

 | elearning

# CERN IT "rapid e-learning" project

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# The project goal

**To promote our applications, tools & their features via very short videos ( $\leq 5'$ ).**

To do that we:

- Recommend various recording methods depending on the use case.
- Advise content owners on how to structure and prepare their tutorial & assist them with rehearsing.
- Inform the community about existing videos and the project itself.

# How did this project start

- An ITLT talk on MOOCs showed some audience interest in the field *under conditions*.
- Discussions and observation of our user community showed that we grew impatient; nobody watches anything that lasts a 2-digit number of minutes.
- Thus, the project description document suggested the making of *short* online videos.
- IT management approved.
- Local higher education establishments got interested in contributing to the project.

# What we did in the first 6 months

- Discussed with:
  - media experts in the lab
  - outreach team members
  - the HR L&D team
  - tutorial content owners
  - e-learning experts outside CERN.
- Evaluated products for various recording methods.
- Recorded several tutorials.
- Documented everything, including rehearsals.

# Use Cases recorded

- Twiki usage tips' tutorials
- Three LHC at home tutorials (for Linux, Windows & Mac users)
- Three electronics' tutorials
- Tutorial preparation guidelines for speakers
- WLCG Operations' web portal demo
- Terminal recording tool *asciinema* tutorial
- Screen capture tool *ffmpeg* tutorial.

# Use cases in the making

- Defined according to the template:
  - CERN configuration Infrastructure
  - Enroll and use the Mac Self-Service
  - The Mail2Print service at CERN
  - An awareness-raising short video about softphones
  - CMS Glimos instructions for guides
- Extensively rehearsed, close to release:
  - Screen capture tool *ActivePresenter* tutorial for Windows & Mac users
  - Screen capture tool *QuickTime* tutorial for Mac users
  - ALICE outreach Master classes' online tutorials for students.

# Use cases listed – pending I

- Need more detailed definition according to the template:
  - ATLAS suggestions:
    - How to submit a PanDA job and follow it in the process (monitoring, UI commands, etc)
    - Quick guide to PanDA user pages
    - How to submit and follow a user data replication request
    - How to change information system (AGIS) fields
    - How to generate a custom Dashboard plot
  - Outreach suggestion:
    - A ‘grand public’ short video on Volunteer Computing
- Need to wait for new software release of the product before recording:
  - A short video series on indico functionality (e.g. meeting or lecture vs conference and the relevant definition parametres).



# Use cases listed – pending II

- A brief presentation of the IT dept. services.
- Laptop encryption tools.
- Getting Microsoft Office for home.
- IT Cloud services.
- IT Monitoring services.
- The CERN IT cernbox functionality.
- Recipes by the IT security team.

# What “pending” means

The content owners are The Key People to:

1. Define the tutorial (Title, Duration, Public, Material, ...)
2. Write the exact script (one can't improvise and be complete in <5')
3. Be willing to re-re-rehearse until the end product
4. Disseminate in their user community
5. Follow the statistics (example) to see what works (or not).

# Use cases we won't do

- Those already available on the web.
  - Check [here](#) the examples of selected short videos (github, gitlab, Sphinx, Jenkins and more) collected by A.Racine (now MSc, thanks to this project 😊 ) for HEP S&C.
- Those covered by other training programmes at CERN which contain e-learning components.
  - Blended learning components in the language and management courses by HR L&D
  - Online SIR courses by the safety experts.

See [use cases' list](#) and [rehearsals'](#) [indico index](#).

A [VideoLibrary](#) of use cases in the making.

A [dedicated collection](#) for released videos in CDS.

# Recording methods

The short online tutorials can be recorded by:

- the CERN audiovisual services (best for talking over slides and showing the speaker) and/or
- a screen capture tool at the desk (enough for web site navigation, demonstration and/or a web-based installation) and/or
- a terminal recording tool (needed for unfolding a series of commands that the viewer will *copy/paste* to perform the same actions).

The use case determines the choice of tool.

# Products for self-made videos

Found on the web or coming with the OSs used at CERN:

- A number of screen capture tools for recording navigation through web pages or installation procedures.
- A teleprompter for tutorial speakers to go through their written script with no stress.
- A terminal recording tool, ideal for typing the commands and show their output.

Documentation linked from our e-learning twiki

# Main Video Publishing Policy

Decision from the 1<sup>st</sup> meeting of the interest group  
(Minutes):

- End-products should be registered in our dedicated CDS category.
- Recording can be done by the CERN audiovisual services **or** by the content owner at the desk.
- So far, the end product of **terminal recording** for use cases like installation &/or configuration sequences can't be put in CDS if copy/paste is needed.

