



# Web Services Some Real Examples and Key Adoption Issues

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New Zealand



## Agenda

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- **Web Services Vision**
- **Real Web Service @ Bekins Co.**
- **Real Web Service @ MedBiquitous**
- **Opportunities and Risks**
- **General usage TODAY**
- **Web Services Key Issues**
- **Conclusion**
- **References**
- **Extra Slides**

## Web Services - What in on earth are they ?

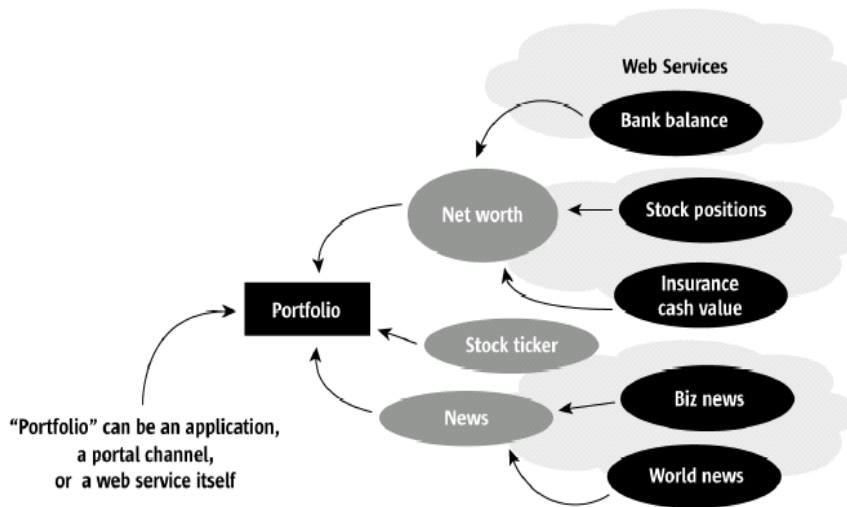
"encapsulated, loosely coupled,  
contracted software objects"

## Web Services - What in on earth are they ?

"encapsulated, loosely coupled,  
contracted software objects"

**Yeah right !**

## The concept and the drivers are simple



Moore's Law (Processing Power)  
Gilder's Law (Connectivity)  
Metcalf's Law (Network)  
Broadband (Always On)

## Vision: The UDDI Nirvana

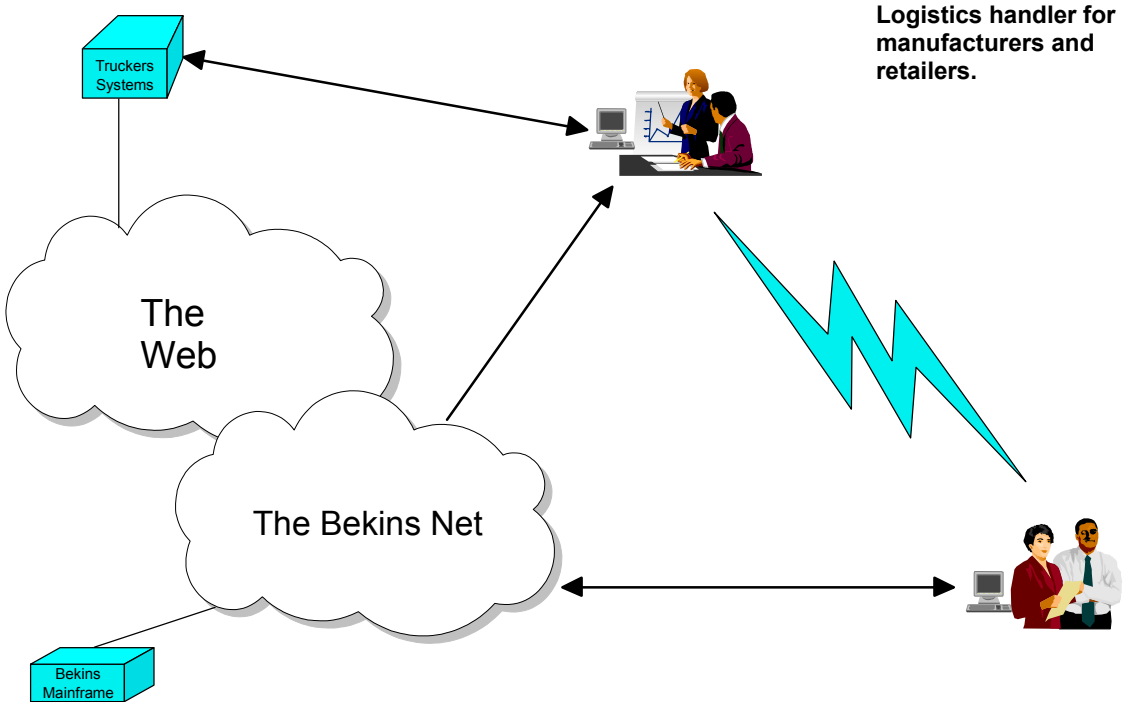
Business, Description, Contact, Identifier (e.g. DUNS)

