



The Essential Home Theatre Resource™

Widescreen Review

NEWSLETTER

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WELCOME!

Love is in the air, and with this being Valentine's Day and all, it seems like a perfect day to propose this month's Newsletter to you. Maybe Cupid will bring you something from the "Coming Soon...To A Retailer Near You" selection of products we introduce to you. Or perhaps you want to just snuggle up and watch one of the DVDs up for an Academy Award® that is mentioned in "The Studio Scoop." Whatever your preference is, I hope you enjoy the February 2008 Newsletter, and Happy Valentine's Day to you all.

In the spirit of sharing the love, *Widescreen Review* is offering a FREE DTS® 2008 High-Definition Audio Demonstration disc in either Blu-ray™ or HD DVD. All you have to pay for is the shipping. Also, for the first time ever, we have reduced our normal subscription rates from \$34 to \$25 per year for U.S. residents. We have also reduced prices for international, as well as Canada and Mexico. Just go to www.widescreenreview.com for all of the details.



Gary Reber
Editor-In-Chief, *Widescreen Review*



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Issue 129, March 2008 of *Widescreen Review*:

- "JVC® DLA-RS2U 1080p D-ILA Front Projector" Review By Greg Rogers
- "Pioneer Elite® KURO PRO-150FD 60-Inch 1080p Flat Panel Plasma HDTV" Review By Doug Blackburn
- "Definitive Technology® Mythos ST SuperTower®, Ten, And Gem XL System" Review By Danny Richelieu
- "Toshiba HD-A35 Third-Generation HD DVD Player" Review By Bill Cruce
- "Noble Fidelity L-55 LCRS In-Wall Loudspeakers" Review By Gary Altunian
- "A Conversation With Amir Majidimehr" (A Former HD DVD Exec) By Gary Reber And Danny Richelieu
- Plus "Wife Assistance Forum," "Your Letters," "One Installer's Opinion" and over 40 Blu-ray Disc, HD DVD, and DVD picture and sound quality reviews and more...

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Blu-ray
by Denon

DENON SEE IT FIRST >>

Recent News

Here are some of the recent headlines that have made it to the News section of WidescreenReview.com, which is now updated daily as our Web staff finds worthy home theatre-related stories and press releases. Visit WidescreenReview.com throughout the day to find out what's going on in the world of Home Theatre.

Best Buy® Backing Blu-ray Disc® Over HD DVD (Minneapolis St. Paul Business Journal)

"Best Buy® Co. Inc. said Monday that it will begin to prominently showcase Sony Corp.'s Blu-ray Disc® high-definition DVD players and discs in its stores and on its Web site starting in early March.

The Richfield-based electronics retailing giant, however, will continue to carry competing HD-DVD products..."

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Sigma Designs Completes Acquisition Of Gennum's VXP® Image Processing Business

"Sigma Designs announced today that it has completed the previously announced acquisition of the VXP® Image Processing business from Gennum Corporation. The addition of the VXP group's industry-leading video processing product line further extends Sigma's world leadership in digital media processor SoCs for consumer electronics..."

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LG.Philips LCD Changes Name To LG Display (The Korea Times)

"LG.Philips LCD (LPL), the world's No. 2 LCD panel supplier, will change its name to LG Display.

"The new corporate name reflects the company's business expansion and diversification, the change in corporate governance following the reduction of Philips' equity stake," Bang-Soo Lee, vice president of the company said on Tuesday..."

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Consumer Awareness Of The DTV Transition Up 80 Percent Since 2006, Says CEA

"Consumer awareness of the transition to digital television (DTV) grew 80 percent since 2006, according to new market research released today by the Consumer Electronics Association (CEA®). CEA unveiled the encouraging new survey numbers today during a DTV awareness event at a Washington, D.C., Best Buy.

The event featured Commerce Secretary Carlos M. Gutierrez, Federal Communications Commission (FCC) Chairman Kevin Martin, and executives from CEA, the National Association of Broadcasters (NAB), National Cable and Telecommunications Association (NCTA), and Best Buy, each discussing their efforts to educate consumers about the transition..."

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Netflix Sides With Blu-ray™ Format In High-Definition DVD Battle (CNN Money)

"Netflix.com Inc. Monday said it would only carry high-definition DVDs in the Blu-ray format, citing 'a clear signal from the industry.'

Four of the six major movie studios only release high-definition DVDs in the Blu-ray format. Netflix said it would phase out the other major high-definition format, HD DVDs, by the end of the year..."

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Sony Rises To Top Of North America LCD TV Shipments For First Time

"Sony climbed four spots in Q4 '07 to reach number one in LCD TV shipments for the first time, with a boost in share from 9.7% to 12.8% on 83% Q/Q sequential growth, the strongest among the top five brands. Sony was the leading brand at 40-44-inch, 45-49-inch, and 50-54-inch, according to preliminary findings from DisplaySearch's latest Global TV Shipment and Forecast Report..."

