SAP at CeBIT Australia 2009

Applies to:

SoKNOS, PennyPointer, BirdsEye, Yowie, Rooftop, CeBIT, Living Labs, Next Generation SOA

Summary

From the 12th to 14th of May, SAP made its Australian CeBIT debut. Throughout the event, a number of current research programs and projects from SAP Research were showcased, giving an insight into SAP's vision for the future in technology. This document explores each of the topics showcased by SAP at CeBIT Australia, 2009.

Author: Gemma Rowston

Company: SAP Research

Created on: 19 May 2009

Author Bio

Gemma Rowston is a business development intern at SAP Research CEC Brisbane. She is currently involved in several Web 2.0 research projects and contributed to the organization of SAP's involvement at CeBIT Australia. Besides working at SAP Research, Gemma is completing a dual degree in Business and IT at the Queensland University of Technology.

Table of Contents

Overview

From the 12th to 14th of May, SAP made its Australian CeBIT debut. Throughout the event, a number of current research programs and projects from SAP Research were showcased, giving an insight into SAP's vision for the future in technology. Research operations in Australia are run from Brisbane and Sydney and play an important role in SAP's global research and development program. With a strong focus on the "Future Internet", comprising of the Internet of Services and the Internet of Things, SAP Research's contribution to topics at CeBIT Australia was of great interest to visitors and a positive preview of what is to come.

Following is a description of each of the topics showcased by SAP at CeBIT Australia 2009.

Keynote Presentation

Prof. Dr. Lutz Heuser, SAP's Executive Vice President and Head of SAP Research, gave a keynote presentation addressing "The Web Based Service Society in 2019" at the CeBIT eGovernment Forum.

Figure 1: Lutz Heuser showing SoKNOS

He showed how collaborative social networks among enterprises, public organizations and individuals will combine by 2019 to achieve specific societal goals. Enabled by the Internet of Services, these networks will compose and deliver value-added services, facilitate mediation between members, and allow for the implementation and transformation of a flexible business model.

SAP's vision for a Web Based Service Society and the Internet of Services builds on the availability of fast and reliable networks. Given the April announcement of the Australian Federal Government's commitment to a National Broadband Network, this is of particular relevance.

Prof. Dr. Heuser recognized the following as the key technological aspects to be addressed when shaping the future Internet:

- Semantic Technology,
- Embedded Systems,
- Integrated Solutions,
- Sensor Network Technology, and
- Service Oriented Enterprise Applications.

Also addressed was the topic of public security and, more specifically, the **SoKNOS** (Service-Oriented Architectures Supporting Networks of Public Security) research project. SoKNOS is led by SAP Research and is a collaborative research project between a group of public authorities, private enterprises, and universities. The aim of the project is to improve communication and cross-organizational collaboration in the public security area through research uniting the digital and physical worlds. By connecting physical assets to the Web and incorporating a single technology platform, SoKNOS will ultimately provide public security with improved decision making, reduced response times, and multi-stakeholder collaboration in disaster situations.

Demos

SAP Research conducted five demos throughout CeBIT:

- SAP Research in Real Life
- Next Generation SOA
- Building a Transport and Logistics Living Lab
- The Future Retail Center
- SoKNOS – Next Generation Public Security

SAP Research in Real Life

"SAP Research in Real Life" involved projects conducted between SAP and research partners within the Australian Government's Smart Services Cooperative Research Centre. Demonstrations included financial planning, real time geo-location and proximity optimization for people and assets, and personal information toolbars.

PennyPointer is a prototype for a next generation Web-based solution for personal finance management and helps banking customers strategically manage their long-term finances. Thus, users are able to make the best possible decisions regarding their spending and savings. PennyPointer can easily be integrated into the technology stack of a financial services provider and provides an innovative user experience for online banking. Using personal modules in a widgets-like manner, the solution enhances already-existing online banking applications. It also enables banking institutions to run data analysis on user input to evaluate cross-selling and up-selling opportunities. PennyPointer is well-placed in the current economic climate and an example of how SAP can ride the current wave through customer-driven innovation.

