FOR PC FANATICS

boot

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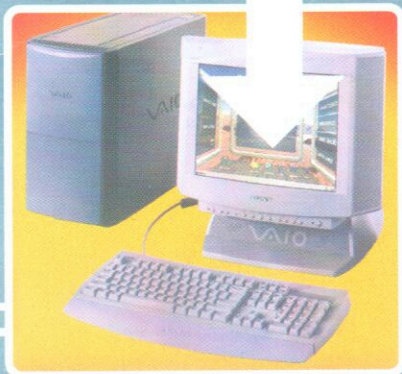
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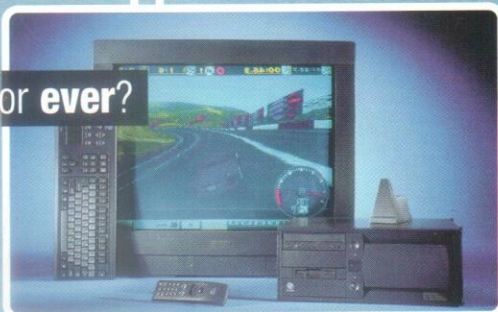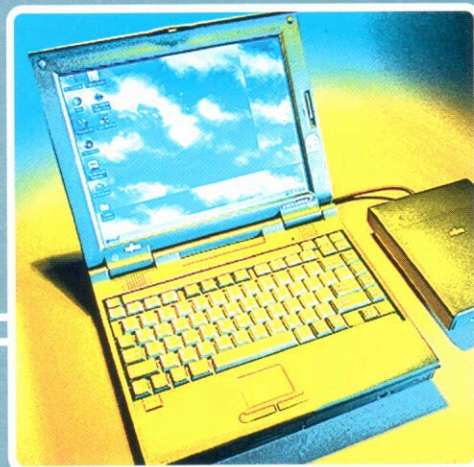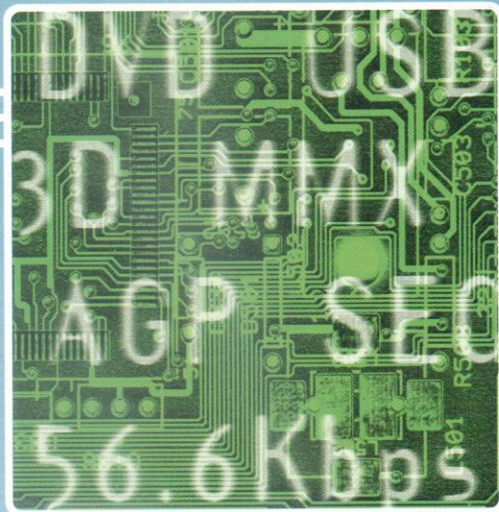
65 H/W and S/W Releases P/Reviewed:

Klamath **Unveiled**!

Voxel Space **2**: the **best** terrain generator **ever**?

The **Golf** War

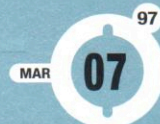CH's **Force** Feed**back**

plus:

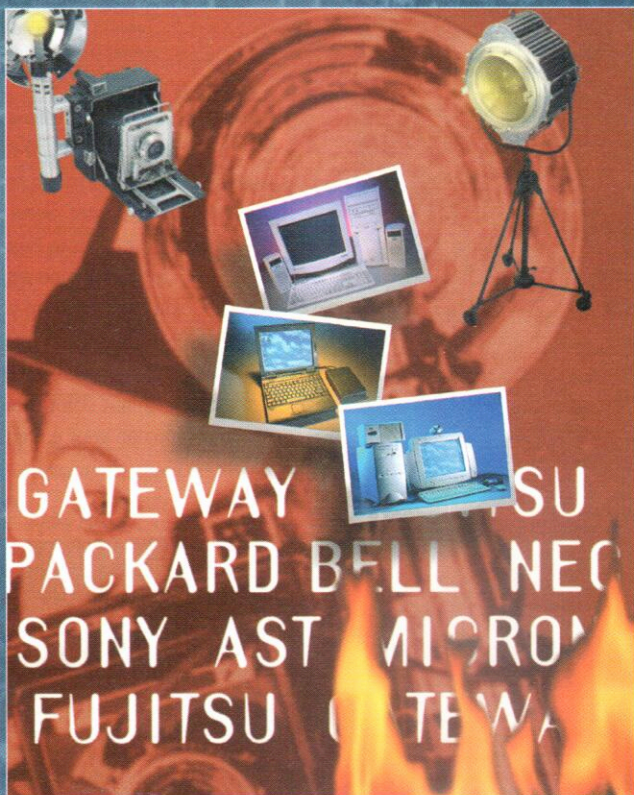**NT** Work**stations** from **Compaq** & Inter**graph**

