

# SWITCH*cast* User Manual

Version 4



**SWITCH**  
Serving Swiss Universities

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# Introduction

Welcome to SWITCHcast – the easy to use video management software for lectures. Please read the following three pages first. They contain important information about the software and hardware requirements.

## Cast your lecture in four steps

**Step 1** (page 7) shows you how the actual recording works.

**Step 2** (page 8) explains how to upload a movie from your collection and make it available to your viewers.

**Step 3** (page 9–11) tells you how to improve the quality of your movie and gives some hints on the cutting and editing options.

**Step 4** (page 12) explains how to generate different formats of your movie and how to publish it on the Internet.

# Technical requirements

The following components are necessary if you want to record a lecture using the SWITCHcast Recorder software. Please note that **we cannot guarantee our support if you use other hardware or software.**

<b>Hardware</b>	<p>Apple Mac computer. These models are supported: <b>Mac mini</b>, Intel Core 2 Duo (2.53 GHz and up), 4 GB RAM, FireWire 400/800 port; <b>MacBook Pro</b>, Intel Core i5/i7 (2.4 GHz and up), 4 GB RAM, FireWire 400/800 port; <b>iMac</b>, Intel Core i5/i7 (2.66 GHz and up), 4 GB RAM, FireWire 400/800 port; <b>Mac Pro</b>, Intel Xeon (2.66 GHz and up), 4 GB RAM, FireWire 400/800 port</p> <p>Firewire (H)DV Camera and tripod. USB cameras are NOT supported at the moment. Our partner for video equipment helps you by finding the appropriate camera model for your needs. Please contact Herr Buchmann (Senior) at <a href="http://www.buchmann.ch">www.buchmann.ch</a>, or call him at 0848 000 333. Or just contact the helpdesk.</p> <p>Microphone or other audio source, e.g. line out signal from your local hi-fi rack</p> <p>Epiphan device to capture the slides from another computer (e.g. the presenter's laptop). Only use one of the following devices: VGA2USB LR, VGA2USB HR, VGA2USB Pro or DVI2USB.</p> <p>Note that the <b>white MacBook (Spring 2010)</b> and <b>MacBook Air</b> series do not have a FireWire port. All these models are <b>NOT supported</b>. Note that the <b>13" MacBook Pro</b> has a shared Audio Line-in and Line-Out port. If you use it as line-in port, you have to select the options in the system preferences, sound section under input.</p>
<b>Software</b>	<p>Mac OS X 10.5.8 (or higher) or Mac OS X 10.6.8 <b>Note:</b> OS X 10.7.x is currently not supported. We're currently working on a solution and hope to have this resolved very soon. Until then, we don't recommend using 10.7. If your new Mac was preinstalled with 10.7 please call us for further assistance.</p> <p>QuickTime Player 7.6 (or higher)</p> <p>SWITCHcast Recorder 2.5.5</p> <p>Epiphan driver (if your setup includes an Epiphan frame grabber)</p>
<b>Optional equipment</b>	<p>You can extend your hardware setup with the following components:</p> <ul style="list-style-type: none"><li>- Video mixer for multiple camera support</li><li>- VGA switcher for multiple presenter laptop support</li><li>- Scan converter to record analog video sources (Composite and S-Video signals)</li><li>- DVD/Hard disk video recorder or a notebook to make full quality backups of the source video and audio material</li></ul>
<b>Recommendations</b>	<p>Allow enough time for the initial setup and <b>make several tests before the real event/lecture takes place</b> to get familiar with the product</p> <p>Keep enough free space on your harddisk drive. You will use approx. 1.5 GB per hour</p>

# Installing the software

**SWITCHcast** > cast

Paola Wieting Logout Org admin view Admin view

**Channels**

- Active
- Test
- Expired
- Create new
- Statistics

**Information**

- Downloads
- Technical requirements
- Video tutorials
- Documentation
- Best practice
- Conditions

**Events**

- Userforum, 28.08.2009**
- Infoday, 03.02.2009
- Workshop, 22.08.2008
- Infoday, 26.08.2008

**Support**

- Contact
- About

**SWITCHcast - The world as your lecture theatre**

SWITCHcast is a sophisticated video management system, by means of which lecturers can very simply record their lectures, upload them to a central server, post-process them and make them available to students via the internet - both as online streams and as downloads for offline use.

