

Agility for Changing Times – Service Oriented Architecture (SOA) as a Strategy

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About Scott Sanchez

- Chief Architect, Unisys Open Source Business
- Past: Goldman Sachs, Bristol-Myers Squibb, Software and Internet startups
- Certified Information Systems Security Professional (CISSP)
- Member of FBI Infragard & Secret Service Electronic Crimes Task Force

Agenda

- SOA
- Agility
- Coupling – tight and loose
- Agility case study
- Implementation lessons
- Q&A

What is SOA?

Technology strategy

What is SOA?

Technology strategy

What is SOA?

Software Development Strategy

Technology strategy

What is SOA?

Software Development strategy

Something you can buy

SOA strategy

Magic Dust

Something you can buy

Software development strategy

SOA?

What is SOA?

**A strategy to
enable agility.**

What is Agility?



UNISYS

WALMART 1962

WAL-MART 1964



WAL-MART 1981

WAL★MART 1992

Walmart  2008

UNISYS



UNISYS



UNISYS

Respond

**What is
Agility?**

Respond

What is

Agility?
Adapt

Respond

Restructure

What is
Agility?

Responde
Restricture
Disconnect

What about Web Services?

Web Services

- A reusable “black box” software component that can be accessed via standard protocols like SOAP (XML) over HTTP

