



Rich Communication @vantage

Siemens Communications Mobile Networks

Bringing a wealth of com power to the mobile world

IP Multimedia Subsystems (IMS) are enriching the way we communicate and collaborate. MNOs and FNOs are investing in IMS to capitalize on IP-based multimedia services' potential. To do this, they need a powerful enabler to create attractive services that are based on familiar applications. That inspire and delight users. And that swiftly transform investments into real revenue flows. Rich Communication@vantage is the answer operators are looking for.

SIEMENS

Engineered to enrich the mobile communication experience

Dictionaries define "rich" as an adjective that means having abundant resources; well-supplied; worth much. In the face of fierce, frequently predatory competition, the notion of "rich" communication with substantial subscriber appeal sounds like music to MNOs' ears. But what does Rich Communication@vantage entail? A real-world, hands-on user scenario highlights its advantages far better than any lab report:

That was then

Picture this: John and Peter are en route to a walk-through at a remote site. While Peter is off renting a car, John is getting their gear ready for transport. He needs to know what will fit in the car and what to leave behind. John calls Peter's cell phone, but Peter isn't available. With conventional com, John can leave a voice message, but he can't know when and if Peter will hear it. He has no choice but to call back later, perhaps several times if Peter is still unavailable.

This is now

With Rich Communication@vantage, though, John has a phone book – he calls it his buddy list – that tells him when and how he can reach Peter. Before he bothers to place the call, John can see Peter is unavailable to take it, say, because he's riding the subway. A few minutes later, the phone book indicates that Peter is now available.

John calls Peter and asks about the size of the car's cargo bay. John can't tell Peter exactly how much cargo space they'll need, so he sends Peter a picture. Peter can see immediately that the kit won't fit.

Richer communication spells...

This illustrates the multi-media capability of Rich Communication@vantage: Call & Share enables users to send pictures or videos while they're conversing. If need be, the voice call can even be transformed into a video call on the fly.

More convenience...

Cut to the next scene: The two are on the road in the rental car. They want to let their colleagues at the site know that they are on their way and when they will arrive, as well as arrange a meeting place at everyone's convenience. Using his handy little phone book, John assigns all his contacts on site to an ad hoc group. He sees that they are all available and sends an instant message indicating their arrival time and asking about a rendezvous point.

More communication power...

This illustrates the multi-party/presence capability of Rich Communication@vantage: Instant Messaging and Chat (IMC) enables the user to send a message and even chat with a group contingent upon availability.

More satisfied users...