**1 Record**  
The video and audio data and the lecture slides are recorded locally using a desktop application.

**Recorder 2.2**  
[Download Now!](#)

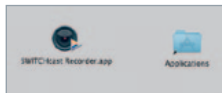
**2 Upload**  
Optionally you can upload movies from your collection via web to the server.

**3 Edit**  
You can organise and postprocess your movies using a web cutting tool.

**4 Publish**  
The data is made available for consumption on the internet automatically.

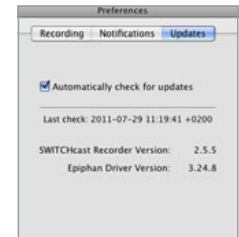
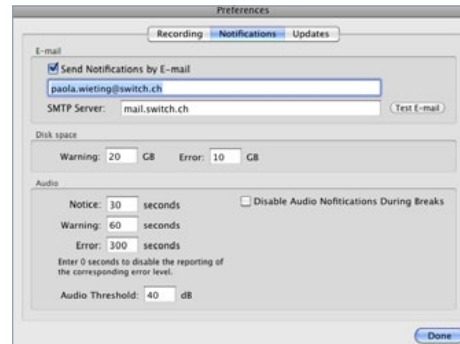
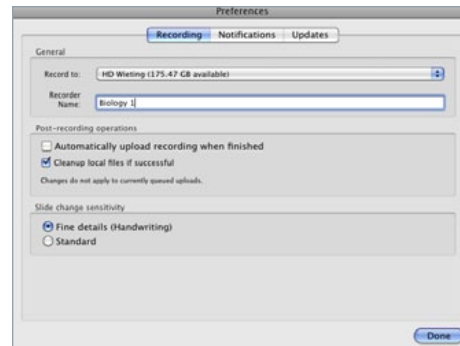
Go to <http://cast.switch.ch> and login with your AAI credentials.

Go to step 1 (Record) and press on 'Download now' to start the installation of the recorder.



Once the disk image has been downloaded and opened click on the SWITCHcast Recorder item and while still pressing down the mouse button, drag it into the 'Applications' folder.

Configure the preferences of the SWITCHcast Recorder. The configuration has to be done before you start recording.



# Creating a channel

**SWITCH** > cast

Paola Wieting Logout Org admin view Admin view

**Channel Setup** > Basic Setup > Customizations > Terms of use > Confirmation

**Channels**  
Active  
Test  
Closed  
Expired  
Create new  
Statistics

**Preferences**  
Personal

**Information**  
News, 22.02.2011  
Downloads  
Technical requirements  
Video tutorials  
Documentation  
Best practice  
Conditions

**Events**  
Past events

**Support**

**Channel name**


**Channel author**  
  
Name that appears in the "author" tag in the RSS feed. Example: Prof. Albert Einstein

**Discipline**  
Please select...  
Please select...  
Please select...

**Access rights for the spectators**  
Public: accessible to everyone on the Internet  
Please select...

**License**  
Creative Commons: Attribution-Noncommercial-No

Let's get started by opening the Recorder you've just installed.

Choose the  icon to create a new channel.

Login with your AAI credentials.

Choose a meaningful name for your channel.

E.g. the name of your lecture or the title of the event to be recorded.

Choose a discipline and define the access rights for the spectators:

- Public: accessible to everyone
  - Federation: accessible to all members of the SWITCH $^2$  federation, i.e. all Swiss Universities
  - Organisation: accessible only to members of your own university
- Click on 'next'

If you like you can add your own logo here.

Click on 'next'


Accept the 'Service Conditions' and select the test checkbox if it is just for testing.

