

Improve me....

SkillCapture

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Why SkillCapture

Video in sports education?

The learning of sports skills can be viewed as process of learning basal movements and combine those into more complex movements. This motor learning process can be illustrated as a motor control staircase where the child starts with crawling then moving to standing, walking, running, jumping and working further up the motor control ladder with more complex movements and skills.

The critical factors for an athlete to learn specific movement skills is that the basic movements which is the foundation of the skill is as optimal as possible before its tried and learned.

The reason for this is that the brain alone does not chose what basic movements are optimal and those who are not. If the inappropriate movement isn't optimized, the user might be limited in further skill learning later in the learning process. Another negative outcome of in-optimal basic movements is that the athlete might have to go several steps back in motor learning in order to break the automation obtained through the many repetitions. This can be very difficult and it can be difficult to motivate children to do so. Thus its important to make sure that those movements that isn't optimal that they are corrected through verbal or visual feedback.

REMEMBER: *The automation of movement is just as effective for inappropriate movements as for optimal. Do you self and you athletes the favor and teach then the most optimal movements from the beginning, then it will get easier later on with more complex skills. A little more time spent in the beginning can have great effect later on in the learning process.*

Verbal feedback is the most common method for skill teaching in sports. Through explanation its attempted to make the user aware of those movements that isn't optimal. In many situations this feedback is sufficient and its easy for the athlete to connect the verbal language to the needed corrections. In skills with high complexity, great force, or high speed it might be more difficult for the athlete to connect the physical awareness with the verbal language. In such situations it might be of great benefit to use visual feedback in the form of video. If video feedback is combined with the instructors verbal feedback and corrections it has great effect.

Video feedback can be used to improve motivation of athletes and students. If video sequences is stored for later retrieval its possible for the users to keep track of the progress and follow the improvements they do. Kids in young age work on the developing their identity and thus the feedback of improvements and progress give them and better understanding of their development process. The feedback on development process for student and athletes can have positive effect on the their self esteem and confidence.

Video has been applied in many sports disciplines and with good success. But until now it has been with great overhead for the actual training session. The problems of using video in training session is most often that it can be difficult to keep enough intensity due to the manual handling of filming, rewinding and playback. This is often with a risk of injuries due to the cool down of the athlete. SkillCapture is a software application developed for optimal use of video in sports education. SkillCapture has all the video feedback functions built in and offers additional options to improve the learning of skills:

1. Filming/Capturing

2. Cutting
3. Playback (slow motion, frame/frame navigation, repeat, drawings)
4. Compression
5. Sorting, naming and association of video sequences.
6. Upload (FTP, HTTP, or copy)

With SkillCapture video feedback does not necessarily take the intensity of the class. Using SkillCapture its also possible to handle the use of the feedback without instructor, leaving the work with verbal feedback to the coach.

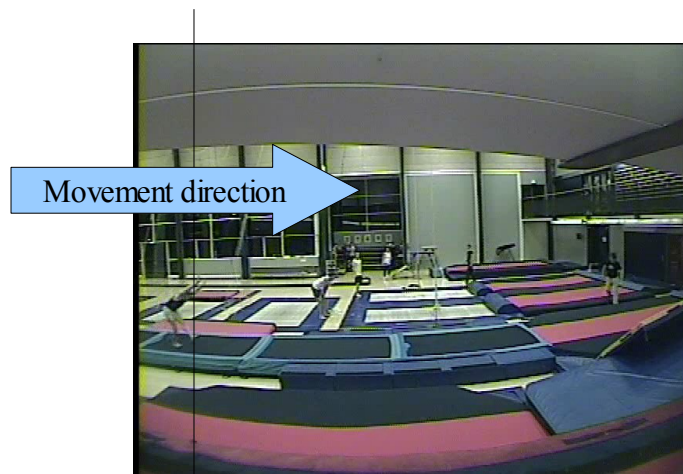
SkillCapture has an option for association of video sequences with the student or athlete that did the movement. This enables the students to get the video sequences on a memory stick or maybe download them from a server. SkillCapture uses RFID tags in order to associate the video sequence to athlete.

Examples of SkillCapture applications

There is a lot of functionality in SkillCapture, and the easiest way to view the various possible applications is to look at the way the video capture is started.

Activation of Capture Start using movements

Its possible to start the video capture with motion in the video image. Either a movement from the right to the left or from the left to the right. The video image is separated into a detection area which is located to the left when its movements from left to right and to the right when its movements from right to left. In the movement area its possible for the coach to move freely without activating the video capture start.



Detection area: If a person moves in this area the capture is started.

Movement area: Its possible to move freely in this area without the start of capture.

In the above example the video image is separated into detection area at the left, leaving the option to start video capture with movement from left to the right.

By using movement detection can give the simplest hardware setup. It only takes a laptop and a built in camera and then you are ready.

One of the disadvantages with movement detection is that the detection area has to be “movement free”. This is a problem in certain settings where others are working in the background. The movement detection in SkillCapture can not distinguish between the correct and incorrect athletes.

If there is additional people in the detection area SkillCapture will capture sequences that are for no use. Thus its important for the use of movement to start capture that only one person is entering the detection area.

Activation of Capture Start using keyboard

The video capture can be started by pressing the keyboard. For every user its possible to add a short cut (special key combination). Hitting this will both start the sequence capture but also name the video sequence with the given user. Using the keyboard is a manual process but for some situations it can be the solution.

Activation using SkillChip

In some situation the use of keyboard is impossible and if you still need the naming, sorting and upload of the video sequences you have an option to use a SkillChip. The SkillChip is used to register the user at the Skill'ID reader. The Skill'ID is a Bluetooth RFID reader. After the user has registered at the Skill'ID a configurable wait time elapses and the video capture starts. The advantages with this system is that there is no need for instructor intervention. The student can operate the SkillCapture by them selves.

Rhythmical gymnastics

I rhythmical gymnastics the music is important. But sometimes its also important to capture video in order to view options for skill improvements but also creative improvements. For this purpose its possible to add music (.mp3 and .wma) to the capturing process. Thus its possible to synchronize music playback and video capture with the single touch on the keyboard. Event though its possible to synchronize using both SkillChip and movement its recommended to use the keyboard for simplicity.

Naming of the video files

Its possible to name the video files individually through the use of user profiles. When activating the capture start by keyboard (short cut) or SkillChip the information from the user profile is used to name the video file. Further it's used in the upload where the video files are sorted in folders for each athlete.

Video upload and external access to video

The most important functionality in SkillCapture is the ability for the coach to evaluate the movement directly during training using a simple and fast approach. In SkillCapture it's further more possible to give the users access to all or just selected video files from a globally available computer/server on the Internet. SkillCapture has four different options for uploading the video files to another computer:

- copy
- ftp
- http
- YouTube

Copy is a simple way method for moving video files locally on the computer (like USB memory key or another folder) or network drive mapped on the computer.

FTP is a file transfer protocol most often used with web servers (web hotel). HTTP is similar to FTP

but is another method to contact the web server in order to upload the video file. In order for the http to work it's important that a script is accessible on the web server.

