



Against the Clock: The One-Minute Time Machine International Dubbing Challenge

Dubbing entertainment into different languages with Dolby Atmos makes the highest-quality, most immersive content available to new audiences. This means not just a wider audience, but an improved experience more reflective of what the creatives intended. But the time and cost of creating these dubs has limited their adoption. Fortunately, new workflows have changed the equation making Dolby Atmos dubbing faster, easier, and more economical.





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When you’ve got your workflow nailed down, the thought of deviating from it can be scary. With schedules and budgets to meet, any delay is too much. That’s why clients can be hesitant about adopting new technology – time is money. If you’re already dubbing films and TV shows into different languages and working in 5.1, there’s good news: migrating to Dolby Atmos is quick and easy, with very little additional time.

To test this hypothesis, Dolby and the [Entertainment Globalization Association](#) (EGA) – a forum for those involved in the globalization of entertainment content – enlisted the aid of [Formosa Group](#), specifically Tim Hoogenakker, lead rerecording mixer at [Formosa Santa Monica](#). The goal was to study the different workflows and task times for post-production language dubbing.

Tim could well hold the record for creating the most Dolby Atmos home entertainment mixes. His work includes many high-profile Sony Pictures and Lionsgate features. He also remixed all seasons of Game of Thrones from the original broadcast mixes into Dolby Atmos.

The task was set out. Tim would be provided with the stereo mix of a film and Pro Tools stems ready to go. The EGA would commission Parisian French, German, and Italian 5-channel dialogue stems to create the international dubs. From that, Tim was to create a 5.1 dub and a Dolby Atmos dub for each language. The goal was to demonstrate the speed and simplicity of creating dubs in Dolby Atmos and show it’s as easy as dubbing in 5.1. But first, we needed to choose a film to run the experiment.

[One-Minute Time Machine](#) (note: some explicit language) is a romantic comedy short that is a meet-cute with a time-travel twist. It takes place on a park bench and features just two characters. A simple piece with one primary location and relatively low-tech sound design, it was appropriate for the purpose of this case study.

Stereo beginnings

“This film was never intended to be in Dolby Atmos, so it was fun to see how we could open it up,” says Tim. His first step was to use the original stereo mix stems to create a Dolby Atmos English mix. “Starting with stereo stems, we

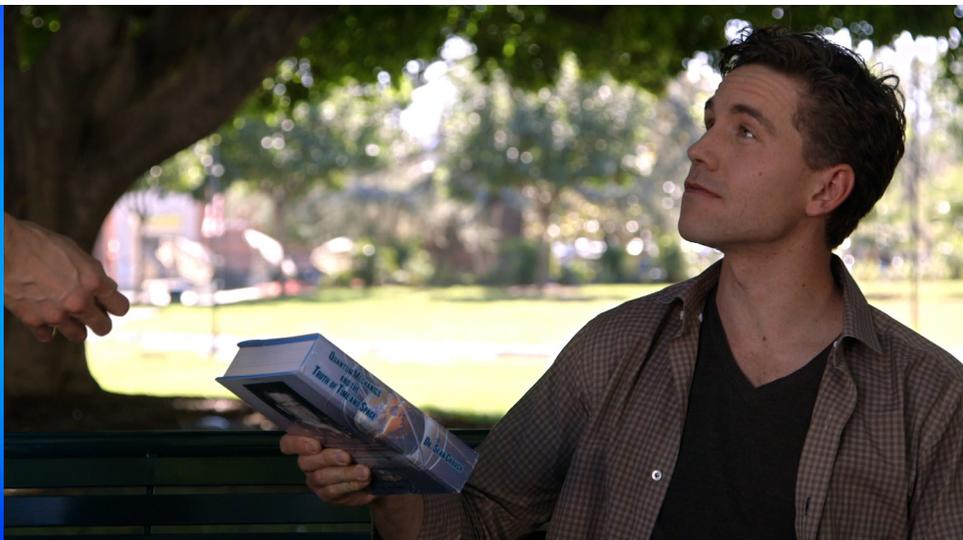


had little separation to manipulate the mix further, but for this test it worked perfectly well overall.”

He spatialized the music, ambiences, hard FX, and cleaned up the dialogue. After the Dolby Atmos version was complete, he mixed it down to 5.1. These two mixes became the starting point for the exercise. The next step was to create a fully filled music and effects (M&E) mix. The music for the production, along with the sound effects – which could be hand claps, body touches, or other audible movements that are captured along with the production dialogue – is removed when the dialogue is removed. That means these elements must be filled in before dialogue in the new language can be added. The M&E and the dialogue are primarily in the front-center bed channel, so M&E filling is largely confined to this channel.

Starting from the original stereo mix, Tim created fully filled M&E mixes in Dolby Atmos and in 5.1. In both mixes, he simply worked with the front-center channel to replace the missing FX instances. “For the M&E portion, the mix process was practically identical for both the English Dolby Atmos mix and the English 5.1





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mix. I created each mix separately and the amount of time needed to create each mix was identical,” says Tim.

