zapthink
zapnote

ZAPTHINK ZAPNOTE™

CAPE CLEAR
EXPOSING COMPONENTS FOR WEB SERVICES

December 2001

Analyst: Ronald Schmelzer

Abstract

Cape Clear's main goal is to create a platform for the development and deployment of Web Services that includes basic infrastructure and features that simplify the process of getting up and running Web Services quickly. The system allows people to take their existing investment in EJB and CORBA business logic and present them to the outside world as web services.

Creating Web Services with an Eye Towards Integration

Web Services are increasingly gaining the attention of the marketplace from different perspectives. The emergence of XML-based messaging and exchange specifications such as SOAP have enabled many middleware systems and concepts such as application integration in a manner that is much easier to use than previous technologies such as COM, CORBA, or even J2EE applications. Developers using those technologies need to understand the various specifics of transaction propagation, security roles, container-managed persistence, and combine them with scripting applications such as JSP for integration with the web. In these cases, it takes a relative amount of sophistication to write applications. SOAP and Web Services provide an abstraction layer that enables easier programming and end-user ease-of-use that technologies such as CORBA simply can't offer.

Another of the difficult problems in the middleware arena is that products in this segment are bifurcated into two different sorts of applications: those that are really good at integration, such as integration brokers, and those that are very good at building business logic systems. However, there rarely are technologies and products that offer both – a user has to choose either an integration or application server. SOAP and Web Services combine these two aspects of middleware in a single technology offering. Since XML comes from a document-centric background, it can offer both integration and as well as cross-platform application functionality as well.

While the Enterprise Application Integration (EAI) industry has been solving similar problems for many years, many of the existing solutions are proprietary solutions and products that solve application integration issues. Web services commoditize enterprise application, since application vendors will add web services functionality to their products providing a single point of integration for their application. This provides the ability to connect all systems together, pile them together, and orchestrate integration at a lower price point than previously possible, using an open set of technologies to solve problem.

In addition, organizations such as Microsoft are now including SOAP as a default stack for their application integration functionality. In a similar manner that Microsoft's bundling of the TCP/IP stack helped to make internet connectivity ubiquitous, its bundling and widespread use of SOAP will make application integration and inter-process communication ubiquitous and will change the dynamics of the market. Also, web services registry and repository sources such as XMethods are not even possible with technologies such as COM and CORBA. XML enables application functionality to be used on a wider scale.
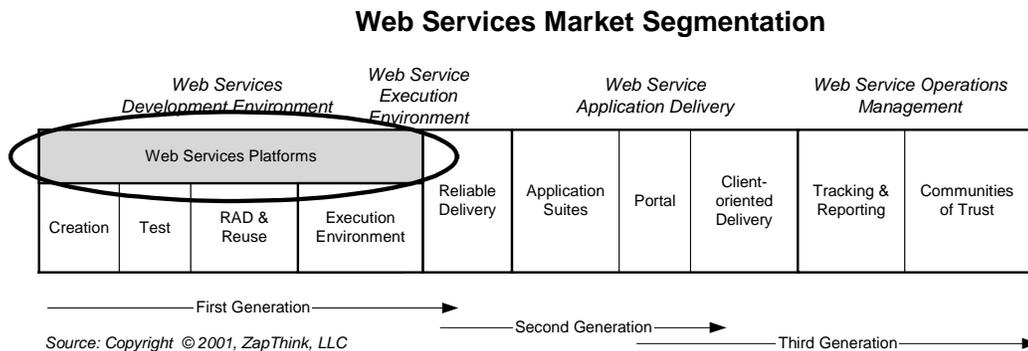
ZapThink, LLC • 11 Willow Street, Suite 200 • Waltham, MA 02453 • info@zapthink.com • www.zapthink.com

Positioning in the Web Services Market

Figure 1: Cape Clear Positioning in the Web Services Market

Web Services Market Segmentation

Web Services Development Environment				*Web Service Execution Environment*	*Web Service Application Delivery*			*Web Service Operations Management*	
Web Services Platforms				Reliable Delivery	Application Suites	Portal	Client-oriented Delivery	Tracking & Reporting	Communities of Trust
Creation	Test	RAD & Reuse	Execution Environment						

First Generation ———————→

Second Generation ———————→

Third Generation ———————→

Source: Copyright © 2001, ZapThink, LLC

Exposing Components with Cape Clear

Into this environment, Cape Clear is providing solutions for developers to take advantage of these clear advantages that Web Services offer programmers. Rather than having to wade through the complexity of alternative technologies, the Cape Clear solution hopes to enable users to develop Web Service-based applications as simply as creating web pages.

