



Achille Peternier, Xavier Righetti,
Mathieu Hopmann, Daniel Thalmann
Matteo Repetto

George Papagiannakis, Pierre Davy,
Mingyu Lim, Nadia Magnenat-Thalmann
Paolo Barsocchi, Stefano Lenzi

Tasos Fragopoulos
Dimitrios Serpanos
Yiannis Gialelis, Anna Kirykou



The concept

Chloé is wearing a smart jacket that helps her in day-to-day activities. In our first scenario, the jacket helps her to find a specific office in a building.

The jacket will also be able to communicate with her surrounding multimedia equipment and choose the appropriate settings by recognizing the context and by taking the user preferences into account.

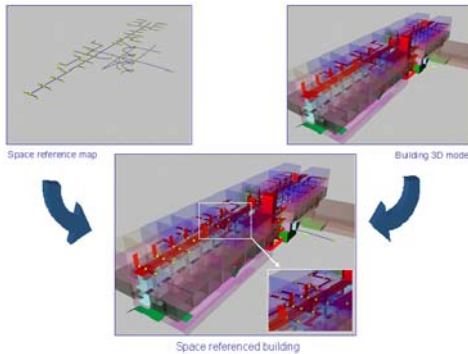


Indoor Localization: WiFi, Zigbee and RFID.

Indoor localization is achieved by combining three different techniques: WiFi, Zigbee and RFID.

Advantages of combining localization techniques:

- Better coverage of the area,
- Finer precision where needed



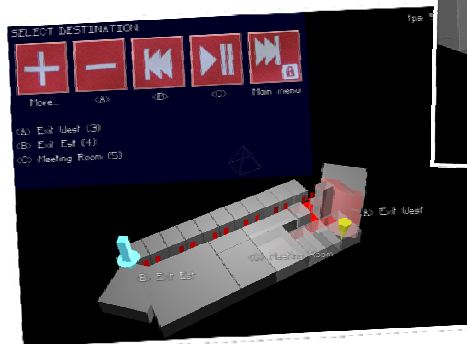
Navigation System: Virtual Guide Simulation, Path Planning and 3D Display.

We show a world-aligned fly-by 3D reconstruction of the area on a HMD. For an efficient guidance, the system needs first to determine the best path to follow from the source to the destination.

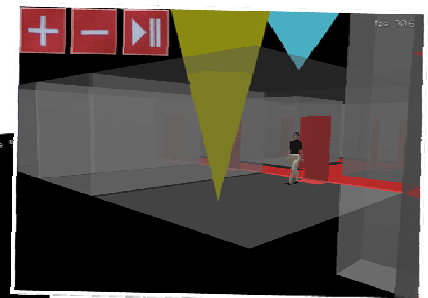
To compute the path in an efficient manner, a dedicated version of the A* algorithm was implemented.

Interface Personalization

The content and the interaction paradigm adapts to the user according to his/her profile and the available hardware. The virtual guide may be embodied by different characters and may pass through different places according to their accessibility.



HMD user view of the GUI



Smart and Transparent Connectivity

A custom Mobility Management Server (MMS) facilitates the connection procedure with APs on the campus and ensures the independence and privacy of both guests and local traffic. The use of the MMS avoids unnecessary handover and session interruptions.

