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# The Mobile HolstenTour

invites users to partake in a unique experience within the historical realm of Luebeck's Holstentor museum.

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The museum itself, through the medium of ubiquitous digital technologies, takes its visitors back in time to uncover Luebeck's rich cultural heritage.



Users compile their own unique tour of the museum by selecting landmarks and entities within the virtual landscape, which are transmitted to the visitor's own mobile phone through the Bluetooth based location infrastructure.

Medieval Luebeck offers a wondrous collection, landmarks, and entities, which visitors first encounter in the virtual landscape.



played by a kiosk installation and then come face to face with the real manifestation within the depths of the Holstentor itself.



Visitors are first introduced to the museum with the opportunity to explore a virtual urban landscape of medieval Luebeck.

The tour not only guides but enriches the visitor experience by awakening them to insightful details tailored for their unique trip into Luebeck's past.



## ::Holstentour

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Is an Interdisciplinary cross cultural Conceptual Project from ISNM Students at the University of Lübeck. The Project is a context-aware, interactive, personalized information system for museums, that uses the principle of Ubiquitous Computing, wireless communications and various multimedia techniques to enhance the space, enrich the user experience in museums and make them more appealing for visitors.

The project was Developed under the Supervision of Prof. Dr. Andreas Schrader with the support of Msc Student Bashar al Takouri during the summer semester 2007.



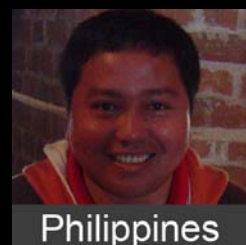
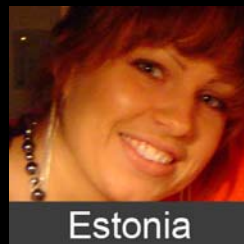
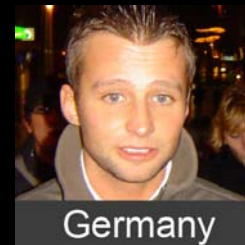
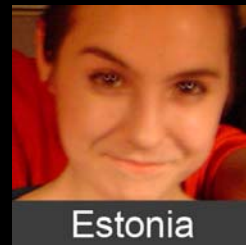
::Main aspects of the project.

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- Interdisciplinary cross cultural work environment.
- Use of Digital Media and Technology.
- Ubiquitous Computing
- Test bed for Master thesis; “Ubiquitous Infrastructure for Contextualized Exhibition Services” B.Takouri
- Get a good Grade 😊



## ::Interdisciplinary Cross cultural Project.



14 souls from 10 nations.

Ecuador, Mexico, Germany, Rumania, Estonia, China, Taiwan, Cameroon, Philippines and Palestine.

Age Span from 22 to 34 yrs.

Engineers, Filmmakers, IT Guys, Semiotics, Psychologists, Catholic Priest, Geographers, Computer Scientist, Multimedia Designers, Journalist and architects.



## ::Digital Media.

### //Wireless Technologies



Bluetooth.: PAN specification for exchange of information  
Between devices with unlicensed short range  
Radio frequencies.

### //Physical interactive media:



LCD Kiosk: We Developed a Flash interactive Interface that  
Was implemented in a touch screen LCD Kiosk.  
which stored instructions from user and then  
Transmitted to the Server.

### //Digital Video



Virtual Tours: Virtual walks through from the Museum  
to Lübeck important places was achieved  
by digital filming and Editing.

### // Server technologies



Tomcat Server: Java netbeans framework



## ::Digital Media.

### //Client



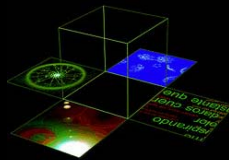
Mobile Phones: The ideal target device from the Ubicom Point of view which resulted problematic.  
PDA;s: Better solution with bigger display and capabilities

### //Programming:



Java: Object Oriented Programming Language  
Javascript: Scripting Language for client side apps.  
Netbeans: Java framework for servers.  
Action Script: Scripting language for Flash.

### //Audio Visual Display:



Client Interface: Html layout with multimedia Digital Files optimized for wireless transmission



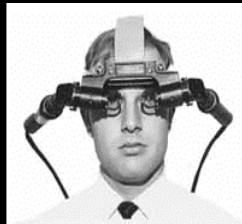
## ::Ubuituous Computing

//Paul Virilio, The Aesthetics of Disappearance.



Argues that technological waves are becoming faster and faster. And this feed our technological dependency, Which results in increasingly smaller gadgets that combined with their quotidian use make them eventually “disappear” from our perception.