Cape Clear's vision of the future is that there will be millions of web services producing functionality ranging from simple shipping calculations to complicated business functions. In their view of the future, developers will build applications not by writing native code, but by combining web services together to form a cohesive application. These developers will be able to build a custom application as easily as customizing the My Yahoo! website. This vision of interoperability and simplicity has been the holy grail of the application development industry almost since its inception. Cape Clear's main goal is to create a platform for the development and deployment of Web Services that includes basic infrastructure and features that simplify the process of getting up and running Web Services quickly.

The logic driving their product strategy is the need to apply web services development to a wider audience. While most development software tools have a fairly high-end developer user in mind, Cape Clear believes these tools are too complex for "mere mortals". The company is seeking to provide a way for "regular guys" to develop web service-based applications. With developers and management coming from a background including companies such as IONA, Cape Clear is well poised to solve problems of this nature.

According to Cape Clear, just as Sybase's PowerBuilder allowed people to build applications around databases, they believe will Web Services will enable applications will be created around components creating from within the Cape Clear solution. In effect, Web Services is backward to traditional distributed components model: data encapsulates behavior versus vice-versa.

In its initial implementations, the focus of Cape Clear has been on solving integration problems between CORBA, Java, Visual Basic and .NET clients, and legacy applications, among others. The goal is to provide a service-oriented approach to integration. In particular, Cape Clear invested heavily in efforts to ensure that it provides interoperability with Microsoft .NET technology. This is attractive for those who want to integrate new .NET developments with existing Java and CORBA systems.

The product offering includes two main products: CapeConnect and CapeStudio. The first product, CapeConnect acts as a server that hosts web services, while the latter product is an authoring tool and environment for web services.

CapeConnect

The current version of CapeConnect is a product that allows people to easily orchestrate a back-end set of application and business logic platforms. CapeConnect allows users to generate Web clients for CORBA and EJB objects. These clients require no programming. The system automatically creates an intuitive, browser-based interface to the business logic implemented by server-side components. CapeConnect also provides an API, called SOAPDirect, that enables remote applications to connect to the CapeConnect infrastructure through SOAP. At run time, information from a Web or SOAPDirect client is channeled to CapeConnect, which interprets the client's input and converts it to CORBA or EJB calls. CapeConnect then communicates with these objects, gathers user-originated information, and converts this information to a format suitable for the client to process or a user to view. CapeConnect Two for J2EE includes a full J2EE application server and also works with any standard J2EE server, such as BEA WebLogic Server, IBM WebSphere Application Server, or Sun Microsystems iPlanet Application Server.

Today people want to solve tactical problems in creating web services, and not boil the ocean by building entirely web service-based application. The CapeConnect solution can be pointed at a CORBA environment, and it will automatically generate web services based on business logic within those systems. The CapeConnect second version, known simply as "CapeConnect Two", can be pointed at Enterprise Java Beans (EJB) for similar functionality. Today, the system allows people to take their existing investment in business logic and present them to the outside world as web services. These services can then be customized at an XML, rather than EJB, level. These developers don't want to expose their internal systems as they internally represent them, but rather they want to represent them externally in a different, more simplified way.

However, this simple vision of the product will evolve so that CapeConnect will handle scripting, transformation, and workflow, and provide a richer environment for people to build out web services. In this manner, CapeConnect can be thought of as an "Apache" for Web Services. Future versions of CapeConnect will support more advanced web services functionality such as UDDI registries.

CapeClear Three includes a UDDI server, which includes a simple API for querying UDDI and retrieving WSDL. The company also is addressing security issues with product called CapeConnect Gateway that runs in the "Demilitarized Zone" using HTTPS with simple login authentication in order to provide same level security as in a banking environment.