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www.bootnet.com

features

The IN Crowd p.42

Firing the Online Afterburner p.36

Lip 32

"We had a vision, about four or five years ago, that these so-called 'business' graphics accelerators could be used for games. Everyone kind of laughed at the idea..."
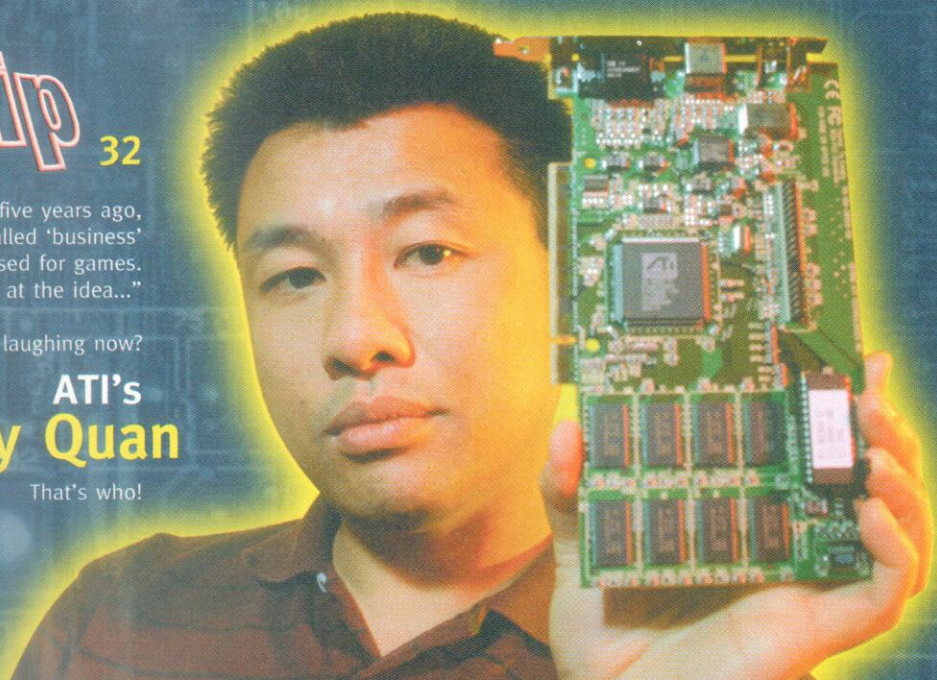
Who's laughing now?

ATI's Henry Quan

That's who!

boot

march 1997

I'm a Marked Man

The old saying goes: "You can tell a lot about a person by looking through their bookshelf." Well, you can also tell a lot about the type of people who would be so intrusive as to root through your bookshelf, but the principle holds true. Only today, you're more likely to get to know someone by perusing their browser's bookmarks than any ink on paper collection sitting around the house.

Well, you don't need to worry about invading my space, because I'm offering up a guided tour of some of my most frequently visited bookmarks. These are some of the sites the rabid PC fanatics at *boot* like to pop by when two free minutes spring up.

Of course, we begin our tour on the page my browser lands on at launch: **www.altavista.digital.com/cgibin/query?pg=&text=yes.** AltaVista is still the search engine of choice and even with the T1 line that *boot* feeds off like an umbilical cord, the text version delivers maximum blaze when it comes time to search and destroy.

When I can't come up with anything to search for, I lurk at: **voyeur.mckinley.com/voyeur.cgi** and see what other people are searching for. This amazingly hypnotic service will expand your consciousness. Who'd have thought that at this moment, someone's trying to find Molly Ringwald on the web. And why are so many people looking for pictures of nude celebrities?

Technically, I probably shouldn't admit that I read another computer publication on the web, but... CMP's Electronic Engineering Times (**techweb.cmp.com/eet/823/default.html**) is the only place to find any sort of lasting fix when I get a major tech jonesing.

For every yin, there is a yang. And to counter the boyz of the bootLab, there are the RiotGrrls. Nikki, Venus, and the gang reside at **www.riotgrrl.com/**. The femme fatales at RiotGrrl will dispel any prejudices you may posses regarding women and technology. Stop by and say Brad sent you.

One thing *boot* prides itself on is the brutally honest approach to the PC industry that distinguishes us from the rest of the PC press. We call 'em how we see 'em, and have a blast doing it. Whenever I get to feeling a little too "establishment," I check into **www.disinfo.com/** and reset my anarchistic edge.

When I'm not plugged into a PC like some sort of carbon-based peripheral, I'm packing U.S. Robotics' clever little PDA, the Pilot. But once you've mastered *Giraffe* and imported your entire phone directory, what's there to do? Simple. Go to **www.inforamp.net/~adam/pilot/** and start downloading more apps, utilities, and demos than your memory can bear. I'm in the middle of Jonathan Swift's l729 classic, *A Modest Proposal*, in *Doc* format and composing the first symphony for a quartet of Pilots in *PocketSynth*.