“Once I had the English M&E mixes in Dolby Atmos and 5.1, those were my guides for the dubs. Both versions – Dolby Atmos and 5.1 – fell into place with the same downmix coefficients that I used for the English mixes. Starting with the English mixes, it was straightforward to create the M&E, because, after that, pretty much all our focus was on the center channel where the other language dialogue would eventually live. It was important to get these fills properly mixed and placed so that the next step – adding the new dialogue – would sync up properly.”

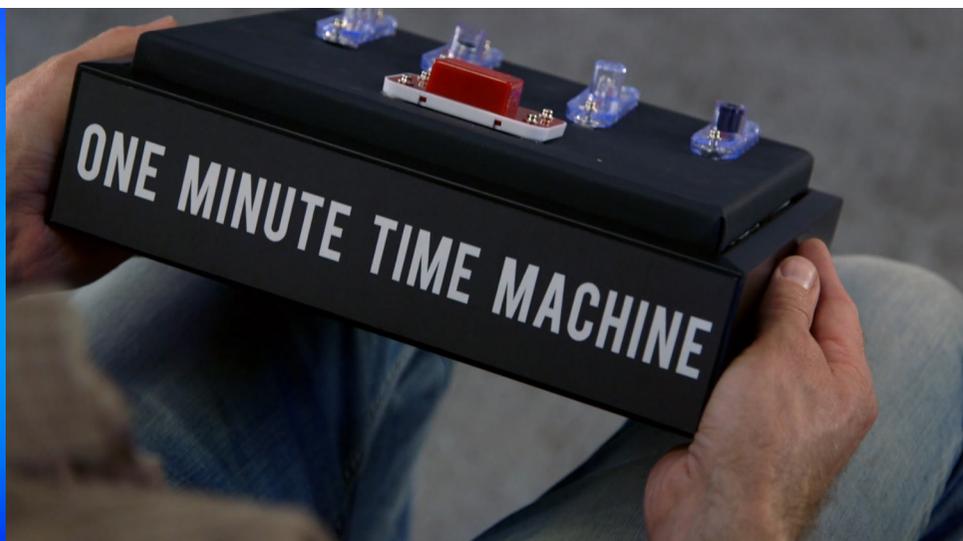
What’s your dub language?

Next, Tim began work on the language dub mixes, first in Dolby Atmos, then in 5.1. The 5-channel dialogue stem was easily dropped into the corresponding bed channels of the Dolby Atmos M&E, as well as into the corresponding channels of the 5.1 M&E. In both versions, the dialogue was mixed into the M&E, taking about the same amount of time for both the 5.1 and Dolby Atmos

versions. In a more complex show with interiors that require spatialization effects like room reverbs, the Dolby Atmos mixing would take a bit more time due to the nature of mixing in three dimension vs. two, but overall, the processes would be very similar. And once the first international dub is completed, Tim pointed out that that mix, including all of the dialogue spatialization settings, can be used as a template to make subsequent Dolby Atmos dubs go even faster.

Sending to print

The final step was printmastering. With both Dolby Atmos and 5.1, this was a one-pass, real-time process. It involved simply playing down the show from top to bottom, and simultaneously printing both masters back to the Pro Tools recorder session while monitoring the Dolby Atmos mix and spot-checking the 5.1 mix as necessary. “The big difference in time consumed is listening to the downstream formats to make sure they’re all working,” says Tim. “Setting this up properly at the beginning is key.”



Dubbing in Dolby Atmos not only delivers high quality but also improves flexibility for future downstream uses. “We can create this wide, immersive, and really deep format that can keep its integrity all the way down to a mono mix, if that’s what you need,” says Tim.

The verdict

“Today, differentiating the creative mix process on a time basis is barely an issue,” says Tim. “While this was a very simple show – sound-wise – the basic processes of M&E filling, dialogue ambience creation, and actual mixing are actually very similar for both 5.1 and Dolby Atmos.”

“Additionally, when I’m working on a feature, the original Dolby Atmos mix is often the creatively approved mix, so it stands to reason that dubbing in Dolby Atmos delivers the truest creative intent to every territory, not just the country of origin,” says Tim.

Everyone involved in sound for film knows the painstaking work that goes on in

tandem with their visual collaborators to create powerful storytelling. Like the actors’ performances, cinematography, and carefully honed scripts, sound has the ability to move people. Dolby Atmos heightens this. Tim fears that, if it’s not applied when the film is translated, the emotional intent of the film can be lost. “We spend so much time using Dolby Atmos to move the audience, to immerse them. Knowing that audiences watching other versions might not experience the full impact is a little heartbreaking. Why shouldn’t those territories have the same experience?”

To learn more about dubbing in Dolby Atmos visit this page:

<https://professional.dolby.com/home-entertainment/atmosdubbing/>