CapeStudio

The CapeStudio product is a Front Page-like tool that allows users to graphically create web services. The product includes a schema mapper that graphically creates mappings between schemas. The mapper creates XSLT files that actually perform the mapping at runtime. The system can then generate client-side stubs as a result of the XSLT transformation. The key problem that CapeStudio is trying to solve with web services is getting them to work together in an integrated manner. The tool allows users to visualize internal and externally published web services and thus provides a graphical-oriented approach to system interconnection. A new piece of the product is the Interceptor Framework, which takes any XML schema presentation and apply XSLT transformation to produce a web-service at the back-end.

Release History and Competition

Cape Clear's core focus is on pragmatic, tactical wins on Web Services early on. Cape Clear first released CapeConnect One in November 2000, and CapeConnect Two in April 2001. CapeConnect Three was released in Q3 2001. While they currently have about a dozen customers, they have had several thousand downloads since their first release. While they are not seeing too much competition in the market, people are asking about general application server technology such as those offered by BEA Systems. However, the primary difference between Cape Clear's products and these options is that they are providing a web services design center for customization and design rather than a generic application server.

Key Conclusions & Recommendations

- Cape Clear provides a nicely integrated set of Web Services creation and deployment tools that is aimed at exposing existing EJB components.
- There is tremendous competitive pressure in the space, especially from J2EE Web Services platform vendors including IBM, Sun, HP, BEA, IONA, Systinet, and others. While Cape Clear has a compelling solution for rapid Web Services creation, it faces considerable competition and positioning challenges in the next year or two ahead.
- Companies should evaluate how well Cape Clear will integrate with their development environment and plans for Web Services implementation

Profile: Cape Clear	(August, 2001)

Date Founded: 1999
Funding: Privately-held, Venture-backed:
      Accel Partners, Greylock, ACT Venture Capital
CEO: David Clarke
Products:
- CapeConnect
- CapeStudio

Address (European HQ):
      61 Fitzwilliam Lane,
      Dublin 2, Ireland
Address (USA HQ):
      900 East Hamilton Avenue, Suite 100
      Campbell, CA 95008
URL: www.capeclear.com
Main Phone: +353 1 241 9900 or +1 (408) 879 7365
Contacts:
      Tom Murphy Tom.Murphy@capeclear.com

Related Research

- ➢ *Service-Oriented Integration* Report (ZTR-WS103)
- ➢ *Web Services Technologies and Trends* Report (ZT-WEBSERV)
- ➢ *Actional* ZapNote (ZTZN-0280)
- ➢ *Infravio* ZapNote (ZTZN-0226)

About ZapThink, LLC

ZapThink is an IT market intelligence firm that provides trusted advice and critical insight into XML, Web Services, and Service Orientation. We provide our target audience of IT vendors, service providers and end-users a clear roadmap for standards-based, loosely coupled distributed computing – a vision of IT meeting the needs of the agile business.

ZapThink's role is to help companies understand these IT products and services in the context of SOAs and the vision of Service Orientation. ZapThink provides market intelligence to IT vendors who offer XML and Web Services-based products to help them understand their competitive landscape and how to communicate their value proposition to their customers within the context of Service Orientation, and lay out their product roadmaps for the coming wave of Service Orientation. ZapThink also provides implementation intelligence to IT users who are seeking guidance and clarity into how to assemble the available products and services into a coherent roadmap to Service Orientation. Finally, ZapThink provides demand intelligence to IT vendors and service providers who must understand the needs of IT users as they follow the roadmap to Service Orientation.

ZapThink's senior analysts are widely regarded as the "go to analysts" for XML, Web Services, and SOAs by vendors, end-users, and the press. They are in great demand as speakers, and have presented at conferences and industry events around the world. They are among the most quoted industry analysts in the IT industry.

ZapThink was founded in October 2000 and is headquartered in Waltham, Massachusetts. Its customers include Global 1000 firms, public sector organizations around the world, and many emerging businesses. ZapThink Analysts have years of experience in IT as well as research and analysis. Its analysts have previously been with such firms as IDC and ChannelWave, and have sat on the working group committees for standards bodies such as RosettaNet, UDDI, CPExchange, ebXML, EIDX, and CompTIA.

Call, email, or visit the ZapThink Web site to learn more about how ZapThink can help you to better understand how XML and Web Services impact your business or organization.

ZAPTHINK CONTACT:
ZapThink, LLC
11 Willow Street
Suite 200
Waltham, MA 02453
Phone: +1 (781) 207 0203
Fax: +1 (786) 524 3186
info@zapthink.com