



SAP RESEARCH

SYSTEMATIC THOUGHT LEADERSHIP FOR INNOVATIVE BUSINESS

SAP Research and MMI

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THE BEST-RUN BUSINESSES RUN SAP



- ♦ **What is SAP ?**
- ♦ **SAP Research programs**
- ♦ **SAP Research activities in Sophia Antipolis**
- ♦ **Multimodality related work @ SAP Research**
- ♦ **Research topics of interest**
- ♦ **Conclusion / Questions**



SAP AG was founded in 1972 in Walldorf - Germany

SAP AG in 2003 revenues: € 7.0 billion

- ♦ **30 000 SAP employees (December 2003)**
- ♦ **70 000 installations**

12 million users in 120+ countries team with us to

- ♦ **Integrate their business processes**
- ♦ **Extend their competitive capabilities**
- ♦ **Get a better return on investment at a lower total cost of ownership**

Unique Partner Ecosystem

- ♦ **More than 1,500 partners**
- ♦ **Overall more than 120,000 SAP partner certificates**

The Global Leader in Business Software Solutions

SAP RESEARCH

- ♦ ~22,000 companies run SAP - the largest installed base in the enterprise software sector
- ♦ Strong focus on R&D with ~9,000 developers & researchers – a bigger investment than any other business software vendor
- ♦ Strategic vertical solutions for 28 industries
- ♦ Only application suite built on an open integration and application platform: SAP NetWeaver
- ♦ SAP is one of the best known brands globally according to Business Week – ranks #35 among the Top 100 brands



Human Computer Interaction & User Interfaces

Business Process Modeling & Management

Knowledge & Information Representation & Management

Security & Trust

Smart Items

Software Engineering & Productivity (Practices & Tools)

Enterprise Application/Information System Architecture

Legend:  Research Programs

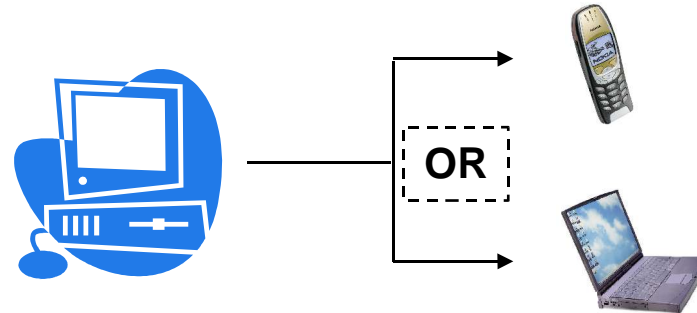
- ♦ **Security and Trust:**
 - ♦ **FP6 projects: eJustice and Mosquito**
 - ♦ **Fraud detection, software security in the areas of cross-border workflows and remote workers**

- ♦ **Software Engineering and Architecture**
 - ♦ **Device Independence**
 - ♦ **SVG based workflow viewer**

Two orientations:

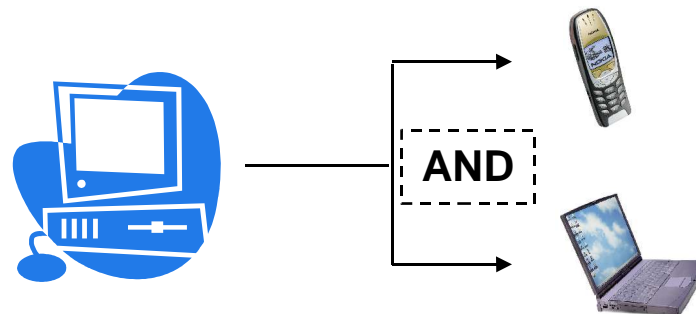
- ◆ **Multiple devices for access, but not at the same time: device independence**

- * Infrastructure
- * Authoring environment



- ◆ **Simultaneous interaction through various input/output: multimodality**

- * Architecture
- * Usability studies



SAP Research involved in:

- ♦ **Standardisation efforts:**

- ♦ **W3C Device Independence Working Group**

- ♦ **EU projects:**

- ♦ **CONSENSUS FP5 project (finished):**

Adaptation engine and Authoring environment for device independent applications

- ♦ **SNOW FP6 project (to be started):**

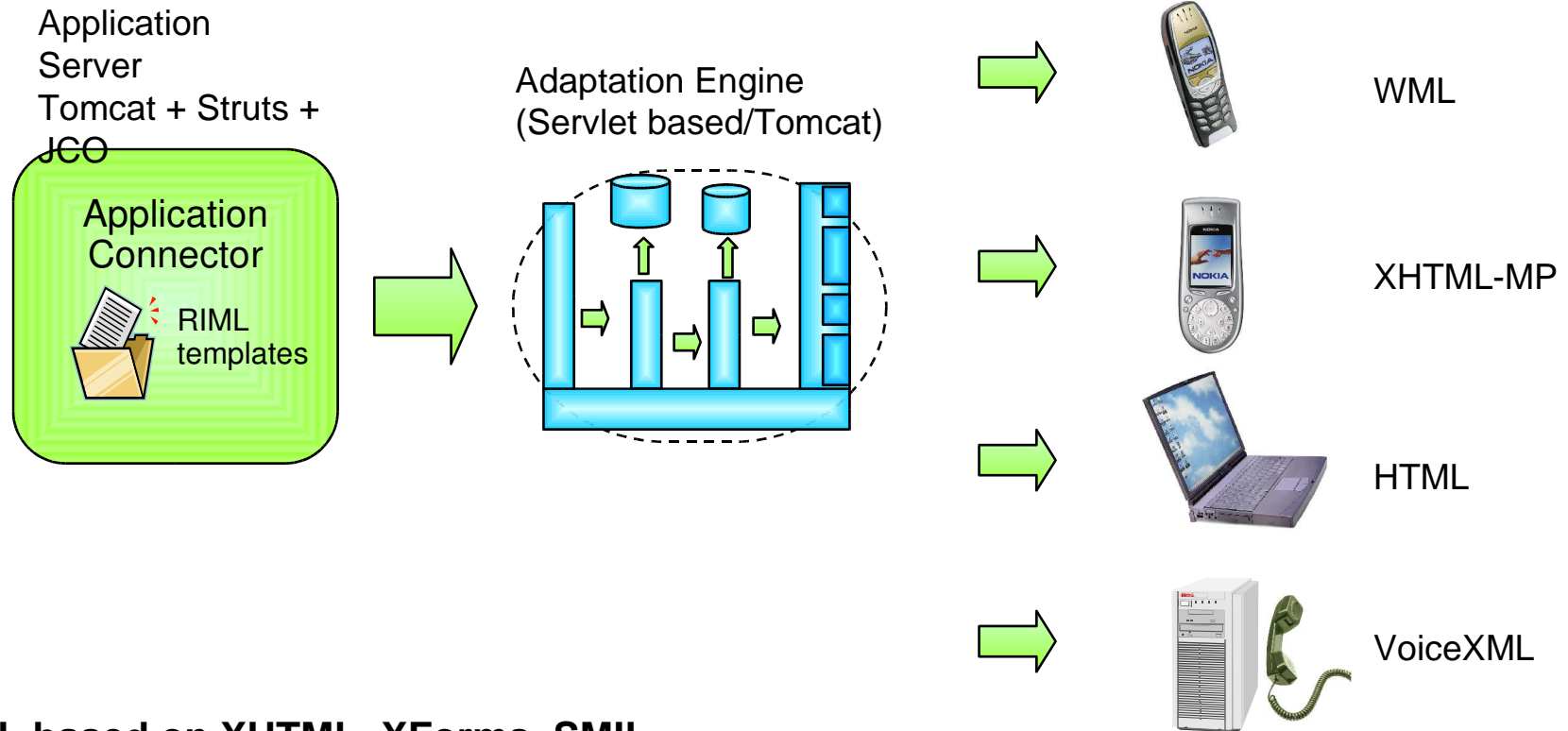
Maintenance workers requiring nomadic devices to access documentation and to interact with it

- ♦ **WearIT@Work FP6 project (started):**

Use of wearables in the industrial field in Europe

- ♦ **eMergency (submitted):**

mobile access to emergency management solutions



RIML based on XHTML, XForms, SMIL

Java - based implementation

device specific mapping based on XSL

Chiba - based XForms support

SAP Research involved in:

- ♦ **PDA based access through voice and pen**
 - ♦ **Infrastructure for testing multimodal possibilities**

- ♦ **Business cases identification**
 - ♦ **How close are clients from using multimodality?**
 - ♦ **How usable is multimodality?**

- ♦ **Homeland security application**
 - ♦ **How emergency staffs can make profit of multimodality today?**

- ♦ **Authoring for full multimodal applications**
- ♦ **Merging device-independence and multimodality**
- ♦ **Designing multimodal infrastructure for mobile devices**
- ♦ **Understanding user needs in different contexts for different applications**
- ♦ **Picking the appropriate combination of modalities**
- ♦ **Measuring benefits of multimodality over existing systems**

Thank you !

Questions ?



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Consensus project: <http://www.consensus-online.org>

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