How to process transparencies

Michaela Marx, DESY, Hamburg, Germany

JACoW Team Meeting, November 2023, HsinChu, Taiwan

Processing slides

... means producing PDF files of transparencies

The aim of the slides processing editor is to produce JACoW compliant PDF files of the presentations for inclusion in the proceedings.

You do not have to edit the type setting or layout, but you still have to make sure of the following:

- all fonts must be embedded
- all missing characters should be fixed
- slides should be free of overlapping issues
- multimedia content (videos, animated gifs) should be embedded

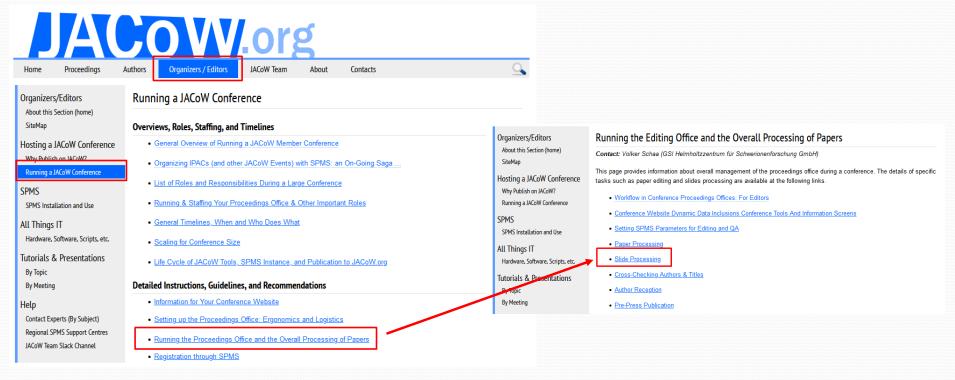
Contents of this talk

- Documentation (JACoW wiki) and Prerequisites
- SPMS environment (download/upload)
- Processing PDF slides (check and fix missing fonts)
- Processing PowerPoint slides (how to fix overlaps)
- how to convert slides to PDF
- extracting media files from a PowerPoint presentation
- embedding videos and animations in PDF files
- trouble-shooting and answering questions

Processing slides: Documentation

Processing slides: Documentation

Guidelines, tutorials and instructions are available on the JACoW-Wiki pages:



https://www.jacow.org/JTM2016/ProcessingTransparenciesEmbeddingAnimations

Processing slides: Prerequisites

How to prepare your workstation in the proceedings office



The conference organizer is responsible for the PC set-up, but for processing slides some extra work is required.

Processing slides: Prerequisites

What to do before you start

- ▶ install video transcoders and other useful software products (Handbrake, Virtual Dub, Convertio)
- **▶** install Lightshot (tool for making screenshots)
- ▶ install PPspliT (PowerPoint Add-in)
- **▶** modify PowerPoint print options: print slides in High Quality
- install Macintosh Fonts on a Windows PC
- ▶ install the latest JACoW.joboptions file (needed for Acrobat distiller and Adobe PDF printer), JACoW-12.joboptions, November'23
- ▶ Prerequisites are available in detail on the JACoW-wiki pages:

https://www.jacow.org/JTM2016/Processing Transparencies Embedding Animations

Processing Transparencies & Embedding Animations

Processing Transparencies - What to do before you start, updated by Michaela Marx (November 2023), Prerequisites - What to do before you start 🖉

Processing slides:
The presentations management in the JACoW-SPMS

Processing slides: SPMS privileges

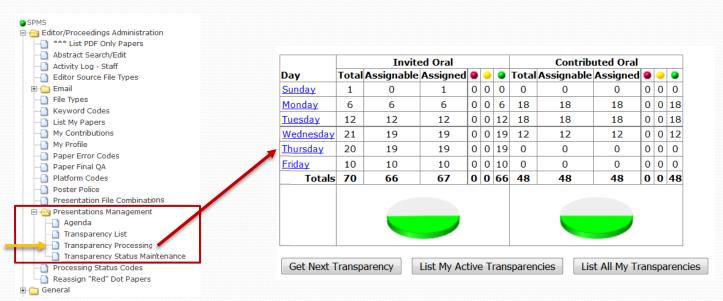
In the SPMS (Scientific Program Management System)

