



FINDING NEMO

HEATHER JOHNSON examines the creation of incredible underwater sounds for *Finding Nemo*, Pixar's highly anticipated animated film for the 2003 Summer season.

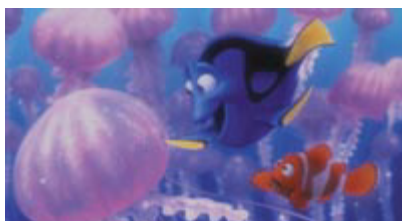
In the Disney/Pixar film *Finding Nemo*, sharks, clown fish, starfish, and other sea creatures take on personalities and situations as unique as their names. Pixar's fifth film, directed by Andrew Stanton and co-director Lee Unkrich, combines a cleverly-written script by Stanton, Bob Peterson, and David Reynolds, surprisingly realistic CGI animation, an original soundtrack, and a celebrity voice-over cast to create an underwater world filled with off-the-wall antics and above-sea-level-type dramas.

The recently released film stars Nemo (Alexander Gould), a spirited clown fish who inadvertently ends up stranded in a dentist's office aquarium overlooking Sydney Harbour. His father, Marlin (Albert Brooks), and his laid-back, short-term memory-challenged companion, Dory (Ellen DeGeneres), travel through the ocean's often-treacherous waters to rescue Nemo, encountering everything from whales and submarines to vicious sharks and angler fish.

Marine Life Mix At Marin

Mixing and editing took place in Skywalker Sound's premier mixing stage, Mix A, one of six mix rooms housed in the sprawling, Marin County facility in California. Now equipped with an AMS Neve DFC console, Mix A has been the site of numerous blockbuster feature films, including *Cast Away*, *Saving Private Ryan*, *Titanic*, and *A.I.*

Co-supervising Sound Editor Gary Rydstrom, also Director of Creative Operations for Skywalker Sound and a seven-times Academy Award-winning mixer and sound effects editor, handled sound design and effects for the sonically dense film. Working to digitised video, Rydstrom utilised the studio's 24-bit Pro Tools digital audio workstation and AVID software.



Rydstrom even created individual fin sounds for each character.

In order to best complement the film's CGI, Rydstrom combined techniques used in traditional two-dimensional animation and live action film. "All Pixar films have the same hybrid challenge," Rydstrom says, from his Skywalker Sound headquarters. "It's animated, but it also has dimension, so there's a reality to it. Unlike cartoons, computer animation has to have some sense of life and movement all the time, otherwise, it feels wrong. There's a similar philosophy in sound design. You have to put in more details just to keep it alive - so that you really believe that they're underwater, and they really are fish."

Subtle details, such as creating a distinct fin sound movement for each character, add even greater depth (no pun intended) to the characters. The nervous, timid Marlin has a tail that flaps rapidly, while 'go with the flow' Dori sails through the ocean with hardly a flutter. "In a film like this you try to both make it real and make all of the sounds useful in terms of the character and the story," Rydstrom says.

Rydstrom and assistant sound designer Dee Selby visited local pet stores to record the filters and bubbles inside a small aquarium. In some cases, they used a Hydrophone - an underwater device used by the Navy and marine biologists that picks up acoustic energy underwater. "Symbolically we wanted it to feel like everything is constricted - Nemo's not free. The Hydrophone, which usually sounds fairly thin, worked well in that situation." Rydstrom also placed contact mics on the surface of the aquarium's motor for more 'dynamic' filter sounds.

An authentic pet shop aquarium didn't work in every situation, however. "Sometimes even the real stuff gets boring," Rydstrom says. "Some of the traditional bubbling in an aquarium we created just by blowing into a rubber tube in the water."

Splashing Around

To capture the sound of water sloshing inside a whale, Rydstrom and crew journeyed to a nearby cave along the Pacific Ocean and recorded the water splashing on to the rocks, the resonant cavern substituting for the monstrous mammal's empty belly.

Submerged in Skywalker Sound's on-site heated swimming pool, Rydstrom and crew splished, splashed, blew bubbles, and shook water balloons to create vast ocean sounds. "We wanted real water that sounds full range, that conveys, 'this is our world and it's wide open'," Rydstrom says. A Sanken MS Series microphone, which works as either a mono or stereo mic, captured this and other portions of the team's field recording.

Dry inside Mix A, Rydstrom found Symbolic Sound's Kyma Sound Design Workstation especially useful in creating formidable underwater growling and elusive subliminal messages. "We could put real sounds, like a creek gurgling or ocean water, on one input, and on another I'd use a microphone and my voice. Then I could manipulate the sound of the water with my voice. I used it on the scary movements for the sharks, and just for fun, I would say the word 'Nemo' several times so there'd be this subliminal kind of 'Neeeeemoooo'," Rydstrom demonstrates in a deep, low growl.

