

THE IMPORTANCE OF WEB SERVICES IN THE TRAVEL INDUSTRY



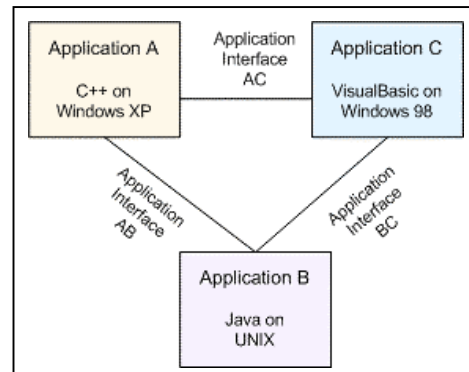
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THE EVOLUTION OF WEB SERVICES

In a rapidly changing global marketplace, a company's success is highly dependent on its ability to leverage customer, transactional and operational data across all of its stakeholders. It's expensive and problematic for businesses to efficiently exchange data across systems that do not "speak" to each other automatically. Allowing these systems to communicate with one another requires costly dedicated connection hardware and overly complex software "bridging" solutions. The combination of high cost, technical hurdles, and lack of industry-wide protocols required to automate has prevented thousands of companies from achieving new revenue opportunities that such a common "middleware" solution could allow. In today's rapidly consolidating markets, the market demands a new common integration methodology.

This diagram shows how three applications, written in different languages and on different platforms, would need specialized interfaces or bridges, to communicate with each other:

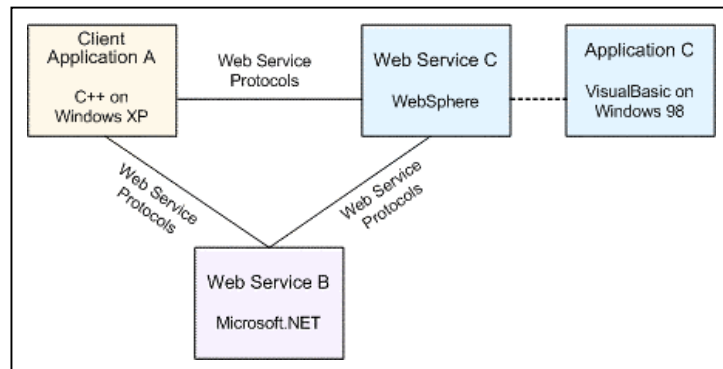


The creation of a universal conduit for dynamic data exchange has long been a goal of such organizations as Oracle, EDI, and Microsoft. Middleware technologies such as RMI, Jini, CORBA, and DCOM all provide robust vehicles for systems integration. But it is the strength of the Internet with its ability to circulate information ubiquitously, via a common language, that is now transforming the way companies handle intersystem communications both internally and externally. Hence the birth of Web services architecture.

WHAT ARE WEB SERVICES?

Web services are emerging standards that are changing the way software is written, used and distributed to facilitate the integration of disparate systems. These standards create new ways for disparate software programs to communicate with each other to help solve business problems, overcoming technical hurdles and financial constraints. Companies can use web services to quickly deploy applications customized to their business processes with low development costs.

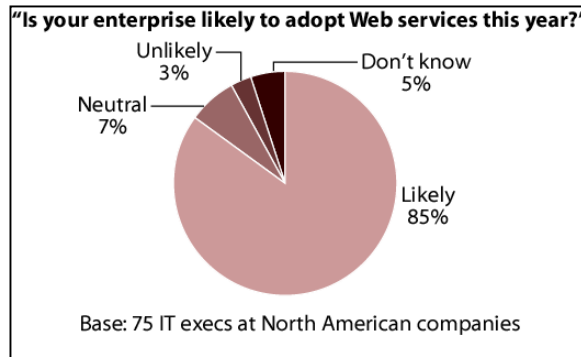
In this new scenario, Applications B & C are now Web services that use standardized protocols to transfer data. The fact that Application B is built on Microsoft.NET, while Application C uses a UNIX platform for its Web Service, is no longer relevant:



