

tools of the trade

Empty the Cigar Box

NeatReceipts SCANALIZER combines a compact scanner and OCR (Optical Character Recognition) software in a single solution that will store and organize expense and tax receipts, bills, business cards, and all sorts of other paper effluvia that's complicating your life. The scanner is compact and lightweight—10.8" × 1.6" × 1.3" and 10.6 ounces. The scanning area can be from 1" × 1" to 8.5" × 11" (up to 30" long). It has a USB connection and will scan approximately three to four receipts per



NeatReceipts SCANALIZER

minute. The SCANALIZER software reads (OCR) data from receipts and puts it into a database organized by date, total, vendor name, and whether you paid by credit card or cash—all displayed on a spreadsheet. You can export the data to Excel, Outlook, Quicken, QuickBooks, Money, Word, PDF, HTML, and vCard formats. There are no batteries (powered by USB), and the scanner auto-sizes, auto-crops, and auto-rotates any scanned receipt or document. www.neatreceipts.com

It's cold and flu season,

and here's a thought to fire up your paranoia. A University of Arizona study claims the mouse on your desk harbors up to 1,676 microbes per square inch (the average toilet seat has about 49 per square inch). But now there's an alternative to the winter-size box of alcohol wipes. IOGEAR'S new **Germ-Free Wireless Laser Mouse** has a special coating that the company says will neutralize 99% of those microbes. The coating is made up of nanoparticles of titanium oxide and silver that combine to form and give off free oxygen ion bases that reduce or eliminate the germs. As to its more mouse-like properties, the IOGEAR has VCSEL (Vertical Cavity Surface Emitting Laser) as a light source, giving it 30 times more tracking power than mice with optical sensors. Besides the accuracy, it works on almost any surface, including glass; is USB Plug-n-Play; and is



Germ-Free Wireless Mouse

hot pluggable. Its wireless range is six feet.

www.iogear.com

Adobe Acrobat Connect (formerly Macromedia Breeze Meeting) is a collaborative communication suite that includes solutions to enable online meetings, create presentations, design training, and manage online events. With Acrobat Connect, you can create personal online meeting rooms. Collaboration tools let you share anything on your screen in real time with up to 15 people in the meeting room. The tools include one-button screen sharing, video, teleconferencing, and whiteboarding. Presentations can be given with any software program, security is

The Music Genome Project

Michael Castelluccio, Editor

■ THE MAPPING OF THE HUMAN GENOME was supposed to take 15 years, but it was completed early in 2003 after 13 years of combined effort by the U.S. Department of Energy and the National Institutes of Health. The goal was to create a database that identified all of the approximately 20,000-25,000 genes in human DNA and determine the sequences of chemical base pairs that comprise DNA—all three billion of them. The arrangement of the elements of the genomes accounts not only for the uniqueness but also for all the diversity in human life.

So what about music?

In the first week of the first month of the new century, a group of musicians and techies met “with the idea of creating the most comprehensive analysis of music ever.” In the words of the founder of the Music Genome Project™, Tim Westergren, the reason for and the method of this analysis worked something like this:

“Together we set out to capture the essence of music at the most fundamental level. We ended up assembling literally hundreds of musical attributes or ‘genes’ into a very large Music Genome. Taken together these genes capture the unique and magical musical identity of a

continued on next page

ensured through the use of strong passwords, and individual participants are announced before they are allowed entry. The personal meeting room never changes and is always



Adobe Acrobat Connect

available to those allowed access. The URL can be sent out by e-mail or within a PDF file, and it's simple enough to remember. Anyone with Flash enabled on their computer can use any browser to access the meeting room. The Professional version of Adobe Acrobat Connect offers an

unlimited number of meeting rooms and a maximum meeting size of 2,500. Other features include Voice over Internet Protocol, meeting recording, customizable layouts and windows, multiple meeting rooms per user, large events and polling, and a central content library. For document viewing, you can upload any printable document converted to Flash and share it with all attendees instead of using screen sharing. Presentations, videos, or applications can be viewed in full-screen mode, and you can use the Instant Meeting feature to start an ad hoc meeting and invite participants from within Outlook. Visit www.adobe.com for more information, or call (800) 457-6613 for the Adobe offerings from Clarix Technologies.

