



Solution Overview

Customer Profile:

The customer is a world leader in the mobile telecommunications market. Renowned for its experience, innovation, user-friendliness and secure solutions, the company has become the leading supplier of mobile phones and mobile, fixed broadband and IP network equipment.

Challenge

The customer required a 3GPP compliant Northbound CORBA interface for its NMS product to enable Fault Management and Configuration Management by multi-vendor umbrella management systems.

In house development could not meet the required Time-to-market, leading the company to look for external solutions. Based on the good experiences with Vertel in earlier projects, the in-depth knowledge inside Vertel on CORBA and management standards and the professional project management methodology lead the customer to the decision to outsource this task to Vertel Professional services group.

Solution

Vertel developed the interface cost effectively and against highest quality standards using its development tools. The solution provides a configurable interface that can accommodate flexible mapping and model definition changes, vital for fast turnaround during product and configuration upgrades. Clearly separated processes were developed for the different interfaces. The mapping of distinguished names is implemented bi-directionally.

Benefits

The customer eliminated approximately nine months of development time that would have been required for their in-house developers to become experts on the CORBA and 3GPP standards and the associated implementation tools such as CORBA Naming service and Event Notification service.

Vertel was able to develop the interface within both the customer budget and delivery timeframes. This ensured The customer a timely market entrance.

Third Generation mobile services require a wide range of diverse network equipment and intense cooperation with partners. The 3GPP solution of the customer NMS will enable its sp-customers to quickly implement standard based multi-vendor end-to-end management systems with full functionality into the own NEV network segments.

3GPP CORBA Interface

3GPP specifications are available for both CORBA and CMIP. Vertel is specialized in both technologies. The customer has chosen to implement the CORBA solution set.

The customer's high quality standards are also applied to their third party solution vendors. Integrating Network applications is a highly specialized skill and Vertel is a dedicated solution provider in this area. Vertel understands what it takes to build carrier-grade solutions. Reliability, scalability, expandability and performance were critical measures of success.

The NMS interface solution was developed on a HP UX platform using parts of the Vertel's M*Ware Mediation development tools, C++ development tools and other 3rd party CORBA Services. It uses CORBA Naming Service and CORBA Notification, all completely compliant with CORBA and 3GPP standards and does not depend on vendor-specific features.

The CORBA interface components include *topology, connectivity, equipment and fault management* objects. The solution is built to provide flexibility and to enable loose coupling of mediation interfaces. Strict project management discipline inside Vertel includes time-line control, cost control, release and documentation management that ensures our customer an easy maintainable and most reliable software solution.

Overall structural architectural robustness is further enhanced by efficient and appropriate use of the queues and concurrency thread in the physical architecture of the solution.

The IDL for this solution is derived from ITU and 3GPP IRP standards. Both CORBA-based and IRP based network management standards were used in developing this solution. Vertel's vast expertise in both technologies enabled blending features from both technologies to develop an optimum solution. The customer Object Model and Distinguished Names were mapped to the 3GPP Object Model and 3GPP Distinguished Names.

Solution Highlights

- A fully distributed, CORBA based solution
- Provides a fully compliant CORBA 3GPP Basic Configuration Interface (3GPP IRP)
- Provides fully compliant CORBA 3GPP Fault Management interface (3GPP IRP)
- Designed using the approved IDL components from 3GPP standards
- Implements flexible data-driven mapping.
- Supports 3GPP RAN model (3GPP TS 32.642 V4.0.0)
- Supports 3GPP Core Model (3GPP TS 32.632 V4.0.0)
- Supports 3GPP GERAN Model (3GPP TS 32.652 V4.0)