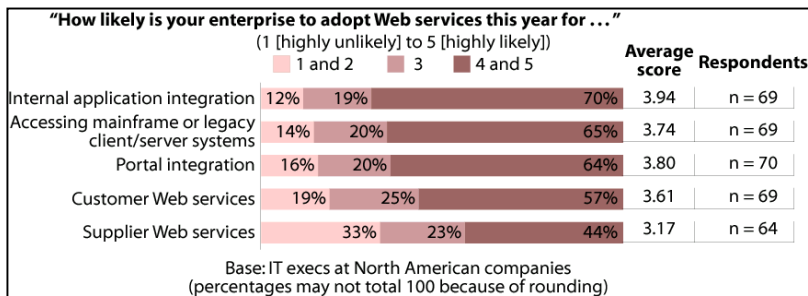


WEB SERVICES ADOPTION

In the past 12 months, Web services technologies have taken hold in many different industries. The flexibility Web services afford means organizations can create efficiencies in just about any business. According to a September 2003 report by Forrester Research, of those companies surveyed, 85% plan on adopting some type of Web services technology within 1 year. Applications include those for both internal and external usage.



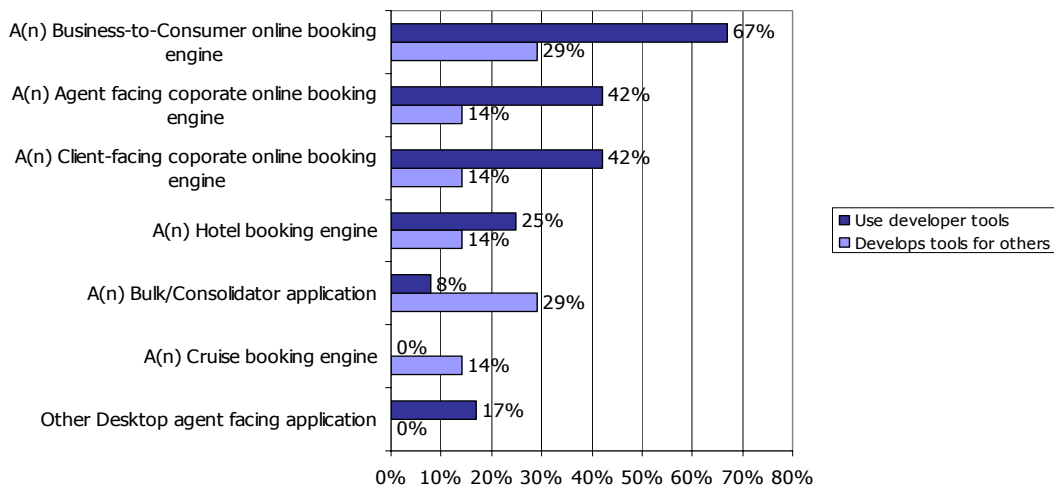
Source: Forrester



Source: Forrester

GALILEO RESEARCH

In September of 2003, Galileo surveyed its own strategic API clients. Surveys were conducted online and via email. The chart below shows how Web services solutions fit into our clients' businesses.





WEB SERVICES IN TRAVEL INDUSTRY

How do Web services specifically serve the travel industry? Streamlining complex business processes and quickly creating flexible customer-facing tools are key components in improving client satisfaction and increasing revenues, particularly in this challenging time of channel shift to the Internet.

The increasingly complicated nature of the travel business with its constant technology changes are driving the need for a higher degree of specialization in the market. As suppliers and retailers embrace online direct marketing to their customer base, as corporate customers adopt online booking solutions, and as travel management companies consolidate operations globally, the need for a flexible and loosely coupled network infrastructure to support the changing business model grows. The industry is experiencing a fragmentation of the value chain whereby a myriad of industry-specific software vendors now serve the many needs of the larger marketplace instead of a single “one stop shop” solutions provider. Web services now become the *only* way to tie the markets together cost effectively.

