



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: CLOUD COMPUTING/SAAS

Cloud computing and Software-as-a-Service (SaaS) are terms that are commonly thrown around these days. For clarification's sake, let's define these terms.

Cloud computing

Cloud computing uses dynamically scalable development tools and resources to create applications. These resources are made available via the Internet.

SaaS

SaaS are the applications that are used from a location outside of your PC. For example, the word processor on your PC is not a SaaS application, but Facebook is a SaaS application.

How does MapleWorks' expertise in cloud computing/SaaS help product development companies and public sector agencies?

Here's one example of MapleWorks' cloud computing/SaaS software development expertise. MapleWorks developed a **Notification Framework** for a customer. It resides in the cloud.

In this scenario, notification is the ability to contact people through different channels when a certain event occurs. Channels are different media types like voice, short message service (SMS), e-mail, or interaction with an interactive voice response (IVR) system. This framework can also provide for two-way communications and enable responses from the called party.

The goal of this project was to give customers an application programming interface (API) that they could use to integrate notification functionality into their enterprise applications through Web Services.

One architectural incarnation of the framework talks via Web Services (simple object access protocol (SOAP)) to initiate a notification. If a response is solicited from the user, these responses come back through the channel and are stored in the database for later use.



Technical challenges and risks

Here are a couple of technical challenges and risks in a project such as this.

Ease of use

Developing an easy-to-use API is paramount to the success of this software development project. Projects of this nature run the risk of not being adapted by customers if the interface is too complex.

Performance

Web Services address another technical challenge of this project: meeting performance targets. Performance is crucial to the framework because it can be used in emergency situations—where timely delivery of some important notification is critical. This requires judicious use of threading, caching, and locking of resources to optimize performance.

Technical expertise that's required

The technology knowledgebase required to create a framework of this nature includes experienced Java server-side developers who have knowledge of:

- Tomcat,
- Spring,
- Hibernate,
- Postgres, and
- Xfire.

It also requires knowledge of:

- Tomcat's threading model,
- Java's threading model, and
- Good practices of real-time programming.

The latter requirements are critical and are not easily found because most Java server-side developers rely too much on frameworks to take care of threading and locking.

For the application development, knowledge of second-generation Ajax toolkits, which communicate using SOAP messages, is essential.

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