**WEB
SERVICES**

are to

SOA

like

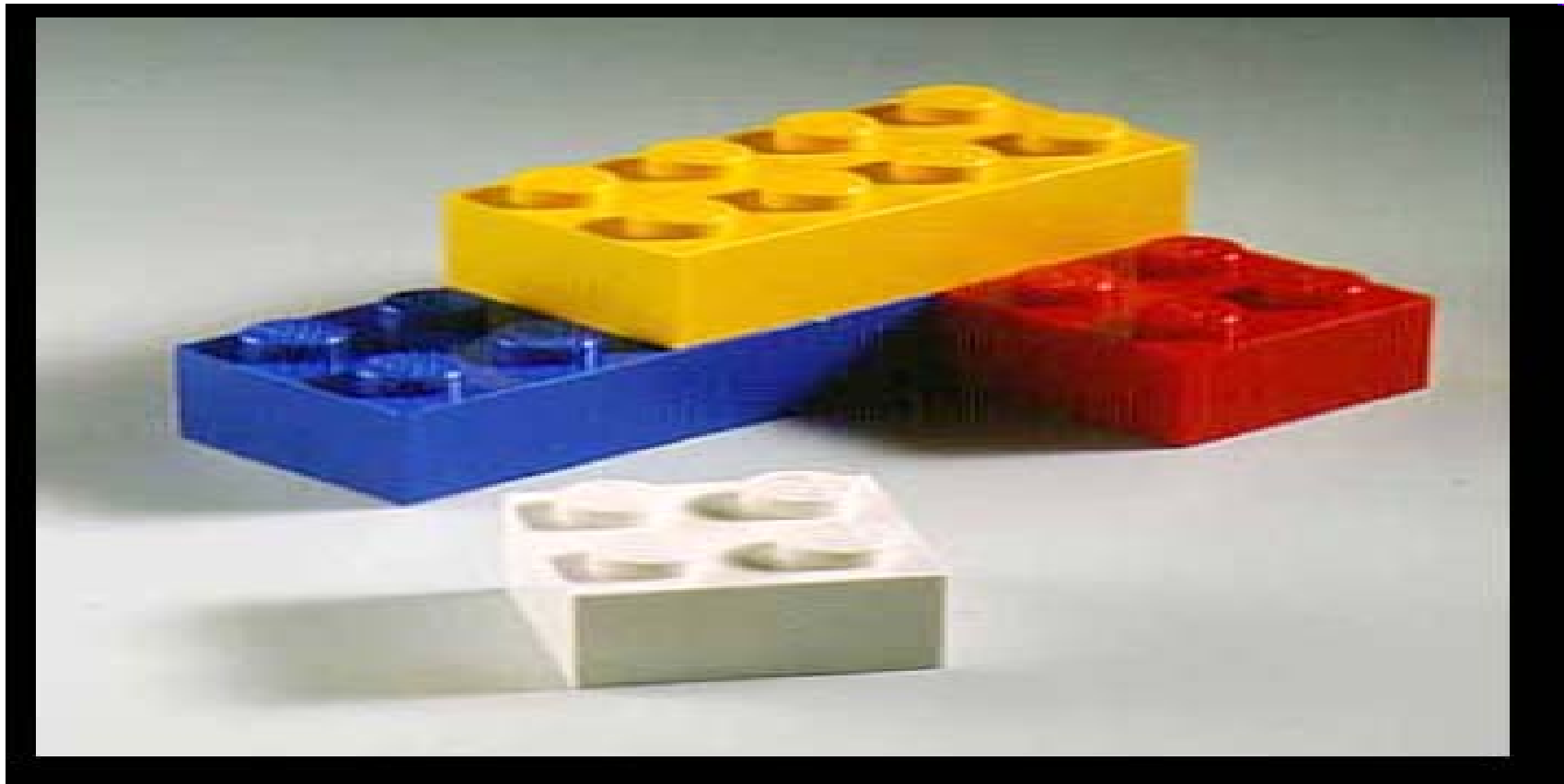


are to



How does SOA Help?

