heig-vd

Haute Ecole d'Ingénierie et de Gestion
du Canton de Vaud

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京都 – Kyoto Mobile Exergaming Project

Abstract

Japan provides an excellent environment for the development of mobile applications and services. In comparison with Europe, mobile communications technologies are in advance.

This has raised opportunities for creating pervasive games, in which location tracking has a central role.

Kyoto is a particularly interesting place to build a pervasive game because of its rich historical heritage and numerous sites of interest.

This project explored the opportunity to build a reusable platform for the creation of pervasive games with geo-localization services. The core principle of the game is to propose different kinds of quests to the players. The players can also grab and collect virtual objects, as well as meet with virtual characters.

The inTrack middleware platform developed at the HEIG-VD was used as a foundation for building the system.

Goals

The project tries to build a platform to create pervasive games with geo-localization services. The major tasks are the following:
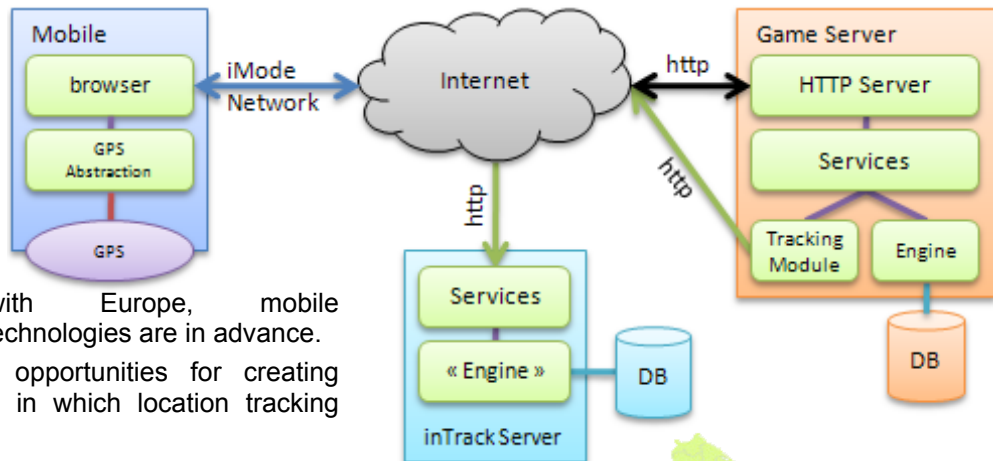
- Development of a generic pervasive game platform.
- Integration and evaluation of inTrack.
- Creation of a catalog of reusable quests.
- Development of a particular game in Kyoto, on top of the generic platform.

Results

At the end of this project, the principal goals have been reached. The platform developed offers the mechanism to create and deploy pervasive games with location tracking features. The integration between the game platform and inTrack works perfectly.

While Japan has offered a great environment from a cultural point of view, it has raised challenges from a technological point of view. To our surprise, mobile operators are very restrictive as far as location information is concerned. For this reason, the initial system architecture (where we planned to develop a native application) had to be modified. Using the mobile web browser has allowed us to get access to the location information, but has forced us to revise our expectations in terms of user interface.

Future Work

During the project, a specific game has been developed on top of the gaming platform. To make it easier to develop other games, authoring and configuration tools would be helpful. In addition, some refactoring of the platform would be required before a large-scale deployment.

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