

Corporate Overview

Clear Methods was founded in 2001 to provide a flexible and secure business platform that would radically simplify and accelerate the creation of services and applications for the Web. With Steam XML software, you can rapidly prototype your XML Web services to thoroughly test and understand your requirements early in the design cycle.

As early as 1998, the company's founders, Christopher Fry and Mike Plusch, recognized both the potential and the limitations of XML and Web services. They set about creating a new platform to enable businesses to capture the economic benefits of Web services and XML without the inherent limitations and complexity of traditional Web services development. They have approached this effort with a relentless commitment to simplification, comprehensiveness and practicality.

Clear Methods has systematically rendered unnecessary the complex, heterogeneous array of technologies, protocols, and interfaces typically required to implement Web services. Starting with a clean slate, the company constructed a uniform, homogeneous and straightforward platform. To accommodate existing systems and technologies, this platform both integrates and interoperates with previously existing Web programming technologies.

The Water language is the underlying base for the company's products, which include the Steam XML Engine™ runtime and the Steam XML Integrated Development Environment. The Steam XML Engine and Steam XML IDE™ were first delivered to customers in 2002 and are now in version 5.0.

Products

Steam XML is a development environment and runtime engine that greatly simplifies the design and rapid prototyping of XML Web services. It eliminates the need for the myriad of tools and languages including XSLT, DOM, JSP, EJB, CSS that are normally required to create Web services. Steam XML is easy to learn and typically reduces the volume of code required for Web services by a factor of 20. The software combines advanced object-oriented facilities with native XML data structures and HTML-like presentation.

Steam XML Engine

The Steam XML Engine is a commercial implementation of the Water runtime environment. It executes programs written in the Water language and deploys on a standard Java platform as an applet, servlet or stand-alone program. Steam is compatible with Windows, UNIX, and Macintosh.

Steam XML IDE

The Steam XML IDE is an interactive development environment that includes a set of tools for the Steam platform. It provides an easy means for writing, running, and debugging Water programs. The Steam IDE expression stepper offers much greater programmer guidance than the typical line-by-line steppers of other IDEs. Because it understands XML and HTML it is able to spot incorrectly-formed expressions. The Steam IDE also provides a customizable menu for inserting common patterns, a one-click test case generator, integrated documentation tools, a powerful object inspector, and an online reference manual. The resulting high productivity environment caters to the Extreme Programming style with its rapid edit, run, and debug cycles.

Water Language

Water is a pure Web services language that embodies the three primary functions needed for XML Web services software within one unified environment. The Water language definition is an open standard managed by waterlanguage.org.

- **Code.** Water is an object-oriented Web programming language that is more flexible, yet easier to learn, than JavaScript, Visual Basic, C++, Lisp, and Java.
- **Data.** Water permits the description of persistent structured data on the Web in XML syntax. Water brings dynamic data to XML and offers the capability of computing values that contain self-referential interconnections.
- **Presentation.** As a superset of HTML, Water inherits all of the markup capabilities of HTML. Water interoperates with and can replace JavaScript dynamic additions to HTML. Water incorporates other presentation libraries including SVG.

The Water language syntax, known as ConciseXML is based on HTML, which has proven to be an easily understandable markup language learned by millions of users. ConciseXML (see www.ConciseXML.org) is a superset of HTML or, more properly, a superset of XML. XML has become the standard syntax for structured data. ConciseXML extends the syntax of XML to facilitate its use in programming. Water provides a means to define and call functions in addition to defining and instantiating objects. As an example of Water's extreme versatility, methods may be added to classes during runtime. As a result, the language is more powerful yet simpler than the class-instance object systems currently in vogue in languages such as Java and C#. It is particularly well-suited for rapid prototyping and simulation.

Key Markets

Users of the Water language and Steam XML platform are those who can benefit from more rapid Web services application development and lower cost maintenance. The target market includes three groups of users: corporate IT departments, independent software and hardware vendors, and educators.

