

CONFESSIONS

of a Windows Media Producer



Or, how to produce iPod video WITH WINDOWS TOOLS.

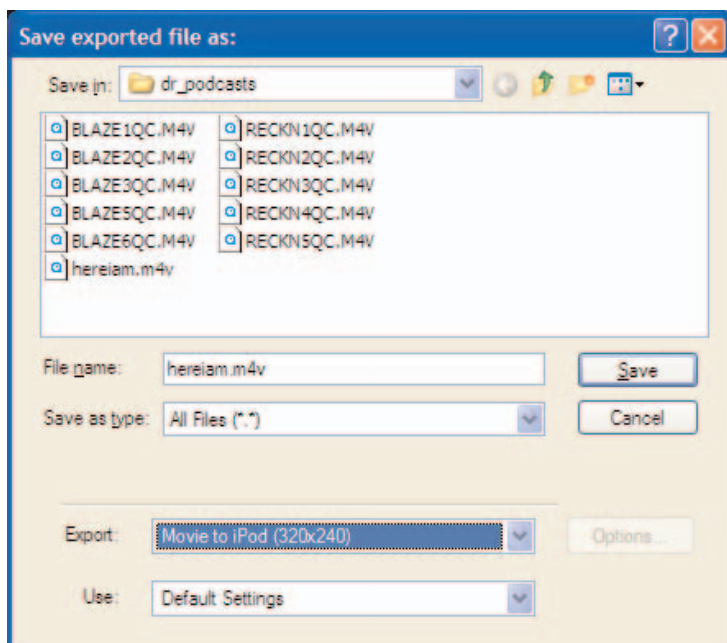
Hello, my name is Nels. I'm a Windows Media producer and software developer. I've been platform-specific for two years and three months (more or less). Recently my world was challenged and altered by Flash Video. Now it's being rocked again by Apple's video iPod, although it only plays QuickTime movies (as of this writing).

Why the brouhaha? Because mass acceptance of the video iPod could make digital media file types (Windows Media, QuickTime, Real, Flash, and so on) irrelevant to a large portion of my customer base. As a consequence, I'm now making movies specifically for iPod hardware—as opposed to for Flash, QuickTime, RealMedia, or Windows Media apps. As you'll see in the following sections, the production process is relatively straightforward. This article is useful to any digital media producer who just wants to see the slope of the learning curve.

BY NELS JOHNSON



CONFESSIONS of a Windows Media Producer



above:
Figure 1.
Exporting to
iPod format
with QuickTime
Pro. Boom,
you're finished.

If you doubt the formidable charm of the video iPod, go out and buy one, plug in the ear buds, and watch a well-produced music video or an episode of *Lost*. The device's extraordinary audio technology, not to mention the crisp display, will immerse you to the level of virtual reality and make you appreciate once again how much of what you see is what you hear. If you're unimpressed, return the unit to the store within 14 days for a 10 percent restocking fee and read no further.

If you're still with me, your next questions will be obvious. Which Windows software tools are best for creating iPod video clips? How do I submit my assets to podcasting services, iTunes, and DIY joints? Here's what's working for me as a professional Windows Media wrangler.

Creating iPod movies from existing media clips

An iPod video clip must be blessed with several key attributes if it's actually going to play on an iPod:

- a 320 x 240 video window,
- a video data rate of up to 768 Kbps,
- playback at 30 frames per second,
- a baseline profile up to level 1.3, and
- an AAC-LC audio track with a data rate up to 160 Kbps, 48 KHz, stereo.

These attributes apply specifically to iPod movies employing the new H.264 video codec, with a file

name extension of .m4v, .mp4, or .mov. The "Movie to iPod" export preset in QuickTime Player Pro (Figure 1) will automatically create these assets. If you create an iPod clip that uses the MPEG-4 video codec (without the benefit of "Movie to iPod"), you'll still need to lock in some parameters:

- a 480 x 480 video window (scaled for the iPod screen at render time),
- a video data rate up to 2.5 Mbps,
- a frame rate of 30 frames per second,
- MPEG-4 Simple Profile,
- an AAC-LC audio track with a data rate up to 160 Kbps, 48 KHz, stereo, and
- a file name extension of .m4v, .mp4, or .mov, assuming the proper file format.

Now let's consider the iPod production process on a Mac. It's pretty simple: Upgrade your QuickTime Player (make sure you have version 7.0.3 or later) to QuickTime 7 Pro and open the movie file you want to convert. Now export it via the "Movie to iPod" preset (Figure 1). The resulting file (with an .m4v file name extension) will sync to your iPod with iTunes. The complete tutorial is at www.apple.com/quicktime/tutorials/creatingvideo.html.