YouTube is a complete solution to work with directly. The video files is directly uploaded to the users own YouTube account.

Hard disk recorder versus SkillCapture?

In the last few years the video harddrive recorders has been in great development. The harddrive recorder looks like standard VHS recorder just that the media to which the video gets stored is different. The advantage with the harddrive recorder is many, but one of the more interesting features is the option to start the video playback at any time. This can be used for feedback in sports where you start the recording and after 15 (adjustable) seconds start the playback. This enables the user to do the skill and right after view the skill result on the TV. The disadvantage with this approach is that if you want to watch the video in slow motion you need to stop the recording, and limit the usage to a single person. So if this tool has to be an efficient tool in the training session the slow motion is not a possible option. The viewing of performed skills in realtime is also somewhat problematic. You need to be a skilled coach but also a skilled athlete to catch the possible errors in movements.

What's RFID?

RFID is the abbreviation for Radio Frequency Identification. RFID is a technology that is used more and more in different setups. A good example is the lifts at alpine skiing where you have to register yourself, but also marathon running where a small tag is inserted in the shoe for recording running time. SkillCapture uses RFID for automated association of video sequences to individual users.

What's video compression?

Video captured with the computer takes up considerable amount of space. 4-5 seconds of video take up approximately 15Mb in raw format. In order not to fill up the hard drive with just a single training session its important to compress the video. A good compression to use is the Microsoft VKI Mpeg4 V3, but its easy to choose another. The reason for choosing Microsoft VKI Mpeg4 V3 compression is that it offers good quality compression but also offers frame by frame navigation which is needed in the analysis of movement.

Hardware requirements

Computer

In order to run SkillCapture it necessary with a computer system with the following specification:

General

Operating system: Windows XP or Vista

CPU: 1.4GHz Intel or AMD processor

RAM: Min. 512Mb

Input: Firewire, iLink, IEEE1394 or USB

Harddrive: Min. 3Gb free space

Windows has to be configured to download and install the latest updates from Microsoft. The latest version of DirectX (as min 9.0c) has to be installed.

Touch Screen

Its possible to configure SkillCapture to use Touch Screens. Look under Advanced configuration.

Video equipment

The camera that is supposed to be used with SkillCapture has to be able to stream video directly to the computer. Typical all Mini DV camera has this option through firewire (1394, iLink). There is a lot of other cameras with streaming option.

Before buying a camera for use with SkillCapture its important to consider the following parameters:

Frame speed

Its important that there is enough images to describe the movement if the user or athlete should be capable of viewing the possible corrections needed. In fast movements (like golf swing, or somersault with and without twists) important detail might be missing due to lack of enough images. For most movements the use of DV camera with 60 or 50 (interlaced) images is enough.

Image resolution

The standard resolution of PAL (Euro standard) video is 720x567 (and NTSC 640x480), typical for most web cams is 640x480, where as HD (High Definition video) has a resolution of 1920x1080. All these cameras has sufficient resolution for most movements.

For some web cameras with lower resolution like 320x240 might be insufficient for analyzing movements with small detail. It has to be noted that some DV cameras has an option for streaming video using USB, but for some cameras the resolution is only 320x240.

Shutter time

Its important use a short shutter time with the camera in order to have clear image. For most DV cameras there is a program called "Sports", which gives a short shutter time. When using a short shutter time its important to have sufficient light.

DV Camera

The DV camera is a relatively cheap camera. The lowest price is around 300USD, and it can be bought in many variants. The DV camera can easily be connected to the computer using firewire and there is no need to install anything for it to work. For those cameras that uses a USB connection its important to install a device driver before the connection. The DV camera fulfill all the requirements to both shutter time, resolution, image frequency.

Examples of cheap DV cameras: Sony DCR HC27E, Samsung VP D371, Canon MD110, JVC GR D720.

<http://sony.com>

<http://samsung.com>

<http://jvc.com>

<http://canon.com>

HDV Camera

Compared to the normal DV camera the HDV has an increased resolution. Its possible to use this type of camera to stream video to the computer. Examples of cameras are Canon HV10, HV20. This type of camera hasn't been tested with SkillCapture.

DVD Camera

DVD cameras does not typically have a firewire (iLink, IEEE 1394) connection and the option to stream the video directly using the USB is normally not possible. An option to use the camera is to insert some AV capture hardware to enable streaming over the analog composite signal.

Hard drive Camera

As with the DVD camera the hard drive camera does not the option to stream video directly into the computer. But there is still the option to stream the composite signal to some AV capture hardware that does the job.

USB Web Camera

A lot of USB web cameras specify that its possible to capture using 30 frames/sec. The problem is that the bandwidth of USB (even version 2.0) is not enough to transport the raw video through to the computer. Normally its possible to have an approximately 10 frames/sec. This is normally not sufficient enough to handle complex movement.

Wide angle camera lens

In some situation it ca be an advantage to use a wide angle lens. This means that the camera can get close to the movement as possible. The only problem with this type of lens is that it distorts the image so that it can not be use for biomechanical analysis in SkillSpector. SkillSpector can display the video but its impossible to get accurate results.

Zoom and motor positioning

For some cameras its possible to adjust zoom, position and focus with a remote control. This is nice feature if the camera is supposed to be mounted on a wall. This gives good usage of one single camera for multiple stations. The only disadvantage with this camera is normally the price, which is normally approximately 8-9 time more expensive than the normal DV camera.

Surveillance cameras

There is a lot of camera types and especially with surveillance. Its important to check the option to control the shutter time before you invest in this type of camera. A good surveillance camera is the Monacor TVCCD-1622COL it has both lense, zoom and the option to control the shutter speed.

AV Capture hardware

For those camera types that does not have digital video streaming to the computer there is an option to use external av capture hardware.

Canopus ADVC 55 is a AV capture unit that can be used with either composite or SVHS signals. This unit is quite good with surveillance cameras, hard drive cameras and DVD cameras.

<http://www.canopus.com>

Firewire cables

Firewire can be found in length of up to 10 meters.

RFID

One of the more special features of SkillCapture is the use of RFID tags. Before the user or athlete starts his skill its possible to register yourself and thus enable naming and sorting of the video

sequences.

This feature requires special RFID reader hardware and RFID tags. This special equipment can be purchased through video4coach.com.

Network

If the video sequences are to be uploaded to a local or external server it's important to have a good network connection.

SkillCapture is capable of using wireless connection but if SkillCapture is supposed to capture and upload at the same time it's important to create a wire connection to the network.

Server

When storing video on local or external server it's important to consider the amount of data that is stored during a certain period. It's not possible to store all video sequences from several years performed on a school with 200 students. Thus some kind of clean up must take place. But to estimate the possible storage capacity and when to start cleanup view the following example:

Example of storage need estimation:

If for example you buy a 500Gb hard drive to store all video sequences of your school over a period of half a year. How many video sequences can be stored with 5 sec. sequences?

5 seconds takes up approximately 500Kbytes

There is 180 student at the school

There is 21 weeks of classes during a half years semester and thus approximately 105 days of classes.

$$(500\text{Gb} * 1024 * 1024) / (500\text{Kb} * 180 * 105) = 55 \text{ sequences each day for each student}$$

Considering that it's not in every class that the SkillCapture is used the amount of sequences that can be stored is more than sufficient.

