









# **OSGi Alliance Community Event**

**OSGi, Platform for Our Future**

**Marquart Franz**  
Siemens AG, Corporate Technology



## SIEMENS - Active in six business areas<sup>1</sup>

Automation and Control	Power	Transportation	Medical	Information and Communications	Lighting
					
Automation and Drives	Power Generation	Transportation Systems	Medical Solutions	Communications	OSRAM
Industrial Solutions and Services	Power Transmission and Distribution	Siemens VDO Automotive		Siemens IT Solutions and Services	
Siemens Building Technologies					

<sup>1)</sup> as of October 1, 2006



## Siemens Facts

(In millions of EUR;  
continuing operations)

	<b>FY 2006</b>	<b>FY 2005</b>
<b>Sales</b>	87,325	75,445
<b>Orders</b>	96,259	83,791
<b>Net income</b>	3,033	2,248
<b>Cash flow</b>	739	-1,489
<b>Employees</b>	<b>475,000</b>	<b>461,000</b>

As of September 30, 2006

## Major R&D investments

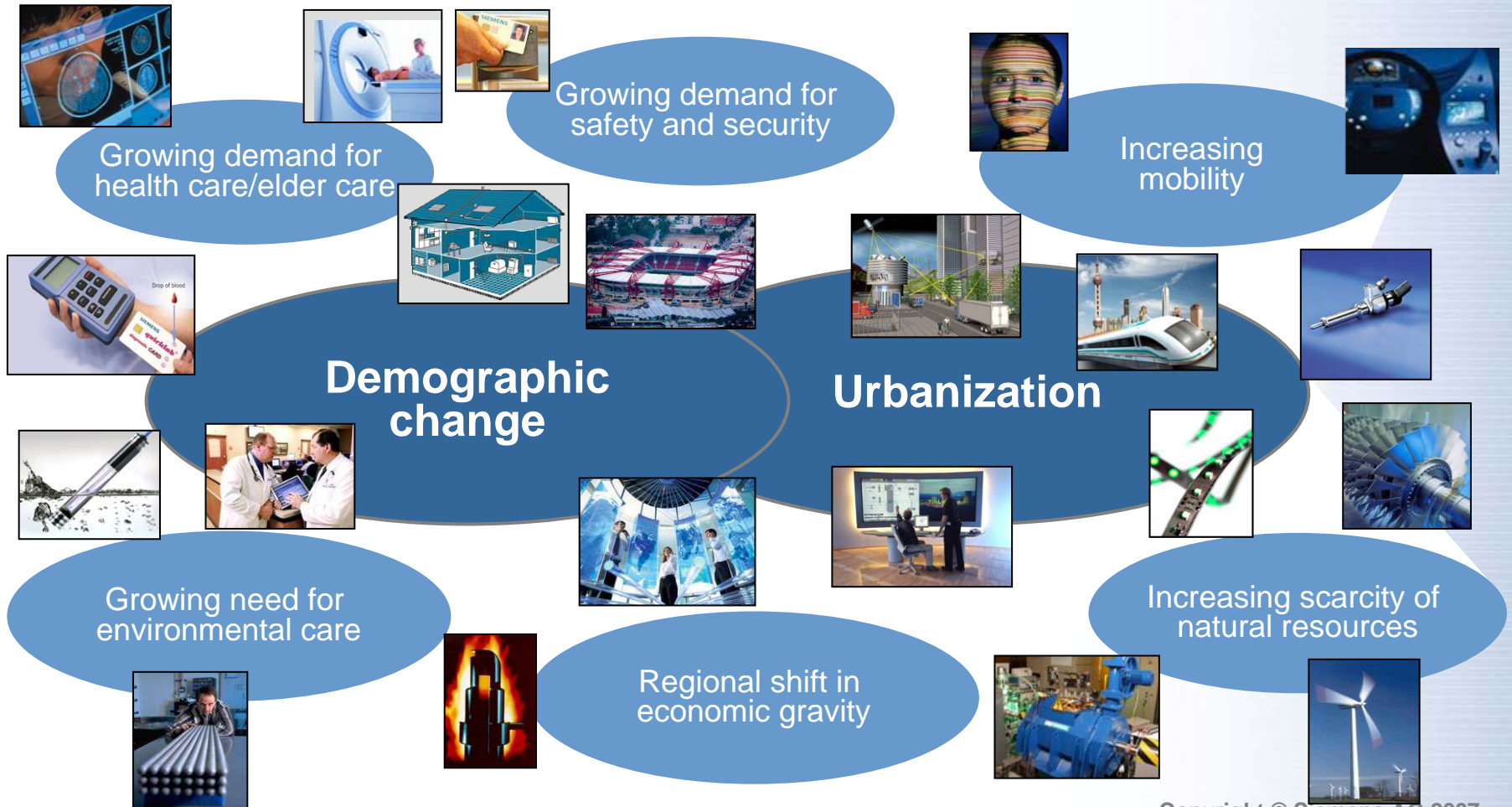
- 5.7 billion EUR in fiscal 2006\*
- 48,900 R&D employees worldwide
- **30,000 software engineers**
- 150 R&D locations in over 30 countries around the world