Click on 'next'

Your channel will be created. If you go to 'Go to my channels', it will show up in your list.

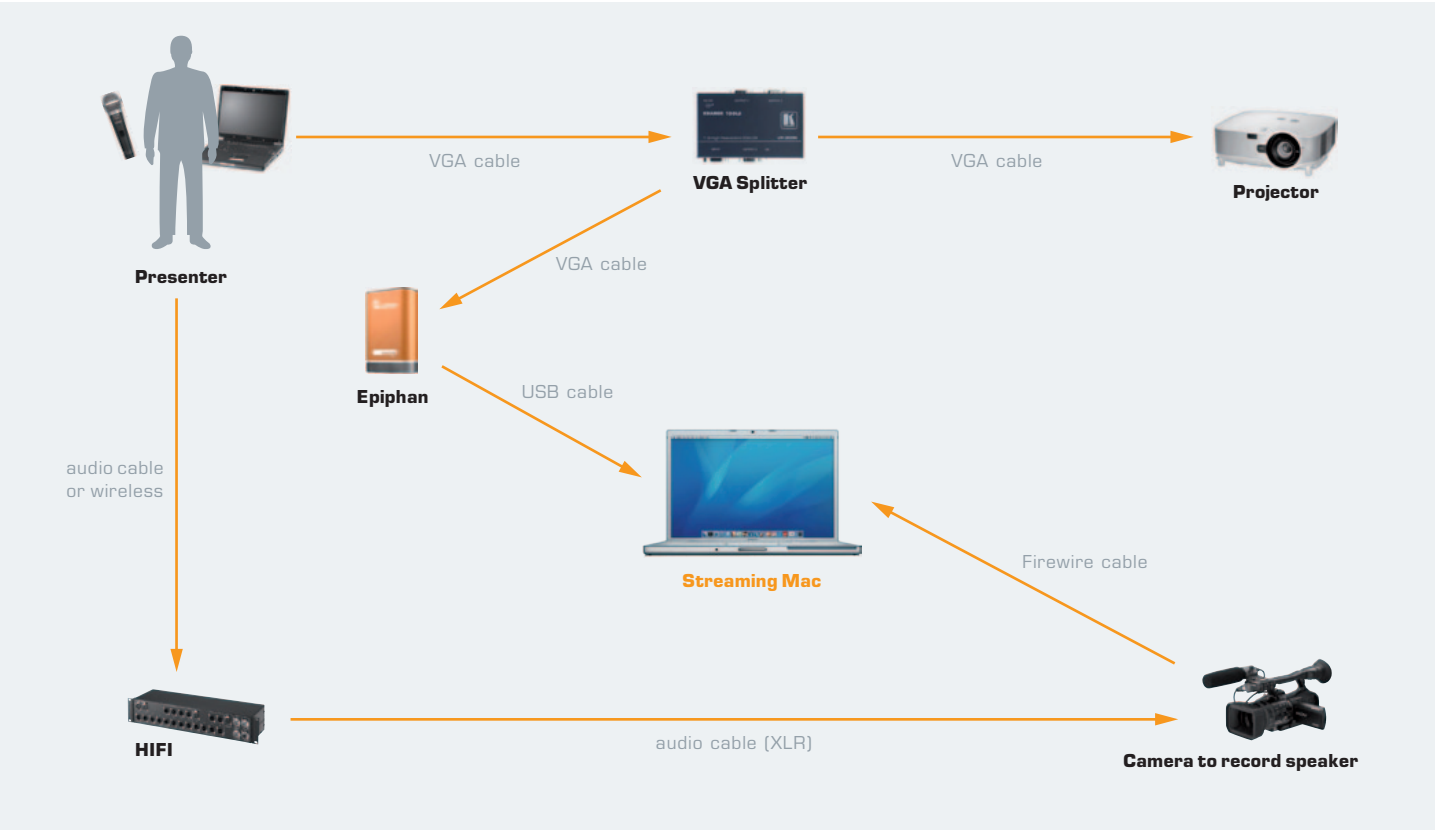
# Grant permissions on your channel



If you want to extend the producer rights to someone else click on the lock   
Find the person you are looking for and activate the checkboxes.