Research clearly indicates that while the travel market is currently challenged by the overall economic environment as well as the threat of international terrorism, the **online market continues to experience significant growth** at the expense of the “traditional” players.

What are traditional travel agencies to do? Focus on their strengths - providing superior, reliable customer service while allowing their clients the convenience of **online** leisure or corporate access. Today’s successful travel service providers are also learning to focus on becoming niche players in particular market sectors in order to differentiate themselves in an already saturated market.

Given the prohibitive cost of building and implementing a feature-rich online solution, many traditional players are experiencing deteriorating market share as a result of not being able to present their leisure or corporate customers with a suitable solution in this fast-changing environment. **Galileo Web Services** stands ready to reverse this trend by enabling the cost-efficient creation of fully customizable online solutions.

“EzRez was able to deploy Galileo’s travel solutions over 80% faster than what was possible prior to Web Services. This will ultimately translate to quicker implementation, additional sales opportunities, and reduced resource requirements.”

**- Tina Finch, CEO,
EzRez Software**

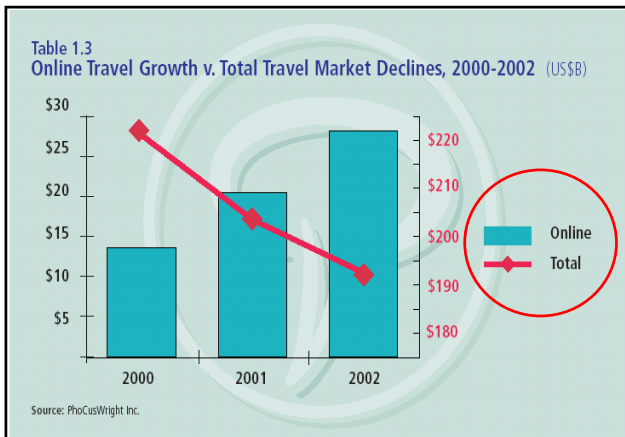


Table 2.5
Q. Which do you think offers the/ is the...
(Base: “Online Travelers”)

	Offline Agency	Online Agency	Supplier
Best Customer Service	48%	19%	23%
Simplest To Use	29%	42%	25%
Most Reliable	36%	25%	26%
Lowest Price	14%	59%	14%
Broadest Choice	29%	46%	12%

Source: The PhoCusWright 2002 Consumer Travel Trends Survey





THE GALILEO SOLUTION

Galileo Web Services allows Internet-based connections to support data transfer between client-side travel applications and the Apollo® and Galileo® Global Distribution Systems (GDS). These enterprise-wide solutions improve efficiency and reduce costs, as well as facilitate the creation of custom applications to support business operations, enhance eCommerce programs, and integrate office systems *so that clients can focus on customer service and selling travel.*

BENEFITS

The benefits of leveraging **Galileo Web Services** are many, and will vary widely based on the type of application built. Galileo does enable dramatic cost savings independent of the application type however.

ADVANTAGES

Stop spending cash on expensive dedicated circuits! GWS eliminates the need for such hardware and can save a client \$15,000 to \$50,000 annually.

Galileo hosting eliminates server hardware & maintenance costs, which can run up to \$70,000 per server or more annually.

Open coding standards allow for greatly reduced development times (average 50% or better reduction) and can facilitate tremendous cost savings (e.g. 1,000-hour effort can result in over \$93,000 in cost savings).

Drive incremental revenue by expediting the time-to-market for new products and services.

Shielded from unnecessary technical concerns, clients can now focus on improving their business.