External server

It's possible with SkillCapture to upload to an external server through FTP or HTTP. If HTTP is supposed to be used it's important to install a small script on the server to accept the copy of the video sequences to the server's hard drive. The following is posted in the server call:

username – User name of the athlete

password – Password of the athlete

MAX_FILE_SIZE – Max. file size.

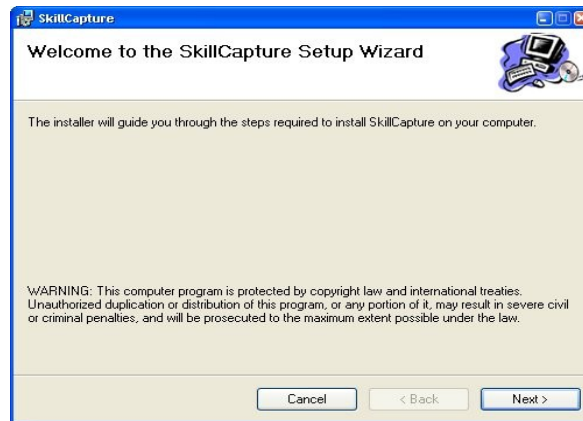
name – Name of the video sequence file

upload – The video sequence.

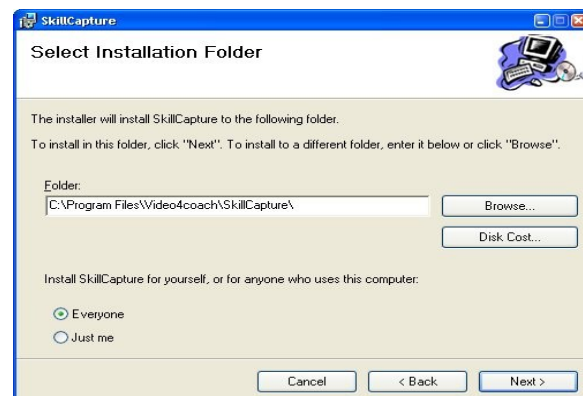
SkillCapture installation

SkillCapture can be installed on both XP and Vista.

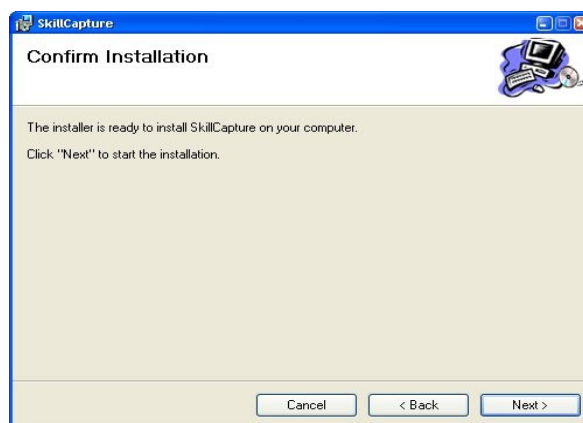
Download the latest version form video4coach.com and start the installation.



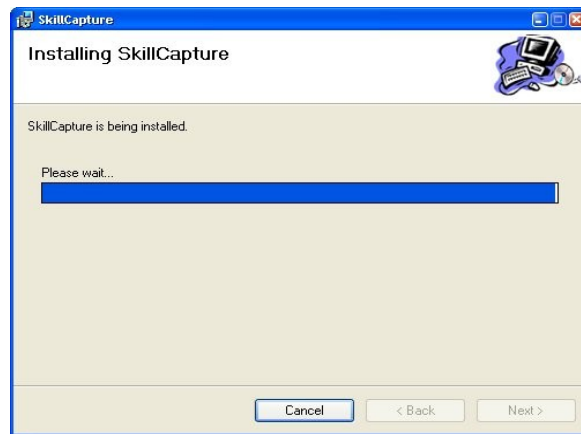
Hit “Next”.



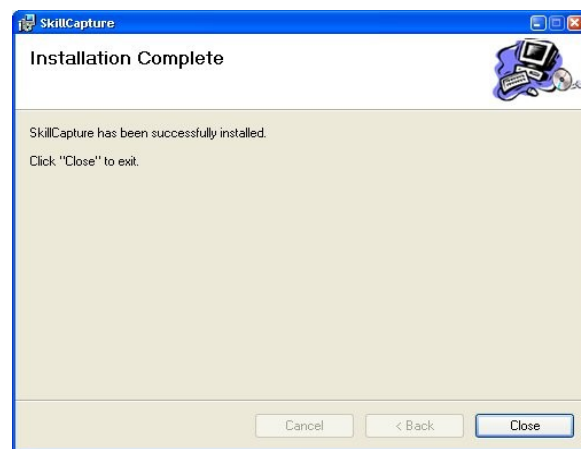
If SkillCapture is supposed to be installed in another place than the default change the setting here. If the computer is used by several users its important that you enable the Everyone option. Hit “Next”.



The installer has collected all the information need and its ready to do the actually installation. Hit “Next” to start the actual installation.



Installation progress.....



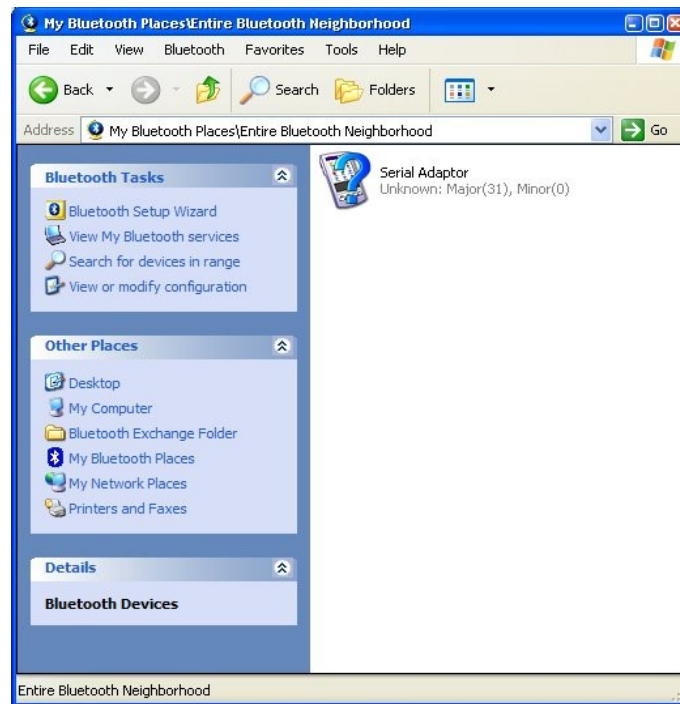
Installation is finished Hit "Close" to end the installer.

