



# t o Y o u r E a r s ( a n d E y e s )

## MULTIMEDIA MUSIC DATABASES

by Péter Jacsó and Judit Tiszai

**M**usic surrounds us wherever we go, and now the Internet is no exception. It is very revealing that a search in Yahoo produced nearly 11,000 hits for music-related sources, more than the other major recreational/entertainment sources together, such as movies (2,028), television (1,880), books (1,059), radio (781), or travel (286). You will find FTP sites, archives, newsgroups, LIST-SERVs, Web pages and genuine, searchable databases about artists, composers, bands, concert programs, tours, lyrics, music education syllabi, shareware programs and data, as well as promotional materials from fans, and all types of music studios, agencies, and publishers (labels). There are more than 7,000 sites about artists, 55 about musicals, 150 just about marching bands, over 600 about or from mainstream, affiliated, independent, and esoteric labels, and over 250 that sell CDs, vinyl records, cassettes, and music videos.

✓ The growth is mindboggling also in terms of quality. Those who can—directly or indirectly—sell or promote music merchandise have brought the World Wide Web domain of the Internet to a new level by offering online, real-time or near real-time delivery of high-quality photographs of album covers, streamed audio and—to a much smaller extent—streamed video files in addition to textual information. On the CD-ROM platform we also see developments, though they are not comparable to the World Wide Web explosion. There are only two multimedia music catalogs on CD-ROM, while this is the most dynamically developing subset online. Contemplating the interests of *DATABASE* readers, we focus here on those multimedia music sources that qualify as searchable databases, or at least as Web sites with browsable indexes.

### THE EVOLUTION AND VARIETY OF ELECTRONIC MUSIC DATABASES

Music related information has been available for several years on the consumer-oriented information services, on the Internet, on CD-ROM, and even on floppy disks. There have been hundreds of forums and Usenet groups organized by

artists, bands, genres, etc., on the consumer oriented services. The information includes discographies, biographies, concert tour details, answers to frequently asked questions about bands and artists, lyrics of songs, and good old gossip. On the professional services level, catalog records for music recordings, sheet music, music related serials and books have been available online through OCLC, and on CD-ROM from the Library of Congress, SilverPlatter, and NISC. These were recently evaluated [1].

The World Wide Web has most of these and then some. One of the most crowded territories has been the music stores. The numerous non-multimedia music stores that popped up on the Internet in the past two to three years selling and offering catalogs of CDs, vinyl records, cassettes, and music videos show a great variety in size and content alike, and represent different stages in the evolution of this market. It ranges from the now archaic procedure of sending an inquiry to the store to find out if the album is available, to the directly searchable online music catalogs that display album covers and artists' portraits by the click of a button. There is an excellent review of many of these databases on the home page of Philip Sells (<http://www.rpi.edu/~sellsp>). Now the next stage is here, when music is played back by the click of a button. This is much different from downloading zipped graphics files and sound bites from the music forums on CompuServe and AOL, exiting the system, unzipping the files, then playing them back.

The most important novelty is that an increasing number of databases and Web sites offer sound clips of many or all of the albums available in the database. Though these are typically short (25 to 30 seconds) clips, and mostly of mono AM radio quality, they are perfect to get the flavor of the style of an unknown artist or a band, or to identify a long forgotten song. Such audio clips would require four to six minutes of downloading time from an online site just to play them back offline. These options are still available, but soon will be replaced by the hot new technology, streamed audio (see sidebar). We tested all the sound samples using



# Streamed Audio—The Hot New Technology

The new audio streaming technology offers compression that ranges from a factor of 20 to 50, allowing almost immediate playback of sound clips on a 28.8 Kbps modem. The faster the modem, the better the quality of the playback may be (though it also depends on the quality of your sound board, speakers, processor speed, the overall traffic on the Internet, and your own server). Details of the audio streaming technology and of the software alternatives were discussed in recent articles in *Information Today* [2, 3]. Suffice it to say here that of the five streamed audio alternatives (Xing Streamworks, RealAudio, TrueSpeech, Internet Wave, and Voxtool), the first four are used for music playback. The first two provided the highest sound quality in our testing. Both have a higher and a lower quality version. For all of these streamed formats you must download, install and configure free playback software. Depending on your modem speed and familiarity with installing programs, this well documented, one-time process does not require more than 10 to 15 minutes. Beyond the streamed audio format, many sites still use the AU, AIFF and WAV file formats. These are not compressed, and they have to be downloaded into your RAM (not the hard disk!) completely before they can be played back. Their advantage is that in most of the Web browsers, the playback software is already built in, or—for WAV format—is part of Windows.

