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Project Note

ep2 Gateway for Credit Card Processing

The ep2 Gateway connects the new payment system to the existing credit card processing equipment at banks. The implementation meets the projected functionality, deadlines and costs for the start of the pilot phase.

Task

In preparation for the launch of EMV2000 chip cards as a future electronic payment system, a new standard called the eftpos 2000 (ep2) Specification is being developed in Switzerland. It defines the interfaces to terminals and peripheral systems and allows payments to be processed more quickly. It also ensures a secure and more flexible payment system for retailers and greater protection against the illegal copying of credit cards.
The task was to connect these interfaces to the payment system of an acquiring institute in order to allow credit card processing. To this purpose, a gateway, which relays the processed transactions at the terminals to the host of the bank, was to be developed.

Implementation

The system was implemented as a highly available, scalable solution in a Windows Advanced Server Cluster environment. An iterative approach was taken to ascertain the biggest risks early on and to enable feedback to the specification being defined at the same time. The design work was model-based, with the system architecture and the classes being created with the aid of modelling tools. The development environ-ment was C++.
TestDirector was utilised to manage the tests, the requirements and the errors; the test cases themselves were pro-grammed in the script language Python.
Access to the database is via ADO to remain independent of the database supplier. The user interface was defined with the help of a usability expert and implemented with MFC.

Customer benefits

- On schedule and on budget:
  The implementation meets the projected functionality, deadlines and costs for the start of the pilot phase.
- Successful integration:
  The acquirer's systems can be integrated in the ep2 environment as planned.
- Safeguarding customer's interests:
  The simultaneous development strategy enabled to influence the definition of the specification early. This way, the spe-cific needs of our customer could be taken into account.
- Easy administration:
  With the electronic interfaces, it is easy to administer the system and to connect new terminals to it.

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Technical Data

Dual Prozessor Compaq Cluster
Windows Advanced Server Cluster, extendable to Windows DataCenter
RUP
OOA/OOD mit UML
Rational Rose
Microsoft Visual C++
TestDirector
Python
XML/XSLT
ADO auf SQL

Zühlke Engineering AG
Wiesenstrasse 10a
8952 Schlieren (Zurich)
Switzerland

Phone +41 44 733 6611
Fax +41 44 733 6612
info@zuehlke.com
www.zuehlke.com

PN-0231-A-E