Wireless Village
The Mobile IMPS Initiative

Frequently Asked Questions

1. Instant Messaging and Presence Services (IMPS)

1.1   What is IMPS?

It stands for "instant messaging and presence service", and includes four primary features:

- Presence
- Instant Messaging
- Groups
- Shared Content

In the mobile Internet society, people have a greater need to communicate than ever before. In wire-line networks, people can use online chat software to communicate across the Internet using short text, or even multimedia, messages. This type of service is called an "instant messaging service". In mobile networks, similar short message services have existed since the introduction of digital mobile phone service.

The utility of instant messaging is greatly enhanced by the addition of a service that will keep track of the online status and availability of your chat partners or "friends"; as well as notify you of changes to their status or availability. This type of service is called a "presence service".

The combination of instant messaging, presence, groups, and shared content is called an IMPS.

1.2   Is the concept of IMPS new?

No. Ever since the introduction of early time-sharing computer systems, there has been the availability of services desired to allow users of these systems to communicate or "chat" between terminals using short text messages. Some have even provided session based services that provide a "chat room" feature.

Digital mobile phone users are also familiar with mobile-terminated and mobile-originated short messaging services. These services allow text-based messaging between mobile phone users.

Internet "web portal" and online services users are also familiar with chat, chat room capabilities and "friends lists" for maintaining chat addresses of friends; along with their online status and availability.

What has been missing from all such services is the connectivity between different service offerings. Such connectivity is one of the goals of the Wireless Village initiative.

1.3   Are there any existing IMPS solutions for mobile phone users?

Yes.

The most popular form of instant messaging in the mobile phone industry is the mobile-originated and mobile-terminated short messaging (i.e., MO-SM/MT-SM) services. However, these services do not explicitly provide any presence services. And the SMS based services support text-only based "chat". However, the emerging Multimedia Messaging Service (MMS) standards will provide multimedia message capability.

The current online services, such as America Online (AOL), are beginning to introduce mobile versions of their AOL InstantMessenger (AIM) service for mobile users. Mobile phone users can expect to see these services introduced soon too. This service will provide some limited presence services also.

Mobile phone vendors are also introducing "chat" applications to their phones that will allow mobile phone users to participate in IMPS sessions, too.

1.4   Why is another IMPS protocol needed?

Today the industry offers a variety of non-interoperable IMPS products, each connecting only those users on their IMPS offering. Each protocol functions only for selected transports, and is implemented on a few devices. Most IMPS products use different communication protocols over the network. These differences are complicated by the lack of a common wireless IMPS solution.

The proliferation of non-interoperable IMPS technologies complicates the tasks of users, device manufacturers, service providers, and application developers. The lack of a common IMPS protocol is impeding the growth in use of mobile devices for mobile messaging services, restricting users' ability to access presence data, and limiting the delivery of mobile messaging services.

The Wireless Village solution is required to deliver symmetrical IMPS communication between any mobile device and other wireline network IMPS services. None of the current synchronization protocols in existence today deliver this universal connectivity.

1.5   How will the specifications of the Wireless Village initiative be different from/better than other proprietary protocols and other industry initiatives?

The Wireless Village specifications are open industry specifications that supports a variety of transport protocols and robust IMPS features. It is easily expandable and based on XML that is widely considered a future-proof choice. Wireless Village specifications also effectively address the resource limitations of the mobile devices and has been optimized to work with variety of applications and devices.

1.6   Will the Wireless Village initiative compete with proprietary IMPS protocols/software?

No. The Wireless Village protocols will enable IMPS vendors to extend their products to interoperate with other vendors' IMPS products. The Wireless Village protocols do not specify the user interface for an IMPS product, neither does it restrict the types of devices that the product can support. By defining a common mobile IMPS protocol, the Wireless Village solution will lead to an increased choice for consumers and a larger market potential for both mobile and Internet IMPS vendors.

1.7   Will the Wireless Village solution be compatible with older products based on proprietary IMPS protocols?

Possibly. With the use of a Wireless Village gateway, products using older, proprietary-based IMPS protocols can communicate with products compliant with the Wireless Village solution. The Wireless Village initiative will also act to estable a clear migration strategy that will minimize the impact of existing investments.

