Current Development of connected appliances
Let’s take a look at serve@Home today and in the near future

What is the value add of OSGi based solutions for the company and the customer

OSGi World-Congress
15.10.2004
Barcelona

Horst Werkmann
Bosch and Siemens Home Appliance Group

www.servehome.com
Market roll-out of BSH

- Market launch of OSGi-based serve@Home 1.0 in Dezember 2003
- 40 installations at German dealers and all over Europe
- Numbers of installations are related to channel strategy
- First serve@Home systems sold to customers
- Make market is running
- serve@Home Release 2.0 will be launched E2004
- New sales channels will be opened with serve@Home 2.0
Ongoing effort for Market Introduction

• Intensive field trials for market research and optimising the product
• Definition of sales channels
• Training of the dealers
• Business model for company and dealer
• Sales folder and POS material to explain an ‘All in One’ solution
• Educating the customer and ‘Make Market’
Presence of serve@Home Dealers in Germany

serve@Home dealers in Q1/2004
- küchenART, München
- Joppe, Braunschweig
- Brigitte B’s Küchen, Grünstadt

serve@Home dealers in Q2/2004
- die einbauküche, Berlin
- Küchenstudio Rehbrücke, Potsdam
- Nixdorf Elektro + Leuchtenhaus, Paderborn
- Adrian, Aschaffenburg
- Küche + Bad Hebeisen, Hanau
- Küchenhaus Hillig, Dresden
- Wilhelm Grob, Steinenbronn
- Kaufmann, Köln
- Thelen & Drifte Küchenforum, Moers
- WeberHaus - World of Living, Rheinau-Linx

serve@Home dealers in Q3/2004
- Ellerbrock, Hamburg
- re-ell Küchenstudio, München
- Ihr Küchen-Spezialist, Zeven
- La Cuisine Küchenstudio, Sinsheim
- almaKüchen - Studio Ahaus, Ahaus
- Haus der Gegenwart, München
- Vesta, Mannheim

Further rollouts are continued in other European countries.

www.servehome.com
Challenge: What does Home Automation offer to the Consumer?

- Access security and safety
- View into the home
- Appliances monitor conditions and report faults
- Viewing into the home
- Refrigerator with integrated TV
- Digital television, EPG, personal timeshift
- Video on Demand
- Controlling shutters or ventilation systems
- Single room temperature control
- Lighting control
- Shared Internet / Multiuser Games

Appliances monitor conditions and report faults.

www.servehome.com
An excursion into OSGi-based serve@Home
Today and Tomorrow
Communication interface in household appliances – the System Interface (SI)

Flexible retrofit through core solution

www.servehome.com

The SI connects the appliance to the powerline network
Components of the 1st Generation serve@Home

Cell Phone

OSGI-based embedded gateway as
• interface (Internet to appliance)
• application platform

GSM / DSL
Internet

WLAN

Powerline Interface

Tablet PC

www.servehome.com
Components of the 1st Generation serve@Home

Info Module

Cool Bulletin Board

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Focus of serve@Home in 2004 / 2005

- Cost Awareness
- Multi Client Support
- Enhanced Security / Peace of Mind
- Enhanced Integration
- Enhanced Services

www.servehome.com
Cost-Benefit Ratio Improves with Increasing Integration

Additional services/crafts for serve@Home by remote software update (OSGi)

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serve@Home SW Architecture

- Extended OSGI Services
- Core OSGI Services

Utility Layer
- Presentation Layer
  - Client Spec GUIs
  - Portlets
- Generic Layer

Device Layer
- Device Spec Extensions
- Generic Layer
- UPnP Dev API
- Modem Adaption Layer
- Log API

EHS Layer
- Generic Layer

OSGI Framework
- Java VM
- Operating System
- HW Platform

www.servehome.com

B S H  B O S C H  U N D  S I E M E N S  H A U S G E R Ä T E  G M B H

Werkmann, Folie 12, 15.11.2004
Additional User Interface Options for serve@Home (2)
Additional User Interface Options for serve@Home (3)

Messages from the appliances

Dryer: Program finished

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Integration of Additional Crafts in serve@Home

Light / Power Switch

Metering

HVAC

Siemens Touch Manager

KNX RF and EIB Integration

AXIS 200+

Webcam/Security

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Integration of Webcam and Infotainment into serve@Home
Integration of Home Entertainment in serve@Home

serve@Home Cockpit

Startseite

Hausgeräte
- Kühlschrank
  - Kühlt: 8 °C
  - Ein
- Dunstabzugshaube
  - Aus
- Geschirrspüler
  - Bereit

Haustechnik
- Leuchten / Geräte
  - 1 ein
- Türen
  -
- Rauchmelder
  -

Homeentertainment

Webcam - Bilder aus dem Haus
- Kamera1
- Kamera2
- Kamera3
- Kamera4

Wettervorhersage für Regensburg
- Samstag
  - Min: 14 °C
  - Max: 20 °C
- Montag
  - Min: 14 °C
  - Max: 24 °C
- Donnerstag
  - Min: 13 °C
  - Max: 26 °C

> Vormittag
> Nachmittag
> Abend
Increasing the Functionality of serve@Home

- Additional User Interface Options
- Diversity of User Interface Client Devices
- Integration of Additional Crafts
- Integration of Webcam and Infotainment
- Integration of Home Entertainment
- serve@Home as Control Station for the Living Room and vice-versa

www.servehome.com
serve@Home Version 2.0 overview
Business Fields for serve@Home

- Controlling shutters or ventilation systems
- Single room temperature control
- Lighting control
- Access security and safety
- View into the home
- Appliances monitor conditions and report faults
- Shared Internet / Multiuser Games
- Video on Demand
- Entertainment
- Refrigerator with integrated TV
- Digital television, EPG, personal timeshift
- Single room temperature control
- Shared Internet / Multiuser Games
- Video on Demand
- Entertainment
- Refrigerator with integrated TV
- Digital television, EPG, personal timeshift
OSGi related Issues, questions, discussions

• Future of OSGi – Which way is the spec. going
  Generic Platform versus Industries/Profiles (Mobile, Car, Smart Home ...)

• Architecture with several OSGi Gateways
  Settopbox/Residential GW both with OSGi. Having this in the Home, in the Car
  Interworking of OSGi Platforms (access to the Framework, com. usage of services)

• Minimum Requirements for the OSGI-Hardware
  CPU, Memory
  Lean GW Integration-Interfaces (no Presentation Layer)

• Abstract Device API
  Generic Interface with access to devices (for Integrators)

• OSGi for .NET (as an example)
  Different implementations of the Framework

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OSGi related Issues, questions, discussions

- BSH started a sourcing process for a residential gateway
- 21 possible suppliers answered RFP
- Sourcing process in KO-system

4 final suppliers
- S-Power → Product solution s@H 2004
  - Existing Product, longterm and good support
- Motorola → Product solution s@H 2005, Entertainment-Box
  - Existing Product, longterm and good support, matching of development Roadmaps neccessary
- NN1 → Back-up solution for 2005
  - Low development Speed
- NN2 → activities stopped
  - Product-development delayed

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