Figure 2: Screenshot of the PennyPointer prototype

Yowie is an innovative personal information toolbar prototype providing a link between business productivity software (such as Microsoft Office applications and 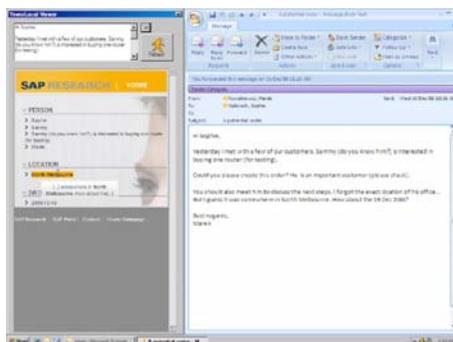Web browsers) and enterprise systems (such as SAP R/3). With the volume of data and information available reaching epidemic levels, there is a need to ensure that employees can find what they need without wasting a large percentage of their time searching (often in vain). As a solution to this problem, Yowie provides a one-stop-shop for information gathering. By drawing on text analytics technology from Business Objects and the extensibility of MS Office, Yowie integrates seamlessly with standard Office tools to provide actionable information and links to actions. The link that Yowie provides is based on the assumption that certain fragments of processed documents (viewed, created, sent, and received) in business productivity software contain enough information to automatically link to data objects and activities of enterprise systems. It is also assumed that known entity recognition methods can be used to provide relevant services to end users.

Figure 3: Yowie running as Outlook 2007 plugin

BirdsEye is a prototype for helping users in collaboration, communication and coordination scenarios. BirdsEye combines geo-spatial data (for example, collected through GPS-enabled mobile phones as shown in Figure 4) with data taken from business information systems (inside of and across organizations'

boundaries) and publicly available sources. This "information mash-up" can help organizations in scenarios such as work order allocation, collaboration between maintenance staff over large distances or community involvement during or in the aftermath of emergency situations. The BirdsEye architecture consists of a Web 2.0-style user front-end, a server to store the geo-data, and a customizable mobile application. The Web 2.0 front-end allows the access, creation, and sharing of services while the BirdsEye server stores geo-data from the mobile application and provides it in a controlled manner to the Web 2.0 front-end. The mobile application allows users to exchange information with the front-end, see their current position and navigate via mobile maps, take photos, shoot videos, and submit them to the server.

Figure 4: The BirdsEye web and mobile clients

The **Rooftop** prototype provides an easy-to-use tool for creating widgets. The prototype can be integrated in a portal or run as a standalone Web application and – as an AJAX application – it does not need to be installed on the client. With the use of a mouse, users can compose widgets from SAP systems, third party systems and services on the Web and connect them so that they are interrelated to meet a specific purpose.

Figure 5: Rooftop with Google Maps and Youtube integration

Next Generation SOA

The observation of four major trends has prompted research within the area of Next Generation SOA. These are the emergence of new innovative, consumer-focused applications in cross-vertical settings, the convergence of services and 'things', the rise of service aggregators, and services and the 'cloud'. Taking on these trends, the "Next Generation SOA" session introduced the future of SOA, Business Process Outsourcing, Cloud Computing, and the Internet of Services. Specifically, the three demos shown were for the Service Broker, TEXO/Services to go!, and Reservoir prototypes. All three are being developed in joint efforts of SAP and research partners.

SAP COMMUNITY NETWORK   SDN - sdn.sap.com | **BPX -** bpx.sap.com | **BOC** - boc.sap.com

© 2009 SAP AG   5

Building a Transport and Logistics Living Lab

A SAP Research Living Lab is a physical innovation environment used to achieve a joint vision by research and industry. The concept boosts open innovation by ensuring that all relevant stakeholders are closely involved in research and development. As a result, complex real-world problems are addressed while providing prototyped and validated solutions for new products and services.

To build on the SAP Research's Living Lab success of other countries, a Transport and Logistics Living Lab is being planned for Australia. SAP Research, NICTA and Fraunhofer Gesellschaft are the drivers behind this joint Living Lab.

The Transport and Logistics Living Lab will be used to research, apply and outline commercialization paths for advanced technology to create competitive advantages in the Transport and Logistics industry. The unique characteristics of the Transport and Logistics industry provide the opportunity to increase economic benefit through the creative application of breakthrough technologies. Visual sensors, tracking and location-based technologies, and automated planning and optimization are examples of technologies that can be used to enable the achievement of business goals in transport and logistics.

To enable visitors to experience new technology and potential products in the Living Lab, key scenarios from the Transport and Logistics industry will be demonstrated. Like the broader Transport and Logistics industry, the scenarios will interrelate. These will be developed from July, 2009, before the official opening of the Living Lab in November, 2009.

The Future Retail Center

One of the most successful of SAP Research's Living Labs is the SAP Future Retail Center in Switzerland which was established in August, 2007. The SAP Future Retail Center showcases twenty-two working demos in three scenarios along the supply chain: Future Retail Store, Retail Management, and In-Store Logistics. The center's close collaboration with partners and clients facilitates and nurtures the dynamic exchange of knowledge, technology, and experience. The mission of the SAP Future Retail Center is to conduct collaborative research in retail, trade, and logistics and to contribute to SAP's thought-leadership. In addition, SAP Research aims to populate SAP's product pipeline with leading-edge business solutions in retail, consumer products, and logistics fields.