TABLE 1

| TOTAL # OF...                      | 1-800 MUSIC |        |        | MUSIC BOULEVARD |        |        | WORLD WIDE MUSIC |        |         | MUSIC CENTRAL CD |        |       |
|------------------------------------|-------------|--------|--------|-----------------|--------|--------|------------------|--------|---------|------------------|--------|-------|
|                                    | albums      | covers | clips  | albums          | covers | clips  | albums           | covers | clips   | albums           | covers | clips |
|                                    | 5,000       | 5,000  | 20,000 | 150,000         | 18,000 | 45,000 | 40,000           | 40,000 | 200,000 | 60,000           | 2,000  | 60    |
| Avg sound clips/album              | 3-4         |        |        | 4-5             |        |        | 5                |        |         | -                |        |       |
| Avg playback time/song (sec)       | 15          |        |        | 30              |        |        | 25               |        |         | 60               |        |       |
| <b>Cecilia Bartoli (classical)</b> | 4           | 4      | 6      | 24              | 10     | 35     | 21               | 21     | 99      | 0                | 0      | 0     |
| <b>Mascagni (classical)</b>        | 0           | 0      | 0      | 21              | 2      | 14     | 4                | 4      | 20      | 0                | 0      | 0     |
| <b>Enya (new age)</b>              | 4           | 4      | 13     | 11              | 2      | 6      | 5                | 5      | 25      | 5                | 1      | 0     |
| <b>Deep Forest (new age)</b>       | 2           | 2      | 6      | 4               | 1      | 6      | 4                | 4      | 20      | 2                | 1      | 0     |
| <b>Johnny Cash (country)</b>       | 5           | 5      | 21     | 48              | 7      | 21     | 16               | 16     | 80      | 52               | 3      | 0     |
| <b>Joan Baez (folk)</b>            | 1           | 1      | 4      | 41              | 11     | 39     | 13               | 13     | 65      | 38               | 5      | 0     |
| <b>Gipsy Kings (latin)</b>         | 7           | 7      | 28     | 13              | 6      | 9      | 8                | 8      | 40      | 9                | 3      | 0     |
| <b>Dave Grusin (jazz)</b>          | 2           | 2      | 9      | 15              | 13     | 39     | 18               | 18     | 90      | 19               | 0      | 0     |
| <b>Dire Straits (pop-rock)</b>     | 8           | 7      | 39     | 14              | 6      | 18     | 11               | 11     | 55      | 21               | 1      | 1     |

| SEARCHABLE ELEMENTS             |   |   |     |
|---------------------------------|---|---|-----|
| album title (exact/keyword)     | ■ | ■ | ■ □ |
| song title (exact/keyword)      | □ | □ | ■ □ |
| artist/band name                | ■ | ■ | ■ ■ |
| genre/publisher                 | ■ | ■ | ■ □ |
| media format/multimedia element | □ | □ | □ □ |

| AUDIO FILE FORMATS           |       |     |       |
|------------------------------|-------|-----|-------|
| RA 14.4/RA 28.8              | □     | ■   | □ □   |
| MPEG low / MPEG high quality | □     | □   | ■ ■   |
| AU/AIFF/WAV                  | ■ □ □ | □ □ | ■ □ □ |

Same song on different albums is counted repeatedly. Music Central also has about 50 audio-video clips in AVI format.

14.4 Kbps and a direct Internet network connection that allowed on the average six to eight times higher throughput rate. It may be premature to classify this multimedia music database domain, but for the sake of structured treatment, we group the sources into categories.

## MULTIMEDIA MUSIC MEGA STORES

There are three Web databases and one CD-ROM database that belong to this category. We discuss

these in some detail, as they represent the trends and models that others will follow. We thought that the CD Club, Columbia House, and MUZE, Inc. would pioneer this technology, but the former has a modest and rather poorly designed database, and the latter offers a puny database of 6,000 albums with text only. Table 1 facilitates the comparison of the four best sources in this category by showing their major features (number of albums, cover art, sound clips, audio file formats, access points), and some of the test search results.

The Web databases themselves are free of charge, currently, but we feel that this policy may change in the near future.