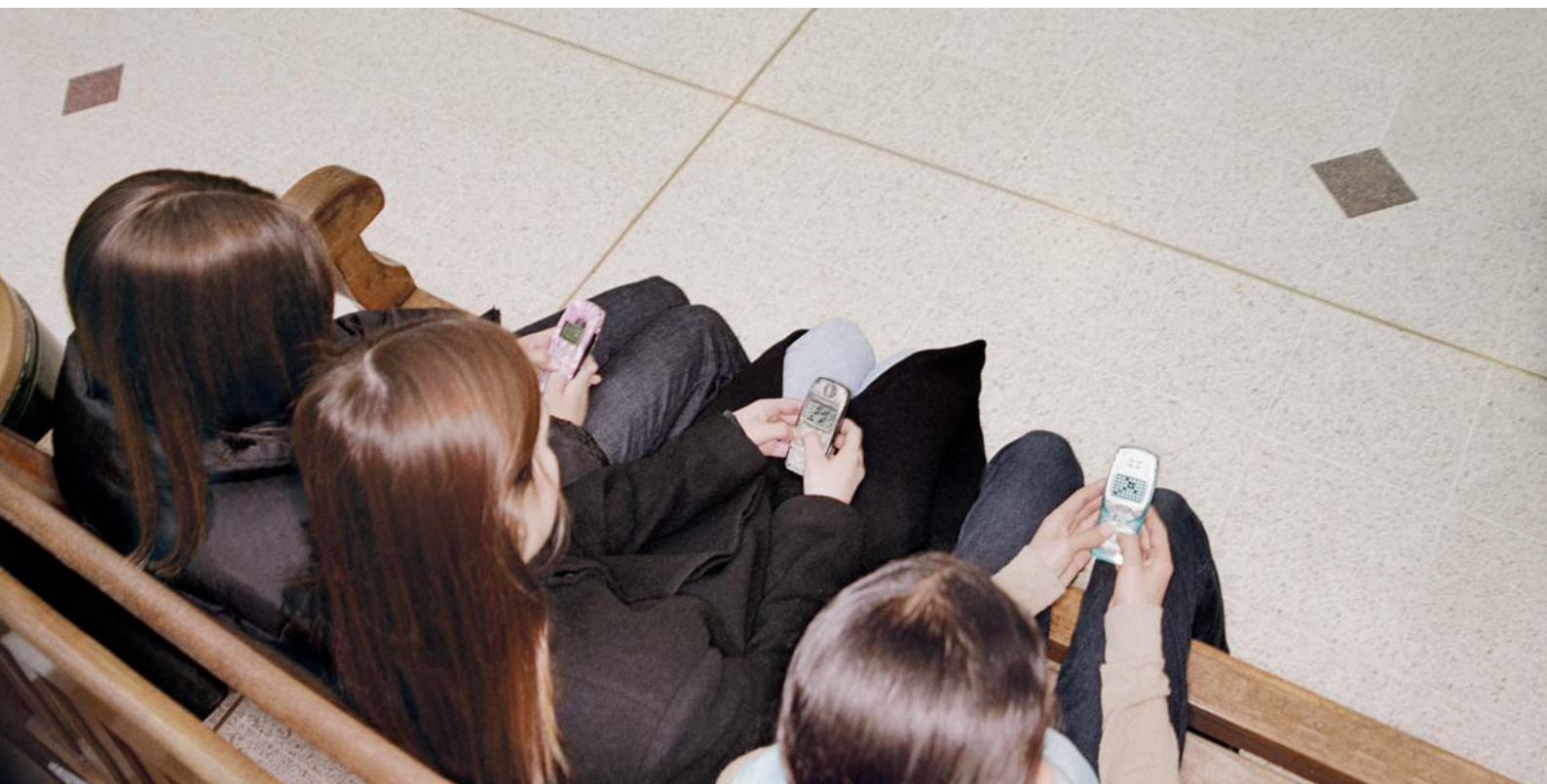
Meanwhile, the organizer on site also takes advantage of the group function, opting to inform everyone via the ultra convenient Push and Talk over Cellular service: "We'll meet at the reception near the main entrance at 9:30 sharp. See you then!"

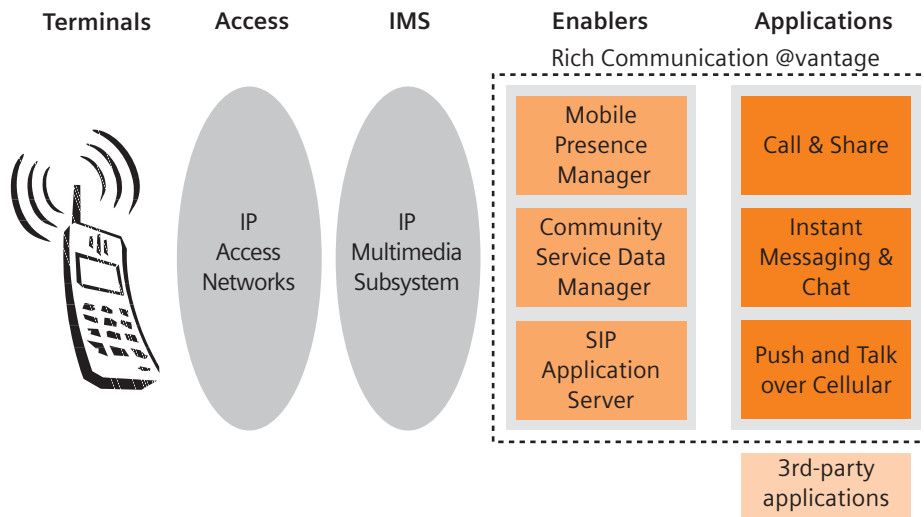
It's that multi-party/presence capability again: Push and Talk over Cellular allows one party to push a button and speak while other(s) listen – without having to dial up a call first! What's more, Push & Share is on the horizon, a future service that does for images and camera views what Push and Talk over Cellular does for voice.

Moving from successive to simultaneous com

These are just a few of the many ways that Siemens is taking remote person-to-person interaction to the next level.

Whereas in the past users could only employ disparate means of communication successively – say, by MMSing a picture after concluding a phone call – Rich Communication@vantage affords them simultaneous communication options. And MNOs a golden opportunity to up air time.