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The Studio Scoop

Rumors, Reports, & Ramblings

Stacey Pendry

80th Annual Academy Awards

We can all breathe a sigh of relief now that the writer's strike is nothing but a bad memory, and look forward to a proper awards ceremonies, red carpet fashions, long-winded, politically charged acceptance speeches, and all.

Below is a list of the nominees vying for the most sought after 13.5-inch, 8.5-pound fake gold statue ever produced, Oscar.

BEST PICTURE

Atonement

Michael Clayton

No Country For Old Men

There Will Be Blood

Juno

BEST DIRECTOR

Julian Schnabel—*The Diving Bell And The Butterfly*

Jason Reitman—*Juno*

Tony Gilroy—*Michael Clayton*

Joel and Ethan Coen—*No Country For Old Men*

Paul Thomas Anderson—*There Will Be Blood*

BEST ACTOR

George Clooney—*Michael Clayton*

Daniel Day-Lewis—*There Will Be Blood*

Johnny Depp—*Sweeney Todd: The Demon Barber Of Fleet Street*

Tommy Lee Jones—*In The Valley Of Elah*

Viggo Mortensen—*Eastern Promises*

BEST ACTRESS

Cate Blanchett—*Elizabeth: The Golden Age*

Julie Christie—*Away From Her*

Marion Cotillard—*La Vie En Rose*

Ellen Page—*Juno*

Laura Linney—*The Savages*

BEST SUPPORTING ACTOR

Casey Affleck—*The Assassination Of Jesse James By The Coward Robert Ford*

Javier Bardem—*No Country For Old Men*

Philip Seymour Hoffman—*Charlie Wilson's War*

Hal Holbrook—*Into The Wild*

Tom Wilkinson—*Michael Clayton*

BEST SUPPORTING ACTRESS

Cate Blanchett—*I'm Not There*

Ruby Dee—*American Gangster*

Saoirse Ronan—*Atonement*

Amy Ryan—*Gone Baby Gone*

Tilda Swinton—*Michael Clayton*

We wish all the nominees good luck in their quest for Oscar. Be sure to read Issue 130, April 2008 for full reviews of the following titles that have been nominated in at least one category: *American Gangster*, *The Assassination Of Jesse James By The Coward Robert Ford*, *Elizabeth: The Golden Age*, *Gone Baby Gone*, *In The Valley Of Elah*, and *Michael Clayton*; reviews of *Away From Her*, *Eastern Promises*, and *La Vie En Rose* can be found on our Web site, www.WidescreenReview.com

New Line

The estate of the late J.R.R. Tolkien, creator of the *Lord Of The Rings* trilogy, filed a lawsuit against New Line Cinema in Los Angeles this week.

The suit alleges New Line did not pay the reported 7.5 percent of gross receipts from the films to the Tolkien estate that was owed. Instead, it is alleged that New Line blocked the Tolkien estate and other plaintiffs from auditing the receipts of the last two films.

The plaintiffs seek more than \$150 million in compensatory damage, unspecified punitive damages, and a court order giving the Tolkien trust the ability to terminate any rights New Line may have to any future projects based on works by the author, including *The Hobbit*.

Peter Jackson, director of the *Lord Of The Rings* trilogy, recently settled a lengthy lawsuit with New Line over his share of the profits from Tolkien's trilogy, has signed on to serve as executive producer of *The Hobbit*, which is slated to start production next year.

The parent company for New Line, Time Warner, has not publicly commented on the suit or its allegations.

In a rare feat for film tie-in partners, Will Farrell, star of New Line's upcoming release *Semi-Pro*, will be featured in commercials for both Old Spice and Bud Light as part of

the tie-in deal made with the film's advertisers.

The basketball comedy is due in theatres on February 29. Citing Ferrell's appeal to the 18- to 34-year-old male market, Old Spice felt running a number of spots featuring the star as the shaggy-haired basketball player Jackie Moon would more than add to their bottom line.

New Line TV has sold ten theatrical releases to the USA Network, including three yet-to-be-released comedies. *Sex And The City: The Movie*, *Semi-Pro* and *He's Just Not That Into You* are among the titles sold to the network.

The rivalry for titles among the cable networks has forced both USA and FX networks to engage in the practice of purchasing titles before they open in theatres, a move that most networks are dubious of.

The seven other titles purchased from New Line by USA Networks are: *The Golden Compass*, *Rendition*, *Shoot 'Em Up*, *The Number 23*, *Martian Child*, *El Cantante*, and *Running Scared*.

Lionsgate

Lionsgate has acquired the rights to the Nicolas Cage action-thriller *Bangkok Dangerous*. Due to direct the film is Oxide Pang Chung and Danny Pang. *Bangkok* is a remake of the Pang brother's critically acclaimed 1999 film of the same name. The brothers also directed the Asian horror films *The Eye* and *The Eye 2*, the first of which Lionsgate remade starring Jessica Alba.

In *Bangkok Dangerous*, Cage plays an assassin who travels to the city of Bangkok to handle four hits for an underworld crime boss.