- the conference administrator needs to setup the access privileges for slide editors
- after login to the SPMS, check the boxes named
 'Transparency Editor' and 'Transparency Processing'

Please select the privileges you want enabled	*******
✓ Conference Administrator✓ Conference Editor	
✓ Editor QA ✓ Transparency Editor	
✓ Transparency Processing Submit	

Processing slides: the SPMS environment SPMS

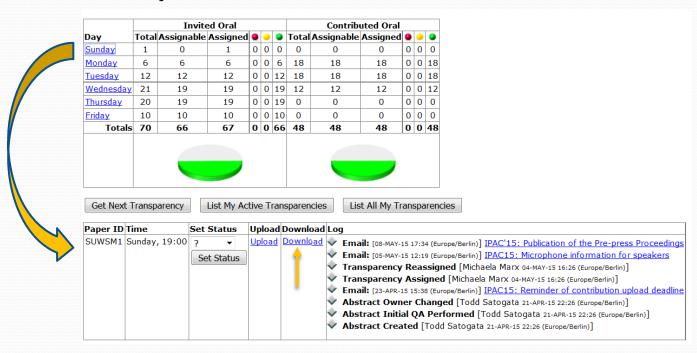
Editor/Proc. Admin Presentations Management Transparency Processing



Note: slides should only be processed after the talk has been given to make sure that it is the final version without last minute changes.

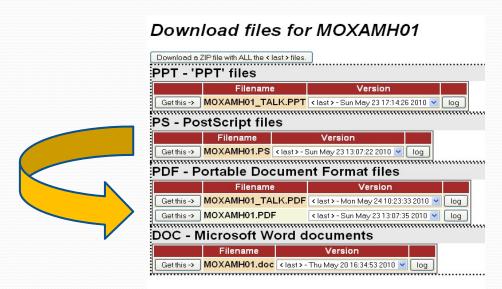
Processing Slides: the SPMS environment

select a day to download the slides



Processing Slides: download screen

The download screen shows all files which have already been uploaded to the database by the author or by an editor.

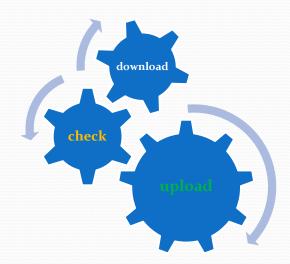


► talks are named *_TALK.PPT, *_TALK.PPTX, *_TALK.PDF, *_TALK.ODP

ODP = open document presentation (Open Office)

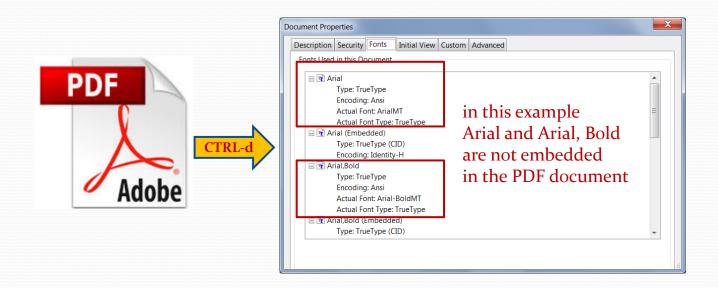
Processing Slides: Slides in PDF format





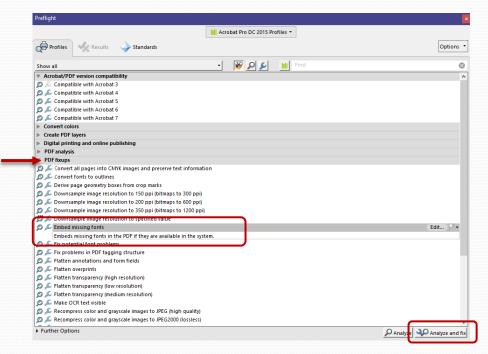
Processing PDF Slides

- ▶ If the author uploaded a PDF slides file ... great ☺
- download the PDF slides file, do a visual inspection and check for missing fonts in Acrobat Pro with CTRL-d



