



APRIL Technologies Case Study – ARCAD Skipper

ARCAD-Skipper for SOA Development in a Diverse Environment.

Streamlining development goes hand in hand with technological innovation at April Technologies.

To implement its Information Technology Master Plan, April Technologies uses ARCAD Skipper both to maintain its IBM i development and to encapsulate and deploy its Web services.

The Customer



Founded in 1999, in 2004 April Technologies became the Information Technology EIG (Economic Interest Group) of the April Group's April Courtage Division. Specializing in insurance Information Systems, April's 70 associates provide members of the EIG with an integrated platform to manage individual and group insurance contracts for contingencies, health, fire, accident, and miscellaneous risk. April Technologies also provides the associated IT services (daily and periodic operation, editions, remote transmissions, user assistance, configuration, statistics, equipment management, telephony, and more). More than half of April Technologies staff works on traditional development in an IBM i environment. Fifteen other associates develop in Microsoft .Net.

A Traditional IBM i Environment

For nearly two decades, development followed a process approach, both at April Technologies and in the organizations that preceded it. In other words, there was little

Enterprise Architecture (EA), which led to regular increases in development costs. At the same time, the company started working with new technologies in 2002. At that time, the choice of .NET was discussed and then made final. In this context, fundamental questions such as **"Where are we going to put our data?"** and **"Where will we manage our business procedures?"** came into play.

In 2005, this in-depth reflection resulted in definition of the ITMP (Information Technology Master Plan) that was divided into 16 tracks under investigation. Seven of these tracks were begun in 2005. Two of the tracks concerned application management and code unity, more specifically unity of business function. The major principle that emerged is that business functions should exist only once in the overall Information System.

An SOA process

After consulting with experts in Java, ILE, and .NET, April Technologies decided in May 2005 that the back office would be developed on an ILE architecture and DB2/400 platform, and that the front office would rely on .NET. The consideration of ILE architecture, application exchanges between .NET and IBM i applications and the technical prototyping were begun in June. The architecture adoption was finalized in September. In November/December a pilot project called "person database" followed.

This was for a single “third party” base, regardless of who the third party was.

April Technologies used an in-house tool to ensure its development management. The development of standards was also a chance to consider the future of this tool. The tool did not work with the ILE architecture retained, nor did it mesh with the heterogeneous set up that was just around the corner with .NET. Since the objective was to have a single configuration management tool regardless of the development environment, April Technologies decided to adopt the ARCAD tools. Two pilot projects were performed to validate both the selected norms and the choice of ARCAD tools.

Once the pilots were shown to be satisfactory, in early June 2006, the company prepared to migrate its existing applications with ARCAD-Skipper. The migration started with the April Courtage application. Migration of the primary application, dubbed April Assurances, was scheduled to be completed on 20 January 2007 with an overall switchover. As of February 2007, April Technologies will manage all its IBM i development projects with ARCAD tools, for a smooth transition to ILE. Next, April Technologies is planning to integrate its .NET developments into ARCAD, making ARCAD the single configuration management tool the company has been searching for.

“ILE lets us write business functions with explicit names (forexample, ‘CommissionsCalculator’, providing commission calculations) that will be included in service programs once – and only once – within the application,” explains Gilles Gozlan, technical architect. **“ILE still provides solid performance, thanks to linkage. And it can coexist with the OPM1 program model. An ‘old’ program can call a business function. We don’t have to break everything down and start all over. In a way, it lets us change horses in midstream.”**

Another advantage of ILE is in the possibility of integrating external modules written in other languages: C, C++, and Java. **“We have acquired an amortization calculation module from an outside provider so we can integrate it into our application as a service program,”** explains Gilles Gozlan.

1 Original Program Model

Web Services

At the same time, April Technologies performed an opportunity study on Web Services on the IBM i. The main motivation behind the study was the possibility of connecting business functions with .NET, PHP, and Flash. The technologies selected were WebSphere Studio for IBM i and WebSphere Express for IBM i.

The Java code generated to encapsulate the RPG procedures is handled by ARCAD-Skipper as a WebSphere plug-in. Skipper also handles later deployment of these Web Services.

The benefits of Web Services were immediate at April Technologies: Reduced development costs, services opened up to the outside, heterogeneous interfaces... the list goes on. **“Creating a Web Service requires no development since wizards do all the work in a few clicks,”** comments Gilles Gozlan. **“By combining the Services with the standards used, we develop more quickly and we can guarantee the longevity of the overall application. We could use Web Services almost immediately through a Web site for one of the subsidiaries, which calls on business functions that we have rewritten to meet this need.”** April Technologies developed its business functions in order to host them in an IBM i environment.

The group provided its partner with the ‘contracts’ that correspond to the services in question and the necessary parameters, and the partner integrated them into its site

PRIMARY ARCAD FUNCTIONS IMPLEMENTED

APRIL Technologies uses ARCAD Skipper for:

- Configuration management and IBM i (formerly AS/400), OPM and ILE development maintenance, including RPG programs, PF, LF, and DDS files, and more.
In the second phase, April will also integrate its .NET development.
- Web Services:
 - Skipper handles Java code generated to encapsulate RPG programs as a WebSphere plug-in.
 - ARCAD also manages the deployment part of Web Services, such as EAR file generation.

