

# iSCC User's Guide

## I. Overview of iSCC

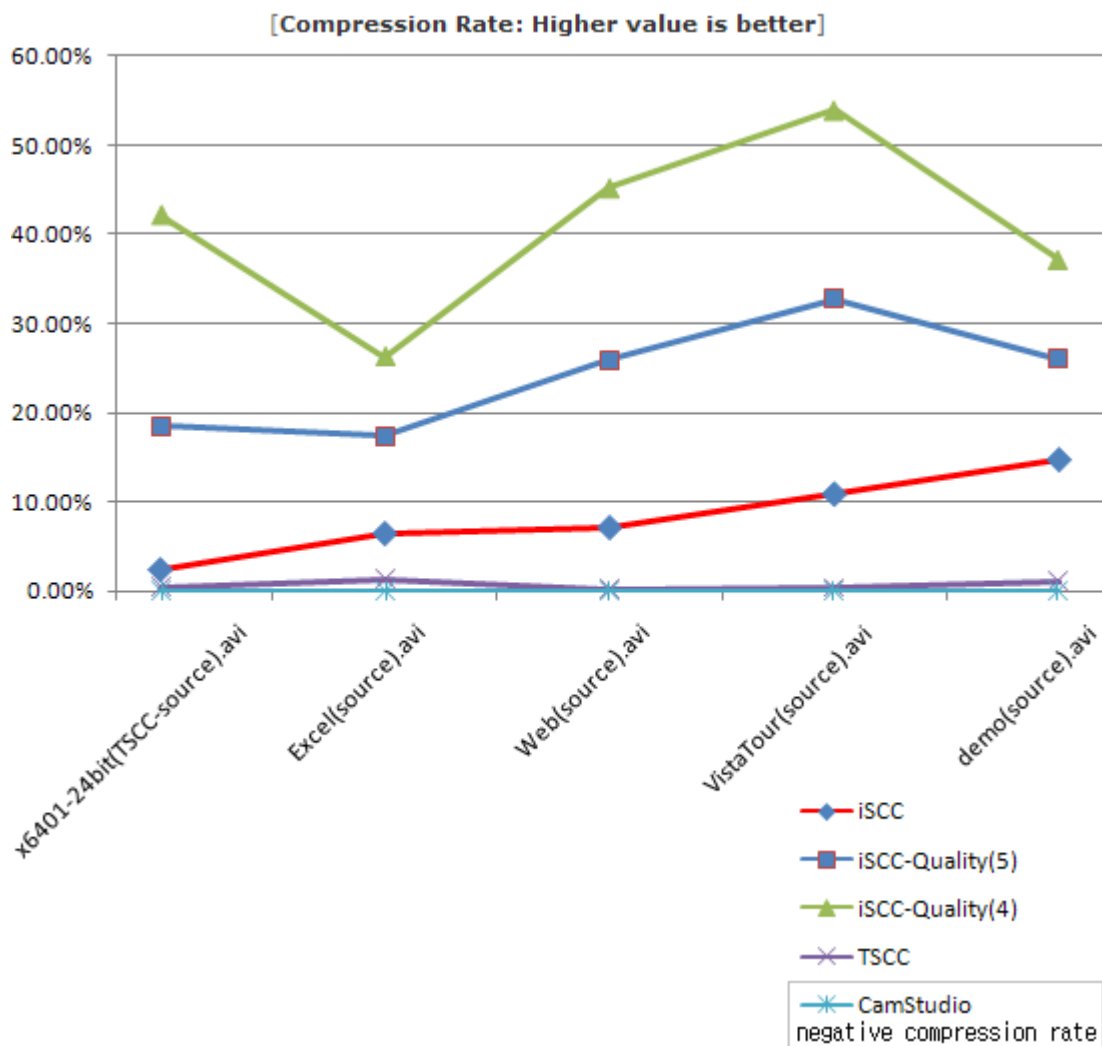
### What is iSCC?

inno Screen Capture Codec(iSCC) is the most optimized codec for screen recording. This codec offers you a higher compression and faster speed compared to any other codecs even the most popular one, TechSmith Screen Capture Codec(TSCC).

iSCC can be used not only with liteCam and CamVercé but also with screen recording software(AVI file type) from other companies such as Camtasia Studio, CamStudio, HyperCam and etc.

### Compression rate comparison

We have compared the compression rate with number of other popular codecs. These graphs are not displaying all the files used in this test and it shows 0% for negative compression rate (bigger file size than the original file).



## Features

- Supports both lossless compression for screen recording and lossy compression for maximum compression
- Faster compression speed for real time recording
- Provides Video for Windows codec and DirectShow Filter based codec
- iSCC Encode Filter: DirectShow Codec(Encoder)
- inno Screen Capture Codec: Video for Windows Codec(Encoder/Decoder)
- Complete x64(AMD64/EM64T) 64bit operating systems support
- Now supports RGB16, RGB24 and RGB32

## System Requirements

- 64 bit OS support. Finally, a reliable codec that works on 64 bit OS.
- iSCC 32bit edition : Windows 2000, XP, or Vista
- iSCC 64bit edition : Windows XP, or Vista x64 Edition
- Minimum system requirements to run Windows Media Player

## Note

iSCC is not a recording/converting software, only the codec will be provided. There is no decoding limitation for the evaluation version, but "Produced by iSCC" will be displayed on the upper right hand side while encoding using the evaluation version.

Licensing and purchasing information

- You can use iSCC on any open source software and freeware. If you would like to use iSCC on any open source software and freeware, please email us your website and brief description about your software at [iscc@innoheim.com](mailto:iscc@innoheim.com). We will honor you with free license after reviewing your email. Please note that you must purchase iSCC for commercial use.
- Please send us an e-mail at [iscc@innoheim.com](mailto:iscc@innoheim.com) for licensing and purchasing information.

## II. Main Features of iSCC

### Features for screen capture codec

Computer screen capture codec not only records the computer screen but is also used for editing the recorded videos as well as for distributing the edited videos. These are the must-have features that screen capture codec's should have:


- **Recording:** This task takes a lot of system resources, so less system resource/memory usage and faster encoding speed is better.
- **Editing:** faster decoding/seek speed is better to move between frames quickly.
- **Distributing/Exporting:** Smaller file size is better. However, you may experience destroying or smudging the text if you are using a lossy codec. Codecs with less text smudging are better if you are using a lossy codec.

### iSCC Features


1. iSCC performs the most optimized tasks through various configuration settings.
  - You can set for faster encoding when you're recording. This will minimize the system load.
  - You can minimize the file size by changing the Quality settings when you're exporting.
2. Fully Supports 64-bit environment.
  - iSCC is one of very few codecs that support 64 bit operating systems which will be widely used when Windows 7 comes available.
3. Supports Video for Windows and DirectShow Filter based codecs.
  - iSCC enhances the compatibility between multimedia applications by supporting both Video for Windows and DirectShow Filter based codecs where most codecs support Video for Windows environments only.
  - Generally, Video for Windows based codecs cannot be used in any DirectShow applications on 64-bit OS. iSCC provides DirectShow Filter based codec for 100% compatibility.

### Lossless and Lossy Compression features only on iSCC

lossless compression used in iSCC means no change in screen quality from the original video. The following pictures show you the screenshot taken from a video encoded with one of the most popular lossy codecs, Microsoft MPEG-4 Video Codec V3, WMV, Xvid and iSCC. You can see that the video encoded with iSCC didn't lose any quality.