Processing PDF slides: how to embed missing fonts

- in Acrobat Pro (example is version 2017) do SHFT-CTRL-x
- look under PDF fixups for 'Embed missing fonts' and click the 'Analyze and fix' button

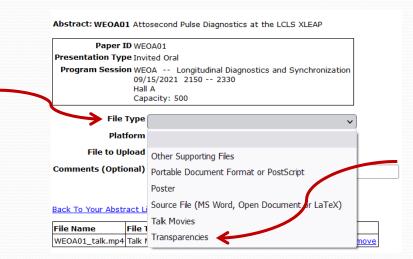


▶ save the PDF file, upload it to the database, leave a comment – and you are done ◎

Processing slides: how to upload a slides file in the SPMS

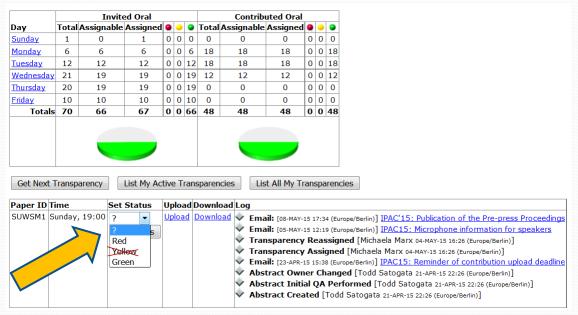
click the Upload button and select file type 'Transparencies'





Processing slides: status and comments

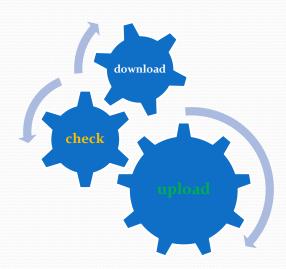
▶ after the upload, set the processing status (red or green), and leave a comment



- ► GREEN: Perfect! Leave a nice comment and you are done ©
- RED: There is a problem and further action is required!
 Describe the problem in the comment field –
 an email with your comment will be send by the SPMS to the speaker

Processing Slides: PowerPoint slides





Now the challenge: processing PowerPoint slides

If the author uploaded PPT (PowerPoint) slides only ...

- download the PPT slides file, start the slide show (press F5) for a visual inspection and check for:
 - overlapping images or text
 - bad or missing characters
 - animations and embedded videos
 - the slides format (4:3, widescreen or whatever)
- in case everything looks fine, convert the PPT slides to PDF and upload them to the database
- in case you detect overlaps or animations some extra work is needed before the slides can be converted to PDF

Processing slides: Fixing overlaps with PPspliT



Fixing overlaps using PPspliT

- the PowerPoint Add-in named PPspliT is used to separate overlapping content
- ► the installation of the Add-in is described in the Prerequisites on the JACoW Wiki pages: https://www.jacow.org/JTM2016/ProcessingTransparenciesEmbeddingAnimations

Processing Transparencies & Embedding Animations

Processing Transparencies - What to do before you start, updated by Michaela Marx (November 2023), Prerequisites - What to do before you start @

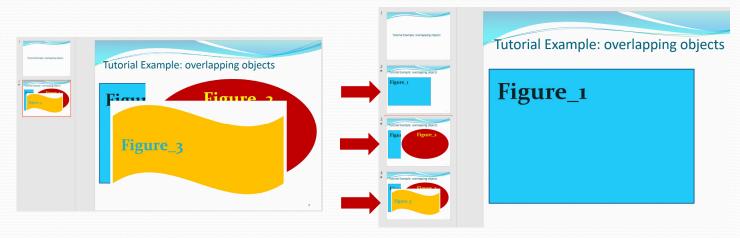
• after the add-in has been installed PowerPoint offers a new tab named PPspliT.
To run the add-in select the slides where you want to split the overlapping content and hit the Split animations button on the left.



21

21

Fix overlaps using PPspliT: Example



- in this example the macro separated the overlaps and split one slide into three
- > save the split slides as <filename>_TALK_split.pptx
 and do not forget to upload the split file to the SPMS as well as the converted PDF file

Processing slides: How to convert PowerPoint slides to PDF?

