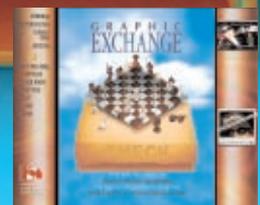


# GRAPHIC EXCHANGE



## CHECK

After you've read this article, go to [www.gxo.com](http://www.gxo.com) or click on the image at right to visit [GXOnline](#) to download Bomb Chianti's interactive PDF bio which includes links to their new single plus production highlights and credits.



*I heard you on the wireless back in Fifty Two  
Lying awake instead of tuning in on you.  
If I was young it didn't stop you coming through.*

In the 1960s musicians made records and movies. In the 1980s they made CDs and videos. But what happens now that it's the 2000s, and

*Oh-a oh*

*They took the credit for your second symphony.  
Rewritten by machine and new technology,  
And now I understand the problems you can see.*

*Oh-a oh*

*I met your children*  
*Oh-a oh*

DVD

*Who did you tell them?  
Video killed the radio star.  
Video killed the radio star.*

*Pictures came and broke your heart.*  
*Oh-a-a-a oh*

kills the  
video star

*And now we meet in an abandoned studio.  
Back in the day, it seems so long ago.  
And you remember, the jingles used to go.*  
*Oh-a oh*

by Bob Connolly

We've all heard how the North American music industry is suffering, with the majority of blame falling on the explosion of CD writers, now standard issue with most new computers. Add in CD-R software that allows users to copy music CDs and compression software that stores music in MP3 digital format so that you can load it onto a portable MP3 player, and it's no surprise that most music stores now refuse to take back discs which have been opened. Otherwise they risk becoming lending libraries where you buy a disc, make copies for yourself and your friends, then keep exchanging it for another CD by the next must-have artist. The Canadian government has even imposed new taxes on blank CD-Rs so that more federal funds can be put back into the music industry through grants to musicians, publishers and record companies.

the music DVD will be the "video"

At the same time, the DVD-Video market has exploded—half of all homes in the U.S. now have DVD players. Hollywood launched the first wave with feature films on disc, and the gaming industry has followed suit with DVD games for Sony Playstation and Microsoft's X-box.

But where are the music DVDs that promoters have been promising? Inexplicably, the music industry is still trying to set a new stan-