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[iSCC: Quality 6, Lossless compression]

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[Microsoft MPEG-4 Video Codec V3: 345kbps, Lossy compression]

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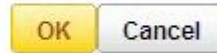


[Windows Media Video 9: 529kbps, Lossy compression]

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[Xvid MPEG4 video codec: 767kbps, Lossy compression]

If you use a lossy codec for screen capture, it causes text smudging. You can change the Quality settings in iSCC which lowers the screen quality without smudging text. You can see different quality settings applied from the pictures below.

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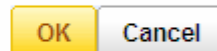


[iSCC: Quality 6, Lossless compression]

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[iSCC: Quality 5, Lossy compression]

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[iSCC: Quality 4, Lossy compression]

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[iSCC: Quality 3, Lossy compression]

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Barack Obama speaks after winning the Iowa  
 Caucuses Thursday January 3, 2008.

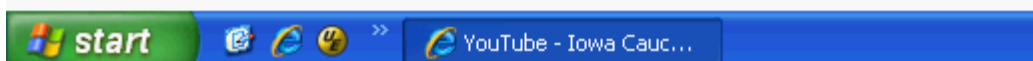
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[iSCC: Quality 2, Lossy compression]



[iSCC: Quality 1, Lossy compression]



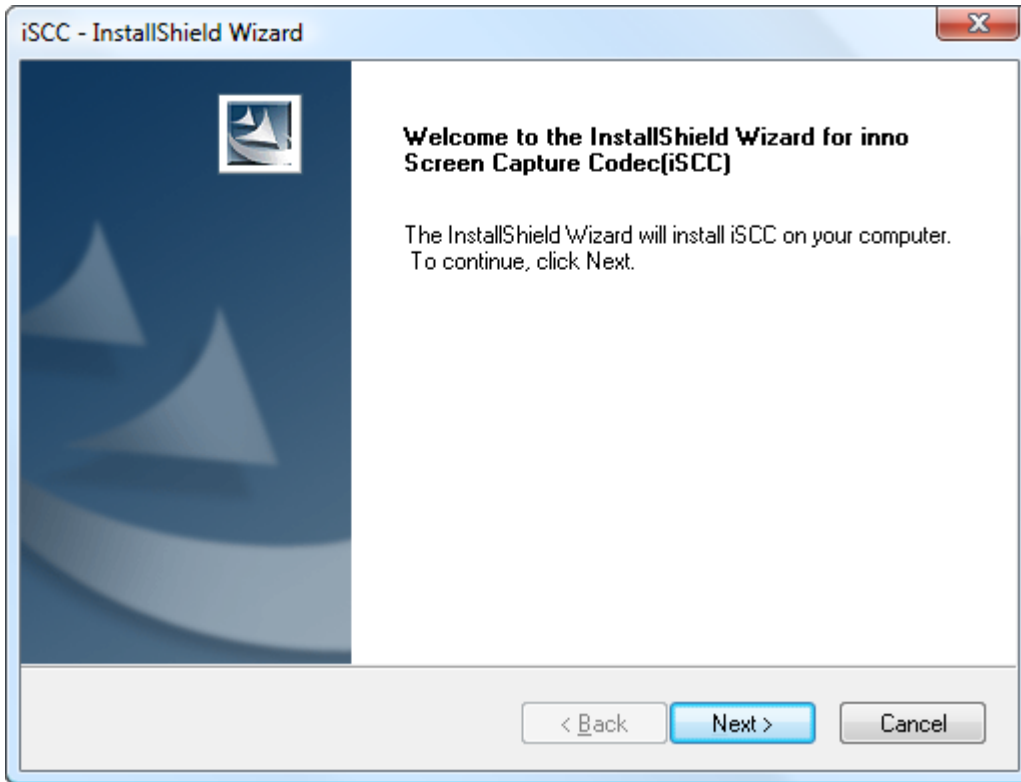
[iSCC: Quality 0, Lossy compression]

As you can see from the pictures, iSCC encodes and leaves text recognizable. This Quality settings can significantly reduce the quality of the video, so check the encoded video to make sure it's viewable. We don't recommend going more than 2-3 steps below High.

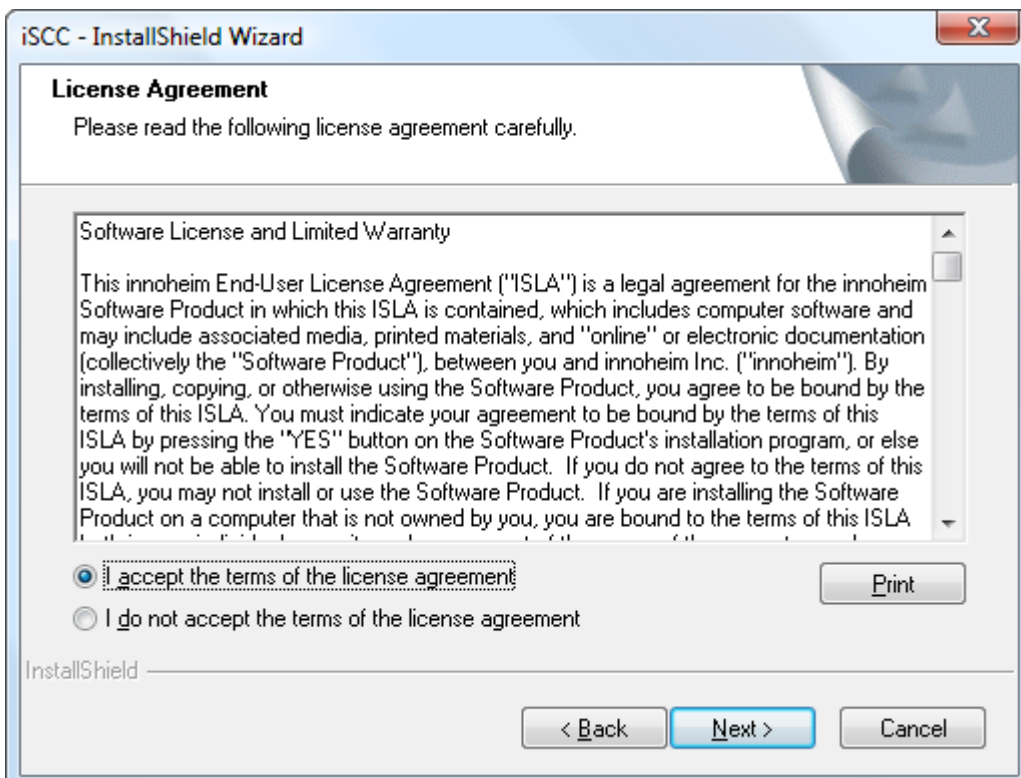
### III. Installation of iSCC

Double click the iSCC installation file and you will see the iSCC installation screen.

Click the **Next** button to continue



The next screen will display the Software License Agreement. Read it through and select **I accept the terms of the license agreement** and click the **Next** button to continue the installation.



You can enter your Name, Company Name and Serial Number in the next screen. If you are installing an evaluation copy, leave the Serial Number field as "**Evaluation**" (keep in mind that "**Produced by iSCC**" , will be displayed when using the evaluation version. )

**iSCC - InstallShield Wizard**

**Customer Information**  
Please enter your information.

Please enter your name, the name of the company for which you work and the product serial number.