## World Wide Music Database

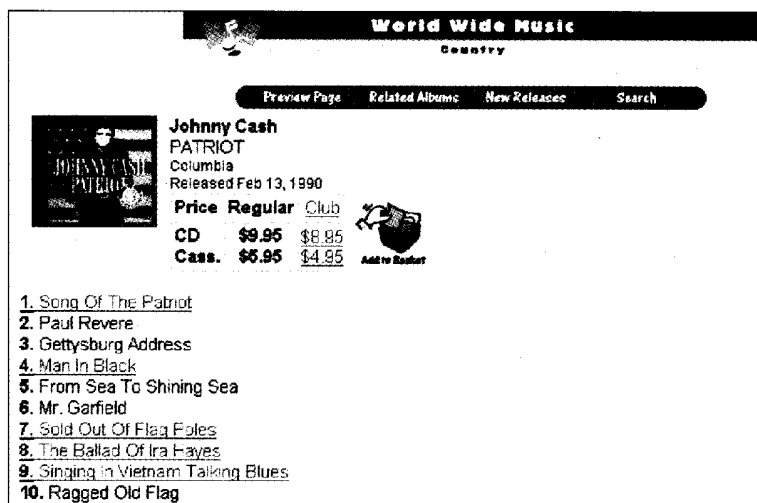
Though this is not the largest catalog, it is a text-book example of high-quality database content, structure, and graphical interface design, sporting splendid search software that is utterly smart and intuitive. This system from the Intouch Group exudes professionalism in every detail. All 40,000 albums have song

FIGURE 1



The quilt of album covers

FIGURE 2



Detail screen of World Wide Music

lists, price information (regular and member discount), album cover, and five sample tracks of 30 seconds duration in AU and RealAudio 2.0 (RA 2.0) file format. As of this writing, RA files were available for only a fraction of the albums, but by the time you read this all 40,000 albums may have samples in both AU and RA formats.

The software handles name and title variations, definite and indefinite articles, special characters, plurals and possessive formats with

aplomb. Diamond & Rust, or Rust and Diamonds, Ragged Old Flag or Old Ragged Flag, Patriots' Dream or The Patriot's Dream, Johnny Cash, or Cash, Johnny are accepted and yield the same results. When a name or a title is not unique, it shows the possible choices, e.g., in response to Cash, it will offer Johnny Cash and Rosanne Cash to choose from. If the name or title does not match, it offers alphabetically or phonetically (!) close options. Scooter retrieved nothing, but the software offered

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FIGURE 3



## The Woman In Me

Twain, Shania

PGD/Polygram 3145  
Released: 02/07/95

Rating Not Available  
CD  \$ 12.96 Cassette \$ 8.49

- Artist Discography -

---

Tracks:

- Home Ain't Where His Heart Is (Anymore) (4:12 )
- Whose Bed Have Your Boots Been Under? (4:25 )
- (If You're Not In It For Love) I'm Outta Here! (4:30 )
- The Woman In Me (Needs The Man In You) (4:50 )
- Is There Life After Love? (4:39 )
- If It Don't Take Two (3:40 )
- You Win My Love (4:26 )
- Raining On Our Love (4:38 )
- Leaving Is The Only Way Out (4:07 )
- No One Needs To Know (3:04 )
- God Bless The Child (1:30 )

Music Boulevard detail screen

Davis Skeeter, Six Shooter, and John Souther.

For classical music you may search by composer, conductor, ensemble, instrumentalist, vocalists, and collections. When there are only a few hits (such as for Mascagni), the album titles are listed directly, but when there are many albums, then qualifying choices are offered first. For Franz Liszt it offers the following filters: collections, chamber, choral, concerto, piano, and orchestral music. For Sir Georg Solti it offers first two major categories for narrowing (ensemble or composer), then for further choice it lists the 25 ensembles with which he recorded. Now this is intelligence.

The search result is a panel of album covers, maximum 16 on a screen (Figure 1). A click on the album title below the cover art brings up the detail screen (Figure 2). The sound clips are played back by clicking on the sound icon. The option bar offers to display the track list (along with a smaller version of the album cover), related albums, or new releases. You may grade the album so that the software learns your preferences when you want the software to make recommendations.

The only additional features that we would like to see are the ability to search by label (e.g., Green Linnet titles), and to have some reviews. This database is addictively perfect. A shopping basket is discretely displayed at the bottom of the detailed item screen. You will use that extensively. The album prices are competitive, and so are the shipping and handling charges, especially if you order between three and eight items.