1.8   What is the relation of the Wireless Village initiative to the IMPS efforts in the IETF, PAM Forum?

The Wireless Village solution is the "next generation" of open specifications for mobile instant messaging and presence services, specifically optimized for the mobile environment.

The Internet Engineering Task Force (IETF) also has efforts underway for some time to standardize IMPS for the Internet environment. The future protocols and formats they will define address the specific needs of the wireline network environment.

The PAM (Presence and Availability Management) Forum is a consortium that is dedicated to defining a set of application programming interfaces to facilitate development of interoperable applications for presence and availability management. They are not defining the format or OTA protocols necessary to communicate with instant messaging or presence services.

For the next few years, the differences between wireless and wireline networks, as well as the mobile domain and the Internet domain, will require additional gateway technology to connect these two domains.

The Wireless Village initiative plans to demonstrate connectivity between the wireless, mobile world and the wireline Internet networks using the Wireless Village technology.

1.9   Who will benefit from the Wireless Village initiative?

An open, mobile instant messaging and presence service protocol benefits various groups, consumers/users, device manufactures, IMPS providers and application developers.

Consumers/end-users
Today, mobile users have limited IMPS connectivity with other mobile users. The Wireless Village solution will correct this limitation. It will also lead to an increased choice of interoperable mobile IMPS products. They also can benefit from communication using the Wireless Village solution with other non-mobile users on the Internet.

Device Manufacturers
While every device manufacturer would like to support the technologies that help solve the mobile IMPS needs of all users and service providers, in practice a device will support one IMPS technology. This choice is forced upon the manufacturer by the constraints of storage space, memory, power consumption and cost. Device manufacturers will benefit from a common protocol that will make the device interoperable with a broad range of mobile IMPS applications, services, networks and transmission technologies. They will be able to market devices that are more feature-rich and easier to configure and use.

IMPS Service Providers
Service providers moving into the growth arena of application hosting are particularly concerned that a proliferation of different IMPS technologies will make it impossible to deploy and support their customers in a cost-effective manner. In order to support the range of data types and devices in use, service providers have to install and configure multiple IMPS server infrastructures, maintain and support that infrastructure, and maintain compatibility and performance. The Wireless Village solution provides a single solution for mobile IMPS connectivity and removes the risk of a tight coupling to a proprietary solution.

Application Developers
Again, one common mobile IMPS protocol enhances the possibility to support a wide range of devices and networked data, reduces the costly support of multiple mobile IMPS technologies and provides the developer with flexibility of evolving the choice of mobile IMPS.

2. The Wireless Village initiative– Mobile Instant Messaging and Presence Services (IMPS)

2.1 What is the Wireless Village initiative?

The Wireless Village initiative is an open industry initiative, that has been created to develop and promote a universal protocol for mobile IMPS among workstations, network application servers, and mobile information appliances, such as mobile phones, handheld computers, PDAs and other mobile devices. The focus of the Wireless Village initiative is the mobile world.

2.2 What are the objectives of the Wireless Village initiative?

The goal of the Wireless Village initiative is to create an open, common protocol for providing interoperable mobile instant messaging and presence services among workstations, network application servers, and mobile information appliances, such as mobile phones, handheld computers, PDAs and other mobile devices.

The Wireless Village initiative wishes to accelerate the market's vision of ubiquitous instant messaging and presence services from any mobile device to any other networked device. The initiative will work with end users, device manufacturers, IMPS providers, infrastructure developers, application developers, and service providers to define a common mobile IMPS protocol, the Wireless Village protocol.

The goal of the Wireless Village initiative is to be symmetrical
That is, it will allow a user to communication with any other mobile or networked user using the Wireless Village initiative's mobile instant messaging and presence services.

Open and common protocol
The mobile IMPS solutions currently available are based on proprietary technologies. The Wireless Village initiative is designed to be a common platform for interoperability between systems and devices regardless of platform or manufacturer.

