Application demonstrations

Pervasive computing in embedded systems

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PECES Middleware

A comprehensive software layer enabling the seamless cooperation of embedded devices across various smart spaces on a global scale in a context-dependent, secure and trustworthy manner.

VERSATILITY

PECES is demonstrated within the project in three different application domains.
Applications

Development tools and Applications

Smart Access Services
E-health Nursing Care Services
Trade Show Guide System
Smart Access Control Application

- Objective: provide seamless assistance in a typical work day
Smart Access Control Application - Demo

- **Smart Car**: destination of Satellite Navigator is configured based on contents of Google Calendar, as soon as the user enters the car. PECES-enabled security mechanisms control the identity of the user (key: user identity).

- **Real-time Traffic Information**: PECES enables the selective broadcast of traffic information to those devices located in the controlled urban area (key: smart car location).
PECES-enabled security and trust mechanisms (based on certificates) are used to identify users and provide suitable information as soon as they enter the smart office.
Smart Access Control Application - Pilot

- The Smart Parking scenario is installed in a shopping center, in the city of Valencia (Spain)

- PECES has allowed the integration between the parking management system and end-users (Android app)

- The application allows:
  - Seamless reservation of a parking lot
  - Automatic opening of barriers upon license plate detection on entrance and exit
  - Automatic ePayment (simulated)