

ZAPTHINK ZAPNOTE

RATCHETSOFT *CHAMPIONING THE CONCEPT OF SERVICE ORIENTED MASS CUSTOMIZATION (SOMC)*

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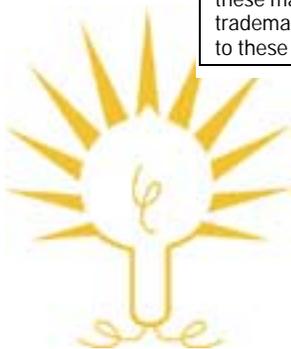
Abstract

As ZapThink discusses in most of its research, Web Services provide an excellent means for exposing application functionality as network-discoverable Services that can then be consumed and composed as needed to suit evolving business requirements. However, one of the challenges that developers face in attempting to build such Services is defining the exact Services that might be required by end users that will consume those Services. Indeed, accomplishing the goals of widespread application reuse has always been a challenge since in a truly loosely coupled environment the developer has little or no communication with the consumers of those application Services.

RatchetSoft hopes to change the fundamental challenge of Service development and application reuse by providing a tool for developers called Ratchet-X that allows them to map user interface elements to Service interfaces. End users can then consume these Services without needing to communicate with the original application developer to meet their ongoing needs.

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Simplifying Application Customization through User Interface Services

Two of the fundamental tenets of Service-Oriented Architecture (SOA) and long aimed-for goals of software design and development are loose coupling and coarse granularity. Loose coupling enables businesses to make independent decisions about what application functionality they produce and how they consume that functionality. Successfully solving loose coupling challenges enables companies to produce IT systems that are capable of meeting changing business requirements while also surmounting the challenges of integrating with disparate, heterogeneous systems in the IT environment. At the same time, the goal of coarse granularity allows companies to compose discrete elements of functionality into larger, more business-oriented needs that can then be consumed as needed.

While the goals of loose coupling and coarse granularity are lofty and noble indeed, they are in fact very hard to accomplish. At some level, the developer of a piece of application functionality must make some assumptions about what applications will be consuming that functionality. And it is at that point – when the assumptions are hard coded into the application – that the goals of loose coupling and coarse granularity are often lost. Simply put, developers find it hard to code beyond their specific requirements. Thus, in order to satisfy the requirements for loosely coupled, coarse-grained, SOA functionality, developers need a way to decouple the way they produce application functionality from the way it is consumed by other parties. Right now, that mechanism is simply the practice of good architecture and the “discipline” that is SOA.

However, one company, **RatchetSoft**, aims to greatly simplify the challenge of building good SOAs by providing a tool called Ratchet-X that maps user interface elements to Service interfaces at a wide range of levels of granularity, thus freeing the developer from having to make any Service exposure assumptions. RatchetSoft introduces a notion called “**Service-Oriented Mass Customization (SOMC)**”. The idea of the SOMC approach is to shift customization decisions from ones made at design-time by the developer (Services they expose), to decisions made at runtime by the consumer (Services that are consumed, regardless of whether or not they were coded ahead of time). In essence, SOMC is an application customization philosophy designed to allow the user to customize application behavior to the software they are consuming – regardless of whether or not the developer conceived of those behaviors ahead of time.

The fundamental way in which the RatchetSoft’s system, known as **Ratchet-X**, works is by providing a “Reflective User Interface (UI)”, in which UI elements, such as entry fields, text in windows, menu elements, and other elements of user interaction are translated into structured data that can be inspected and manipulated at runtime, through Service interfaces, by other applications. Ratchet-X creates Reflective UIs through a software component called a Context Builder, which automatically maps UI elements to Services once the suite is compiled into the application by the developer. These Services are then consumed by other RatchetSoft tools to greatly simplify the application customization process.

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Thank you for reading ZapThink research! 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.