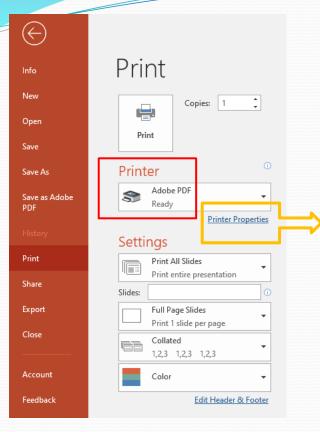


Processing slides: how to convert PPT to PDF

There are different ways to convert PPT slides to PDF – but there is **only one way recommended**:

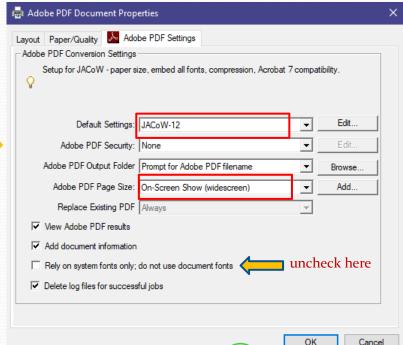
- print the slides to the Adobe PDF printer
- only this way makes sure to embed all fonts
- **Exception**: Use **Save As type PDF** when printing to Adobe PDF failed, e.g. when images look strange or colors have changed

Print the slides to the Adobe PDF printer for conversion to PDF



Printer Properties

- select the JACoW-12 options
- choose the correct Adobe PDF Page Size based on the slides format



- ▶ the JACoW-12 options make sure that all fonts will be embedded
- For the widescreen format select On-Screen Show (widescreen) from the list of available page sizes

Processing slides: How to adjust the slides format

Processing slides: different formats

Standard (4:3)



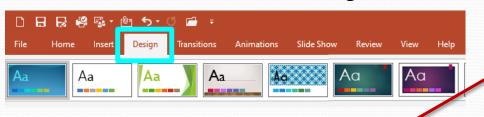
Widescreen (16:9)



Custom Slide Size



 \triangleright to check the format \rightarrow select Design \rightarrow Slide Size



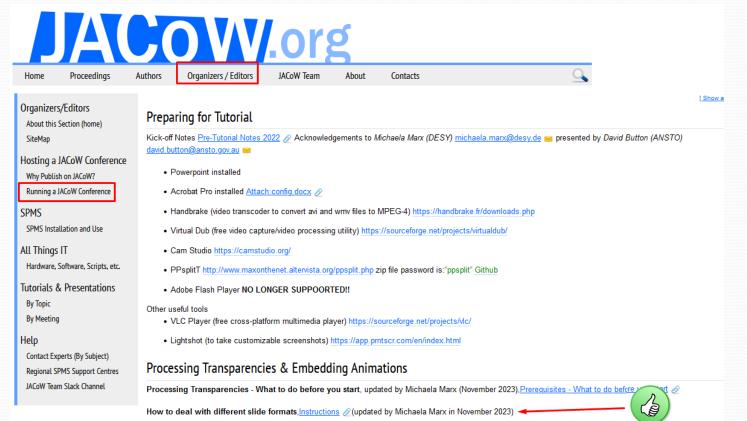
the slide size is highlighted in grey, if not, click on **Custom Slide Size** to get the size



Processing slides: how to deal with different formats

look at the JACoW-Wiki pages for further instructions:

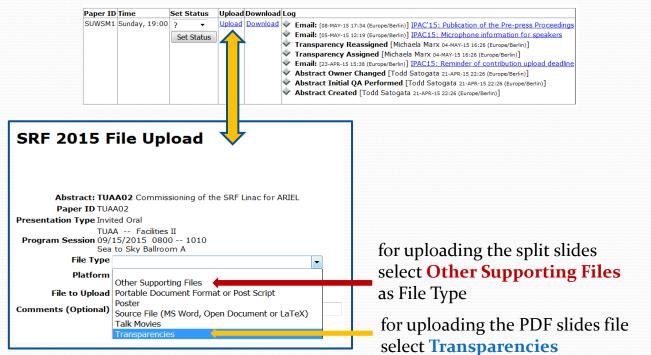
https://www.jacow.org/JTM2016/ProcessingTransparenciesEmbeddingAnimations