Skill'ID

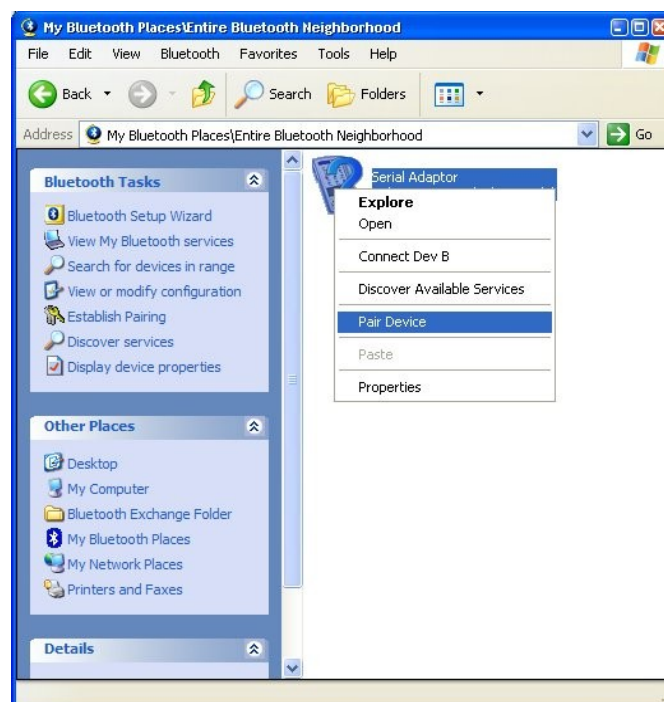
Before its possible to connect to the Skill'ID its important that its registered with the computers bluetooth system..

Turn on the Skill'ID. Make sure its fully recharged.

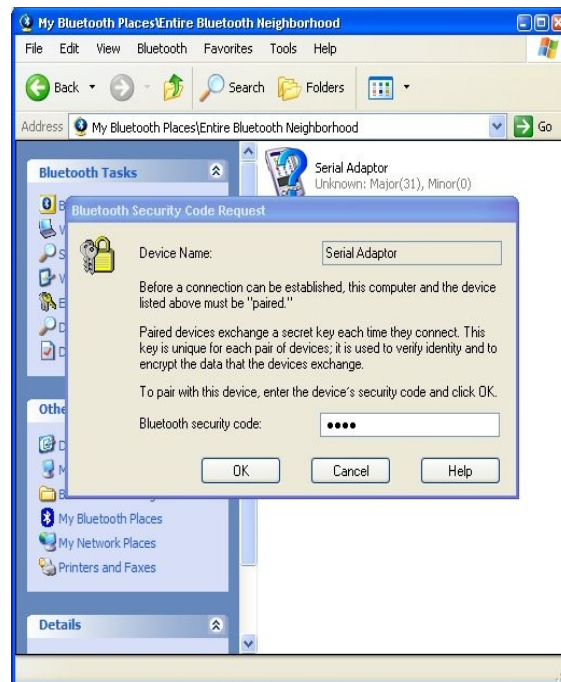
Open "My Bluetooth Places" and click "View devices in range".



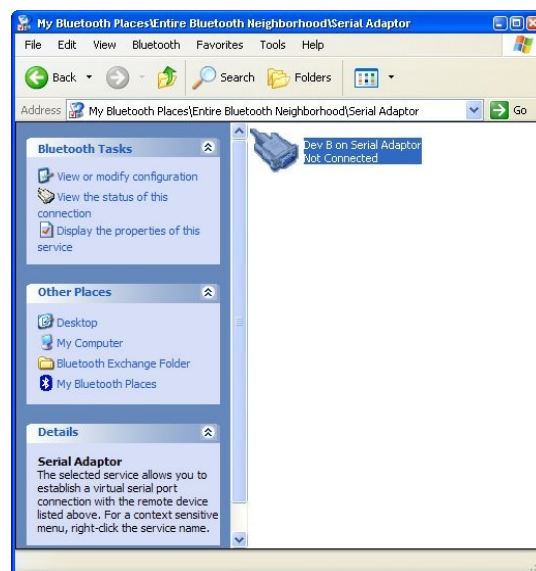
Right click on Serial Adaptor and choose from the menu "Pair".



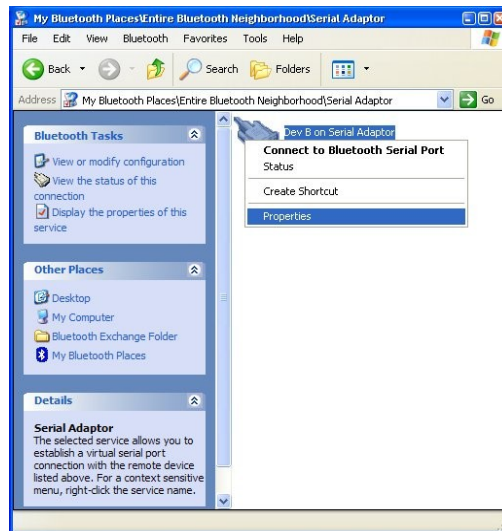
Type the security code 1234.



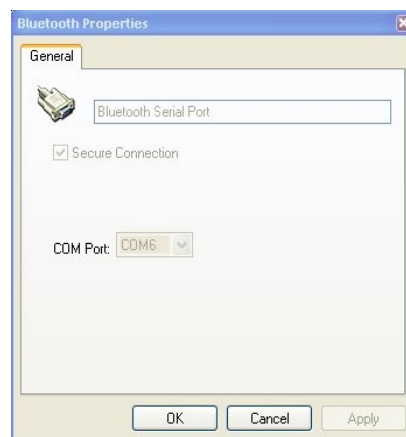
Click the "Serial Adaptor" icon.



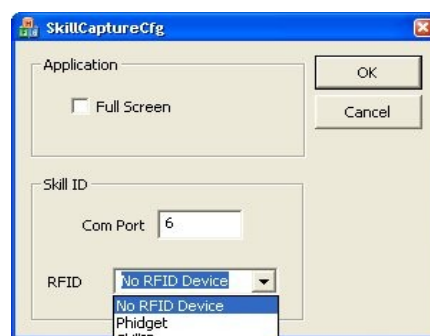
Right click "Dev B on Serial Adaptor" and choose "Properties"



Remember the "COM Port" number. Its has to be entered into the SkillCapture configuration.



Start the SkillCaptureCfg application (Start->Video4coach->SkillCapture Config):



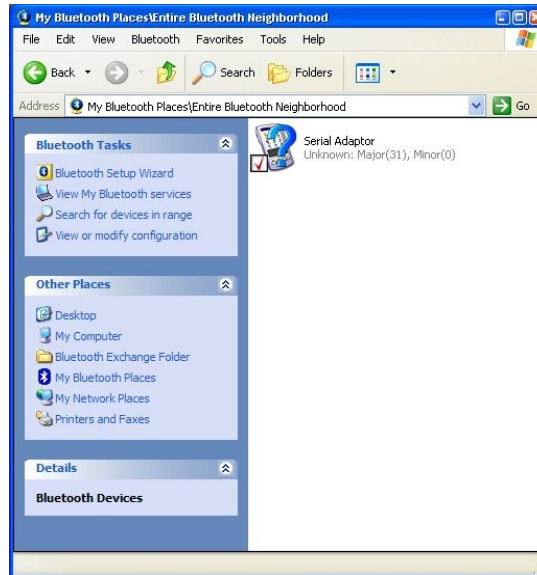
Type the "COM Port" number from the fra Skill'ID registration and choose the RFID device to be Skill'ID.

