



PROJECT RESULTS

Platform for terminal-independent services & applications



satellite). It supports services such as e-commerce, information retrieval and exchange, security and service remote management.

Providing services with added value

Telecom operators are looking for new ways to offer their customers added value and their future revenues will come mostly from services. This trend places new demands on systems at the edge of the network. Whereas access systems in the past dealt primarily with the integration of different types of access and core network technologies, from now on they will also have to provide extensive service functionality. Service Access Platforms (SAP) must include a set of basic features, which can be easily customised and extended by access providers. They must also allow for rapid deployment of new services, and offer well-defined interfaces to third party service providers. The emergence of Internet-based voice and multimedia services is one of the key drivers.

More and more companies - in telecom, as well as in other sectors - are conducting business over the Internet. The challenge is to optimise increasingly complex system and application engineering for developing Internet applications. There is a clear need for high-level Application Programming Interfaces (APIs) that hide the underlying complexity of common tasks such as transaction, security, and network resources and management.

Why PEPiTA?

Based on the Enterprise JavaBeans specification, the PEPiTA platform offers application developers an attractive library of middleware

The PEPiTA platform provides answers to these needs. It offers:

- Increased independence from the USA for value-added services



functions as well as access to terminal-independent services (PC, PDA, STB, GSM) and networks (LAN, mobile, fixed, home network,

based on telecom and Internet standards.

- Definition of open APIs that support the specific requirements

PEPiTA (ITEA 99007)

Partners

- Alcatel Bell
- Alcatel CIT
- Bantry Technologies
- Bull CP8 SchlumbergerSema
- Charles University
- Evidian, A Groupe Bull Company
- France Telecom R&D
- Katholieke Universiteit Leuven
- Université de Grenoble
- Université de Valenciennes

Countries involved

- Belgium
- Czech Republic
- France
- Ireland

Start of the project

September 1999

End of the project

December 2001



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of the European markets for information and communication services

- An attractive platform for uniform service deployments based on standard practices.

Four-level generic platform

Service personalisation, security, user profiling and directory intelligence. PEPiTA has created a four-level generic platform with secure connections for (mobile) phones, smartcards and computers via a common architecture, including an API for virtual services and an Enterprise Java Beans (EJB) platform for application services. The middleware helps companies connect their applications to different terminals. This reduces the complexity of applications and helps speed up development.

The platform is compliant with new versions of EJB and J2EE specifications, which are extended with middleware services such as security and notifications, enhanced transaction support including Open Nested and Closed Nested



Transactions, and sophisticated persistency support. PEPiTA assists Java Card application development, terminal application development, Java Card deployment and wireless-oriented services, particularly for security and user profile storage.

PEPiTA has brought:

- dynamic mechanisms to translate high-level application requirements such as reliability, network, local or transport into a running protocol stack

- approaches that allow the re-use of functionality from network protocols on the service layer
- rules and policies to select a given service scenario
- and the corresponding protocols.

Main applications

The platform is referenced on the ObjectWeb site (www.objectweb.org), which distributes it as an open source under the name JOnAS (more than 15,000 hits per day and 50,000 downloads so far). The project has actively contributed to European and international standard organisations



such as 3GPP, ETSI, and Java standardisation groups.

Several project partners have directly used PEPiTA results:

- Access to Services features in Alcatel's Intelligent Networks platform (ALMAP).
- Evidian released the PortalXpert product, which uses work done on security. This security gateway provides single sign on for Web access to enterprises, without deploying software on users' computers or web servers.
- Bantry Technologies integrated PEPiTA smartcard services into its Virtuocash payment product line.
- Schlumberger integrated PEPiTA's Java Card tools components into its development tools (Odyssee2 Lab), as well as PEPiTA's cryptography components in their IT products Crypto Services.

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ITEA-labelled projects build crucial middleware and prepare standards, laying the foundations for the next generation of products, systems, appliances and services. Our projects are industry-driven initiatives, involving complementary R&D from at least two companies in two countries. Our programme is open to partners from large industrial companies, small and medium-sized enterprises (SMEs) as well as public research institutes and universities.