When I'm overloaded with tech (believe it or not, it *is* possible), I sneak off to **espnet.sportszone.com/** to check out what every web site oughta be like. Forget the whistles and bells. I don't need goofy little animations to bedazzle my eyes, or a repetitive background soundtrack to chew my download time and keep me from the content I came for. ESPN's site delivers.

Hopefully, that gives you some idea of what makes me tick (besides the bomb I carry in my notebook bag.) I'm always interested in expanding my itinerary, so share your favorite bookmarks with me at bdosland@bootnet.com.

FIRING

THE
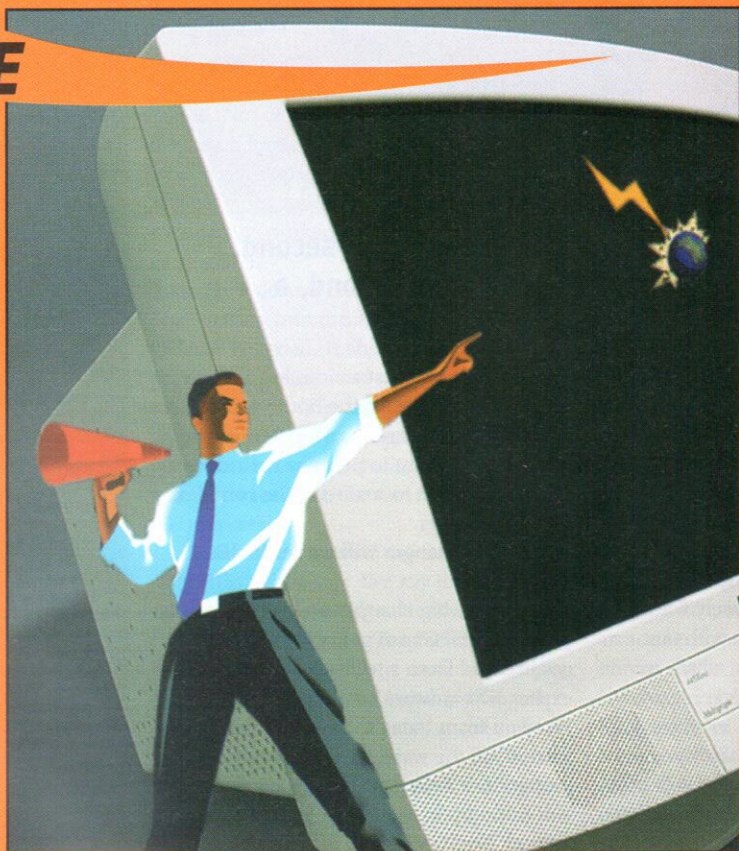
ONLINE
AFTERBURNE

A step-by-step guide to adding multimedia to your si

Web pages don't need to be static compendiums of **icons** and **text**. Dynamic **presentations**, complete with **sound** and **motion**, can be imported from the industry standard application for creating **multimedia**, Macromedia *Director,* straight to your site as a **Shockwave** applet.
The only limitations are **bandwidth** and your **imagination**.

BY DAVID W. BOLES

idea

Before even opening *Director*, you'll need to come up with the idea that you want to convey. I needed to create a logo for my web site at boles.com and decided that, for maximum impact, it should be a Shockwave movie.

Now just what is it I need in a logo?

Well, it must be **brief**. The logo shouldn't steal the show at the site—there are more important things for visitors (and their browsers) to chew on.

To accomplish this, be aware of the **size** of the file. Nobody wants to be forced to sit around while 200K of Technicolor travesty downloads. The movie should be sharp, short, and to the point. At 40K, even a 14.4bps surfer will only have to wait 30 seconds for the logo to load and fire. To hit that magic file size, make the image files small; greyscale will suffice—full color is too much size for too little grainy gain.

The next step to keeping it brief is: **No looping!** Don't bombard visitors with an endless movie that repeats and repeats. Say what you have to say once and be done with it. If visitors want to repeat the movie, they can hit the Reload button for a replay. Some may think the movie is too short. Believe me, it's better to be quick and keen than slow and dull.

I want the movie to have **music** (after all, this *is* multimedia). I'll use a short drum riff and cut the movie to match the beat. This will help distinguish my site on the web, because many web masters only use sound as an afterthought or as MIDI background music.

The reason for Shocking the logo is to ensure that it's **dynamic**. The animated effect will make the eye jump along with the beat of the drum riff, creating a full-scale multimedia experience in less than two seconds. The spiritual cadence of the movie will be parallel time in three tiers: Image, Movement, and Sound.

