

# Interaction Design in Television Voting: A Usability Study on Music TV and Input Devices

Ralph Riecke<sup>1</sup>, Alex Juers<sup>1</sup>, and Konstantinos Chorianopoulos<sup>2</sup>

<sup>1</sup> University of the Arts Berlin, Germany

<sup>2</sup> Ionian University, Greece

`alex_juers@t-online.de, ralph.riecke@gmx.de, choko@ionio.gr`

**Abstract.** The aim of this work is to study the usability of voting on music TV channels. We asked subjects to perform a voting-task on two different music TV shows. The results indicate, that 1) there are small differences in acceptance and understanding of the voting-instructions between users and non-users, 2) the mobile phone is a familiar and the most preferred voting-device and 3) sociability features is a way to support the pricing model of voting services for entertainment applications in TV.

**Keywords:** Usability, voting, interactive TV, music TV, mobile phone.

## 1 Introduction

Voting over TV shows has been a popular [3], but controversial kind of TV interactivity [4]. Call-In shows like “Who wants to be a millionaire” and voting shows like TRL are only two out of hundreds different formats of interaction between the TV channels and the viewers. Especially music television channels recognized the potential of those formats for their program very early. They started to produce some new TV shows that are based on voting – Get the Clip on VIVA and TRL on MTV are the most popular ones for German viewers.

Previous works have studied user interaction with music TV, such as information overlays and animated characters [2]. Researchers have also studied voting in the context of e-government systems [1], but there is no research on the entertainment aspects of voting in the context of a television show (e.g., Music TV, reality show).

Interactive voting-shows offer lots of possibilities to companies and viewers. Usability plays a major role in interactivity. It took the producers some time to develop useful formats and voting instructions to motivate the audience to use this modern way of interacting – and also spending money. As a matter of fact, music channels and telephone companies earn millions of dollars with voting and some viewers more and more incur debts. So is this topic all about making money?

Besides the ethical considerations, how easy is the voting, what are the main functions and how clear is the pricing presented in the shows? Do all of the developed and existing instructions help the user in praxis to make voting easy or Interactive TV Voting-Shows on TV music channels in terms of usability spending money easily? Are the users able to handle the tasks of voting and realize the costs with the offered instructions? Or are they useless? All of those questions are still to answer.

## 2 Method

We employed usability testing to explore the above research questions.

### 2.1 Test Material

Viva – Get The Clip VIVA was the first TV Music Station to broadcast in German. VIVA focuses on its target group of feminine teenagers. Get the Clip is an interactive Music-Format on VIVA which empowers the viewers to act like program directors. It works like a kind of a playlist which is build together by the viewer. The Show is aired seven days a week for about three hours a day. The viewer has the possibility to vote by telephone call and SMS. The clip-list with all the video-numbers is shown on teletext and channel-website. In addition, users can send an instant message while voting with SMS. On the TV screen the viewer can see the messages, the playlist und some Information about the running top three of the voting in real-time with the music video-clips. The top three are placed with percentages on the upper part of the screen. Short messages send by the viewer and voting instructions are shown at the bottom of the screen.



**Fig. 1.** Get the Clip voting show on VIVA and TRL voting show on MTV (Germany)

MTV – TRL MTV stands for music television owned by MTV Networks (Viacom). In Germany it is on air since 1997. MTV focuses on its target group of more edgy boys. TRL is a live show hosted by a ‘VJ’ (Video-Jockey) on MTV, where the viewer can select from a sample of the newest clips by voting. Before the actual show starts, each viewer can vote 5 out of 40 songs online. This only works on the MTV Website and is not featured on TV. By the beginning of the TV show the top ten are created out of the pre-voting. During the show the viewer has the possibility to change the top ten chart-list ranking online or per call. At the time of the study a phone-call counts 3 times more than an online vote. The viewer can see the ranked chart-list position of the actual played song in the left corner of the TV screen. All the available videos for voting and the voting instructions are shown in a red box in the bottom area of the screen.

One significant difference between the two shows (Figure 1) is that the videos played on VIVA are overlaid all the time by percentages, messages, voting instructions and the

playlist whereas the clips on TRL are shown mostly without numbers and text-boxes, which only appear occasionally.

Both shows were recorded a few days in advance to make sure that every user received the same content. Therefore the text written by the users couldn't be displayed on the TV Screen. Also a few options weren't able to take into consideration because they are only available when the show is on air.

## 2.2 Study Set-Up

The study took place in an relaxed setting (Figure 2). The same qualitative environment and the same technological set-up for every subject ensured a controlled environment. The voting devices telephone (traditional) and notebook with internet connection (Windows software package) were provided. On the Notebook the websites of the two music channel were already opened to avoid mistakes in getting to the websites. The mobile phone belonged to the subject because there can be some differences between the usability of mobile phones (Figure 2). All the arising costs were taken over by study organizers. The main limitation of this study is that there was no remote control interactivity for the music TV channels.