//Mark Weiser; Ubiquitous Computing



Ubiquitous: Omnipresent, Universal, Constantly Available

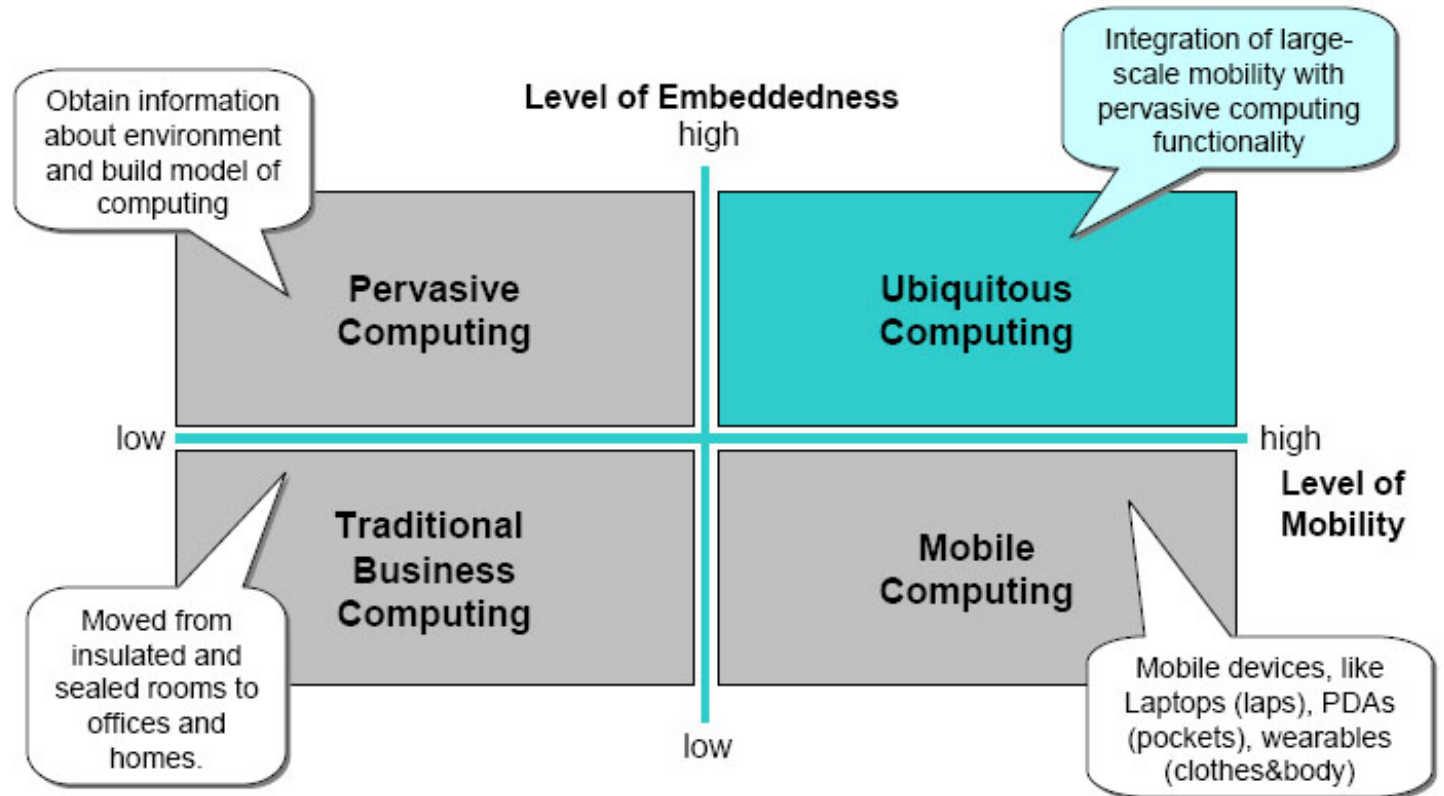
**“Ubiquitous Computing enhances computer use by making computers available throughout the physical environment, while making them effectively invisible for the human user.”**

**“The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it.”**



# ::Ubuitous Computing

## □ Dimensions of Ubiquitous Computing



© Kalle Lyytinen and Youngjin Yoo, Communications of the ACM, December 2002



## ::The Museum



### //Hansestadt Lübeck:

Important trade history, Capital of the Hansa trading league of Baltic states in medieval Times. And still have an active port with connections in the Baltic sea. UNESCO world Heritage site.