Corporate IT Departments

Corporate IT departments are under intense pressure to integrate and Web-enable their applications at minimal cost. While Web services present a potentially powerful solution, their inherent complexity presents a challenge that has hampered the adoption of both XML and Web services. Water minimizes the training required to build Web services and XML applications. Enterprises can access existing systems more easily, and actually merge together existing services using XML. The Steam XML platform offers IT departments a simple, but powerful unified object-oriented programming environment based on XML. It eliminates the need to stay current with more than a dozen¹ languages and programming models otherwise needed to develop complete Web services applications.

Independent Software and Hardware Vendors

Independent software vendors strive for ways to speed their products to market while building in both Web services and XML capabilities. At the same time, they are looking for ways to make their products easier to customize and support. Steam XML provides a powerful new way for software vendors to reduce cost while adding Web services capabilities, XML and user level customization to their products.

Water is the only software environment that allows developers to produce applications combining logic, data and presentation natively in XML. Combining logic, data and presentation simplifies the ISV's ability to customize their software products. Doing so natively in XML makes integration smoother both within the ISV's environment and across corporate boundaries through Web services. Steam XML enables ISVs to easily add Web services, XML and user customization to their products while improving their profitability.

Today many embedded systems ranging from cell phones to robotics require access to Web services. Steam XML provides designers with a high productivity environment for adding Web services to embedded applications.

Education

The Water language is used by leading-edge educators to teach Web services and distributed programming. Water is especially easy for students to learn. The language allows students to make a gentle transition from presentation (HTML) to programming. It is a simple, clean, consistent language for teaching critical thinking and good programming skills. Water offers a familiar syntax that extends HTML to dynamic programming. Educators who have been teaching computer science with Java because of its usage in industry will find that Water is both easier to learn than Java and more flexible. Water exposes students to XML and Web services -- a very practical set of skills. Finally, Water is a multi-paradigm language that supports object-oriented, functional, procedural, and declarative programming

Management Biographies

Michael Plusch, CEO and CTO of Clear Methods

Mike Plusch has over ten years of industry experience building platforms and complex Web applications for organizations including Digitas, Harlequin, and Bowstreet, a pioneer in Web services. He is the co-inventor of the Water language and ConciseXML. He has developed a broad range of applications for financial services, travel, retail and manufacturing. An accomplished author, Plusch has written two books and contributed to numerous books and articles on Web Services, including **Water: Simplified Web Services and XML Programming**, Wiley; and **Water Programming**, Mike Plusch and Christopher Fry. Plusch holds degrees in Management and Computer Science from MIT.

Christopher Fry, Chief Scientist and Founder of Clear Methods

Christopher Fry has over twenty years experience as an architect in language development and artificial intelligence. He is the co-inventor of the Water language and ConciseXML. Fry was the architect and major contributor to the development of several software languages. He has also authored numerous related publications in the journal *Communications of the ACM*.

Fry's language development experience includes Macintosh Common Lisp, Dylan, and a knowledge representation language while at BBN. He has also designed languages for describing musical scores. His previous technology leadership experience includes positions at Bowstreet; MIT; PowerScout, where he was CTO; Harlequin; Coral Software; BBN; and IBM.

Robert Nilsson, Vice President of Marketing

Robert Nilsson has twenty-five years of high tech marketing experience, with both software and systems. Prior to Clear Methods, he helped launch Orbital Software, a pioneer in the field of enterprise knowledge management software. Nilsson was also VP of product marketing at UNIFI Communications, a \$60M provider of enterprise-class desktop fax, email, and voice messaging products and services.

Nilsson's system marketing background includes tenure as VP Marketing at Axil Computer, the leading provider of Sun-compatible systems, and the first company to introduce enterprise-class eight processor Intel Windows NT servers for commercial applications. Nilsson has also held marketing management positions at Digital Equipment Corporation and Hewlett-Packard Company. He holds an SB from MIT and MBA from Columbia University.

