

Smart Connectivity Solutions

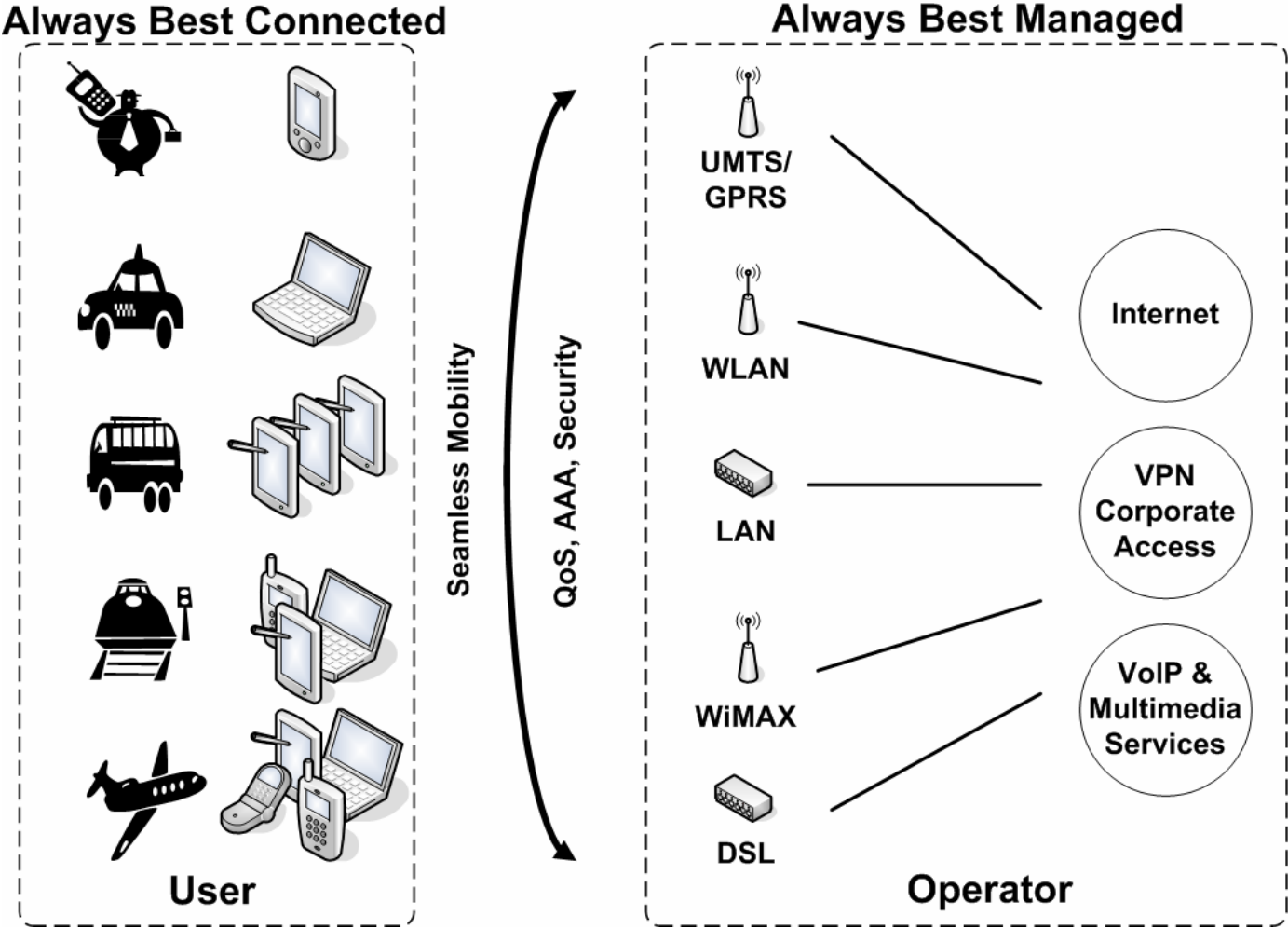
2006

Agenda.