Disney/Pixar

Walt Disney Studios is the latest in a growing group of studio-owned overseas-releasing divisions to sign on for a digital print distribution partnership with Arts Alliance Media. In the non-exclusive pact, Disney has agreed to supply its films across Europe in digital format to AAM-deployed DCI-compliant screens.

Disney has also agreed to make provisional contributions toward the digital cinema hardware costs of converting a theatre

to a digitally compatible venue. AAM's previous agreements with Fox, Paramount, Sony, and Universal cover the costs of upgrading up to 7,000 screens throughout Europe.

Anthony Marcoly, President of Sales and Distribution at Walt Disney Studios, has said, "Not only do we release all our films in digital format, Disney is also the number one provider of 3-D motion pictures. We are delighted theatre audiences everywhere will soon be able to see movies like they've never seen before."

Pixar's *Ratatouille* dominated the 35th Annual Annie Awards, capturing a whopping nine trophies in the ceremony held on February 8, 2008.

Best animated feature was among the awards given to the Brad Bird-directed feature. Other categories that *Ratatouille* captured were best director, screenwriter, character animation, character design, music, production design, storyboarding, and voice acting (Ian Holm).

Winning a tenth Annie for the studio was *Your Friend The Rat*, the short film that appears on the *Ratatouille* DVD. Meanwhile, the game based on the animated feature won best animated video game category.

Veronica Mars' Kristen Bell has been signed on to star in the Mark Steven Johnson-directed romantic comedy for Disney, *When In Rome*.

The story follows a love-starved New York curator (Bell), who steals magical coins from Rome's Trevi Fountain, only to be pursued back to New York by a band of aggressive suitors—the very same people whose coins she stole.

Sony/Columbia Tri-Star

The *No Country For Old Men* team of Joel and Ethan Coen, and Producer Scott Rudin, have signed on to write/produce/direct Pulitzer Prize-winning author Michael Chabon's novel *The Yiddish Policeman's Union* when adapted to film this year.

The Coens' will turn their attention to the project once they've finished shooting *A Serious Man* for Working Title and Focus Films. *Yiddish* is the third Chabon novel to be translated to film by Rudin.

Sony Pictures Classic has acquired the North American rights for the Oscar-nominated Russian film *12*.

Director Nikita Mikhalkov's courtroom drama is a loose adaptation of Sidney Lumet's 1957 film *12 Angry Men* and is set in contemporary Russia. The film's subject is now a young Chechen boy on trial for killing his stepfather. The jurors are a group of ethnic Slavs divided by racism and prejudice.

Hank Azaria (*The Simpsons Movie*, *Run Fat Boy Run*) has signed on to play the part of Abraham in Judd Apatow's next comedy

project, *Year One*. The film, set in biblical times, will also reunite stars Michael Cera and Christopher Mitz-Plasse for the first time since appearing together in Apatow's *Superbad*. Harold Ramis is slated to direct; Owen Wilson serves as executive producer.

Warner Bros.

Lucasfilm has signed an agreement with Warner Bros. and Turner Broadcasting to bring another *Star Wars'* saga to the big screen.

The fully animated 3-D picture, *Star Wars: The Clone Wars*, will arrive in theatres mid-August. The film is due to run around 100 minutes and will pick up between episodes II and III, when Anakin Skywalker has yet to become Darth Vader. The project will primarily employ voice actors new to the *Star Wars'* franchise, with the exception of Anthony Daniels, who will reprise his role as C3PO, and Matthew Wood, who is back as General Grievous.

The film will set the stage for a continuation of the saga being played out on the small screen in 30-minute segments, when Cartoon Network airs the TV series by the same name. Lucasfilm Animation has already produced some 30 episodes of the series, with more episodes slated.

This is the first time Warner Bros. has distributed any of the *Star Wars* titles. Fox has been the sole distributor for the Lucas franchise ever since the first film's theatrical release in 1977.

Warner Bros. and IMAX Corp. have titled their third original IMAX 3-D project, *Under The Sea 3-D*.

Production began last month in Papua, New Guinea and it is due to be released in February 2009. Warner's second project with IMAX, *Deep Sea 3-D*, grossed more than \$60 million worldwide.

BBC Films

Peter Saarsgard, Carey Mulligan, Alfred Molina, and Emma Thompson are set to star in the Nick Hornby (*About A Boy*, *Fever Pitch*)-adapted screenplay, *An Education*. Hornby adapted the script from the Lynn Barber memoir published in the literary magazine, *Granta*.

The coming-of-age movie is set in the London suburbs and follows a typical 17-year-old girl (Mulligan) just as the 1960's swinging counter-culture emerges. Her world is turned on its head when she meets a 35-year-old, sports-car-driving Brit (Saarsgard). As he courts her with expensive meals and holidays abroad, her doting father sees her future at Oxford University vanishing

before his eyes.

Filming for this project is due to begin late March 2008 on location in London. No intended release day has yet been announced.

Universal Studios

Universal has purchased the domestic and select international rights to Sam Raimi's first directorial outing since *Spider-Man 3*, entitled *Drag Me To Hell*. Raimi co-wrote the script with his brother Ivan Raimi, and principal photography is set to begin in Los Angeles on March 17.