Click on 'Save'


# Lecture



# 1 Recording


## Record an event


Click on the SWITCHcast symbol under 'Applications' to start the software.

Click on the  icon to import the channel you have created.

Login with your AAI credentials.

Select the channel of your event and click on 'Get'.


Click on the red icon 'New Recording'  to prepare the recording.

Select camera and microphone in the drop down menu under the left picture (test the sound by clicking here ).  
If for some reason the sound gets lost during the recording, you will get a warning like in the picture below.

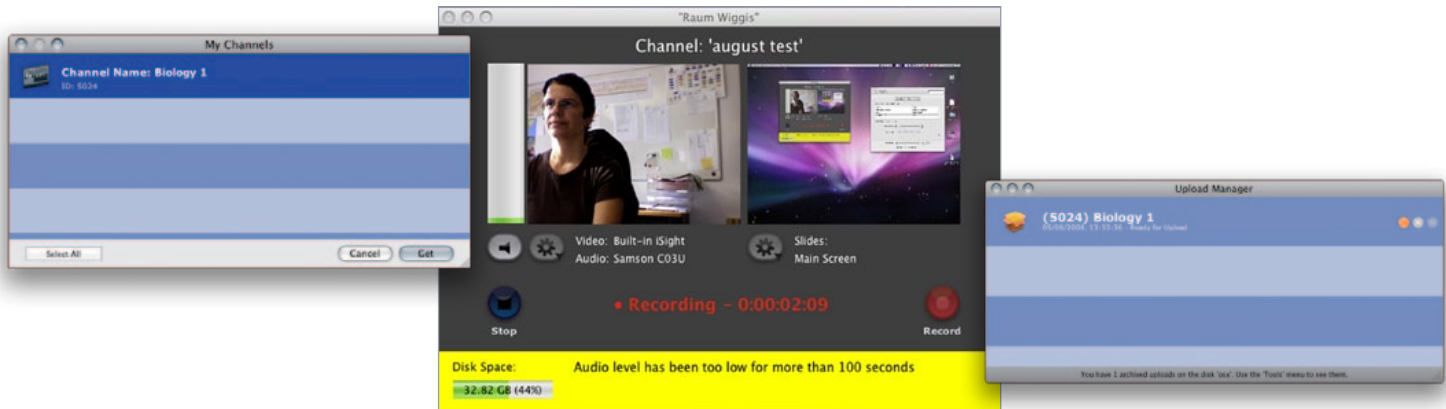
Select the Epiphan grabber as the source for the slides recording under the right picture.

Click on 'Record' when the event starts.

Click on 'Stop' when the event is finished.

In the Upload Manager, click on the orange circle  to upload the recording (you can atomize this step in the preferences of SWITCHcast).

The recording will be added to your channels. If you go back to the website and select the active channels, it will show up in the list of recordings.





# 2 Uploading


## Upload a movie from your collection

**File formats:** Quicktime, AVI, DIVX, FLV, MKV, GVI, VP6, VFW, WMV


**Video types:** MS-MPEG4 v1 & v2, DivX, 3ivx, H.264, Sorenson H.263, FLV/Sorenson Spark, FSV1, VP6, H263i, VP3, HuffYUV, FFFVhuff, MPEG1 & MPEG2 Video, Fraps, Snow, NuppelVideo, Techsmith Screen Capture, DosBox Capture

**Audio types:** Windows Media Audio v1 & v2, Flash ADPCM, Xiph Vorbis (in Matroska), and MPEG Layer I & II Audio, True Audio, DTS Coherent Acoustics, Nellymoser ASAO

**AVI support** for AAC, AC3 Audio, H.264, MPEG4, VBR MP3

Go to your channels. 

Select the channel where you want to upload your movie.

