Greg Hendershott of Cakewalk Interview – for Computer Music Magazine
By Ted Perlman & Jim Roseberry

Back in the early 90's anybody using an IBM-type computer had to feel like an outcast. Practically everyone who did any midi recording on a "pro" level was using the new and amazing Apple Macintosh. However, if you made the choice to work on the PC platform, the coolest and most feature-packed program was "Cakewalk". It's pages of dots and dashes pushed the DOS format to the limit. Started by a young man from Edina, Minnesota named Greg Hendershott in Boston, Massachussetts, it has grown from that humble DOS program into the amazing and complex digital audio powerhouse it is today - "Sonar". Packed with everything musicians need to create recordings from conception to mastering, it has continued to lead the market in adding innovations, from Acid-type loop editing to the new softsynth standard on the Windows platform - Dxi. No longer can people point to the big German software program as the "only game in town". Cakewalk has just as many big-name pro users endorsing their product, whether they are making top 40 hits, movie scores, or television themes.

Cakewalk recently released version 1.3 of their new multi-track audio/midi sequencer "Sonar". Computer Music sent longtime Cakewalk users Ted Perlman and Jim Roseberry to chat with Greg Hendershott (Founder and CEO) and Michael Hoover (VP Product Development) about the current state of Cakewalk and what's in store for the future.

CM:
What made you want to get involved in music software?

Greg:
I took some computer music classes in college. Before that, I wasn't interested in computers at all. I was definitely not a "math and science person", I'm pretty hopeless at that end of it, have had to work pretty hard at it. But music made computers and technology fun for me, and that's been the motivation all along.

CM:
Where do you see Cakewalk in the next 5 years? Do you see SONAR being perceived as more of a "pro app" in the same league as Cubase or Logic?

Greg:
Cakewalk has been making software for 15 years, and we've had professionals as customers the whole time. What constitutes a "pro app" is in the eye of the beholder. Some people repeat what other people say. Other people think for themselves and use whatever tool works for them. To the extent there has been a perception gap, it's been due to a few things. We've always focused on Windows. We've been more popular in the US and Japan than in Europe. Before SONAR, we probably weren't the best choice for dance music. So combine them all: If you were making dance music in Europe on a Mac, you probably weren't thinking much about Cakewalk. However that's already changing, at least for Windows users.

CM:

Upon first opening Sonar, the most obvious difference from previous versions of Pro Audio is the user interface. In addition to the new graphics, there are several new track-based settings/options. Can you explain these in detail?

Mike:

The track view received most of the UI revision. The goal was to improve workflow. In a lot of applications, you find yourself opening window after window. While SONAR will work with two monitors, a lot of users need to get by with one. So we combined the console view and the track view, added Show/hide tools that let users manage what tracks they see and edit, and provided Zoom and Fit commands to help navigation while making detailed edits.

CM:

Is Cakewalk ever going to consider making one cross platform app, similar to the way Steinberg and Emagic put out PC and Mac versions of Cubase and Logic?

Greg:

We live, eat, and breathe Windows. Cross-platform is a nice idea, but rarely done well. Usually, the reality is that one platform gets the most attention, and the other platform gets the B team. That secondary version lacks features, or the quality suffers, or both. It's rare to see full parity for both platforms, much less on a sustained basis over the years. We take another approach: We focus on Windows and deliver what we believe is the best choice for Windows customers.

CM:

Sonar supports software synthesizer plug-ins in DXi (DirectX Instrument) format. Could you elaborate on the DXi specification?

Mike:

DXi is a new (only 9 months old) open standard based on DirectX. All of the major soft synth manufacturers now support it. For example: Native Instruments, Roland, Bit Headz, FXpansion, RBC Audio and others. Even Synths like Reaktor, Battery, and Vsampler are now available as DXi.

CM:

Have you ever used your competitors' software (Cubase or Logic)?

Greg:

Yes, of course. So do many other people here. You have to look at the competition. You also have to listen to customers. And you have to make room for a third thing, which is the ideas you'll never get from competition or customers. Balancing all three of those things, is the challenge.