"The Fast-Track Shopper" was one demo from the Future Retail Store scenario shown at CeBIT. The demonstration shows how shoppers will execute transactions in the future. For example, where all transactions are done via mobile phone (Mobile Retail), goods are tagged with RFID for easy scanning, and payment is done via mobile phone. Another demo from the Future Retail Store scenario is "Smart Shelf and Second Life". This is where shopping is done virtually in Second Life so that shoppers interact in a real-time representation of the SAP Future Retail Store. Items removed from the shelf virtually are actually taken from the shelf in its physical equivalent.

SoKNOS – Next Generation Public Security

Further to Prof. Dr. Heuser's discussion of SoKNOS, a demonstration of the SoKNOS research project was shown based on data from the February floods in Far North Queensland. SAP Research recreated a virtual flooding disaster to show the capabilities and benefits of innovative IT support in managing a crisis. The organizations involved in disaster coordination, including fire, ambulance, police, and the State Emergency Service (SES), are able to collaborate effectively thus aiding the decision making process and managing the disaster's impact. For example, to gain an overview of the situation, users of the system can view images uploaded from the mobile phones of people onsite, live streams from webcams installed next to river height measurement locations, and the allocation of resources throughout the affected area.

SAP Press Release

The following organizations are members of the SoKNOS project:

- SAP AG

- B2M Software AG

- Berlin Fire Department

- Cologne Fire Department

- German Research Center for Artificial Intelligence

- DHI-WASY GmbH

- German Police University

- ESRI Geoinformatik GmbH

- Fraunhofer IESE

- Fraunhofer IGD

- itelligence AG

- ontoprise GmbH

- Rutgers University (CIMIC)

- Technische Universität Darmstadt (TK, KOM)
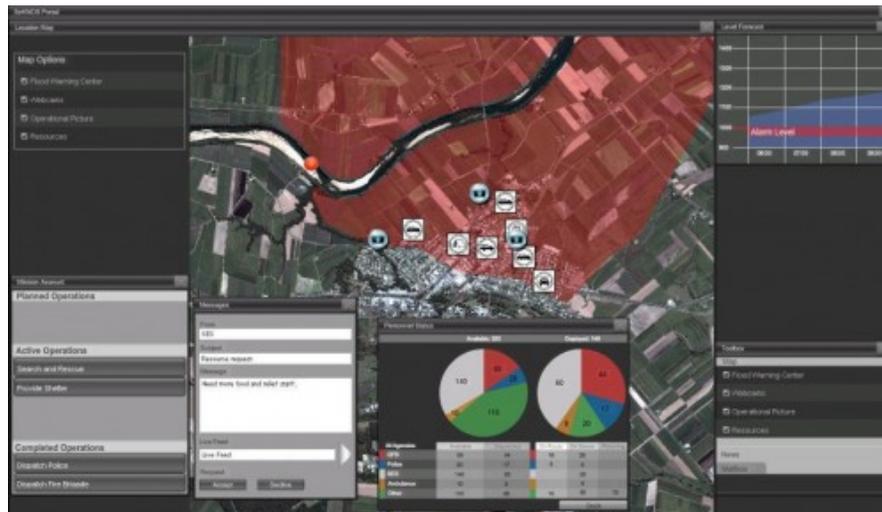
- Technische Universität Dresden (GIS)

- Westfälische Wilhelms-Universität Münster (IfGI)

Figure 6: Screenshot of the SoKNOS prototype

Further Information

Further information on **SoKNOS** can be found here.

Additional information on the **Future Public Security Center** can be found here.

Further information on the **Future Retail Center** can be found here.

The following people can be contacted for further information regarding the respective topics:

- **SAP Research in Real Life:**
  - Marek Kowalkiewicz, Senior Researcher, SAP Research Brisbane
    marek.kowalkiewicz@sap.com

- **Building a Transport and Logistics Living Lab:**
  - Marissa Takahashi, Business Development, SAP Research Brisbane
    m.takahashi@sap.com

- **SoKNOS / Future Public Security Center:**
  - Knut Manske, Director, SAP Research Darmstadt
    research.darmstadt@sap.com

- **Next Generation SOA:**
  - Alistair Barros, Senior Researcher, SAP Research Brisbane
    alistair.barros@sap.com

Related Content

- SOA and Online Banking in Australia
- SAP Research and Public Security

Copyright