Click OK to accept the changes. If you choose Cancel the changes is not changed.

Moving Skill'ID to another computer

In some situation its necessary to move the Skill'ID reader to another computer. Before this can be done its important to unregister (Unpair) the Skill'ID from the current computer.

Open “My Bluetooth places”, right click on the Serial Adapter icon.



Choose from the menu ”UnPair”

Re-establishing the connection with Skill'ID

In some situations the connection between the computer an Skill'ID can get lost. Either because of the Skill'ID has been switched off, the distance between Skill'ID and computer is to far, or some electronic interference is disturbing the connection.

In order to re-establish the connection make sure the Skill'ID is charged and turned on, then activate the “New Session”.

SkillCapture

Video capture with SkillCapture

SkillCapture capture video in small sequences.

Video is started using the following methods:

1. Register of athlete (RFID)
2. Detection of athlete in the video image.
3. Short cut using the keyboard

When the athlete uses RFID to start the video capture there is a small adjustable time gap (called Wait time) before the actual capture start. The wait time is not used with detection in video image or key press.

Capture stop is based on “Capture time”.

After the video sequence has been capture the delay time defines the time capture stop until video playback.

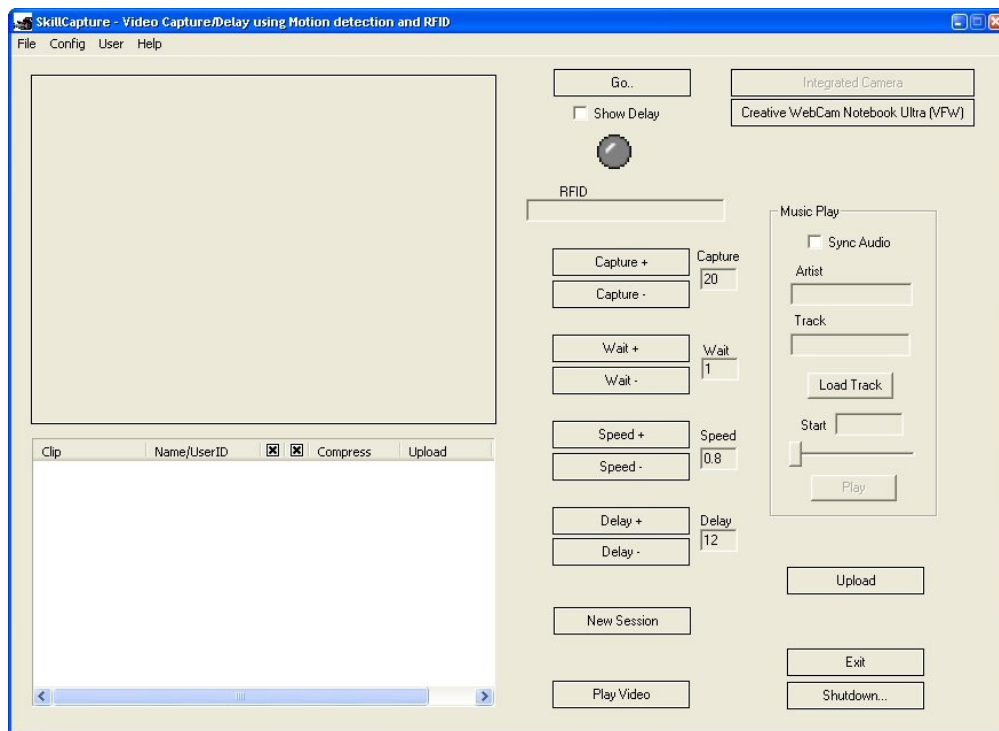
Training session

SkillCapture uses sessions to distinguish classes. Every time a new session is started a new folder is created to contain the video sequences. This means that you can group your video sequences based on classes. For the athlete it's easy to find the video sequences from a specific class. When video is copied to another server the video sequences is organized using the following prescription:

Users/Name of User/Session start date and time/video sequence .avi

Beside the new video folder creation it's important to know that the activation of “New Session” will close and re-establish the connection with SkillID.

SkillCapture software



Preview window

Placed in the top left corner of the application. In the “Preview” window its possible the current view of the camera.

Capture List

The Capture List is placed in the lower left corner of the application. The capture list is used to list all the captured video sequences. If a certain video is to be seen again just double click on the entry. Its important that the capturing isn't running while trying the re-play a video sequence.

Camera buttons

If the Camera 2/Camera 3/Camera 4 parameters has been configured with camera entries a number of buttons will be placed on the front of SkillCapture. Each button represents a camera. Use the buttons to switch between connected cameras.

Go

Used to start and stop capturing. The button can not be used to stop ongoing capturing that can only be terminated defined by the “Capture time”.

Show Delay

Enable/disable video playback after capture.

RFID

Show current registered RFID tag.

Capture +/-

Increase or decrease capture time.

Wait +/-

Increase or decrease wait time. Wait time is the time RFID register to capture start.

Speed +/-

Increase or decrease video playback speed. 1.0 is normal speed, 0.1 is 1/10 the originally captured video speed and 2.0 is double speed.

Delay +/-

Increase or decrease the delay time. The delay time is the time from capture end to playback of the video.

Upload

Click to start and stop upload of the video sequences to external server.

Exit

End application.

Shutdown..

Shutdown the computer.

Music Play

Sync Audio

Enable/disable synchronization of music playback during video capture.

Load Track

Click to load music in format mp3 or wma.

Artist

Show artist for mp3 music.

Track

Show title for mp3 music.

Start

Show time start of music playback.

Slider

Adjustment of music start time.

Play

Start music playback.

SkillCapture menu**File*****New session***

Start new session. Thus new folder to store video sequences.

Open Session

Open previously saved session.

Standby

Put the computer in standby mode.

Shutdown

Shutdown the computer.

Exit

End application.

Config***Upload***

Video upload and compression parameters.

Video Delay

Video delay playback options.

Capture Options

Video camera device selection. Detection selection and setup of audio capture.

Users

Add Profile

Add another user profile.

Edit Profile

Change already existing user profile.

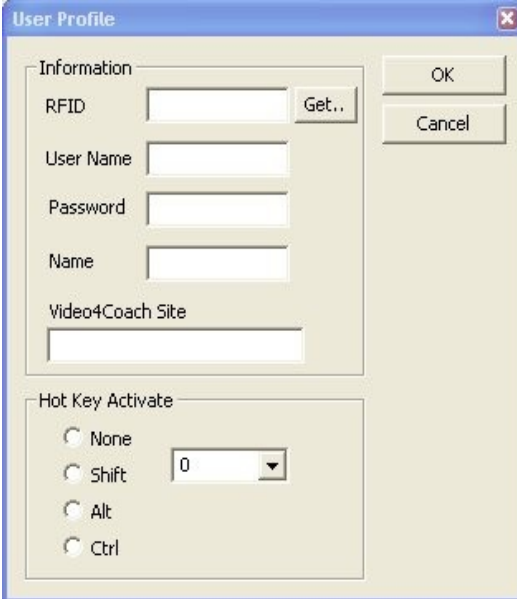
Help

About

Show information about SkillCapture version.