Business Categories - 3 Taxonomies (Industry, Product/Service, Geographical)

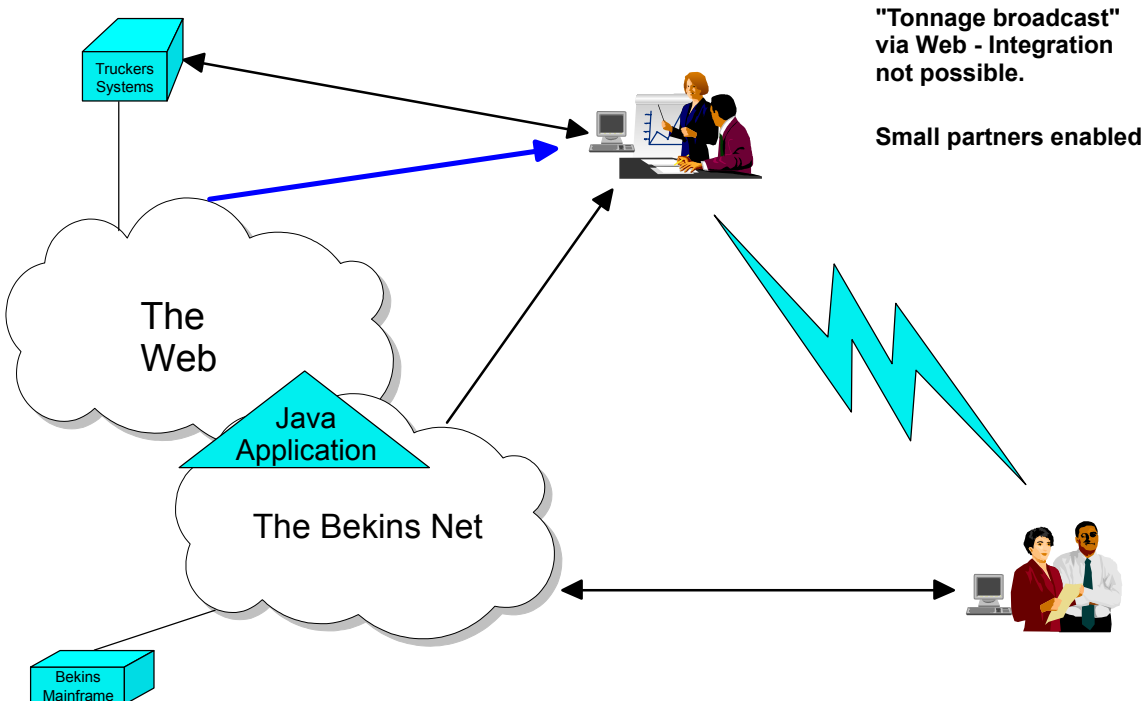
How to do business with me ? (BP, SD and Binding Information), Implementation Agnostic