Click on the icon  and 'Browse' to search for the movie on your hard disk. Click on 'Upload'.

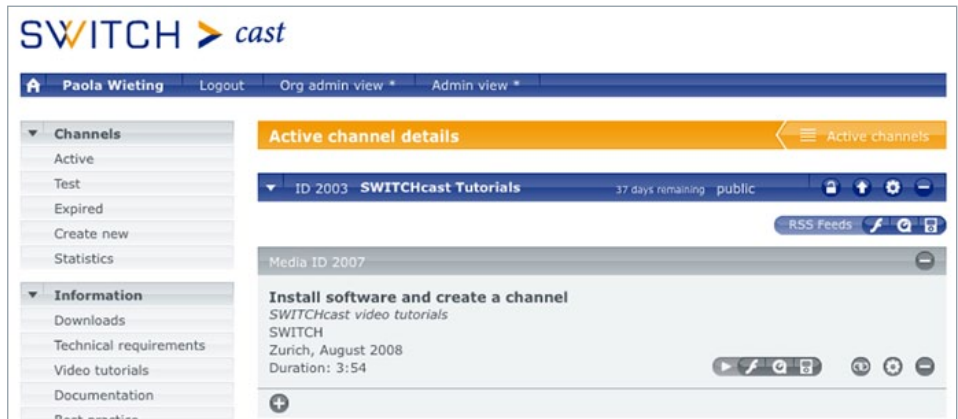
If no more changes are necessary for your movie, you can automatically export and publish it by clicking the checkbox 'Auto-publish'.

If you want to edit your movie, please read the next two chapters for more information on this matter.


The recording will be added to your channels.

If you go back to the website and select the active channels, it will show up in the list of recordings.

# 3 Editing basics



## Tag, cut & chapterize

Select the channel you want to edit. Click the icon  to enter the cutting tool. There you'll find different tabs. Go through the following steps one by one.

**Tag the Clip** – A clip is the entire movie you are producing.

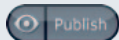
This is where you can enter detailed information for your clip like title, subtitle, presenter, location & date.

**Cut the Scenes** – Every clip consists of a set of scenes and each part of a movie you want to appear in your final clip is called a 'scene'.

In this tab, you can cut the scenes you want to keep by setting the beginning (in) and the end (out) of a scene.

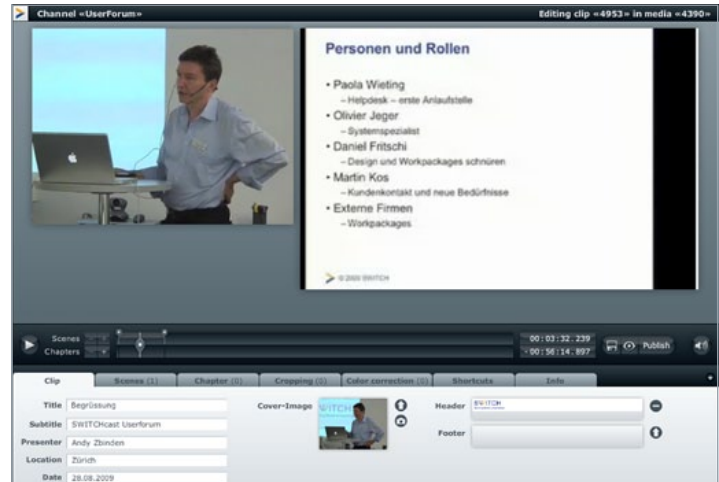
**Define Chapters** – Chapters are quick links to a given point in you clip (as example you set a chapter every time when the topic changes).

Do create chapters by dragging the slides in the timeline to its beginning (in) and give it an appropriate name.



You want a quick **preview** of your clip? Click on the 'eyeball icon'.



You want to **produce** different formats of your clip? Click on 'Publish'.




# Editing advanced

## In the 'clip' tab

You can insert or change header and footer.

