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# Interaction Design for Online Video and Television

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## Abstract

This course will teach attendees how to design and evaluate interaction with online video and television. It provides attendees a pragmatic toolset, including techniques and guidelines, which can be directly applied in practice. The different tools will be contextualized based on current developments, giving participants a complete overview of the state of the art and industry.

## Duration of the Course

Total duration: **2 hrs and 40 minutes** (2x 80 minutes)

## Learning objectives

After the course, participants should be able to:

- Have a complete overview of current developments on TV and online video applications
- Assess the strengths and weaknesses of these applications
- Analyse relevant user experience aspects such as usability, sociability and enjoyment
- Understand the process of interaction design for these applications
- Identify design opportunities for novel features of TV and online video
- Know how to adapt user testing and perform a heuristic evaluation for TV and online video applications

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### Course history

David Geerts	Pablo Cesar
Designing and Evaluating the Sociability of Interactive Television and Online Video  (EuroITV'10 & EuroITV'11)	Introduction to User Experience Design for Interactive TV  (UXTV'09)
Social Video and Television (NordiCHI'10)	Interactive Television and the Web (WWW'09)
CHI2011: Designing Social TV and Social Communications for the Home	
CHI2012: Social Interaction Design for Online Video and Television	
CHI2014: Interaction Design for Online Video and Television	

This course is based on the CHI2014 course "Interaction Design for Online Video and Television", but will be **expanded** by including recent examples and developments in the field and by taking into account previous attendees' comments and suggestions.

**Overall, evaluations** of the CHI2014 course were very positive. Aspects of the course that were highly appreciated were e.g. the "comprehensive intro to interaction design for online video and tv", "Multiple case studies", "Audience discussion and participation" and "content, examples, design support, pitfalls to avoid, framework & visual exemplars from research".

For the last five years we have been **continually improving the contents**, based on the reviews from the course participants (as one participant noticed: "I attended course in 2011 -- the content has been updated very well"). Participants last year asked for more analysis of the examples, more background material, more time for the exercise, less historical overview and more focus on what worked (successful examples) and less on what didn't work (unsuccessful examples). Taking these comments into account, the following aspects will be changed:

- Removal of older (not that relevant) historical examples, so there is enough time for performing a participatory exercise
- Inclusion of recent statistics regarding the evolution in TV and online video watching
- Improvement of the hand-outs delivered to the participants, including all the relevant references and related work
- Deep analysis of two example applications for assessing strengths and weaknesses

### Content of the Course

In this course, the instructors will first give an extensive overview of successful existing and emerging television and online video applications, on the web, on television and on smartphones and tablets. Special attention will be paid to current commercial developments in TV offerings, online video, and second screen applications. The instructors will highlight and summarize the most important features present in these applications and present them in a coherent framework (see course material sample). The framework will help in understanding the relevance of these emergent applications for the CHI community, in particular which aspects of user experience are relevant

for TV and video applications and which interaction design techniques can be of help when designing them. Two example applications will be analysed in more detail, to assess their strengths and weaknesses in depth. Next, the instructors will provide a detailed overview on the design of online video and television applications that exploit novel features, with an emphasis on social interactivity, interaction techniques and content. The following key principles in designing such applications will be discussed in detail: activity, awareness, synchronization, social interaction, device, and social reach. Each of the principles will be illustrated by using existing design projects, including secondary screens, rich social experiences with other viewers and social sharing of television content with closed relationships. The intention of using these examples is to share the instructors' experiences in designing such applications. After these key design principles, we will show how TV and online video applications can be evaluated. First we will discuss how usability and sociability can be studied by performing user tests, which aspects of testing are different from studying applications in other domains, and include practical tips on how to improve user testing focused on the user experience of TV and online video. Then we will go over a number of heuristics, based on the design principles discussed earlier, for designing online video and television applications. In order to better explain the underlying concepts, we will perform a plenary group exercise in which the participants are invited to apply the design principles and heuristics and evaluate and redesign an online video application. Participants will be put in pairs, and a set of screenshots of an application will be handed out to them (see materials for several examples). They will be given approximately ten minutes for inspecting the interface, identifying

user experience problems, and suggesting a redesign. During the next ten minutes, each pair of participants will shortly present one of their key findings, resulting in 10-20 ideas for redesigning the application. Finally, the instructors will explore the future of the emerging trends in TV and online video and together with the participants discuss what factors can lead to the success or failure of these kinds of applications.

### **Justification**

There are four main reasons why this course is of interest to a CHI audience:

1. It is a **quickly growing topic**, as current developments show. Many video sites are integrating their streaming video offering with social media, broadcasters are experimenting with adding social features and novel interaction techniques to normal television sets, and users are increasingly using smart phones and tablets while watching TV, resulting in many so called "second-screen" and transmedia applications.
2. These new applications need **specific approaches for designing and evaluating** their usability, sociability, and user experience which are not yet familiar to most developers.
3. The course combines the **instructors' expertise and knowledge** with these applications. The instructors have actively collaborated in the design and evaluation of visionary systems during the past twelve years (David Geerts: evaluation & sociability; Pablo Cesar: design & technology). In the course, **a lot of recent examples** from the instructors' experience will be used.
4. It is a **relevant research topic** for the CHI community. The amount of papers, notes and case

studies on (social) television is increasing every year. For example, the workshop on Exploring and Enhancing the User Experience for TV at CHI2013 drew an audience of more than 30 participants with an acceptance rate of 50%, and at CHI2014 there were several presentations on TV and Video research. Course participants will be introduced to the ACM SIGCHI sponsored conference focusing on this area, ACM International Conference on Interactive Experiences for Television and Online Video (TVX), and its community<sup>1</sup>.

### **Background of attendees**

The target audience for this course is researchers and practitioners who want to learn how to design television and online video applications, and requires basic knowledge on human-centred design. This is not a technical course on how to develop such applications.

### **Presentation format**

Lecture (including case studies), videos, an exercise and plenary group discussions

### **Detailed Schedule**

- Welcome & Introduction (*35 minutes*)
  - An overview of current market developments
  - A framework with previous, existing and emerging applications
  - An introduction to interaction design for television and online video
- Designing TV and Online video Applications (*60 minutes*)
  - Key principles for designing interactive experiences

- Evaluation of online video and television (*35 minutes*)
  - How to perform user testing with television and online video
  - Several heuristics to evaluate these applications
- Plenary exercise (*20 minutes*)
- Future outlook (*10 minutes*)
  - What are the key research challenges for the CHI community?

### **Audience size**

The expected audience size is around 30-40 participants. Exercises will be adapted to the audience size, in order to maximally simulate interaction by the participants. Results will be pre-prepared in case there is not sufficient feedback from the audience.

### **Audio/visual needs and student volunteers**

The standard **audiovisual equipment** provided by CHI2015 (projector, screen, computer audio, and podium microphone) should be sufficient. **Student Volunteers** are not required for this course.

### **Promotional strategy**

Both instructors are heavily involved in the ACM TVX conference organization, an ACM SIGCHI sponsored conference, as well as in the IFIP TC on Entertainment Computing (and its conference ICEC). Both channels will be used to advertise the course, as many participants to the TVX and ICEC conferences are (potential) CHI attendees. The instructors are also active in several EU projects (e.g. HBB-Next, TV Ring, Vconnect, ...) through which the course will be advertised. In addition, the course will be announced in several Facebook groups that deal with Television and Online Video, as well as through the instructors' twitter followers.

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<sup>1</sup> <http://www.sigchi.org/communities/tvx>