Where can I find details ?, Who published this ?, Service Type - tModelKey

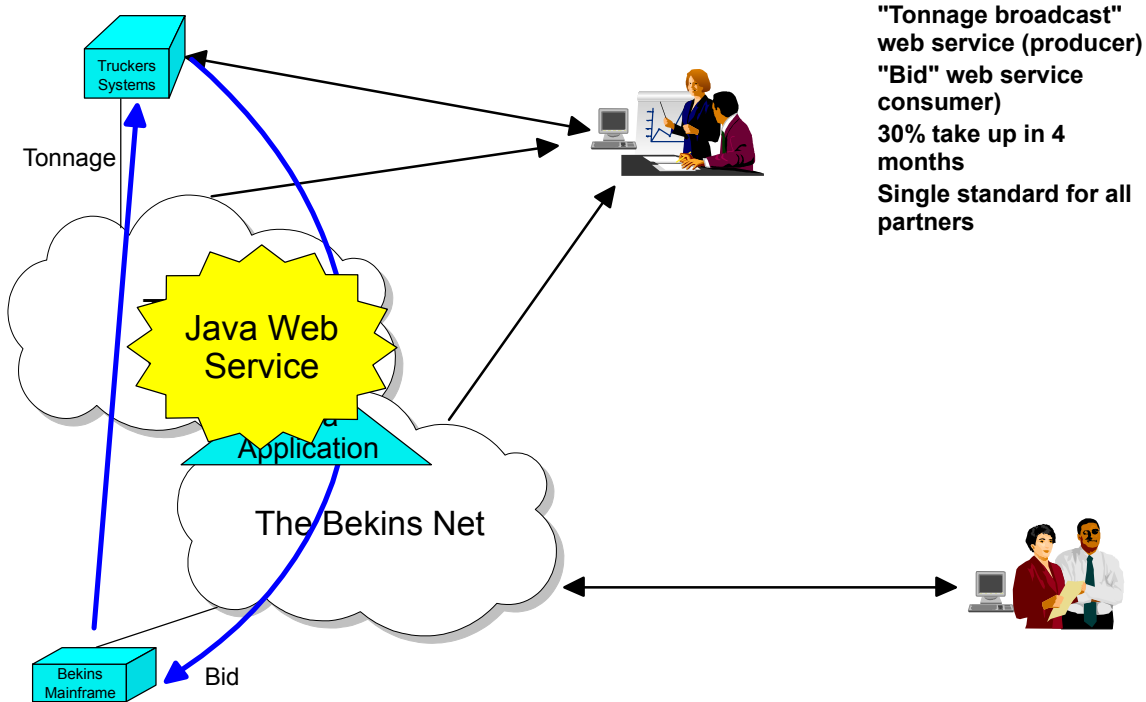
## Real Web Service @ Bekins Co., Illinois



## Bekins with the Web



## Bekins with Web Service



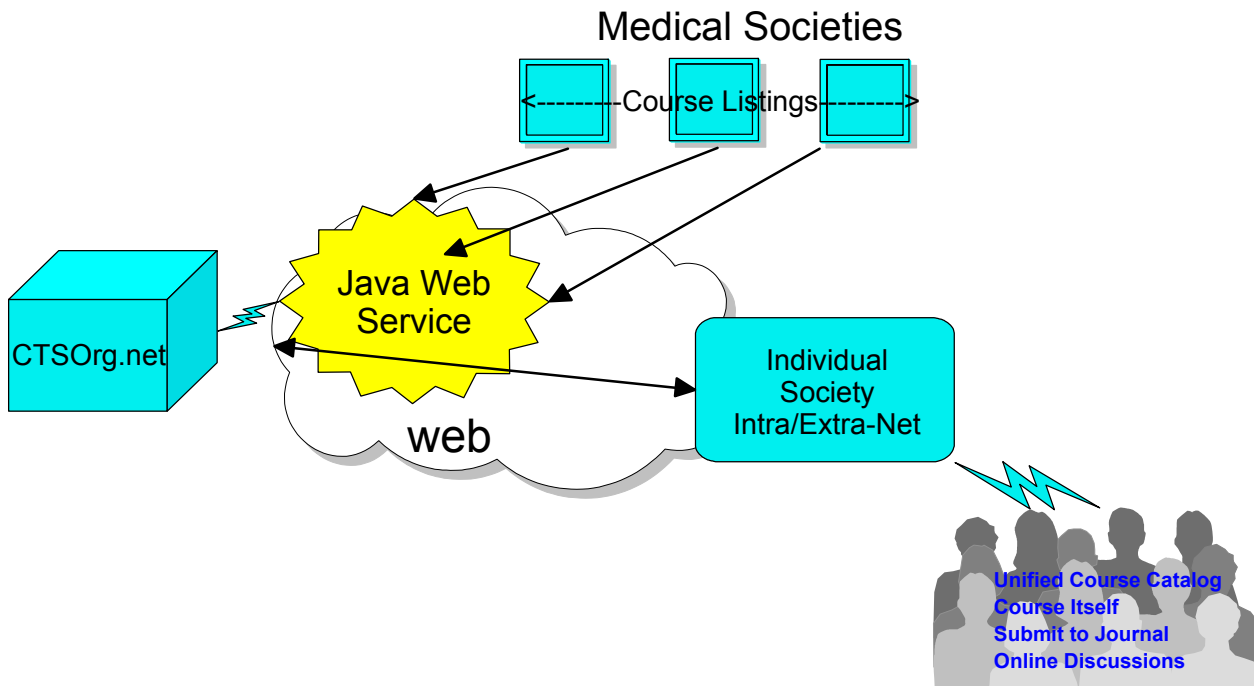
## Real Web Service @ MedBiquitous

"My goal was to instantly be able to put my fingers on the latest information from the around the world, all with a single sign-on," says Greene. "We learned that we could share a common server and middleware to help us stay in touch."

