

by Marlene Orton

### What it is

Personal Digital Assistants (PDAs) are miniature computers powered by microprocessors and originally developed as simple digital calendars for storing addresses, telephone numbers and taking notes. They have evolved since the 1990s into data-crunching devices with more extensive software to support graphics, Windows packages for Excel, Word and Notebook programs, games, playing music, emailing and downloading information from the Internet. Other plug-ins allow for navigation software, portable printers, web cameras and portable keyboards.

### Applications

Use of PDAs has far exceeded the original purpose of managing a personal calendar, address book and time planning. Symbol manufactures a PDA with a card swipe and radio beacon software that allows for warehouse management, for example. Inventory can be tagged from up to three metres away using radio frequency (RF). Information stored in a PDA can be transferred to a personal computer's (PC) inventory control database from a remote distance.

Pharos produces PDA organizer navigational software so that geo-spatial information (GIS) and mapping can be downloaded quickly. Maps are available in French and English in specific areas of North America.

PDAs also offer translation software, which is one of the more popular add-ons, and allows translation of downloaded material from English to French and vice versa.

### How does it work?

PDAs are tiny computers that can be either hand-held or palm-sized, both of which are powered by microprocessors and very simple operating systems with a ROM (read-only memory) chip. Both run on batteries and both are made to work in tandem with a personal computer or laptop. That means data and information from a PC can be uploaded to the PDA either by wireless methods, through a cable, or an infrared communications port. All PDAs have the same major features: microprocessor, operating system, memory chip, batteries, LCD



Courtesy of Research in Motion (RIM)

display, input device in combination with touch-screen or keyboard, input/output ports to connect to PC or laptop and desktop PC software.

One of the first PDAs introduced in the 1980s was Apple Computer's Newton Message pad, which was too large and complex, and used a less than satisfactory handwriting recognition program. In 1996, the first Palm Pilot hit the market and was an instant winner. It was small enough to tuck into a shirt pocket. Now Palm-like devices are available from the major vendors. But Palm Inc. continues to sell the vast majority of the PDAs on the market, now under a new name called Palm One.

### Vendors

Major PC hardware makers from Sony to IBM and NEC sell their own hand-held or Palm-like PDAs. Prices in Canada range from \$300 to \$1,100. The leading manufacturers include:

- Casio
- Handspring
- Microsoft
- Palm
- Sony
- ViewSonic
- Compaq
- Hewlett Packard
- NEC
- Research in Motion (RIM)
- Toshiba

"Palm probably has the market share as far as PDAs," says Greg Bruzas, president of Directdial.com Canada, a leading Canadian online seller of electronic hardware. The site ([www.directdial.com](http://www.directdial.com)) includes a total of some 250,000 name brand products. "Blackberry (made by RIM) technology gives you a phone, email and a digital camera all at once. We're starting to talk about having a very cool little portable," says Bruzas.

MDG Computers ([www.mdg.ca](http://www.mdg.ca)) is another major online retailer based in central Canada. Rogers AT&T Wireless ([www.shoprogers.com](http://www.shoprogers.com)) is an authorized reseller of Blackberry wireless products.

### What's next?

Increasingly sophisticated special features soon will become standard in many devices. These include MPEG movie files for downloading feature films, a GPS receiver for remote instant reception of everything from manhole covers to city addresses, digital cameras to capture images and photo editing software to immediately sharpen photography before emailing by Internet to a remote location. "For more than half our buyers, the more bells and whistles, the more features they can add on, the more popular the product," says Bruzas at Directdial.com.

Marlene Orton is a freelance writer based in the Ottawa area.



Courtesy of Research in Motion (RIM)