SWISS TIMING

FIGURE SKATING

ISUCUTTERFS

Figure Skating

User Manual

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1 INTRODUCTION

About This Document

This document describes the operation of ISUCutterFS.

Associated Documents

- FS Quick Reference Guide
- FS ISUScore2FS Manual
- FS ISUCalcFS Manual

About the ISUCutterFS application

This application is an optional feature that provides a Video Replay feature in the Scoring system. This application processes the video signal of a DV camera and saves the complete performance of a Skater. Supported by the Caller, the operator sets the Trim In / Trim Out marks for the individual elements. These marks are then sent to the Judges terminals.

This application provides an easy to handle option to review and replay the performance elements. Trim In and Trim Out marks can be modified, replaced and deleted as desired.

2 HARDWARE NOTES

2.1 Recommended Hardware

- Pentium III (1 GHz) or better, AMD processor 1 GHz), Pentium-M processor 1.4 GHz or better, AMD-M processor
- Microsoft® Windows® 2000 or higher
- 256 MB RAM or more
- VGA 1024x768 - DirectX9 installed
- 20 GB Hard Drive or more - split, i.e. 8GB for the system, 12GB (NTFS formatted video)
- at least 1 GB free hard disk space for 5min video capture
- 100 Mbit Network Connection
- Fire wire (onboard or via PCMCIA card)

- Video distributor (one video input to several video outputs); e.g. Kramer or ST INNOVATION in-house solution
- Converter Video - Fire wire / IEEE1394
- Canopus ADVC110
- Basically any stable running FBAS > DV converter can be used.

We have tested systems with Transmeta processor. These systems had problems displaying the video correctly without dropped frames.
For the capturing of the video signal, we recommend at least a consumer DV camera with a video out. However, we rather recommend a semi professional or professional camera with a monitor on the camera to easily follow the competitor. In addition, it is necessary to split the video signal of the camera, because at least the cutter and the caller are working with a video signal. Furthermore, devices are needed to convert the video signal to a Fire wire signal.
We recommend using a separate NTFS formatted partition for the video capturing, as the required DirectX9 is not supported by Windows 95 or NT. The system is not tested on Windows 98. We recommend using Windows 2000 or higher.
Although the cutting and caller application can be controlled with keyboard, we recommend using a mouse and a big screen.

2.2 Tested Hardware

ISU Judging System (with replay - no touch screen)

- HP, Compaq notebooks
- Sony Vaio notebooks

ISU Judging System (with replay - with touch screen)

The following models can be operated like touch screens:
- Panasonic Toughbook (CF-18)
- Paceblade tablet PC
- Advantech Panel PC (PPC 153T)

The following model can be operated with specific pens:
Fujitsu Stylistics (ST4121)

3 INSTALLATION OF ISUCUTTERFS

3.1 Requirements

The target PC needs to be set up as follows:

- All hardware components are installed and set up properly
- Windows ® 2000 with Service Pack 2
- DirectX 9 or higher installed
- Use a separate partition of the hard disk for the video recording.

3.2 Installation of ISUCutterFS

To set up the program, the ISUScore2FS package is required that is found on the website www.isujudgingsystem.com.
Leave the start dialog by clicking on [Next].
Select checkbox **Cutter** to install ISUCutterFS program as an optional application:

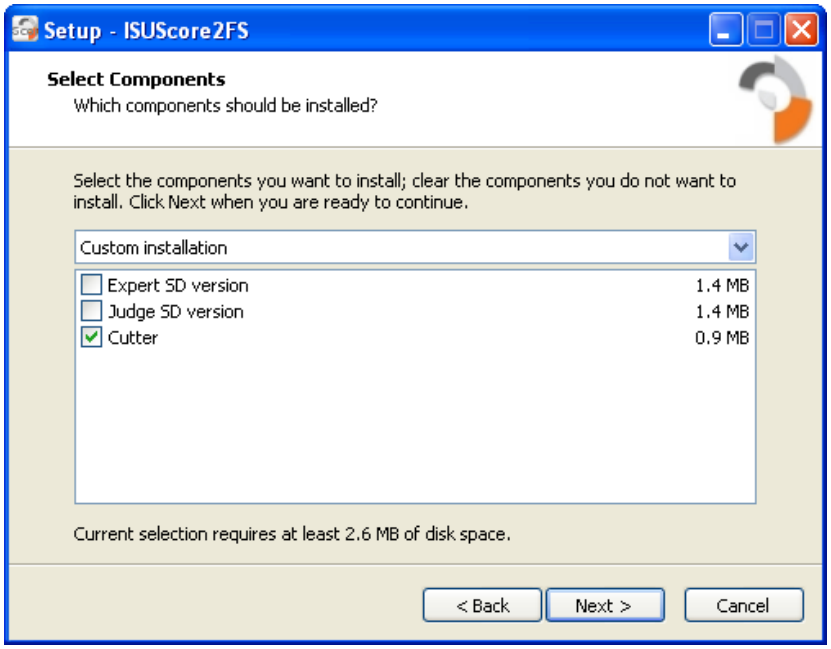

Figure 1 - Install ISUCutterFS

You have the option to create a desktop icon and to finish the setup.

Figure 2 - ISUCutterFS shortcut

Once the installation is finished, you are ready to start working.

4 OPERATION OF ISUCUTTERFS

4.1 Starting the system

The main menu

ISUCutterFS starts with the following main screen:

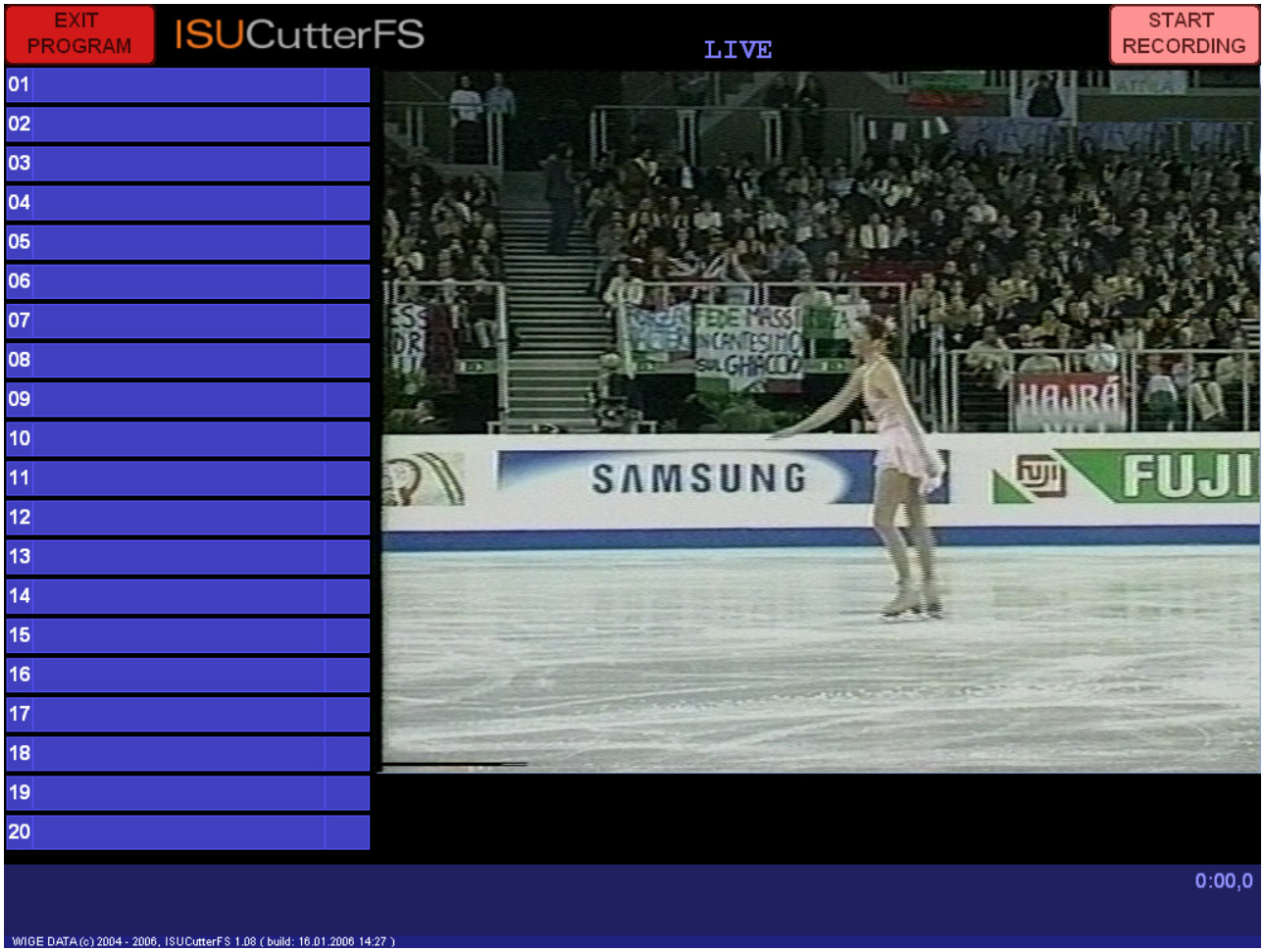

Figure 3 - ISUcutterFS Main screen

This screen indicates the current video picture. The left part of the screen indicates a list of a maximum of 20 clips.

The [Exit Program] button in the upper left part of the screen is used to exit the program. In the upper right part of the screen is the [Start Recording] button that is used to start the Recording. In the center of the screen is the current video status, i.e. live, recording or playback.

The lower part of the screen contains the time passed by and further information, including the version and build date of ISUCutterFS.

4.2 Recording

In order to start the recording, click the [Start Recording] button in the right upper corner of the screen.

Figure 4 – Recording

The button switches its colour from red to green, and the headline indicates “Recording”.

When the recording is started, the time (lower left part of the screen) is reset to '0:00,0'.

Note: ISUCutterFS only records videos until the Recording status is changed again (button in the upper left corner), or if the hard disk is full. If a Scoring System is connected (see upper line in the screen that indicates the IP address), the Scoring System filters all commands. If this application does not respond, ISUCutterFS becomes inoperable and needs to be closed.

In order to create individual clips from the video material recorded, click the [Start / End] button. The current time is automatically entered in the list on the left part of the screen, when [Start] is selected. When clicking this button again, the clip is stopped, and the second time (time out mark) is entered in the list. Use the [Undo] button to reset the last time out mark. If a mark has been set too late, use the following steps to correct the mark:

If a Scoring System is connected, the left field beside the time marks is filled with the elements sent by the Expert.

The record can be stopped with the [Stop Recording] button. A dialog box is opened to confirm your selection. Press [Enter] for Yes or [ESC] for No.

4.3 Video Cutting

Switch to the cutting mode by clicking the [Stop Recording] button.