- Market and Customer's Perspective
 - Product and Business Model
 - Strategy and Business Development
 - Company and Management
 - Financial Planning
-

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User / Operator Perspective

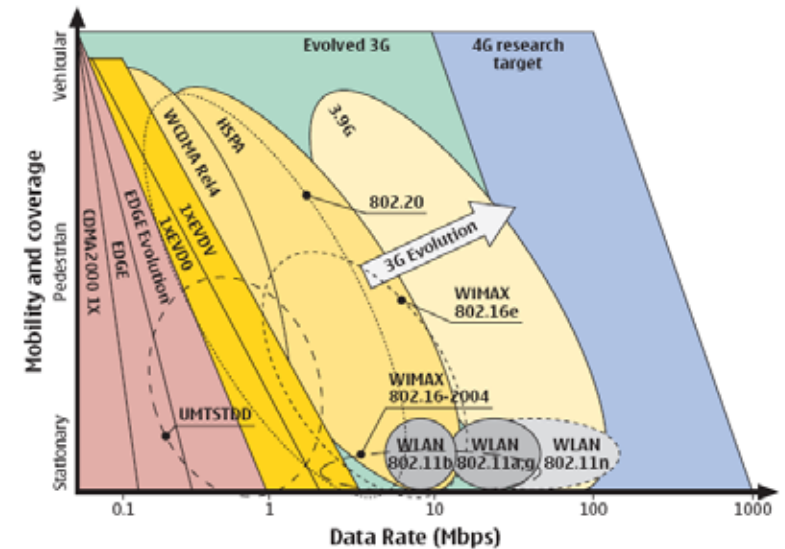


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Market / Customer Perspective

Evolution of networks

- Wired, wireless, and mobile networks are converging to an all IP heterogeneous network with immense complexity
- Underlying access network technologies like UMTS/GPRS, WLAN, and WiMAX have to be integrated in one overall heterogeneous network
- Operators have to provide their customers with hassle-free access to communication services while taking into account the best possible resource usage of the deployed infrastructures
- Seamless mobility, intelligent network selection and optimal resource usage are key success factors for next generation heterogeneous telecommunication networks or so-called 4G systems



Mobility and coverage vs. the data rates of different radio technologies
(Source: Nokia, „Radio Network Evolution“, white paper)

Requirements from the users' and the operators' perspective

- Always Best Connected (ABC) from the user's point of view
- Always Best Managed (ABM) from the operators' point of view

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Market / Sales

Target market segments

- Telecom network operators, mobile network operators, MVNOs
- Automotive industry
- Public services (paramedics/ambulance, police, etc)
- Public transportation (train, bus, taxi)
- End users, business and corporate users

Competition

- Single purpose solutions like Mobile VPN products or client side connectivity solutions from
 - BirdStep (Birdstep Intelligent Mobile IP Client, MN - Windows 2000, XP, Symbian)
 - SecGO (Secgo Mobile IP, HA, MN - Microsoft Windows 2000 and XP, Linux)
 - ipUnplugged (Universal Mobile IP Client)
 - iproam (Mobile VPN Client, Windows 2000, Windows XP, Pocket PC 2002, 2003, and Windows Mobile 5.0)

are targeting the operator market and business users, mainly focussing on mobile terminal devices.