#### Music Boulevard

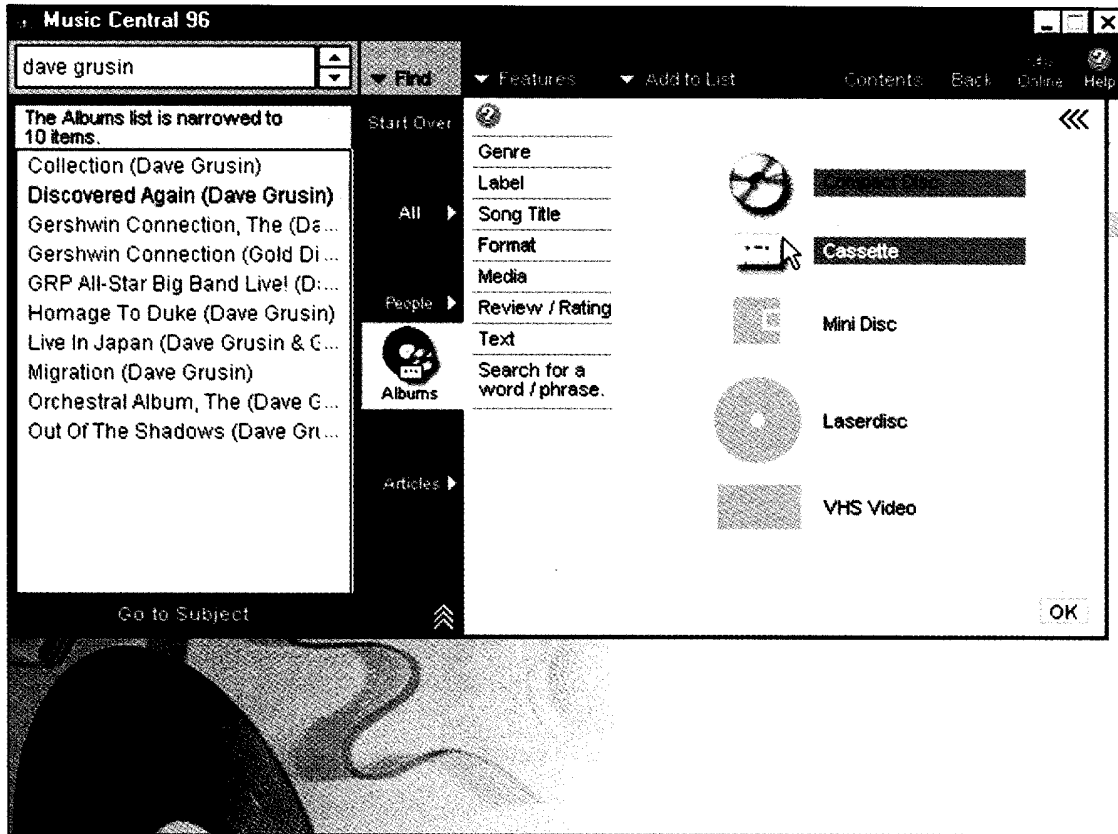
This database of 150,000 albums comes from Telebase Systems, Inc., a company that was created 12 years ago by one of the visionaries of our industry, Dick Kollins. It is among the largest music databases. Our test search results clearly show its superiority in terms of the number of albums found by artists. At the end of February about 60 percent of the albums had song lists, there were 18,000 album covers, and 15,000 albums had sound samples. Typically, an album has three samples in two qualities (low-quality MPEG and high-quality MPEG), but for classical music we found a higher number of samples, partly due to the many mult disc collections. The samples are 30

seconds long, and of very good quality. The album covers are in two sizes and also well-done. We found only one glitch in the hundreds of albums whose details we looked up: for Solti's Matthias Passion the cover of Lohengrin is presented.

Music Boulevard has grades and reviews for many of the albums from the *All Music Guide*. Biographies come from the 14-volume *Contemporary Musicians* series of Gale that is an integral part of the database. Music Boulevard also has 20 *Billboard* charts, and the daily *Music Wire* magazine along with the latest issues of popular music publications, including *Blues Revue*, *SPIN*, and *Gramophone*. It offers three graphic modes (full, slender, and limited)—this is very considerate. A few services are available only for those who hold a Backstage Pass, which can be purchased for \$4.05 a month, or \$29.95 a year.

The software has many of the features discussed previously but lacks some important ones. Album and song titles seem to be phrase indexed, so you need to know exactly the first or first few words of the title, i.e., Old ragged flag will not find Ragged old flag. We would like to see automatic

FIGURE 4



Music Central's search screen

pluralization or singularization, the flexible treatment of special characters and definite and indefinite articles, such as & for and, etc.

The search results are presented in a nice summary format showing the album title, the artist's name, the album cover (if available), and a speaker icon (if music samples are available). A click on the album title brings up the detail screen (Figure 3). The listing of related artists and groups who perform similar music is a good idea. Sometimes you will also find the name of artist(s) who had the most influence on this artist.

#### 1-800 Music Now

This database from MCI is the smallest one in this category, but still far bigger than the ones in the league of multimedia music boutiques. On the average there are

four clips per album, but as shown in Table 1 this varies considerably. The lack of song title searching is a sore point. The album titles appear in a


This is an excellent database  
but the much larger, more  
current and free multimedia  
online music catalogs will give  
Microsoft a run for its money.

tabular form that also includes the price and the symbols for the sound file format (AU and RA). Sometimes an artist or band biography is also

included. Clicking on the album title brings up its details with the song list, and the album cover. Clicking on the code of the sound files will start playing the sample after a few seconds delay. You cannot select individual songs from the album, they play back as a series for a total of 50 to 60 seconds. Precious seconds are lost by the unnecessary announcements of the song titles that are already displayed in front of us. The repetitive pitching ("the album includes the hit song") is annoying enough, but the incorrect pronunciation of many of the Italian and Spanish artists' names and song titles add insult to injury. The coverage is rather unpredictable. It was surprising to see how few albums there were from

Johnny Cash and Joan Baez, even considering the much smaller size of the database. Classical music has only a small share according to our sampling.