The Lego Example



Tight Coupling vs Loose Coupling

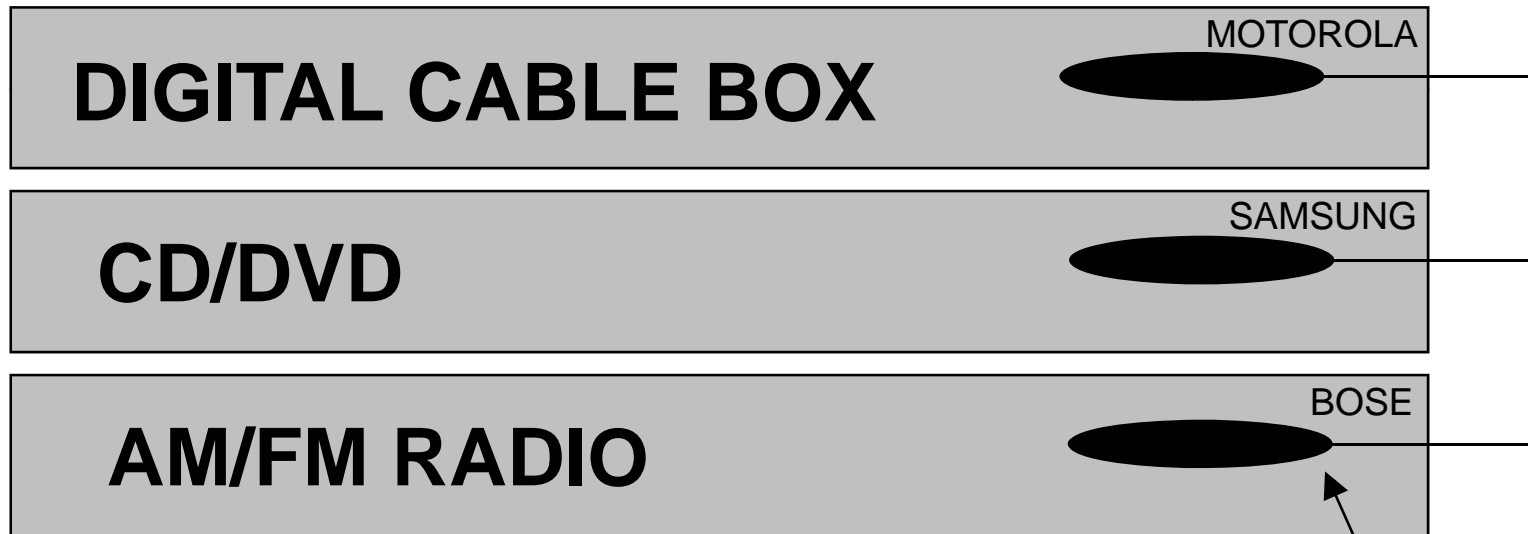
“Tightly Coupled” Stereo System



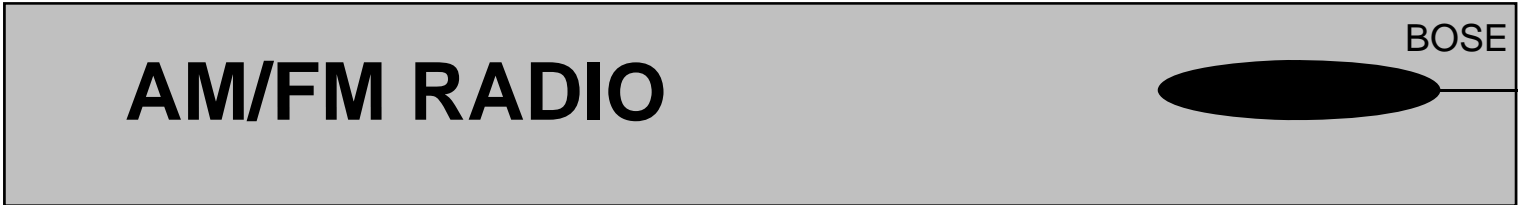
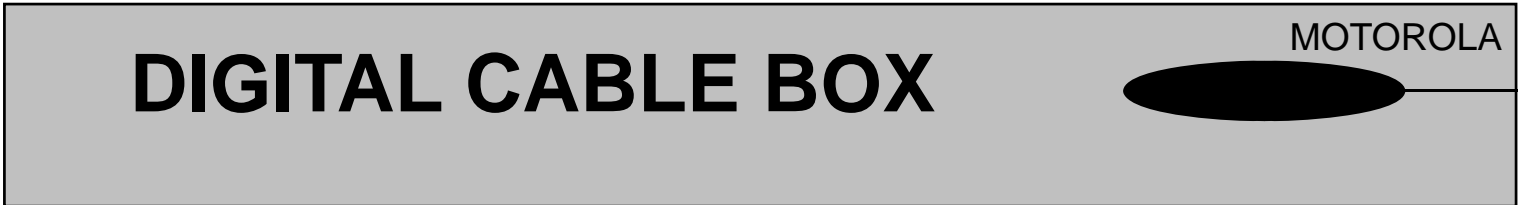
“Tightly Coupled” Stereo System

