**Web Serives**

Web services extend the World Wide Web infrastructure to provide the means for software to connect to other software applications. Applications access Web services via ubiquitous Web protocols and data formats such as HTTP, XML, and SOAP, with no need to worry about how each Web service is implemented. Web services combine the best aspects of component-based development and the Web, and are a cornerstone of the Microsoft .NET programming model.

What are Web Services?

* Web services are application components
* Web services communicate using open protocols
* Web services are self-contained and self-describing
* Web services can be discovered using UDDI
* Web services can be used by other applications
* XML is the basis for Web services

How Does it Work?

An XML Web service can be used internally by a single application or exposed externally over the Internet for use by any number of applications. Because it is accessible through a standard interface, an XML Web service allows heterogeneous systems to work together as a single web of computation.

Instead of pursuing the generic capabilities of code portability, XML Web services provide a viable solution for enabling data and system interoperability. XML Web services use XML-based messaging as a fundamental means of data communication to help bridge the differences that exist between systems that use incongruent component models, operating systems, and programming languages. Developers can create applications that weave together XML Web services from a variety of sources in much the same way that developers traditionally use components when creating a distributed application.

One of the core characteristics of an XML Web service is the high degree of abstraction that exists between the implementation and the consumption of a service. By using XML-based messaging as the mechanism by which the service is created and accessed, both the XML Web service client and the XML Web service provider are freed from needing any knowledge of each other beyond inputs, outputs, and location.

XML Web services are enabling a new era of distributed application development. It is no longer a matter of object model wars or programming language beauty contests. When systems are tightly coupled using proprietary infrastructures, this is done at the expense of application interoperability. XML Web services deliver interoperability on an entirely new level that negates such counterproductive rivalries. As the next revolutionary advancement of the Internet, XML Web services will become the fundamental structure that links together all computing devices.

Web services platform elements:

* SOAP (Simple Object Access Protocol)
* UDDI (Universal Description, Discovery and Integration)
* WSDL (Web Services Description Language)