User surveys echo subscribers' wish for more sophisticated com tools. To put these tools into users' hands, Rich Communication @vantage embraces the big four M's: It is multi-modal (voice call, messaging, walkie-talkie mode), multi-medial (text, voice, image, video), mobile and multi-party enabled (one-to-many; many-to-many). On top of that, it is context-sensitive, meaning that it accommodates and processes presence and availability info. And as an IP-based concept, it is future-proofed to protect MNOs' investments.

Bridging the great media divide

Today users must commit to a com option first – say a voice call, SMS or MMS – without knowing if the intended party is available or the selected option is best suited for the task at hand. That is about to change: Courtesy of a service enabling MPM (Mobile Presence Manager) and a phone book, users know up front if a party is available, and which access option is best. They can see, meet and greet each other online, courtesy of presence and availability info. And while today a media gap separates voice calls and SMS/MMS-based data communication, Rich Communication @vantage enables voice, text, images and video to be combined at will – and all within the same session.

Three pillars provide the underpinning for Siemens Rich Communication@vantage – Call & Share, Instant Messaging & Chat, and Push and Talk over Cellular. These three intriguing services merit a closer look:

Call & Share – Show and tell for the mobile generation

In a nutshell, Call & Share is the ability to instantly share video and data files with a contact during a voice call. Multimedia may be shared repeatedly during the session, and the parties can even opt to transition from audio to video on the fly.

Call & Share affords users considerable benefits:

Image transfer:

- Immediacy: Unlike with MMS, a picture is sent straightway and is instantly viewable at the other end.
- Simplicity: Handling is far easier than with MMS. The picture is sent at the touch of a button, on demand without having to search for the other user's phone number or first terminate the session.

Video transfer:

- Convenience and freedom of choice: Video streaming content is available on demand. And in contrast to a UMTS video call, both participants can truly interact, taking turns on sending their camera views.
- Cost efficiency: Multimedia content is delivered on demand, ensuring cost-efficient utilization.

And it brings tremendous benefits to network operators:

- Call & Share services allow them to enrich conventional calls and capitalize on new and very persuasive business opportunities.
- Like a conventional phone call, Call & Share is a real-time service. And real time translates to air time.
- Adding multimedia content to a call generates additional PS traffic to up the MNO's earnings.

Instant messaging and chat go mobile!

Instant Messaging and Chat, also known as Mobile IM/Chat, is similar to Internet messaging applications such as AOL Instant Messenger and Microsoft.NET Messenger. IMC endows cell phones with chat capability, with the added bonus that only a presence-enabled service can bring. The procedure is ingeniously simple: The user defines contacts in his phone book and assigns them to groups and lists via Community Service Data Manager (CSDM). He can then view their presence and availability statuses and define his status. And he can send and receive messages with text, pictures, emoticons, audio, etc. at will, even across different operators' networks and to and from multiple users.

Users enjoy:

- Spontaneous one-to-one, one-to-many and multi-party chatting enriched with multimedia.
- Presence/availability info for an unprecedented look-before-you-leap experience. The user knows ahead of time if and how the desired contact is available.
- User-friendly clients that make it easy to use instant messaging services via a presence-enabled phone book.
- Familiar, Internet-style messaging via cell phone.
- Convenient mobile instant messaging and chatting as lifestyle enhancements: Rather than being tied to PCs, users can chat on the go.

And the network operator enjoys:

- Rising revenues as chatting shifts from the Internet to mobile phones.
- Forward-looking investment security courtesy of OMA and 3GPP standards and early industry specifications (IETF SIP/SIMPLE, OMA IMPS).
- Rising demand for IMC services due to widespread availability of IMC-enabled handsets.
- Seamless integration of existing messaging options such as SMS and MMS.

Push and Talk over Cellular

Push and Talk over Cellular leverages new technology to bring old-school walkie-talkie capability to cell phones. It affords users fast and easy means of quick one-to-one and one-to-many communication. With the Mobile Presence Manager (MPM) and the Community Service Data Manager (CSDM) providing the functionality, a push of a button is all it takes to access a presence-enabled list, select the desired contact(s) and share a voice message with family, friends or fellow workers. The same goes for small businesses such as couriers, taxi cabs, hotels and repair services that use land mobile radio to communicate.

