"For native development, Delphi is my first choice."

– Jean-Marie Cannie, CTO and Founder

FL STUDIO

IMAGE LINE

Delphi®

ORGANIZATION

Image-Line Software

APPLICATIONS

FL Studio Digital Audio Workstation

TOOLS USED

Delphi

CHALLENGES

Complex digital signal processor comprised of millions of lines code and more than 300 assembler functions

No native support for a large base of Mac users

RESULTS

Ability to link function to code directly

Faster coding and prototyping

Expanded reach to Mac users

Introduction

Image-Line Software is a Belgian-based creator of FL Studio, one of the most popular Digital Audio Workstations (DAWs) available on the market for creating music. FL Studio is installed more than 30,000 times per day (more than 10 million installations a year) by users in more than 200 countries, including power users such as Avicii, Martin Garrix, Afrojack, and Mike Oldfield.

Challenge

The FL Studio project contains more than 2.5 million lines of code and more than 300 assembler functions for the digital signal processor. Currently the company has 15 employees working in product development.

Jean-Marie Cannie, CTO and Founder of Image-Line Software, says prior to entering the music industry, he had a long history working with Turbo Pascal. "It was the base development tool we used to develop stock market software before moving into arcade games which led into music sequencing."

Solution

When Image-Line transitioned from video to music, Cannie decided to switch to Delphi from Embarcadero as its software development platform of choice. "Delphi is very important for us as a development tool because it allows us to do inline assembly and link function to the code directly. With classic development tools, that process is much clumsier. However with Delphi you can just add a button and double click; it speeds up coding and allows us to work in the language we know best."

FL STUDIO SIGNATURE BUNDLE

Music composition & production software

Results

With Delphi, compilation and prototyping are faster and easier, Cannie says. "Delphi is really nice for us, because if you need native speed like we do, then the only other option is C++. Having worked with both, I find Delphi to be much more productive and easy to work with. For native development, Delphi is my first choice."

Another important feature for Cannie is the pre-compiled libraries. "With Delphi, every unit is pre-compiled. If you change only one block that contains a line of code, it will run within seconds versus the one-and-a-half minutes it would take with C++. That's a very unique feature to Delphi."

One of the most significant developments for Cannie is Delphi's 64-bit compiler and the native support for OS X. "That's very helpful since a significant proportion of music producers are using Macs these days. We ran the first test version in early July and expect to have something for our audience within six months. Having a product that runs natively on both Windows and OS X, without customers having to jump through hoops, has the potential to grow our customer base significantly and will be a welcome friend for those Windows users who switched to Mac and are missing out on their Lifetime Free Updates. That's a major breakthrough for us."

While mobile isn't a major area of focus for Image-Line, Cannie says they are investigating future development work for iOS devices using Delphi. "These tools offer many benefits that will help bring even more benefits to our customers."