And, most importantly, the logo must be **representative**. It should express the intent of the site. boles.com is where my wife Janna, who is deaf, and I call home, so I'll use sign language to finger spell "b-o-l-e-s-dot-com" in my movie. That will set the stage for a multimedia palace where deafness and design coexist.

If you go online, you can visit the movie right now. Just go to boles.com and you'll see all 39K of this Shockwave movie. After you've watched the movie, hit Reload to see it again, or click on Continue to view the source images used to animate it. The entire self-playing 1.6MB version of the movie is contained on the *bootDisc* bundled with this magazine, along with the *Director* source file. If you don't have Shockwave on your system, you can find the Shockwave plug-in on the *bootDisc* as well.
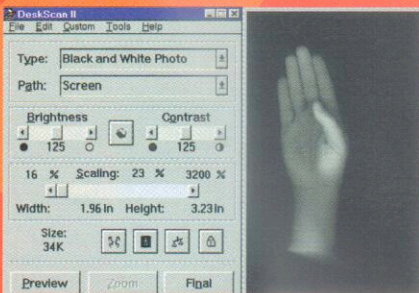
Web Warnings
Points to ponder before posting

While an endless realm of possibilities exists when it comes to creating *Director* projects, keep in mind the following general rules for creating your own Shockwave movies for the web:

■ Avoid including more than one movie per page. Multiple movies consume RAM and can freeze a visitor's system. If you're set on using more than one movie, or if you want to call a movie from within a movie, try to stick to a maximum of three movies total on any one page.

■ Use sound in only one movie per page because web browsers get confused when they have to stream more than one soundtrack simultaneously.

■ Indefinitely looped movies hog CPU cycles and bloat a browser's ability to access the network, so if you insist on loops, limit them or give the user a visible button to stop the movie.

■ Limit the color palette to save space and download time.

shop

First, I've decided that each letter in "boles" should be an individual hand-sign graphic. So, scanning directly into *Photoshop* from a TWAIN-compliant Hewlett-Packard 4C flatbed scanner, I grab a black-and-white photo of my hand seven times for each letter of my last name (plus a "dot" and one "com") saving each as a BMP file, which *Director* easily imports.

To break the eye-boredom of so many singular hand signs, I decide to get funky, and create a single scanned image that represents all three letters in "com." By moving my hand on the scanner, each handcrafted letter blends into the next one. I hold each letter for the moment the scanner light bar passes over my hand and then I quickly move my hand down the scanner bed to form the next letter.

This is the first hand scan, using Hewlett-Packard's 4C *DeskScanII* software inside *Photoshop 4.0*.

This is how the sequence of "b-o-l-e-s-dot-com" images will appear.

In the space of a single pass, I move my hand to create the three finger-spelled letters of "com."

Now that all the art is created and saved in the appropriate format, it's time to build the sound file that will play with the logo.

Director Xtras

Build to suit

Director 5.0 supports an extension standard that allows multimedia producers to tailor the program to their needs. These extensions are known as "Extras," and a few of the most helpful are listed below.

Human Code's **XtraNet** allows Macromedia *Director* and Shockwave movies to communicate on the web. By using XtraNet, you could connect CD-ROMs to the World Wide Web for live updating of new content. XtraNet can also create multiuser game environments. You can find Human Code online at **www.humancode.com/xtranet.**

WebXtra is available from Tabuleiro da Baiana at **www.tbaiana.com.** This Xtra turns *Director* movies into a platform for viewing any file type registered to be handled by an ActiveX control. A single *Director*-powered experience can now include viewing Microsoft *Word* and *Excel* files; enriched web pages featuring VRML and Java applets; and PDF documents. Using WebXtra, you can embed HTML pages directly within multimedia applications, allowing your visitors to surf the Internet from within a *Director* movie.

MediaLab's **PhotoCaster** is an Xtra that instantly creates cast members directly from *Photoshop 4.0* layers. With a single click, you can import your entire *Photoshop* file into *Director*, and each layer appears as an individual cast-member, indexed, antialiased, properly registered, and ready for staging. **www.medialab.com.**

A complete list of Macromedia's Xtras for *Director 5.0* can be found at **www.macromedia.com/software/xtras/director/index.html.**

forge

Sonic Foundry's *Sound Forge 4.0* is great for controlling and creating sound files. I have a drum beat WAV file I created some time ago that I'll use as the soundtrack in my movie. Each spike of the beating drum will be a signpost pinnacle for an animation transition. While the main beat points are at 0.029 seconds, 0.484 seconds, 0.772 seconds, 1.073 seconds, and 1.227 seconds, I won't bind my images directly to the point of those peaks. The images should jump and blend on an internal beat of their own, which can only be discovered in the creation of the actual animation in the *Director* movie.