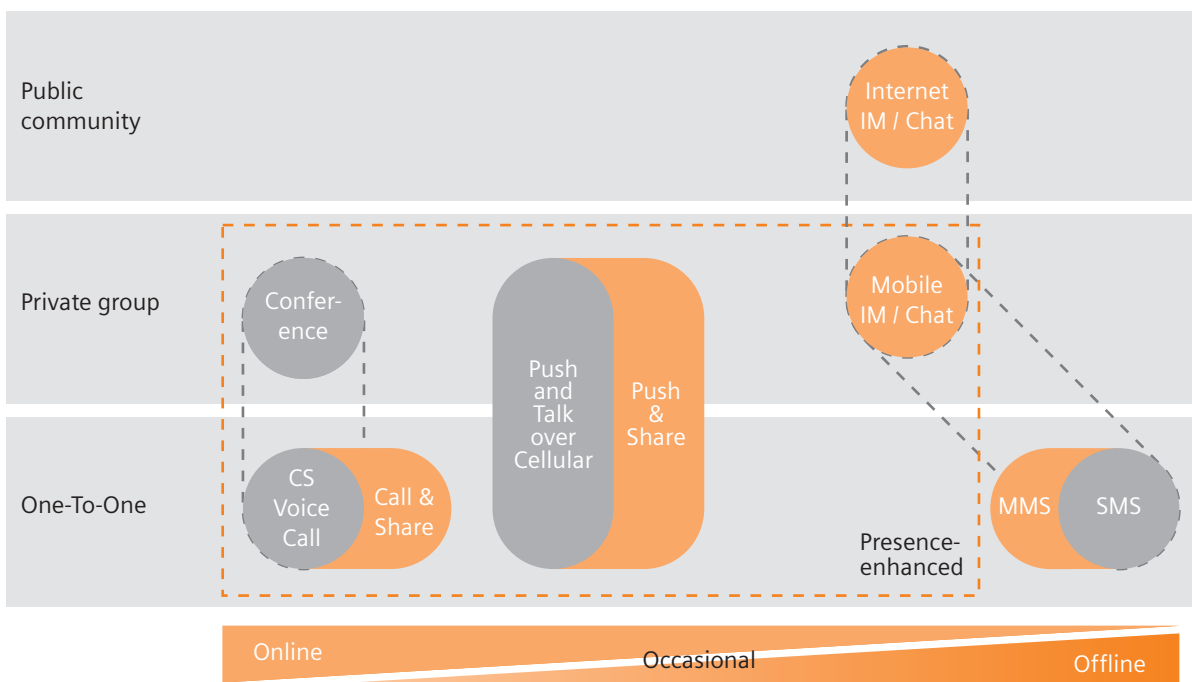
Users are sure to relish

- The convenience of an always-on functionality.
- Fast, intuitive remote communication with a real-time, up-close feel.
- Excellent coverage and connection quality, particularly in contrast to conventional radio.
- User-friendly clients that provide Push and Talk over Cellular swiftly and simply, at the touch of a button.

The network operator will savor

- Other operators' experience that users with Push and Talk over Cellular features on their phone tend to use their handset more – with the revenues boost this entails.
- The opportunity to plant a footprint in a market with some 305 million subscribers by 2010 according to forecasts.
- The revenues growth that a whole new realm of voice services brings
- The peace of mind that comes with knowing investments are secure because the Siemens' Push and Talk over Cellular solution complies with 3GPP and OMA standards (PoC, XDM and PAG) and supports access technologies such as GPRS, EDGE, UMTS, TD-SCDMA and WLAN.
- A solution that, unlike other vendors' proprietary solutions, offers the tremendous advantage of standards and incorporates IMS@vantage, enabling the network operator to bring further IMS-based services to market.

Even images and videos can be exchanged with Push & Share.



● Rich Media (pictures, video, files, ...)

The Siemens end-to-end solution encompasses:

2.5G and 3G networks and technologies, IMS@vantage and Rich Communication @vantage, which comprises service enablers, applications and clients.

Enablers:

- A Mobile Presence Manager (MPM) that endows phone books with presence & availability info
- A Community Service Data Manager (CSDM) that adds multi-party capability to the equation and serves to manage groups and lists
- A SIP Application Server for third-party applications

Applications:

- Call & Share
- Instant Messaging and Chat
- Push and Talk over Cellular

Clients:

Clients are pre- or user-installed applications on end devices. Siemens partners with top providers to develop and market clients that ensure Rich Communication@vantage and other OMA-standardized third-party services' interoperability with diverse vendors' end devices.