#### Music Central

 On the CD-ROM platform, only Microsoft's Music Central multimedia database fits this category. It is a well designed database of 60,000 CDs, audio cassettes, laserdisk and video cassettes, 2,000 album photos, 8,000 biographies, and 5,000 reviews from *Q* magazine. There are 30 video clips, but the low number of sound clips is disappointing. Most of the albums have song lists, and playing time (though not for the individual songs). Price is not available, but you may call a toll-free number to find out and order the album.

The database has the most search options. Beyond the usual options, you may also filter your search by type of medium (CD, audio cassette tape, videotape, etc.) to zero in on the albums of your preference (Figure 4). This is an excellent database but the much larger, more current and free multimedia online music catalogs will give Microsoft a run for its money. For those who don't have a fast Internet connection, or are charged by the hour, Microsoft's CD-ROM music catalog at a street price of about \$40 is a good choice, but the number of sound clips should be significantly increased. It is also a disadvantage that it runs only under Windows '95. Monthly updates from the Microsoft Network are free.

Some of the other non-multimedia online megastores (**Pentagon CDs & Tapes, IMM, CDnow, Emusic**) have plans for or started to add music samples but at the time of this writing the volume was negligible.

#### THE BIG SIX GROUP

There are six major music publishers (known as the Big Six) that have about 80 percent of the market share: Sony, Warner, BMG, Polygram, MCA, and EMI. All of them have their own Web sites, but the differences are significant.

**Sony Music** is the richest source and sports by far the best design (Figure 5).

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FIGURE 5

The screenshot shows the Sony online website with a grid of categories. At the top left, there is a banner for an 'Online survey and free gift!'. The main header is 'Sony on line' with the Sony logo. The categories are arranged in two columns:

- on music:** Artist information, tour schedules, sound clips, cover art, music video, and special promotions. Includes a sub-section for 'Ozzy Osbourne Live in concert'.
- on games:** Software information, video game previews, screen savers, and Sony Playstation product news. Includes a sub-section for 'Website of the month! Fusion-Jan'.
- on electronics:** Product info for consumer electronics, business & professional products & computer products. Includes a sub-section for 'New DDC-101 Digital Still Camera'.
- on movies:** Immerse yourself in Columbia, TriStar, Triumph, & Sony Pictures Classics films, and home video. Includes a sub-section for 'They're not really criminals BOTTLE ROCKET'.
- on television:** Get involved with all your favorite Sony Television Entertainment TV shows and Home Show Network. Includes a sub-section for '"Party of Five"...help Bailey pick a college'.
- on gear:** Shop for great entertainment merchandise from Sony Signatures. Includes a sub-section for 'Pop culture merchandise and collectibles'.
- on theatres:** Theatre locations, history, Sony Imax Theatre, & Magic Johnson Theatres.
- on air:** Music & talk based entertainment and entertainment news, and entertainment clips.

A sample from Sony Music's database

Its home page leads you to the samples of various music categories or bands and artists. The 30-second samples recorded in 22 KHz 8-bit quality are in WAV and also often in AIFF format. For this sampling rate and depth the quality is excellent, the converting of the samples from digital audio to computer file was obviously very professional. Sony has a Music Vault that can be browsed by an alphabetical index of artists and band names. It is not multimedia, however, and even its text information is frugal, including only the title of the album, and the CD/tape identifier.

**BMG's Classics World** Web site is small and not fancy in design, but offers high quality (44 KHz, 16-bit stereo) 45- to 50-second MPG audio clips that are browsable by conductors, ensembles, cellists, pianists, violists, singers and other soloists—including Pavarotti, Caruso, Mario Lanza, Anna Moffo. However, there may have been problems with converting the digital audio recording into MPEG file format, as we heard some noisy, low quality samples, such as the one from Bernstein's *The Early Years*. Hopefully these will be replaced by good recordings, as this sampling

frequency and depth (taking about 1MB per minute) should deliver CD Audio quality in theory.

**Polygram** deserves praise for its multimedia database that is searchable by artists and genre. It has song listings, background information, liner notes and sound samples for artists and bands, including such former and current bestsellers as ABBA, Cecilia Bartoli, Eric Clapton, Pavarotti, and Shania Twain. Its listing for *Braveheart* includes track list, liner notes, photos, interview excerpts from artists, and five sound clips in WAV format.