User profile

Add and change of user profile is done through the menu Users.

A screenshot of a 'User Profile' dialog box. It has a title bar with a close button. The dialog is divided into two main sections. The top section, titled 'Information', contains five text input fields: 'RFID', 'User Name', 'Password', 'Name', and 'Video4Coach Site'. To the right of the 'RFID' field is a 'Get..' button. To the right of the entire 'Information' section are 'OK' and 'Cancel' buttons. The bottom section, titled 'Hot Key Activate', contains four radio buttons: 'None', 'Shift', 'Alt', and 'Ctrl'. To the right of the 'Shift' radio button is a small dropdown menu showing the number '0'.

Add new Profile

Adding a new user profile to the SkillCapture system select from the menu Users->Add Profile.

User Name

Type the user name of the user. This is not the actually name. If video is supposed to be uploaded to an external server using HTTP its important that this is the correct username of the user at the external system.

Password

User password.

Name

Display name of the user.

RFID

If the SkillCapture system uses Skill'ID tags its possible to use the “Get” button. Activating “Get” starts the Skill'ID so that a SkillChip can be registered.

Hot Key Activate

The short cut key that can start video capture for the user profile.

Video4coach Site

The external web site to receive the user profiles video sequences.

Change existing profile

Choose from the Menu User->Edit Profile

Type the username and password for the user in the Profile login dialog.

A dialog box titled "Profile Logon" with a blue title bar and a close button (X) in the top right corner. It contains two text input fields: "User Name" with the text "jcb" and "Password" with masked characters "*****". To the right of the fields are two buttons: "OK" and "Cancel".

Choose "OK"

A dialog box titled "User Profile" with a blue title bar and a close button (X) in the top right corner. It is divided into two sections. The "Information" section contains fields for "RFID" (769914), "User Name" (jcb), "Password" (masked), "Name" (Jan Brond), and "Video4Coach Site" (www.video4coach.com). There is a "Get.." button next to the RFID field. The "Hot Key Activate" section has radio buttons for "None", "Shift", "Alt", and "Ctrl". The "None" option is selected, and there is a dropdown menu showing "X" next to it. To the right of the dialog are "OK" and "Cancel" buttons.

Change the various options and hit "OK" when finished

User profile and upload to YouTube account

If the video files is to be uploaded to the users own YouTube account it's important that the choosen username and password is identical with the users YouTube account.

User profiles on multiple computers

If the same user profiles is supposed to be used on several computers its possible to create the user profiles on one computer and replicate the v4cuser.txt file on all other computers. The v4cuser.txt file can be found in the SkillCapture install folder (it might be [c:\Program Files\Video4coach\SkillCapture](#)).

Advanced user profiles

The v4cuser.txt is a normal text file that contains the user profile information. The file can be created in many other programs than SkillCapture if just the file format is followed:

ID:username:MD5 password:Name:Http upload server:Short cut key:short cut special key

ID: Unique id of the user. When using SkillChip its the id from the RFID tag.

Username: A short name of the user. Could be initials. If video is supposed to be uploaded to external HTTP server its important that the username is the user's login name at the web site.

Encrypted Password: As default its possible to use V6282b874f76983fe which is "password" encrypted.

Name: Users full display name.

Http upload server: HTTP external upload server.

Short cut key: The key to be used to start video capture for the user profile.

Genvejs special tast: Possible special key to be used with the short cut key. 0 no special key, 1 Shift key, 2 Alt key, 3 Ctrl key.

Example:

```
1:usr0:V6282b874f76983fe:User 0:www.video4coach.com:0:0
2:usr1:V6282b874f76983fe:User 1:www.video4coach.com:1:0
3:usr2:V6282b874f76983fe:User 2:www.video4coach.com:2:0
4:usr3:V6282b874f76983fe:User 3:www.video4coach.com:3:0
5:usr4:V6282b874f76983fe:User 4:www.video4coach.com:4:0
6:usr5:V6282b874f76983fe:User 5:www.video4coach.com:5:0
```

SkillCaptureUserAdm

SkillCaptureUserAdm can be used for advanced administration of the user profiles on the SkillCapture system. The application is built to simplify the task of bringing the SkillChip id with the user profile information. Most of the time the information about students is received from the school office in an Excel sheet and the problem is how in easy steps to add the SkillChip id and user information together.

The screenshot shows the SkillCaptureUserAdm application window. It contains a table with the following columns: RFID, User Name, PASSWORD, Full Name, Upload Site, Short Cut, and Special Key. The table lists 20 users, including test users and a user named Jan Brond. To the right of the table is a sidebar with buttons: Open, New, Save, Edit, Set Password, New RFID, Delete, Paste User List, and OK.

RFID	User Name	PASSWORD	Full Name	Upload Site	Short Cut	Special Key
1	usr0	5f4dcc3b5aa765...	User 0	www.video4coach.com		
2	usr1	5f4dcc3b5aa765...	User 1	www.video4coach.com		
3	usr2	5f4dcc3b5aa765...	User 2	www.video4coach.com		
4	usr3	5f4dcc3b5aa765...	User 3	www.video4coach.com		
5	usr4	5f4dcc3b5aa765...	User 4	www.video4coach.com		
6	usr5	5f4dcc3b5aa765...	User 5	www.video4coach.com		
7	usr6	5f4dcc3b5aa765...	User 6	www.video4coach.com		
8	usr7	5f4dcc3b5aa765...	User 7	www.video4coach.com		
9	usr8	5f4dcc3b5aa765...	User 8	www.video4coach.com		
10	usr9	5f4dcc3b5aa765...	User 9	www.video4coach.com		
11	usrA	5f4dcc3b5aa765...	User A	www.video4coach.com		
12	usrB	5f4dcc3b5aa765...	User B	www.video4coach.com		
13	usrC	5f4dcc3b5aa765...	User C	www.video4coach.com		
14	usrD	5f4dcc3b5aa765...	User D	www.video4coach.com		
15	usrE	5f4dcc3b5aa765...	User E	www.video4coach.com		
16	usrF	5f4dcc3b5aa765...	User F	www.video4coach.com		
17	usrG	5f4dcc3b5aa765...	User G	www.video4coach.com		
18	usrH	5f4dcc3b5aa765...	User H	www.video4coach.com		
19	usrI	5f4dcc3b5aa765...	User I	www.video4coach.com		
20	usrJ	5f4dcc3b5aa765...	User J	www.video4coach.com		
769914	jcb	042e91c84bd34...	Jan Brond	www.video4coach.com		
581989	testuser1	5f4dcc3b5aa765...	User Test1	www.video4coach.com		
582138	testuser2	5f4dcc3b5aa765...	User Test2	www.video4coach.com		
767701	testuser3	5f4dcc3b5aa765...	User Test3	www.video4coach.com		
478685	testuser4	5f4dcc3b5aa765...	User Test4	www.video4coach.com		
767220	testuser5	5f4dcc3b5aa765...	User Test5	www.video4coach.com		
770038	testuser6	5f4dcc3b5aa765...	User Test6	www.video4coach.com		
769951	testuser7	5f4dcc3b5aa765...	User Test7	www.video4coach.com		
769981	testuser8	5f4dcc3b5aa765...	User Test8	www.video4coach.com		
767592	testuser9	5f4dcc3b5aa765...	User Test9	www.video4coach.com		
770021	testuser10	5f4dcc3b5aa765...	User Test10	www.video4coach.com		

When SkillCaptureUserAdm is started the current v4cuser.txt information is loaded.