Processing slides: File upload in the SPMS

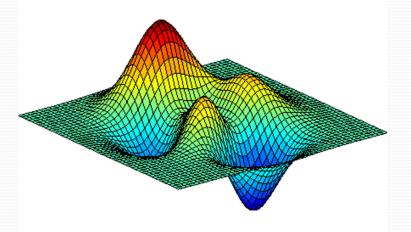
SPMS File upload: upload both, pdf and split slides

- save the new PPT file with split objects as Filename_TALK_split.pptx
- convert the PPT slides to PDF and save as Filename_TALK.pdf
- upload both files to the database



Processing slides: Embedding videos and animated gifs in PDF files





Embedding videos and animations in PDF files

If the PowerPoint presentation contains videos or animated gifs ...

- extract the media files
- transform video files (*.avi) to MPEG-4 (*.mp4) which is the supported Acrobat video format
- > transform animated gifs to MPEG-4 directly with Convertio
- convert the PPT slides to PDF by printing to Adobe PDF



▶ after all these steps, open the PDF slides file and embed the videos and animations

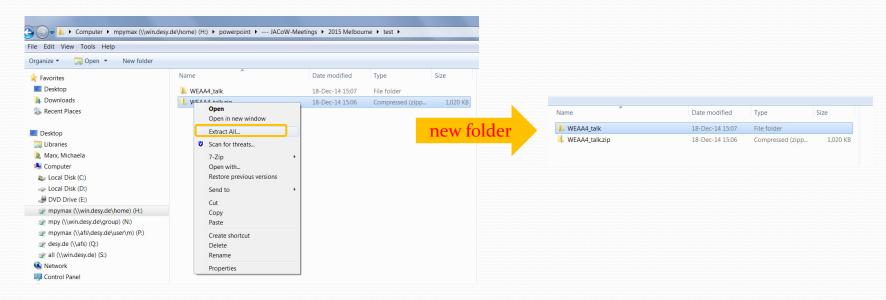
Processing slides:

How to extract media files like videos and animated gifs from PowerPoint



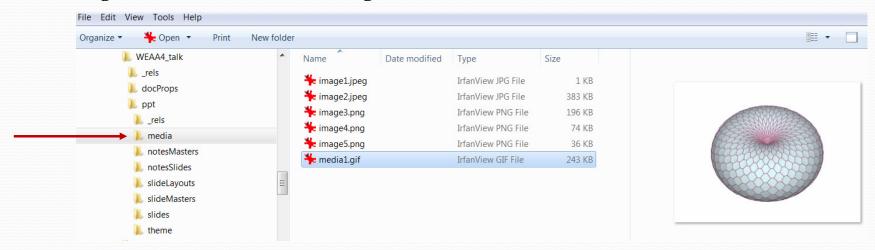
How to extract Media Files from PowerPoint Presentations

- In PowerPoint go to **File** and click **Save As**. Make sure you choose the .pptx format
- Go to the directory where you saved the presentation and rename the .pptx file to .zip
- Use an archive extractor tool, e.g. 7-zip, WinZip or (easier) just do a right-mouse-click to extract the .zip file contents



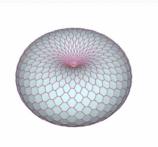
How to extract Media Files from PowerPoint Presentations

• All images, videos and animated gifs are saved in a subfolder named **media**:



- ▶ these media files (.gif, .avi, .wmv or whatever) must be converted to mpeg-4 for embedding in the PDF file
- ▶ Note: to reduce the size of extracted mpeg-4 files just use Handbrake and convert from mpeg-4 to mpeg-4 ©

animated gifs



Example

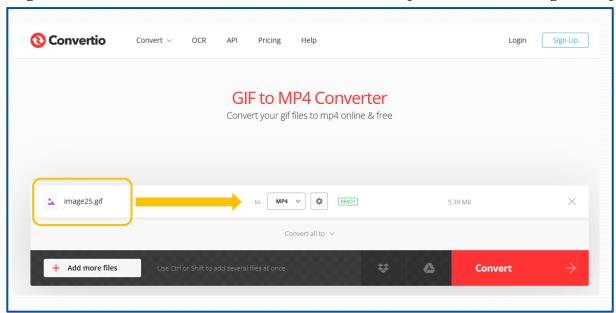
Reference: http://visualizingmath.tumblr.com/post/527 43559077/a-torus-consists-of-a-central-axiswith-a-vortex

