

BlackBerry  
7100t

# tools of the trade

## Convergence and Clarity

**BlackBerry's new 7100t** combines a multitude of functions in a single device. It's a wireless phone that also manages e-mail, instant messaging, SMS (Short Message Service), and wireless data access and has a built-in address book, Internet browser, calendar, memo pad, and tasks function. It's a BlackBerry, but it also has a Bluetooth connection for wireless headsets along with a speakerphone, polyphonic ring tones, and an advanced call log. The keypad is a modified QWERTY with two letters and a number on most keys. To help with the adjustment to the layout, the 7100t has SureType, which completes words for you and can learn new words after one occurrence. One-hand navigation is assisted by a thumb-operated track-wheel and ESC key on the side. It includes BlackBerry desktop software

and works with BlackBerry Enterprise Servers. You can integrate with an existing enterprise e-mail account or up to 10 personal/business e-mail accounts. The battery life is rated up to eight days on standby and four hours of talk time. There's a 32MB flash memory, and the 7100t weighs 4.2 ounces and comes in a case that measures 4.7 x 2.3 x 0.8 inches. [www.blackberry.com](http://www.blackberry.com).

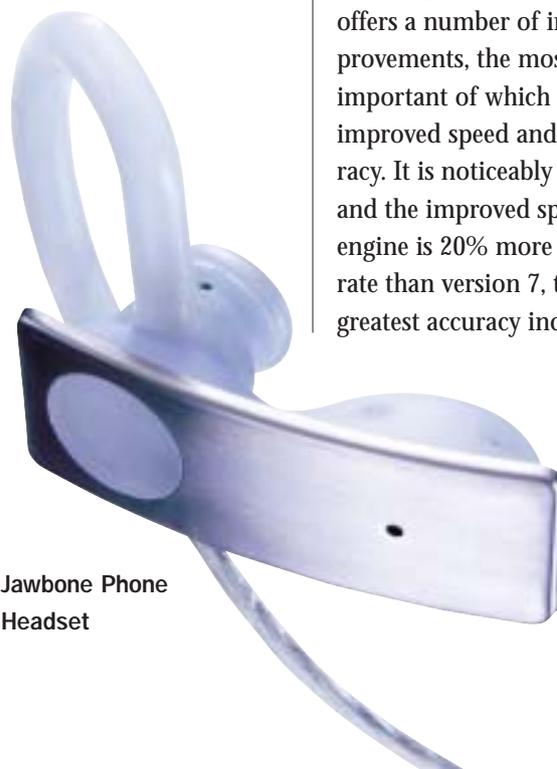
From **Aliph**, the **Jawbone™** adaptive headset for mobile phones features striking design and engineering. The adaptive sound technology improves the sound received and transmitted with three kinds of processing. Incoming sound is improved with a system that has noise-canceling ability. There are two microphones for voice output. The first detects vibrations through your cheekbone and cheek as you speak, and the second

transmits those sounds without including the ambient background noise around you. The noise-canceling feature draws some additional power from your cell phone. The design was created by Yves Béhar of Fuseproject, and it has been named one of the most innovative products of the year in *Business Week's* Annual Design Awards and has been exhibited at San Francisco's

Museum of Modern Art. The technology is described by Aliph as military-grade, and it did evolve from research at Lawrence Livermore Labs. It's not inexpensive, with a list of \$149.95, and Jawbone is available for phones from Motorola, Nokia, and Sony Ericsson. [www.jawbone.com](http://www.jawbone.com)

## Dragon and Drawing

The new **Dragon NaturallySpeaking 8** from ScanSoft offers a number of improvements, the most important of which are improved speed and accuracy. It is noticeably faster, and the improved speech engine is 20% more accurate than version 7, the greatest accuracy increase



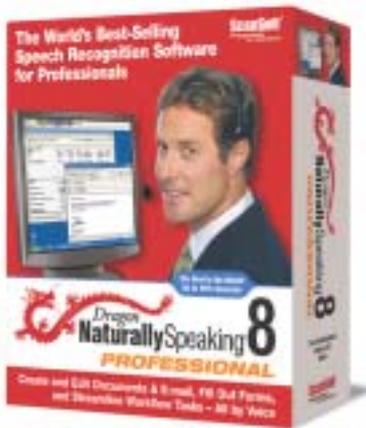
Jawbone Phone  
Headset

## Hackable House ◆ Michael Castelluccio, Editor

■ WHEN PBS INVITED SOME FAMILIES to return to the past and spend a few months in log and sod huts in Montana or in a cold, gaslit Victorian London townhouse, the rest of us were able to watch and be reminded of the many inconveniences we have gladly left behind. Most of us prefer a much smarter kind of house with hot water always ready in the tank, refrigerated food, and maybe even a Roomba from iRobot coasting around the living room, vacuuming while we watch the next episode of the

1900 or Frontier House on our large-screen TVs.

Yes, the smarter the house the better. But did you know there's a way that you can improve your own home's IQ beyond waiting for the home-of-the-future features in the last World's Fair to show up in retail establishments? One of the latest volumes in O'Reilly's hacker series is called *Smart Home Hacks*, and, like the rest of the hacks books, it presents a series of clever digital solutions (hacks) for automating your house. The *continued on next page*



### Dragon NaturallySpeaking

in the history of the program. With the improved hardware on most users' desks, this version will serve its traditional markets for legal, medical, and office professionals as well as personal users. The increased speed makes 100+ words-per-minute dictation routine. Setup is still very simple. After you load the program and plug in the headset, you do a volume and quality check by reciting a few sentences, and then you train the

system to the sound (enunciation characteristics) of your voice by reading a short selection from a book or speech as it appears on the screen. That personal profile of your voice is accessible from any terminal on your network, so you can work on other machines besides the one on your desk. You can also use other handheld recording devices including those operating on Palm OS or Pocket PC systems. Dragon lets you dictate directly into Microsoft Office, WordPerfect, Lotus Notes, and virtually any Windows-based application or simply open the DragonPad word processing application. Correcting and editing by voice is as simple as before, but now it's quicker, and you can customize your own commands for particular tasks. [www.scansoft.com/naturallyspeaking/](http://www.scansoft.com/naturallyspeaking/)