**MCA** has an index to the 150 artists and bands featured in the first seven volumes of its magazine on its Web site. It is not a very artistic design but indicates who has sound, video clips, or album covers beyond biographies, and other text pieces. Its 20- to 30-second audio clips are in AU format.

**Time Warner** has only a dozen or so albums with one sample per album in AU and MPEG file format. An interesting feature of Warner is that it provides sneak previews for upcoming albums a month before their release.

**EMI's** Web site is deeply disappointing, way below the standard of any of the other Big Six companies, and even most of the affiliated and independent labels. If any credit is due, it should go to the fan clubs of artists and bands that compiled decent collections of album covers and sound samples in a variety of formats for some EMI performers, such as Pet Shop Boys.

#### MULTIMEDIA MUSIC BOUTIQUES

There are three major types of boutiques: genre-specific, label-specific, and artist-specific, and there are a few general boutiques. Sometimes the label-specific database implies genre as is the case with BMG that deals with classical music, or Windham Hill that trades mostly in new age (though it had a dozen samples for Hawaiian slack guitar music). It offers, among others, about 100 album covers and 25- to 30-second samples in AU format.

#### Genre-specific Databases

**Jazz Central Station** from N2K, a subsidiary of Telebase Systems, Inc., is by far the best genre-specific site. Its design is awesome (Figure 6), the best we have seen, and the content

FIGURE 6



One of the superbly designed screens of Jazz Central Station

is incredibly rich, cerebral, and of the highest quality. We are not “jazz nuts” to say the least, but we have spent hours in this stunningly beautiful site. It has everything about jazz in a lucidly organized manner. You find reviews of jazz albums, jazz-related books and flicks, illustrated with substantial soundbites, promotional clips of new jazz releases, listings of jazz radio stations and jazz clubs in some major cities, upcoming concerts and jazz festivals in the U.S., Europe and Japan, and details of albums of the most important jazz labels, like Blue Note, GRP, and Concord. In the Musician’s Express section you’ll find educational material, and interactive Master Classes from jazz luminaries. It is the ultimate in multimedia to have Marvin Stamm illustrate trumpet improvisation. For further study, you may listen to and download the music samples

and the scores that are in Acrobat format. There is a resource directory for jazz musicians, and interactive

Jazz Central Station...is by far the best genre-specific site. Its design is awesome, the best we have seen, and the content is incredibly rich, cerebral, and of the highest quality.

exhibits of prominent jazz superstars, like Chick Corea, Branford Marsalis, Al DiMeola, and Dave Grusin, who himself is one of the entrepreneurs and brains of this project.

N2K also published the best genre-specific CD-ROM, **GRP Collection**. It is currently available only for the Mac, but a Windows version may be available by the time you read this. It also sports a nice design and excellent content. The database has album cover, track listing, and artist information for 550 jazz albums. There are also 150 sound samples of about 30 seconds on the average, 20 video clips, artist photos, complete CD booklets for 75 albums, and a virtual radio that can play jazz music continuously.

Not surprisingly, the underground genre is well represented on the Web. **IUMA** (Internet Underground Music Archive) has been one of the pioneers in creating a substantial archive of music samples of alternative groups. These could be downloaded and played off-line since 1993. Many of

## Web Databases and Sites

URLs for Web sites mentioned in the article, in order of appearance. All URLs start with <http://>.