Since I'm using greyscale images in the movie, I can afford sound files as deep and as rich as possible, so most of my project file size will be eaten up by a 170K 1.7-second drum riff!
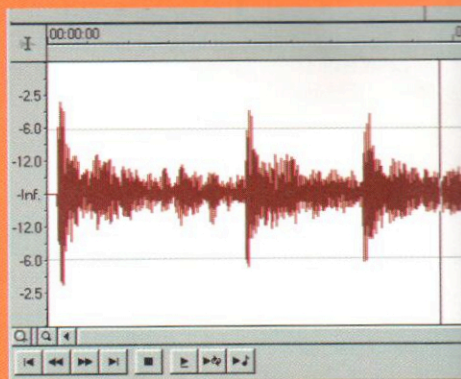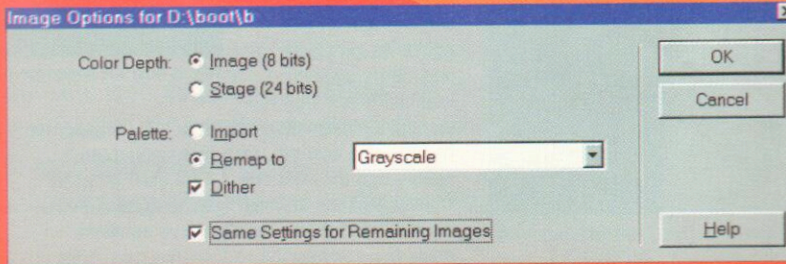
direct

Now it's (finally) time to launch *Director* and start building my logo.

1 Hit CTRL+N to start a new movie, once *Director* is loaded.

2 Choose Import from the File menu to bring in the sound and image cast members.
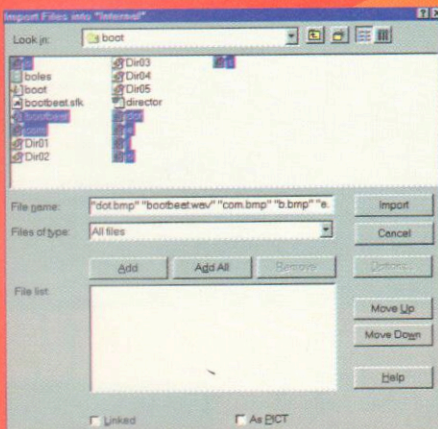
I select the files to import into my *Director 5.0* movie.

3 Choose 8-bit color depth in the Image Options import dialog box; Remap to Grayscale; dither; and check the Same Settings for Remaining Images box.

4 Click on OK to begin import. With the internal cast set, I'm ready to start dragging and dropping my images and sound onto my *Director* stage to arrange the flow of the movie.

I pick the images I need from the Internal Cast window and drag and drop them onto the "stage" area of my *Director* project. I can resize the images by dragging a border handle.

Each of the seven images should blend on stage and share end and beginning space in order to enhance the effect. I can't fade in and out, because there's no time to spare, since the movie's so short. The fact that most of the images will remain on stage for only three cells with the first and last cell shared with images before and after means that, in effect, "o-l-e-s" will appear on stage alone for only a single cell each!

The "b" and the "dot" will run for five cells, since the "b" is the first image to catch your eye and the "dot" is tethered to the syncopation of the drum beat before the final "com" image appears and then dissolves over a life span of 10 cells.

I choose the color depth and import qualities for my BMP files as I load them into a *Director 5.0* cast member window.

of their own, which can only be ... of the actual **animation** in the *Director* movie.
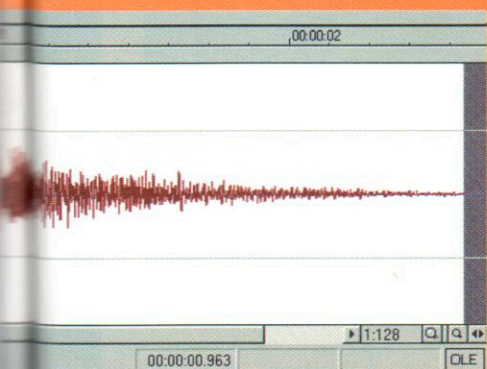
This is how *Sound Forge 4.0* views my WAV drum riff. The spikes are the hardest drum beats.