### //The Holstentour Museum.

The Building was one of the City gates of Medieval fortified Lübeck. One of the 4 west gates. The late gothic Building is now a landmark and icon for the city. Converted in museum, The Holstentor exhibit the urban and trade history and development of the city during medieval times. The museum is divide its exhibitions in 3 levels, each one with 3 rooms (1 room per tower, plus the room connecting them).



# ::The Museum



## ::The Concept

The concept consists of a Bluetooth-based information system that is coupled with an individually calculated guided tour around the museum.

The tour is based on a set of preferences that can be adjusted before entering the museum.

By the use of an interactive multimedia touch-screen installation the visitor will be able to make a choice of objects that are of interest. According to this selection a tour will be calculated and sent to a mobile device via Bluetooth.

The information system transferred to the mobile device will now guide the visitor through the museum.

When entering a room the visitor's mobile device is located and the location-specific information will automatically be pushed onto the mobile device.

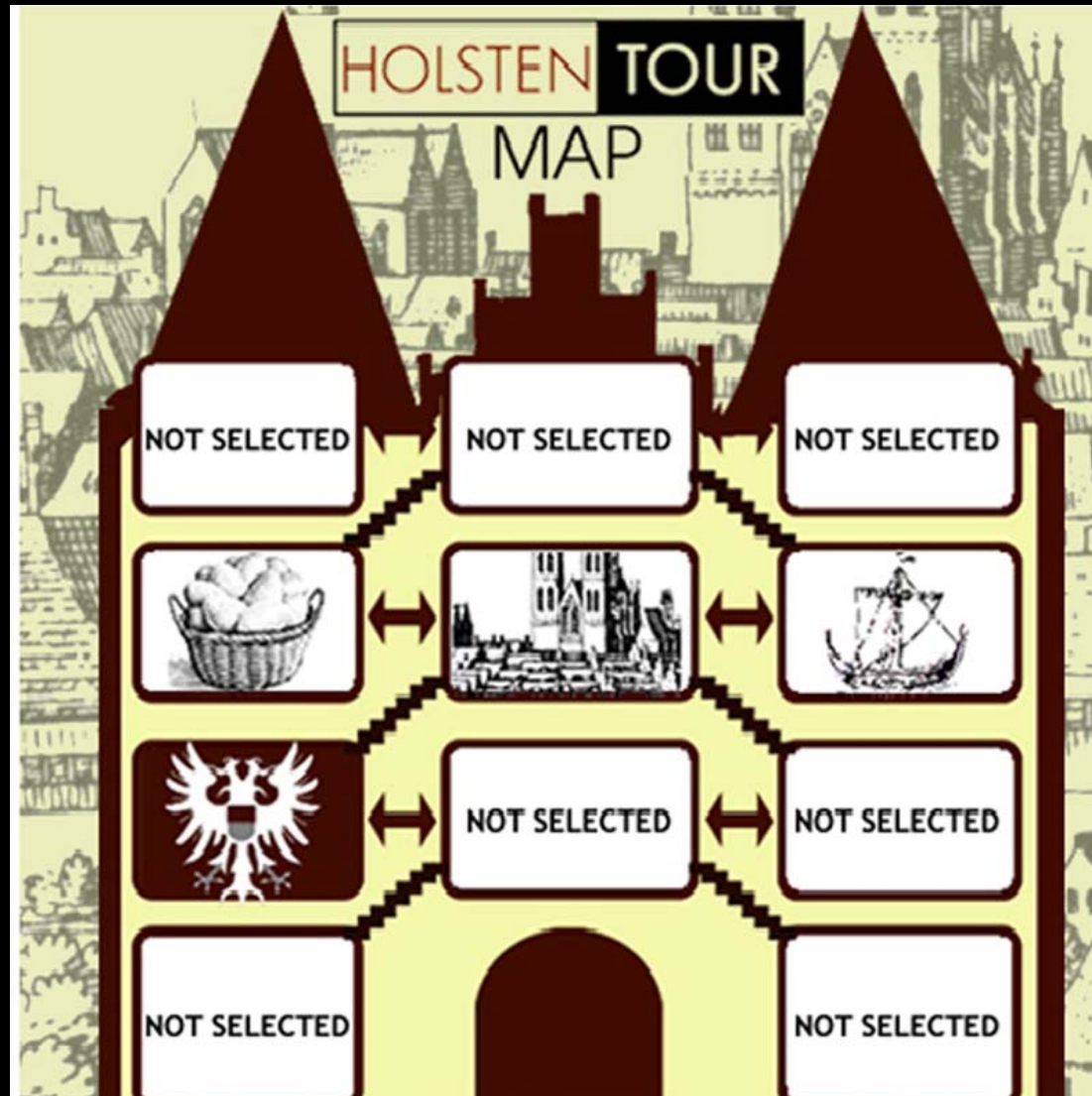
This information will consist of a webpage that provides audiovisual content about the specific room. In addition to the information on the screen the text will be recited as an audio file, so that the visitor does not need to pay attention to the mobile device while contemplating the exhibited objects.