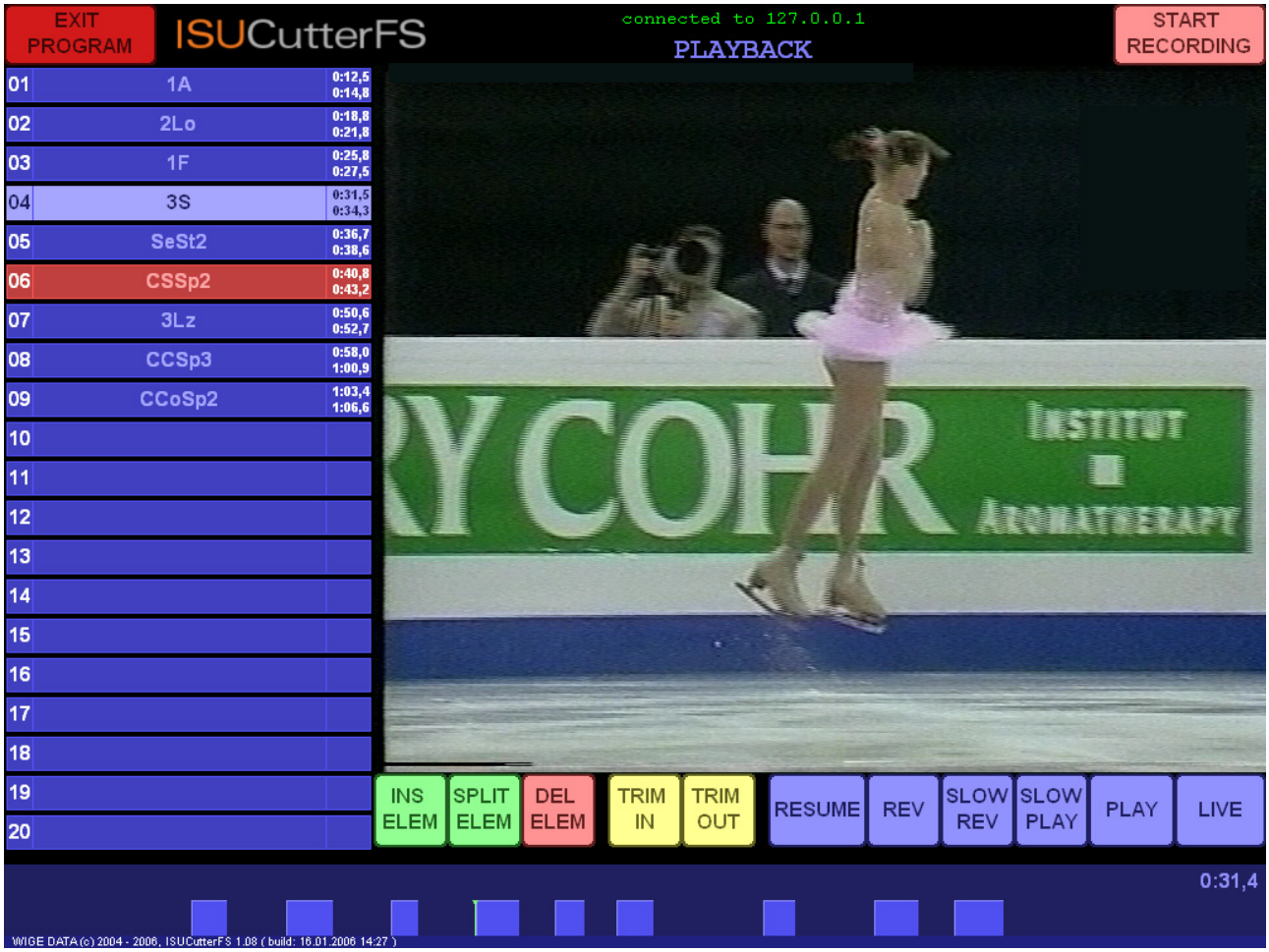

Figure 5 - Video Cutting

The lower part of the screen now provides buttons to insert, cut and delete clips. Below is the time bar and the clips contained therein.

Elements marked with a Review Request by the Expert, are highlighted in red allowing the video cut system operator to edit marked elements with high priority.

The Playback is started clicking on one of the clips in the list. The screen switches to the Playback mode:

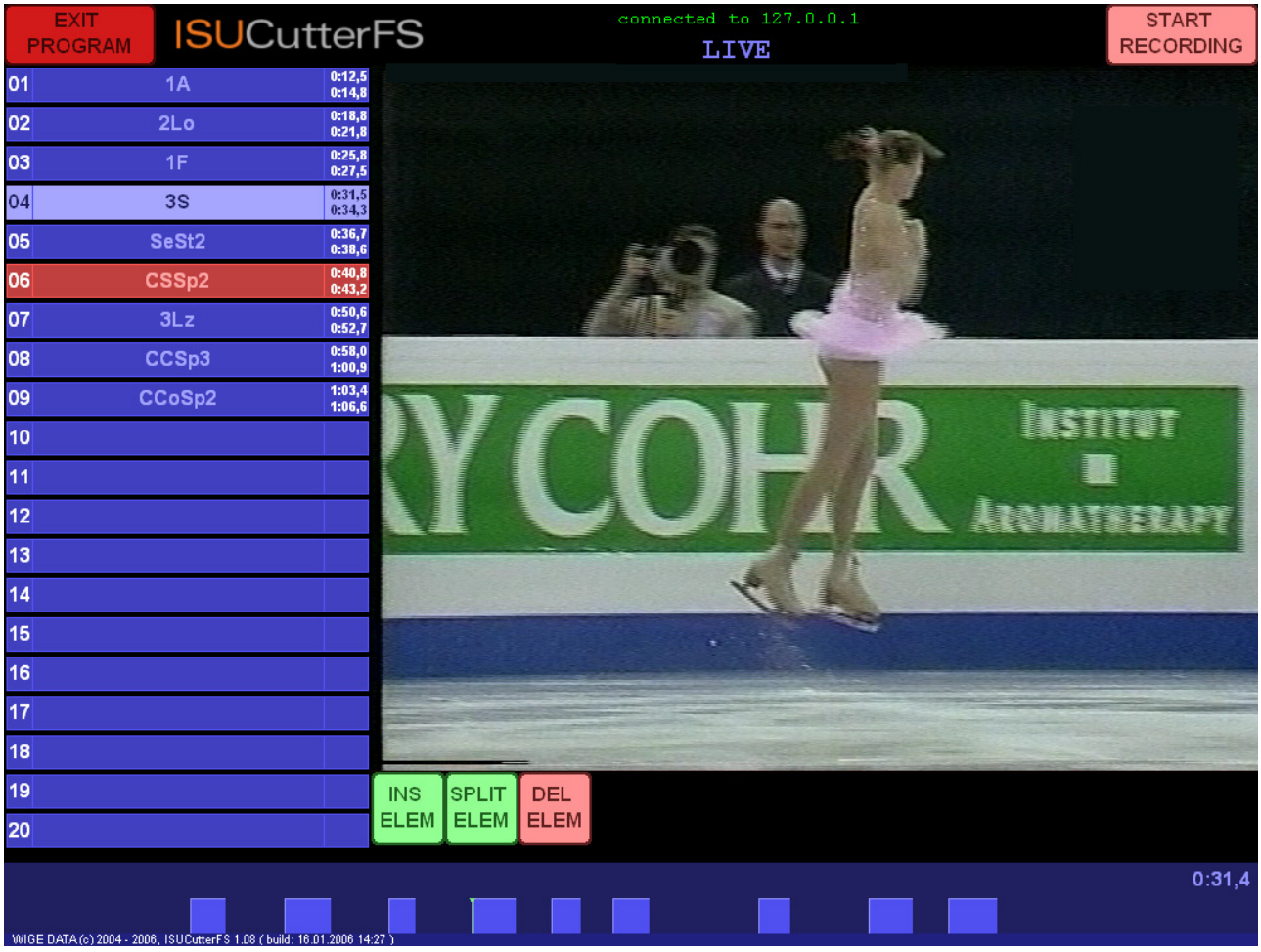

Figure 6 - Playback mode

4.3.1 Insert a clip

In order to insert a clip (for video cutting purposes) or an element (performance), first select a position in the clip list. Then define the time by clicking on the time bar. The application now switches from the current video picture to the indicated time in the video. The video is stopped. Now click on the [Ins Elem] button. The clip is now created. This clip now consists only of the still picture.

4.3.2 Changing the start and end position

The cutting marks are called In and Out marks. The following section describes how the start and end position can be modified afterwards.

4.3.3 Delete Clip

In order to delete a clip, select the desired clip from the left list. Click the [Del Elem] button. A dialog box is opened in which you have to confirm that you really want to delete the clip.

The cutting marks are now moved to the desired position.

Note: The naming of the Scoring system remains the same.

