

History of DivX

Microsoft MPEG-4 V3 was "re-engineered"

I am reminded of John Perry Barlow's classic statement "The Internet treats censorship as damage and routes around it," as I contemplate how these Beta Microsoft codecs disappeared into a network of underground developers and re-emerged as the "DivX" format that has been setting the standard for video distribution across all computing platforms. Versions of Gej's original "DivX" MPEG-4 encoders are now available for Linux, for MacOS, for beOS and for Windows.

Microsoft's MPEG-4 V3 encoder was "re-engineered" as the "DivX Low-Motion" codec, and the V2 as "DivX Fast-Motion." The Linux DivX player uses the same DLL object code as the PC version, **but clearly the port for the Macintosh demonstrates that these underground developers have access to source code.** In fact, several MPEG-4 source codes are linked from a new website, OpenCodex.com that is offering a \$50,000 prize to the first developer who produces a good MPEG-4 codec for Quicktime, and releases it to the public domain (it's nice to see that Quicktime devotees will not be bypassed by the new technologies).

http://www.trevormarshall.com/byte_articles/byte10.htm

DivX 3 is a hacked version of Microsoft MPEG-4 V3

The history of DivX is a tricky subject indeed, but here is a very brief rundown for you which should help you on your way

1 - DivX isn't DivX.

The original DivX isn't related to DivX as we know it today. There was a product of Circuit City called DivX which enabled users to buy encrypted DVDs at reduced pricing for use in special players. Every few times you wanted to watch the movie, you would pay a small charge and this would enable you to view it.

Of course the scheme flopped, and now all the old DivX DVDs are worthless pieces of plastic.

2 - DivX

DivX 3 was released. **A hacked up/modified version of the MPEG4 based codec from Microsoft**, DivX 3 offered superior compression/quality ration then the Microsoft codec, and immediately became the choice codec for video encoding in the internet underground.

4 - A little while later, DivX 4 is released. This time DivX uses its own codebase. It's no longer related to the Microsoft codec and support just keeps on growing. Developed along side OpenDivX aka Project Mayo, an open source project, the quality gets better while the file sizes keep shrinking. There's numerous little bugs along the way, but by DivX 4.12 we have a winner on our hands.

6 - DivX 5 is released. Now firmly based upon the MPEG4 video standard, with additional special features from DivX networks for quality enhancement, things just keep getting better. The open source project is mainly discontinued due to only a small but very talented group of contributors, many of whom were compensated for their work or hired by DivX networks. DivX 5 offers basic and Pro versions, charged at \$30 or adware supported.

Because of the MPEG4 video standard, you can also argue that DivX follows in the development of MPEG1 and MPEG2 standards, although the development of the MPEG video standards really is a separate issue.

And there you have an extremely brief summary of the DivX history. Now go research 8D

<http://forums.divx.com/eve/ubb.x/a/tpc/f/821101651/m/287103571>

Microsoft MPEG-4 V3 hacked by Gej

The original DivX 3.xx codec is based on Microsoft's MPEG-4 V3 codec (ASF was based on MPEG-4 V2). The reason why the **codec was "hacked" and re-distributed (by a french hacker known as Gej)** is because Microsoft's codec did not allow encoding to AVI (they only wanted people to encode to ASF/WMV, surprisingly ;-). **The DivX 3.xx codec also includes hacked versions of an MP3 codec and a WMA codec.** The AngelPotion, MPEG-4 and SMR codecs are all in the same boat. There is also a VKI (Scene Detect) patch that will insert keyframes at scene changes for you automatically, which will improve picture quality.

The new DivX 4.x codec has nothing to do with Microsoft - it has been developed entirely from scratch, and is still under development (hence less than perfect compatibility/efficiency/quality). In time, the DivX 4.xx codec will completely replace the 3.xx codec, but for now, the 3.xx codec offers better compatibility/efficiency/quality. The 4.xx codec is compatible with the 3.xx codec, but may have performance/quality problems (the same is not true in reverse - the DivX 3.11 Alpha codec is not compatible with the DivX 4.x codec).