Ellen Page, the popular star of *Juno*, for which she received an Oscar nomination, is slated to star in the horror flick. *Hell* was developed at Ghost House, the joint venture between Mandate Pictures and Raimi, which has churned out such instant horror classics as *The Grudge*, *The Boogeyman*, and *30 Days Of Night*.

20th Century Fox

Fox has closed a rights deal to use the premise of the History Channel's *Ice Road Truckers* as the basic foundation for a full-length action flick.

History Channel originally aired *Ice Road Truckers* as a one-off special, then developing it to become one of their highest-rated series.

The reality show follows the trials and tribulations of the drivers that captain their behemoth 18-wheelers over a 350-mile highway made of ice, hauling equipment and supplies to Canadian diamond mines in its Northwest Territories.

Fox has yet to hire a writer or producer for the project. **WSR**



Coming Soon... To A Retailer Near You

Tricia Spears



Sharp BD-HP50U

The full-digital 1080p AQUOS® **BD-HP50U** Blu-ray Disc® player from **Sharp®** supports BD-ROM Profile 1.1, or BD Live, the latest version of the Blu-ray Disc format. Through the HDMI™ 1.3 input, users can experience AQUOS LINK™, which enables integrated and seamless

operation between the Blu-ray Disc player and AQUOS LCD televisions with a single remote. Outputting 1920 x 1080 24 frames-per-second high-definition video and featuring a Quick Start feature, users are able to begin watching their favorite Blu-ray Disc titles with a touch of a button in less than ten seconds (according to Sharp). The BD-HP50U will be available in May 2008 for \$699.99.

Sharp 800 237 4277 www.sharppusa.com

Jamo®'s **A 400** series of flat panel loudspeakers are part of their Aesthetic range of designer loudspeakers. Their innovative technology and quality craftsmanship features an exquisite Danish design. The **A 407** floor-standing model employs a one-inch woven textile dome tweeter and four mid/bass drivers; the **A 405** is a satellite loudspeaker designed for shelf or wall mounting; the **A 402**—the smallest in the series—is a wall-mountable satellite design; the **A 400 CEN** is designed for horizontal shelf or wall mounting; and the **A 400 SUB** is a reflex-ported design subwoofer. While the series is currently available overseas in a silver finish, a variety of system combinations will be available in the U.S. in February 2008 in a sleek, black version.



Jamo A 407

Jamo www.jamo.com

The **CineTension2** screens from **Elite Screens, Inc.** are tension-cord reinforced retractable screens available in either solid or acoustically transparent material. Because the material is perforated, loudspeakers can be placed behind the CineTension2 screens for a more simplified appearance. Available in a wide variety of sizes, aspect ratios, and gain materials, the screens offer a built-in 12-volt trigger that synchronizes screen drop and rise with a projector's power cycle and an adjustable vertical limit switch that regulates screen drop and rise settings. Available in CineWhite with a 1.1 gain, CineGray with a 1.0 gain black-level contrast enhancement, and PowerGain 1.8 gain material, for enhanced color reproduction with high-resolution projectors in a home theatre environment, the CineTension2 screens range in price from \$789 to \$1,589, depending on size and optional features, and include a two-year limited replacement warranty.



Elite Screens CineTension2

Elite Screens, Inc. 877 511 1211 www.elitescreens.com

The new compact remote-controlled HDMI switchers from **Tributaries®**, the **HX410** and **HX410A**, can each select from among four HDMI sources and output signals to a single HDMI output. Both models include Signal Enhancement, which engages active equalization to maintain full-integrity HDMI transmissions even over long cable runs. Including both optical and coaxial S/PDIF digital-audio ports for each input and at its single output, audio and video signals are allowed to be routed independently. Compliant with the latest HDMI 1.3 and HDCP 1.1 standards, both models include front-panel pushbuttons and blue mini-LEDs. With both wireless remote control and RS-232 serial control, the HX410 (\$300) and HX410A (\$400) are supplied with a convenient "credit-card"-style infrared remote and are available now.



Tributaries HX410

Tributaries 800 521 1596 www.tributariescable.com

Mirage's latest generation of its Omnican in-ceiling loudspeakers—the **OC-65** (\$375 each), **OC-55** (\$250 each), and **OC-45** (\$175 each)—offer several improvements over the original models, including weather-resistant enclosures. All three models feature Polypropylene Titanium deposit Hybrid woofers with patented Ribbed Elliptical Surround technology to eliminate distortion and allow the loudspeakers to play lower with greater output and fidelity. Whether installed indoors or out, each model utilizes a one-inch pure titanium hybrid tweeter mounted in the company's patented rotating Omnican design, and features sleek, low-profile grilles that can be painted to match any décor.