- In this case, press the  to import your new logo or press on the  to remove the actual header or footer
- Save your changes

You can also replace the picture of the cover image if you are not happy with it. The cover image is produced automatically. This is always the first frame on your scene.

- In this case press the  to import your new picture.
- Save your changes


Note: Please note that the size of the header and the footer should be as follows:

**Header** Height between 80 and 120 pixel  
Width 900 pixel when you have video and slides  
Width 400 pixel when you only have video

**Footer** Height approximately 50 pixel

## In the 'chapter' tab

Chapters behave like bookmarks inside your video and allow the viewer to quickly navigate to a specific topic.

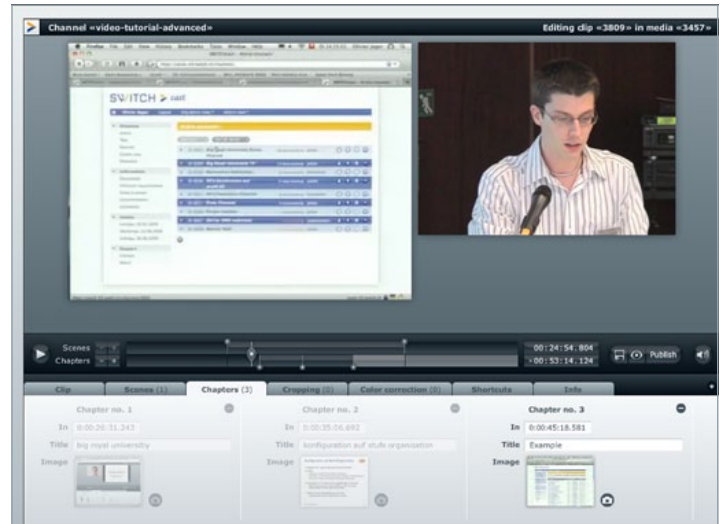
- Activate chapter tab.
- Move the slider to the point where you like to insert the chapter and press on the . Give a title.
- Proceed in this way for all the other chapters.  
Please note that too many chapters are not very user friendly.

For every chapter you automatically get a picture of a slide (or the presenter video if no slides are available). If you prefer a different picture, drag the slider to a different position and click on the camera icon to create a new chapter image.

This picture will be shown in the chapters overview of the produced version.


Save your changes.


**Hint:** To set your chapter precisely where you want, you can move the slider with the arrows keys on your keyboard. This allows you to skip from frame to frame.



### In the 'cropping' tab

You can crop your slides. Do you have a black border that bothers you? Is there a part of the screen you do not want to show to your audience? You can cut away the parts of your slides you wish to hide.

Move the slider to the slide you wish to edit. Click on the  and change the cropping area by dragging the corners accordingly. The light area indicates the part of the slide that will be shown.

To move the whole cropping rectangle around within the slide, drag the  in the middle.

Repeat this step if necessary. The change will only take effect in the slides which are within the selected part of the timeline.

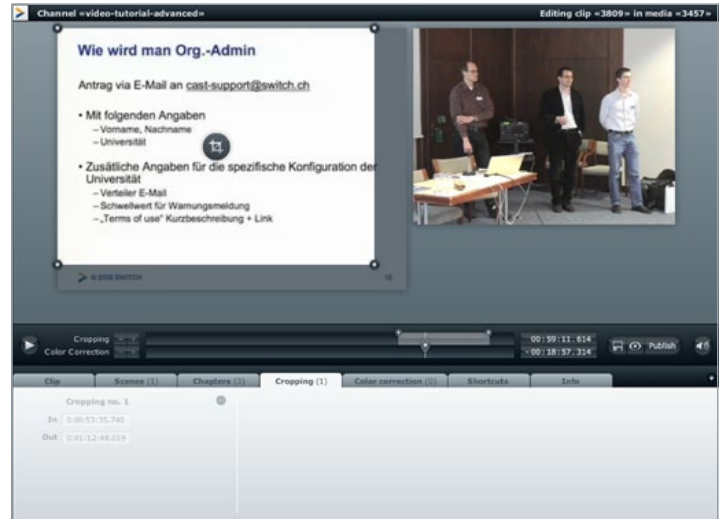
You will see the result only after publishing the clip. The active area will be enlarged to fit inside the slides video.