User Name:  
test

Company Name:  
innoheim

Serial Number:  
Evaluation

InstallShield

< Back   Next >   Cancel

If you have purchased a registered copy and enter the **serial number** and click the **Next** button.

**iSCC - InstallShield Wizard**

**Customer Information**  
Please enter your information.

Please enter your name, the name of the company for which you work and the product serial number.

User Name:  
test

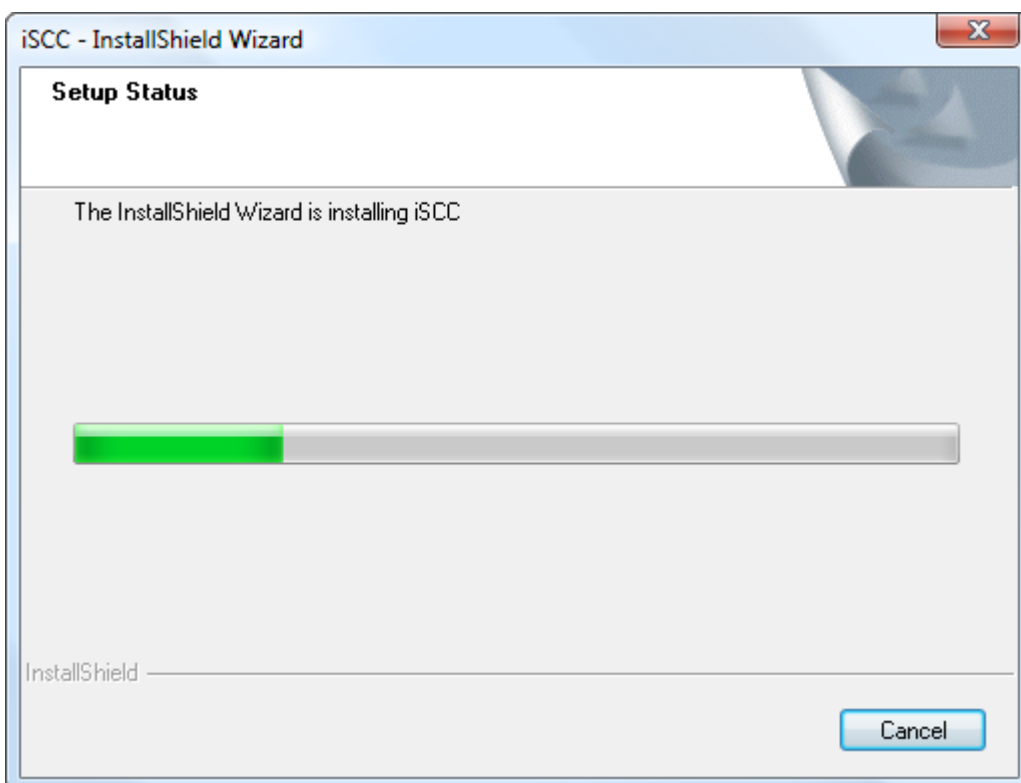
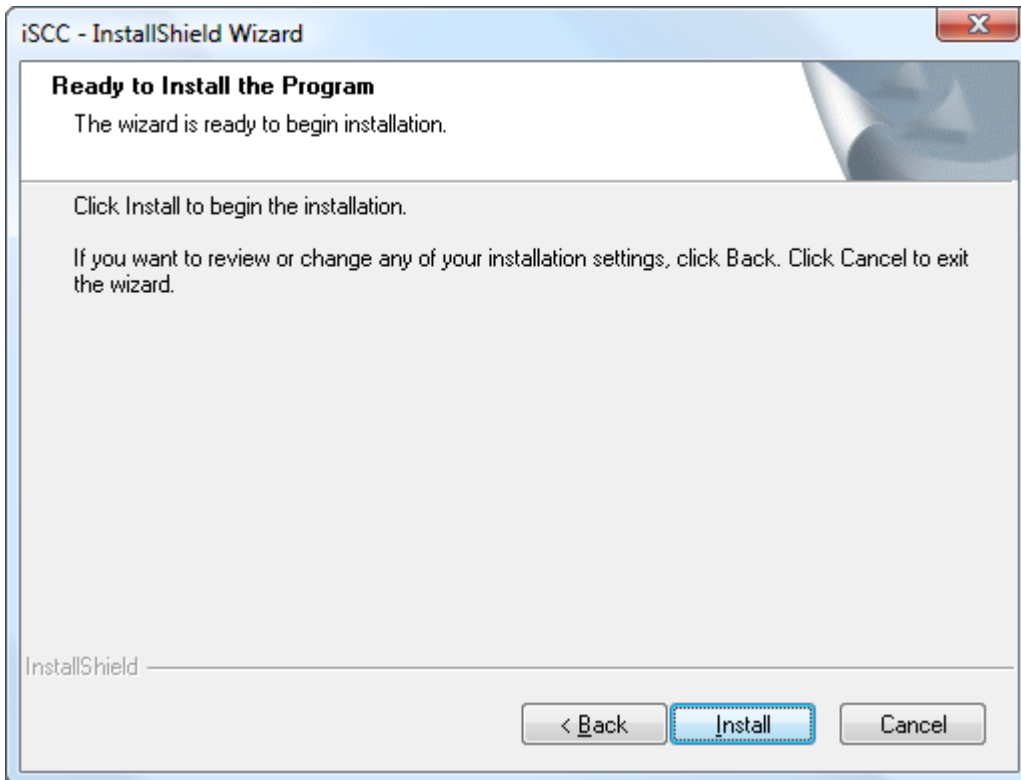
Company Name:  
innoheim

Serial Number:  
B - - - - Q

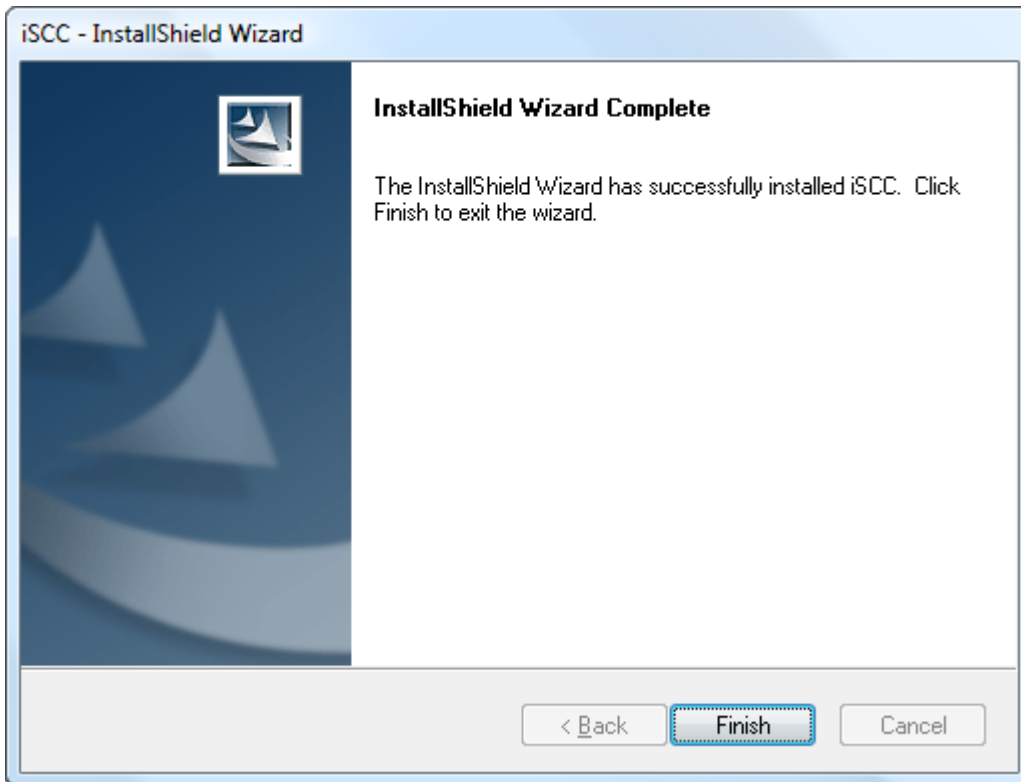
InstallShield

< Back   Next >   Cancel

Click the **Install** button to install iSCC.



