

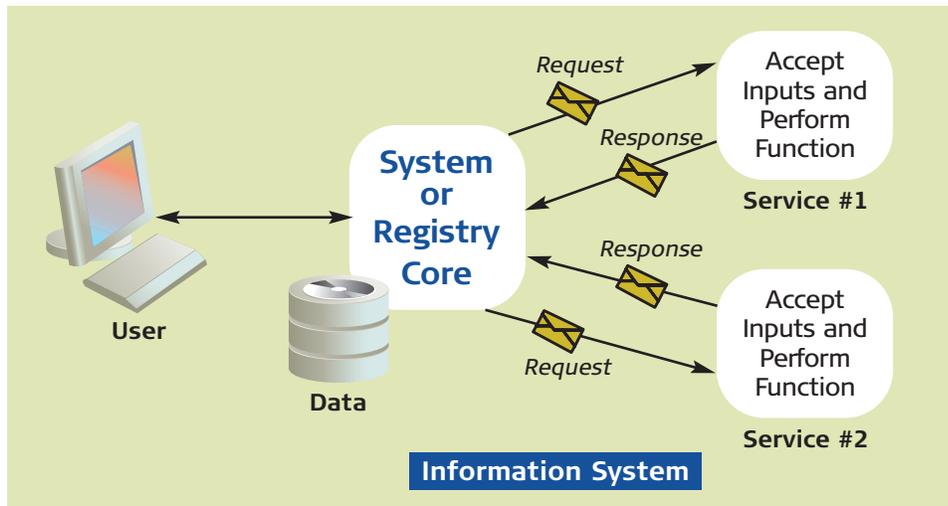
Service-oriented Architecture

For a Health Information Exchange Network (HIEN) to support interoperability between many different systems and organizations it must not only utilize accepted standards but it must provide its core functionality in a flexible and modular way. One important way to structure a system to function this way is through a **service-oriented architecture (SOA)**.

What is an SOA and how does it work?

The concept of SOA is not new. For years software developers have created systems with **application programming interfaces (API)** which define how systems and subsystems interact with one another by exchanging data in reliable, structured ways. Many of the core services that are used to operate the Internet began as functions with APIs which developed into internationally-recognized standards. In an SOA complex systems are created which are comprised of discreet functions, or **services**, that make themselves available to other systems on a network and perform specific tasks. These services form system building blocks capable of being reused over and over again in the context of different needs and applications. Diverse systems can share important algorithms, features, and capabilities by relying on these shared services rather than reproducing this functionality each time it is needed.

Several key technologies make SOA possible. The most common implementations use a standard called **Web Services** which relies on



several key components: Extensible Mark-up Language (**XML**) provides the structure for messages that need to move to and from the services. Hypertext Transport Protocol (**HTTP**) most often provides the means to transport these messages across networks, including the Internet (encrypted using HTTPS). Web services can be implemented on a variety of platforms and languages, including **.NET** and **Java**, and complete system solutions can draw upon services deployed on a mixture of platforms. Users do not need to know or care about the existence of an SOA within

the systems they are using. But an SOA can dramatically reduce the cost and complexity of building and adapting systems to changing needs and environments.

Find out more information from:

World Wide Web Consortium
www.w3.org/2002/ws/

Webservices.org
www.webservices.org

Microsoft
msdn.microsoft.com/webservices/

Sun Microsystems
java.sun.com/webservices/



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