# Publicity on Tutorials' existence

- Link them from the service documentation.
  - Thus, change of text and video will be in sync.
- Link them from SNOW Knowledge Base articles
  - check for most needed additions relevant to most frequent incidents.
- Announce:
  - In the *e-learning-interest-group* e-group.
  - To the content owner's community.
  - At the ITMM, in the Training section of the report and all liaison channels with other departments.
- What else?

# Lessons learnt – for speakers

- Quality recording is very time-consuming. Check what already exists before starting.
- Write down everything. One can't improvise 'on air'.
- Annotate your text/speech and say where you stand in the tutorial outline.
- Check your physical environment before recording (external noise, intruding commercial brands, the teleprompter position...)

Detailed recommendations' text, slides, tutorial.



# Lessons learnt – for the project

- Everyone is busy →
  - Everything takes a long time to complete
  - The updating of video material is not yet clear.
  - Some people are skeptical (would a short video ‘glorify’ my service?)
- On the other hand,
  - we say: **Show me** what you mean!
  - CERN-made educational material recordings available to the world already exist, e.g. our Academic Training. Shorter videos will be viewed more easily until the end.

# Why continue with this project

- Younger people learn “online” (See article).
- <https://www.khanacademy.org/> is an example of where learning is evolving in the 21st century.
- Others do it, why not us? Examples:
  - Geneva University (unige)
  - EPFL
  - IBM
  - Other international organisations – we made a survey on that. Answers’ summary in the next slide.
- Even out-of-date videos can be interesting to archive.
- Other education-related initiatives show great interest in this project, e.g. HEG, unige, Research Data Alliance
- All is web-based. Good for our image as  
... the web was born at CERN.

# E-learning survey results

Extract from the July 2016 survey

what\who	WTO	WHO	EPFL	FNAL	Barcelona University	Lund University
Employees' total	600	7500	4000	1700	7000	7500
E-learning team	6 part-time	2 equiv. to 1 FTE	12 equiv. to 10 FTEs	3 FTEs	4 FTEs	5 FTEs
Responsible dept.	Training & techn. assistance	HR	IT services	ESHQ Env. Safety Health Quality	Pedagogical support unit	Centre for Educational Dev.
E-learning type	-Tutorials w/o interaction -Courses w. interaction -Blended	-Tutorials w/o interaction -Blended	-Tutorials w. interaction -MOOCs -Blended	-Tutorials -Courses both w.+w/o inter. -Blended	-Tutorials -Courses both w.+w/o inter. -MOOCs	-Tutorials -Courses both w.+w/o inter. -MOOCs -Blended
Why?	To train gov. officials on org. agreements	-Productivity gain - Collaborators' autonomy	-Remote collaborators -enriched doc. -org. image	-Productivity gain - Collaborators' autonomy -specialized subjects	Collaborators' autonomy	-Productivity gain -org. image
LMS	Yes-not disclosed	Yes-Cornerstone OnDemand	Yes-Moodle	in house tool	Yes-Moodle	In-house tool called LUVIT

# One more Very Important Reason

Technical & scientific content in a <5' online tutorial has to be very *precise* in order to be complete, understandable and worth the preparation effort. The short video becomes a way to also **build collaborations** via comments and advice:

- Across IT teams: on how our tools are built/work.
- Physics–IT applications: on design & optimisation.
- Cross-experiment method sharing, e.g. on data handling, for mutual help and time saving.

# Created to organise the work

- E-group for internal discussions of the interest group.
- Vidyo portal for meetings and recording rehearsals.
- Dedicated indico category for rehearsals and recording links.
- Dedicated CDS category for final tutorial versions.
- Hashtag in social.cern.ch for announcements. Should we make a 'mattermost' in addition?
- CERN service account for storing scripts and documentation.
- Contact email for questions.
- CERN e-learning logo and standard tutorial cover slides.
- Video library Edutech with the use cases with
- e-learning twiki with all these links and more.

# Contributors

- Alexandre Racine & Pedro de Freitas (students - for terminal recording tools' evaluation, documentation and help with the rehearsals).
- Michal Kwiatek (IT DTO – for use cases' submission & comments).
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- Jacques Fichet (for artistic advice on videos that convey the message)
- Fabienne Marcastel (for the e-learning logo)



# Conclusion

- In a few months of existence, this project investigated the, previously unused at CERN, area of self-service recording tools.
- It offered advice and technical options to content owners for their documentation and educational material promotion.
- It helped establishing contact amongst experts and across departments.
- What now:
  - Keep the momentum, continue recording, expand the number of use cases.
  - Publicise the tutorials, get viewers' feedback, learn and adjust for each next video made.



# Learning in a digital age ([photo credit](#))



# Thank you for your attention!

