Multi-media messaging

Project Brief: multi-messaging product

The mobile telecommunications market is maturing, and network operators are racing to differentiate themselves through value added services. Software systems are vital to the delivery of value added services to mobile sub-scribers.



BUSINESS OBJECTIVE

IPL's client, a major European manufacturer of paging and messaging systems for GSM cellular networks, identified the need to develop a new multi-media messaging system (MMS), to provide customers with a wide range of state of the art voice mail and fax mail facilities. In order to supplement the client's own core resources, IPL was selected as the software development partner, on the basis of its proven track record in developing business critical and embedded systems.

IPL'S SOLUTION

Initially, IPL provided consultants to produce a specification of the requirements for the new system. Then IPL and the client established a joint team to design and develop the new system, with an IPL project team developing a large portion of the software at IPL's offices in the UK.

The MMS is a modular system which provides mailbox facilities by using Intelligent Networking. The system is fully distributed; messaging units can be embedded within the network at any switch site. A messaging unit can inter-operate with the switch using a variety of signalling protocols, such as SS#7 or R2. Each messaging unit can support tens of thousands of subscribers, giving a total potential capacity in the millions.

The MMS can be configured to provide a call completion service, or a more comprehensive voice mail system. In addition the MMS can provide fax facilities. A mailbox can act as a store and forward service for faxes, to pro-vide a non-blocking fax facility, or a fax mail service can be provided.

Messages may be exchanged between mailboxes either over a network, or directly over a telephone link, allowing the MMS to operate in a wide variety of Telco network configurations.

The MMS provides a user-friendly interface by offering voice guidance in the appropriate language for the subscriber. Multiple languages are supported.

The MMS is extensively configurable. Most aspects of the service are governed by a "Service Script", which may be either hand crafted, or generated using a service creation environment.

This flexibility allows the MMS to be re-configured for deployment in a number of additional roles as well as a messaging service, for example as a bulletin board system, as an interactive voice response system, or as an Audiotex system.

MANAGING THE PROCESS

IPL formed a close working partnership with the client. This led to the establishment of a well integrated, dual-site project team. Extensive use of e-mail and the internet to exchange deliveries of software facilitated the successful dual-site operation.

In the UK, IPL's software engineers developed software involving over 28 man-years of effort. Development work was carried out within the framework of IPL's Quality Management System.

A phased approach allowed many key aspects of the system functionality to be delivered early, allowing the client to deploy interim systems with some of its customers, and to secure several further sales.

IPL was subsequently involved in the integration of the complete system at the client's site.

THE OUTCOME

IPL's client has sold the new system to a number of new customers, and as an upgrade to several existing customers. Our engineers have provided assistance at end-customer's sites during commissioning, and we have since developed a number of significant enhancements to the original system.

FURTHER INFORMATION

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