• an animated gif is a type of gif image that can be animated by combining several images into a single file, like a flip-book



Transforming animated gifs to mp4 using Convertion

- **OCCONVERTIO** is a powerful file converter
- converts animated gifs directly to mp4 online & free through the web browser https://convertio.co/gif-mp4/
- ► faster then using VirtualDub and Handbrake (which takes two steps to convert from gif to mp4)

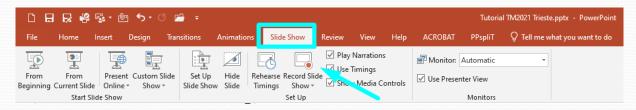


Processing slides: How to deal with motion path animations

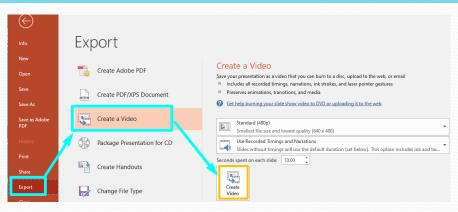


Motion Path Animations

- motion path animations are a very special visual gimmick in PowerPoint presentations
- ▶ for embedding in PDF files they can be recorded and saved as a video file
- ► PowerPoint can record a slide show



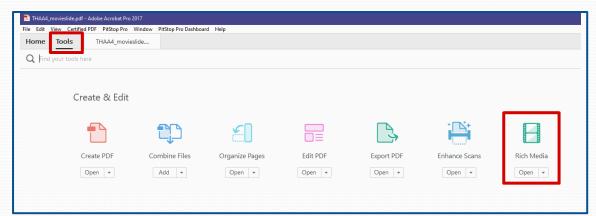
► After the slide has been recorded, click on File/Export and select 'Create a Video'. Save as type MPEG-4 video and embed the video in the PDF file.



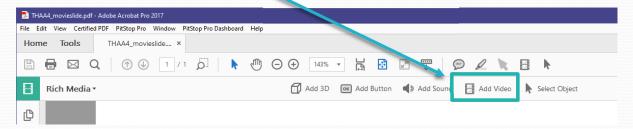
Processing slides: How to insert mpeg-4 videos in PDF documents

How to insert videos in PDF documents

in Acrobat Pro click on Tools and select Rich Media

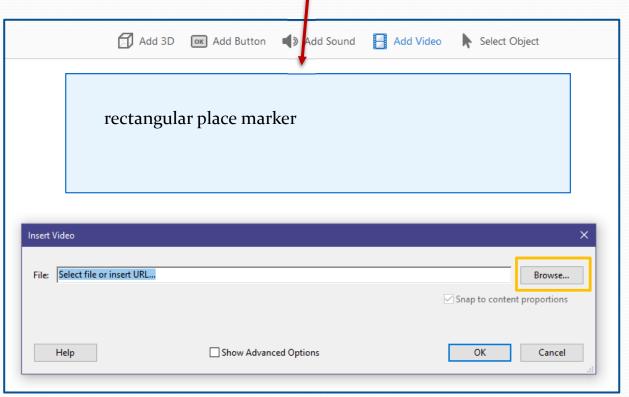


click on 'Add Video'

