

Quick Compress

Indeo video interactive's normal offline encoding can be time-consuming. The Quick Compress option allows Indeo video interactive [to encode](#) video many times faster than it otherwise would. Exactly how much faster depends on the specific content of the source video and the other encoder options you've selected. However, this option uses a subset of the offline encoder's compression techniques, speeding compression but reducing overall visual quality somewhat. Data rate control may also be somewhat less accurate.

If you choose Quick Compress, then several other options are automatically disabled: [bidirectional prediction](#), [transparency](#), [quality](#), and [minimum viewport size](#) (local decode).

Use Quick Compress to test, prototype, or preview the appearance of your video after encoding with Indeo video interactive. It is also suitable for hard disk applications in which data rate control is less critical. However, after you've previewed the video and made any required adjustments, we recommend using the off-line encoder for your final product. For the best quality at lower data rates, or to achieve a steady data rate without spikes, do not use the Quick Compressor.

The Indeo video interactive codec can play any video clip compressed with the Quick Compressor.

To enable quick compression, check the Quick Compress box in the Encoder Controls area.

Scalability

When scalability is enabled, Indeo video interactive compresses video in a manner that allows playback visual quality to vary automatically, based on the playback system's available processing power. If processing power is inadequate, the codec degrades visual quality incrementally rather than dropping frames. This avoids jerky video playback.

To enable scalability, check the Scalability box in the Encoder Controls area.

Bidirectional Prediction

Video compression has traditionally used some form of [interframe compression](#); the codec compares video frames and stores only the difference between frames. This has usually used backward prediction: the contents of some frames are predicted based on the content of previous frames.

Indeo video interactive uses such interframe encoding techniques, but it can also make use of a more sophisticated interframe encoding technique called bidirectional prediction: the contents of some frames are predicted based on both previous and future frames. Bidirectional prediction helps avoid large spikes in data rate caused by scene changes or fast movement, significantly improving image quality, particularly in video sequences involving high motion.

Bidirectional prediction adds a certain amount of playback overhead: when the current frame has been encoded based on both past and future frames, it is necessary to first [decode](#) a future frame in order to decode and display the current frame. The Indeo video interactive codec therefore decodes frames in a different order from that in which they are actually displayed. Such out-of-order decode imposes a certain amount of overhead; for a clip without much movement, such as a talking head, the feature may not improve image quality enough to make it worth the overhead.

To enable bidirectional prediction, check the Bidirectional Prediction box in the Encoder Controls area. This option is disabled when using [quick compression](#).

Transparency

The Indeo video interactive codec supports a form of transparency analogous to chroma-keying or blue-screening, allowing you to composite foreground objects over backgrounds from a source other than the same video clip. This transparency encoding is flexible, allowing for multiple foreground objects of complex shapes. Foreground objects can also move from frame to frame, allowing you to create what one might call video sprites.

The encoder box offers three choices for handling transparency: first-frame analysis, alpha channel, or none.

First-frame analysis:

The first frame of the video is analyzed to determine the color or range of colors that represent the transparent background, such as the blue screen. If you choose this method, the first frame of your video must be a carefully lit shot of nothing but the background that you intend to become transparent.

Alpha channel:

The codec interprets the upper eight bits of the source video's 32-bit RGB color space as an 8-bit alpha channel describing the transparency or translucency of each pixel in the frame. Indeo video interactive uses the alpha channel to generate a 1-bit transparency bitmask for each frame: a pixel is either transparent or not. Translucency is not supported.

None disables transparency.

If either method of transparency is enabled, Indeo video interactive analyzes each frame, separates the background pixels from the foreground pixels, and encodes only the foreground objects.

This option is disabled when using [quick compression](#).

Quality

Indeo video interactive offers you the ability to allocate the amount of system resource required for video playback, trading off image quality against system resources. The Quality pull-down menu offers three categories:

Good Image quality is good and video plays smoothly using the least processing power.

Better Image quality is better and video requires somewhat more processing power to play smoothly.

Best Image quality is best and video requires the most processing power to play smoothly.

Select the appropriate choice from the pull-down menu. This option is disabled when using [quick compression](#).

Access Key

If you are concerned about the illegal distribution of your copyrighted material, use Indeo video interactive's access key feature to prevent misuse of your video clips. Access keys are numeric passwords that you insert into a video clip during compression. A clip encoded with an access key can be played only by an application that has the key. Media Player, for example, cannot play clips encoded with an access key because it cannot supply an access key to Indeo video interactive.