Mirage Loudspeakers 866 428 2122 www.miragespeakers.com



Universal Electronics NevoS70

The **NevoS70** hand-held universal controller from **Universal Electronics®** intuitively delivers total control of entertainment and digital media devices in today's connected home. With an elegant one-handed design, the NevoS70 features a 3.5-inch color touch screen. Giving the user the ability to view and control any device that has a compatible embedded Web server, access is available to Web-based services in order to deliver real-time information such as news, sports, and stock quotes. With NevoS70, consumers have a single control point to manage virtually all their home theatre equipment, while accessing digital content stored on a PC or media server. The NevoS70 should begin shipping in early 2008 for \$1,199.

Universal Electronics 714 820 1000 www.uei.com

The Motion Picture Soundtrack Jigsaw Puzzle

► PART 2

DAVID WEINBERG

The movie theatre sound system and the three widely accepted digital film soundtrack encoding/decoding systems have been addressed in previous articles ("The Digital Future Of Film Sound," Volume 3, Number 1, Issue 7 February/March 1994, p53; "The Dolby® Stereo Digital Film Sound System," Volume 3, Number 2, Issue 8 April/May 1994, p53; "Why Don't Theatres Sound Better," Volume 5, Number 3, Issue 21 August 1996). It is appropriate to continue this backward trek through the film sound process to the preceding stage-creation of the soundtrack.

On April 27, 1996, in General Cinema Corporation's Framingham (Massachusetts) Theatre Number 5, John F. Allen (High Performance Stereo) teamed with Steven B. Cohen (currently Director, Sales and Development, Sony Pictures Studios, with extensive experience in production and editing of sound for film and video) to explain this process with a historically unique presentation—a live demonstration of the soundtrack mixing process in a movie theatre with an audience.

Setting The Stage

John set the stage by describing his HPS-4000™ sound system and its capability to exceed the defined requirements for proper digital soundtrack reproduction, using film clip examples to demonstrate his thesis. He pointed out that improper tuning tends to cause subtle sounds to disappear, and reminded his audience that directional effects need to be independent of the nearest speaker location. The previous articles provide extensive details on the sound system and John's close-mic method of voicing the system in accordance with ISO-2969. The performance of the HPS-4000 system, and the quality of the sound it presents, is testimony to the viability of his approach. John also noted that in this theatre, the seats installed keep the acoustic characteristics fairly constant whether the theatre is empty or full.

This theatre was equipped with the Sony SDDS playback system, which was used throughout the presentation. Dan Taylor (Vice President, Sony Cinema Products Corporation, Business Development for North America) discussed the status of SDDS use—about 2,300 units installed in 32 countries, with orders for a total of around 4,500 units, and more than 120 films released with SDDS soundtracks. He also told us of an independent projectionist who used a film loop of the SDDS trailer to determine that at least 1,350 passes of the film through a properly maintained projector were needed before the SDDS decoder computer detected read errors, and more than 1,500 passes before the system switched to the optical analog soundtrack due to uncorrectable errors.

The SDDS demo reel includes excerpts from *Only You*, *Speed*, a sound-only section of the main title music from *Hook*, a sound-only section of rain forest edited by Academy Award®-winning Sound Editor Tom McCarthy, Jr., *The Bodyguard* (including Whitney Houston singing) and the SDDS trailer. After we saw the demo

reel, Dan Taylor announced to the audience that he has seen this reel hundreds of times and this time, with the HPS-4000 sound system, heard things he has never heard before.

Six months' preparation went into the remaining portion of the presentation. Arrangements were made to borrow more than \$55,000 worth of special equipment which was used both in preparation for and during the presentation. Several days dedicated access to a sound mixing stage were donated to allow preparation of the digital source tapes. John Allen, Steven Cohen and others put in hundreds of hours to make this a very special occasion.

The Soundtrack Creation Process

Putting together a film soundtrack is a multi-dimensional matrix of sequential and parallel efforts involving an amazing number of people repeatedly faced with the need to invent ways to create sounds that fit the picture. Typically, some 400-600 individual sounds and source tracks are used to compose a full two-hour soundtrack. Sometimes up to 1,000 tracks could be playing at one time (such as in *Total Recall*, reel 6AB).

Crafting a soundtrack is made even more complex by the new discrete digitally-transmitted playback formats, since the movie has to sound good with 5.1 or 8 channels of sound (depending on which digital soundtrack systems are used), the 4 channels of Dolby ProLogic, 2-channel stereo in many homes, and single channel monophonic sound in many theatres and homes.

Once the director, sound engineer and music director have spent hours determining what their intentions are and what sounds they want where, an extensive search begins to accumulate the available prerecorded source sounds and music recordings, to determine which other sounds need to be created in sound design versus which can be generated by the Foley artists, and what music must be composed.

Throughout the creation process (Figure 1), the different parts of the film soundtrack are kept as segmented and separate as possible, delaying combination as long as reasonable to maximize the flexibility available to the director, supervising sound editor and rerecording mixer. Most sound units are mono, some may be stereo; the music score could be up to 7 channels wide.