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RatchetSoft Products

Ratchet-X	Availability: January 2004
<p>Overview: Championing the concept of Service Oriented Mass Customization (SOMC), RatchetSoft aims to solve some of the long-standing challenges of application functionality reuse and customization through the use of a "Reflective UI" approach to mapping user interface elements to Service interfaces. Leveraging Microsoft's .NET computing platform to create a new way of modifying software in the field, RatchetSoft delivers on this promise through a hybrid offering of desktop software and online marketplace services geared towards making it easy for users to extend the behavior of applications they use everyday without developer intervention.</p> <p>Details: RatchetSoft's flagship product is Ratchet-X, which is comprised of the following major elements:</p> <ul style="list-style-type: none">➤ Context Builder Suite – Developer tools and components for .NET-based applications. Includes "UI Translation Adapters" that wrap desktop applications and translate desktop UI elements into Service interfaces. Works with .NET applications, browser-based applications, and includes adapters for Microsoft Office applications as well.➤ Ratchet Suite – Ratchets are add-in applications that manipulate data extracted from SOMC-compliant applications. Current ratchets include Ratchet-X Process Manager for integrating with disparate data sources and mapping user interface and data elements to Service interfaces, and Ratchet-X Storage Manager for associating new data elements with existing application information.➤ Ratchet-X Commander – An integration hub that secures and coordinates the communications between the context builder and ratchets. <p>Value Proposition: Key Ratchet-X benefits include:</p> <ul style="list-style-type: none">➤ Increased productivity through the direct and immediate integration between desktop applications and back-end data sources via directly queryable Service interfaces. Also eliminates manual cuts and pastes from multiple sources.➤ Significant reduction in the number of modification, test and release cycles since users can implement many application behavioral changes on their own.➤ Improve interaction between software developers and their value-added partners by enabling their applications to be modified without having to share source code or forcing customers to work with complicated APIs. <p>Pricing: Please inquire with RatchetSoft</p>	



The ZapThink Take

ZapThink often writes about how building an SOA requires discipline on the part of the business user, the developer, and the enterprise architect that aims to fuse those two disparate groups together into producing a cohesive IT solution for business requirements. However, many companies have yet to discover the best practices required in actually meeting the goals of loose coupling and coarse granularity. In this vein, ZapThink believes that developer tools companies, such as RatchetSoft, along with professional services firms will help to accelerate the movement towards SOAs by simplifying many of the architectural aspects in building an SOA.

RatchetSoft helps to simplify the architectural part of the SOA picture by offering a way to map user interface elements to Service interfaces that can be dynamically discovered and composed with other third-party Services into Service-Oriented Processes by consumers who have no control over the actual application. While companies who have forward-thinking architects and developers who are adept at building Service interface might not require a RatchetSoft product to meet the goals of loose coupling, ZapThink believes most firms don't have the requisite knowledge to build the right level of coupling and granularity without the assistance that a RatchetSoft-like product can bring.

That said, companies like RatchetSoft will face their greatest challenges from the SOA Implementation Framework vendors, such as Microsoft, IBM, and BEA (see Zapthink's report on Service Orientation Market Trends for an explanation of the SOAIF). Since these vendors will hope to one day provide a complete platform for the development and runtime implementation of SOAs, they will eventually want to provide the sort of value that RatchetSoft aims to provide the developers. However, given that the SOAIF vendors have quite a bit on their plate today, RatchetSoft offers companies who are struggling to build SOAs a solution today that exploits the benefits of loose coupling and coarse granularity without having to necessarily climb some of the steepest slopes of the SOA learning curve.

Profile: RatchetSoft	December 2003
Date Founded: November 2002	
Funding: Privately-held	
Employees: <10	
Product: Ratchet-X	
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URL: http://www.RatchetSoft.com	
Main Phone: (866) 245-4286	
Contact: Joe Labbe jlabbe@RatchetSoft.com (516) 987-6061	

Related Research

Reports

- *Service Orientation Market Trends* Foundation Report (ZTR-WS110)
- *SOA Tools and Best Practices* Foundation Report (ZTR-WS107)
- *Microsoft ZapNote* (ZTZN-1066)
- *SOA Tools* Focus Report (ZTF-WS115)

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.

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