*You were the first one.  
Oh-a oh*

*You were the last one.*

*Video killed the radio star.  
Video killed the radio star.*

*In my mind and in my car, we can't rewind we've gone too far*

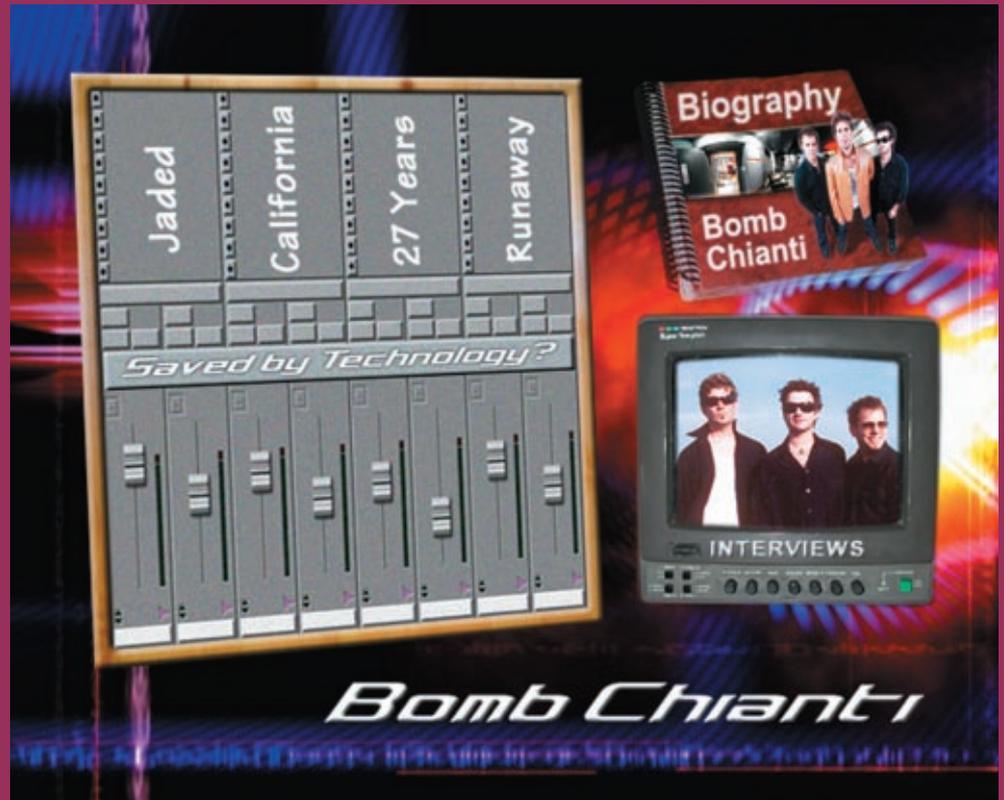
*Oh-a-aho oh,  
Oh-a-aho oh.*

*Video killed the radio star.  
Video killed the radio star.*

*In my mind and in my car, we can't rewind  
we've gone too far.  
Pictures came and broke your heart, look I'll  
play my VCR.*

*Video killed the radio star.  
Video killed the radio star.  
Video killed the radio star.  
Video killed the radio star.  
You are a radio star.  
You are a radio star.*

*The Buggles, "Video Killed The Radio Star"  
(1981, Age Of Plastic)*



Toronto band Bomb Chianti wanted to make more than just a video. So through the latest in Mac-based technology and a little collaboration, the band produced Canada's first music DVD-Video.

dard for DVD called DVD-Audio which uses a different sampling rate and purportedly produces a higher fidelity audio signal. But that's just plain stupid. It's reminiscent of when DVD was first introduced, and a competing DVD format called DIVX—backed by Steven Spielberg and a gaggle of Hollywood lawyers—only caused confusion. Thankfully (and with the help of criticism from journalists like myself) it was quickly killed off by lack of market support.

Carlos Santa and U2 both recently released music video discs in DVD-Video format—and in 5.1 Dolby Digital surround sound they're incredible. So why go through the process of producing a new standard? DVD-Video seems to be good enough for most ears—except those belonging to a handful of recording studio engineers with ultra high end sound systems.

## let's give DVD a try

Not long ago I was approached by a local Toronto band called Bomb Chianti, who wanted to make a music DVD-Video (my experience includes several years producing music videos and

recordings for artists such as Lee Aaron and Platinum Blonde).

Bomb Chianti's Chris Seldon hoped to combine my DVD and music video production experience with his knowledge of Dolby Digital sound production (since he also works for Toronto-based solutions provider Saved by Technology as a specialist in computer audio applications). Together we thought we could produce the ultimate rock band disc—a Bomb Chianti Dolby Digital 5.1 DVD-Video with surround sound.

Applying Apple's "digital hub" approach, we wanted to produce the whole disc on Macs with SuperDrives and Apple DVD software, in combination with *Digidesign Pro Tools* sound editing software for Macintosh—the first (that we know of) Canadian multimedia surround sound music DVD. The band would have a demo disc that it could take to record companies with the intention of producing a full-blown Bomb Chianti DVD-Video album.

## into the studio

Chris Seldon turned out to be very adept at gathering support for our project. A recording studio called Umbrella Sound agreed to



supply a day in the studio to record one song at no cost—and since Umbrella had a *Pro Tools* digital audio workstation, and *Pro Tools* would be the common thread in our production workflow, it was an ideal choice.

At first we tried recording the band directly to the computer's hard disk—but after only a few takes the drive was full. So we decided that it made more sense to simply record to a 24-track multi-

track two-inch tape machine and transfer the tracks to disk after the recording session. It was disappointing not to be going entirely digital from the start—or so we thought, but later we found out that beginning with analog recording opened up a whole new set of possibilities through re-mixing old 24-track tape masters.