Dialogue

During filming, dialogue is coincidentally recorded. Analysis of the dailies helps ascertain if the performance is acceptable, how it may need to be adjusted (equalization, compression, etc.) and what portions of those recordings will need to be supplanted using automatic dialogue replacement (ADR). ADR, also known as "looping," is employed when the original recording is unusable due to ancillary noises, unclear sound, overlaps of dialogue and word changes for TV versions. The actor, at a later date in a

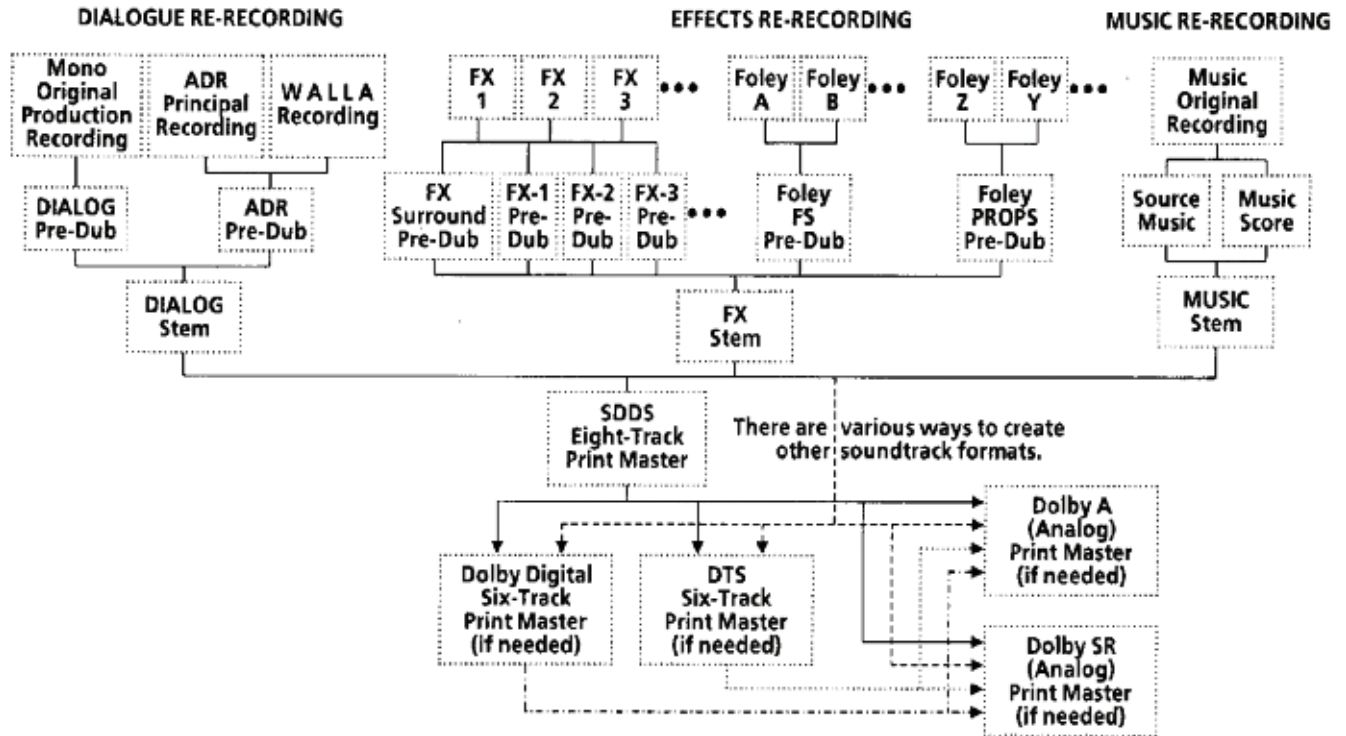


Figure 1 Simplified Soundtrack Production Process

recording studio, listens to the original dialogue recording over headphones. Then, while watching the image on the screen, the actor is recorded redelivering the lines in sync with the image; all of C3PO's and Darth Vader's dialogue (the voice of James Earl Jones) was looped in the *Star Wars Trilogy*. When some of the original location dialogue recording is used, it is no simple trick to make ADR sound the same as the dialogue recorded on location during filming. [Most motion picture soundtracks employing ARD provide poorly spatially integrated dialogue.]

In shots with background people, realistic ambience often requires them to be speaking, particularly if the scene is of a bank, subway, cocktail party or other group location. Naturally, it is not possible to have the background actors speak during filming, as it might interfere with a clean dialogue recording, and it would certainly make sound editing more difficult. Therefore, during filming, the background actors mouth their speech. During post production, a process known as WALLA recording is used. WALLA recording (named after "walla-walla," one of the nonsense sounds used) is the studio recording of group background ambient dialogue that matches the background people in the scene. Voice actors come in to the studio, select which background per-

son(s) they are speaking for, and are recorded uttering nonsensical syllables interspersed with occasional appropriate key words. The key words add the right kind of flavor to the scene, to help the audience believe in the location shown.

From all of these dialogue recordings, three pre-dubs are created—one of the main actors' dialogue, a second pre-dub of the ADR, and a third of WALLA recordings. Splitting the pre-dubs this way makes it easy to control the dialogue in the final master mix.

