Ambient Media – An Introduction by Case-Studies EuroITV 2009 Tutorial

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ABSTRACT

Media evolved from media that can be described as integrated presentation in one form (multimedia). From multimedia, media evolved towards embedding the consumer in a computer graphic generated synthetic world (virtual reality). From this point on, media evolved to the consumers directly exposed to the media in their natural environment, rather than computer interfaces (ambient media). In addition, media will be evolving towards a fully real/synthetic world undistinguishable from pure media integrating human capacity (biomedia or bio-multimedia) somewhere in the very far distant future. The goal is to train and educate participants in new innovative service design for ambient multimedia. The course will cover potential and possibilities of this new multimedia field and its relation to other trends, such as ubicom, pervasive computation, affective computation, and tangible media. Specific key-concepts of ambient media are developed based on various business case studies.

Keywords

Ambient media, ambient computation, ubiquitous computation, pervasive computation, smart media, Web 2.0, context awareness, emotional computation.

1. OBJECTIVES

The objective of this tutorial is that the audience is able to answer the following questions:

What are ambient media? What is the form and language of ambient media? What is ambient intelligence and which technologies does it bring?

The audience shall be trained in the emerging media environment and know its basic concepts. For the HCI community, it presents novel methods for interaction and navigation through media in the consumer surrounding environment. For the media interested communities, it gives a glimpse what changes ambient media brings for existing media eco-systems. For the more technical focused audience, technical systems and ambient computation will be introduced. In addition to previously held tutorials, this tutorial presents 5-10 case studies on general level. To deepen the understanding of ambient media, the tutorial examines selected case studies under technological, HCI, consumer experience, and smart media aspects.

2. CONTENT OF THE TUTORIAL

2.1 Part 1: Introduction

The introduction gives insights into the development of ambient media. It reviews current trends and gives details into the development of ambient media in general. In further detail, the introduction contains the following main issues:

- History, general viewpoints, and business aspects
- State-of-the art, standardization efforts, and organizations
- Legal factors, socio-economic, and privacy aspects
- Concepts overview, trends, and technology enables
- Ambient media form, content, and techniques
- First definition of ambient media

2.2 Part 2: Case Studies

The second part of the tutorial introduces 5-10 case studies of ambient media on general level. These case studies will be refined within the scope of the media eco-systems part of the tutorial, and the technical part of the tutorial.

- Business case studies from the media management, marketing, strategically, and service point of view
- Business case studies for ambient media
- Presentation of Nokia Ubimedia MindTrek Award wining projects from 2007 and 2008 (see www.mindtrek.org)
- Case studies form the SAME 2008 and other ambient media related workshops held in conjunction with other events

2.3 Part 3: Smart Interactive Media Eco-Systems

Definition and exploitation of ambient media from a media and human-computer-interaction viewpoint. This part of the tutorial shall answer the following questions: what are ambient media? What is the form of ambient media? How will HCI change and how can we design for ambient? The following are the main issues to be discussed within the scope of this part of the tutorial:

- Principles of ambient media
- HCI and ambient media
- Natural environment as place for media
- Interaction models and behavior patters
- Consumer experience and consumer studies
- Context awareness
- Personalization and consumer profiling
- Emotions and media
- *Examination of case-studies on these aspects*

2.4 Part 4: Ambient Media Systems

Ambient intelligence is the basic technology enabling ambient media. Within this part of the tutorial the system aspects shall be evaluated:

- Ambient and cross-service oriented computation
- Hardware components

- Smart materials
- MEMS & sensor technology
- Adaptive software
- Ubiqutious communication
- I/O device technology
- Software components
  - Media management & handling
  - Emotional computation
  - Natural interaction
  - Context awareness
  - Computational intelligence
  - Presence technologies
- *Examination of case-studies on these aspects*

3. TARGET AUDIENCE

This course is designed for a general audience, which is interested in the future of media technology. Its content is relevant for an audience with industrial, media, technological, or service design interest.

4. SCHEDULE OF THE TUTORIAL

The tutorial is scheduled for Wednesday afternoon, 3rd of June 2009, 14:00-18:00 (4 hours):

14:00-15:00 (1h)   : Part 1: Introduction

15:00-15:30 (1/2h): Part 2: Case Studies

15:30-16:00   : Coffee Break

16:00-17:00 (1h)   : Part 3: Smart Interactive Media Eco-Systems

17:00-18:00 (1h)   : Part 4: Ambient Media Systems

5. READINGS & MATERIAL

For further reading, please check out the *Ambient Media Association (AMEA)* website at: http://www.ambientmediaassociation.org. Much of the material can be found on the association's website, where also more material can be downloaded. Other interesting readings are: [1-14]

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