I used two Sony DVCAM cameras to capture the live recording process; one was a Sony PD150 for hand-held close-up shots,

The final Dolby Digital 5.1 surround sound mix for the Bomb Chianti DVD was produced in a small studio in Ajax, Ontario using a Digitools Pro Tools audio console.



the other a Sony D30 mounted on a mini-crane. Both were set to a wide screen 16x9 aspect ratio to give the perspective of the big screen. Wild sound was recorded to provide a reference for syncing the master audio to the video segments.

Once all the music tracks were committed to tape, each track was digitized to the *Pro Tools* workstation and saved as Sound Designer files, *Pro Tools'* native format (we could also have captured AIFF files but that would have required conversion later). The important point to remember was to capture the tracks in sync. We could either use midi, locked to time code, or just record a beep across all twenty-

four tracks at the start of the tape and then manually adjust the digital tracks to fall into sync during the track layout process.

At the end of the day, with the digitized tracks copied to a Firewire drive, we said our thanks to Umbrella Sound for the use of the studio and departed.

## bring it on home

What comes next is one of the best things about DVD: you can bring the Firewire drive back to your own personal *Pro Tools* studio to enhance the tracks.

Digidesign's Digioo1 is an inexpensive PCI card for a G4 that lets you play back *Pro Tools* project files and master digitized



tracks. You can lay up the tracks in sync to each other, add effects, edit out mistakes, overdub tracks such as keyboards and sound effects, equalize, compress, add reverb, and on and on. What you're trying to do is efficiently record your bed tracks (such as drums, guitars and vocals) in a professional acoustically designed sound-proof studio, then bring it home to enhance and premix the tracks on your own time. Spend as many hours as you need on your home system, then take the digital tracks and *Pro Tools*'s project file to a studio set up for 5.1 Dolby Digital Surround sound mixing and place the tracks in a 5.1 space.

The 5.1 mixing process is simple if you've premixed all the tracks ahead of time. After you've selected your best takes, edited out the mistakes, equalized, gated and compressed the tracks for punch and clarity, the main job at the mixing studio is to position and pan each track to one or more of the six speakers. A typical 5.1 setup will have three large speakers at the front and two smaller speakers at each side near the back. The subwoofer is the ".1" in 5.1, and it is usually located somewhere in the front of the room.

To mix our 5.1 surround sound, we went to an Ajax, Ontario studio called Up is Loud, a husband-and-wife operation with a great setup for mixing feature films that's built onto the back of a house. Remixing old two-inch 24-track tape masters and turning

them into 5.1 Dolby Digital surround sound was a business opportunity that Up is Loud's owners had jumped on with enthusiasm.

But the main reason Bomb Chianti chose them was because they have a *Digidesign Pro Tools* mixing console setup that's compatible with the band's *Pro Tools* studio. To compare this to a graphic arts workflow, it would be similar to a graphic designer and a service bureau both using *QuarkXPress* for file creation and output; but instead of an imagesetter, Up is Loud has a *Pro Tools* environment with a computerized mixing console.

Chris Seldon figured that if you had done your homework, you could mix several songs in one day. I believe it's possible to mix an entire album in one day if you have experience with the process.

One other thing to keep in mind is that you need to provide a stereo mix for DVD users who don't have a surround sound system and let your listeners choose what's best for their system. For our 5.1 mix the studio provided us with a stereo track and six AIFF tracks on CD.

## now shoot the video and edit

Now that we had our final stereo track, we had to go out to shoot additional segments for the video. Using a portable CD player (i.e. a ghetto-blaster), we cut a CD from the stereo track that had been provided by the studio; then, with the Sony D-30 DVCAM video camera again in tow, we headed off to beach locations and warehouses around town to shoot concept footage for the video. But before setting out, we used *Pro Tools* to speed up the song by 200% and wrote that to a CD.

When the song was played back in the street it sounded strange—not high-pitched, but mechanical. Singing twice as fast as normal, the singer lipsynced to this fast track. Then in the video editing studio we used *Final Cut Pro*'s speed utility to slow the video to half speed. The resulting effect was that the lead singer

walked in slow motion but was still singing in sync to the song. And we also shot some green screen footage of the band singing in my studio so we could composite the vocalists against outdoor footage that had also been shot on DVCAM.

