

UNISYS **JBoss World 2006 LAS VEGAS**

The Evolution of SOA Technology on the Modern Mainframe

Modernizing mainframe applications with J2EE

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Analysts on Mainframe integration

The Mainframe & SOA

- Mainframe is the most reliable business platform
- Rip and replace not an option
- Need to re-use and extend mainframe functionality



ExpoQ

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Gartner – research report published 10/25/2005
“Leverage your Mainframe Applications with SOA”

Excerpts:

“Mainframe organizations have faced a decade of negative perception, predictions of obsolescence and general market derision.”

“The market hype surrounding service-oriented architecture (SOA), as well as the growing awareness of the limitations of alternative hardware/software platforms, is leading many mainframe organizations to re-evaluate their decision to abandon, or at least marginalize, the mainframe platform.”

“Gartner recommends that every mainframe organization begin the strategic process of determining the long-term role of this platform in its overall application architecture.”

“For those organizations uneasy about incurring the cost and risks of migration from mainframe platforms, SOA may provide a tactical modernization solution ...”

“Furthermore, we recommend an immediate tactical approach to reuse established applications as “pseudo-services.” ...”

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Forrester Research says:

RECOMMENDATIONS

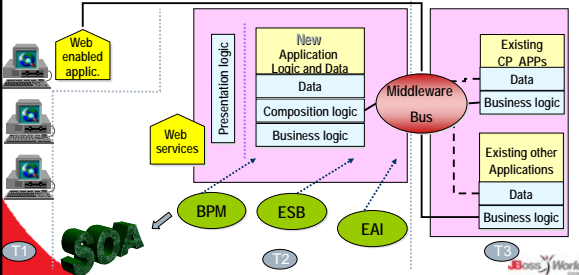
MOVE FORTHRIGHTLY TO ADOPT AND EVOLVE YOUR SOA

From Forrester’s discussions with myriad enterprises doing SOA, we have concluded that there are many, many different ways that firms evolve their way into SOA. In most cases, initial SOA implementations are small-scale and low cost — and achieve only a small part of the full range of flexibility that the full market hype of SOA promises. But that small part is enough, as the above data shows, to prompt nearly 70% of SOA users to expand their SOA deployments. It is this type of market experience — and its dramatic difference over the days of OO and CBD — that makes SOA safe, prudent, and a high priority for enterprise adoption. If you are not already using SOA, move forthrightly toward adoption, start small, and evolve your SOA from there.

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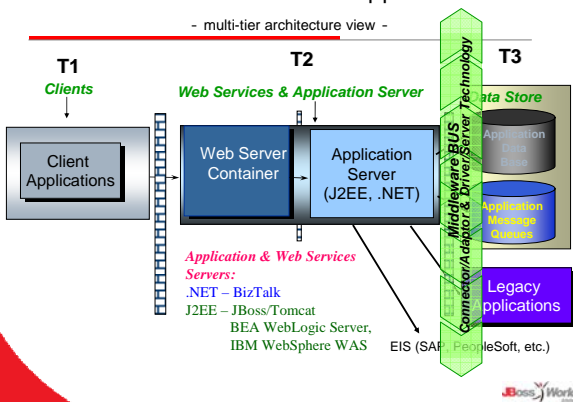
3T - Distributed & Composite applications - the basis of evolution into EAI/ESB/BPM/SOA

- **Distributed applications:** “placement of application logic into different layers of abstraction” – the basis for composite applications
- **Composite applications:** “development of new application systems by combining brand-new logic and transactions exposed by pre-existing, legacy applications.”

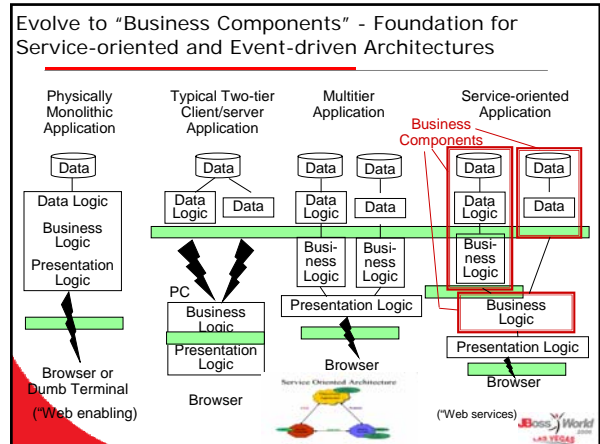
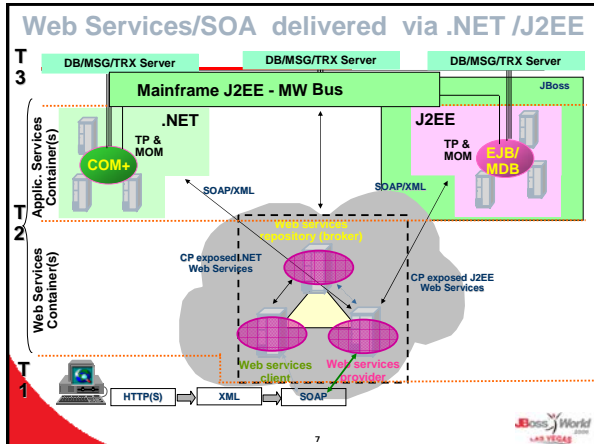