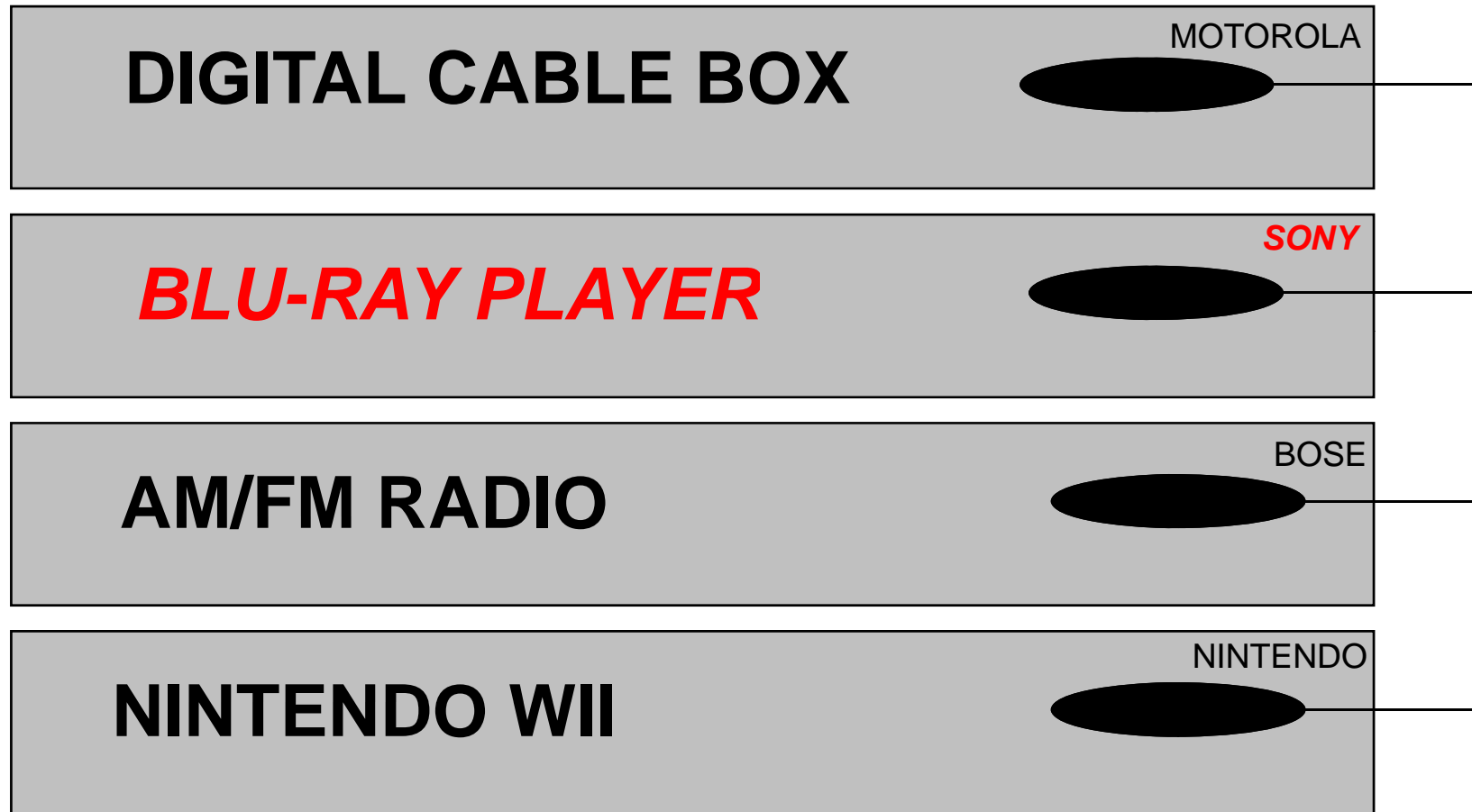


“Loosely Coupled” Home Theater



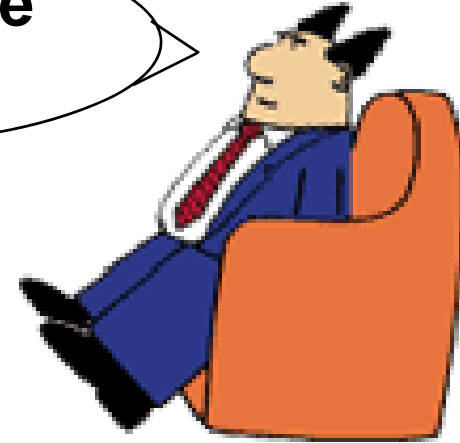
Standard interfaces





Real-world Agility Case Study

What is it we
do again?



- Check inventory
- Enter the order
- Pull the material
- Print a shipping label

Company L's SuperServer2000™

All-in-One Features:

- Inventory reporting
- Order taking
- Warehouse item picking
- Prints shipping labels

Wow, it's
perfect!



Six Months Later...

To save money, all shipments will now be sent using XPS instead of ShipEx.



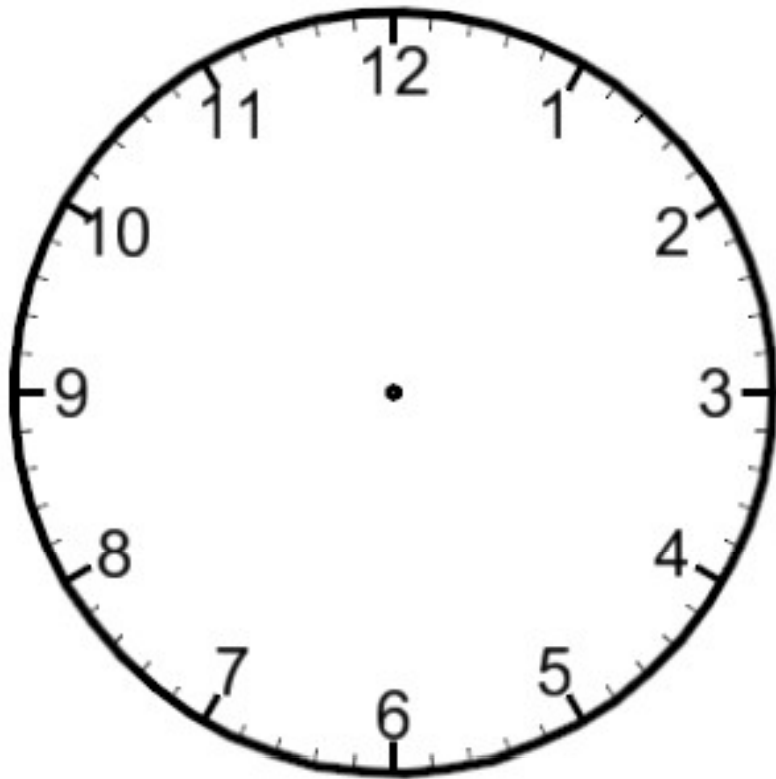
**But SuperServer™ only works
with ShipEx...**



Make it work!!!

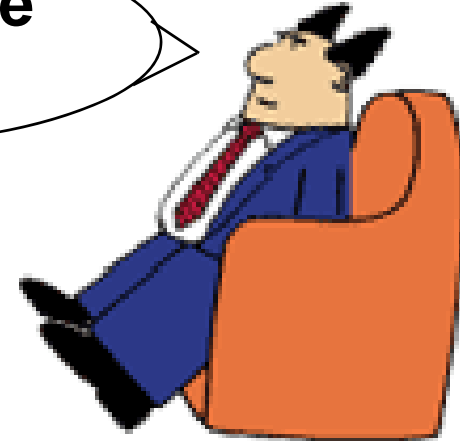


Changing an “all in one”, tightly-coupled business system is time consuming and expensive...