SAMPLE APPLICATIONS

Galileo Web Services facilitates the cost-effective creation of a virtually limitless set of different applications to help streamline agent or consumer business processes. Regardless of whether the application is built by a third party software developer or by an agency directly, the same benefits ring clear. For example, **Galileo Web Services** clients are using the systems to build leisure and corporate Internet booking engines for both consumers and/or agents, group travel Web applications, reporting and analytics systems such as fare comparison tools, workflow automation solutions, as well as a wide variety of quality control measures to improve margins.

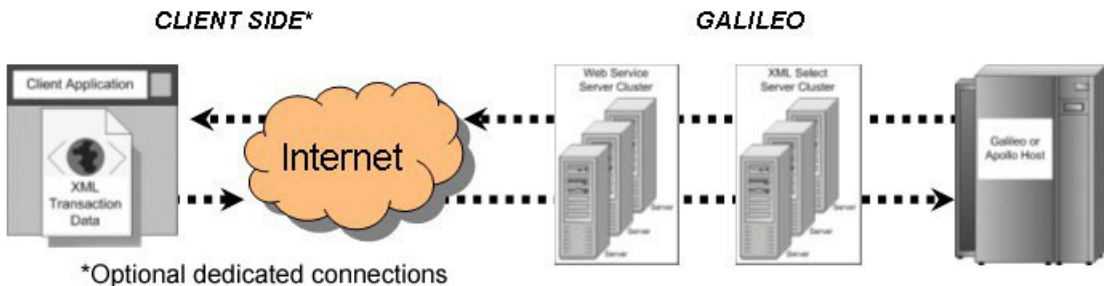


ARCHITECTURE/TECHNOLOGY

Our Web Services solutions, which connect to the CRS via the Internet, can be broken down into two main services:

- **XML API Web Service** - Mirror the functionality of Galileo's host CRS via Internet connectivity allowing clients the flexibility to build fully customized applications that better support and integrate their businesses.
- **GWS Encapsulated Services** - Act as a library of bundled commands designed to cut development and maintenance costs.

GWS Data Flow



TOOLS & ENVIRONMENTS

Any development tools or environments that are compatible with the standards and protocols listed under "Product Requirements" can be used. These tools and environments include, but are not limited to:

Microsoft.NET, IBM WebSphere Studio Application Developer, Apache Axis (replacing Apache SOAP), Mind Electric GLUE, SOAP::Lite (Perl)

DEVELOPER SKILLS

Developers should have familiarity with XML, as well as the standards and protocols listed above.

CONNECTIVITY

Galileo Web Services can be supported through either an Internet connection or a dedicated connection. Because Web Services formats and standards are not limited to use on the Internet, the same protocols apply to the message, regardless of the type of network connection.



PRODUCT REQUIREMENTS

Galileo Web Services conform to the following industry standards & protocols:

Message Envelope

SOAP 1.1

<http://www.w3.org/TR/SOAP/>

Message Transfer

HTTP 1.1

<http://www.w3.org/Protocols/>

Encryption

SSL 3.0

<http://home.netscape.com/eng/ssl3/index.html>

Web Service Description Language

WSDL 1.1

<http://www.w3.org/TR/wsdl>

Discovery & Integration

UDDI 1.0

<http://www.uddi.org>

Data Transfer

XML 1.0

<http://www.w3.org/XML>

SECURITY

Galileo Web Services servers are secure with access granted only to licensed clients. Internet connections to **Galileo Web Services** must also be encrypted via an SSL (Secured Socket Layer) protocol. For dedicated connections, security methods for the connection must be defined in the client application.

SUMMARY

The introduction of Web services technologies has been improving the way companies deal with merging disparate internal business systems as well as with the difficulty of integrating with their partners. Within the travel industry, Galileo has proven itself to be the undisputed leader in providing cost-effective Internet connectivity to the host CRS thereby allowing its customers the ability to put the best possible tools in the hands of their employees or customers.

**FOR MORE INFORMATION ON GALILEO WEB
SERVICES, PLEASE CONTACT A GALILEO
SALES REPRESENTATIVE OR VISIT:**

<http://ais.galileo.com>