

Zeitschrift: Comtec : Informations- und Telekommunikationstechnologie = information and telecommunication technology
Herausgeber: Swisscom
Band: 77 (1999)
Heft: 10

Artikel: The wireless world in the next millennium
Autor: Schwartz, Larry
DOI: <https://doi.org/10.5169/seals-877067>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 02.07.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

The wireless World in the next Millennium

The world stands on the threshold of a new era of computing and telecommunications as Internet-based networks compete with traditional circuit-switched public networks to be the infrastructure of choice for new enhanced services. The next generation of communications networks will provide the foundation to support the explosive growth of "eBusiness" and usher in a new breed of applications for e-commerce, voice-over-IP, distance learning and e-tainment, among others yet to be realised.

Compaq is uniquely positioned to be a driving force for the convergence of communications and computing technologies. Consider some of these numbers:

LARRY SCHWARTZ

- All of the world's top 35 telecom companies use Compaq systems
- Compaq platforms handle 80% of the toll-free calls and 75% of the emergency calls that originate in the United States – more than 200 million calls a day.
- We are the market share leaders for underlying platforms for Service Control Points (SCP) with 29% of market.
- We are the world leaders in SCPs deployed for off-switch services, with 425 SCPs deployed globally.

While Compaq is involved in all aspects of computing and communications, in the fastest-growing telecommunications segment – Wireless – Compaq's presence significantly exceeds every other telecommunications equipment supplier, according to a 1998 study by Venture Development Corporation. Today, there are well over 30 million subscribers depending on Compaq's Wireless Intelligent Networking systems for wireless services and this number is expected to double over the next year.

The Four Phases of Wireless Growth

Before looking into the future, it is useful to understand the four major phases that the Wireless segment has already experienced.

The first phase was "Dream Land". In an environment of regulated monopoly/dupopoly, an operator's strategy was simple. Publicise your name, offer wireless dial tone and charge premium prices. High-end users like lawyers, real-estate agents and doctors were willing to pay the high

price for "go anywhere" wireless voice service.

The next phase was "Home Expansion". As the number of high-end users reached saturation, the need for expanding the served available market became apparent. To extend the served market from business into high-end residential, pricing packages were created (e.g. security packages for a fixed fee per month and a specified number of minutes of use.) This allowed the market to continue to grow. The third phase can be called "Big Time Choice". With B and C- Band licenses came new small PCS operators offering expanded choice for users. The incumbent suppliers competed on area of coverage while the new entrants competed on quality of digital voice. Bundled services, such as private dialing plans, voice mail and calling number became the new competitive playing field as operators began to compete for existing as well as new subscribers. Again, the overall market penetration grew.

The fourth major phase of wireless competition began with the introduction of One-Rate service (pioneered by AWS). This effectively allowed wireless operators to compete for local and long distance business with Wireline operators and long distance carriers. With no additional charges for roaming or long distance, the market penetration continues to climb to new levels.

Wireless Futures

As this millennium fades and a new one begins, one major marketplace phenomenon and three wireless industry innovations can be expected to come together to drive the wireless industry to an entirely new stage.

The first of the three wireless industry innovations is the two-week battery pack that enables people to have their wireless phones turned on all the time.

The second is high-speed data access that makes communication to the Internet practical.

The third of the innovations is prepaid service, which essentially turns a cellular phone into a roaming debit machine. The marketplace phenomenon that will synergise with these innovations is, of course, the Internet. The Internet is creating unprecedented access to information and e-Commerce. People can see, buy or trade virtually anything from Shares on E-Trade to Furbys on E-Bay. As the content power of the Internet and the anywhere/anytime access power of digital cellular come together, we are entering the fifth phase in the expansion of the wireless segment. This is the stage where the wireless/wireline walls come tumbling down and competition for subscribers will increase dramatically. This stage, which is just beginning, will be the stage of premium services. The best in class service providers will prevail and applications - some of them almost science fiction-like - will drive the marketplace. For example:

- A 12-year-old who just placed a bid on E-Bay for a Furby gets outbid. A short message is automatically sent to his or her pager letting them know and asking do they want to raise their bid?
- Somebody's stock trade limit has been reached. Her on-line broker calls on the cellular phone and asks whether to proceed with the trade. The reply comes by simply pressing a yes/no button on the dial pad to confirm the transaction.
- A prepaid wireless cell phone can be used to buy a coke at the store. The vendor enters the cell phone number and the amount, and the buyer enters their Personal Identification Number – or PIN – to accept the charge. The phone actually becomes the point of sale. A similar example is that a phone can be used to automatically transfer funds from a bank account to the grocery store, much as the debit/credit card terminal works today.

This not a futuristic wish list. At Helsinki Airport it is already possible to buy a drink from a vending machine using a GSM cell phone. I get information about stock trade limits on my cell phone today. And in several European countries 9 to 12

year-olds carry kiddy phones with pre-set numbers that enable them to reach Mum, Dad or Grandma in case of difficulties.