CM:

Tell us about Sonar's record/playback meters. They are perhaps the most flexible I've seen.

CM:

Why didn't Cakewalk support the VST standard, as Emagic and Steinberg did?

Greg:

The bottom line is we wanted a good experience for our customers. We were already using DirectX, which is a real standard built into the Windows platform. With VST, which is a proprietary spec controlled by Steinberg, we were concerned about being able to support it properly on Windows. Our impression was that Steinberg didn't make it particularly easy for Emagic (for instance VST2), and we didn't want our customers caught in the middle of those kinds of games. Also, proprietary specs are bound up with the fate of the company that controls them. OMS is an excellent example: When Opcode went away OMS was in limbo. The happy ending is that Apple builds OMS into the Mac OS. With DirectX, we already have that happy ending, in the beginning. So we've devoted our efforts toward supporting that for our customers.

CM:

Sonar supports a new low-latency driver standard called WDM Kernel Streaming. Can you elaborate on the details of this new standard?
Why WDM Kernel Streaming instead of ASIO?

Mike:

SONAR works with any Windows-compatible audio hardware using standard Windows MME or WDM drivers. What is important for readers to know is that with Windows 2000 and Windows XP, WDM is the new standard for doing digital audio on the PC-- and it's fast. WDM provides super low latency for input monitoring, real-time playable soft Synth performance, and mixing even on machines with entry-level sound cards. Anyone running SONAR on Windows ME, XP, or 2K can take advantage of WDM's performance. The other thing to realize is that WDM is here today. Every major audio card manufacture has released or is just now releasing WDM drivers for their hardware. So why WDM instead of ASIO?

CM:

Where do you think the home recording industry is headed?

Greg:

In the broad technology industry, there is a story that happens over and over. Dedicated hardware increasingly gets replaced by software running on general-purpose PCs. We'll see more of that in the home recording segment. Intel and AMD are giving people double the processing power, every 18 months -- at the same price. That power of doubling is huge. If you take a sheet of paper, and keep folding it (doubling its thickness), you can reach from the Earth to the moon in just 41 folds. People never believe that until you walk them through the math. Doubling is just a incredibly powerful force, and home recording technology will continue to experience this just like every other technology field

Cm:

There was a rumour a few years ago that Microsoft was going to absorb Cakewalk and it's technology into Windows. Was any of that true?

Greg:

Every couple months I hear a new rumor regarding Cakewalk. Most of them are pretty funny. Either they're garbled from something true (for example we do work closely with Microsoft on technology), or they're invented by competitors. I think that if your company isn't the subject of bizarre rumors, then it doesn't have a pulse and isn't having any impact on the market.

Cm:

Does Sonar support automation of realtime effects plug-ins?

Mike:

SONAR supports DX8 automation. These include all the Power Technology effects. We include older versions of our plug-ins for backwards compatibility that do not support automation via DX8.

CM:

In addition to realtime audio effects, Sonar features realtime MIDI effects (MFX). Tell us about the MIDI effects provided by Cakewalk and those available from third parties.

Mike:

MIDI FX are plug-ins that you can use to non-destructively manipulate MIDI data in real-time. MIDI plug-ins can generate and/or process existing data. Cakewalk supplies the Session Drummer, an arpeggiator, echo delay, velocity mapper, event filter, Quantize and even a chord analyzer. MusicLab and NTONYX are two 3rd party plug-in manufacturers that produce VeloMaster and Style Enhancer respectively.

CM:

Cakewalk seems to be making a major effort to gain a bigger foothold in Europe and the UK. What brought this shift in policy around? Will Cakewalk be enlarging their European offices?

Greg:

With SONAR we felt we had the kind of product that could get a fresh look in Europe, both because it's a new image and because the product truly is more suitable for the somewhat different market. Europe is important to us. Personally, I just visited Music Live this past weekend, where Cakewalk was exhibiting. That was my second trip to the UK this year, to learn and talk with people.