\*Including R&D investments related to specific customer requirements, reclassified into cost of sales



# The consequences of megatrends require innovative and comprehensive solutions





## Solutions for Embedded and Enterprise

- **OSGi Technology for Embedded use**
  - Siemens has long experience with OSGi Technology in Embedded environments
  - Product devices range from Automotive Driver Information Systems, Smart Home Gateways to Home Appliances
- **OSGi Technology for Desktop / Enterprise use**
  - Desktop matters again with Rich Client Solutions and Enterprise Systems trend towards lightweight containers like Spring and OSGi
  - Siemens uses OSGi technology for desktop and enterprise internally and in a variety of developments and products like Siemens OpenSOA



# Product Examples



## Siemens VDO Top Level Architecture: Customization and Modularity

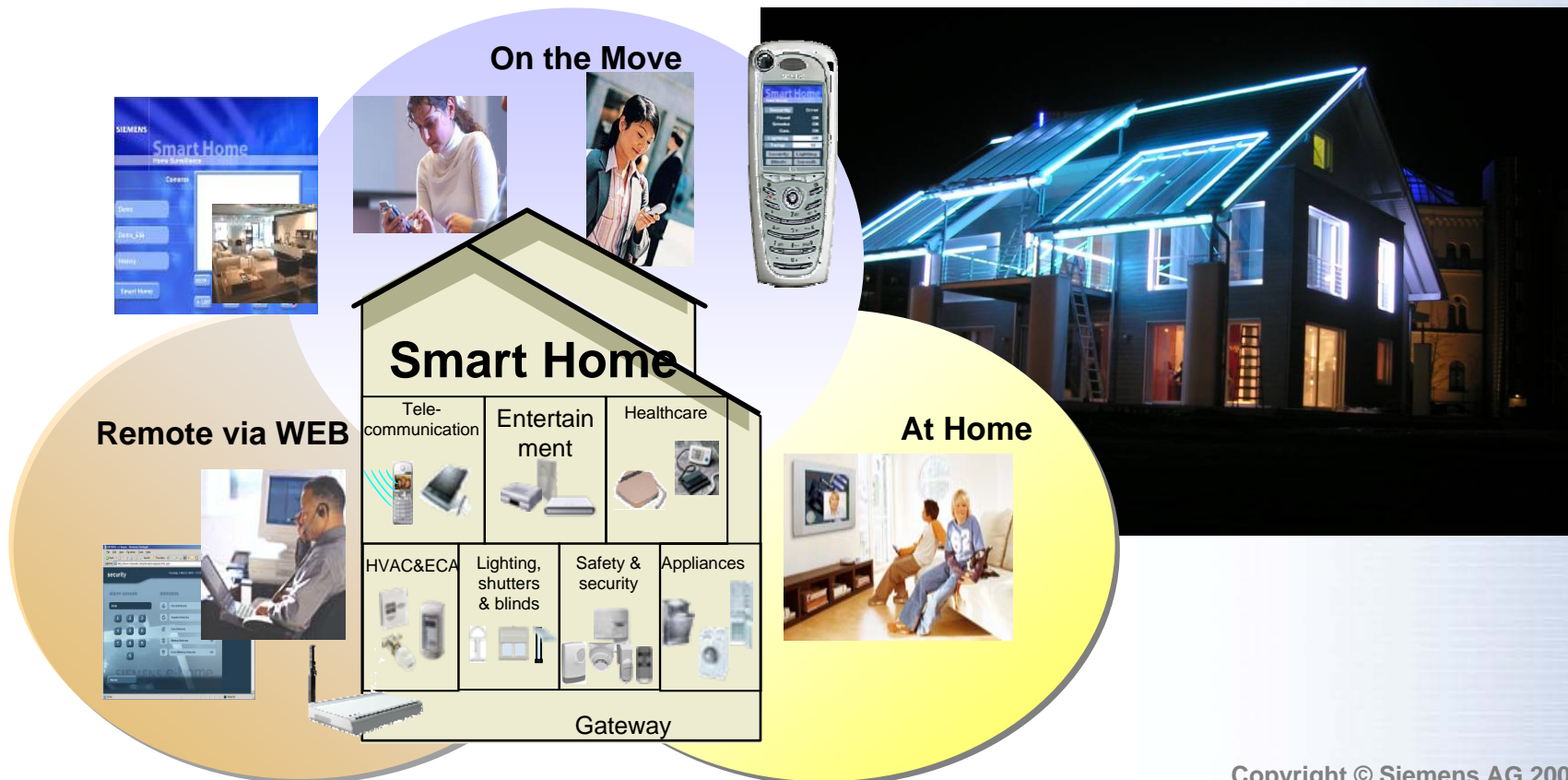
- Since Q4/2003 the BMW 5-series and 6-series proposes a Top Level Architecture (TLA) based system worldwide including:
  - Entertainment
  - Communication
  - GPS Navigation
  - Telematics
  - Car Configuration
  - Climate Control