There is two ways to create a user list with SkillChip ID's. Either the list of user names are added first and then SkillChip ID's, or the list of SkillChip ID's are added and then after the user names added.

Adding new SkillChip ID

Select the position where a new SkillChip ID is supposed to be inserted. Register the SkillChip tag on the Skill'ID reader.

Creating new user list

Click on the button “New” to remove all the users from the current list and create a new.

Create new user list from Excel

If a new list is not created before you insert new users they will be appended to the current.

Open Microsoft Excel and find the list (single column) of user names (full name and surname). Select the list of users to be added. Copy the list (Either Ctrl-C or from the menu Edit->Copy)

Select in SkillCaptureUserAdm the “Paste User List”.

Create new list with new SkillChip ID's

1. Click ”New” in order to create new list..
2. Find the number of SkillChip and write down a unique number (example from 1 to the number of tags to be used) on each tag.
3. Register SkillChip #1 at the Skill'ID reader.
4. Click OK in the dialog box if the ID is accepted.

5. Go to step 3 and repeat it until all SkillChip is registered.

Add new SkillChip ID to users profile

1. Select (click on the RFID number in the first column) the user that has to get the new SkillChip ID.
1. Register SkillChip on the SkillID reader.

Change single user profile information

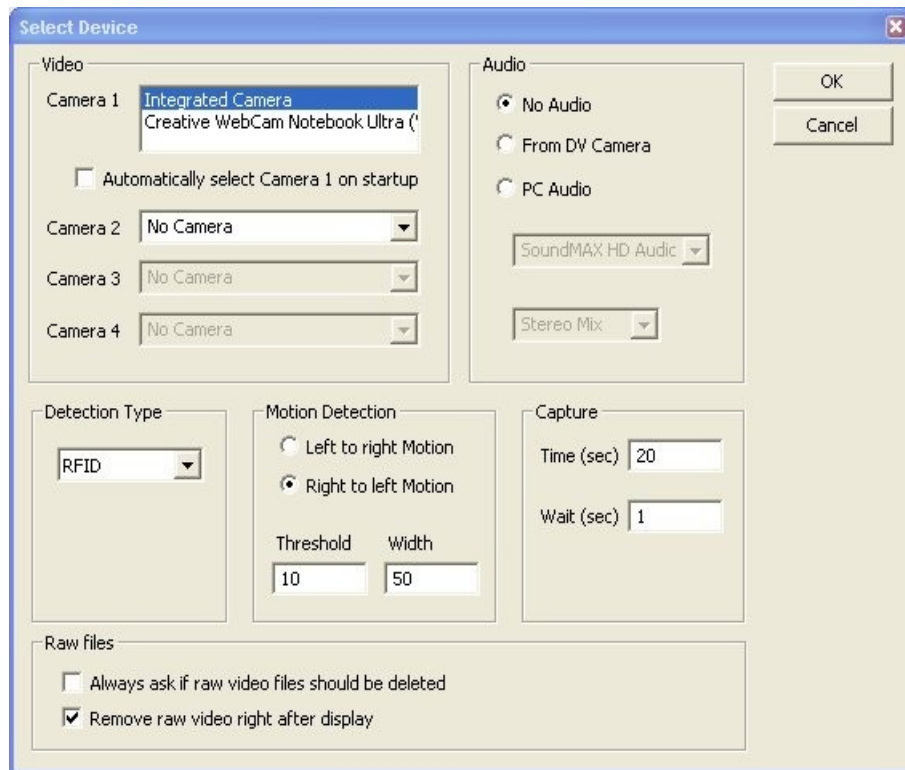
2. Select (click on the RFID number in the first column) the user that has to get the new SkillChip ID.
3. Click the Edit button.

Change user profile password

4. Select (click on the RFID number in the first column) the user that has to get the new SkillChip ID.
1. Select "Set Password"
2. Type the old password
3. Type new password

Configuration

Video Capture options



Camera 1

Selection of the first video device.

Automatically select Camera 1 on startup

If this option has been selected SkillCapture will use the camera from start.

Camera 2/Camera 3/Camera 4

If multiple cameras is connected to the computer it's possible to configure SkillCapture to enable fast access to switch camera on the front.

Audio

If sound is needed in the video capture its added in this section. The sound can be recorded from different inputs. There is a lot of different options on computeres and its worth testing various options before going to the class.

No Audio – No sound needed.

From DV Camera – Sound is recorded from the DV camera.

PC Audio – The sound from the computers sound system is added to the video sequence. This could be microphone or stereo mix where its possible to add music from the mp3 playback.

Detection type

Select the type of video capture start. Following is possible:

Keyboard – Keyboard (short cut)

Motion – Movement in the image.

Motion/RFID – RFID registration and movement.

RFID – RFID registration.

Motion Detection

Left to right Motion – Places the detection area in the left side of the video image.

Right to left Motion - Places the detection area in the right side of the video image.

Threshold – A value between 0-100 that specify the detection sensitivity. A value of 100 specify the the complete detection area has to be covered before the capture start. A value of 0 specify that nothing has to be covered before the capture starts. Typically this value would be 30.

Width – Specify the detection area width.

Capture

Time

Length of capture sequences in seconds.

Waits

Wait time from user registration at the SkillID to video capture start.

Raw files

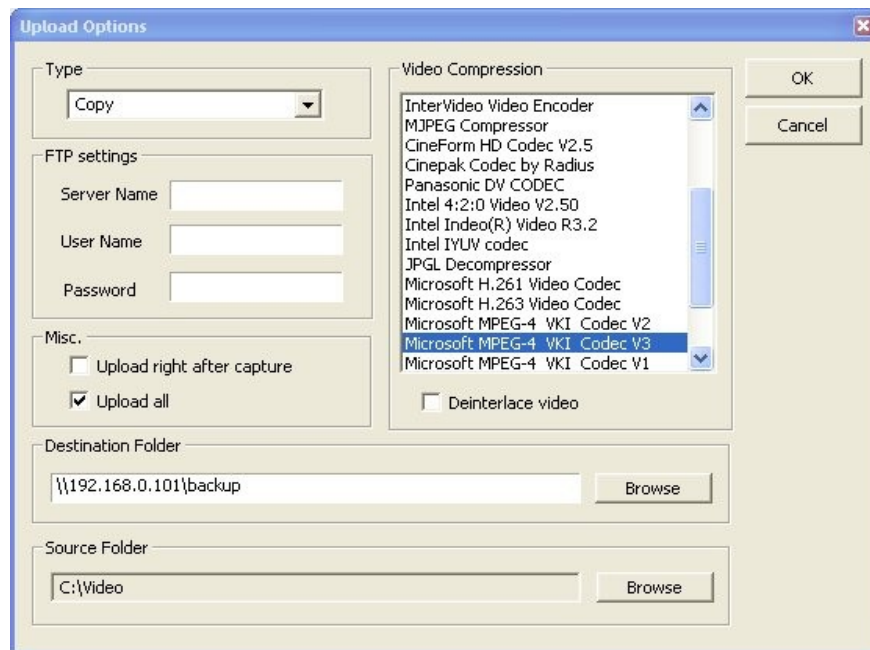
Always ask if raw video files should be deleted

If this options is enabled SkillCapture will at application exit ask if the raw video sequences is to be deleted.