If the aspect ratio differs, the remaining border will be filled with a solid white color.

Don't forget to publish now the recording.

### In the 'shortcuts' tab


You will find all necessary shortcuts for the cutting tool. By using those shortcuts you will be able to work quicker and precisely.

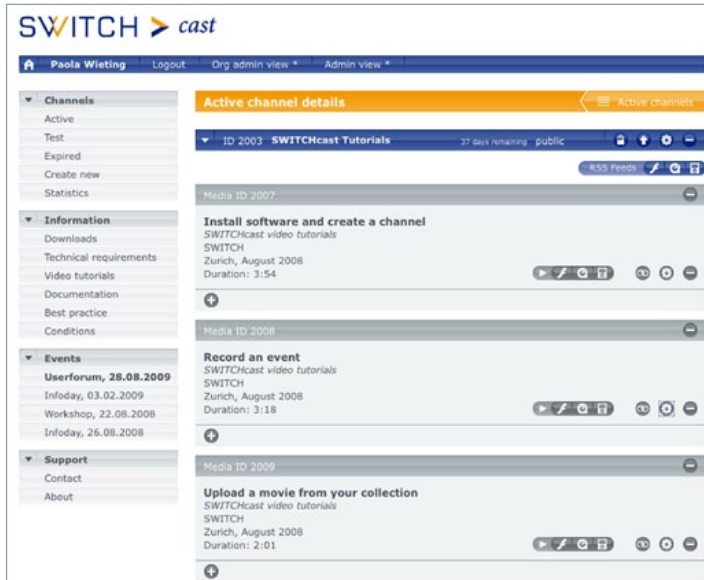


Clip	Scenes (1)	Chapters (2)	Cropping (3)	Color correction (4)	Shortcuts	Info
Space bar					n	Focus next chapter/scene
← / →					p	Focus previous chapter/scene
Shift + ← / →					Shift + n	Set playhead to start/end of next chapter/scene
s					Shift + p	Set playhead to start/end of previous chapter/scene
c					Backspace, Delete	Delete focused element (scene or chapter)
i					Enter, Return	Press "Ok" button in dialog boxes
o					Esc	Press "Cancel" button in dialog boxes
					SHIFT + mouse drag	Constrain aspect ratio while cropping the slides

# 4 Publishing

You have different possibilities to publish your recording:

Click on  to get a list of all available URLs for publishing your clip.



The screenshot shows the SWITCHcast web interface. The top navigation bar includes the SWITCHcast logo, user name 'Paola Wieting', and links for 'Logout', 'Org admin view', and 'Admin view'. A left sidebar contains a 'Channels' menu with options like 'Active', 'Test', 'Expired', 'Create new', and 'Statistics'. Below this are sections for 'Information' (Downloads, Technical requirements, Video tutorials, Documentation, Best practice, Conditions) and 'Events' (Userforum, Infoday, Workshop, Infoday). The main content area is titled 'Active channel details' and shows information for 'ID 2003 SWITCHcast Tutorials'. It lists three media items: 'Install software and create a channel' (Media ID 2007), 'Record an event' (Media ID 2008), and 'Upload a movie from your collection' (Media ID 2009). Each item includes a title, description, location, date, and duration, along with playback controls.

Select the URL you prefer and integrate it in your homepage or send it to your viewers by e-mail.

To see what's behind the URL click on 'Go'.

You can either publish a single clip or all the clips in this channel at once.

RSS feeds starting with 'itpc' will be automatically subscribed in iTunes.

If you want the clip to appear completely embedded in the homepage use the last two URLs.



