



Software Development Consulting Services  
For Product Development Companies  
and Public Sector Agencies

### Use Cases

By way of Use Cases, MapleWorks® Technology offers real-life examples of how technology is being applied to solve business problems.

### Who is MapleWorks Technology?

MapleWorks is a Canadian-based provider of the highest quality software development consulting services. We hold a single-minded focus: network communications. As such, we employ only the most technically astute engineers and project managers.

### Top technical talent

The MapleWorks technical team holds extensive product development and project management experience. Leverage MapleWorks' experienced software development resources who deliver on time, on budget, and on spec.

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## USE CASE: NETWORK INFRASTRUCTURE AND FRAMEWORKS

Mobility and changing access demands are forcing enterprises to adapt the designs of their switches. Reliability and feature sets all need to be enhanced.

### How does MapleWorks' expertise in network infrastructure and frameworks help product development companies and public sector agencies?

Here's one example of MapleWorks' network infrastructure and frameworks software development expertise. MapleWorks **designed and enhanced functions on a packet cable carrier class platform** for a customer.

New and enhanced functions enabled their customer to address the network communications needs of small- to medium-size businesses, as well as provide for new technology—like queries to SIP application servers. MapleWorks implemented a set of advanced and sophisticated functions enabling group and security management, as well as an application server interface. The switch supports legacy circuit and packet cable voice services, video telephony, and non-traditional SIP-based services.

Specifically, Mapleworks developed the following features.

### Security functions

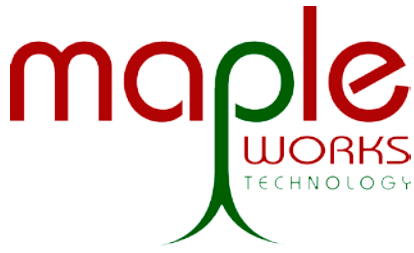
- Authorization codes
- Account codes
- Class of service

### Group functions

- Call pickup
- Call park

### Application services

- Music on hold
- Attendant console



### **Technical challenges and risks**

The features were complex and required significant architectural work within existing code. Changes to state machines, connection management, billing, and subscriber databases were only some of the modules impacted. Additionally, the management and provisioning system was updated. The original architecture was designed to be market specific (e.g. North America, Europe, etc.). New features needed to be universal, in that they would work across international dialing plans, signaling protocols, etc.

### **Technical expertise that's required**

The skills needed for a project such as this are call processing knowledge, data and real-time voice processing analysis, circuit switching, and state machine development. In addition, an understanding of dial plan tables, and impact on the billing system interfaces is needed. In this specific scenario, all changes are to be completed while maintaining existing performance and reliability levels.

Strong skills in all aspects of software engineering and product development are required including an in-depth knowledge of C, real-time distributed software architectures, embedded operating systems (VX works or ENEA Operating System OSE), and highly available carrier class systems. Knowledge of VoIP, UNIX, OSE, finite state machine design, packet cable, and emerging technologies in the area of network communications is needed.

MapleWorks holds strong technical competency and experience in network infrastructure and frameworks development. Leveraging MapleWorks' expertise, product development companies and public sector agencies can be confident that their networks will be developed to their exacting standards.

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