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# The Mobile Consultant's Toolkit

by Walt Nelson

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Whether we are in-house 4D developers or independent consultants, at one time or another we will find ourselves on the road: traveling to customer sites to estimate, develop, install, or support our 4D applications.

Cecil Consultant is a 4D developer living in the San Francisco Bay area. Cecil does most of his work outside his home-office: when he is not at a client site, Cecil likes to work outside close to nature: in the park, at the beach, and sometimes even in a restaurant coffee shop. Therefore, the state of mobile technology is important to Cecil. He keeps up with the latest developments, and he doesn't mind spending money if it will enable him to be more mobile without sacrificing effectiveness. Here is a list of the items in Cecil's "Mobile Consulting Toolkit."

- **300mhz Pentium Laptop Computer** with 64MB RAM, 2GB hard drive, CD-ROM drive, PCMCIA network & modem card, Windows NT Workstation 4.0. Cecil bought this system nearly a year ago; because prices are falling so quickly, he is thinking of upgrading the RAM to 128MB and the hard drive to at least 5GB. His current configuration cost him about \$1,650 including tax and extended warranty.
- **300mhz Apple Macintosh G3 Powerbook** with 128MB of RAM, 8GB hard drive, DVD, PCMCIA network card, System 8.5, and Virtual PC. Cecil's clients are about 50/50, Macintosh and PC; he decides which computer to carry to a customer site based on what the clients are using. The cost of the Mac G3 Powerbook was \$2,999.
- **Portable Cannon printers.** Cecil has two of them: the BJ-30 (about two years old) and Cannon's latest version, the BJC-50, which he bought less than a month ago. He uses a portable printer when he is in a hotel room or at a restaurant and he needs to print his daily schedule, a proposal, a flowchart, a 4D method, or any other small document. He likes both printers: the BJ-30, which only prints black-and-white, has a built-in multiple sheet feeder that can hold up to 20 pages. The BJC-50, which feeds one sheet at a time, is somewhat faster (5ppm black versus 3.5ppm); it can print in color; and there is an optional scanner attachment. Both printers are lightweight and portable: the BJ-30, weighing about 3.5 pounds, has a battery life of approximately 30 printed sheets; the BJ-50, weighing two pounds, has a battery life of approximately 100 sheets! Either of the printers will fit very easily into the front pocket of Cecil's com-

puter bag. The cost of the Canon BJ-30 was \$225 two years ago, and the cost of the BJ-50 (50% faster, color capability, option scanner attachment) is \$399.00. Both prices include tax and extended warranty.

- **GDT Softworks PowerPrint™ (now called the Infowave PowerPrint).** This is a hardware cable that connects to the Mac Serial port or USB port on one end, and to a PC printer's parallel port on the other end. The PowerPrint supports more than 1,500 models of PC-compatible printers; Infowave maintains software and cable connection information on their web site, [www.Infowave.com](http://www.Infowave.com). When Cecil needs to print on his portable Canon printers from his Mac G3 Laptop, he uses the PowerPrint cable and software. The price of the PowerPrint is \$99.00 plus tax. The price is the same, whether you buy the regular serial version or the USB version.
- **Yuasa NP 7-12 12volt 7.4 amp Rechargeable Battery.** Although this battery is a bit bulky (about 6 pounds), Cecil likes it because it can provide power to any of his portable peripheral devices: laptop computer, wireless modem, or portable printer. On a full charge, the Yuasa battery can power a laptop computer for 3.5 to 4 hours. The battery has a cigarette lighter-style connection, so Cecil also needs a power inverter to make it work with his laptops and peripherals. Cecil uses the **Power2Go™ DC-to-AC Inverter**. The Yuasa battery costs \$75.00 and the Power2Go Inverter costs \$35.00, both with tax-included.
- **10BaseT Hub.** When he goes to client sites, Cecil carries an extra 10BaseT Hub with cables. This hub has one ThinNet (10Base2) connection and five 10BaseT connections. This makes it possible for Cecil to connect to any client's network and transfer large files—without the client having to unplug any equipment to make room for Cecil's laptop(s). This hub is also handy when Cecil needs to test his cross-platform 4D applications. The prices of hubs are coming down every day. Cecil paid \$75.00 for his hub and connection cables. (Note that a hub with a ThinNet port is somewhat more expensive than a hub with only 10BaseT ports).
- **Nokia cellular telephone.** You probably already have a cellular phone, so we won't waste your time by listing all the features of modern-day cellular phones. Cecil uses his cellular phone number as his primary business phone