Click the **Finish** button.



You will see a folder named **innoheim > iSCC** from the Start menu after it's successfully installed.

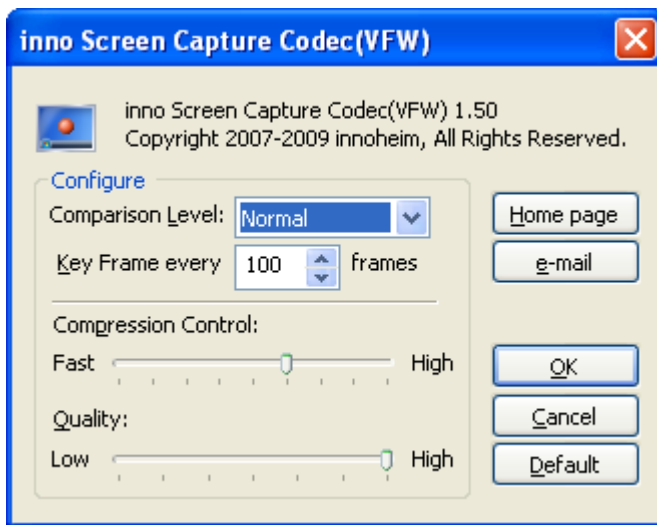
After iSCC is successfully installed, you will be able to play AVI files encoded with iSCC.

## IV. Instruction

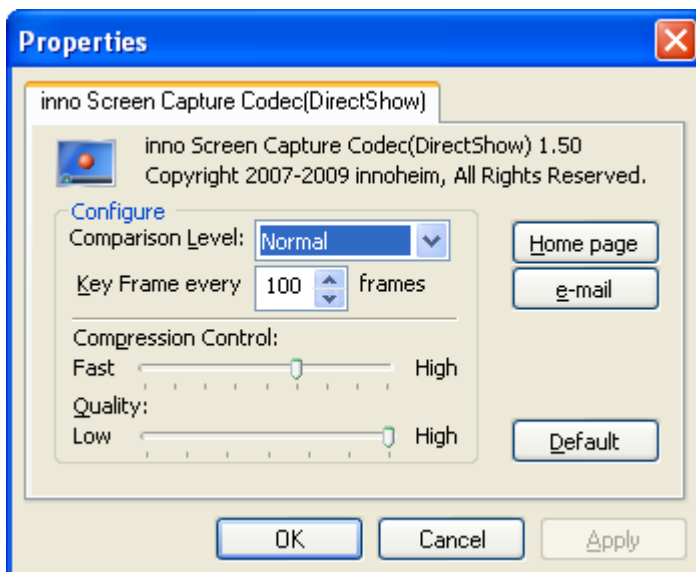
There are two components in iSCC; Video for Windows(VFW) based **inno Screen Capture Codec** and DirectShow Filter based **iSCC Encode Filter**. You can use **inno Screen Capture Codec** most of the time, and select **iSCC Encode Filter** on DirectShow Filter based programs if **inno Screen Capture Codec** is not supported.

Default settings will work on most cases. However, you may change the settings if you wish.

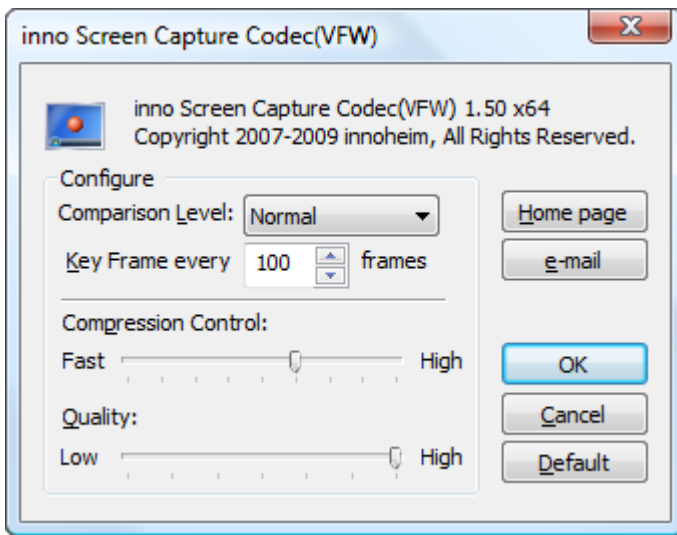
The following picture shows you the dialog box where you can configure custom settings.



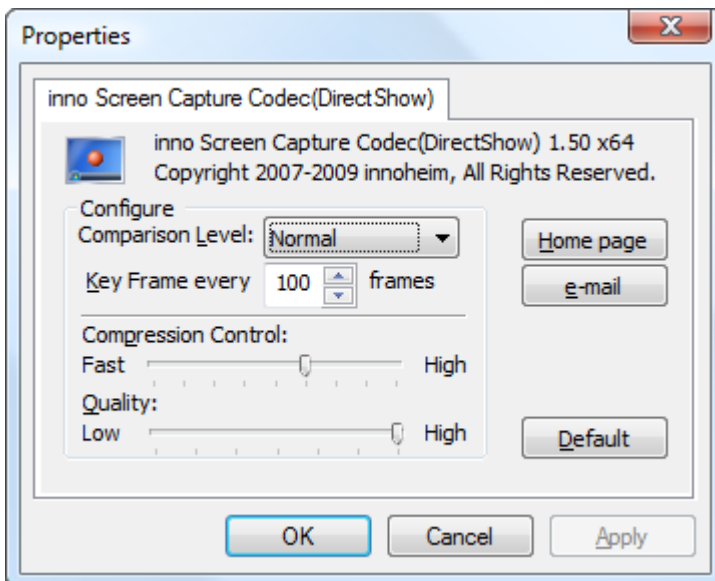
[inno Screen Capture Codec – 32-bit edition]



[iSCC Encode Filter – 32-bit edition]



[inno Screen Capture Codec – 64-bit edition]



[iSCC Encode Filter – 64-bit edition]

Basic settings for DirectShow and VFW are identical. You can change settings for **Comparison Level**, **Key Frame**, **Compression Control** and **Quality**. You can always click the **Default** button to reset to the default settings.

- **Comparison Level**: Steps for comparing between frames. More frame comparison will be performed if you set it **High**. Generally, you get higher compression rate if you set it **High**.

- **Key Frame every \*\*\* frames**: Setting intervals between key frames. If you set the interval value smaller, you get a faster seek speed but the file size will get bigger. You can enter between **0-1000**, and only the first frame will be set as key frame if you set it to **0**.

- **Compression Control**: **Fast** means faster compression speed and lower compression rate. **High** means slow compression speed and higher compression rate.