Dr Peter Greene, the associate dean for emerging technologies at Johns Hopkins University Medical School in Baltimore, quoted in cio.com.

He is also the Executive Director of the MedBiquitous Consortium

## Real Web Service @ MedBiquitous



## Real Web Service @ MedBiquitous

- **Gather course listings from all over and publish as web service**
  - ▶ Unified course catalogue
  - ▶ Take courses without leaving home base
- **Shared CorMed applications as a web service**
  - ▶ Membership application
  - ▶ Journal article submission application
  - ▶ Online discussion forum

## **The opportunities (In order of adoption)**

- **Realise "Best of Breed"**
- **Cost Reduction and lower B2B e-business Cost barrier**
- **Enable new applications to support new business opportunities**

## **The opportunities**

- **Realise "Best of Breed"**
  - ▶ Allows pieces of software to talk to one another "unassisted", cheaply and easily.
    - Allow applications running in different parts of an organization, or in different organizations, to exchange data "unassisted" easily and cheaply.
  - ▶ Use universal and non-proprietary data standards
    - Integration between new software and legacy systems will be simpler.

## **The opportunities**

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- **Realise "Best of Breed"**
- **Cost Reduction and lower B2B e-business Cost barrier**
  - ▶ By lowering the cost of software integration between systems as compared to a typical EAI effort.
  - ▶ By standardising skill sets
  - ▶ By lowering the cost and complexity of value chain integration

## **The opportunities**

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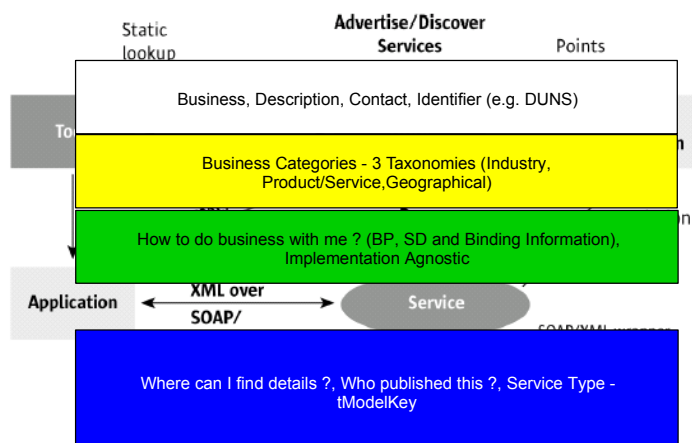
- **Realise "Best of Breed"**
- **Cost Reduction and lower B2B e-business Cost barrier**
- **Enable new applications to support new business opportunities**
  - ▶ Global Ski Resort Finder
  - ▶ Google Search
  - ▶ FedEx/UPS Tracking
  - ▶ SOAP SMS
  - ▶ Send FAX
  - ▶ EDGAR Search
  - ▶ Currency Exchange Rate

## The risks

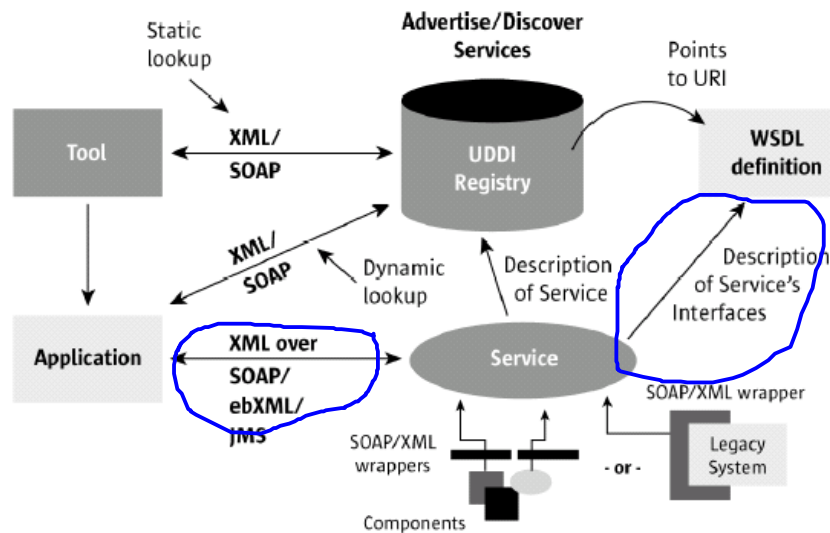
- Standards "Embrace and Extend"
- Platform Lock In
- Inter-operability
- Business Level Standards
- New Skills
- Security
- RAS

Web Services Interoperability (WS-I)

