarded the treatments as somewhat or more useful (figure 2b) and also read them more actively ( $r=0.492$ ,  $p<0.05$ ) than the other players.

The players who considered treatments useful also thought that the game was more interesting because of the treatments ( $r=0.556$ ,  $p<0.01$ ), felt that they got information from the series that they could use in their game (2c) ( $r=0.592$ ,  $p<0.01$ ) and thought the game and the series felt integrated ( $r=0.641$ ,  $p<0.01$ ). They also reported noticing that the game had effects on the series ( $r=0.695$ ,  $p<0.01$ ), and vice versa ( $r=0.496$ ,  $p<0.01$ ). Moreover, those players who were using information from the treatments in their game (figure 2c) thought the treatments made the game more interesting ( $r=0.743$ ,  $p<0.01$ ) and adventurous ( $r=0.464$ ,  $p<0.05$ ). These correlations can be visualized as in figure 3, to highlight the relations.

To sum up the findings: Most players concentrated only on playing the game, and didn't read treatments very actively. The game was thought as rather good. E.g players stated that they would be interested to play similar games in the future (mean=4, std. dev=1.0690, on scale 1=probably not-5=definitely.) Most players also played frequently and actively measured by actions made

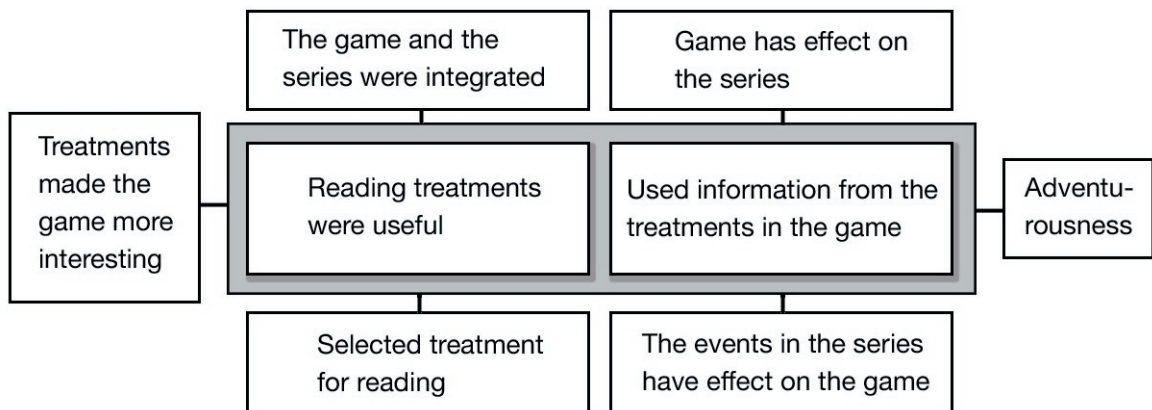


Figure 3: Relations between the aspects.

in the game. It was playable without the series. So, because the treatments weren't necessary but instead cumbersome to read, most of the players didn't bother. Some players specifically commented, that reading treatments was far less interesting than watching television, and thought that if the treatments had been a real TV-series, they would most likely have watched it. However, our data gives some indication that the connections we tried to build into *The Footprints of Power* were noticeable, because those players who in spite of all did read the treatments thought that the series/game felt interrelated. They also reported the whole experience as more interesting and adventurous than did the rest of the players.

## Conclusions

One important issue in producing content for digital television is what kind of content viewers want and how they want to interact with the content. Interactivity is already present to some extent in usage cultures concerning television, e.g. console gaming. On the other hand, television is also being viewed as a very passive device, allowing for people just to sit and watch a ready-made show. In this paper, we have considered some issues regarding the design of interactive content for digital television: namely how to combine game-like interaction with narrative structure.

Highly interactive shows that prompt or even require the user to participate while viewing are undoubtedly a thing we will be seeing in the near future. However, some viewers will assumedly continue "just watching" television, even as it provides possibilities for more and more interaction. We believe that combining familiar forms of interaction, such as games, with traditional television narratives, might act as an introduction to interactive television content. At the same time it allows us preserve the possibility of broadcasting the show itself, while allowing the viewers to decide freely when and for how long they want to engage in the associated interactive content. The concept allows for multiple people interacting at the same time, without dictating the actual moment of the interaction.

When we started our work with this concept we thought that the main question would be how to build connections between the game and the series. However, our data hints that even the elementary means used in *Footprints of Power* were somewhat adequate (when players did invest time in reading the treatments). What the testing points out is that the game didn't as such give enough reasons to follow the series. This raises new research questions: What kind of elements could be used in the game

to more effectively lure the players to watch the series? How should the game communicate to the player about the possibilities of interaction it provides and its interrelation with the series?

We believe that our work points out some useful issues to consider when designing interactive or game-like content for digital television. However, the results indicate, that in order to continue our research we must come up with a more visual and less cumbersome way to imitate a television series.

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