- **Quality**: The default value is **High** and it's lossless compression. If you change it to **Low**, your system may slow down so it's not recommended for real time recording. You can change the Quality value a step at a time to determine the appropriate value for your recording.

You will be able to reduce the file size if you set **Comparison Level** to **High**, **Key Frame** to **300** and **Compression Control** to **High** when you are doing the final conversion after the editing. It is recommended to set **Quality** to **High**, but you can reduce the file size by reducing the **Quality** value.

As mentioned earlier, change the **Quality** settings only for file conversion. However, change the **Quality** setting **one** or **two** step lower if your best interest is in minimizing file size. If you set it even lower, the video quality will be significantly reduced. Please note that it takes 20-30% longer encoding time if you change the **Quality** settings from **High**.

If your system has faster than dual core CPU and good video, audio card, you may be able to reduce the **Quality** settings **1-2 level** lower and apply it to real time recording. Please test record first when you change the settings.

## V. Application of iSCC

iSCC can be applied to various types of programs that use AVI files. Especially, iSCC will be very useful if you apply to computer screen recording programs and video editing programs.

We will go through the procedures for applying iSCC to major screen recording programs like liteCam 3 & CamStudio and a video editing program, VirtualDub.

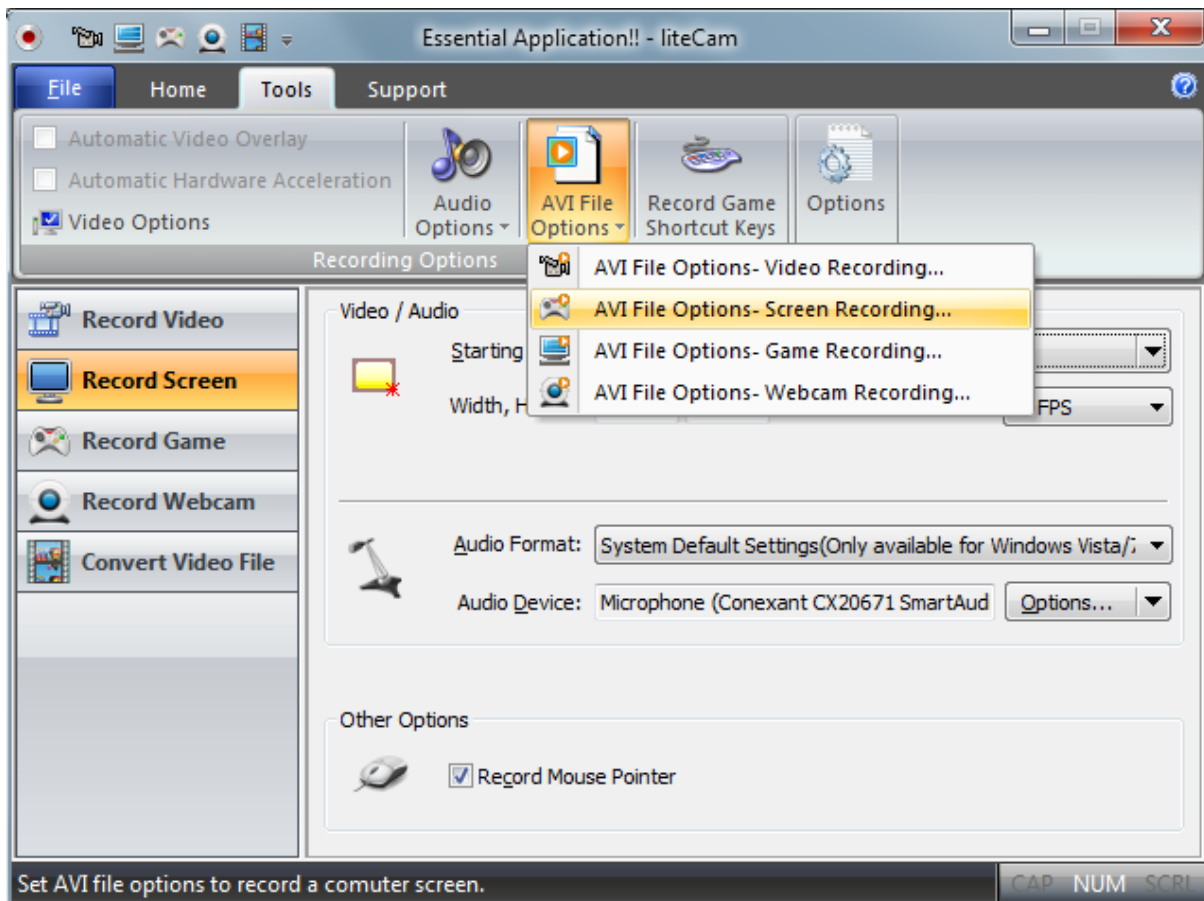
You need to install an evaluation or registered version to apply iSCC to screen recording or video editing programs. If you use the evaluation version of iSCC, there will be no restriction on decoding and a message box will indicate the evaluation version is being used while encoding. The iSCC logo will be included in the AVI files created using the evaluation version of iSCC.

### 1. liteCam 3

<http://www.innoheim.com/>

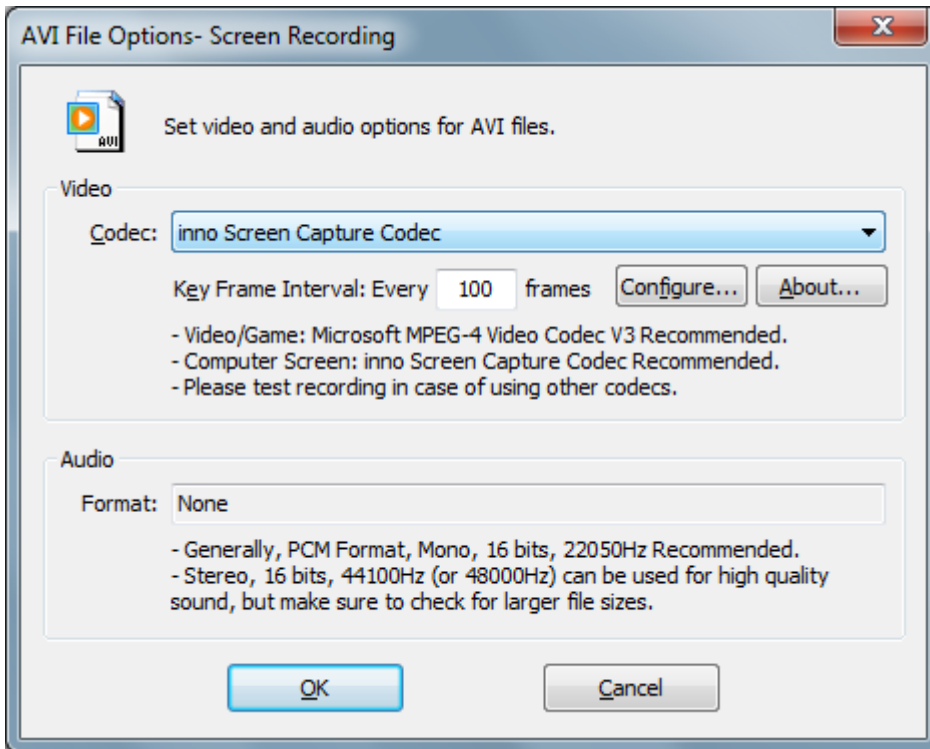
liteCam 3 is a screen recording application developed by innoheim. Among the recording features of liteCam 3, 「Record Screen」 uses iSCC as a default setting. If you are using another codec and want to switch to iSCC, please follow the procedures shown below.