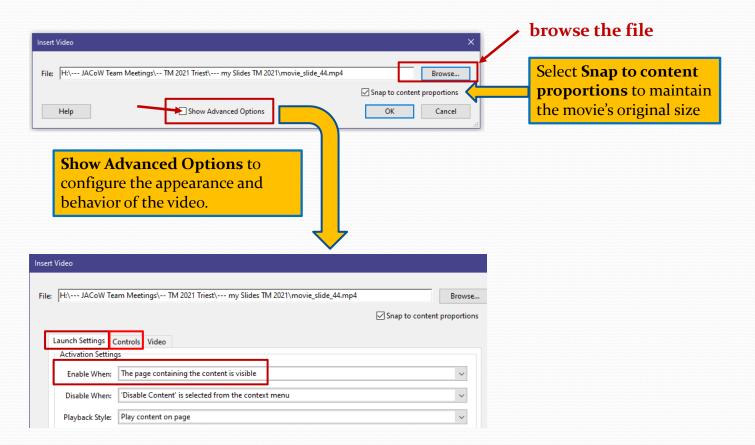


How to insert videos in PDF documents

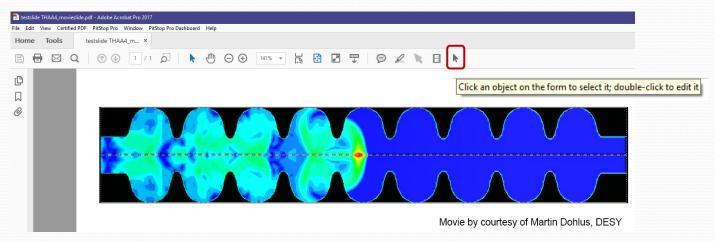
draw a place marker on the PDF slide or double-click the page to open the 'Insert Video' dialog box



How to insert videos in PDF documents



Modify videos in PDF documents



▶ to modify the **position** or the **size** of the video use the **Select Object tool** ▶



Processing Slides: Trouble-Shooting

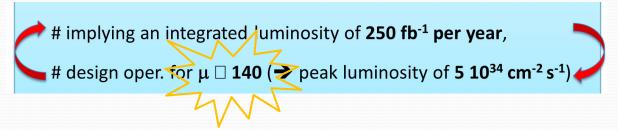


Processing Slides: Trouble-Shooting Missing characters

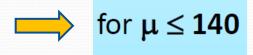


Example: PPT slide containing text, symbols and numbers

when running PowerPoint, not embedded characters appear as a blank box which is a placeholder for a missing font - quite hard to detect!



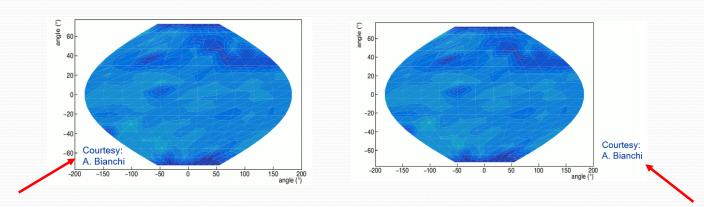
when you are not sure how to fix it, set status to RED and contact the author. The missing character in this example was a less than or equal sign!



Processing slides: Trouble-Shooting Shapes or captions covering videos

Example: Shapes or captions covering videos

- it could happen that captions or shapes on a PPT slide are covering the video
 they are not part of the video and will disappear after the conversion to PDF
- to fix this issue just move the text box before conversion from PPT to PDF



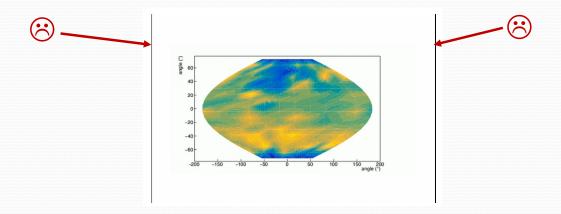
in this example the text box covering the animation has been moved to the right side

Example taken from A. Bianchi et al, "Temperature Mapping on a Niobium-Coated Copper Superconducting Radio-Frequency Cavity", arXiv:2305.09597 [physics.acc-ph], 2023

Processing slides: Trouble-Shooting
Embedded video in a PDF document
appears with a fragmented black frame

Example: Black lines around an embedded video

- ▶ after a video has been embedded in the PDF file you see black lines surrounding the video ... this is a bug in Acrobat Adobe is not able or not willing to fix it ⊗
- try to get rid of the lines by changing the size of the video sometimes it works, sometimes not



Example taken from A. Bianchi et al, "Temperature Mapping on a Niobium-Coated Copper Superconducting Radio-Frequency Cavity", arXiv:2305.09597 [physics.acc-ph], 2023

Thank you for your attention ©