

The World in your pocket

Mike Bromwich, Technical Director of PDMS

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Just as we are becoming familiar with e-commerce, e-business, e-trading and e-everything else, the next revolution in the development of the Internet is getting started. The Internet of today allows us to communicate, interact and trade with organisations and individuals irrespective of their geographical location. The only prerequisite for existing in this new 'global space' is that we are 'wired-into' the Internet, and that we have an Internet access device such as a computer in the office, a set-top box in the home, or a public terminal in a cyber-cafe an airport.

Predictions indicate that in five years from now, four-times as many people will access the Internet using a mobile device than using a fixed device such as a computer. The next wave of technologies are set to enable us to do just this - to communicate, interact and trade wherever we are, whether we are walking, driving or flying. The world is now so small it can fit into your pocket.

As with all areas of innovation, the mobile Internet will arrive in phases. What many consider to be the first real phase of wireless Internet access uses a technology known as Wireless Application Protocol - WAP. This provides two distinct areas which empower m-commerce: firstly, a set of standards which describe how mobile devices, such as WAP-enabled mobile phones, communicate with the wired Internet. The transport Protocol, as it is called, takes into account that the connection between the mobile device and the fixed base-stations can be unreliable and difficult to predict. In addition the band-width available, effectively the size of the 'pipe' to the Internet, is generally much smaller than what is available to your PC.

The second area which the WAP standards covers relate to the content delivered to the mobile device. The current World Wide Web is based on HTML, the computer language that describes how a web page should look and how the user can interact with it. As most people know, web pages include links which can be selected to move to related pages, and these links are also specified in HTML. When we access the Internet using a mobile phone we are constrained to a much simpler interface. For example, we don't have access to a mouse for selecting links, we only have a numeric keypad, and the display is typically less than five centimetres wide. WAP specifies an alternative to HTML called WML, which was developed to overcome these constraints.

The Nokia 7110 is one of the first devices supporting WAP to be generally available. It uses a small roller below the screen which can be used to move up and down the page and to navigate between links. Pressing the roller selects the link and moves to another page.

The BBC web site supports WAP devices. They provide access to news and sports headlines, weather and city information, and also full TV listings. Other well-known sites which support WAP include lastminute.com and CNN.

One of the main advantages which WAP has over other technologies is that it operates over existing networks. I can use my WAP phone to access my email and to access WAP-enabled sites using my existing mobile phone account and network. I just configure my phone with the connection details for any WAP-enabled ISP, such as Advanced Systems here on the Island.

Another technology which has attracted much attention over recent months is the Universal Mobile Telecommunications System - UMTS. This is an entirely new set of standards providing a new generation of high band-width mobile connectivity. In the UK, licenses for provision of UMTS services were auctioned to parties including existing mobile phone operators. Commercial services are expected to start at the beginning of 2002. The current aim is to provide coverage to 80% of the UK population by the end of 2007. UMTS requires the deployment of new infrastructure to support the advanced high-speed protocols it provides. Here on the Island, Manx Telecom is embarking on an exciting project with NEC and Siemens to create one of the first commercial UMTS networks in the world. This will provide users with multimedia content, high-speed access to office networks, and many other third-generation applications which are currently out of reach when you are away from your home or office.

A related technology worth a mention is Microsoft Windows CE. Although not directly providing mobile communications, this is a version of the operating system currently in use on personal computers designed for supporting anything other than a personal computer. Microsoft's vision is that everyday devices such as video recorders, mobile phones and even fridges will run Windows CE, and will be connected to the Internet. You can imagine a world where your fridge registers what you use by scanning the bar-code. When you are getting low, it connects to your local supermarket and orders the groceries you need.

There are numerous other initiatives, such as Bluetooth and GPRS, which I could discuss here. However, it is the concept and opportunity which these technologies bring that is of more interest than the technologies themselves: from checking your flight time on the way to the airport to live video streaming from the scene of an accident to a specialist hundreds of miles away. Mobile communication technologies, m-commerce and the portable Internet are perhaps going to have a more noticeable effect on our lives than the Internet has to date. Soon you will have the world in your pocket.

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