Click 「Tools」 tab → 「AVI File Options」 → 「AVI File Options – Screen Recording」 to change the codec when you record screen as shown below.



You will be prompted with 「AVI File Options – Screen Recording」 dialog box.

Select 「Inno Screen Capture Codec」 from the combo box to use iSCC for recording process.



Click 「Configure」 button to change options for iSCC.

Now, you can apply iSCC to record and create an AVI file using liteCam 3.

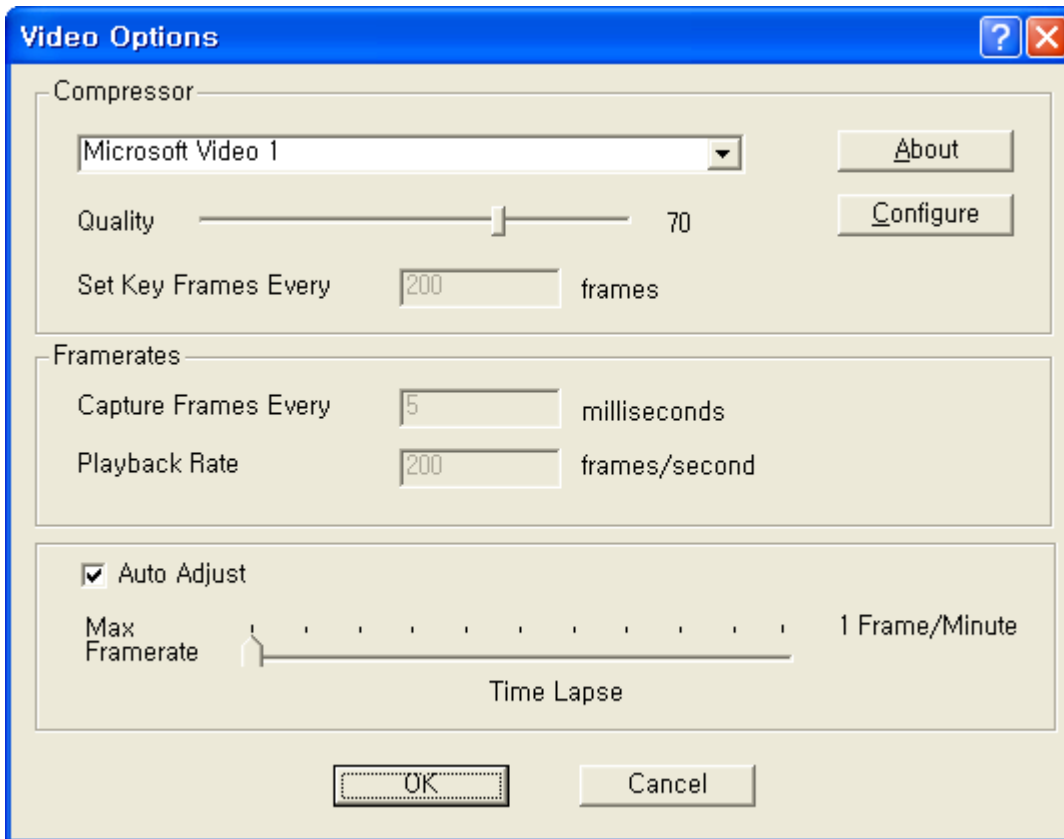
## 2. CamStudio 2.0

<http://camstudio.org/>

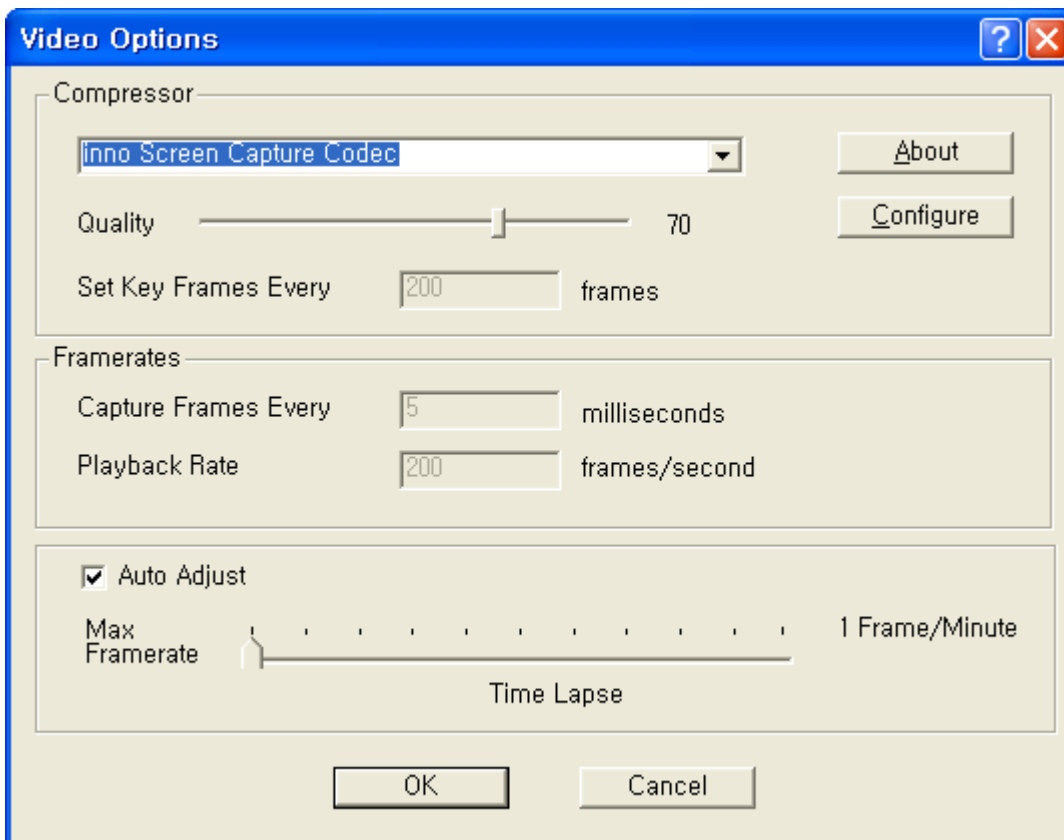
CamStudio 2.0 is a frequently used recording application and it uses 「Microsoft Video 1 Codec」 as a default setting. 「Microsoft Video 1 Codec」 will provide you with inferior picture quality to iSCC because it is a lossy codec. However, iSCC is a lossless codec and it will provide you with better picture quality in most cases. You will find it useful to record screen containing a lot of texts because iSCC prevents text smudging. iSCC offers significantly the higher compression than the lossless codec distributed from the CamStudio.



If you want to switch codec to iSCC while using CamStudio, please follow the procedures shown below.  
Before recording, click 「Options」 from menu → 「Video Options」.  
You will be prompted with 「Video Options」 dialog box as shown below.



Select 「inno Screen Capture Codec」 from the combo box in 「Compressor」 group box as shown below and click 「OK」 to close this dialog box.  
Now, you can apply iSCC to record.

