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# LIGHTWAVE 3D® NEWSLETTER ONLINE EDITION

## May - 2010

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### Project news: Repo Men



Practical model of artificial heart, image courtesy of CCE.

"Repo Men," is a Sci-Fi action-thriller based on the novel, The Repossession Mambo, by Eric Garcia.

In this movie version of our future, humans have become dependent on expensive mechanical organs, created by a company called "The Union." Repossession agents are sent out to collect these organs when the customers can't pay their bill. The gruesome results of these encounters, and how they affect the parties involved, are cleverly presented with some great practical FX work that finds its genesis in LightWave 3D.

Since these repossessed organs played a fundamental role in the storytelling, the production crew needed convincing models that not only looked cool, but were also a believable piece of machinery. This particular task warranted a call to Andrew Clement, owner and founder of the LA-based company, Creative Character Engineering, to take on the responsibility of creating props for the hi-tech body parts.

A LightWave user since version 4, Andrew's CG work can be seen in TV shows like, "Hercules" and "Xena" and the feature film, "Blade." His practical FX work can be seen on recent TV shows like, "Dexter" and "Grey's Anatomy," as well as feature films like, "Cloverfield" and "Star Trek."

We were fortunate enough to speak to Andrew about LightWave 3D's involvement with the creation of the props, and he stressed the importance of making it part of his regular production pipeline. When we asked why, he had lots to say:

"LightWave is extremely easy to use. It has a full-featured modeler, solid animation tools, and what I think is the best bundled render engine out there. I usually do the CG work alone or with a small crew, and I'm able to get an extremely professional result, without a lot of mucking about. I can set things up myself from start to finish, and then choose how much tweaking I can afford, without wasting a lot of time up-front. Also, LightWave has unlimited render nodes, which means if you spend as much money as I do keeping a small studio afloat, with the dozens of small software licenses that I need to keep current, having free render nodes is a big deal!"

The process in creating these models starts in LightWave 3D, where Modeler's ability to determine the proper sizing of the material comes in handy, so that its eventual 3D print will be accurate, down to the millimeter. "It was a definite time-saver. Because I built these models in LightWave, I could separate each organ into parts that I could print individually," says Clement, "and I knew they would fit together easily, and perfectly. It made building the more complex organs a much easier task than it would be, if I were to just start sculpting and testing."

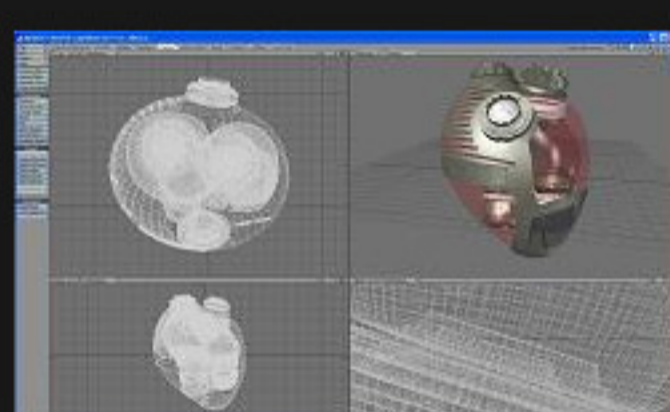
Once the models, based off of the studio concept art, were built in LightWave 3D, the .obj files were then run through Right Hemisphere's Deep Exploration, to obtain the .stl files that would be printed out, re-molded, hand-sculpted for finer detail, and eventually plated and finished.

Each organ has a tiny barcode engraved on the main housing, about the size of a dime, but smaller. The challenge to create such fine detail without spending eye-straining sculpting time, was yet another quick-fix in LightWave 3D. "We had the images of the barcodes created in Illustrator," describes Clement, "and brought those into LightWave, where we extruded the shapes onto the model."

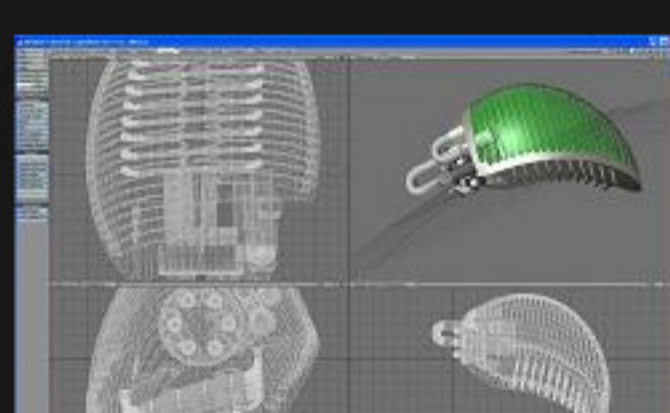
When asked about the future of this medium, Andrew had this to say, "From prototyping, to concept art, to asset delivery, it's all digital. Even though I love handcrafting something, I have no problem sitting down at a CG workstation when I need to. It's just another tool, especially now that I can translate what's onscreen to a tangible part."



Bar code detail, with dime in place to show size, image courtesy of CCE.