These three pre-dubs are ultimately combined into a Dialogue Stem, which provides all of the dialogue used throughout the film. Remember that with few exceptions, the main dialogue is concentrated in the center channel, while the background dialogue could be in any one or more of the up to 7 full range channels (in the SDDS format).

Effects

For many of today's films, a lot of sound effects (FX) are needed. Many of these sounds are not yet in the archives and need to be manufactured or recorded. Sound engineers collect hundreds of hours of strange sounds in a library to make their job easier. Sometimes the source of the original sounds can be as strange as close-micing the wheels of a Honda rolling on gravel, which has been

described as the primary sound source for the large rolling rock that chases Indiana Jones out of the cave early in *Raiders Of The Lost Ark*. An amalgam of some half dozen different sounds were adjusted (equalized, speed changed, etc.) and put together to make the sound of the stone gate opening to let Luke Skywalker stroll into Jabba's cave in *Return Of The Jedi*.

Sound effects are not recorded like many music recordings, where an attempt is made with a single recording to create the sonic image of the stage of musicians in the hall. Separate FX recordings are created for each soundtrack channel, and the sound engineer must determine the timing, level and modification (equalization, reverberation, etc.) for each sound that is placed in each channel. This helps create a believable soundfield to immerse the viewer in.

Foley artists record all types of footsteps (Foley FS) on all kinds of surfaces, and create the sounds of everything the actors touch (Foley Props), like turning door knobs, opening umbrellas, etc.

The FX pre-dubs and the Foley pre-dubs are mixed into the FX Stem. It can easily take four days of concentrated work to create a 10-minute Foley reel, and five more days each per reel to match up dialogue and effects.

Music

The other major soundtrack component is music, and the film director, composer and music editor make a number of choices regarding the source of each musical selection used.

Source music is that which may be coming from a performer, radio, TV or jukebox either in the scene or which the audience is to assume is in the location shown. This music is "futzied" to simulate playback from radio, TV or telephone speakers. Each of these pieces can be a readily available recording (for which royalties must be paid) or a custom composition. Sometimes, to avoid royalty payments, a decision is made to compose a sound-alike source piece similar to a famous composition.

The Composer and Music Supervisor compose and/or assemble the film score. Movies like *Stand By Me* and *Immortal Beloved* use a lot of well-known works and recordings for most of the film score, as opposed to the *Star Trek* series, for which each film score is a custom composition.

The composer is given a video of the film with time code so the music composed will accurately match the action. The music is recorded on the recording or scoring stage, with the film running behind the musicians so the conductor can see the images and coordinate the sound with the action. Simultaneously, a timing click track and computer-generated video streamers, synchronized to the film, may be fed to the conductor and musicians to facilitate more precise timing of the musicians' performance.

The source music and score are mixed to create the Music Stem.

Putting It All Together

Once the three stems are completed, they can be mixed to make the final soundtracks—the Dolby® SR analog and the SDDS 8-track digital print master. From the SDDS master, Sony can mix down to a 6-track DTS® or Dolby Digital soundtrack printmaster. For each of the different soundtrack formats, analog and digital, the reference level is the same, but the noise floor and the amount of headroom available are different. As such, creation of each of these other soundtrack formats from the SDDS master is a labor-intensive process, requiring decisions by the re-recording engineer to ensure dialogue is intelligible and the sound fits within the dynamic range available from each

format. Dolby makes available a special box which semi-automates part of the process in creation of the Dolby SR and Dolby A masters, but intensive human oversight is still necessary.

An average film requires 6-8 weeks to mix using a single sound mixing stage. The crew for a mix includes at least a chief recordist (who is responsible for playback, recording machines and patching audio to the mixers), 1-3 mixers, a projectionist and a dummy loader, who loads sound units for playback. The sound mixer usually monitors on a large theatre sound system to ensure the sound will play effectively on all sound systems used, from monophonic Voice Of The Theatre speakers all the way up through the HPS-4000 system.

Properly designed and accurate cue sheets are critical to the speedy success of this hectic process. EVERYTHING is logged by the mixers and supervising sound editor, and tracked on the sheets to enable mixing and remixing. Some of the newer computer-based mixing consoles automatically log all the actions, including switch selections, adjustment settings, and when and how fast they are changed. This is a most welcome technological improvement, because it not only eliminates the manual logging activity, but remembers precisely what was done when, permitting precise repetition and controlled editing of the mix process.

Mixing It Live!

For this presentation, Steven Cohen used a ten minute excerpt from *The Juror*, starring Demi Moore, Alec Baldwin, et al. He had copied onto digital tape 184 tracks of principal recordings from those used to create the soundtrack for the selected film clip. Of these, 12 channels were production dialogue and 12 were ADR channels. For this show in the GCC theatre, he played these back on multiple Tascam DA-88 digital recorders, SMPTE time-code synchronized to a video transfer of the film clip (using a video recording made synchronization easier).