CM:

Sonar features real-time non-destructive "slip editing." Can you explain what this is?

Mike:

Slip editing is the ability to trim or crop data from beginning and ending of a clip. These are non-destructive, so you can always go back and re-expose the cropped audio or MIDI. Let's say you wanted to delete a bar of out of the middle of a clip. You can use the scissors tool to split the clip to the right the part you want to remove. Then, instead of deleting it, you could just drag the right edge from right to

left to hide the data. If at some point you decide you want to bring that bar of music back, you can just drag the right edge of the clip to the right until the deleted material appears. So on top of unlimited undo and redo, you can now always get back to your edits.

CM:

More pro users than ever are using SONAR. Did Cakewalk make a point to enlist these high profile musicians or did they approach you?

Greg:

It's been a combination of both. Also we have some new advertising where we'll be showing some diverse examples of professional customers; the first is Slipknot. Again, we've had numerous professional customers all along. For example the old Pro Audio product got awards from Mix magazine readers in the US, a couple of Post awards, and so on. As the Windows platform is used in more post production work, we see even more. And it goes beyond post, to areas including original music, game music production, you name it.

CM:

Sonar supports "vector" envelope-based automation for audio and MIDI tracks. For those unfamiliar with the term, can you explain what vector automation is?

Mike:

Imagine a continuous line that runs the length of the track. This line represents the track volume (or any other track parameter including FX and Soft Synths). When you move the line towards the top of the track, the volume increases. When you move the line towards the bottom, the volume decreases. You can also change the shape of the line by inserting nodes or by recording your volume control movements. Once the nodes are in place, you can move the nodes and/or the lines between the nodes independently to "shape" your volume. This shape is your vector. We've only mentioned volume in this example, but SONAR lets you automate almost any audio or MIDI track parameter and/or MIDI parameter. Vectors are sample accurate so they provide the smoothest sounding changes and they are easy to manipulate

CM:

What are your feelings about Pro Tools and the way Digi has managed to corner the market of high-end digital audio recording in the music, film, and TV business'? Why do you think Digi keeps the prices so high on their PT products?

Greg:

It's the classic first-mover advantage. They were there first. Plus they've carefully created a closed world where they control access to their customers by other companies, and even control what kinds of third-party products can be created for their platform. Eventually, those kinds of closed, proprietary systems usually lose ground to more open models. Like mainframe computers giving way to PCs. But they are very smart people and will do everything they can to protect their franchise and the profit margins that go along with it. Anyway, we are not trying to compete directly with Digidesign, like say Steinberg is with Nuendo. It's more subtle than that. It's not about us trying to force the market to move someplace. It's about

where the market will go, inevitably, and how to be there with our partners and customers.

CM:

Are you going to stay more hands on with Cakewalk, the company you founded? There was a period of about 2 years in the late 90's when you turned the position of President over to someone else, and the company suffered as a consequence.

Greg:

I'm very happy with my role today. We have a great team, many talented people. We're running a sound business and focused on doing the right things.

CM:

What new products are Cakewalk/you considering exploring in the future?

Greg:

It's an old joke, but if I told you I'd have to kill you. And all the readers. Which would leave no one to buy the products. So, no, I can't really say. I will say that we're pretty focused on being a software company and on being a Windows software company. You will see us partnering with other companies to create solutions for customers, more often than you will see us trying to figure out some new product area from scratch.

CM:

What other interests do you have outside of the music software business?

Greg:

I'm interested in business in general, outside our industry. I like to travel outside the US and be exposed to other people and places. In the US you can travel thousands of miles and not experience anything truly different. That's very comfortable but it can get a little boring. And obviously I listen to a lot of music. And I create a small amount of very bad music myself.

Ted & CM:

We want to thank both of you for letting our readers get to know not just the technical side of Sonar but also two of the people behind the software. Have a Happy Holiday!

Greg & Mike:

And the same to you and your readers. It's been fun, thanks.