Why Siemens?

Operators who turn to Siemens for Rich Communication@vantage get more than merely an end-to-end solution. They get a future-focused, IP-based package with a full set of features that covers all the bases.

Our brand of rich communication solution is multi-modal, multi-medial, multi-party-enabled and context-sensitive for presence and availability info. Best of all, it lets you craft any combination of services you wish to satisfy your users. When you opt for the

standard-based solution by Siemens, you are opting for all the future-proof investment protection that the driving force in IMS standardization brings to the table.

Rich Communication@vantage is all about modularity. Comprised of enablers and individual applications, it is an à la carte offering that lets MNOs mix and match services at will. What's more, a rich selection of applications is required to make IMS a rewarding proposition for MNOs. Siemens' IDP (IMS Developer Program) affords application developers worldwide access to an Internet portal offering information and tools. This encourages third parties to develop more applications, which Siemens tests and certifies. All this translates to greater freedom of choice and revenues potential for MNOs. And it speeds up new service delivery while driving development costs down

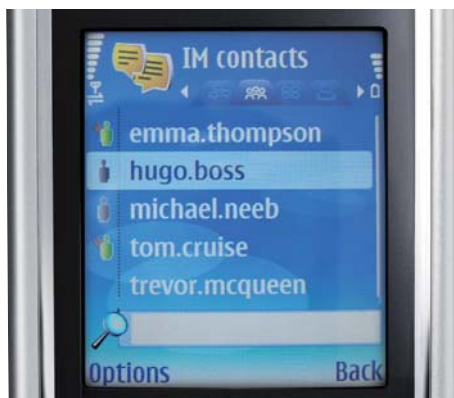
Operator benefits at a glance

- Rich Communication@vantage provides the convenient, easy-to-handle communication channels that subscribers want, are willing to pay for, and enjoy using. And that translates directly to revenue.
- Booming multi-modal, multi-medial and multi-party communication will bring new revenue flows on top of the returns from today's one-to-one communication.

- To preserve investments for many tomorrows to come, the Siemens solutions is engineered to support IP/SIP-based communication and conform with prevailing industry standards such as 3GPP and OMA.
- Rich Communication@vantage is not only IMS@vantage-enabled, it is also multi-vendor-enabled for other standard-compliant IMS.
- Rich Communication@vantage targets mass consumers and business users, enabling MNOs to tap the potential of both segments with the same solution.
- Rich Communication@vantage bridges the gap between mobile and fixed subscribers, and significantly grows the user base for mobile applications and services.

User benefits at a glance

- The "rich" in rich communication also captures the user experience in a word. It lets users experience a service offering unrivalled in content richness and enjoy a communication sensation that they will want to use time and again.
- Unequaled ease of use. These services combine sophisticated multimedia communication with simple handling. User-friendly clients literally put these services at users' fingertips. And a touch of a button is all it takes to access the presence-enabled phone book and use them. Context sensitivity provides presence and availability info, adding a new dimension to familiar services such as MMS. What's more, Siemens service enablers bring the benefits of uniform handling to other services beyond Rich Communication @vantage.



2.5G	Second and a half Generation [mobile networks]
3G	Third Generation [mobile networks]
3GPP	Third Generation Partnership Project
CDMA	Code Division Multiple Access
CSDM	Community Service Data Manager
EDGE	Enhanced Data rates for GSM Evolution
FNO	Fixed Network Operator
GPRS	General Packet Radio Service
IDP	IMS Developer Program
IETF	Internet Engineering Task Force
IM	Instant Messaging
IMC	Instant Messaging and Chat
IMPS	Instant Messaging and Presence Service
IMS	IP Multimedia Subsystem
IP	Internet Protocol
LAN	Local Area Network
MMS	Multimedia Messaging Service
MNO	Mobile Network Operator
MPM	Mobile Presence Manager
OMA	Open Mobile Alliance
PAG	Presence and Availability Group
PoC	Push to Talk over Cellular
PS	packet switched
SIMPLE	SIP Instant Messaging and Presence Leveraging Extensions
SIP	Session Initiation Protocol
SMS	Short Message Service
TD-SCDMA	Time Division Synchronous CDMA
UMTS	Universal Mobile Telecommunications System
WLAN	Wireless LAN
XDM	XML Document Management
XML	eXtended Markup Language

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