Note that both codecs can be installed together, and 3.11 encoded files will playback with the DivX 3.11 Alpha codec and 4.x encoded movies will playback with the DivX 4.x codec (this is true unless otherwise specified during the DivX 4.x setup, which allows you to playback all 3.11 Alpha movies using the 4.x codec)

If you wish to playback most existing DivX movies well, you may want to download the 3.11 Alpha version of the Divx codec instead, as other versions may not be 100% compatible. If you want a completely "legal" codec that has built in 2-pass encoding, you should try the DivX 4.x codec, which is the latest version of the DivX codec developed by the guys who "hacked" 3.11 Alpha (the DivX 4.x codec is not "hacked" - it is a 100% legal and written from scratch). The DivX 4.x codec also offers backward compatibility with all movies encoded with the 3.11 Alpha codec (although 100% compatibility/performance cannot be guaranteed). Note that both the 3.11 and 4.x codecs can be installed on the same system (and 3.11 encoded DivX movies will playback with the 3.11 Alpha codec, while 4.x encoded movies will playback with the 4.x codec), so you can get the best of both worlds.

In other words, for the movie you download off the net, use the 3.11 Alpha version. If you have never used the DivX Codec to encode movies before, also use the 3.11 Alpha version, since most instructions are still for this codec (updated 3 September 2001 : there are now full instructions for using the DivX 4.x codec as well here). However, if you have experience with the DivX codec, or general AVI encoding, you may want to try the DivX 4.x codec. If you are also concerned about the legal status of the 3.11 Alpha version, then you should use the DivX 4.x codec.

<http://www.dvdreaper.com/divx/history/index.php>

Jerome Rota a.k.a. Gej

DivX was derived from WMP code

The controversy over the wacky discs resulted in the Divx name emerging years later as the moniker for a home-brew compression technology that was initially called DivX ;). The winking emoticon mocked the previous product. The emoticon was later dropped.

DivX ;) was actually derived from some Windows Media Player code floating around in beta. Around 1999, French hacker Jerome Rota (also called Gej) found a codec embedded in the Microsoft product that was actually an MPEG-4-compatible process. He pulled it from the code, and it got passed around the underground as DivX ;).

Gej needed something to compress files so they could be transferred easily. Those in the underground saw it as a way to trade movies—and they did. Luckily for Hollywood, even movies compressed to the max were still 700MB or more. This is where the story gets interesting. Gej eventually got some decent funding and formed a company called DivXNetworks. Soon after, a clean-room version of the codec was developed, making any commercial version of DivX not bound by the myriad MPEG-4 patents. In the meantime, as DivXNetworks CEO Jordan Greenhall told me, "All the MPEG-4 software companies were going out of business, and we ended up being the last man standing."

<http://www.barrel-of-monkeys.com/graphics/prod/dvdplayers/divx/divx-reloaded.html>

Profile of Jerome Rota

For the high-tech community, he is *the French kid*, the guy making Hollywood sweat with an invention called DivX;-), an increasingly popular underground program known as "the MP3 for video." For Microsoft, he is the hacker who "stole" elements of their technology to create a method for people to illegally pirate movies over the Internet. In France, he's the media darling from the Mediterranean city of Montpellier, who had the nerve to take his ideas to Southern California this November and launch a company he brazenly called "Project Mayo."



But Gej, aka Jérôme Rota, describes himself simply as "a video lover." "The rest of the DivX;-) story is an accident," he says in a musical Southern French accent, from Project Mayo's offices in La Jolla.

A year ago, the tall, pony tailed 27-year-old with small glasses and a John Lennon demeanor, couldn't have imagined working in the fast-paced Internet bubble near San Diego, let alone having to crawl outside the office for smokes. DivX;-), he says, was an accident that happened in the summer of 1999.

