Web Services Technology Design and Development

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Web services are remote procedures that are discoverable, self-describing, and platform agnostic. Businesses that find success using Web Services will be those that understand the technology fundamentally: its motivations, its significance, and the likely course of its maturity.

As opposed to packaged products, in a typical web services scenario, a business application sends a request to a service at a given URL over HTTP. The service receives the request, processes it and returns a response.

Some of the most important aspects of Web Services are its ability to communicate between parties using different information systems and also using different computing platforms. XML (eXtensible Markup Language), a markup language that makes data portable, is one of the key technologies in addressing these needs. The W3C and other public groups have established SOAP, WSDL, and UDDI (all based on XML) as the communications protocols for Web Services. These protocols describe the available services and the message formats. Standard Internet transport protocols such as HTTP and FTP are used for sending the messages.

This platform agnosticism has the potential to greatly reduce the software maintenance cost for a company. The backend data store and business rules now become constant across multiple applications and hardware platforms. Prof. Zilora of the Information Technology Department is conducting research on behalf of a local company looking at using web services technology for their decision support systems. In this summer research project we are working on developing several front end clients for the Customer Management portion of the system. The project has resulted in the development of both a desktop and a web-based front-end to the same set of customer management services.