Advice from Middle Aged Female Tech
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Women's Computer Consulting
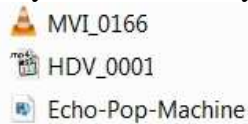http://hollyecho.com

I have been in the industry with my own company since 1994. The entire time I have worked in this field there have been very few times any two techs ever agree completely. The advice I give here is based on my experiences, testing, and what I know works.

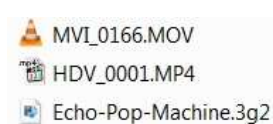Today's Subject: **Video Types and players**

I am often asked, "Why do some videos play right away, and other say I have to download something?"

Ok, there are lots of video file types, only the most common are listed in this article. Most people have their computer to hide extensions for known file types, this is a mistake in my book, but, many have done fine doing it this way. Let me give you an example:

In your video files you see:

MVI_0166
HDV_0001
Echo-Pop-Machine   With the file type extensions displayed you see this: MVI_0166.MOV
HDV_0001.MP4
Echo-Pop-Machine.3g2

As you can see with the extensions I can see what type of file it is, not just a video file, but what TYPE of video file. (.MOV is a QuickTime extension, and it came from a camera that stores it files in QuickTime format, used to me only apple could play these, but now you can download QuickTime to any PC. .MP4 is a video format that is very condensed and plays High Definition videos at a small space or download, most High Definition (HD) camera use the MP4 format. .3g2 format are used mainly by primarily still shot camera and cell phones that produce a lower quality video.)

To see your extensions:
1. Click on Start
2. Click on Control Panel
3. Click on Folder Options (with windows 7 and windows 8 type folder options in the search box)
4. Click on the tab that says "view" (middle tab)
5. UNCHECK the box in front of "Hide extensions for known file types"

Let's cover the basics of the terminology. **Codec** is an acronym for compressing\decompressing. This technology is used to execute an algorithm to compress or decompress video or audio. An example of this is playback of your PVR recordings on your HTPC; when the file plays back your PC is decompressing, or decoding, the MPEG-2 or H.264 video and MPEG-Audio or AC-3 audio contained in the file.

- **Decoding** usually refers to "playback" of a certain file.

- **Encoding** refers to taking a raw or uncompressed signal and converting to a compressed format (i.e recording a TV stream to MPEG-2)

- **Transcoding** refers to changing compressed audio and/or video formats (i.e. converting MPEG-2 to H.264)

Let's start out with some of the **formats used to encode audio & video** . I won't go into a lot of detail but the common ones will be covered. To playback these formats a decoder or transform component is required, when

using DirectShow this is called a filter.

- **MP3** - MPEG-1, Layer 3 audio compression became popular in the '90s due to sound quality in smaller file sizes.
- **FLAC** - Stands for "Free Lossless Audio Codec" which has gained a lot of popularity over the years as it can retain the files original quality while reducing the size significantly.

- **MPEG-2** - Standard video compression used in DVDs, some Blu-ray discs, broadcast TV, older digital

  video cameras, etc. Older analog tuners used MPEG-2 to encode video.

- **H.264** - (note x264 is merely a software H.264 encoder). H.264 is an emerging standard that is increasingly being used worldwide for video where MPEG-2 has been previously used.

- **VC-1** - Microsoft developed alternative to H.264. This codec was used by HD DVDs and some Blu-rays

- **XviD** /**DivX** - Based on the MPEG-4 Part 2 standard

- **WMV** - Microsoft developed video codec

- **WMA** - Microsoft developed audio codec
- **AAC** - Advanced Audio Coding has been in existence since the late '90s and can deliver better audio quality at a lower bitrate when compared to mp3. AAC was first defined in the MPEG-2 specification and further defined in the MPEG-4 specification with several levels of compression tools. Commonly used by Apple itunes store as a delivery format and increasingly used as an audio compression format in place of mp3.

Containers are used to store the various compressed formats listed above. When you come across a file it will be named something like *.mkv or *.avi or *.mpg. To playback these containers a source or splitter component is required.

- **AVI** –Short for Audio Video Interleave, one of the oldest containers developed to store media files on

  Windows

- **MKV** - Increasingly popular open source container maintained by the Matroska organization.

- **MOV** - Apple's container
- **ASF** - Microsoft developed container intended to provide better support for progressive downloads and HTTP streaming

- [WMV](#) - An ASF file storing content compressed using WMV/WMA

- [VOB](#) - Container used to store compressed audio and video on DVDs

- [MPG](#) - Container for MPEG-2 files optimized for storage as a file, also known as a MPEG-PS or program stream
- [TS](#) - MPEG-2 transport streams are the defacto standard for use in broadcast worldwide. Digital tuners commonly receive this format and either store it directly or demultiplex the stream contents for use in another container (ie, wtv).

- [DVR-MS](#) - ASF based container used by Media Center to house MPEG-2 files, metadata and DRM for Media Center recordings
- WTV - Container developed by Microsoft and introduced with the TV Pack update to Vista Media Center (Fiji) to replace DVR-MS. Can theoretically contain most codecs but is currently used to store MPEG-2 or H.264 video and MPEG-Audio, AC-3 or AAC audio.

- [M2TS](#) - Very similar to the TScontainer used by Blu-ray discs to house video and audio files MP4 - Standard container for MPEG-4 audio and video, also known as M4V
- MPA - Standard container for AAC audio files, also known as M4A or AAC

This gives the basics. This is my suggestion for the easiest way to play all the video files that come your way, without worrying what to open.

1. Download QuickTime   http://www.apple.com/quicktime/download/   DO NOT check keep me updated.
2. Download VLC Media Player http://www.videolan.org/vlc/download-windows.html (mac users there is VLC for you also http://www.videolan.org/vlc/download-macosx.html)

VLC will play .mov and all quicktime extensions once the QuickTime is installed, it will also play all the videos that Microsoft Media Player plays and those that Microsoft Media Play will not. All formats listed above VLC will play, and it is free. If you come to a site that asks you to pay, DON'T do it, there are always sites that spoof the real site and asks you to pay for what you can get for free! (use the links I gave above for the real sites)

I am always about saving money and not spending it on things you don't need to

Remember ANY questions, email me at: Montgomery@Hollyecho.com. If possible, I will include the answer to your questions in my next article.