

Making Seamless Mobility a Reality for Swisscom Mobile



Customer

Swisscom Mobile AG
(Berne, Switzerland)

Summary

To complement the market's increasing demand for integrated services and to better capitalize on its diverse network infrastructure, *Swisscom Mobile* looked for a solution to enable seamless handover between access technologies.

Based on the *Living Systems Connection Agent (LS/CA)* software by *Whitestein Technologies*, *Swisscom Mobile* was able to deliver the world's first seamless mobility client application to its enterprise and private customers.

Key Benefits

- New services and revenue streams
- Improved ROI on networks
- Higher ARPU
- GSM Association Award recognition
- Enabled next generation of converged IP-based services

“Moving in areas like seamless connectivity [...] ensures keeping value creation and of course also ensures keeping the customer on our networks.” Carsten Schloter, CEO, *Swisscom*

Business Challenges

Swisscom Mobile, based in Berne, Switzerland is the premier provider of mobile telecommunication and public wireless network access in Switzerland.

Commoditization

As a market leader and innovator, *Swisscom Mobile* had been keenly aware of a most significant development since the beginning of the new century: voice traffic decreasing continually and applications increasingly converging towards IP-based infrastructures. These trends were leading to an increasing commoditization of the transport infrastructure, which was posing a serious challenge to any business model relying on it too much.

Service-orientation

The technology-centric approach of the past was not going to remain the strategy for long-term success. Moreover, the commoditization of the transport offering was heralding a more service-oriented approach. Enterprise and private customers were starting to demand an individual combination of services that were not dependent on the availability of a certain access technology.

Diverse Infrastructure

However, due to the inevitably disparate nature of technology innovation cycles and ROI expectations, *Swisscom Mobile* was offering its growing portfolio of services over a number of different network technologies (at the time GPRS, UMTS and WLAN, later also EDGE and since 2006 HSDPA).

“Today's answer [...] is to strive for greater and greater coverage of homogeneous technologies. Unfortunately, this approach is inherently limited and will fail to achieve the true anytime, anywhere, mobile connectivity envisioned.”

Wolfgang Weber, CTO, *Swisscom Mobile*, in July 2003

Business Opportunity

For *Swisscom Mobile* it became clear that a virtually transparent network landscape with less or no boundaries for the customer was going to be a crucial proposition of a service-centered offering. It was therefore of key importance to find a solution that would realize their vision of one cumulated, interruption-free mobile network, offering automatic and seamless mobility between the underlying network technologies: connect once and remain best connected, anytime and anywhere. By keeping their customers securely connected to this ‘unlimited’ network and thus to their applications, *Swisscom Mobile* would be able to continue their first-class service wherever and whenever private networks were not an option. This promised to increase the use of existing services and network utilization and to ultimately enable a new generation of converged services.

“Seamless handover will simplify users' lives and enable new services.”

Wolfgang Weber, CTO, *Swisscom Mobile*, in July 2003

Solution

Swisscom Mobile needed a partner that could help realize its “Mobile Unlimited” vision in order to capitalize on these opportunities. For this world-premiere innovation, said partner would have to show great technology expertise while at the same time not being entrenched in legacy approaches. *Whitestein Technologies* was delighted to be chosen over a major vendor based on these qualities.

After successfully preparing a demonstrator for *Swisscom Innovations*, *Whitestein Technologies* was asked to create a solution capable of seamless mobility together with *Swisscom Mobile*. The offering had to be ready for release only six months later to coincide with the national launch of the UMTS service.

Based on its *Living Systems Connection Agent (LS/CA)* software *Whitestein Technologies* delivered a novel client solution, the “Unlimited Data Manager (UDM)”. It made automatic and seamless connections to and transfers between networks – without the user or applications being affected. Of particular note at the time was the rigorous adherence to the predominant standards and a tight integration with most corporate VPNs, which was to be a key proposition for affluent enterprise customers.

“[T]he system is extremely user-friendly. Thanks to the fact that managers now have mobile access to corporate data, the Internet, and e-mails, they can save time and work more flexibly because they are no longer tied to their workplaces.”

Stephan Marugg, IT Manager, Würth Group (worldwide trading group)

Results

Already in the first year of operation, “Mobile Unlimited” attracted over 10,000 customers. In February 2005, the solution won the renowned “GSM Association Award for Best Mobile Enterprise Application” for *Swisscom Mobile*.

With the *LS/CA*-based solution, *Swisscom Mobile* is meeting its customers' demands for seamless mobility and keeps them using its own network of services rather than searching for access. Hence, the solution increases utilization of network resources and leads to a higher ARPU and ROI.

Combining the strength of its diversified network infrastructure, *Swisscom Mobile* continues to be well positioned against its competitors to continue offering next-generation data services faster and more ubiquitously.

Whitestein Technologies' solution also tackles the inherent discrepancies in security and QoS between (operator-controlled) cellular networks and (best-effort) wireless networks by relying on industry standards like Mobile IP and autonomic self-management principles.

“Swisscom Mobile's success as a global innovation leader also relies on outstanding partners like Whitestein Technologies. They provide us with superior technology and implementation skills and show an exceptional degree of industry knowledge and proactive thinking.”

Erich Jungo, Senior Project Manager & Member of the Management, *Swisscom Mobile*

About Whitestein Technologies

Whitestein Technologies is a pioneer of self-adaptive enterprise software. We create software that dynamically responds to changing conditions so it can optimize your processes and infrastructures in real-time. To stay ahead, we are continuously advancing our innovations in the field of autonomous software agent technology.

Whitestein Technologies was founded in 1999 and is privately held. The firm is headquartered in Zürich (Switzerland) with several global offices.

Powerful Features

- ❑ Front end of the solution consists of an easy-to-use dashboard with one click connect
- ❑ Detects all available connections
- ❑ Prioritizes them according to user-customizable rules
- ❑ Automatically connects based on preset configurations
- ❑ Reconnects after interruptions
- ❑ Manages a seamless handover to the next network where/when necessary
- ❑ Maintains one static IP address for the client's network interfaces
- ❑ Allows VPN and applications to remain uninterrupted and users undisturbed

Technical Footprint

- ❑ Supported platforms: Microsoft® Windows® XP/2000/Vista™/7
- ❑ Supported network technologies: WLAN (802.11 a,b,g,n); HSDPA, UMTS, EDGE, GPRS; Ethernet
- ❑ WLAN security: WEP, WPA, WPA2 (IEEE 802.11 i); EAP-LEAP, -PEAP, -TLS, -FAST (IEEE 802.1x) for public networks; EAP-SIM, WISPr, HTTP form-based for public hotspots
- ❑ Application integration: COM API for Mobile IP SDK; command line API for overall functionality
- ❑ VPN support: Nortel® VPN; Cisco® VPN; Checkpoint® SecuRemote®; Microsoft® L2TP and PPTP; F5 Networks® FirePass®; AT&T® VPN and others

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