**SmartDraw 7** from **SmartDraw.com** has a new interface along with 30 new features and tools and more than 30 new wizards to simplify a variety of different drawing tasks. With it you can create flowcharts, organization charts, networks, floor plans, Gantt charts, calendars, timelines, and a variety of technical diagrams. You can begin with predesigned chart and drawing templates, and with much of the process no more difficult than drag, drop, resize, and label, professional results are available even to novices. There's a new interface and more powerful toolbar. The basic shapes are available in the toolbar to drag and drop into your drawing, and the arrow lines and heads are there also. The drawing area is larger, and you can zoom in up to 1000% using left and right

mouseclicks. The template browser presents thumbnail images, and there's a preview of all your documents in thumbnail form in a new welcome dialogue. Automatic features such as auto sizing, anti-aliasing, and numerous automatic connectors add to the uniform look of your charts and diagrams. To see the variety of drawings possible or to download a free 30-day trial of the SmartDraw Suite Edition, go to [www.smartdraw.com](http://www.smartdraw.com).



### SmartDraw Drawing Tool

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author, Gordon Meyer, is a software engineer who has a house in Silicon Valley that's not only truly "wired," it's "smarter than your average house cat." In many ways, it looks after itself, the people within, those who phone the house, even the dog. Gordon has 27 other hackers and writers also represented in the book.

### Where to Begin?

Your house already has a central nervous system if electrical and phone lines are in place and the circulation chores are tied to central heating and air-conditioning. What you need is a brain—a digital control center. Meyer prefers the X10-based Home Automation System. It's been around for a while (since 1978), is still the Home Control leader according to sources like *PC Magazine* and *Tech-Living*, and it's inexpensive. The Active-Home Professional Home Automation Starter Kit includes a lamp module, EagleEye Motion Sensor, appliance module, Palm Pad Remote, keychain remote, slimline switch, Socket Rocket, and professional software module—all for less than \$100 ([www.x10.com](http://www.x10.com)).

The X10 system is the base and is compatible with other computer protocols that the author uses for many of the hacks. The other programs used include HomeSeer for Windows and Indigo and XTension for MacIntosh. The X10 system works by itself, but Meyer explains that by adding a computer that can be left on, you can include a whole world of programmable functions and clever hacks.

By connecting up to the starter system, you have taken the first step in home automation. "The essence of home automation," Meyer explains, "is using specialized equipment that can control your lamps, appliances,

heater, and air-conditioning, and perhaps sense where in the house people are located. Every automation system is built upon these building blocks." And so it follows that many of the early hacks have to do with simple tasks like remotely controlling your heating or connecting lighting to sensors or times so the lights go on at six or whenever it gets dark. Add motion sensors, and you can "see" on your computer where people are in the house, and you can tell the system to turn on lights as people enter a room or hallway and turn them off when they leave.

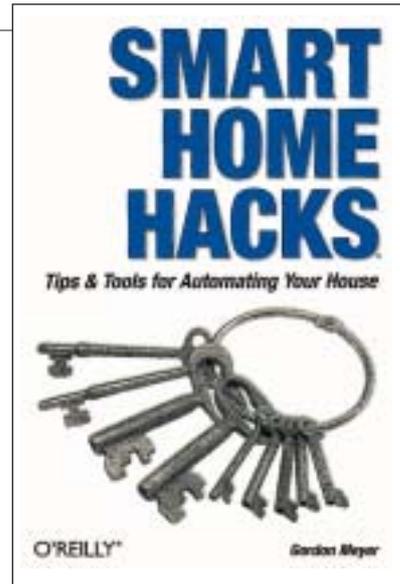
### Then There Are the Jetsons

Being able to set up the coffee-maker to start brewing at 7 a.m. is pretty mundane, even if you're doing it with an older machine that doesn't have its own timer, but some of the more exotic and advanced hacks might have been inspired by futurists like Hanna-Barbera.

You can monitor an empty house with motion detectors for security. But what about Fluffy's litter box? You can set up a procedure that counts how many times the box has been visited and notifies you when it has reached the "phew, this is offensive" threshold. One hacker included this bit of programming in the box below.

```
if (time delta of "litter box motion detector") > 5 * minutes then
  Speak "there is a kitty in the litter box!"
  Set theCount to (Get Unit Property "usecount" from unit "litter box
  motion detector") as integer
  write log theCount
  set theCount to theCount + 1
```

There are a few more lines that instruct the program to speak the words "It is time to empty the box!" when the count has reached three visits. So, in this fellow's house, you will hear over loudspeakers "There is



a kitty in the litter box" whenever a cat steps in and trips the sensor. If the cat steps out and right back in, you're only told once (that's the > 5 \* minutes line in the code). After three visits, the house, even if it's unoccupied, is told that it's time for a little housecleaning. A written log is also kept for those returning home later.

You can monitor the refrigerator door or flooding in the basement, know when your mail has arrived, have your house bark like a dog when you're away and it senses intruders, heat the toilet seat, silence the rest of the house when you're on the phone, motorize your window blinds, and even harness your hamster to power a night light. All in the effort of getting your house out of its current totally oblivious

condition and making it the smartest house on the block.

Go to <http://hacks.oreilly.com/> for more information on Gordon Meyer's *Smart Home Hacks* along with the other excellent books in the series. ■