The SOA Way

What is it we
do again?



- Check inventory
- Enter the order
- Pull the material
- Print a shipping label

Company U's OpenServer3000™

Available services:

- **Inventory system**
- **Order system**
- **Warehouse system**
- **Shipping system**

Wow, it's
perfect!



Six Months Later...

To save money, all shipments will now be sent using XPS instead of ShipEx.



**I'll update the configuration on
OpenServer™ to use the XPS
Web Service instead of the
ShipEx Web Service.**



Now that's Agility!



Implementation

Where to begin?

- Don't go it alone – work with a trusted partner
- Develop a current state “as is” picture of your environment (tightly coupled spaghetti)
- Create a Service Oriented “to be” picture (loosely coupled SOA)
- Run the numbers and put a business case together to realize your “to be” picture.

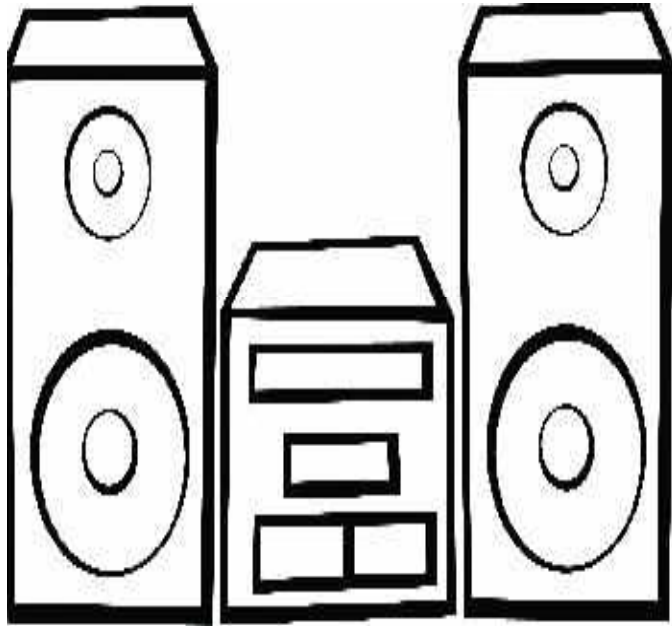
In a successful SOA...

- The value of SOA is well understood from top to bottom in the organization
- A solid governance program is in place
- New applications are designed and developed using a Service Oriented Architecture
- Preference is given to new COTS applications that expose major functionality through web services

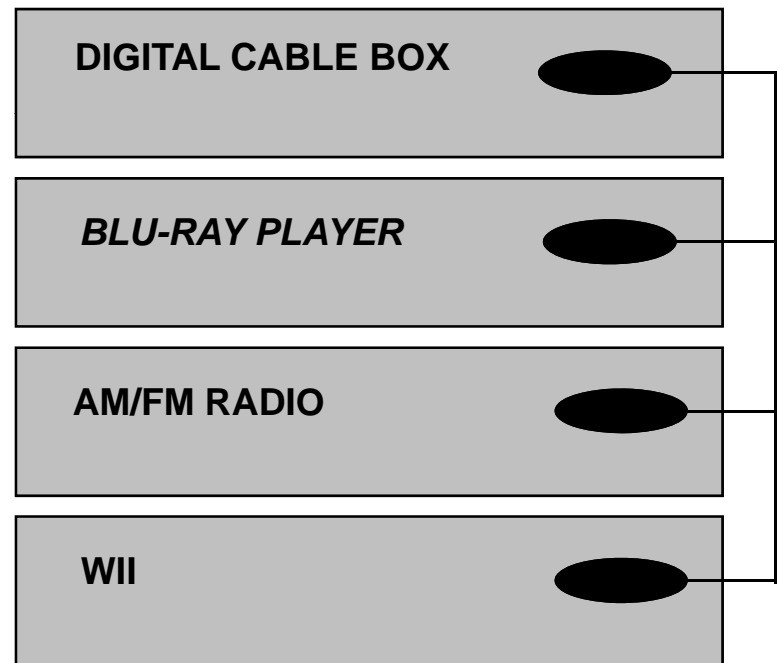
In a successful SOA (continued) ...

- An Enterprise Service Bus (ESB) and open standards (XML/SOAP) are always used for systems integration – never point to point!
- A combined top down (business process) and bottom up (technology) approach is used to identify and build Enterprise Services
- Your service providers and partners fully understand the importance of SOA and follow your guidelines

Which best represents your “as is” picture?



OR



Questions?

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