Back in Montpellier Gej was working as a 3D graphic artist for firms such as Lancôme, and he wanted to archive his clips. "Not on a VHS tape, but on CD-Roms, for a more beautiful quality and a cleaner, durable result." Drawing on nearly 20 years experience programming and tinkering with computers (at age 8 he was already breaking his piggy bank to buy machines and parts), Gej put together a hybrid program based on Microsoft and MP3 technology.

The resulting "DivX;-)" (an ironic reference to the failed movie-disk format DivX) allows high-quality digital video files to be stored at 15% of the size they normally require. As soon as Gej posted the program on an Internet Relay Chat (IRC) network, video fans bombarded him with e-mails. Gej told himself, "I will build a website and post it there, and hopefully I won't be bothered anymore." The site received 40,000 visits the very first week. "It just exploded," he says.

Gej insists that "things often happen in life by total accident." His nickname, for instance, was invented randomly by a friend at school. His newfound career as co-founder of a "start-up building tools to enable broadband digital video," is another twist of fate. If it wasn't for an e-mail from Jordan Greenhall, who is now the CEO of Project Mayo, Gej wouldn't have even considered commercializing his revolutionary program, which is now being used by an estimated 2-3 million people worldwide.

"Creating a company? I didn't think of it really," he says, with the disarming smile of the true geek. "I would have no idea how to do it. I guess it would have been possible to team up with people in Europe, but with a longer incubation period. Here, in the U.S., it's amazing: in two months, the company was on track."

The name "Project Mayo" is another accident, the fruit of a wacky brainstorming session between the food-loving Gej and his colleagues: Mayonnaise, you see, at least the way French mothers prepare it (from scratch, with complicated ingredients blended just right), is either hit or miss. It's a question of technique, timing and luck.

"Gej is very flexible and very interested in experimentation," says Jordan Greenhall. "He has a good sense of humor, and it's great to work with him around."

And besides being fun, Gej's graphic experience and love of cinema gives Project Mayo a leg up over pure geek-powered companies "One of the reason we can succeed where other people can't is that we have Gej, who understands the film process and has a great intuition for that," adds Greenhall. "With him on board, the product doesn't only make sense from the side of developers, but also makes sense from the side of video, cinema which looks good. [He] Doesn't compromise on quality. He should be able to help filmmakers."

But Gej isn't necessarily in it to help out the major studios -- he's never liked big-budget movies and the sci-fi stuff his hacker friends adore (like *The Matrix*) makes him shrug. The movies that make his pulse accelerate are European classics like Jacques Demy's musical "The Umbrellas of Cherbourg," or the dark Belgian comedy: "Man Bites Dog."

"Hollywood and the blockbusters don't need the Internet," he says. Gej would rather see his program be used by independent filmmakers and wacky directors to get

around distribution chokepoints. "Like bands saying 'I exist' on MP3 sites, those people could easily put their films online and it would certainly help them to build an audience."

Regardless of what happens to his new company, Gej says he wants to stay true to his roots as a hacker, which in French is translated as *pirat*. "I don't like its pejorative tone," says Gej. "I'm a 'hacker,' in the sense that I free technology."

Right now Gej is working on freeing his revolutionary technology from the legal shadow of Microsoft, by creating a "DivX;-) Deux" totally unreliant on Bill Gates' source code. He hopes his next invention will be more egalitarian and broad in nature.

"DivX;-) contributed to a lot of illegal movie swapping on the Internet, and I know this was not the goal," he says. "This was just a step. Now I would like the next program to be useful to everybody."

<http://www.emmanuelrichard.com/Articles/ArticleScanBIS/Articlescan/divx.htm>

About DivX at DivXNetworks

The history of DivX, Inc. and the DivX phenomenon begins with the original release of the DivX® video compression technology, **developed** by Jérôme Rota (aka "Gej") in September 1999. Within hours of the time Gej first posted the codec on his personal website, the technology proved extremely popular and garnered tremendous grassroots support, quickly earning the moniker "the MP3 of video."

Questions and discussion

How did Windows Media Player source code float around 1999?

Why cannot Microsoft take legal action for stealing their MPEG-4 V3 code?