Write Your Own Xtras
Custum tailoring

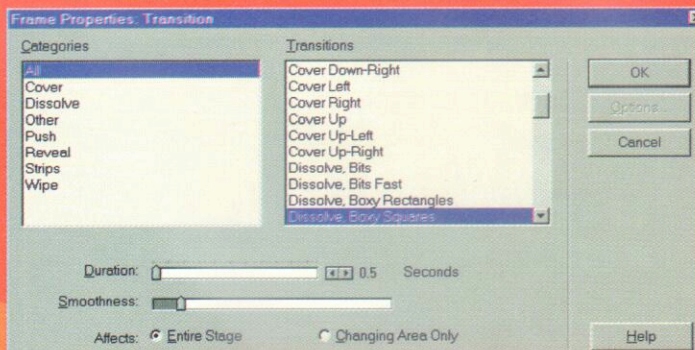The Director Xtras Development Kit (XDK) contains all of the files, documentation, and samples you need to get started developing Xtras.

Products

AUTHORWARE

You can write Transition Xtras that work in both Authorware and Director! The Authorware XDK is a subset of the Director XDK; get the Director XDK, and you've got the files you need to write cool transitions for Authorware.

DIRECTOR

You can write Transition Xtras that work in both Authorware and Director! You can also write Lingo Xtras which replace XObjects and are far more powerful, cast member Xtras that the user can insert in movies and edit the same way as built-in Director cast member types, and Tool Xtras that extend the Director authoring environment.

◆ Get the Director XDK
◆ Online docs
◆ Xtras Developer Program
◆ FAQs for the Director XDK
◆ IMoaFile cross-platform interface available for download.

www.macromedia.com/software/xtras/xdc.html#director

If the XDK isn't on your *Director 5.0* CD-ROM, you can download free from Macromedia. You'll need a programming background and experience with C or C++ programming languages in order to write *Director 5.0* Xtras.

One great thing about *Director* is that you have multiple channels for your images! Unlike regular film or video, where you have only an "A" roll and a "B" roll, *Director* allows you to get a better overall visual picture of precisely how your movie builds upon itself. My seven images create what looks like a staircase in the Score window. The movie channels appear to quickly "drop down a hill" as one image cascades into another.

One final tweak I add is moving the first and last cell of each image just slightly on the stage. This small change gives the image a feeling of animation, even though it's only taking place over a period of three cells. Viewers won't notice that each image moves—they'll only feel each image popping in and creating an arc across the stage as "b-o-l-e-s-dot-com" is spelled out. These invisible touches are what make a movie special. They are what create that "intangible difference," which a person experiences and expresses a liking for, but that they can't pin down exactly what it is.

6 I click the Script icon in the Score window to change the stage color with the Lingo command: Set the stageColor to 255. Now the stage is black instead of white.
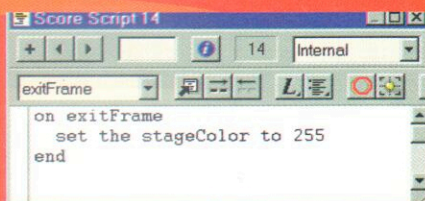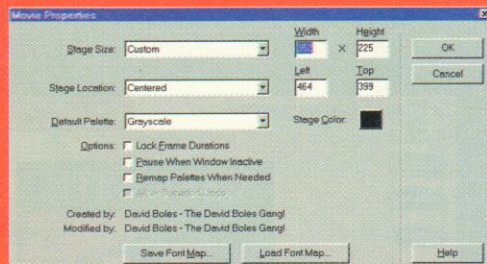

I want my movie to run on a black stage instead of the default white stage. I set that black background color via this simple Lingo script.

7 It's time to end the movie. Right clicking on the Transitions channel in the Score window brings up this Properties box:
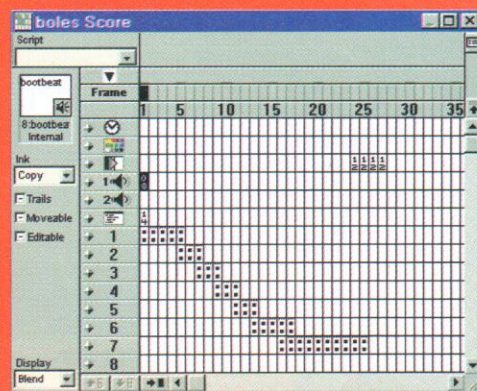
Here's the score for my movie. Notice how the images form a descending staircase as they waterfall into each other.

8 My movie will end with a Dissolve into Boxy Squares. This transition works because the tiny dissolving boxes look and feel like miniature versions of the boxy finger spelling that has been popping across the screen during the movie, delivering a nice finishing touch.

I set my movie properties here in this window.

This is the Transition screen. I pick a nice Boxy Dissolve for the end of my movie.

5 Now I drag my bootbeat.wav file on the stage and it is automatically added to my Project window. Playing the movie, I discover that the general sound-peak points the images balance upon work well in fitting the throb of the entire drum riff.

9 The movie's finished. It runs well. I go to Movie and choose Properties from the Modify menu to confirm the movie parameters. The Stage Size can be changed here and I can make certain that the stage color is, indeed, registering as black. Everything looks good. Nothing needs to be changed.

