A change is as good as a rest—so the adage goes. After a long day troubleshooting your company's network and dealing with the inane problems of users, you need a little R-and-R. With all of the high-tech tasks you perform at work, you may be loathe to spend your evenings and weekends staring at your monitor at home. The web sites featured in this article may give you some ideas about how you can still find fun in the high-tech world while escaping the monotonous doldrums of servers, users, and office politics.

BUILD A NEW BEST FRIEND

Robotics have been the stuff of sci-fi movies for 50 years. Although today robots do everything from building automobiles to barking at you when you come through the door at night, building your own robot is inventive. To see ample evidence of what I mean, you simply need to tune into any number of cable television programs such as Robot Wars, Junkyard Wars, Robotica, and BattleBots. Building a robot can progress from a casual hobby to an outright obsession.

The goal of GoRobotics.net (www.gorobotics.net) is to provide the ultimate resource for amateur robotics, with a focus on getting beginners started. As a result, at the GoRobotics.net web site you will find a variety of information to help you get started.

The GoRobotics.net web site includes sections such as Projects, Resources, and Links. Information on the GoRobotics.net web site ranges from basic to advanced. The Projects section features articles that outline instructions for building various types of robots. The Resources section offers a variety of basic information about constructing and programming your robot. By taking advantage of the Links section, you can find almost everything you need to know about building a robot.

If you would rather have your robot up and running in a shorter amount of time than it takes to build one from scratch, try LEGO Mindstorms (http://mindstorms.lego.com). Using a LEGO Mindstorms kit, you first build your robot using the included microcomputer and more than 700 LEGO elements, including sensors, motors, gears, and other LEGO bricks. You then program your robot using the included software.

For example, The Robotics Invention System 2.0 includes detailed instructions for building modular "plug-and-play" robots including the following:

- Roverbo, a steady going robot that moves around, avoids obstacles, and can follow a line
- A crobot, a fast-moving robot that flips and dances
- Inventorbot, a smart, attentive robot that can greet you

Star Wars lovers should check out the Dark Side Developer Kit. Using the Star Wars family of LEGO Mindstorms products, you can become a Sith master and build Imperial robots.

For updated news about the world of robots, visit the Robots In The News section of Robot Books.com (www.robotbooks.com/robot-news.htm). This web page is updated weekly with articles about robots in the news. You can also sign up to receive a robotics newsletter.

In addition, Robot Books.com sorts through the many robotics books available today and selects, reviews, recommends, and sells the best books. But Robot Books.com isn't limited to books. You will also find a selection of robot toys, movies, educational toys, magazines, motors, and robot kits.

If you are looking for more detailed information, you can start your search at PEKEE (www.pekee.fr/eng/low/default.php). PEKEE is a robotics portal and search engine where you can locate information about all types of robotics, from commercial to amateur.

Note. PEKEE is a French web site. Although PEKEE does have an English interface, many of the links on the PEKEE web site point to French-language web sites.

PEKEE is divided into several sections, including the PEKEE headings and The Robotics Gate. The PEKEE headings section features areas such as news, articles, links to top web sites, games, and forums. You can also subscribe to PEKEE's newsletter to ensure that you stay up-to-date on the latest robotic developments.

The Robotics Gate section features areas such as links to robotics-themed computer games, background about robotics, information about robots you can purchase, and more. There are even links to other robotic web rings. If you can't find what you want on PEKEE, you may never find it.

A BREATH OF FRESH AIR

If you would rather spend time outdoors after being penned up inside a cavernous office all day, you can still participate in a high-tech hobby. All you need is a Global Positioning System (GPS) device, and you can dive into the popular pastime of geocaching. (For more information about choosing a GPS device, see "Product Snapshots."

The basic idea of geocaching is that individuals and organizations set up caches all over the world and share the locations of these caches on the Internet. Using a GPS device, you can then use the location coordinates to find a particular cache. After you find a cache, you usually are encouraged to take an item from the cache and leave an item for the next finder.

It sounds easy, right? A fter all, how difficult can it be to find something if you are told exactly where it is? When you take
into account the margin of error of GPS devices, however, you may have to search a 200-square foot area to find the cache—and the cache is sometimes very cleverly hidden.

The location of a cache can be very entertaining. A cache located on the side of a rocky cliff accessible only by using rock climbing equipment may be hard to find. An underwater cache may only be accessed by scuba diving. Other caches may require long difficult hiking, orienteering, and special equipment. Caches may be located in cities both above and below ground, inside and outside buildings. The skillful placement of a small logbook in an urban environment may be quite challenging to find.

The premier geocaching web site is **Geocaching: The Official Global GPS Cache Hunt Site (www.geocaching.com)**. The information on this web site is enough to get you started—and more. According to the Geocaching web site on the day I visited, there are now 13,955 caches hidden in more than 109 countries—and those are just the caches posted on the Geocaching web site. Estimates of the total number of geocaches range up to 40,000.

Luckily, the Geocaching web site enables you to narrow your search for caches by entering your zip code, state, or country. The search engine then returns a number of caches in your area. The caches are rated by their founders according to level of difficulty finding the cache and how rigorous the terrain is. Geocaching has become such a popular hobby that the forums on the Geocaching web site are quite busy. In these forums, you can check in with geocache hunters in your area, or you can talk with geocache hunters from all over the world.

### Product Snapshots

If you are going to take up geocaching as a hobby, you are going to need a Global Positioning System (GPS) device. The Geocaching web site (www.geocaching.com) list the following “must haves” when shopping for a GPS device.

- You should be able to store waypoints. The ability to store more than 200 waypoints is cool; but for geocaching, 10 is sufficient.
- The device should have a long battery life.
- The device should be waterproof. Many caches are near water, and you may end up dropping your GPS device.
- 12-channel parallel receiver system.

Highlighted below are a couple of the most recent GPS devices that have been released. These devices meet the above standards and are produced by reputable GPS manufacturers.

#### MAGELLAN MERIDIAN GOLD GPS

The Magellan Meridian Gold GPS device features 12 channels with 16 MB base map and 500 waypoint storage. It includes built-in detail on U.S. cities, interstate highways, major roads, parks, waterways, and airports. In addition, the Magellan Meridian Gold GPS has a Secure Digital memory-card slot for expanded storage.

Using a GPS device, you can locate specific coordinates and search to find the treasure.

The Magellan Meridian Gold GPS is waterproof and features a rugged, ergonomic design. A 1.75” x 2.2” (44.4 mm x 55.9 mm) gray-scale screen with backlight and a backlit keypad make it easy to use in dark environments. The battery life is approximately 14 hours with 2 AA batteries.

The Magellan Meridian Gold GPS is available through retail outlets and through online stores for the suggested retail price of U.S. $299. For more information about the Magellan Meridian Gold GPS, visit www.magellangps.com.

#### GARMIN GPS V

The Garmin GPS V device features 12 channels with 19 MB of built-in memory and 500 waypoint storage. Included with the Garmin GPS V is a MapSource City Select CD-ROM with street-level maps and points of interest. The Garmin GPS V provides position accuracy within 49 feet, and autorouting shows the shortest and fastest routes.

The Garmin GPS V is water resistant to a depth of 3.3 feet. The 2.2” x 1.5” (5.6 x 3.8 cm), 256 x 160 pixel display features 4-level gray scale and is backlit. The battery life is approximately 25 hours with 4 AA batteries.

The Garmin GPS V is available through retail outlets and online stores for the suggested price of U.S. $535.70. For more information about the Garmin GPS V, visit www.garmin.com/products/gps5.