

# Encoding Video Files for LiveNote™ Remote Video Sharing

LiveNote Remote Video Sharing allows you to access streaming videotaped recordings of depositions in West LiveNote and West Case Notebook via Livenote VideoSite™. LiveNote VideoSite requires video files to be encoded in the Microsoft® Windows Media® (WMV) format. Many different programs and encoders, such as Sorensen Squeeze, Digital Rapids Stream, and Rhozet, can create Windows Media files. Additionally, Microsoft's Windows Media Encoder can be downloaded at [www.microsoft.com/windows/windowsmedia/forpros/encoder/default.msp](http://www.microsoft.com/windows/windowsmedia/forpros/encoder/default.msp).

## VBR or CBR

Windows Media provides the option to encode in variable bit rates (VBR) or constant bit rates (CBR). The following descriptions can be found at [www.microsoft.com/windows/windowsmedia/howto/articles/codecs.aspx](http://www.microsoft.com/windows/windowsmedia/howto/articles/codecs.aspx).

VBR encoding is designed for use when you want to create a downloadable file that has a smaller file size and bit rate without sacrificing sound and video quality. With VBR encoding, you can often achieve optimal quality with a lower average bit rate and file size. While some portions of a track may contain a lot of data and will be harder to compress, other portions contain relatively little data and require fewer bits. Quality is optimized by detecting which sections are most difficult to encode and allocating more bits where they are needed most. For low-bit rate streaming and devices such as CD and DVD players, a peak-constrained mode can be used so that the bit rate of the more complex content does not exceed the capacity of the delivery method. In some cases, you can end up with a VBR-encoded file that has the same quality as a CBR-encoded file, but with only half the file size of the CBR-encoded file.

CBR encoding is designed to work most effectively in a streaming scenario where the end user's bandwidth is a consideration. With CBR encoding, the bit rate of the file or stream remains fairly constant and close to the target bit rate over the course of the stream. The disadvantage of CBR encoding is that the quality of the encoded content is not constant. Because some pieces of content can be more difficult to compress than others, parts of a CBR stream can be of lower quality than others. In addition, CBR encoding results in inconsistent quality from one stream to the next, and quality variations are more pronounced at lower bit rates.

## Multiple Bit Rates

Whether variable or constant, the bit rate determines how much data is used to render the audio and video. The Windows Media format allows a single file to have more than one bit rate. For the best performance, it is recommended that you create video files with multiple bit rates (CBR) encoding. Creating WMV files with three different bit rates will allow the video to stream at the appropriate connection speed for each user. Different bit rates vary as follows:

- **high bit rate (above 192 Kbps):** best video quality, largest file size, highest bandwidth usage
- **medium bit rate (128 Kbps–192 Kbps):** good quality video, medium file size, lower bandwidth usage
- **low bit rate (below 128 Kbps):** low quality video, small file size, lowest bandwidth usage

LiveNote VideoSite is specifically configured to support multiple bit rates. If desired, you can select more than three bit rates. The larger bit rate you select results in a larger file with higher quality video.

## Best Practices

The best settings and bit rates will depend on your needs and network infrastructure. It is recommended that you create several test files at different bit rates to find the optimal encoding settings for your network. Proper testing will ensure the content is available with the highest quality for your organization.

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