**Applying Apple's "digital hub" approach, we set out to make the first Canadian 5.1 Dolby Digital music DVD-Video.**

**After you've selected your best takes, edited out the mistakes, equalized, gated and compressed the tracks for punch and clarity, the main job at the mixing studio is to position and pan each track to one or more of the six speakers.**



Since the band members had several Macs between them (including a new G4 Titanium) as well as *Final Cut Pro*, I loaned them my Sony Portable DVCAM recorder and a Firewire drive, and told them to “select the scenes that you feel present your best performances. Just give me the digitized video and I will cut the pictures to the music.”

From three hours of video, I was presented with about half an hour’s worth of “select scenes”.

The band wanted to have the same flexibility in producing the video as they had with *Pro Tools*. *Final Cut Pro* allowed all the band members to provide their input. Because all the data was on one Firewire drive, the *Final Cut Pro* project file and the linked DV files could be shared, and each of us could make versions or combine sequences. This is a great way to work—as long as you have artists who can collaborate peacefully (which means leaving their egos at the front door).



We wound up producing several master versions. One was just drums and bass; another was just the guitar player; another one was just live studio footage; and the final master track was a combination of all three, with excerpts from the concept footage shot around Toronto. Since DVD-Video can provide interactive multi-angles, we found that each version could be incorporated. Just select the guitar track or the drum track for the whole song!

**You can process digital video to look just like film by using software such as CineLook.**

DV format does have certain drawbacks for music videos. Although DV is everywhere in news and documentaries, stations such as MuchMusic prefer to play videos that are shot on film in order to maintain a consistent look. However you can process digital video to look just like film by using software such as *CineLook*, an *Adobe AfterEffects* plug-in that lets you add film grain and con-

trast. We also used a stock film library called *Film Clutter* to get a more natural film look. *Film Clutter* is a CD-ROM of real film strips that have been transferred to digital format—basically black film with small specks of white dust. When you composite this material over your final video, it adds a dusty, grainy quality that film so often has once it has been run through a projector a few times. It fools everybody.

## time to make a DVD...

Once all the tracks had been edited in *Final Cut Pro*, each sequence was exported to a single QuickTime track and converted to MPEG 2, since DVD only uses MPEG video. *DVD Studio Pro*, Apple’s excellent DVD authoring application, allows you to transcode DV into MPEG 2. When you install *DVD Studio Pro*, an extra QuickTime extension is placed into your system folder

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that allows you to compress DV to MPEG 2 via the QuickTime player application.

*DVD Studio Pro* also has a utility called APAC that allows you to take your six AIFF files and convert them into a Dolby Digital audio track known as a AC3 audio track. We just took the six AIFF files that had been exported from *Pro Tools* and dropped them into APAC. In a few minutes we had a final Dolby Digital surround sound track.

Now all the elements needed to produce the multi-angle DVD (except graphics for the menus to select the songs on the final disc) were ready to be imported into *DVD Studio Pro*.

## ...then add on the interface and extras

Professionally produced DVDs feature motion menus where animated videos move behind the buttons that select the songs or additional “bonus” material. We also wanted to put an interactive “bio” of the band on the disc so users could learn how the band was formed.

Using *Photoshop*, we created 720 x 540 pages containing scanned photos and text. These final pages were resized to 720 x 480 to be imported into *DVD Studio Pro* since that’s the aspect ratio of DVD-TV playback (DVD players then resize the images on the fly to about 640 x 480 so the images look normal on a TV screen). Most producers use *AfterEffects* to make motion menus because it’s good for compositing video and still images. The final



motion menu is usually a few minutes in length, and that final video also needs to be converted to MPEG-2 for incorporation into *DVD Studio Pro*.

Linking the buttons to the audio tracks, the video angles, and the still pictures for the bio was a fairly straightforward procedure

## With hundreds of 1980s songs regaining popularity on "oldies" radio stations, videos from these tunes could now be repackaged and their multi-track masters easily remixed for 5.1 surround sound.

using drag-and-drop menus—and certainly a lot easier than using *Macromedia Director* to produce an interactive video presentation. The last step was to burn a DVD.