The screenshot shows a dialog box titled 'URLs to be used in web pages, e-mail, iTunes, <a href="...">'. It contains several rows, each with a label and a text input field containing a URL, followed by a 'Go' button. The rows are: 'Clip (box layout with all formats)' with URL 'http://pcast-02.switch.ch/vod/clips/lxpbojcds/link\_box'; 'Clip (Flash)' with URL 'http://pcast-02.switch.ch/vod/clips/lxpbojcds/flash.html'; 'Clip (QuickTime)' with URL 'http://pcast-02.switch.ch/vod/clips/lxpbojcds/quicktime.mov'; 'Clip (iPod)' with URL 'http://pcast-02.switch.ch/vod/clips/lxpbojcds/ipod.m4v'; 'All clips in this channel' with URL 'http://pcast-02.switch.ch/vod/channels/c6xjmpkho'; 'RSS feed (Flash)' with URL 'http://pcast-02.switch.ch/vod/channels/c6xjmpkho/flash.rss'; 'RSS feed (QuickTime)' with URL 'itpc://pcast-02.switch.ch/vod/channels/c6xjmpkho/quicktime.rss'; and 'RSS feed (iPod)' with URL 'itpc://pcast-02.switch.ch/vod/channels/c6xjmpkho/ipod.rss'. Below this is a section titled 'URLs for embedding into web page, <script src="...">' with two rows: 'Embed clip (layout with all formats)' with code '<script src="http://pcast-02.switch.ch/vod/clips/lxpbojcds/link\_box.js'; and 'Embed all clips in this channel' with code '<script src="http://pcast-02.switch.ch/vod/channels/c6xjmpkho.js" ty'. A 'Close' button is at the bottom left.

# Glossary

<b>Channel</b>	Several clips are bundled in a channel. A channel usually comprises a semester course, a lecture series or a congress.	<b>Scene</b>	A scene is a sequence of the recording you want to keep for publishing. If your event has a break in the middle, set a scene for the first part and another scene for the second part. This means everything outside of a scene is not visible for your spectators.
<b>Chapter</b>	A clip can be split up into several parts (called chapters), which the user can navigate to directly. This helps in structuring longer recording events.	<b>Shortcuts</b>	Using shortcuts make your work easier. As example: To define the begin of a scene just press 'i' or press 'o' to set the end of the scene. You find the list of the existing shortcuts in the cutting tool under the tab 'shortcuts'.
<b>Clip</b>	A clip is the final product your spectators can watch. Each clip is composed of one or more scenes.	<b>SWITCHcast cutting tool</b>	From your channel list on the <a href="http://cast.switch.ch">http://cast.switch.ch</a> site, you can enter the cutting tool to apply the finishing touches on your recording (example: cutting parts, setting chapters, publishing).
<b>Edit</b>	At the end of a recording session you get a clip. This raw file might still contain parts, which you don't want to have in the final version. Using the cutting/edit tool, you can get rid of unnecessary sequences; you can create chapters and even cut the clip into several parts.	<b>SWITCHcast Recorder</b>	With the SWITCHcast Recorder software installed from <a href="http://cast.switch.ch">http://cast.switch.ch</a> , you will be able to record your lecture with audio, video and slides.
<b>Epiphan</b>	This is a frame grabber, which is needed for automatically capturing the slides from the presenter's computer.	<b>Upload a movie</b>	With this tool you can upload a movie you already have in your collection and make it available to your viewers.
<b>Event</b>	Event is used to describe the 'occasion' you want to record, like a lecture, a presentation or a keynote.		
<b>Lecture</b>	See event		
<b>Media</b>	Medias are the raw material of your recordings located in your channel after uploading them.		
<b>Movie</b>	An audio and video recording of an event (in the most cases the presentation slides are captured from another computer).		
<b>Publish</b>	Once you have uploaded a movie into your channel, you probably want to share it with your viewers. You can post the link to the channel on your website, you can send it per email or you can create a podcast to distribute to your audience.		
<b>Recording</b>	An audio and video recording of an event (in the most cases the presentation slides are captured from another computer).		



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