SYSTEMATIC THOUGHT LEADERSHIP FOR INNOVATIVE BUSINESS

SAP Research and MMI

Cedric Ulmer, **SAP AG**

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**

Summary of SAP Today

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 BEST-RUN BUSINESSES RUN SAP

The Global Leader in Business Software Solutions

- **~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**

THE BEST-RUN BUSINESSES RUN SAP

SAP

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**

OR
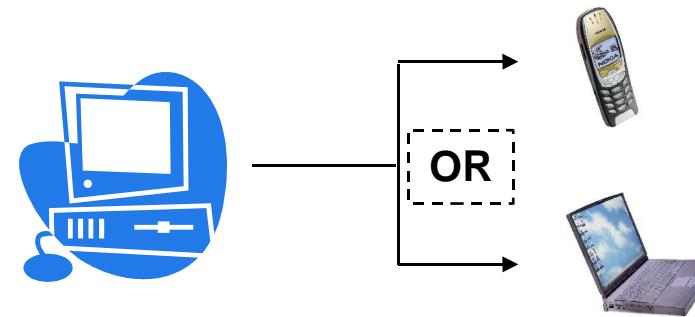
♦ **Simultaneous interaction through various input/output: multimodality**

 ❊ **Architecture**

 ❊ **Usability studies**

AND
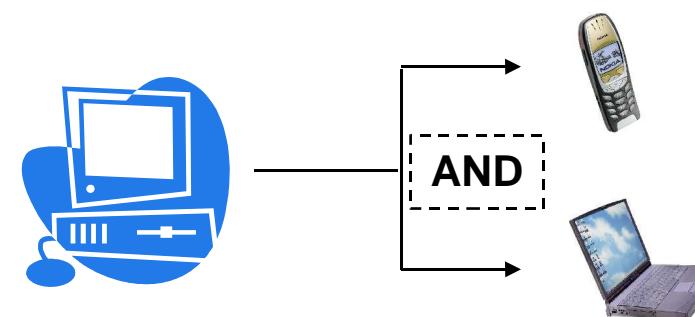
SAP Research involved in:

- **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

Device Independence - Consensus

Application
Server
Tomcat + Struts +
JCO

Application
Connector

RIML
templates

Adaptation Engine
(Servlet based/Tomcat)

WML

XHTML-MP

HTML

VoiceXML
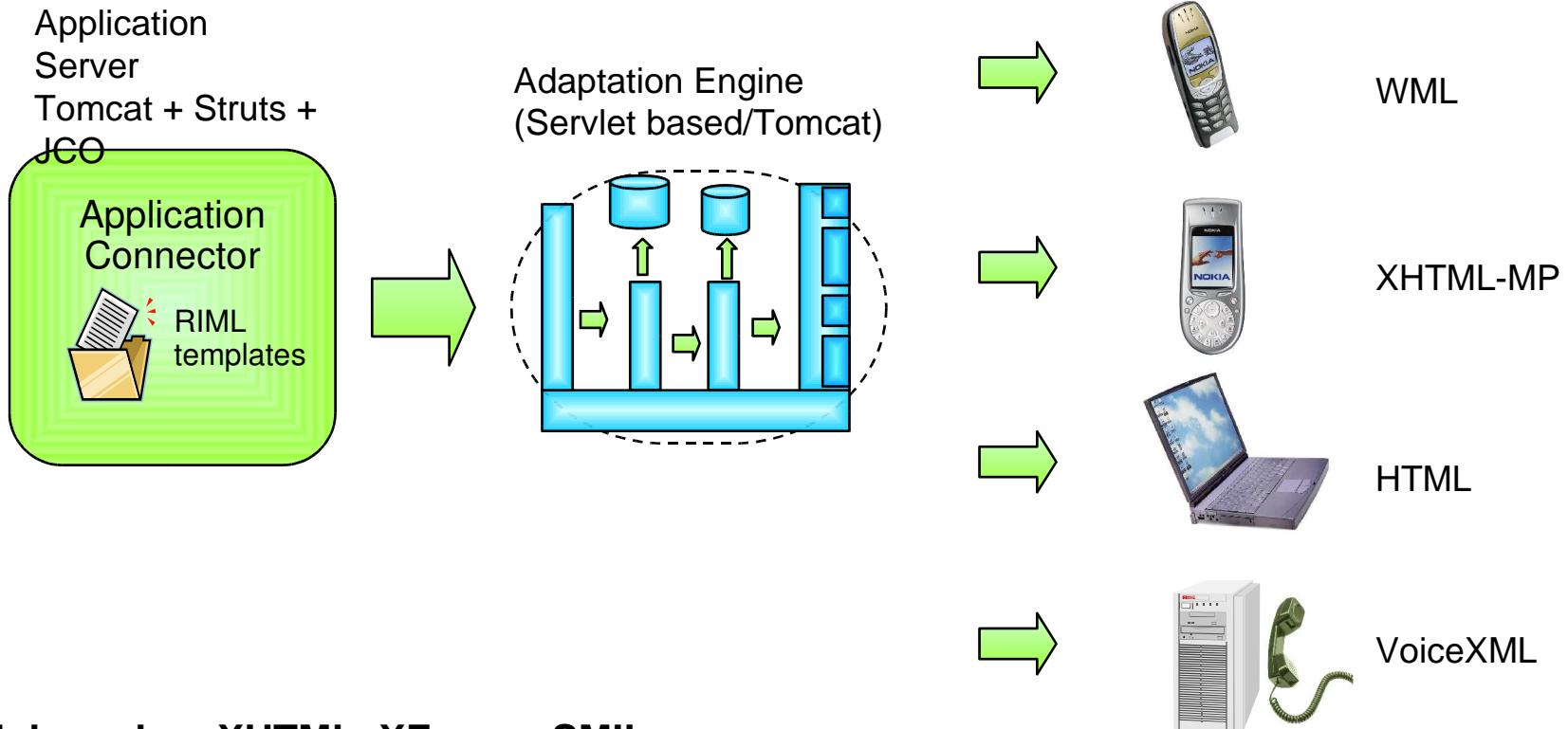
RIML based on XHTML, XForms, SMIL

Java - based implementation

device specific mapping based on XSL

Chiba - based XForms support

THE BEST-RUN BUSINESSES RUN SAP

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**

SAP

Thank you !

Questions ?
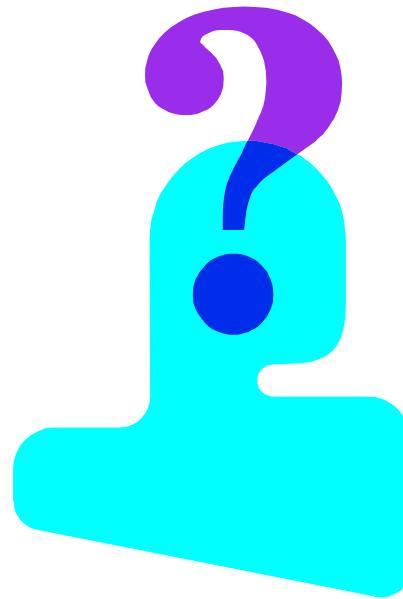
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Consensus project: http://www.consensus-online.org

SAP RESEARCH

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