Accelerating Growth Through Partnership

It is Compaq's intent to accelerate the introduction of the multitude of wireless data and voice services being enabled by the Internet and mobile data technology. For instance, Compaq – also a leading computer supplier to financial institutions worldwide – is actively working with several wireless operators and financial clearinghouses. The intention is to accelerate the growth of the wireless e-Commerce market, by enabling electronic fund transfers to be made through a wireless telephone. The cellular phone is effectively becoming a mobile ATM machine. By punching a few buttons or by merely speaking into a cell phone, consumers will be able to access bank accounts or make a purchase. Compaq is also actively partnering with telephone equipment manufacturers to combine their Radio Frequency expertise with Compaq's experience in program-mability and content access. This will enable mobile access to a wide variety of internet-enabled services ranging from information services to mobile banking. Dan Hesse, President of AT&T Wireless, said recently that it was his goal to make the Wireless home office as ubiquitous as the wireline dial tone. Compaq today is actively engaged in "wireless enabling" its extensive portfolio of laptops, PDA's and next generation information appliances. The goal is to ensure that Compaq's customers are at the forefront of the wireless e-Commerce market of the future. Imagine using a laptop or Palm Pilot without a phone hookup to access e-mails, the company server and the Internet. 9.4

Larry Schwartz, Group Vice President, Compaq Telecommunications Division, is responsible for Compaq's worldwide telecommunications activities including wireless, wireline and IP-telephony applications. He was named to this position in July 1999. Prior to this, Schwartz served as Vice President and General Manager, Compaq Telecom Network Solutions, responsible for all IN and wireless applications.

« FollowMe^{NATEL®} »

Wer über ein Festnetz- und NATEL-Abo von Swisscom verfügt, kann vom neuen intelligenten Umleitsdienst FollowMe^{NATEL®} profitieren.

Wenn der Dienst geschaltet ist, werden alle Anrufe, die auf den Festnetzanschluss gehen, automatisch auf das NATEL umgeleitet. Ist das Handy ausgeschaltet, klingelt das Telefon ganz normal zu Hause. Erfogt auch dort keine Antwort, meldet sich die Combox zu Wort. Der Umleitsdienst FollowMe^{NATEL®} bietet 100% Erreichbarkeit und muss nicht ständig ein- und ausgeschaltet werden –

er ist Tag und Nacht betriebsbereit. Wenn dies nicht erwünscht ist, wird sich die Combox melden. Die Umleitungen sind billiger als herkömmliche Dienste. Die Umleitung kostet 50 Rappen pro Minute. Abonnements- und Einschaltgebühren sind gratis. Info: Gratisnummer 0800 880 110, Swisscom-Shop oder Homepage www.swisscom.com/followme

Chi dispone di un abbonamento Swisscom per la rete fissa o per il Natel, può approfittare del nuovo e intelligente servizio di deviazione FollowMe^{NATEL®}.

Se il servizio è attivato, tutte le telefonate che giungono sulla rete fissa vengono deviate sul vostro Natel; se il vostro portatile è disattivato, suona il telefono di casa; qualora anche lì non risponda nessuno, s'inserisce il vostro Combox. FollowMe^{NATEL®}, il primo servizio di deviazione intelligente che consente di essere raggiungibili al 100 % e non deve essere continuamente attivato e disattivato, è a vostra disposizione giorno e notte. Quando non desiderate rispondere, si inserisce il Combox. Le deviazioni non costano molto, anzi sono più economi-

che dei servizi tradizionali. Bastano sfr. 0.50 al minuto che vengono addebitati unicamente quando le telefonate sono deviate dalla rete fissa al portatile. Il canone e le tasse di attivazione? Non esistono per FollowMe^{NATEL®}. FollowMe^{NATEL®} è la soluzione ideale per le persone sole, le famiglie con collegamento ISDN, ma anche per le piccole imprese. Qualche domanda? Il numero gratuito 0800 880 110, il vostro Swisscom Shop o il sito Internet www.swisscom.com/followme sono a vostra disposizione per qualsiasi domanda.

Saviez-vous que, si vous êtes titulaire d'un abonnement au réseau fixe et d'un abonnement NATEL de Swisscom, vous pouvez profiter des avantages du service de déviation FollowMe^{NATEL®}?

Lorsque FollowMe^{NATEL®} est activé, tous les appels entrant sur votre raccordement fixe sont automatiquement déviés sur votre portable. A moins que ce dernier ne soit éteint: la sonnerie retentit alors normalement à votre domicile. Et si personne ne décroche, votre répondeur intégré Combox enregistre les messages pour vous. FollowMe^{NATEL®} – le premier service de déviation qui a de la suite dans les idées – vous assure une accessibilité totale. Il vous suffit de l'activer une fois pour toutes et il se charge de vous transmettre vos appels à votre convenance. Et si vous ne souhaitez pas répondre, Combox prend la relève. FollowMe^{NATEL®} ne vous

ruinera pas, puisqu'il est meilleur marché que les services traditionnels du même genre. En fait, seule la déviation de votre raccordement fixe sur votre portable est facturée. Et ce, au prix modique de sfr. 0.50 la minute. Qui plus est, FollowMe^{NATEL®} ne connaît ni frais d'abonnement, ni frais de mise en service. FollowMe^{NATEL®} est la solution idéale pour les personnes vivant seules, les familles disposant d'un raccordement ISDN ou les petites entreprises. Si vous souhaitez un complément d'information, le numéro gratuit 0800 880 110, votre Swisscom Shop ou la page internet www.swisscom.com/followme vous fourniront les renseignements voulus.