Integration of Web Services With Mobile Applications

A Web service is an application service or software component that is accessed through the Web. Each Web service can be a collection of Web methods. A mobile application can be written to use these Web methods. Mobile applications often use a Web service to send or retrieve data. Web services usually fall into two classes: standards based approach (SOAP) and representational state transfer (REST). REST Web services are simpler and therefore more widely used.

A Web service can be consumed by any number of mobile applications. The user interface for the mobile device will be device-specific. Because of the technology involved with Web services, you can use these as building blocks to create powerful mobile applications. When creating a new mobile application, one approach is to consider the user interface as a client for a Web service. Web services foster code reuse because a user interface can be built for any type of device. It is possible for a number of different devices to use the same Web Service. The user interface will be device-specific and will be built so that the data are formatted and displayed effectively on the device.

A large amount of the content that mobile device users transmit and consume is unstructured, such as documents, images, audio, and video. Web services can be built to efficiently handle this type of content for mobile applications. Integration of Web services with mobile applications presents several benefits, including being able to separate the user interface from the application's content and data.

**Separation of Concerns**

Thin-based clients are desirable because you can separate the user interface from the application logic. Client-server applications frequently have a database back end. Because of this separation of concerns, developers can be utilized in their area of expertise. A developer who is an expert in developing software for the application or business logic may not be well-suited for developing user interfaces. In fact, it is sometimes advisable to employ a graphic designer to design the various screens. This would ensure that the interface is rich and engaging.

Building a mobile application that integrates Web services is a strategy that also capitalizes on the benefits of the separation of concerns. A Web service may already exist that provides the service or data that your new mobile application may need. It might be fruitful to decide against reinventing an
existing application because this will take extra time. In addition, you may not have the means to develop a comparable application that will result in the same user experience.

Consider your mobile application as the end product. Your users will not always realize that your mobile application was built as a compilation of code that was written by several developers. Your goal is to build the application so that it is rich, engaging, and takes advantage of the Internet. Web services are available through the Internet. Data is also available through the Internet. By utilizing the tools and technologies that are available—such as Flex, PHP, and Web services—you can create a rich Internet application that is user-friendly and performs beyond expectations.