Rydstrom's sound design certainly amps up moments of terror, excitement, and humour, but doesn't overpower the dialogue edited by Co-Sound Supervisor Michael Silvers and ADR Editor Steve Slanic. "The effects and the world Gary created allow you to realise you're in a completely different place," says Silvers, who

teamed with Rydstrom on several live action films before joining him on A Bug's Life and subsequent Pixar films.

Original dialogue mixer Doc Kane utilised Walt Disney Studio's industry-renowned Stage B, where character voices were recorded for classics such as Alice in Wonderland, Lady and the Tramp, Peter Pan, and many others. Silvers expanded Kane's rough mix - delivered via hard drive by film editor David Ian Salter - to more than 30 tracks in Pro Tools, allowing him the flexibility to EQ individual characters and incorporate multiple crowd tracks. Silvers also used Pro Tools to smooth out the overall dialogue, eliminate 'ticks' and make necessary volume adjustments and pitch shifts. Bruce the Shark, a 14,000kg creature voiced by Barry Humphries, required extensive use of Pro Tools' pitch shift plug-in. "He's very large, and he's also very scary," Silvers says of the intimidating character. "To find the right register for his voice, we had to pitch shift at different levels so that we could choose the optimum version. We pushed it to the point where he sounded like he had all that weight but didn't sound artificial."

Whether it's Bruce the Shark's booming voice or Dory's delicate tone, dialogue is critical in the Pixar production. One of Silvers' primary objectives was to keep the dialogue intelligible in the midst of resounding effects and composer Thomas Newman's emotional score. A particularly challenging moment occurs during a frantic chase scene involving a school of mean, ugly angler fish. "The angler fish is roaring, there's a full orchestra going, and in the foreground, one of our heroes, Dory, is trying to read something and she's whispering the whole time. She's not a very good reader... she's a fish. There were times when we had to lower things in order to let something else play. Maybe we didn't get every inflection of the dialogue, but you get the general idea because the music and effects are so wonderful at that moment."

And Finally...

For the final mixes, engineer Armin Steiner presented re-recording mixer Gary Summers both a 5.1 orchestra mix and a 48-track mix of synthesizer overlays, broken down into left-centre-right elements of brass, strings, and soloists. "For instance, they'd keep chimes or percussion separate, knowing that it was adding more colour to the score but that it may get in the way," Summers says. "That gave us the opportunity to pull those things out or rebalance them slightly."

The 24-bit Pro Tools system allowed Summers to move cues up or down a few frames, or cut out portions of music altogether. The four-times Academy Award-winning mixer uses very little outboard gear, but cites the TC Electronic Reverb 6000 and DBX 902 de-esser as helpful tools. "Everything else is in the desk," he says. The project was recorded on to the Tascam MMR-8 hard-disk recorder/player.

When Disney/Pixar releases the film on DVD, viewers will find, for the first time, a special music and effects-only mix. "If you watch the movie again and don't listen to the dialogue, not only do you hear things, but you see a lot



of the cute and fun details that you forgot were there," Rydstrom says. "It's a way to sit back and watch the film in a whole new light."

The additional DVD mix also enhances the musical experience. "A lot of the time the music gets tucked way underneath the dialogue," Summers says. "But [in the music and effects mix] you can hear all the little nuances that Thomas has done - little accents and thematic things that he created for the characters - even with the sound effects."

"He's very atmospheric and almost sound effect-like in his music," Rydstrom says of Newman, a multi Oscar-nominated composer whose work can be heard in American Beauty, The Shawshank Redemption, Road to Perdition, and more than 50 others. "It's a very interesting score and I like the way it works with the sound effects. That's why I wanted to put those two elements together."

Finding Nemo marks Pixar's first underwater-themed film, and arguably raises the bar even higher for the company's computer animation department. Like Monsters Inc. and other previous Pixar releases, the film is the result of long hours and extensive research from a talented, detail-orientated team.

"They're true film artists. They don't let anything go," Silvers says of the forward-thinking animation studio. In regards to audio, Summers adds, "They look at the soundtrack like they look at the animation - down to the pixel."

Project:

Finding Nemo.

Studio:

Skywalker Sound, Marin County facility.

Co-supervising Sound Editor and Director of Creative Operations for Skywalker Sound:

Gary Rydstrom; Dialogue Mixer: Doc Kane

Co-Sound Supervisor:

Michael Silvers; ADR Editor: Steve Slanic.

Report:

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