Slim Devices Squeezebox™ is a network music player that lets you stream digital music and Internet radio to your stereo system. Packed in a case that's about 7.5" × 3.5" × 3", the player works in both wired and wireless modes. Besides playing your own personal digital collection, the device can play Internet Radio even when your PC is turned off. The always-on Internet Radio works with SqueezeNetwork with access to hundreds of Internet Radio Streams offered by Slim Device's partners, including Pandora and Rhapsody. Internet Radio favorites can be saved in a playlist, and the high-resolution display shows song title information during playback. Squeezebox supports MP3, Ogg Vorbis, and WMA-formatted Internet

Radio streams. Connection to your computer is either by 802.11g wireless or Ethernet, and it's compatible with Windows, Macs, and Linux. The 30-button infrared remote has a SmartScroll algorithm to find favorites in



Squeezebox Player

large lists. Along with the information displayed, you can choose high-speed, full-screen visualizers. Audio outputs include digital and analog with volume controls for all outputs. Multiple outputs can be used simultaneously, and speaker and headphone connections are on the back of the device.

www.slimdevices.com ■

continued from p. 57

song—everything from melody, harmony, and rhythm to instrumentation, orchestration, arrangement, lyrics, and, of course, the rich world of singing and vocal harmony. It's not about what a band looks like or what genre they supposedly belong to, or about who buys their records—it's about what each individual song sounds like."

When you look over the list of more than 400 "genetic" attributes of music used by the group, you can see the list goes well beyond the basic mechanics of harmony, rhythm, and melody. Sure, there are recognizable attributes like major and minor key tonalities, vocal counterpoint, and dissonance, but there's also a raft of idiosyncratic qualities like: angry lyrics, acoustic guitar layering, busy electronic hat, mid-tempo shuffle feel, thin female vocal performance, vocal scatting, and something called wet snare.

The Project has been chugging along for the past six years. The analysis for each four-minute song takes about 20 to 30 minutes, and by May 2006, the library contained 400,000 analyzed songs from 20,000 contemporary artists.

Why would anyone devote so much time to this cataloging? Why indeed? Stop for a moment and see if you can figure out a way to turn this unique project into a business plan. Take a few moments before you read further, and keep in mind the explosive economic energy that lies just below the surface in the music industry and those who have tapped it with engines like Napster and the iPod.

Pandora Radio

If you read the Tools part of the page first, you already know one way to convert this musical database to



Pandora gets to know your preferences and continues to refine the selections.

cash. Squeezebox uses the Genome Project filter in combination with a receiver to create playlists of preferred artists and types of music that you play through your home music system.

But let's get back to the primary application for the Project. Go to www.pandora.com, and you will see the player that's the interface for the Music Genome Project database. You need a broadband connection and Flash 7 or 8 to use the application. The Pandora player chooses a succession of songs from its database after you create a channel. You do this by typing the name of an artist or song. When you tap the create button, Pandora sorts a selection based on the characteristics of the first song or artist you requested.

But that's not the end of the process. Pandora gets to know your preferences and continues to refine the selections. It does this by accepting input from two pop-up menus, one beneath the album cover of the song playing and one that appears as a radio button with the words "Help Us" on it. As you mouse over the album cover, a small panel lifts up. It has a thumbs up and thumbs down icon and an arrow that will open a larger menu. Check thumbs

up, and the program will look for more songs with the characteristics of the one playing. The opposite for thumbs down. The larger menu has additional information. It has a link that

reads, "Why did you play this song?" It takes you to the genetic elements of the song and why Pandora thinks it belongs on your station. Another link, "Move this song to a different station," allows you to make your own corrections. There's a "Bookmark" link; a "Backstage" link that opens up pages of information on the artist, group, or album; and a "Buy" link that will take you to iTunes or Amazon. The Help Us button opens up a similar set of choices with another choice—a button with Zzzz emblazoned on it. The instruction for that link is, "I'm tired of this song—don't play it for a month."

The overall effect of all these choices is that you become an active member of the Genome community, shaping the content on your own player. It's the kind of personalization that encouraged the growth of powerhouse portals like Yahoo and Google. You can create a total of 100 stations, and the customization of each station is possible through another pop-up menu next to the name of each station. In that area of the player, you can delete or rename a station, edit its content, add more music to it, and even e-mail the station to a friend. Pandora not only learns, but it accommodates.

The online Pandora player is free, but you can also pay to subscribe to the advertising-free version for a modest cost. The Squeezebox player, which is an ideal plug-in that will import Pandora to your home music system, has just been sold to Logitech to become part of their quality line of digital accessories. ■