Interoperability and harmony
The Wireless Village initiative is designed so that existing IMPS solutions can be updated to interoperate with those based on the Wireless Village initiative. To accomplish this goal, the protocol needs the following characteristics:

- Operate effectively over wireless and wireline networks
- Support a variety of transport protocols
- Support robust set of presence, instant messaging, chat and shared content features
- Enable mobile IMPS from a variety of devices
- Address the resource limitations of the mobile device
- Build upon existing Internet and Web technologies

2.3   Who are the sponsoring members of the Wireless Village initiative?

Sponsoring members are Ericsson, Motorola, and Nokia. In addition to these companies, the Wireless Village intiative is encouraging other industry IMPS leaders to join the initiative. The updated list of supporters can be found at
www.wireless-village.org

2.4   How did the Wireless Village initiative get started?
Ericsson, Motorola, and Nokia initiated the discussions about forming the Wireless Village initiative at the end beginning of 2001. The Wireless Village initiative was publicly launched on April 26, 2001.

2.5   How and by whom is the Wireless Village initiative operated?

The Sponsors of the Wireless Village initiative have committed to fund and run the day-to-day activities of the Wireless Village initiative. The organization consists of a multi-part agreement that defines a joint development effort among the Sponsors. This method was chosen, rather than creating a non-profit company or other legal structure because it provides a faster mechanism to address the goals of the Wireless Village initiative. Other industry initiatives, such as Bluetooth and SyncML, have had success with this organizational structure.

2.6   What is the relationship between the IEEE-ISTO and the Wireless Village intitiative?

The Wireless Village intiative has chosen the IEEE Industry Standards and Technology Organization (IEEE-ISTO) to administer day-to-day support of its activities. The IEEE-ISTO is a not-for-profit corporation offering standards-related industry groups an innovative and flexible operational forum and support.

2.7   Why do these three founders believe that the Wireless Village initiative will succeed?

The founding companies repesent a cross-section of the mobile device manufactuers. Their combined experience in successfully delivering wireless handsets and services is a credible basis for undertaking this effort. In addition, the demand in the industry for a common solution that provides mobile IMPS to wireless users will drive the success of this initiative.

2.8   How do I join the Wireless Village initiative?

The Wireless Village initiative is seeking industry supporters. Anyone can become a Supporter. Just go to the Wireless Village initiative website and complete a form. You will then be contacted by a representative of the Wireless Village initiative about your desire to join.

2.9   What other companies are you talking to or expect to join as Sponsors that are not currently Supporters?

Sponsors are companies that have committed to fund the operation of the Wireless Village initiative. At the present time, the initiative is not seeking new Sponsors. However, a much easier way to participate in the intiative is to become a Supporter. There is no current fee to become a Supporter. Just go to the Wireless Village initiative website and complete a form. You will be contacted by a representative of the Wireless Village initiative about your desire to join.

2.10   What is relation/position of the Wireless Village initiative to other standardization bodies?

The Wireless Village initiative is very focused in its efforts on developing and promoting mobile IMPS technology.

In this role the Wireless Village initiative will liaison with a variety of other standardization bodies, both to cooperate in making the specification, or to work with the organizations to ensure the adoption of the Wireless Village technology. A variety of bodies including WAP Forum, 3GPP, IETF are candidate organizations for liaison with this activity.

2.11   What benefits will the Wireless Village initiative membership give to a company?

Supporting companies get an opportunity for early review of the specifications and the ability to provide their contribution and comments to the specification work. Supporters have the ability to participate in the development effort and determine the direction of continued work. In addition, supporting companies will get an opportunity to test interoperability of products that support the Wireless Village protocols.

2.12   What influence can supporting companies have in the initiative?

Supporters that are committed to a common mobile IMPS protocol will have an opportunity for early review of the specifications and provide their contribution and comments to the specification work.

2.13   What implementation support will licensees receive from initiative?

The Wireless Village initiaitive is developing the Wireless Village reference test server, which is licensed to Wireless Village supporters to facilitate implementing the Wireless Village specification. The supporting companies can easily leverage this test code to bootstrap their existing mobile IMPS solutions with the Wireless Village protocols.