| Company or product name    | URL  |
|----------------------------|--|
| Xingtech                   | <a href="http://www.xingtech.com">www.xingtech.com</a>   |
| RealAudio                  | <a href="http://www.realaudio.com">www.realaudio.com</a>   |
| TrueSpeech                 | <a href="http://www.dspg.com">www.dspg.com</a>   |
| Internet Wave              | <a href="http://www.vocaltec.com">www.vocaltec.com</a>   |
| Voxtool                    | <a href="http://www.voxware.com">www.voxware.com</a>   |
| Columbia House             | <a href="http://www.columbiahouse.com">www.columbiahouse.com</a>                                 |
| MUZE                       | <a href="http://www.muze.com">www.muze.com</a>   |
| World Wide Music           | <a href="http://www.worldwidemusic.com">www.worldwidemusic.com</a>                               |
| Music Boulevard            | <a href="http://www.musicblvd.com">www.musicblvd.com</a>   |
| 1-800-MUSIC-NOW            | <a href="http://www.1800musicnow.com">www.1800musicnow.com</a>                                   |
| Pentagon CDs               | <a href="http://www.pentagon.net/">www.pentagon.net/</a>   |
| IMM                        | <a href="http://www.trey.com">www.trey.com</a>   |
| CDnow                      | <a href="http://www.cdnow.com">www.cdnow.com</a>   |
| Emusic                     | <a href="http://www.emusic.com">www.emusic.com</a>   |
| Sony                       | <a href="http://www.sony.com">www.sony.com</a>   |
| BMG                        | <a href="http://www.classicalmus.com">www.classicalmus.com</a>                                   |
| Polygram                   | <a href="http://www.spider.media.philips.com/polygram">www.spider.media.philips.com/polygram</a> |
| MCA                        | <a href="http://www.mca.com">www.mca.com</a>   |
| Time Warner                | <a href="http://www.iuma.com/warner/">www.iuma.com/warner/</a>                                   |
| EMI                        | <a href="http://www.emirec.com">www.emirec.com</a>   |
| Jazz Central Station       | <a href="http://www.jazzcentralstation.com">www.jazzcentralstation.com</a>                       |
| Windham Hill               | <a href="http://www.windham.com">www.windham.com</a>   |
| IUMA                       | <a href="http://www.iuma.com">www.iuma.com</a>   |
| Electric Scotland          | <a href="http://www.almac.co.uk/es/">www.almac.co.uk/es/</a>                                     |
| RCA Victor                 | <a href="http://www.rcavictor.com">www.rcavictor.com</a>   |
| Reprise Records            | <a href="http://www.repriseRec.com">www.repriseRec.com</a>                                       |
| Allegro                    | <a href="http://www.allegro.com">www.allegro.com</a>   |
| Atlantic                   | <a href="http://www.atlantic-records.com">www.atlantic-records.com</a>                           |
| Geffen Records             | <a href="http://www.geffen.com">www.geffen.com</a>   |
| Rolling Stones Official    | <a href="http://www.stonesworld.com">www.stonesworld.com</a>                                     |
| CD Link                    | <a href="http://www.cdlink.com">www.cdlink.com</a>   |
| MP Music Previews          | <a href="http://www.mpmusic.com">www.mpmusic.com</a>   |
| RockWeb                    | <a href="http://www.rockweb.com">www.rockweb.com</a>   |
| SonicNet                   | <a href="http://www.sonicnet.com">www.sonicnet.com</a>   |
| MW3                        | <a href="http://www.mw3.com">www.mw3.com</a>   |
| Rock and Roll Hall of Fame | <a href="http://www.rockhall.com">www.rockhall.com</a>   |
| NOMA                       | <a href="http://www.edge.net:80/noma">www.edge.net:80/noma</a>                                   |
| NARAS                      | <a href="http://www.grammy.com">www.grammy.com</a>   |
| BMI                        | <a href="http://bmi.com">bmi.com</a> (not <a href="http://www.bmi.com">www.bmi.com</a> )         |
| ASCAP                      | <a href="http://www.ascap.com">www.ascap.com</a>   |
| NMPA/HFA                   | <a href="http://www.nmpa.org/">www.nmpa.org/</a>   |

these—along with pictures—are available at IUMA's home page, mostly in AU and RA format, and often also in MPEG format.

Sometimes a genre-specific site is very small and buried too deep within

a larger site to get due attention. **Electric Scotland** has no fancy design, but it offers samples in low and high quality Iwave (Internet Wave) formats of Scottish and Irish musicians performing traditional Celtic music.

### Label-specific databases

Most of the labels affiliated with one of the Big Six publishers have their own Web sites, and so do smaller and independent labels. Not all of them are multimedia, but the number keeps increasing literally day by day. **RCA Victor**, one of the oldest labels specializing in classical music has a modest Web site offering less than 30 classical sound clips in AIFF format. These range from 23-second snippets to one-minute clips. There are seven to eight featured albums, but not all of them have sound samples.

Among the affiliated labels, **Reprise Records** represents a good example, offering news about its artists, and samples of their latest album in AU format. The roster includes over 32 artists, including such highly popular performers as the ethereal Irish singer, Enya, Mike Oldfield, and Frank Sinatra. **Allegro**, **Atlantic Records**, and **Geffen/DGC** have good sites, showing a wide variety of file formats for audio samples.

### Artist-specific Web Sites

Among the thousands of artist-specific Web sites, **Stonesworld** (from N2K, the same company that offers Jazz Central Station) stands out. The sophisticated design, and the sumptuous content is impressive, though not as eloquent as Jazz Central Station's. We were somewhat distracted by the funky typography. If you are a fan, you may learn everything about the Stones' past, present and future. Many will get a kick out of the audiovisual user guide, the 40 album details, and the demo of the Enhanced CD version of Voodoo Lounge. A hotlink button takes you directly to Music Boulevard.

Less spectacular but remarkable official artist sites include those for Jimi Hendrix, Ray Stevens, Van Morrison and Yanni, to name a few. In this category, the unofficial Web sites maintained by individuals and fan clubs far outnumber and outperform the official artists' sites. Most of them don't have multimedia elements yet, but some have both sound clips and video, and are organized and presented professionally. Though their legal status is questionable, and they may be forced to ditch photos,




sound clips and movies, it is worth visiting the best of them, including multimedia sites for the Beatles, Dylan, Enya (three unofficial multimedia sites in addition to the official one), Madonna, Meatloaf, and Frank Sinatra.