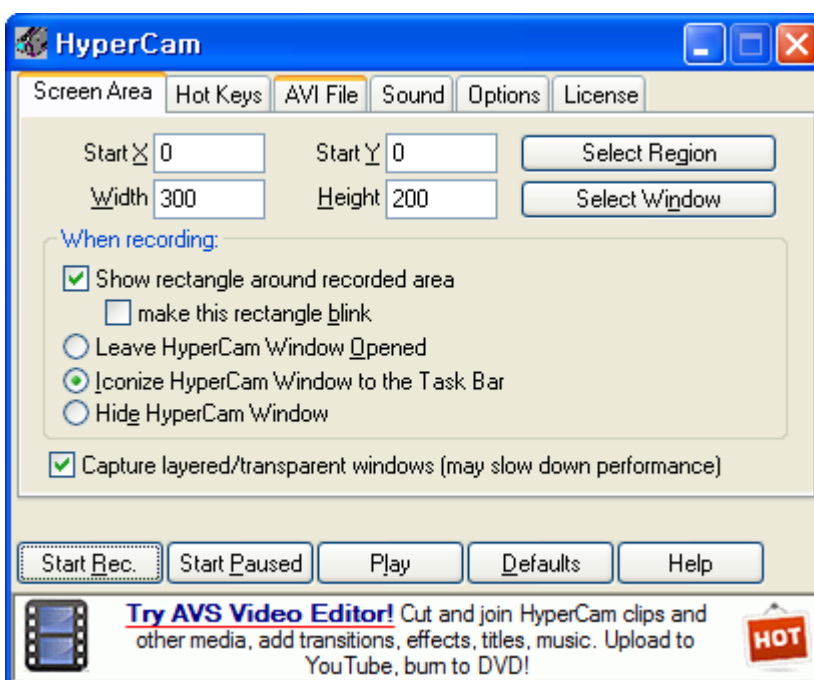


Click 「Configure」 button to change options for iSCC.  
Now, you can apply iSCC to record and create an AVI file.

### 3. HyperCam 2

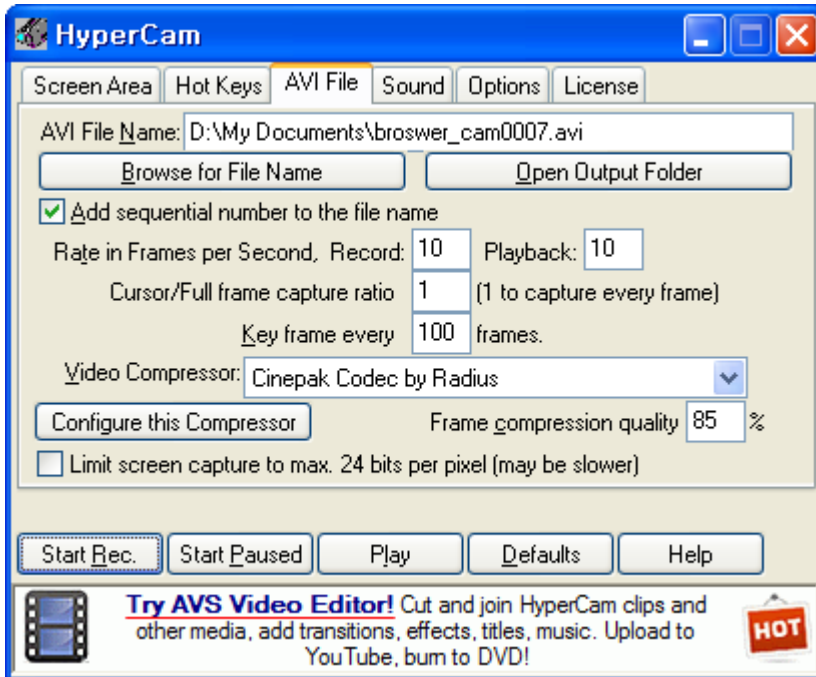
<http://www.hyperionics.com/>

HyperCam 2 is also a frequently used recording application and it uses 「Cinepak Codec by Radius」 as a default setting. This lossy codec also provides you with inferior picture quality to iSCC.

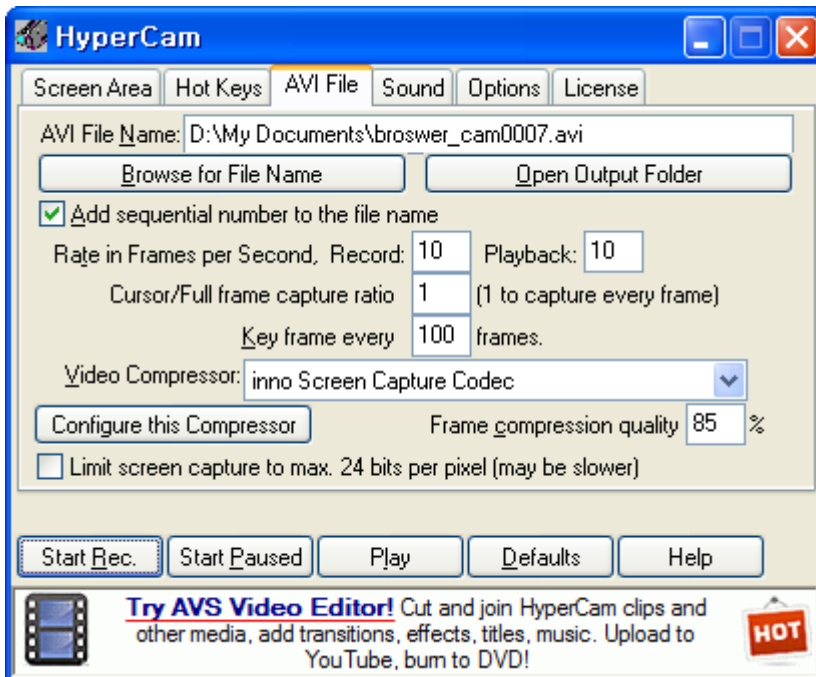


If you want to switch codec to iSCC while using HyperCam 2, please follow the procedures shown below.

Before recording, click 「AVI File」 tab and you will find 「Video Compressor」 combo box with 「Cinepak Codec by Radius」 selected.



Select 「Inno Screen Capture Codec」 from 「Video Compressor」 combo box as shown below. Click 「Configure this Compressor」 button to change options for iSCC.



