

TMC'S TELECOM ADVISOR

Toys - Wireless Internet Access Devices

By Peter Aggus

Hand-held, go-anywhere internet access devices – are they the ultimate in convenience, or a solution looking for a problem?

Background

We have looked at wireless data services in previous *Advisor* articles. It is possible to hook up a laptop computer to a cell-phone data service, dial up a local ISP and go browsing. At present, your data rate is most likely to be 9.6k – and, if you browse regular web sites, you will probably be disappointed with the results. That is partly a result of the speed (most users are used to at least 28.8k dial-up by now) and partly a result of the fact that web page designers are putting more and more data into their web pages (graphics and multi-media content being the chief culprits).

Terminal Limitations

Apart from access speed, the lap-top is hardly a convenient device for pulling out of your pocket to check up on the departure time of your next flight. Lap-top technology seems to be moving more towards being a portable desk-top system rather than shrinking to pocket size.

Palm-top technology is filling the void, but with vastly scaled down features. Whilst you could technically link a palm-top computer to a cell-phone and start browsing the internet, you would rapidly become frustrated with the lack of a basic keyboard and the constant need to scroll to view a web page both wider and taller than the display.

Try to do the same on a cell-phone itself and the result is even worse. A 3-line x 15-character display is little more than a scrolling key-hole and a numeric keypad is a real pain to type alphabetic text (press the “2” key once for “A”, twice for “B”, three times for “C”, four times for “2” and where did they put the “@”!).

Designers have now made a fundamental change to the way web pages are constructed when aimed at the mobile terminal market. The changes fall into two categories – display and control.

Using Smaller Displays

The display changes reflect the fact that the terminal is not going to be able to display full colour graphic-rich pages, but is likely monochrome text based with around 15 characters per line and 3 lines on the screen at once. Web servers conforming to the emerging mobile display standard are able to understand what the terminal can

display and to generate output to suit.

Whilst you can still browse conventional HTML pages, by entering a “standard” URL, the result is not very readable.



Working With Limited Keyboards

Scroll keys on the phone are used to control the display, soft keys can be assigned special functions and the numeric keys can select menu choices. The result is a totally different structure from the mouse-based world which drives most HTML desk-top browsers.

The new structure allows the display of a hierarchy of menus (similar to those used to drive interactive voice response systems from a touch-tone phone). The end product is access to a limited amount of text, similar to what you would expect on a text-based pager.

The most significant effect of this is a need for a complete re-think about how a web site is constructed and what it displays. Now we are starting to get somewhere useful.

The New Generation Wireless Terminals

We looked at two examples of wireless internet technology.

Telus Mobility's i-Web data service is a set of facilities built on their CDPD network.

BlackBerry is an end-to-end solution developed by Research In Motion Limited and offered via various carriers.

There are other choices becoming available, but these two represent the basic options at present.

Telus i-Web

We used a Nokia 6185, fitted with a “minibrowser”. This literally makes the cell-phone a terminal on the internet – no dial-up ISPs, you are already on-line once you fire up the minibrowser.

The sidebar, taken from the Telus Mobility web site, shows a typical use of the service. It can also be used to find phone numbers, browsing the 411 phonebook service – with the ability to get the phone to dial the

What can you do today with i-Web Microbrowser?

Say your company is sending you on a trip to Fiji for training. On your way to the airport, you use your TELUS Mobility i-Web Microbrowser to check your flight...



...Surprise, it's delayed for four hours. Rather than hang around the airport, you decide to see a movie so you check for showtimes...

...After the movie you head to the airport. Waiting for check-in, you read a current analyst report on your broker site. You see a good buy, so you jump online and buy shares..



...The stock skyrockets, so you move your family and live out the rest of your days rich, on the beaches of Fiji.

just a little larger than an alphanumeric pager – it is certainly portable. It contains a small, but adequate, display – along with a basic alphabetic keyboard. This disposes of the multiple keystroke problem associated with the cell-phone technology.

The hardware could cope with the new portable terminal web page format discussed earlier – but that is not a part of the basic offering.

Summary

The Telus i-Web service is technically good, performs well – but has limited content appeal at present. Its success will depend on support by content providers - finding out what users need and then providing it. At present, it is a technology looking for a market. Our appetite for techy gizmos may well create that market – then we will wonder how we ever did without it.

Blackberry is really a fully featured 2-way pager. Its market is more limited but very real. It appeals to the mobile executive

who wants a pager-type service, with the option to reply and generate messages.

We are seeing the convergence of data terminals and cellular communications. Perhaps we will start to see palm-top systems with fully integrated cell-phones. Then we will see if the users want a 2-way pager, or a cell-phone with integral mini-browser, or a palm-top with integrated cell-phone.

We will come back to this one as the technology matures.

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target number without re-entering it. All we need now is voice controlled search and this will be a really powerful tool.

The technology was much more impressive than previous attempts using a lap-top to browse conventional sites. However there are very few web sites currently adapted to serve the new technology – though that will change as demand grows in a very new market. The experience was encouraging in that it was very responsive and much more user-friendly than expected.

The current services include access to ferry times, news, weather and sports results. If you really want to track your net worth whilst in the move – yes, you can access share price data.

You can also send and receive e-mail – but we are back to that ugly keystroke problem entering text. It is also difficult to see reading long e-mail messages through a “keyhole display” – and short messages might as well go by the SMS paging service to the phone.

Blackberry

This approach is quite a contrast in many ways. The sidebar shows the Blackberry unit and its basic mode of operation.

Unlike Telus, Blackberry is not a radio service provider. Instead they are a content provider who offers terminal equipment, which can operate over several carrier services.

Basically, Blackberry addresses the need for a small portable e-mail engine. Being

A screenshot of a BlackBerry device displaying an email message. The email text includes: 'Message Overview: Read', 'Sent: Feb 8, 2000 9:36a', 'From: Sanjay Bharat (PIN)', 'Subject: Compatible?', and 'Software ours. System legacy. Compatible? Is it?'. To the right of the device is a sidebar with a red asterisk icon and a question mark icon. The sidebar text reads: 'You're always in the loop with BlackBerry. Use the arrows to scroll and read your message. Clicking the red dot on the wheel allows you more options.' A 'Back' button is visible below the device.