### General Boutiques

In this category, **CD Link** is the most remarkable for two reasons. It has an excellent collection of newly released chart busters, and it offers 20- to 25-second WAV samples (and a growing number of TrueSpeech samples) of *all* the tracks of the nearly 200 top albums, including movie soundtracks. This is pretty useful for getting a real feel for the entire album. Much too often we tend to buy albums based on the one song that is played on the radio, just to find that the rest of the album is disappointing. Most of the sound clips are available only in WAV format, but 30 albums also have clips in TrueSpeech format. This latter format has the highest compression rate, and therefore the shortest delay before playback, but the samples were of poor quality.

**MP Music Previews** stands out with samples from 110 albums, representing 100 artists, and 20 different labels. They include such bestsellers as Paula Abdul, The Chieftains, Tracy Chapman, Enya, Garth Brooks, The Grateful Dead, Meat Loaf, and Pink Floyd. You may browse lists of selections sorted by artist, label, and genre. The clips are available in WAV, RealAudio 2.0 and near CD-quality MPEG formats. The choice is impressive, but we had some problems. The 20-second WAV files crashed the Multimedia Player program of Windows at the end of the sample. The full previews in RealAudio and MPEG format promise to last for three minutes, but they tend to be nearer to two minutes, especially if we discount the

unnecessary narration. It is also confusing that the MPEG files are identified as 2MB, but in reality they are nearly 3MB, and that makes a difference in the expected download time.

 MNI offers **MusicNet**, a multimedia CD catalog on CD-ROM. When this quarterly CD-ROM catalog was first published in the spring of 1995, we were very impressed with it. Today, looking at the free online competition, MusicNet's collection of 220-230 albums per issue with cover photos, song lists, discographies, a few video clips, and three 30-second sound clips per album may not be competitive, despite its nifty interface. The price is \$9/issue or \$29.95 for five issues. However, for those who don't have fast and flat rate connection to the Internet, or would use it only for sampling music, MusicNet can be a good solution.

**RockWeb** has a medley of samples of bands and artists featuring, among others, the multiple Grammy nominee Joan Osborne with sound clips in AIFF, WAV and RealAudio 2 formats. **SonicNet's** Kool Clips is a selection of music samples ranging from Cuban music to Celtic music, all in AU format. **MW3** is notable because it supports lesser known artists and offers 30-second samples in AU, low fidelity and high fidelity MPEG.

### DATABASES OF ASSOCIATIONS AND AGENCIES

Beyond the music stores, the music publishers, and the fan clubs, we expected that the various associations, agencies, and music institutes would provide the most and best multimedia resources about music. They fell short of our expectations, but there are a few remarkable exceptions.

The best in this category is the Web site of the **Rock and Roll Hall of Fame Museum**. Even if you can't get to Cleveland for a personal visit, you get a very good impression about its multimedia treasures, and you may listen to sound samples (in AU, RA and WAV formats) of the inductees. Small but promising is the **National Online Music Association (NOMA)** Web site that has high-quality, 50- to 60-second MPEG samples for a few artists.

This category was the most disappointing because so many powerful

associations and music agencies would have the clout and/or the money to have substantial samples from the oeuvre of the artists they represent. The Grammy Awards database of the National Academy of Recording Arts & Sciences, Inc. (**NARAS**) is impressively rich in text, but has no multimedia. Similarly, **BMI** (representing 160,000 songwriters and composers) has a stunningly large, adequately searchable database of seven million songs, but it has no multimedia elements at all—nor does the database of **ASCAP**, the American Society of Composers, Authors and Publishers. The **National Music Publishers Association (NMPA)** and its licensing affiliate, the Harry Fox Agency (HFA), are not even on the Web.

### AND THE BAND PLAYS ON...

The number of high-quality and free multimedia music databases will keep increasing on the Internet at a very fast pace. They represent new opportunities, new concepts, new pricing strategies, and new legal challenges. The CD-ROM segment of the information industry with a very few exceptions cannot cope with the top notch online music databases. It tries to offer something different for those who crave music: CD Audio disks enhanced by other multimedia and text elements for entertainment and education. Though these cannot be considered databases, they are certainly of interest for many in the database industry and will be reviewed in a later issue.

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### Contact Information

#### CD-ROM Databases:

Music Central (Microsoft)  
800/936-3500 or 206/635-7172

GRP Collection (N2K, Inc.)  
212/378-5555

MusicNet (MNI, Inc.)  
800 MUSICNET or 970/522-3805