Foreword

Television is one of the most successful technological consumer products ever produced and has spread to virtually every household in Western society as well as the rest of the world. Television sets are often located in a central part of the main living room. Television viewing is a dominant part of most peoples’ leisure activities and daily lives; and, for many, television has become their most important source of information and entertainment. Therefore, to say that television has a central place in our culture or that television has thoroughly changed our society and our daily lives over the past decades is an understatement that barely begins to describe reality.

Television, however, is not a static medium, neither as a technology nor as a service. Game consoles, video cassette recorders (VCRs), cable, and satellite systems have already begun to change the image of what television is and what it can be as a medium. Right now, television undergoes even more radical developments and changes with the delivery of interactive and digital TV services to the home. Terms like personal TV, customization, content-on-demand (COD), on-demand services, enhanced TV, Internet protocol TV (IPTV), SMS-TV, personal video recorders (PVR), user-created content, and more general concepts such as digitization, interactivity, convergence, cross media, the merging of television and computers, of broadcast and Internet, and so forth, point out some of the aspects involved in this process of change.

Viewing the current landscape of interactive digital television from a bird’s eye perspective—there are several major trends worth noticing.

TV reception and TV content are no longer limited to the TV set, but the TV set is joined by and merged with an ever-increasing panoply of platforms and devices that can be used to receive television content and services: desktop computers, home media centers, game consoles, laptops, personal digital assistants (PDAs), mobile phones, and other wearable devices that transcend the traditional concept of TV. In this special sense, interactive digital television is television beyond TV.

One aspect of this is, on the one hand, the convergence between the world of television and the world of Telco and hence the emergence of applications that combines the strengths of interactive digital television with those of the mobile phone to cre-
ate cross platform applications in the form of SMS-TV, mobile TV content, and so forth; and on the other hand the convergence between the world of television and the world of the Internet in the form of IPTV, WebTV, Web site for TV channels, TV programs, and so forth.

Television is no longer restricted to one type of technology, one type of service, and one type of application, that is, television programming, but interactive digital television is composed of different technologies and a diversity of different applications, services, and contents. TV is transformed from a mono-application to a multi-applications medium.

Television is no longer exclusively distributed from a central provider to a mass audience of viewers via broadcast. Besides cable and satellite, interactive digital television is also distributed as IPTV, as COD, or service-on-demand (SOD) upon request from the individual viewer and through peer-to-peer (P2P) networks from user to user. In this sense, interactive digital TV is TV beyond broadcast.

One aspect of this is personalized, customized, or individualized TV. In its most simple form, personalized TV is television with (PVR) functionality. With full PVR functionality the user can pause during a broadcast as content is cached on the disk and the viewer can watch the program later. Likewise, PVR functions enable the user to rewind and fast-forward television content using the remote control. In this way, viewers can time shift the broadcast during a program, skip over commercials, and so on. In its more advanced forms personalized TV is based on models of user preferences, agents, and smart technologies. In this way, too, interactive digital TV can be seen as TV beyond broadcast.

Another aspect is enhanced TV. Enhanced TV is content—text, graphics, or video—that is overlaid on regularly displayed video content and is accessed interactively, that is, a sort of advanced teletext service or super text TV. Whether it is based on so-called local interactivity, that is, interaction between the viewer and content downloaded to the individual set-top box or based on user requests through a return channel, the enhanced part of the content is, in a way, beyond broadcast.

Interaction design in interactive digital media is no longer exclusively ruled by the usability paradigm, that is, criteria such as functionality, effectiveness, and efficiency. Looking around at contemporary activities in human computer interaction (HCI) and interaction design you are able to observe a relatively clear-defined movement from what previously used to be usability activities to what now can be defined as examinations of human experience and subjective satisfaction: Usability engineering makes way for experience design. Measurements of error rates and time per task are substituted by examinations of likeability, sociability, playability, pleasureability, and so forth. Usability experts change job titles to “user experience research managers.” And former usability labs turn into human experience labs. In this sense, interaction design and experience design in relation to interactive digital television are already way beyond usability.
Television is no longer solely built on the business models of the broadcasting industry, but is also shaped by new business models and revenue opportunities based on digital and interactive capabilities as well as cross media formats. Thus, in many ways the interactive and digital television industry is on the edge of transcending the traditional broadcasting industry with profound consequences for business models, marketing, and so forth.

Television is no longer an entirely passive experience of a preplanned flow of programming with occasional zapping, but a complex combination of planned flow and interactive sequences, that is, ordinary broadcast enhanced with interactive applications, which results in a completely new media experience. In this sense, interactive digital TV is beyond TV reception.

As it appears, television—and especially digital and interactive TV—is many different things, just as the degree of interactivity varies widely. This volume deals with some of the aspects of this new situation concerning interactive digital television with a special focus on technology and applications, interaction design, and business and marketing.

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