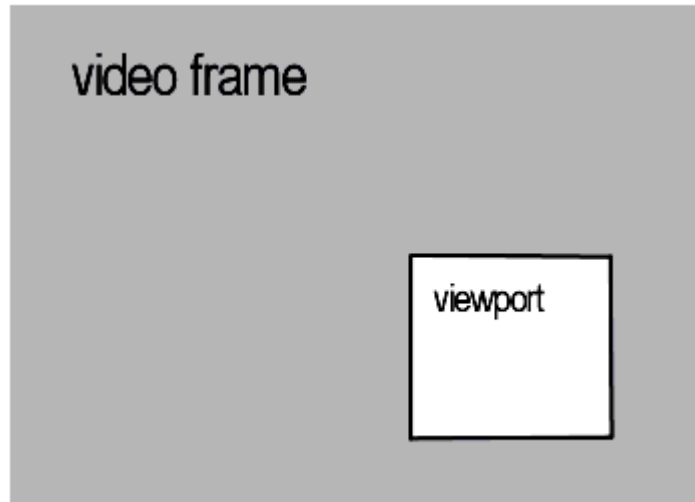
To use this feature:

1. Check the Enable box in the Access Key field. The compression application displays the Value field.
2. Enter a number between 0 and 4,294,967,295 in the Value field. (Do not type commas.)

This value becomes the access key that an application must supply in order to play the video clip.

Minimum Viewport Size

Sometimes an application needs to display only part of a video image. In such a case, it's efficient to avoid wasting system resources decoding the part of the source image that does not need to be displayed. Indeo video interactive provides this capability with local decode. The playback application can tell Indeo video interactive to decode only a rectangular subregion of



the source video image: the viewport.

If you plan to make use of this feature, you must specify the minimum possible size of the local decode viewport during compression. Then the display size of the viewport can be enlarged dynamically during playback. Its location can be changed dynamically during playback as well.

To enable the local decode feature during video playback, specify the minimum viewport size by entering the width and height in [pixels](#) in the Width and Height fields in the Minimum Viewport Size area.

To disable local decode for a given video clip, enter 0 in both of these fields.

This option is disabled when using [quick compression](#).

Load Defaults

By default, Indeo video interactive saves encoder options between uses. If you would like to reset the option to the default options, press the Load Default button.

The defaults are:

Quick compression off.

Scalability off.

Bidirectional prediction off.

Transparency set to None.

Quality set to Best.

Access key disabled.

No minimum viewport size (width and height both set to zero).

Other Tips

Audio Interleave

If too many frames are being dropped, or if the audio seems poorly synchronized with the video, ensure that the [audio interleave](#) is set to one frame.

CD-ROM Padding

If too many frames are being dropped, or playback quality is poor, ensure that CD-ROM padding is disabled (unchecked). CD-ROM padding was recommended for previous versions of Indeo video, but do not use it for this version. The [CD-ROM](#) padding option enhances playback on single-speed (1X) CD-ROM drives, but it can degrade quality for video files playing back on faster CD-ROM drives or from a hard drive.

If a video file has already been compressed with CD-ROM padding, you must recompress it with the option unchecked. Simply using an editor to remove the padding without recompression will not fix the problem.

Customer Support

Technical support on Intel Architecture Lab (IAL) technologies can be obtained through the following:

	USA or Canada	International
Phone support	800-628-8686 (1-3-1)	916-356-3551
Fax support	916-356-6100	916-356-6100
BBS	916-356-3600 (Folsom, CA) 8N1	(44) 793-496340 (Swindon, UK) 8N1
FaxBack (documentation)	800-628-2283	916-356-3105 (44) 793-496646 (Swindon, UK)
	Request document 9200 for the IAL Technology Product Guide.	
	Request document 9 for a complete catalog of available documents.	
Electronic mail	Developer_support@Intel.com	
Internet	ftp.intel.com/pub/IAL/multimedia. View or copy the file LIBDIR.TXT.	
World Wide Web	http://www.intel.com	

About Help

Use Help to quickly find the information you want about the Indeo video interactive codec.

To use Help:

- Use the scroll bars or the page down key to see more text in a topic.

- Choose underlined text like [this](#) or [this](#) to get more information.

- Use the buttons at the top of the Help window to go to other help topics.

- Choose the Exit button to exit Help.

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Indeo ® video interactive Copyright 1996 by Intel Corporation.

Related Topic

These windows open to display information about related topics.

popup definition

These windows pop up to define terms that may be unfamiliar to you. Click to dismiss them.

to encode

The process of converting the video color space from RGB to YVU and then compressing the video.

interframe compressing

A form of compression in which the codec compresses data in one frame relative to the data in others, creating delta frames.

to decode

The process of decompressing video and then converting the color space from YVU to RGB.

pixel

Picture element, the smallest independently accessible unit of a digital image: a dot.

audio interleave

The granularity with which the audio data alternates with the image data in a video file.

CD-ROM

Compact Disc Read-Only Memory: a compact disc used for computer data and applications that cannot be modified. It can be accessed with a CD-ROM drive on a computer.

interframe compressing

A form of compression in which the codec compresses the data in one frame relative to the data in other frames, creating delta frames. Compression in which the data in one frame is compressed only relative to itself is called intraframe compression, creating key frames.