In addition, the Wireless Village initiative gives supporters an ability to ask questions and give feedback releated to the specification. This support can be obtained from the supporter section of the Wireless Village website.

2.14   **What is the organization's Intellectual Property Rights policy?**

Each participating company has the right to license its IPR's on fair, non-restrictive and reasonable terms. The goal of the founding members, however, is to release the Specification to anyone for free.

3. The Wireless Village specification

3.1   **What are the objectives for the Wireless Village technology?**

In order to achieve it's goal of establishing a common mobile IMPS protocol allowing any mobile device to communicate with any compatible device over various networks, the Wireless Village initiative must overcome the demanding requirements of wireless communication. High network latency, limited bandwidth, and relatively high transmission costs are all features of wireless networks that impose a high demand on a synchronization protocol.

3.2   **How and by whom has the specification been written?**

The specification will be written by Wireless Village initiative's technical committee. Specialists from all the sponsoring companies will be involved in creating the specification. In addition, Wireless Village supporter companies will be given the opportunity to provide valuable feedback and contribute to the process.

3.3   **What is the schedule for making the Wireless Village specification and other deliverables available?**

The initial Wireless Village specifications expects to be published by the end of 2001. At that time, anyone will be able to download the specifications free of charge at the "Downloads" section of the Wireless Village Supporter web site, www.wireless-village.org. The Wireless Village supporters will be able to get an early opportunity to review the specifications before they are published.

3.4   **How will customers be assured that products that implement the Wireless Village solution are interoperable?**

The Wireless Village initiative will use its community of supporters as a forum in which to conduct interoperability testing activities. Products that indicate support of the Wireless Village solution will need to successfully demonstrate conformance and interoperability.

3.5   **After publication of the first specification to what direction will Wireless Village specification be developed to?**

The Wireless Village specifications will become the basis for a new class of rich content, mobile IMPS.

3.6   What transports does the specification support?

The Wireless Village soultion is transport independent and thus capable of being used over the many different data protocols in use by wireless and networked applications. It can work smoothly and efficiently over existing MO-SM and MO-SM short messaging services (SMS), the emerging multimedia messaging services (MMS) standards, GPRS, as well as other emerging Internet communication protocols (SIP). Initially, the most commonly used protocols will be SMS and MMS.

3.7   What data types does specification support?

The Wireless Village solution enables mobile devices to communicate with other mobile IMPS users using simple text messages, as well as rich, multimedia content-based messages. The protocol does not mandate how data is represented or structured on the device or within the networked data repository.

To ensure interoperability, the protocol describes how IMPS protocol data is represented over the network.

3.8   Is instant messaging with the Wireless Village protocol secure? How is this assured?

The Wireless Village specification uses the security mechanisms of underlying transports. Thus no new security scheme has been defined.

Authentication between a Wireless Village IMPS client and server assures that the client and server are who they say they are. In addition, instant messaging traffic can be encrypted to allow for secure instant messaging.

3.9   Wireless Village technology is based on XML. Why was that chosen?

XML, the Extensible Markup Language, is rapidly emerging as the lingua franca for representing structured data over the Web. XML has been implemented widely and is well tested. This will ensure easy implementation and interoperability testing.

3.10   How is interoperability assured?

Wireless Village initiative has a carefully designed process to ensure consistency of behaviour between different products. The process will be administered by the Wireless Village initiative. The Wireless Village initiative plans to hold conformance and interoperability events in order to permit vendors to test implementations supporting the specifications. The intent is to have a number of events in different locations.

4. The Wireless Village protocols

4.1 Do the specifications define a client/server or server/server IMPS protocol?

The specifications define both an IMPS representation protocol, as well as a client/server protocol that permits a mobile device to access and interact with a mobile IMPS provider. In addition, the specifications define a server/server protocol that can be used to create a gateway to other Wireless Village domains. The server/server protocol can also be used to create a gateway to legacy or Internet based IMPS providers.

4.2 Is chatting between mobile and Internet clients possible?

Yes, using a gateway based on the Wireless Village solution, a mobile client can communicate with an Internet-based IMPS client.