## So where are we today ?



## Current usage focus



J2EE = Write once, Run Everywhere w/o Change

Web Services = Integrate with One and Integrate with all w/o Change\*

## Web Services Key Issues

- **Business**
  - ▶ **What "SERVICES" ?**
  - ▶ **When will the Packaged Business Applications render as Web Services ?**
  - ▶ **How to get people into the NEW THINKING\* ?**
- **Technical**
  - ▶ **Single Vendor or Single Standard**
  - ▶ **Where does this fit into LINUX**

\* I have coined the 4LA - Service Oriented OO (SOOO™)

## Conclusion

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Today, there are no inherent barriers to development and deployment of applications using a service oriented architecture, based on web services standards, including a UDDI registry inside the firewall. This will make you ready to go "outside" at the right time and with the right producer portfolio and consumer shopping list.

## References

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- **Usage and Commentary**
  - ▶ [www.cio.com](http://www.cio.com)
  - ▶ [www.darwinmag.com](http://www.darwinmag.com)
  - ▶ The Economist and Fortune
- **Gospel**
  - ▶ [www.xml.org](http://www.xml.org)
  - ▶ [www.uddi.org](http://www.uddi.org)
  - ▶ [www.w3.org](http://www.w3.org)
- **Industry Analysis**
  - ▶ [www.middleware-company.com](http://www.middleware-company.com)
  - ▶ [www.stencilgroup.com](http://www.stencilgroup.com)
  - ▶ [www.zaphink.com](http://www.zaphink.com)
- **Technology and Product Providers**
  - ▶ [www.sun.com/software/sunone/docs/arch/chapter1.pdf](http://www.sun.com/software/sunone/docs/arch/chapter1.pdf)
  - ▶ [www-106.ibm.com/developerworks/webservices/](http://www-106.ibm.com/developerworks/webservices/)
  - ▶ [java.sun.com/webservices/](http://java.sun.com/webservices/)
  - ▶ XML Web Services Basics, Roger Wolter, Microsoft Corporation December 2001
- **Various New Zealand Knowledge Sources**
- **What is available ?**
  - ▶ [www.xmethods.net](http://www.xmethods.net)
  - ▶ [www.xmlrpc.com](http://www.xmlrpc.com)



# Thank You

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This presentation and links to some references are available at [www.prashanta.com](http://www.prashanta.com)

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## Extra Slides

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## Take Away - Web Services Strategy Outline

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- **Business**
  - ▶ **Service Taxonomy for Candidate Applications**
    - Consumer candidates
    - Producer candidates
  - ▶ **Business Applications**
    - COTS Business Applications - Rate of support
    - Custom Built (or Heavily Modified) Core Business Applications
  - ▶ **People**
    - Skills - NEW TOOLS - YetAnotherLearningCurve
    - Knowledge - NEW THINKING\*
  - ▶ **Business Model**
    - Producer, Consumer, Manager, All
- **Technical**
  - ▶ Existing EAI Investment
  - ▶ Single Vendor or Single Standard
  - ▶ Value Chain Participants
  - ▶ End User Experience
  - ▶ Delivery Metaphor - Browser vs Rich Win or Mac
- **LINUX**
  - ▶ Adoption ROADMAP/BLEUPRINT for 6-12 months

\* I have coined the 4LA - Service Oriented OO (SOOO™)

## The essentials (101 to 210)

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- **XML-RPC**
  - ▶ RPC wrapped in XML sent via HTTP POST
  - ▶ 64 on <http://www.xmlrpc.com/directory/1568/implementations> on 20th May 2002, 9.20pm, NZT
- **SOAP - you do have a supermarket of them**
  - ▶ 80+ on <http://www.soapware.org/directory/4/implementations> on 17th May 2002 at 11.07pm, NZT
  - ▶ The de facto RPC standard for a web service
- **WSDL**
  - ▶ The declarative specification standard for a web service
- **UDDI**
  - ▶ Slated to be the equivalent of Internet DNS of web services, two public registries in place, can be INTERNAL to an org or community
- **XML**
  - ▶ All specifications are described in XML, Whiz-dull is an XML language

## Missing by design

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- **Security**
  - ▶ Left it to HTTP, if that is good for you, then fine, else
  - ▶ Not a barrier inside the enterprise nor amongst "trusted" partners
- **ACID Test (Atomic, Consistent, Isolated and Durable)**
  - ▶ Gosh I are still current !
- **Business Process**
  - ▶ 2+ years of work to be done
  - ▶ Do you follow the Biztalk vs ebXML war ?
- **RAS (yes I mean the good old stuff)**
  - ▶ Watch the WS-I space
- **Inter-operability**
  - ▶ Watch the WS-I space