Advisors to Clear Methods

Michael Cusumano, MIT Sloan School of Management

Michael Cusumano is the Sloan Management Review Distinguished Professor of Management at the Massachusetts Institute of Technology's (MIT) Sloan School of Management. Cusumano has consulted for major companies around the world, including Alcatel, Business Objects, Cisco, Ford, Fujitsu, General Electric, Fidelity, Verizon, Hitachi, IBM, Intel, Merrill Lynch, MITRE, NASA, NEC, Robert Bosch, Schlumberger, Siemens, and Toshiba. He has been a director of Infinium Software (ERP applications, now part of SSA Global Technologies) and NuMega Technologies (software development tools, now part of Compuware), among other firms, and an advisor to numerous high tech firms. He has also served as editor-in-chief and chairman of the MIT Sloan Management Review and has written for The Wall Street Journal, Computerworld, The Washington Post, Communications of the ACM and other publications.

Professor Cusumano has published seven books including Platform Leadership: How Intel, Microsoft, and Cisco Drive Industry Innovation (2002, with Annabelle Gawer), Microsoft Secrets (1995, with Richard Selby), and Competing on Internet Time: Lessons from Netscape and its Battle with Microsoft (1998, with David Yoffie), His latest book, The Software Business, will appear in early 2004.

Henry Lieberman, MIT Media Lab

Henry Lieberman has been a research scientist at the MIT Media Laboratory since 1987. His research interests focus on the intersection of artificial intelligence and the human interface. He directs the Lab's Software Agents group, which is concerned with developing intelligent software that provides assistance to users through interactive interfaces.

Jason Bluming, President BoardWare

Jason Bluming is the founder of BoardWare. Prior to Boardware, Jason was the COO of Abridge and VP at Bowstreet Inc., an industry leader in XML Web services and business Web infrastructure software. He was responsible for providing the leadership and vision of their corporate strategy, partner development, and product marketing divisions. Before joining Bowstreet, Jason was president and founder of Pollinate, Inc., a startup software firm developing an electronic commerce system for software metering. Preceding his role at Pollinate, he was the VP and CTO of NetMarket, acquired by CUC International, the CTO of MecklerWeb Corporation, and a senior software architect at Enterprise Integration Technologies. Jason holds an MBA from Harvard Business School, an MS in Computer Science from Stanford University, and a BS in Computer Science and Engineering from M.I.T.

Investors

Clear Methods has received seed funding from Draper Fisher Jurvetson (www.dfj.com), DFJ New England (www.dfjne.com), and several private investors. Draper Fisher Jurvetson is a leader in early-stage Internet venture capital. They focus on information technology businesses that have a large market potential.

About Clear Methods

Clear Methods provides enterprises and independent software vendors with an advanced Web services platform that dramatically speeds the creation of flexible business software. The Clear Methods Steam XML product enables rapid prototyping of XML Web services. Through rapid prototyping, businesses can validate requirements and test new Web services early in the development process. Steam XML eliminates the need to program in multiple languages and technologies, and instead provides a single, interactive environment, especially designed for Web services and XML.

Founded in 2001, Clear Methods is headquartered in Cambridge, Massachusetts. Customers include Teledyne Brown Engineering, General Dynamics, MIT, Pratt and Whitney, Northrop Grumman, MITRE, and the USAF ESC. Steam XML applications include simplified XML Web services, system and network modeling and simulation, and rapid prototyping.

Contacts

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Footnotes

1: Building web services applications can involve the following diverse technologies.

Presentation Tier - HTML, CSS, URL, JavaScript, XML

Middle Tier - Doc (JavaDoc), Component Model (JavaBeans), Services (EJB),
Controller (Servlet), Template (JSP), Unix Shell, Test Scripts, Deployment
Descriptors, Property Files, Custom Tag Libs, RegEx, Shell Scripts

Data Tier - SQL, CSV, Stored Procs

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