According to Apple, iTunes is the only way to get video clips onto an iPod (at least for now) on both Macs and PCs. Hacking may be difficult (IMHO) because it will require detailed knowledge of the iPod OS. In any case, QuickTime Player Pro can open and convert any Mac-based QuickTime movie.

However, products such as iFill (www.griffin-technology.com/products/ifill/) have circumvented iTunes to some extent. And cameras such as the Sanyo Xacti support MPEG-4 video. If you shoot in 320 x 240 mode, you can move clips from the camera to the iPod via USB with no transcoding necessary.

Windows conversion tools

Workflow on a Windows box is the same in principle, but there's one big difference: QuickTime 7 Pro for Windows (QTW) can't open some basic Windows media types. Among them are ASF and WMV (Figure 2). MPEG-1, a prior problem in QTW, works fine in v7.0.3. Sony Vegas and Adobe Premiere convert directly between QuickTime and Windows Media, but if your NLE of choice can't perform that file conversion, you'll need to create an interim AVI file that QTW Pro can load and convert to iPod format (just like the good old days, circa 1995).

The interim file creation can be managed with MovieMaker, an app comes with Windows XP, but it takes time and consumes significant disk space for longer movies. It also adds an extra layer of transcoding and scaling—the native codec and window size of finished QTW-friendly clips is DVAVI 720 x 480.

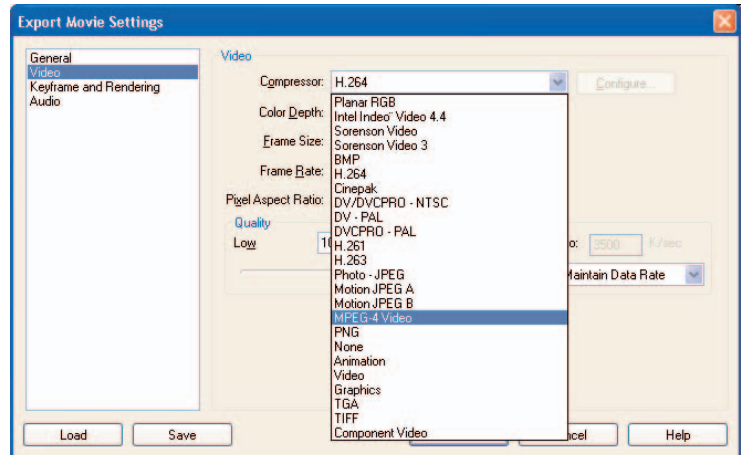
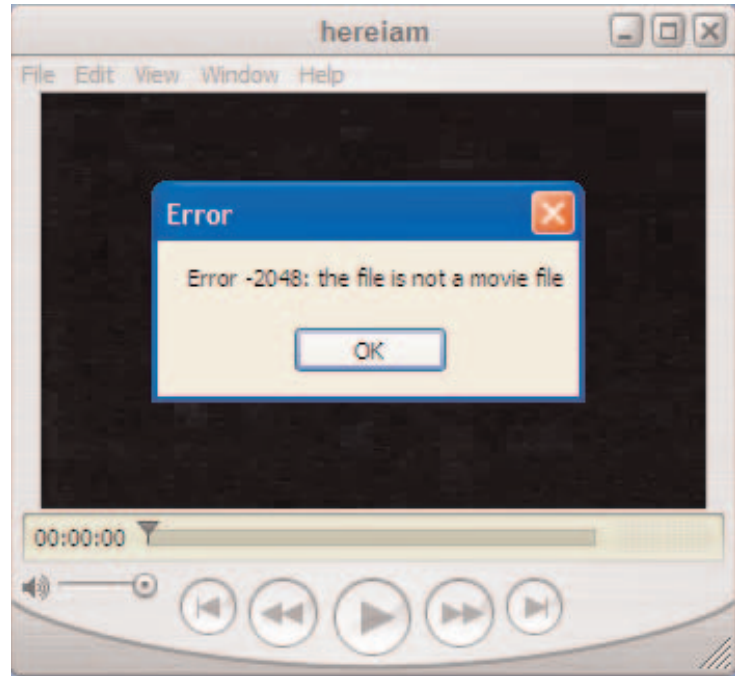
Such hurdles could easily drive you to Premiere or Vegas, but things aren't perfect with those apps, either. Premiere Pro 1.5 doesn't have iPod export preset available, but Apple says third-party developers are supplied with the APIs to enable the preset (**Figure 3**). If you transcode without an iPod export preset, remember to obey the attributes previously listed or your resulting clip may not sync to your iPod with iTunes.