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Web Services Server & J2EE Application Server - multi-tier architecture view -



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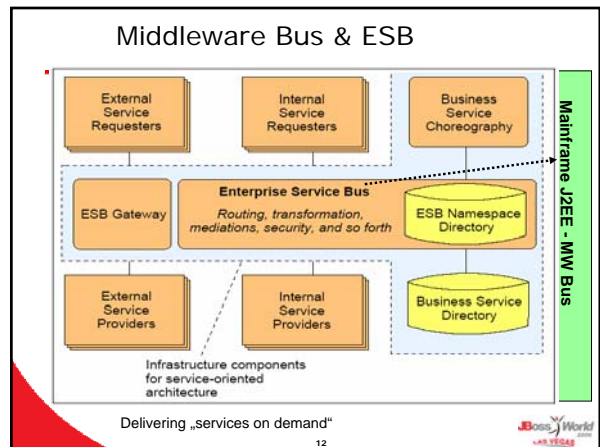
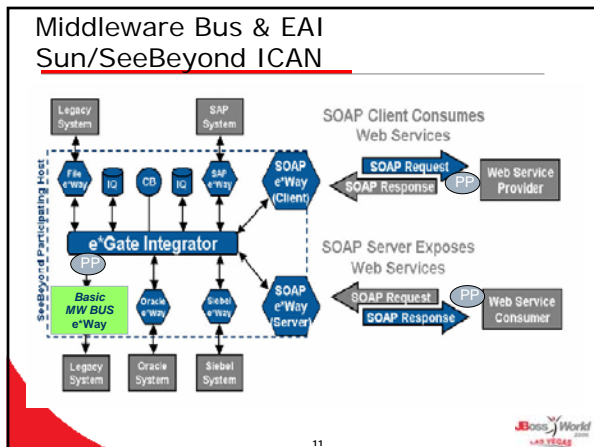
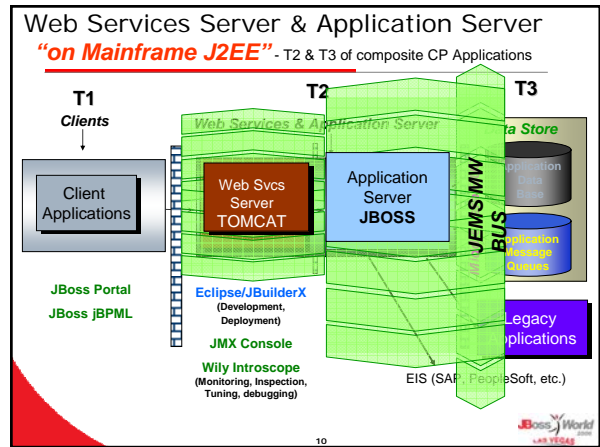
What did we achieve with the "segregation"?

