Galileo Web Services
Agenda

> Evolution of APIs
> What are Web services?
> Key business requirements for Galileo Web Services
> What are Galileo Web Services
> How Web services work
> XML Select vs. Galileo Web services
> Example using GWS to create a travel application
> Provisioning
> 3C Process
> Pricing
> Sales Material
Evolution of APIs

1990 - Terminal access to travel data
   - FocalPoint DDE
   - Inside Access

1999 - Terminal emulation to travel data
   - Screen scraping
   - OLE Select
   - EDIFACT Select

2000 - Structured, pre-defined data access
   - XML Select

2003 - Web services
   - Platform agnostic
   - Accessible over the Web
   - GWS

What are Web Services?

> A set of standards that allow applications to talk to each other over the Internet

> XML – Extensible Markup Language
  • Used to tag, structure and define the data

> SOAP – Simple Object Access Protocol
  • A protocol used to encase or format XML data

> WSDL – Web Services Description Language
  • Describes the available services

> UDDI – Universal Description, Discover and Integration
  • The directory or “yellow pages” of web services
<table>
<thead>
<tr>
<th>Key business requirements considered when the GWS project was scoped</th>
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<tr>
<td><strong>Online Presence</strong></td>
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<td><strong>Development Costs</strong></td>
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<td><strong>Software Developer Concerns</strong></td>
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<td><strong>Hardware Costs</strong></td>
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<td><strong>Economies of Scale</strong></td>
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### What are Galileo Web Services?

<table>
<thead>
<tr>
<th>Galileo Web Services (GWS)</th>
<th>Encapsulated Web Services</th>
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<tbody>
<tr>
<td>- GWS will deliver the functionality of the existing XML Select product as a web service</td>
<td>- Prior to web services, the process to access travel content required a series of cryptic ‘calls’ to the Apollo/Galileo system</td>
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<td>- GWS will provide 100% compatibility with existing XML Select message formats</td>
<td>- Web Services encapsulates complicated business logic for customers, facilitating fast development and easy access to travel content</td>
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<td>- GWS transactions provide access to the native Apollo/Galileo functions</td>
<td>- GWS significantly reduces the need for customers to possess travel industry expertise and knowledge of specific transaction calls to build an application</td>
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What are Encapsulated Web Services?

> Flight Information Web Service
  • The flight information service provides the ability to look up the status of a flight, departure/arrival times, gate and other valuable information

> Itinerary Web Service
  • The Itinerary service retrieves all itinerary items for a PNR

> Travel Codes Translator Web Service
  • The translator service provides access to translations of many industry-specific and Host specific codes
## Comparison of developer tools

<table>
<thead>
<tr>
<th></th>
<th>XML Select</th>
<th>Galileo Web Services</th>
<th>XML Desktop</th>
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<tbody>
<tr>
<td>SDK Install</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Dedicated Line</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Structured Data</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Dedicated Hardware</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Encapsulated Logic</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Platform Specific</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Use Viewpoint GUI</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Galileo Terminal Ids (GTIDs)</td>
<td>Dedicated range</td>
<td>Dynamic from a Pool</td>
<td>Fixed</td>
</tr>
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</table>
XML Select vs. Galileo Web Services. What’s changed?

- Any operating system
- Windows NT / 2000

Any operating system
Windows NT / 2000
How does GWS work?

XML structured data is then wrapped in a simple object access protocol (SOAP) “envelope”...
Request is sent from the client application to the Host via the Internet…
Response is then sent back from the Host to the client application via the Internet…
The XML structured data is then retrieved from the SOAP message and sent to the business logic layer of the application.
Example of using GWS to create a travel web site or application...
First sketch out the layout...
Use VB Script, C++, Java, etc. to start building site functionality...
Incorporate GWS into code to access content and encapsulated business logic...
Develop presentation layer for travel content from GWS request/response...
Add logos, advertising or messaging to make it even more valuable...
Potential customers

> Know your target market
  - Listen for Key Words during conversations with your customers: “customise”, “internet”, “application”, “booking engine”, “API”, “structured data”, “online”
  - Qualify your customers

– 3rd party software developers with a need for access to content using cost efficient and effective technologies

– Mid-Large size subscribers with at least 50K+ segments per year with no/weak online presence and access to IT resources

– New online subscribers looking to update their web site online booking engine technologies

– Non-traditional companies with a need for access to travel content for their business
Sample sales scenarios

> Scenario #1:
  • Type: Large agency with home based agents and access to IT resources
  • Problem: Agency has agents that work “virtually” and they need a customised application that will give their agents anywhere, anytime access to travel content
  • Solution: Develop customised browser-based application

> Scenario #2:
  • Type: Large agency with home based agents and access to IT resources
  • Problem: Agency wants to increase revenue by 20% over the next 3 years
  • Solution: Enter new distribution channel – Internet Sales

> Scenario #3:
  • Type: Third party developer with access to IT resources
  • Problem: Vendor looking for next killer application for travel agencies
  • Solution: Build a web based automated eticketing application
Competitive information

> Galileo was the first GDS to introduce an API product utilising Web Services architecture
  • Launched in the US in 2002, Launched in AU/NZ in 2003
> All of our GDS competitors offer API solutions
> Amadeus API
  • Utilises XML requires comms application on client side
  • Not a Web Services solution
> Sabre recently launched Web Services in APAC
  • No known customers in the region
> Abacus
  • Abacus WebLink XML
The 3C Process

> Consultation, Capacity Planning & Collaboration
> Not a ‘certification’ process
> Enables Cendant TDS to perform an evaluation of how a customer uses the GWS or XML Select
> Benefits include:
  • Reduced number of support phone calls and AIS request
  • Higher customer satisfaction
  • Improved system resource capacity forecasting
> Initially for new GWS and XML Select customers
> Plan to revisit existing GWS and XML Select customers
Details of The 3C Process

> Copy system is granted after contact is received
> Call from AIS to customer to review project
  • plans for development, overall key project target dates, volume expectations, implementation plans
> Schedule next check point meeting to review
  • Status of problems, design directions, changes to key target dates or volume expectations
> Guidance on the business logic approach and needs for optimal efficiency
> Once a customer requests Production access, a final application evaluation will be executed and final sign-off coordinated by a System Engineer from the API Technical Support team
Pricing

> License Fee
  • License is for an annual, enterprise-wide, world-wide agreement

> Support/Maintenance Fee
  • Little support on installation is required
  • Support will be more focused on the functionality the customer wants to provide

> Excessive Transaction Activity (ETA) fees
  • GWS introduces ETA charges based upon a look-to-book ratio
  • All transactions in excess of the 250 to 1 ratio will be chargeable.
  • Galileo’s focus is on optimisation, support and maintenance of each customers’ applications, so that each look-to-book ratio is below this threshold
Sales Tools

- ARC / TDSnet
  - The GWS sample site can assist you in the sales process
    - http://testws.galileo.com/GWSSample
  - The site contains:
    - Help Files
    - Sample Code (with working flight availability and FLIFO functionality)
    - Getting Started Code – supports C#, VB.net, Java, Perl
  - There are 3 levels of security.
    - The Overview section will be accessible by anyone
    - The Documentation section will be available to anyone we are in negotiations with and we are under NDA with
    - The Code section will only be accessible to licensed GWS customers