I've found a cheap, simple, third-party app to go from WMV to M4V (if not to MP4). If you are comfortable using software from China, check out the shareware apps on www.imtoo.com. I've tested three of its products—MPEG Encoder, iPod Movie Converter, and DVD to iPod Suite—on a Windows XP machine with good results (**Figure 4**). In some cases, I needed to run the resulting QuickTime for Windows file through QTW Pro to ensure it had H.264 video encoding and would sync to the iPod via iTunes. This entailed extra time while the H.264 encoder worked its magic but spared having to create an interim AVI file.

Distributing your iPod movies

Distribution issues for iPod video are different from those for desktop media, but they're also significantly different for producers working on Windows. For the purposes of this article, I'll define a *podcast* as publishing files on the Internet via an RSS feed, so users get new files automatically by subscribing to the feed, which is different from putting iPod-friendly video clips on a Web site for download.

If you plan to submit your iPod video podcasts directly to iTunes, Apple provides a software development primer at <http://phobos.apple.com/static/iTunesRSS.html>. If you're not a major media company intent on selling your songs for \$.99 or your TV shows and short film subjects for \$1.99, you may get lost in the land rush—at least until things settle out. Other moguls such as Yahoo and AOL will certainly compete with Apple for fresh podcast media, but may also expect indies and unknowns to play for free.



Creating your own RSS feed

For Windows media producers who want to publish iPod-friendly video clips as DIY RSS feeds from your own Web sites (and do your own promotion), I offer the following recipe, which I'm already using on my home page at www.downecs.com. (Google provides links to many other useful recipes that may better suit your needs.)

1. Decide which page(s) of your site you'll offer your RSS feed(s) on. A feed is an XML file meant to be read by a dedicated feed-reader program—not a general purpose Web browser. On my Web server, I used a file named http://www.downecs.com/rss/podcast_feed.xml, of which you can view the structure and content by loading the link in your browser instead of your feed reader (**Figure 5**).

above:
(top) Figure 2. Trying to load a WMV or ASF file in QuickTime for Windows.
(bottom) Figure 3. Premiere Pro 1.5 doesn't allow you to export directly to iPod-format video.



USING IPODS TO DISTRIBUTE CORPORATE VIDEO TO EMPLOYEES

By Nate Caplin

The iPod may be the greatest consumer entertainment device ever. More important, it might be the technical fix to my employer's corporate video department's last-mile problem: distributing up-to-date safety, training, HR benefits, ethics, compliance, and other messages from management to distant employees—such as line mechanics, meter readers, and construction workers—who don't sit in front of PCs all day or lug around a laptop.

At American Electric Power (AEP), where I work in the video department, we've already built a robust Webcasting and streaming media operation to distribute hundreds of videos and dozens of live Webcasts annually to our 20,000 employees at over 400 locations in 11 states. But it only works well for office-bound employees. A new iPod, at about the price of a typical PDA,

can put our entire video library—organized into categorical playlists, all randomly accessible—into the hands of employees in the field and on the front lines.

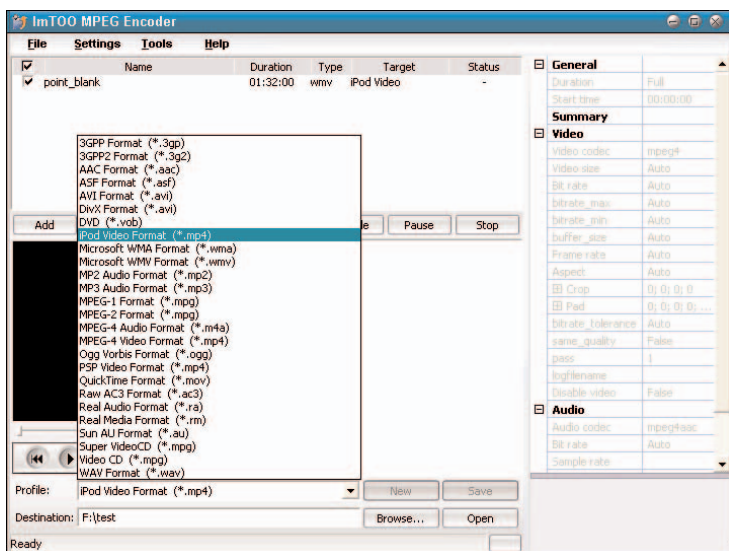
Video quality is surprisingly good on the built-in iPod screen, and is legible even for showing technical tasks. Portability is a given, so a worker could even whip one out of his pocket to review a repair or safety demonstration at the job site. And the iPod can be connected to existing TVs or projectors at our service center for playing videos to larger audiences. Even PowerPoint presentations can be adapted to play as JPEG photo album slide shows—at full XGA resolution.