Shocked Sites
You can surf... for inspiration

H ere are three of the author's favorite Shockwave sites. Visit them to see the variety of things you can create with *Director* in hand.

adapted from
of the Zoombinis
Logical Journey

MudBall Wall by Broderbund. Tons of Shockwave fun and sound.

www.broderbund.com/studio /activemind/mudball.html

Mudball Wall. Visit this site and experience one of the most fun sites on the web. Broderbund's *Logical Journey of the Zoombinis* CD-ROM is a great learning game for kids and this Shockwave movie is an interactive game based upon the CD-ROM! The challenge is to "hit" all of the numbered stones on the wall to free the Zoombinis. It's also great that Broderbund has the guts *not* to include any directions on the page. If you weren't in an interactive and curious mood, you might never discover that this beautiful "image" is actually a game. Here's a clue: Click on the blinking arrow to begin. To tell any more would be to ruin the fun and fascination of this glorious site.
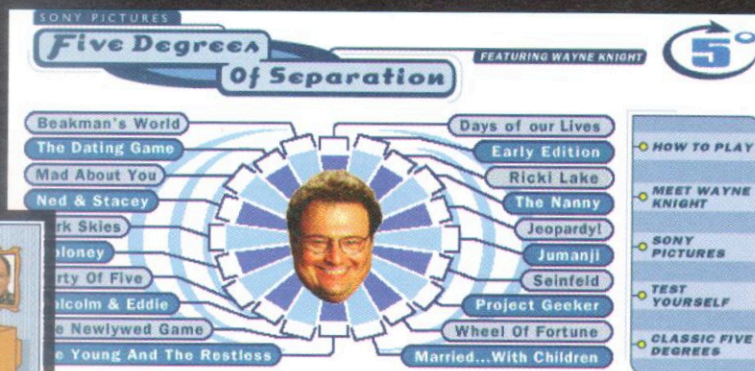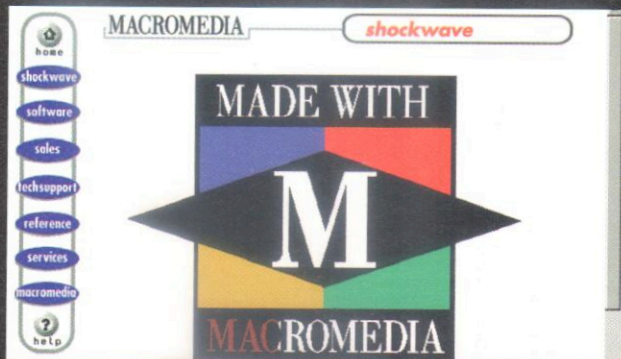
www.spe.sony.com/Pictures/tv/5d/main.htm

Sony has a great *Five Degrees of Separation* site for *Seinfeld's* Wayne Knight. The inspiration for this site is the *Six Degrees of Kevin Bacon* book. This site is well-designed, funky, and Shocked! Visit it and test yourself!

Sony's *Five Degrees of Separation* is an online web game made possible by Shockwave.

Macromedia's animated logo has been Shocked into a movie experience.

www.macromedia.com /shockwave/director5 /moviedocs/made_mm.html

Macromedia's Shockwave Movie Lab gives you the chance to see a wide variety of examples of *Director 5.0* Shockwave movies made specifically for the web and download the source code to see how the movie was created.

Since these files are **self-playing**, the **1.7-second** movie runs over **1.6MB** as an **executable** file!

project

Now the movie is edited and a "Projector" must be created out of the file so it can be played outside of *Director*. Since these files are self-playing, file size can be quite large, and true to form, the 1.7-second movie runs over 1.6MB as an executable file!

Still, creating a projector version of the movie is important. Before running it through the Shockwave Afterburner Xtra, I need to view the movie in a stand-alone state to see if it holds together.

From the File menu, I select Create Projector and add the boles.dir file.

Clicking Options in the Create Projector tells *Director* how the file should be played. I choose Full Screen, and tell it that the file is to run under Win95 and NT.