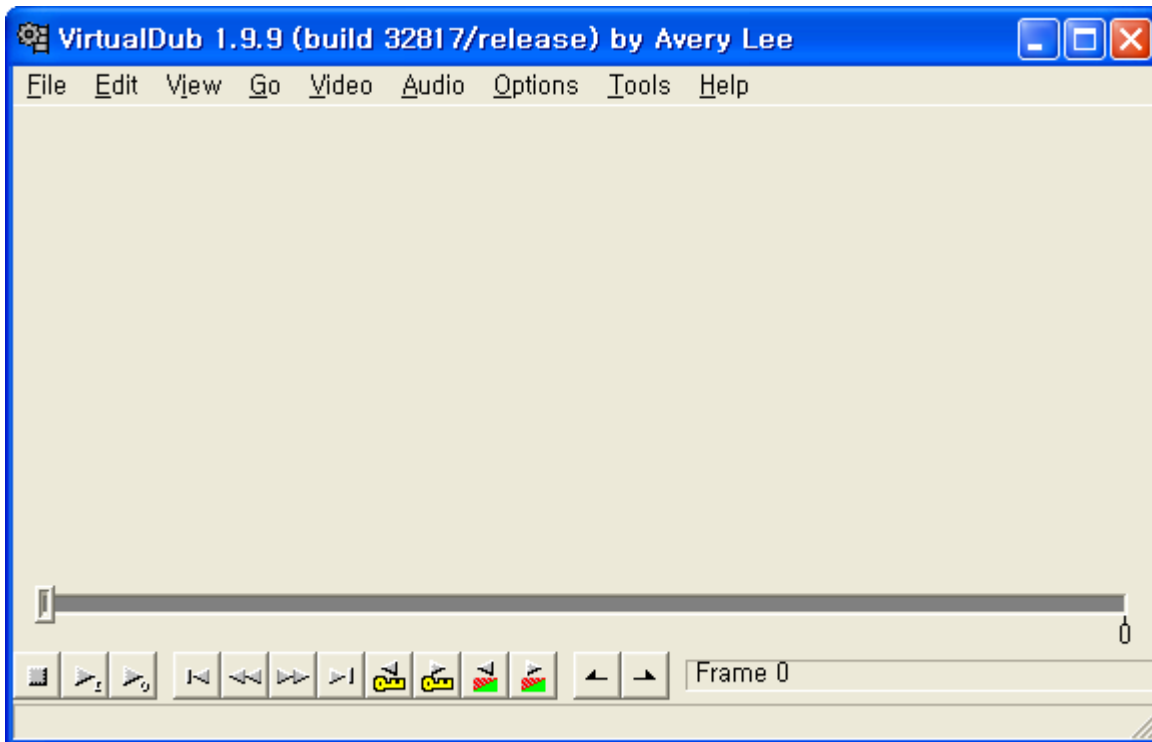
Now, you can apply iSCC to record and create an AVI file.

#### 4. VirtualDub

<http://www.virtualdub.org/>

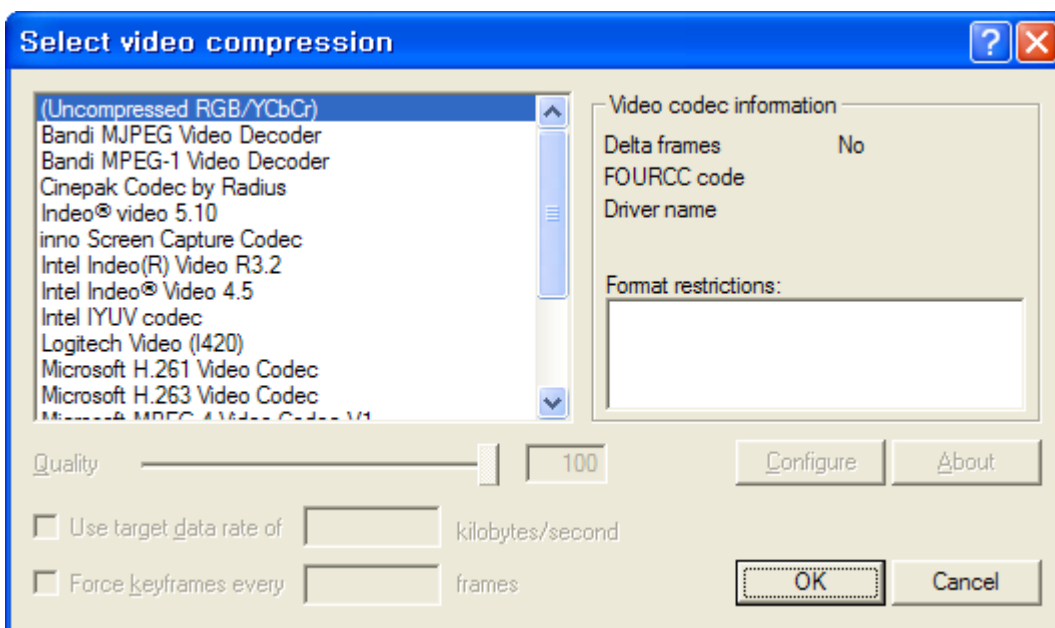
VirtualDub is the most frequently used video editing application. VirtualDub basically deals with AVI files, and iSCC can be easily applied. You need to install iSCC on the system in order to edit AVI files created

applying iSCC.



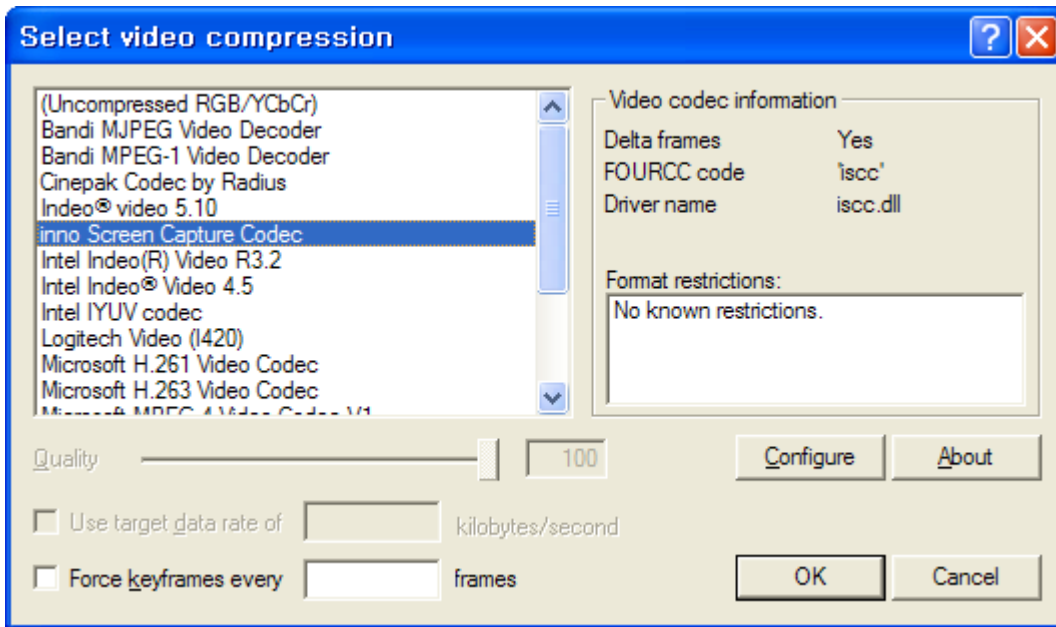
If you use the evaluation version of iSCC, there will be no restriction on decoding. Therefore, you will not have any restriction when you play or edit files with VirtualDub. If you want to save an AVI file edited using VirtualDub, please follow the procedures shown below.

Click 「Video」 from menu → 「Compression」. You will be prompted with 「Select video compression」 dialog box as shown below.



Select 「inno Screen Capture Codec」 from the dialog box as shown below.

Click 「Configure」 button to change options for iSCC and 「OK」 to close the dialog box.



If you select 「Save as AVI」 to save an edited file, an AVI file applying iSCC will be created. You will be able to create an AVI file applying iSCC this way although iSCC is not applied to the original AVI file.

There will be no change in picture quality if you use the lossless codec and save as many times as you want. Please note that there could be loss in picture quality if you apply MPEG Codecs and save several times.

So far, we have gone through the procedures to apply iSCC to screen recording and video editing programs. Most of the screen recording and video editing programs offer options to select codec for AVI files. For other programs that are not mentioned in this user's guide, please refer to the program manual to apply iSCC.

You can also visit websites for other programs for detailed information on how to apply other codecs.