Artificial heart in LightWave Modeler, image courtesy of CCE.



Artificial liver in LightWave Modeler, image courtesy of CCE.

See more of Andrew Clement's work at the [Creative Character Engineering](#) website.

### Picture of the Month: Vette 789 by Elvis Blazencic



Elvis "Lewis" Blazencic is one of LightWave's best-known car modelers. His latest creation is a customized Corvette C6, a striking model and even more dynamic in the poses Lewis has chosen for it. Without a doubt, it is the newsletter's Picture of the Month. We asked Lewis about this car:

#### So tell me about the 789 project you started it in 2008. Why the long time?

Bob commissioned me to make several cars (he chose the models), and the deal was, to work on them when I didn't have too much other work. Obviously I had too much other work! Also, for this car - a Corvette C6, customized by a company called n2amotors.com, the interior was tough to do, and I wanted to make it in full detail, since I'm a sucker for details and precision. Another reason I chose this car is that I have an actual Corvette C6 model, about 80 percent done (it just needs wheels and some textures), so I can reuse this interior.

#### What number car is this for you?

I once had a spreadsheet with stats (I don't know where it is on 9 HDDs), but it's out of date now. I think I'm close to around 115-120 models.

#### Do you always work in subpatches?

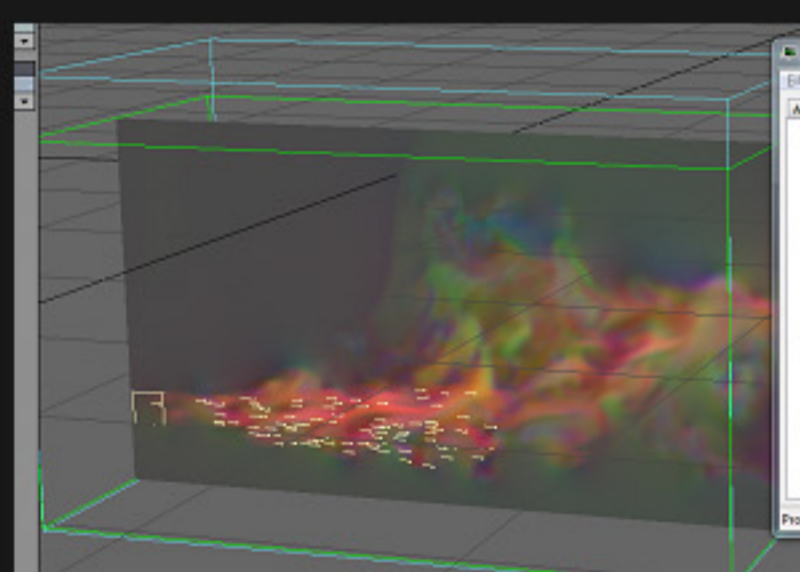
Ninety-five percent of my cars are in subpatches. It's only when I do low poly/games models, that it's all regular polys. As for CCs, I don't use them in Modeler; although I'd love to, because they are too slow for me, and still present some problems with Knife, and some other tools.

#### Do you just work in 64-bit now?

I model in 32-bit, all the time. 32-bit Modeler can use 4GB RAM in a 64-bit OS, so there are no problems with millions of polys. Many plug-ins, like Pictrix tools for snapping, are still 32-bit only, so it's not really an option for me to go to 64-bit for modeling, but my rendering is 64-bit, all the way.

You can see more views of Lewis' 789 project on the [forum thread](#).

### Plug-in news: Turbulence



TFD is designed for optimal scalability with respect to increasing resolution as well as number of CPU cores.

#### What interested you in making your plug-in available for LightWave, too?

One obvious aspect was that LightWave had a free spot for a fluid plug-in, like Turbulence. Since Turbulence is developed with a Public Beta version, the very active community was a factor, as well. Development of CORE Technology provides a perspective for the future, beyond the next 2-3 years.

Fluid simulation touches several aspects of a CG pipeline: surfaces and particles as inputs and interacting objects, animation, shading, lighting and post-effects. Therefore, the modularity and extensibility of the 3D-framework, is an important factor. The evolution from "customizable toolkit," to "CG operating system" with an abstract component system like CORE, helps specialized solutions like Turbulence, to avoid re-inventing or stretching 3D-framework code.

#### Why did you start with a 64-bit version, rather than the more popular 32-bit Windows version?

Code-wise, both versions are identical. So both versions are actually developed at the same time. It's merely the release process that made the initial 32-bit Beta version appear two days later. However, 64-bit is the recommended architecture for professional operation of a fluid simulator. When you are working on high quality simulations, you can easily reach the memory limit in a 32-bit application.

#### Will there be a 64-bit Mac version, too?

Yes.

Turbulence is available in a limited demo version of the beta (camera resolution for animation can't exceed any variation on 480x360), from the [jawset website](#), and is available for purchase at a special introductory price, while in beta.



TFD provides intuitive volume shading controls.

Discussion thread for this edition of the newsletter is on the [NewTek forum](#)

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