

The new 'Mobile' Internet

The Internet is presently already a part of many people's lives around the world. New modes of accessing the Internet are now available. Consumer today also have the option of staying connected even while they are on the move through wireless devices such as mobile phones and PDAs. These new modes of access bring tremendous value to the end user, breeding a new generation of users, applications and services.

Imagine going shopping & pushing a button to show your husband the exact shade of paint you want for your new house while he is at work and getting a thumbs up message back from him immediately. Or knowing when an old schoolmate happens to be in the same city as you so you can finally get together for dinner and catch up with each other. Or capturing your toddler in action & sending the multimedia clip to his grandparents. Or playing an interesting game of chess with a friend in another city while your both on the train ride home from work.

These trends have also resulted in the coining of a new term – the 'Mobile' Internet – a reference to mobile access to the Internet. A number of developments on the device and network have made the Mobile Internet possible. This article discusses these developments and the new possibilities opened up by the Mobile Internet.

Yesterday's mobile phone has today morphed beyond recognition into a device that far exceeds its basic function of providing voice telephony service. As has been the case with personal computers, technological advances in handsets have allowed mobile manufacturers to put more into the same or smaller form factors. So the mobile phone today is a device that, in addition to providing familiar telephony functions, takes on the role of a multimedia communicator, personal organizer, camera, radio, voice recorder, information, entertainment and connectivity device all rolled in one! In many instances, the mobile phone takes on specialized functions such as a walkie-talkie, gaming console, location or identification device too.

There are other ways in which the mobile phone has changed and is going the way of the personal computer – it runs its own operating system (Symbian, Windows Mobile, Linux or one of the myriad proprietary ones) and contains far more software content in the form of standard and custom applications than ever before. You can now download and install software on your phone and customize its look and feel.

And finally, your mobile phone or PDA now supports Wireless IP (Internet Protocol) access making it a window to the World Wide Web or the Internet, and consequently a part of the Mobile Internet.

Accompanying changes on the mobile phone is the evolution in underlying wireless network technology. Advances in network technology have resulted in increased bandwidth and new service options for the consumer. Mobile operators are rolling out new generation infrastructure. Circuit-switched 2G (second generation) cellular networks are giving way to 2.5G and 3G (third generation) converged (voice and data) packet-switched cellular networks. Other types of wireless network technologies such as 802.11/WiFi and Bluetooth are finding their way into mobile handsets as well as public and private networks all over the world. All of this, of course, gives the end user a number of different options to connect to the Internet.

The new Mobile Internet however goes beyond mere access to the Internet from your mobile. Today people no longer mean WAP (Wireless Access Protocol) or even web browsing when they talk of the Mobile Internet. The drive to communicate in different ways across different networks has created the need for an internet-friendly signaling standard that supports both voice and data services. So the current operative word for the Mobile Internet today is **SIP** – an acronym for **S**ession **I**nitiation **P**rotocol – which makes all this possible. SIP is an old IETF (Internet Engineering Task Force) signaling standard based on web and email-like technologies that has regained prominence in light of its relevance to next generation Voice/Video (over 'IP' or Internet Protocol) and Messaging services.

SIP, with its ability to support varied media formats and types, is well suited to multimedia applications and its aspect of flexibility leaves the door open to further innovation when it comes to introducing new types of services. In fact the advantage of using SIP is its ability to support traditional voice services such as basic calls, call forward, call hold, call transfer, conferencing, etc. as well as new and exciting ones such as presence, instant messaging, multimedia messaging, push to talk, push to show, chat, video telephony, interactive gaming, multimedia enhanced 'rich' calls and collaboration.

SIP is the only protocol common to next generation fixed and wireless network domains that also meets signaling, presence & messaging needs. It has a familiar, email-like addressing scheme and has the advantage of being simple and extensible. Thus new features can be overlaid on the base application in order to support additional functions, making it adaptable to different service scenarios and future technology improvements. The ability to do so many different things with SIP allows users to mix and match features to create more powerful services.

SIP infrastructure rollout in 3G mobile networks is a foregone conclusion. SIP, however, has the distinction of also being popular in next generation fixed networks. PC-based SIP applications such as MSN Messenger are already available courtesy Microsoft and in the Enterprise, converged SIP-based voice and data networks represent the way forward. The benefits of these trends accrue to end users, as they are now able to communicate using their mobile devices with an even larger and growing set of mobile and fixed remote users. SIP's suitability to different network types allows users the convenience of using a single SIP-enabled mobile handset as their access device across private and public wireless networks.

SIP services perceived to have immediate high growth potential include Presence, Instant Messaging and Push To Talk. Presence (the ability to determine a remote user's availability and/or location) and Instant Messaging (a feature already popularized by desktop AOL, MSN and Yahoo messenger applications) have already been proven to be extremely popular in the internet world and mobile operators view them as key mobile service enablers, providing the means to enable and enhance a variety of applications such as gaming, directory services, voicemail services, information and location services. Push To Talk, a walkie-talkie like service on your mobile phone, has caught the attention of mobile operators and various versions of this service have been or are being deployed globally.

So get ready for a SIP of the new Mobile Internet - the possibilities are endless!