This projector file is on the *bootDisc*. The filename is blkboles.exe.
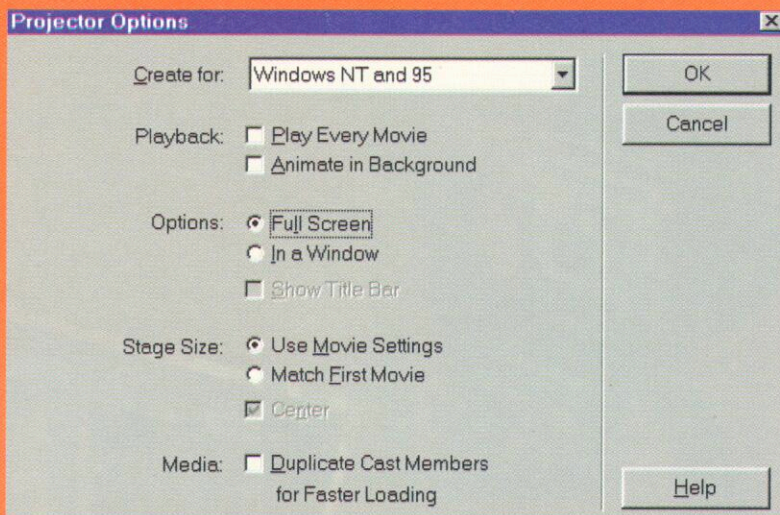
**Projector Options are selected for my EXE file here.**

burn

In order for a *Director* movie to play on the web, it must be run through Macromedia's Shockwave Afterburner Xtra (which is available from the Macromedia web page at **www.macromedia.com/shockwave/devtools.html#director**.

Unfortunately, you'll have to go download it yourself because Macromedia doesn't allow anyone to publish the *Director 5.0* Afterburner Xtra on CD-ROM.

Choose Xtras from the file menu and select Afterburner from the drop-down menu. (Note: If you don't see Afterburner listed on the Xtras menu, then it hasn't been properly installed.)

I name my Shockwave file "blkboles" and save it with a DCR extension. The web server will need to read that extension to recognize the movie as a Shockwave file. The DCR extension also minimizes download time for visitors.
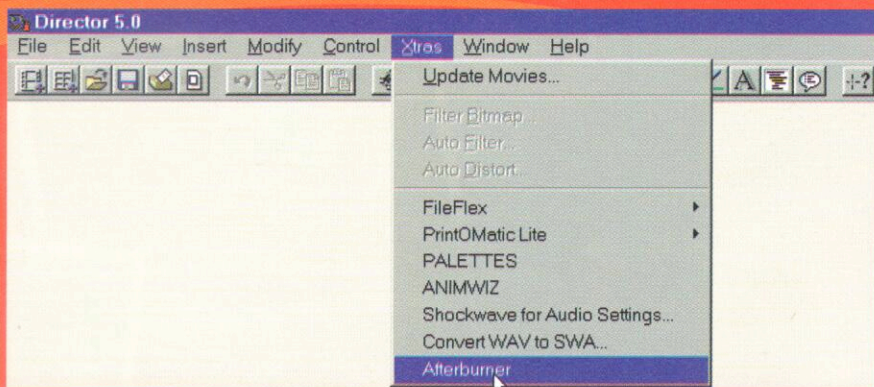
Here's where Shockwave Afterburner for *Director 5.0* appears on the drop down menu if it's installed properly.

(Note: Ask your ISP or web administrator if their server is configured to play Shockwave movies. To set up a server to stream Shockwave movies, check out **www.macromedia.com/shockwave/config.html** for detailed directions for configuring your server.)
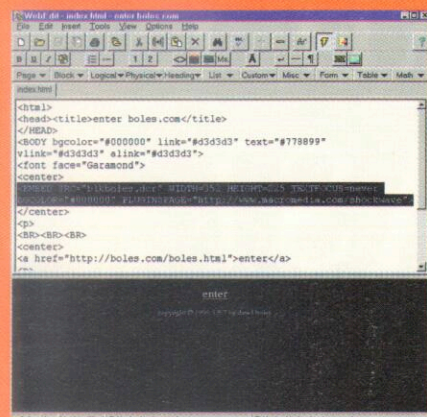
embed

Now it's time to embed the Shockwave *Director* movie in the web page's HTML code Here's the code for my site:

```
<EMBED SRC="blkboles.dcr"
WIDTH=352 HEIGHT=225 TEXTFO-
CUS=never
BGCOLOR="#000000"
PLUGINSPAGE= "http://
www.macromedia.com/shockwave">
```

The PLUGINSPAGE code URL will invite visitors on the site to download the Shockwave Plug-In from Macromedia if their browser is unable to read my Shockwave movie.

The highlighted text in my index.html page for boles.com is the Shockwave EMBED code.

done

I came up with an idea, applied it to the limitations of the technology, created a *Director* movie, and posted it on my web site as a Shockwave movie. I think the movie works well. It's quick, unique, and hopefully, intangibly unforgettable!

David W. Boles is the Publisher and Editor in Chief for Internet Insider *magazine found online at* goinside.com. *He is the author of more than 26 articles and his work has appeared in* Windows, Web Techniques, *and* clEx *magazines. Mr. Boles is the author of the international best-seller* Windows 95 Communication and Secrets *published by IDG Books Worldwide. You can write to him c/o david@boles.com.*