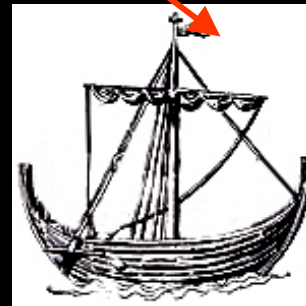
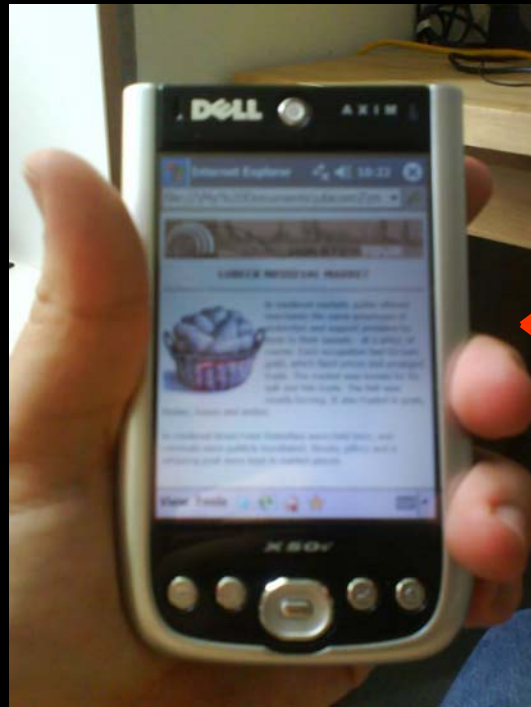
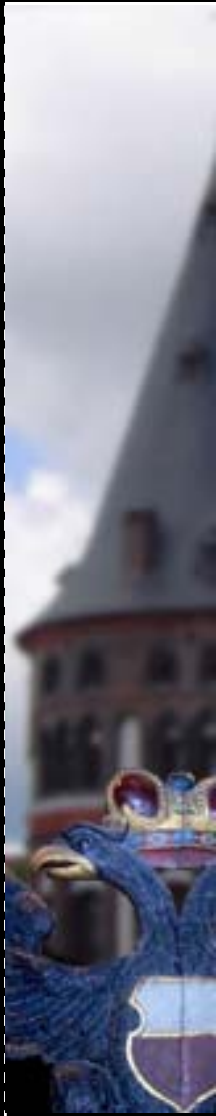
# :::The Implementation



## ::The Implementation



# :::The Implementation



## ::Work Groups



### //Concept Group

Veronica Hulea, Karen Detken, Katja Novitskova, Mari-Klara Oja, Steve Stein, Carlos Martinez.



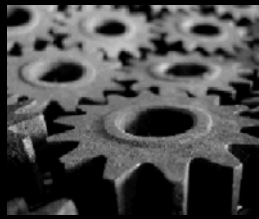
### //Content Group

Vavara Guljajeva, Georges Belinga, Loreto Jacque, Luo Zhu, Xiaujing Fan, Yunpei Wu.



### //Design Group

Karen Detken, Carlos Martinez, Katja Novitskova, Xiaujing Fan, Mari-Klara Oja.



### //Technology Group

Yunpei Wu, Hong Chun, Lihua Song, Steve Stein.



## ::Conclusions

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//Work Group.

//Project Management.

//Ubiquitous Technology

//Communications.

//Devices.

//Content.

//Applications.



:::Thank You.

INTERNATIONAL SCHOOL OF NEW MEDIA  
at the University of Lübeck

**HOLSTEN TOUR**

### The Mobile HolstenTour

invites users to partake in a unique experience within the historical realm of Luebeck's Holstentor museum.

Historical context offers a wonderful historical ambience and "ambience" which enables the user to get a better feeling for the atmosphere of the historical world.

Users are first introduced to the museum with the opportunity to discover a virtual virtual ambience of historical Luebeck.

The tour not only guides but entertains. The virtual museum tour is an interactive experience for which can be used for the Luebeck's past.

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