Finally, the band also wanted to include an interactive PDF file of the bio that was on the DVD-Video. So we used the same DVD graphics and imported them into *Adobe InDesign*. Additional text was added for a few interactive links to VRs of the studios that we had taken during our film shoot. As a final touch, we added interactive web links to the studios' websites. This file was then exported as a PDF and included on the disc.

## How about all you dotcom-savvy multimedia production companies? Just think: gold and platinum music DVDs could be hanging on your wall.

system that is used to make a DVD-Video) to a DVD-ROM which can be played on both computers and set-top DVD players.

## a hybrid DVD-ROM-video—and it works!

The whole process worked like a charm (except for a delay in getting discs from Apple—these discs are always sold out), and it was all done on a Macintosh G4 workstation.

Looking back on the process, I realize that DVD offers all sorts of opportunities—not just for bands, but also record companies and recording studios. With hundreds of 1980s songs regaining popularity on "oldies" radio stations, videos from these tunes could now be repackaged as "Hits of the 80s" and their multi-track masters easily remixed for 5.1 surround sound. Personally, I would love to hear a DVD of Van Halen's hits remixed for Dolby Digital in surround sound.

To heck with VHS. Give us DVD in 5.1!

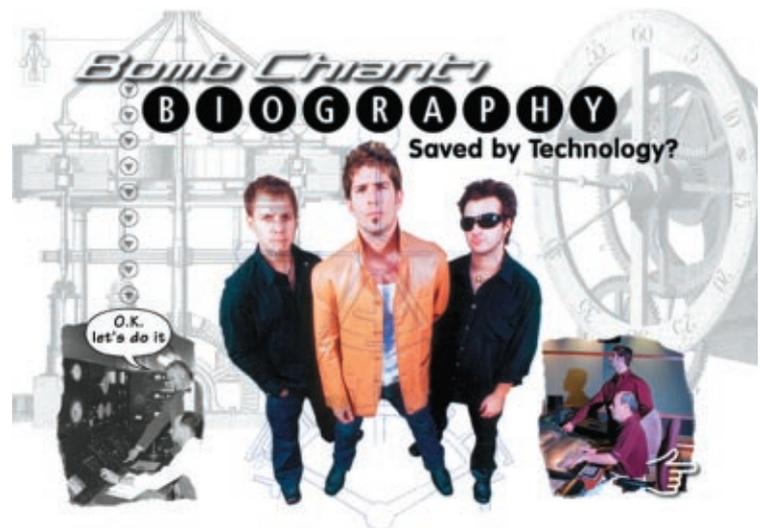
*Toast Titanium* was used to build the final DVD by formatting the PDF files, QTVR, and the DVD-Video's "Title Set" (a title set is the data and the operating sys-

Unfortunately the nightmare of legal paperwork for music "sync" rights might kill the idea of remixing the masters to video. But it's possible to start fresh. Take Bomb Chianti, for example.

The band started with DVD—they eat and breathe it—and the band's singer is a specialist in *Pro Tools*. They didn't have to be convinced that surround sound is the way to go. Most important, they understood the market. Napster has permanently altered the music business—downloading free MP3 files is being promoted universally, and Apple's iPod is a runaway success.

But Apple's Steve Jobs has a vision of another future, a future where DVDs replace CDs, and where it will be almost impossible to steal a DVD. After all, it's tough to rip off a multi-angle DVD-Video—and besides, it's 4.6 gigabytes of data, so how long would it take to download that?

It's obvious that there's money to be made in music DVDs, but it might be a tough sell to record companies. What division of the industry will sign these new artists? The video division? The



music division? The television division? MTV?

But how about all you dotcom-savvy multimedia production companies? Just think: gold and platinum music DVDs could be hanging on your wall—and there are lots of musicians out there working for multimedia companies.

You have the tools. Maybe you even have the talent.

So get the software and start jammin'.

A final note for those interested in seeing the final Bomb Chianti video: check the GRAPHIC EXCHANGE website at [www.gxo.com](http://www.gxo.com) for a QuickTime version, along with "bonus material" and the interactive PDF bio on the band that's included on the DVD-Video. It has links to the studios, related websites and QuickTime Virtual Reality Cubic VRs. 🌐

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