Distribution Channels

- T-Mobile, T-Mobile MVNOs, T-Com, T-Systems

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PRODUCTS, TECHNOLOGIES, AND COMPETITIVE ADVANTAGES

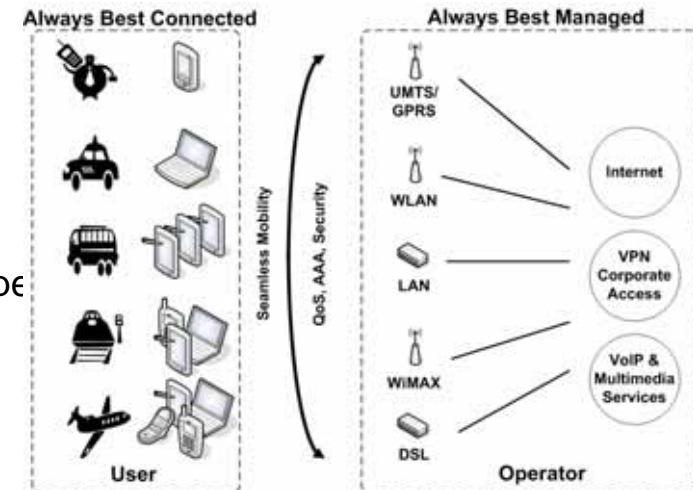
Product range

Smart Connectivity Solutions for operators:

- SCS for Laptops, PDAs, mobile phones
- SCS Gateways for public transportation, public services, military, transportation
- SCS for network management for mobile / fixed network operators, MVNOs or service providers

Smart Connectivity Solutions for manufacturers and end users:

- end users, corporate users, companies
- automotive industry
- public transportation sector
- public services sector



Competitive Advantage

Extensive trials have been conducted in cooperation with T-Mobile and the solutions have been optimized for T-Mobile's network architecture and existing infrastructure components.

Overall testbed infrastructure with different access technologies, core network components, terminal devices and testing equipment is available.

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PRODUCTS, TECHNOLOGIES, AND COMPETITIVE ADVANTAGES

For the development of the smart connectivity solutions an adequate environment is required. The network infrastructure testbed hosted and maintained at DAI-Labor will be available to satisfy this demand.

For the overall testbed infrastructure, investments of several million € have been done.

The testbed infrastructure provides the company with an ideal environment for development, testing purposes, and trials:

- UMTS/GPRS, WLAN, pre-WiMAX, Flash-OFDM
- Broad range of terminal devices
- Professional of testing equipment for conformance and performance tests



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Strategy and Business Development

Phase 1 (end devices, end users) (2006)

- Solutions for Laptops based on Windows XP
- Solutions for PDAs based on Windows Mobile 5 (e.g. MDA pro)
- Solutions for Linux based terminals (e.g. Nokia N770)



Phase 2 (mobile networks) (2007)

- Solutions for
 - Automotive industry
 - Public services
 - Transportation services

based on an embedded platforms



Phase 3 (Always best managed networks) (2008)

- Intelligent network management solutions for operators' with heterogeneous access network infrastructures
- Solution to support IPv4 & IPv6 networks and IPv4 & IPv6 applications in a mobility enabled environment



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Company & Management

Highly educated people of the Competence Center Network & Mobility at DAI-Labor are experts in the domains of

- next generation telecommunication network infrastructures
- integration of heterogeneous access networks
- mobility management in heterogeneous environments
- Mobile IP based terminal mobility
- IPv6 and IPv4 coexistence and migration
- Security and QoS

The focus is on

- always best connected paradigm (ABC) from the user's point of view
- always best managed paradigm (ABM) from the operators' point of view

With experiences in

- Foundation of privately financed companies in the TIMES (Telekommunikation, Internet, Medien, Entertainment und Software) domain
- Consulting services in the TIMES domain

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Financial Structure

Project Data

- 01.10.2002 – 31.01.2006 Project BIB3R funded by the BMBF (volume: 7.000k €, 50% funding, approx. 1.500k € for DAI-Labor)
- 01.01.2003 – 31.01.2006 Project Seamless Connectivity in co-operation with T-Systems (volume: approximately
- From now on DAI-Labor in-house project
- Team consists of 5 researchers and 5 student workers
- The testbed infrastructure (hardware, software, facilities – worth several million €) will be available for development, testing and trials for SCS

Capital Requirements

- Year 1: 5 employees + facilities @ TU Berlin
- Year 2: 8 employees + facilities
- Year 3: 15 employees + facilities + marketing

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