

Scalable Multi-Windowed DTV Experience

-Tutorial-

Instructor

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Abstract

Digital Television (DTV) consists of much more than replacing analog video and audio broadcast signals with a digital stream. The data stream that delivers DTV serves as a vehicle for interactive content to accompany the TV viewing experience, as well as a fat pipe for a broadband Internet connection. Earlier attempts at interactive TV were based upon a narrow bandwidth data stream using the Vertical Blanking Interval (VBI) of an analog signal, with primitive interactive functions displayed on the TV screen. These generally served as an annoying distraction from the TV content, and offered very little interactive content of interest. With DTV, one has the opportunity to remedy these earlier shortcomings and provide an interactive experience that offers benefits both for the customer and the broadcaster.

The course will start by giving an overview of the different infrastructures ready for providing interactive DTV. Next, the Digital Video Broadcasting project (DVB) and MPEG-2 standard will be introduced. DVB provides a complete solution for digital television and data broadcasting across the range of delivery media (i.e., cable, satellite and wireless). Then, existing DTV services (e.g., Electronic Program Guide, EPG) will be scanned. Finally, the emerging concept of “scalable multi-windowed DTV experience” will be presented in terms of potential applications and technical challenges. While multi-windowing expands the DTV experience to the range of devices that are found in today’s pervasive computing environment, it does not address the question of how best to accommodate the capabilities of these devices (i.e., scalability). Therefore technical challenges range from home device discovery to data representation and transcoding. Impulse e-commerce and multi-display DTV will be used to illustrate this emerging concept.

Who Should Attend

The course is intended for anyone interested in understanding emerging technologies and services in the exciting area of interactive digital television. The course covers a wide range of technologies. No specific prerequisite is however required.

Course Material

The participants will receive a set of lecture notes upon arrival to the course. This set includes the presented foils and a list of pointers to recent technical papers and documents.