WAP FORUM™ RELEASES WAP 2.0
SPECIFICATIONS FOR PUBLIC REVIEW

WAP 2.0 Integrates Latest Internet Standards and Content Technologies into Mobile Environment, Providing Platform for Richer Mobile Experience

MOUNTAIN VIEW, Calif. -- August 1, 2001 -- The WAP Forum™, the industry association that develops and fosters the growth of the Wireless Application Protocol (WAP), today announced the release of WAP 2.0 for public review. This next generation of the WAP specification helps content developers deliver a richer and more secure experience to mobile Internet service subscribers. WAP 2.0 is a significant evolutionary step in the worldwide standard and will allow application developers to create compelling mobile content using the same tools and techniques they are already familiar with using for other Internet applications. The new architecture of WAP 2.0 continues the convergence of WAP with the evolving Internet, merging the work of the WAP Forum, the World Wide Web Consortium (W3C), and the Internet Engineering Task Force (IETF) and enabling more rapid development of new mobile Internet applications.

“The new specification is a significant milestone towards the WAP Forum’s goal to bring a richer experience to users of mobile phones and other wireless devices," said WAP Forum CEO, Scott Goldman. "WAP 2.0 provides all companies in the wireless value chain with a bridge to the mobile Internet's true potential."

"WAP 2.0 is a significant evolutionary step towards the introduction of advanced mobile Internet services," said Becky Diercks, Director of Wireless Research for Cahners In-Stat**.** "The evolution of WML 2.0, WAP's markup language, to an XHTML architecture incorporating CSS allows the developer community to easily deliver applications that will capitalize on a broad set of supported features that will enhance the user experience**.** Cahners In-Stat Group expects the number of wireless Internet subscribers to

grow from 30 million in 2000 to 742 million by the end of 2005. WAP 2.0 will help fuel this growth through next generation applications and devices."

End-Users

WAP 2.0 is designed to increase the usability of WAP applications, meeting market demands and taking advantage of the latest industry developments such as higher bandwidths, faster data speeds, greater processing power, and varied screen sizes. With advanced networks and additional services, users of WAP 2.0-enabled devices will experience mobile access to new Internet-based content, applications and services that will serve as a valuable extension to the PC.

Developers

Supporting XHTML, WAP 2.0 reduces development costs, allowing developers to write applications for both PC and WAP clients, using a common subset of language elements and development tools. XHTML's modular architecture also enables developers to quickly and easily build applications that can adapt to changes in the hardware environment. WAP 2.0 also gives developers the ability to create applications utilizing enhanced style features. Through the use of Cascading Style Sheets (CSS), developers can separate style attributes for one or more XML documents from the actual code, reducing the size of the markup code in browser memory.

Device Manufacturers

Device manufacturers have the opportunity to develop handsets that support applications that optimize the usability of WAP applications by capitalizing on new WAP 2.0 features, such as the ability to include color, multimedia messaging, large-file downloading, improved navigational functions, and user-friendly menus.

Network Operators

Network operators will benefit from the ability to provide new services that have increased appeal by exploiting the benefits of WAP 2.0. These new services have the potential to increase user traffic,

leading to increased revenue and bringing operators the benefits of their investment in 2.5G and 3G networks.

WAP 2.0 Enjoys Industry Support

"The GSM Association welcomes the availability of WAP 2.0 specifications and applauds the move towards an XHTML based mark-up language," said Rob Conway, CEO of the GSM Association. "The importance of the continued evolution of WAP cannot be understated - WAP 2.0 will make it easier for developers to build compelling applications and to create a richer experience for users through the mobile Internet. The parallel development of the Association's M-Services Guidelines complements and is supportive of the release of WAP 2.0 standard, helping as it does to bridge the gap to key service elements of the new specification required by our operators in the short to medium term."

*An extended testimonial list can be viewed at: http://www.wapforum.org/new/testimonials.pdf

The Technical Evolution and Benefits of WAP 2.0

As WAP continues convergence with Internet specifications, WAP 2.0 builds upon the latest Internet standards: XHTML, TCP/IP, HyperText Transfer Protocol (HTTP/1.1), and Transport Layer Security (TLS).

Utilizing standards developed by the W3C, WAP adopts XHTML and CSS Mobile Profile as part of WML 2.0 (while maintaining backwards compatibility with WML 1.x), to reduce the time necessary to create and test applications and manipulate content for various devices. At the protocol level WAP 2.0 adopts IETF specifications as follows: In the transport layer, WAP 2.0 features TCP/IP for those networks capable of transporting data over IP. In the session layer, WAP 2.0 adopts HTTP/1.1 as a protocol. WAP 2.0 adds further security features, including the adoption of the TLS protocol, to provide improved end-to-end security and integration with the wired Internet security to enable secure use of mobile commerce, mobile banking applications, and service offerings.

New technologies of WAP 2.0 that will improve the user experience are Data Synchronization, Multimedia Messaging Service (MMS), Persistent Storage Interface, Provisioning, and Pictograms.

Additionally, Wireless Telephony Application (WTA), Push, and User Agent Profile (UAPROF) utilize more advanced features in WAP 2.0 than in previous versions.

For Data Synchronization WAP 2.0 adopts the SyncML protocol in order to ensure a common solution framework with a multitude of devices. The SyncML messages are supported over both the Wireless Session Protocol (WSP) and HTTP/1.1 protocols. MMS provides the framework to develop applications that support feature-rich messaging solutions, permitting delivery of varied types of content in order to tailor the user experience. The Persistent Storage Interface provides a set of storage services that allow the user to organize, access, store and retrieve data on wireless devices. The new Provisioning feature permits the network operator to manage the devices on its network with a common set of tools. The Pictogram feature permits the use of a set of tiny images, allowing users to quickly convey concepts in a small amount of space while transcending traditional language boundaries.

Push technology allows trusted application servers to proactively send personalized content to the end-user, such as a sales offer for a product a person might be interested in buying, a new email notification, or a location-dependent promotion. Push technology complements the traditional "pull" model of the Internet where users request specific information from a Web site. UAPROF enables application servers to send the appropriate content to the user and to recognize the capabilities of devices, such as screen size and color to maximize performance potential, bringing the user increased satisfaction. WTA provides a range of advanced telephony services within the application environment, enabling a host of call handling functions such as making and answering calls, placing them on hold, and redirecting them even while performing data-centric tasks. The availability of these services enables operators to offer customers a unique user interface to control complex network features, such as call forwarding options.

*Additional technical information on WAP 2.0 can be found in the White Paper:
http://www.wapforum.org/what/whitepapers.htm

*For a list of specifications, go to: http://www.wapforum.org/what/technical.htm

WAP 2.0 is a next generation specification that addresses the needs of all players in the wireless industry, who plan on incorporating the platform-agnostic specification in their products and services to

grow the wireless market. The WAP Forum built the WAP 2.0 specification in accordance with the work of the W3C and the IETF, whose specifications define the modern Internet.

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About the WAP Forum

The WAP Forum is the industry association that is responsible for developing and fostering the growth of the Wireless Application Protocol (WAP), the open, global de facto standard that allows mobile users of wireless hand-held devices to securely access and interact with Internet-based content, applications and services. The WAP Forum is comprised of hundreds of members, representing 99 percent of the handsets sold worldwide and more than 450 million global subscribers. Members include worldwide device manufacturers, carriers, infrastructure providers, software developers and other wireless solution providers. For more information about the WAP Forum, including a current listing of its members, visit www.wapforum.org.

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