What's most promising, though, is the prospect of video podcasting to synchronize managers' PCs and their employees' iPods from our central servers. Although we could equip employees with portable DVD

players, PDAs, or cell phones with video capabilities, none of those solutions would be as capable, as easy to use, or as cost-effective as the iPod.

So, as I write this, we are building a proof-of-concept around an iPod, iTunes, and RSS server. We hope it will be well-received by our operating companies and IT department, who would have to approve and support it. The only question that remains is, when we make our presentation, should we disguise the iPod, silk-screen a Cisco logo on it, and say it costs \$600? ■

Nate Caplin manages streaming media operations for American Electric Power's corporate Webcasting studio in Columbus, OH. He has been compressing video for 10 years for employers and clients such as Knight Ridder News Service and Abercrombie & Fitch.



above: Figure 4. The UI for imToo's MPEG Encoder—from WMV directly to iPod format.

2. Create a script that will generate your XML feed file from the contents of your media library database. You can write a static XML file by hand, but that defeats the purpose of periodic publishing based on new additions to your library. I used Macromedia ColdFusion as my scripting tool. A copy of my CFML script is available on DV.com.
3. Make sure your media library database contains useful, if not must-have data, and set up a trigger on your Web server to run your script frequently to generate a new WML file reflecting new video clips (for example) in your database to which your RSS subscribers will be alerted when they run or refresh their feed readers—assuming, of course, you have subscribers.

This approach is clearly a far cry from having your iPod-ready content accepted by and available to the public via a heavy hitter like iTunes. It does, however, qualify as a podcast. The problem: Unless you're already known to the public, who cares?

The better news is that you can create iPod movies almost as efficiently on Windows as on the


```

<?xml version="1.0" ?>
- <rss version="2.0">
- <channel>
  <title>Download Recordings RSS Feed</title>
  <link>http://www.downrecs.com</link>
  <description>Free Video Podcasts from Download Recordings, Inc.</description>
  <language>en-us</language>
  <copyright>Copyright 2005 Download Recordings, Inc.</copyright>
  <lastBuildDate>Sun, 20 Nov 2005 12:00:37 PST</lastBuildDate>
- <item>
  <title>Go to Blazes - Video Podcasts</title>
  <description>Recorded live at South by Southwest 1996</description>
  <author>njohnson@downrecs.com</author>
  <link>http://www.downrecs.com/blazes.html</link>
  <pubDate>2005-10-19 11:17:42</pubDate>
  </item>
- <item>
  <title>Dead Reckoning - Video Podcasts</title>
  <description>Recorded live at South by Southwest 1996</description>
  <author>njohnson@downrecs.com</author>
  <link>http://www.downrecs.com/deadreck.html</link>
  <pubDate>2005-10-19 11:17:42</pubDate>
  </item>
- <item>
  <title>Red to Violet - Video Podcast</title>
  <description>Atmospheric European rock</description>
  <author>njohnson@downrecs.com</author>
  <link>http://www.downrecs.com/redtoviolet.html</link>
  <pubDate>2005-10-19 11:17:42</pubDate>
  </item>
- <item>
  <title>Ali Kahn - Video Podcasts</title>
  <description>Recorded live at the Justice League, San Francisco, April 23, 2000</description>
  <author>njohnson@downrecs.com</author>
  <link>http://www.downrecs.com/alikahn.html</link>
  <pubDate>2005-10-19 11:17:42</pubDate>
  </item>
- <item>
  <title>Swedish Whistler - Video Podcast</title>
  <description>Swedish pop rock</description>
  <author>njohnson@downrecs.com</author>
  <link>http://www.downrecs.com/swedish_whistler.html</link>
  <pubDate>2005-10-19 11:17:42</pubDate>
  </item>
</channel>
</rss>

```

Mac—assuming you have and understand the right tools, which are basically free. You can easily move these movies to an iPod using iTunes for Windows and enjoy them without reservation—or worrying that your client base will defect to your podcasting-savvy competition. ■

Nels Johnson is president of Download Recordings, a Bay Area consulting and contract programming company specializing in desktop media. He's the author of *Windows Media 9 Series by Example* (CMP Books, 2003).

above:
Figure 5.
A simple XML file for an RSS feed reader, available on DV.com.