Steven first played back the original production dialogue units, and then played back the dialogue pre-dub by mixing the appropriate channels of original production dialogue. It is a little eerie to hear dialogue anechoically mixed, and with so many long periods of silence, particularly when my mind is expecting to hear the sounds I know should accompany what I see on the screen. There are silences during some of the speaking,

too, where decisions had been made to use ADR.

He then ran the ADR principal recording, which is only the replacement dialogue to fill in those silences in the dialogue pre-dub. I wasn't able to determine how close the sound engineer had gotten the ADR sound to match the adjusted original dialogue recording sound, but I didn't hear any obvious differences. The WALLA was added in the same manner as the director and sound editor make such decisions on the mixing stage. These ADR tracks included appropriate simulations of the main actors' breathing, particularly when Demi Moore gasped to show her fear. To set the cue points for all these different tracks of sounds, the experts tend to use film footage, not time code, to mark their spots. At 24 frames per second, there are 172,800 frames in a 2-hour movie, and the frame-to-frame time is about 0.042 seconds. Steven then played back the ADR pre-dub, highlighting the choices made by the director and sound editor.

In the Dialogue Stem, blended from the dialogue pre-dub and ADR pre-dub, Demi Moore's scream was distorted, but since it was a good performance, it was kept, and part of it was used in the final film mix. Listening to this stem, I perceived improved intelligibility of the dialogue inserted by ADR, and the actors sounded alive, since they now breathed! In addition, a little reverberation was added to Ms. Moore's scream.

We heard the background FX pre-dub, which included birds, ducks, kids in the park (as the car went by), interior car sounds and the sound of the river. It is quite an art to take one or more library sound(s) of things like tires, engine starts, etc., and integrate them into a believable car that matches the car, the action and the camera perspective (like switching from outside the car to inside).

Because of the digital split surround formats, a Left Surround and a Right Surround effects pre-dub have to be created. Steven said that it is very important to have phase coherency in the Left-Center-Right channels, but it is much less important for the surrounds' effects. He joked that adding doppler shift to the sound of the birds singing as the car (and the camera) went by would have been difficult. We were also told that for many pictures, the pre-dubs are created using Dolby SR analog recording on "mag-striped" film, since many sound professionals still find it easier and quicker to use razor-blade editing; with the tight release schedules on

some films, pre-dubs are created long before the picture is “locked,” and speed and ease of editing are serious considerations.

In succeeding playbacks we heard Foley FS (footsteps), then Foley Props (which is anything the actors touch and more—some examples: opening car door handles, hand slaps, the squeaks of hands on the steering wheel, chains rattling, the sound of the car suspension bottoming, liquid sloshing in the bottle in the moving car, the sound of the actor sucking liquid from the bottle through a straw, lips smacking, the car crashing after it goes over the cliff). Steven then played back several of the separate FX pre-dubs; the first FX pre-dub was of car noises, and included the first use of the Low Frequency Effects (or “.1” subwoofer) channel in this film clip. It is strange to listen to long periods of silence punctuated by brief bursts of sound, some lasting for much less than a second. One of these FX pre-dubs was 25 source tracks mixed down to the 8 soundtrack channels. The large number of separate FX pre-dubs (Figure 1) provides more artistic flexibility in creating the final mix by delaying some of these decisions to a later point in the process.

Steven then played, in succession, the Dialogue Stem, the FX Stem and the Music Stem. Most of us would miss the music if it weren't there, but I never paid attention to

the fact that music is rarely present continuously throughout a film. Hearing the Music Stem made that obvious.

This represented most of the editorial choices and re-recording decisions in the mix. At this point, there are still several generations of steps leading up to the final soundtrack master.

Steven then played the video of the scene with the final mix he had just created, followed by running the composite SDDS release print of the same scene. There seems to have been some additional equalization, and maybe some other changes, between the video version and the film version we heard. In other words, changes and adjustments are made up to the last possible minute.

Comments And Credits

After we recovered from following this amazing process, Steven and John held a short question and answer session.

John Allen closed the show expressing his appreciation for the many people who put so much effort and time into this exceptional presentation: Special thanks to Michael Kohut, Executive Vice President, Post Production Facilities, Sony Pictures Studios; Steven B. Cohen, Sony Pictures

Studios, for putting so much of his time and effort into the preparation and presentation; John Norton, Director of Technical Services, General Cinema Corporation (GCC); Rex Hescocock, Manager, GCC Framingham Theatres; Bob Sivco, Tascam, for extended loan of the digital recorders used for pre-production and during the presentation; Phil Ozek, Chairman, Boston section, SMPTE; Paul Beck, Secretary, Boston section, SMPTE, for providing the video equipment and the mixer used during the presentation; and Andy Lizotte, Stacy Lizotte, Bruce Ferelli and Jeff Corman, projectionists.

While I fundamentally understood that creating a film soundtrack was complex, I really had no idea how many people and how much time and steps are involved in the process. This was a truly enlightening experience which gave us a much greater appreciation for the movie sound we tend to take for granted. ■■

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