

Discover the simplicity of XML processing in Gen with XML Composer

Tom Sipos - Canam Software Labs, Inc. October 12, 2009, 14:00



Canam Software Labs Overview

A privately held Canadian corporation founded in 1994:

- Offering innovative high quality products and IT consulting and staffing solutions
- Over 200 fortune 1000 customers in 40+ countries
- Based in the high-tech corridor of Mississauga (Toronto), Ontario, Canada





Partnership with CA

Strong Partnerships Produce Strong Results:

- Texas Instruments (1996-1998)
- Sterling Software (1998-2000)
- Computer Associates (2000-Present)

A strong Focus on CA Gen Solutions:

- Our CA Gen productivity solutions are CA Smart certified
- Computer Associates Solution Partner
- Partnered with CA on numerous consulting, delivery and pre-sales engagements...









Agenda

- To offer some definitions and brief explanations of the underlying technology
- To discuss Web Services and XML Data Handling as they apply to CA Gen
- To demonstrate how XML Composer can analyze a WSDL to create a SOAP request to invoke a Web Service and parse the SOAP reply from a CA Gen Client





XML Overview

World Wide Web Consortium (W3C)

- · Governing body for the use of the web
- Standard protocols and associated technologies which enable applications to communicate via the internet
- SOA, SOAP and WSDL are examples of those standards

Service Oriented Architecture (SOA)

- Goal of SOA is to allow applications to use independent functional modules from existing software services to form ad hoc applications
- Large modules minimize the number of interface points at the expense of the granularity necessary for re-usability





... XML Overview

SOAP (Simple Object Access Protocol):

- · A protocol for exchanging XML-based messages via HTTP
- Facilitates Service Oriented Architectural (SOA)
- A SOAP message is contained in an envelope which contains the header and the body of the message

WSDL (Web Services Description Language):

- An XML-based language that models a Web Service
- Web service providers use WSDLs to define the system functions that have been exposed to the web based protocols (methods and properties of the API)
- SOAP is used to actually call one of the operations available in a WSDL definition





...XML Overview

XML (Extensible Markup Language):

- · Facilitates the sharing of data across systems
- · Capable of describing many different kinds of data

XML HTTP (XML Hypertext Transfer Protocol):

- A set of APIs that enables XML, HTML, or binary data to be transmitted to and from Web servers over the internet using HTTP
- Used by SOA to define SOAP protocols and WSDL definitions





More on SOAP

An Example SOAP Request Message:



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... More on SOAP

An Example SOAP Reply Message:





More on XML

XML – Extensible Markup Language:

 A self-documenting data representation 'language' which includes both data and meta-data

What it does:

 Allows designers to create their own customized tags, enabling the definition, transmission, validation and interpretation of data between applications and organizations

What it is used for:

- Internet applications, Web Services
- Inter-system communication
- · General data file format

Global data interchange standard:

- · Between companies
- · Between systems within a company



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More on XML Data Handling

What is an XML Data Handler?

- A mechanism for converting a business object into an XML document and vice versa
- An example would be converting the information contained in the view structures of an CA Gen application into an XML document via an automated process

What types of XML Data Handler are there?

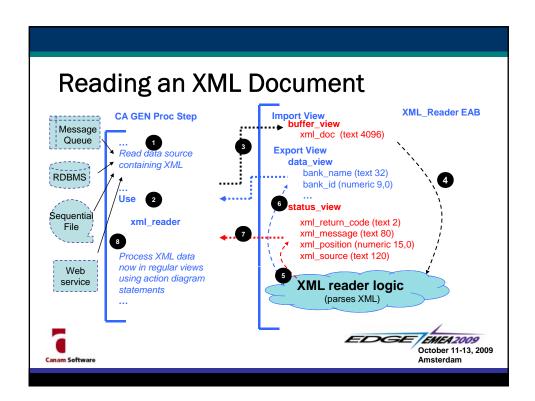
- There are two basic types of data handler:
 - An XML Reader which allows access to an XML data source
 - · An XML Writer which allows non-XML data to be output to an XML data source

How would that work in an CA Gen application?

Let's take a look at an example of an XML Data Handler in Gen...







XML Composer: Key Features and Benefits

What it is:

- The most powerful and innovative visual XML development tool on the market today with full code generation capability (Cobol, C, Java)
- Designed specifically for CA Gen applications

What it solves:

- How to process XML documents easily using CA Gen
- How to understand web services by parsing WSDLs

- Developers sheltered from XML development detail (creating XML parsing logic)
- Can utilize existing XML schemas, WSDL or even an XML sample
- Visual environment provides huge productivity gains, 70%+ time savings
- Full code generation so developers can focus on solving the business problem not on inventing nifty algorithms
- Maintenance is a snap with automatic version control



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Report Composer: Key Features and Benefits

What it is:

The solution of choice for developing high performance integrated application reports and file access logic for CA Gen applications

What it solves:

- How to access (read and write) sequential files using CA Gen logic
- How to create application reports using CA Gen

Why use it:

- Extends the benefits of the Model Driven development
- Integration with CA Gen
- Provides code generation support for all CA Gen platforms
- Future proofs for the Web point solutions (Crystal, hand-cut code) have to be re-developed from scratch



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Demo #1: Invoking a Web Service

We will be using the webservicex.net™ Global Weather web service, but why?

- · Useful demonstration tool
- · Free to use, robust and is highly available
- · Easy to understand
- · Uses a WSDL to describe the format of the SOAP request and response is
- · XML Composer can import and analyze the WSDL schema

Where can I find information on the webservicex.net™ Global Weather web service?

 The URL for further information, FAQs and downloads is: http://www.webservicex.net/