# Smart Home Showcase: T-Com Haus

- Single Family Home, Berlin, Leipziger Strasse



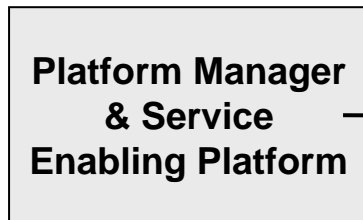


## Smart Home Gateway: Siemens SX765 SGP (service gateway platform) Architecture

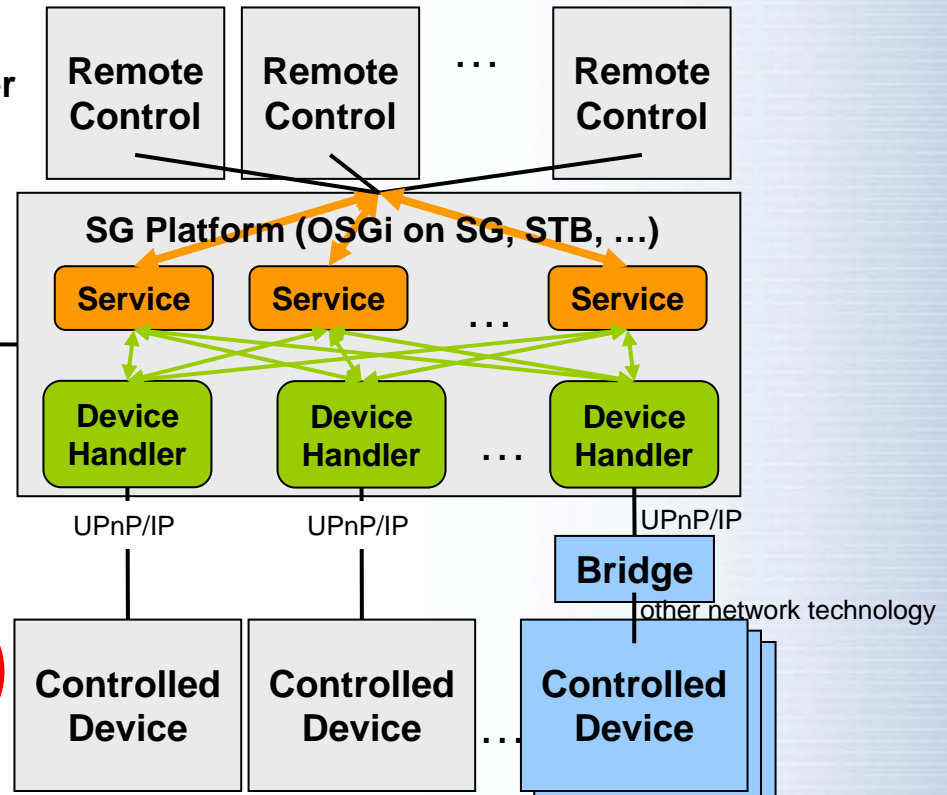
- ... it has to be scalable, extendable, based on Open Standards, easy to use and - it just works

### Key Benefits

- Framework as application enabler
- Brings down mgt and rollout complexity (billing, security, ...)