number: he put it on his business cards, he gives his clients that number to call for tech support, and he provides that number as his business phone on his web site. As a business phone, three features of the cellular phone are important to Cecil: Call Waiting, Voice Mail, and Pager service. The costs of cellular phones—and phone service—are dropping every day; the deals are getting better and better. Six months ago, when Cecil bought the phone he currently owns, he paid \$155.00 including tax for the phone itself. Cecil's service provider is Cellular One. He pays a flat rate of \$79.00 a month for 500 minutes of calls. 300 of those minutes can be rolled-over to future months, for up to one year. This allows Cecil to accurately predict his monthly cell phone expenses: so far, he has paid the same \$79.00 rate every month for the past six months—whether he talked for 150 minutes or for 650 minutes. (Note: Sprint, GTE, and some of the other service providers have come out plans that offer free phones, and plans that eliminate long distance charges. Cecil plans to contact Cellular One to find out if they are willing to match the new plans on the market. If not, Cecil will transfer his account when the current contract expires in six months).

• **Ricochet wireless modem.** The wireless modem is Cecil's favorite new toy! Here are the reasons why:

- The wireless modem is so compact that it attaches to the lid of Cecil's laptops with Velcro. The modem is about ½" thick and it weighs less than a pound. The modem easily fits in Cecil's computer case, securely attached to the lid by four small Velcro strips.
- Cecil can check his mail several times a day, no matter where he is. He can respond to tech support questions, do online banking, and check on his web site. Cecil is doing e-commerce on his web site, and he gets automatic email notification of every transaction at his site. Using the wireless modem, he can monitor sales activity at his site several times a day. He even makes changes to his web pages while he is on the road.
- If Cecil forgets or misplaces his ACI Partner CD, he can connect to the ACI Partner Central web site and look up a tech note; check the HTML online help; download an example—or even download the latest version of any product in the 4D family.
- Having the wireless modem frees up Cecil's Internet/fax telephone phone line in his home-office. This means that Cecil can use his second telephone line at home as a "dedicated receive" line. He can connect a spare computer to this line and use that computer as a fax receiving station, or even as a remote server for Windows NT Remote Access Services (RAS) or Apple Remote Access (ARA). This means he can dial-in to his computer and download files or do remote testing.

- The wireless modem has a remarkably stable connection: in fact, it is more stable than Cecil's telephone landline connection. To test the stability of the connection, Cecil left his wireless modem connected to the ISP for 36 straight hours; the connection never dropped. Several times during that 36 hours, Cecil tested the connection: He surfed the web, checked his email, and downloaded large multi-megabyte files—all without losing a single byte of data!
- Although the wireless modem is rated at 28.8, the effective speed is actually faster than Cecil's 56KB modems! Because the line is so clear, the 28.8 wireless modem can establish and maintain a 57.6 connection (with data compression). Cecil's home phone landline is another story: due to line noise, Cecil's home-office phone line can only maintain a connection of approximately 38.8. Therefore, when Cecil needs to download large files, he uses the wireless modem instead of his normal telephone line. Even if the file is very large and will take more than an hour, he knows that the connection will be reliable.
- The coverage in the San Francisco bay area is virtually 100%. Cecil has used the modem in San Francisco, Redwood City, Cupertino, San Jose, Fremont, and even Walnut Creek. If there is a blind spot, Cecil hasn't found it yet. (Note: as they mention in the Ricochet documentation, a wireless modem may not be able to make a connection if you are deep within a building, far away from any windows. Cecil has only had this happen once. Note also that Ricochet provides national coverage, but Cecil hasn't yet tested it outside the San Francisco bay area.)
- The cost of the Ricochet wireless modem by Metricom is \$360.00 including tax. The monthly charge for unlimited connect time is \$29.95. Ricochet offers discounts for annual pre-payment of the monthly connection charges. ([www.metricom.com](http://www.metricom.com))

## Summary

If you are, like Cecil, a highly mobile consultant, you can set up a traveling virtual office by purchasing a laptop computer and approximately \$2,000 worth of add-on peripheral devices. I followed Cecil's example and "went mobile." I wrote the final draft of this article while sitting in a folding lawn chair in a Cupertino, California public park. After my final proof-read, I emailed the article to Mark Yelich using the Ricochet wireless modem.

## About the author

Walt Nelson is a 4D developer, trainer, and troubleshooting consultant who has been working with 4D since the Silver Surfer beta test project of 1987. He is the author of 4D for Fun & Profit: A Handbook for Professional 4D Developers, and of the Docu-POWER! Document Management System. He can be reached at: [walt@waltnelson.com](mailto:walt@waltnelson.com).