4.4 Commands

Button	Action
Esc	Exits the program or exits a dialog box
Enter	Confirmation of dialog box
Space	In the cutting mode: replays the selected clip In the recording mode: set new time in / time out marks
F1 / Ins	In the cutting mode: a clip is inserted
F2	In the cutting mode: the current clip is cut at the current position.
F3 / Del	In the cutting mode: the current clip is deleted. In the recording mode: the last cutting mark is deleted.
F4 / Pos1	In the Playback mode: A new In point is set.
F5 / End	In the Playback mode: A new Out point is set.
F6	In the Playback mode: The clip is stopped or continued.
F7	In the Playback mode: The clip is replayed in normal speed (rewind)
F8	In the Playback mode: The clip is replayed in half the normal speed (rewind)
F9	In the Playback mode: The clip is replayed in half the normal speed.
F10	In the Playback mode: The clip is replayed in the normal speed.
F11	In the Playback mode: back to the live picture
F12 / Break	Switch from the cutting to the recording mode and back.
Arrow up	In the cutting mode: selects the previous clip from the clip list.
Arrow down	In the cutting mode: selects the next clip of the clip list
Arrow left	In the Playback mode: switches to the previous screen. By keeping the Shift or/and Ctrl or/ and ALT button pushed, the scrubbing can be quickened.
Arrow right	In the Playback mode: jumps to the next image. By keeping the Shift or/and Ctrl or/and the Alt button pushed, the scrubbing can be quickened.
I	Re-initialize video
C	Re-connect to Caller / Expert
D	Close connection to the Caller and activate local work

Table 1 - Keyboard Shortcuts

5 PROGRAM CONFIGURATION

The ISUCutterFS folder contains the configuration file dvcutter.ini:

```
[dv]
  recframes = 50
  playframes = 50
  playdelay = 100
  file = temp.dv
  input = 0
  deinterlace = false

[isu]
  ip = 127.0.0.1
  port = 1111
```

In the [dv] section, all necessary parameters for the video processing can be set. Make sure you enter a different folder than the current program folder.

The partition or drive indicated in the file line needs to have at least 1GB of free disk space available.

In the example indicated above, the video file is automatically saved on the partition with the most disk space available. If no partition with at least 1 GB of free disk space is available, a dialog box appears to inform the operator accordingly.

Use [input] to enter “1“ for the second device found instead of “0“ for the first DV device. This setting is only of importance, if more than one DV is connected.

The corresponding video storage buffers are set in [recframes] and [playframes]. For the normal European video standard, 144Kb RAM are reserved per frame.

If the individual frames in PAL/NTSC are interlaced, activate [Deinterlacing]. However, the quality suffers considerably. The parameter is called [deinterlace] and is either set 'true' (for active) or 'false' (for inactive).

The connection to the scoring System is entered under [isu]. Our example shows the Scoring system (Expert) on the local PC with port 1111. For further setting details, please refer to the Quick Reference Guide.

6 FAQ AND TROUBLESHOOTING

6.1 The video screen of ISUCutterFS is grey

ISUCutterFS does not receive data from the first DV device.
- Check if the DV device is active.
- Is the device properly connected?
- Does it work properly?
- Is more than 1 DV device connected?

Reconnect the device(s) with the PC. Restart ISUCutterFS or re-initialize the setup by pressing I.

6.2 The video is frozen

Re-connect all devices with the PC. Re-start ISUCutterFS or re-initialize the setup by pressing I.

6.3 The video image is hitching or is not indicated properly

This issue may be caused by performance problems:
- Hard disk may be full or fragmented
- Processor too slow; other applications may impact the performance.
- The graphics card cannot show the video picture in real time.
- No DirectX 8.1 or higher installed
- Mouse cursor shadow activated

6.4 ISUCutterFS cannot be connected to the Scoring System

Check if:
- All network components are connected and working properly
- The network has been set up correctly, i.e. if the Scoring PC is connected to the network
- If the Scoring System is running properly
- If the ISUCutterFS contains the correct IP address and the correct port

6.5 Video incomplete or only a still picture available

Check if:

- Hard disk full or fragmented (You need at least 1GB free disk space)

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7.2 Versions

Version	Date	Modifications since last version
1.0	10/06/10	Initial version
1.1	09/02/05	Partitioning req. added, hardware reqs. modified
1.2	17/01/05	Version 1.08
1.3	27/10/06	Layout modification
1.4	20/05/11	Layout changes
1.5	06/08/12	Installation changes (ISUScore2FS with ISUCutterFS option)

NOTES

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