- SGP architecture driver for cost-effective services



## serve@Home - Control your home where ever you are

- Full range of white goods devices
- Remote control / status / diagnostics / maintenance
- Integration of non-white goods services such as web cams, news ticker, localized weather information, lighting (Siemens Touch manager)

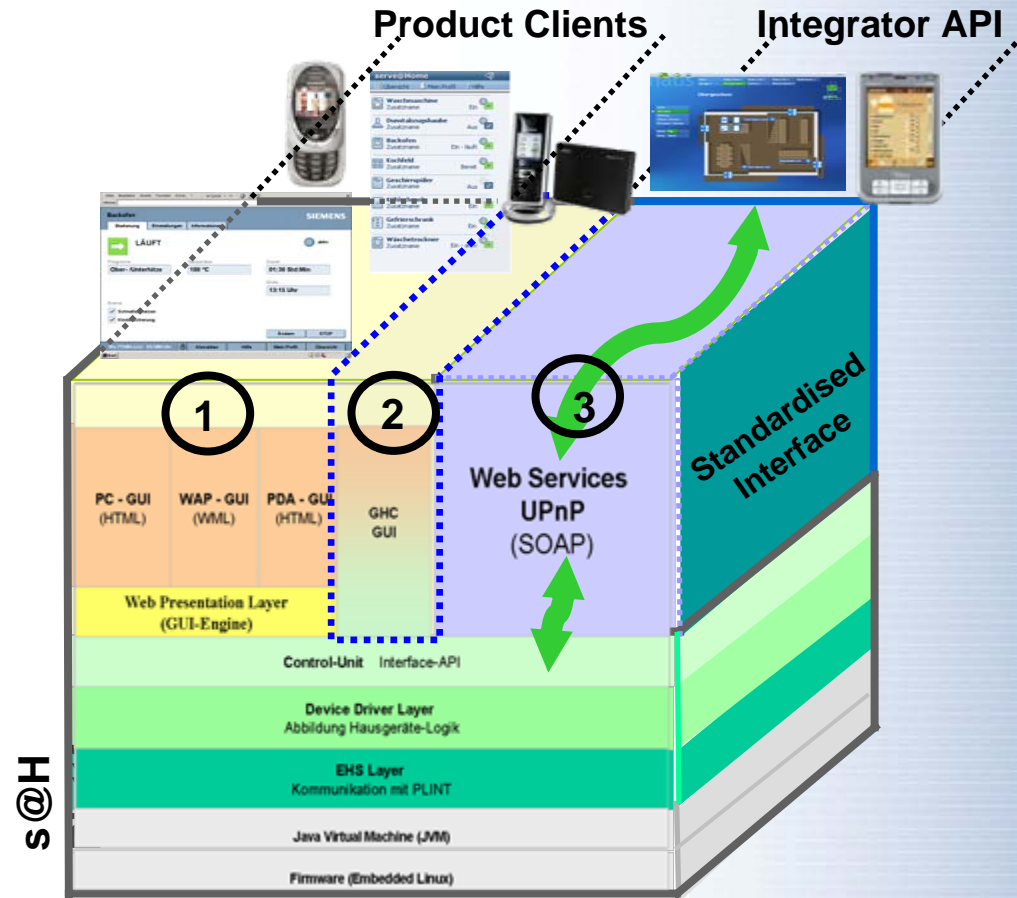




# serve@Home

Three serve@Home product variants based on OSGi platform

- 1 Premium solution with IP-based clients (Tablet) PC, Pocket PC, WAP phone
- 2 Solution with DECT phone client
- 3 Headless solution with web-service based API





## Siemens OpenSOA Application Product Line

- OpenSOA provides the basis for shared business functionality among applications, creating new synergies for users across the enterprise.
  - Common Software assets are used to compose applications for the Unified Communication, Unified Messaging and Contact Center market.
- Siemens Enterprise Communication developed Siemens OpenSOA as a foundation for SOA-based applications. The OSGi service platform is being used as a component model and runtime environment for common SW assets.
  - Improved modularization of SW assets
  - Separation of (cross-cutting) concerns into the hosting environment
- HiPath 8000 Assistant and HiPath 8000 Media Server are first products already delivered based on Siemens OpenSOA, a new version of HiPath OpenScape is currently under development.