**Fig. 2.** Experimental set-up and input devices employed in the study

## 2.3 Subjects

The recruitment of subjects was facilitated by a screening procedure. All subjects were recruited from a school class consisting of 31 pupils. 29 of them confirmed that they know about voting. 4 girls and 5 boys out of the 29 pupils have voted at least once. In the end, 3 boys and 4 girls agreed to take part in our exploration. One of that girls didn't have any experiences concerning music channels, so we decided to exclude her, in order to keep a balance between genders. The ages were between 13 and 20. Overall, six users with voting experience and two without were recruited.

## 2.4 Testing Procedure

Each subject had to perform the following task (translated from German): "In the next 10 minutes you will see two voting shows from two different music channels. Each one of the shows will be presented over a duration of 5 minutes. Your goal is to vote for

one clip of your choice in each show. You can freely choose one or more out of three voting devices: mobile phone, or telephone, or a notebook with an internet connection."

The study organizers payed for the cost of voting, in order to ensure that users would not hesitate to do the voting. In terms of acceptance, we found users would accept a pricing model which lies between 9-17,5 Cent for each SMS. Nevertheless, the economic aspects of voting is outside the scope of this study and more tests should be done to predict acceptable price range.

Task completion was observed with the help of an observation checklist. We measured time to watch a clip completely (measured average time of a clip: 2 minutes 48), time to read the instructions, and time to vote with any of the given devices.

Further we considered that the subject may start again after an incomplete attempt of voting which is defined as missing out of one of the major steps for voting – wrong chosen clip number, wrong usage of the voting tool and wrong sending procedure.

After the subject accomplished the task, a questionnaire-based interview followed. The interview provided more detailed information about facts like voting-instructions, device usage and preference, screen design and the pricing.

### **3 Results**

All subjects solved the voting task on each TV music channel within the allocated time. Average time of the users was 3:24 minutes and of the non-users 4:24 minutes. The preferred voting tool for all subjects was the mobile phone. The notebook connected to the internet was used only two times by the subjects to look for voting instructions whereas the telephone wasn't used at all. The voting instructions provided by the TV music channels (on screen and online) were mostly used by the non-users.

The pricing model of both TV music channels was clearly visible for 5 subjects. 3 subjects weren't able to remember the costs for their voting procedure. More than 80% of the subjects would vote again and even more often, if a lower price was offered. The average suggested price for the two shows was: 9 Cent on TRL and 17,5 Cent on "Get the Clip."

Although, the task was easy to solve, non-users had a few problems and therefore reviewed the task as medium-hard to solve. One non-user criticized that "the voting instructions on both music channels were not clear and therefore confused" him whereas the other non-user liked the way TRL formulated their voting instructions but disliked the confusing screen design with "too much information and too many symbols and colors" of "Get the Clip."

Although the subjects had the possibility to choose out of three voting devices all of them used the mobile phone for voting. In general, all subjects explained their decision towards the mobile phone with following statement: "It's my daily companion and I'm used to it."

### **4 Discussion**

Based on the results of the study we draw some implications for theory and practice. Furthermore, we provide suggestions for further research in this direction:

**Television voting is an established practice:** It was interesting to see that all subjects solved the task; even the non-users did so.

**Mobile phone as a multipurpose tool (remote control):** All subjects preferred their mobile phones for voting because in everyday life “it is always close to” them. Indeed, always and everywhere teenagers communicate with their mobile phones. However, our study did not include the option to interact directly with the TV through a remote control, which might have been a close competitor to the mobile phone.

**Online voting instructions are not enough to ensure usability:** There are two different kinds of voting instructions – on TV screen and on the website of the two TV music channels. We found out that most users didn’t look for the online instructions, but further research (e.g., eye tracking) is needed, in order to examine what captures the attention of the users during voting.

**Perceived economic value of social TV:** There was a major difference between the two music shows concerning the desired price for voting. Users would spend nearly double of the amount for the Clip’ as they would spend on ‘TRL’ – 9 Cent for ‘TRL’ and 17,5 Cent for ‘Get the Clip’. The main difference between the two formats is the messaging option provided by ‘Get the Clip’. This outcome could be essential for further development and improvement of voting shows especially in terms of customer satisfaction and business profit maximization.

Future research should study the differences between the remote control and other alternatives for interaction with TV and in particular with voting shows. Especially, how the television remote control measures up against the mobile phone? Moreover, further research should consider the differences between voting for entertainment and voting for other aspects (e.g., public issues). Finally, changes in technology and consumer needs should be taken in consideration by improving the existing or developing completely new formats, like mobile TV voting shows.

## References

1. Bederson, B.B., Lee, B., Sherman, R.M., Herrnson, P.S., Niemi, R.G.: Electronic voting system usability issues. In: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, CHI 2003, pp. 145–152. ACM, New York (2003)
2. Chorianopoulos, K., Spinellis, D.: Affective usability evaluation for an interactive music television channel. Computers in Entertainment 2(3), 14 (2004)
3. Slot, M.: Changing user roles in ICT developments; the case of digital television. Telematics and Informatics 24(4), 303–314 (2007)
4. informity, Big Brother drops text votes and cuts call costs,  
<http://informity.com/articles/2007/06/01/bigbrotherdrops/>