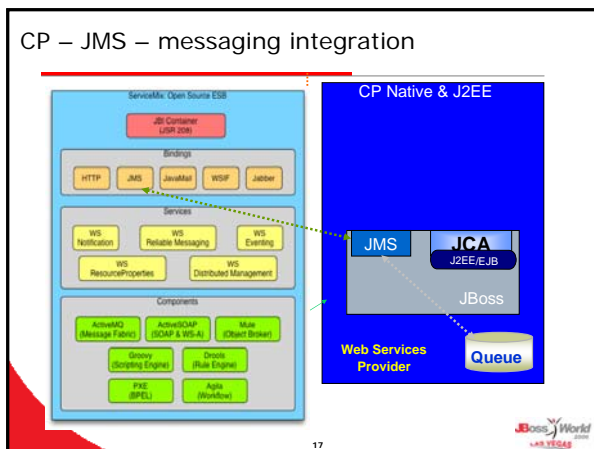
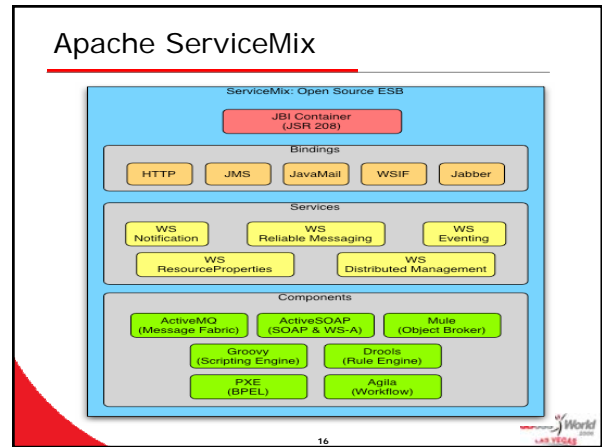
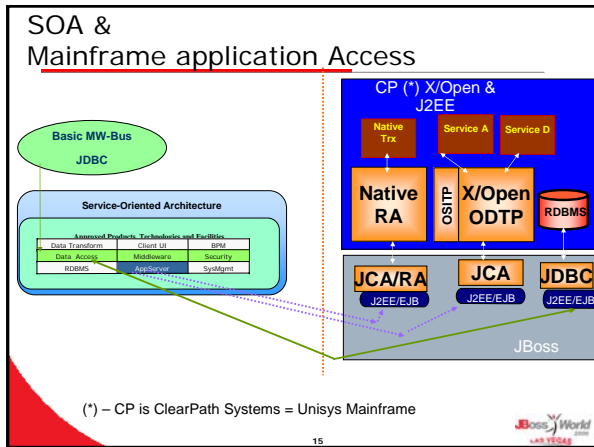
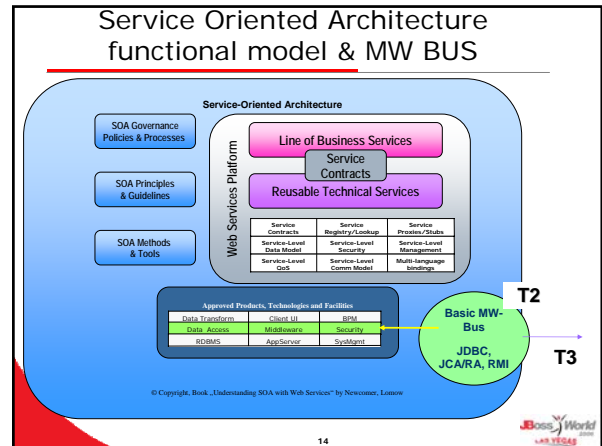
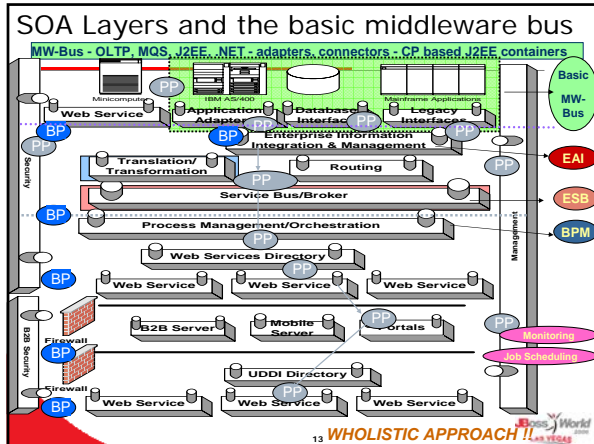
Defining SOA

- Service Oriented Architecture (SOA) is a technology architecture based on *disaggregation*.
- It promotes the utilization of *autonomous* application and system "services" abstracted from one another, *independent of implementation*.
- Each service should be *self-describing* with a published interface, accessible to other elements of the system, most commonly over a network.
- In an SOA, services are designed to be *dynamically* invoked.
- Ideally, an SOA should be *modular*, with separate *layers* of functional code, data, workflow, and presentation interfaces.
- Use of Web services is a best practice vs. mandatory requirement.

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Forrester Research says:

Business Transformation Is The Strategic Impact Of SOA

SOA can be used in *a tactical way*, wherein services are designed around targeted needs to more flexibly connect specific applications,

or in *a strategic way*, wherein services are designed in business terms around business units of work and transaction requirements.

The more strategic approach creates, in effect, a digital model of the business that is ready to connect to any business process, customer, partner, or supplier wherever and whenever it is needed.

This results in a higher degree of strategic business flexibility, and our data shows that enterprises — especially large enterprises — realize the more strategic value of SOA.

Mainframe applications -> SOA ...

- Exposed as “pseudo-services” – can participate & evolve into

“Adoption of composite applications will grow from fewer than 15 percent of enterprises in 2003 to at least 60 percent of enterprises by 2008 (0.7 probability).”
—Gartner Group 10/16/03

- Composite Application
- EAI – Enterprise Application Integration
- ESB – Enterprise Service Bus
- Business Process Management and Definition
- Business Activity Monitoring
- Business “blueprinting services”
- SOA – Service Oriented Architecture

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