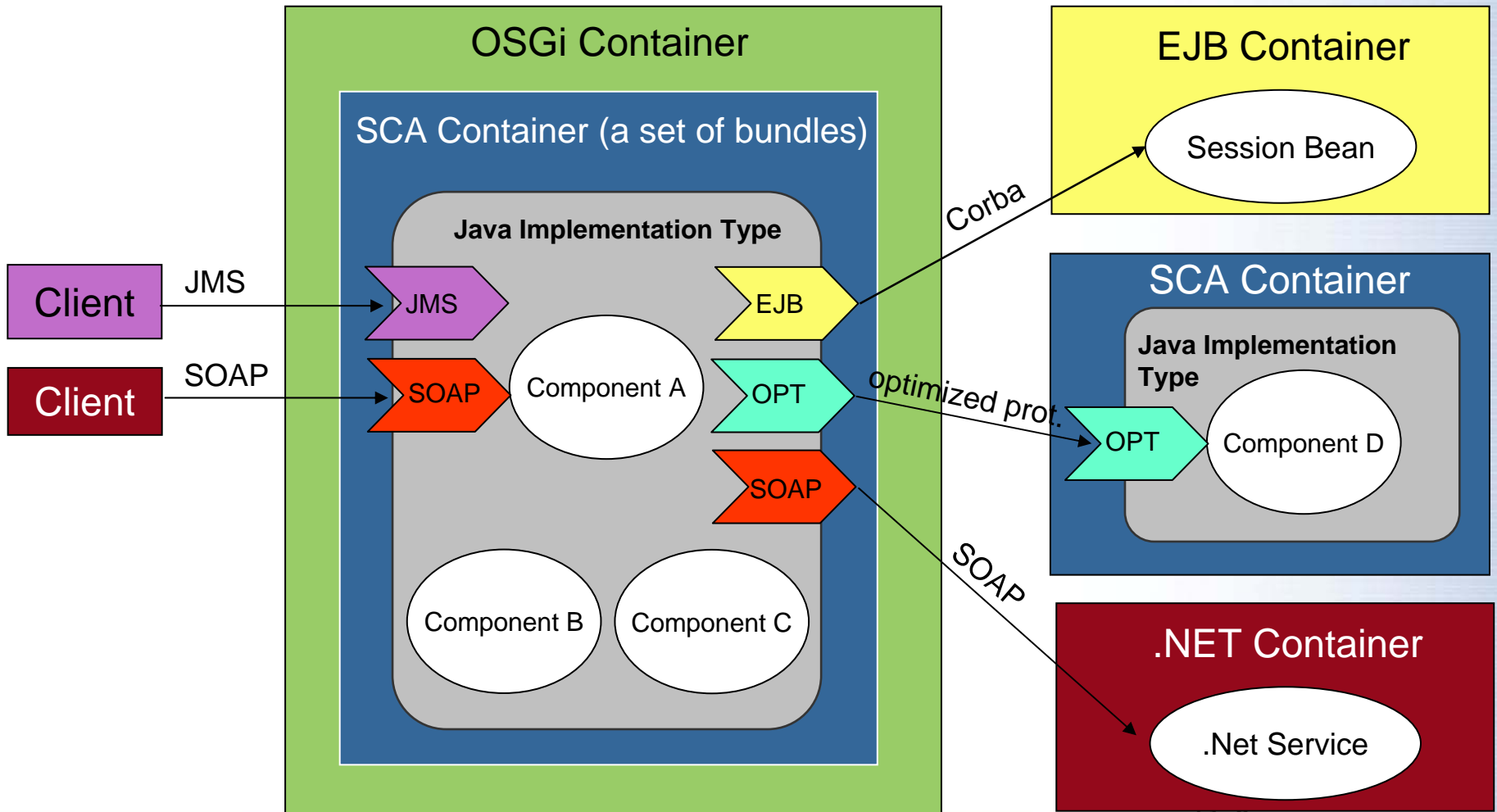
# Integration Challenges

- **Siemens has a to integrate heterogeneous landscapes (internally or at customer site)**
  - OSGi technology based enterprise systems have to integrate into heterogeneous environments
  - **Service Component Architecture<sup>1</sup> (SCA)** is a promising solution as it is build on open standards and is technology and implementation independent.
  - SCA defines a model for assembling service components into a business solution in a Service Oriented Architecture (SoA)
  - SCA allows to select always the best-suited technology

<sup>1</sup> <http://www.osoa.org/>



# SCA OSGi Integration





## Summary

- OSGi Technology is an important technology for Siemens
- Siemens **uses** OSGi Technology in different areas, from Embedded to Enterprise, and has **shipping products**
- To fulfill the enterprise requirements parts are still missing. Our goal is to drive the definition of standard solutions for missing parts in the **OSGi Enterprise Expert Group** by keeping OSGi useable for the Embedded area
- **Integration** is a key challenge for Siemens products and services  
The power combination “OSGi Technology and Service Component Architecture (SCA)” is most promising