Remove raw video right after display

If this option is enabled all raw video sequences is deleted right after video playback.

Upload



Type

Configures the method by which the video sequence is uploaded.

Copy

Standard copy method. This option enables copy of the video sequence to a local place on the computer (memory stick also) or to another external server.

FTP

FTP (file transfer protocol) option uses the FTP internet protocol to transfer the video sequences to an external server. There is a lot web hotels that offer this option to transfer files to the server.

V4C Site

This option enables to transfer video sequences to an external server using the HTTP internet protocol.

YouTube

This option uploads video files to YouTube. It only works if the naming of the video files is based on the user profile information. Also each user has to have an active account at the YouTube web site.

FTP settings

Server Name

Server name of the server to receive the video files.

User Name

Username of the FTP access.

Password

Password of the FTP access.

Misc.

Upload right after capture

Enable this option if all video sequences is supposed to be uploaded right after video sequence has been compressed. Its important if this option is supposed to be used that the Internet connection is stable. Its recommended to use wired connection over wireless. Wireless can be unstable and cause problems for SkillCapture.

Upload all

Enable this option if all video sequences is supposed to be uploaded, no matter what.

Destination folder

Type the location where the video sequences is supposed to be stored.

Source Folder

The location where the video sequences is stored locally.

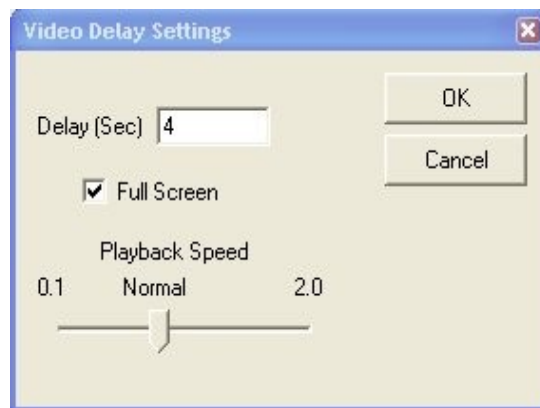
Video Compression

Selection of video compression. There is a lot of different video compression algorithms but its recommended to use the Microsoft Mpeg4 VKI V3 which is installed with SkillCapture. This compression algorithm enables good frame by frame navigation. Other algorithms can be chosen.

De-interlace video

Remove interlace from video before compression. This is only supposed to be used with DV cameras. It will improve video quality considerably.

Video delay



Delay(sec)

Time from video sequence has been captured until its displayed.

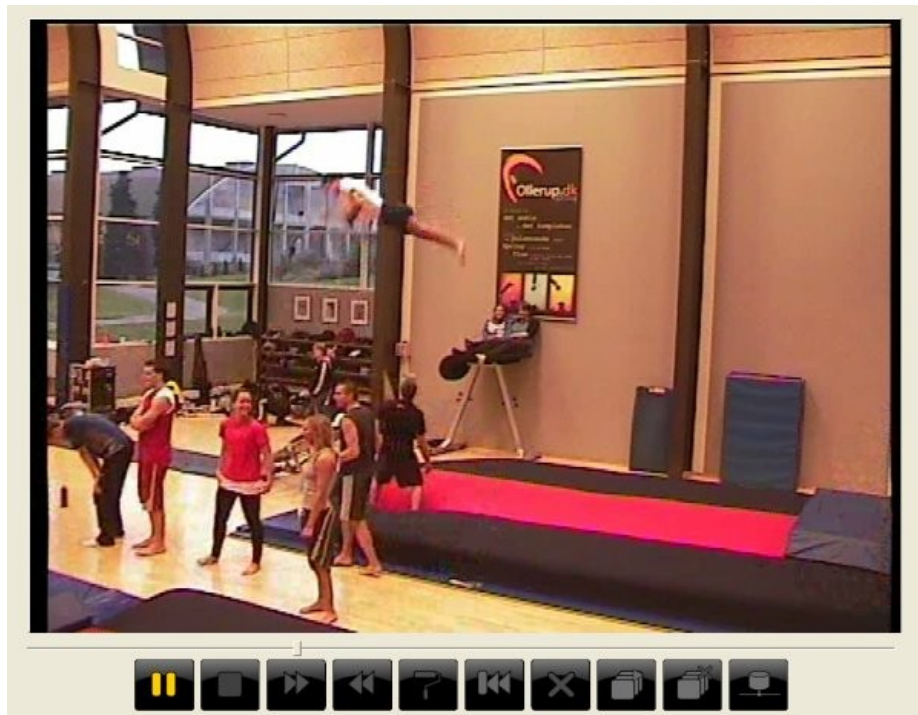
Full Screen

Show the video sequence in full screen mode.

Playback Speed

The playback speed of the video sequence.

Video playback



The buttons on the video playback dialog explained from left to right:

Pause/Play

Play or pause the video sequence.

Stop

Stop playback.

Step fwd

Next frame.

Step back

Previous frame.

Clear drawing

Erase drawing.

Rewind

Rewind to the beginning of the video sequence.

Close

Close the video playback dialog.

Stop Capturing

Stop video capturing

Clear all video

Mark all video sequences in the Video list as displayed.

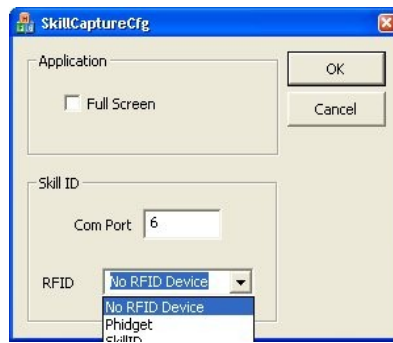
Mark video for upload

Mark the current video sequence for upload. The upload time depend on the settings in the upload configuration.

Advanced functions

There is a few advanced options that is not accessible from the SkillCapture interface. The options can be configured using the SkillCapture Cfg software installed with SkillCapture.

Find the SkillCaptureCfg software in SkillCaptures instal folder, or under the video4coach program group found in the "Start" menu.



Skill'ID

Com Port – Com port for the Skill'ID

RFID – The RFID equipment type that is connected.

Application

Full Screen – In some applications it might be nessesary to run SkillCapture as a fullScreen Application. If SkillCapture is configured as a full screen application its most optimal with a screen resolution 1280x1024.