



# Flash is Dead. Finally.

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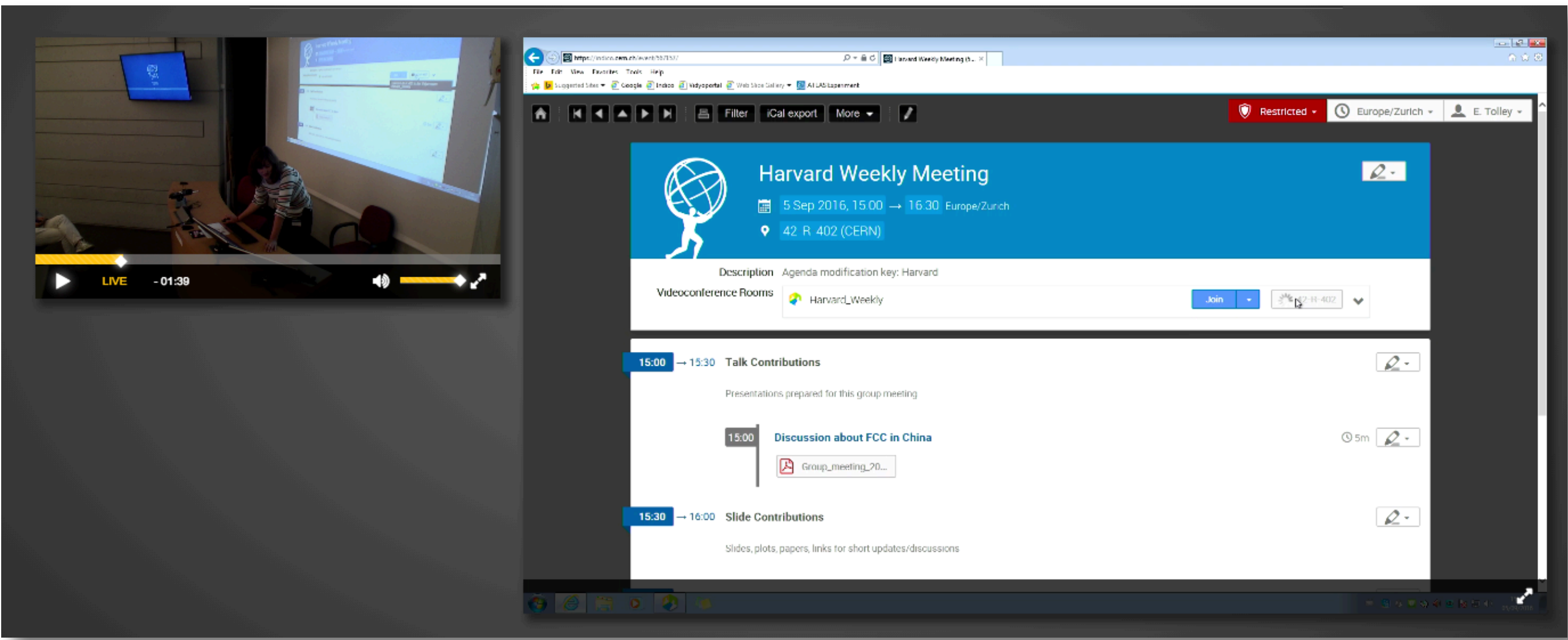
For almost 10 years, CERN has been providing live webcast of events using Adobe Flash technology. This year is finally the year when flash died at CERN! With Flash being slowly phased out on most streaming platforms, the CERN streaming service moved as well from Flash to HTTP streaming.



The biggest challenge for providing pure HTML5 video streaming goes with the support of different streaming protocols across browsers and OS platforms. Thanks to THEOPlayer ([www.theoplayer.com](http://www.theoplayer.com)) we are able to stick with the HTTP Live Streaming (HLS) protocol from Apple and play it on all modern browsers on desktops and mobile devices. We are able to deliver the same experience as we did with Adobe Flash based players. Our users can still enjoy video of the speaker synchronised with video of the presentation, so they have the same experience as sitting in the auditoria.

## DVR – Digital Video Recorder

We will soon introduce DVR functionality for all our live webcasts. Users that arrived late on the webcast website, will have a possibility to go back to the beginning of the webcast or if they missed something they can seek back to watch it again. With the DVR feature we will also be able to publish the recording right after the webcast is finished.



## Micala

Michigan and CERN Automated Lecture Archiving (Micala) is an automated tool developed at CERN with a collaboration from the University of Michigan. We improved the workflow to faster publish the recorded lecture by integrating the Sorenson (<http://www.sorensonmedia.com/squeeze/squeeze-server/>) transcoding cluster to Micala. The communication with users is now done with the automatic creation of the ServiceNOW ticket for each recording.

Lecture #10959

Details

Lecture ID10959

LOID20160818-cernmatrox05-164954

TypeWEBLECTURE

TitleHuman Brain Development Project

SpeakersAhmad Hesam

Created18 Aug 2016 at 16:49

RequestorSotiros Pavlou

ServiceNow TicketRQF0630812

Indico ID557791c19

CDS Record2209815

RecordedIT Amphitheatre - matrox05.cern.ch

Duration00:04:54

Tasks

Task nameTaskStatus

RecordingCOMPLETE

Flattening F4V filesCOMPLETE

Matching with IndicoCOMPLETE

E-Agreements acceptedCOMPLETE

Creating Lecture ObjectCOMPLETE7 mins

Analyzing slidesCOMPLETE39 secs

Creating CDS RecordCOMPLETE2 mins

Creating MasterCOMPLETE17 mins

Publishing Slaves for DesktopCOMPLETE5 mins

Publishing Slaves for MobileCOMPLETE6 mins

Indico link to CDS

Processing

Origin pathVcern.ch/dts/Service/Recordings/Rooms/IT\_Amphitheatre/20160818-cernmatrox05-164954

Path to slidesNo slides to check

Delayed fileNo delay

Seconds of delay0 seconds

Start time00:00:00End time00:04:54

Re-start processing

SLAVES

Filename	SMIL	
557791c19_desktop_camera_1080p_4000.mp4	557791c19_desktop_camera.smil	✓
557791c19_desktop_camera_360p_800.mp4	557791c19_desktop_camera.smil	✓
557791c19_desktop_camera_480p_1000.mp4	557791c19_desktop_camera.smil	✓
557791c19_desktop_camera_720p_2000.mp4	557791c19_desktop_camera.smil	✓
557791c19_desktop_slides_1080p_4000.mp4	557791c19_desktop_slides.smil	✓
557791c19_desktop_slides_360p_800.mp4	557791c19_desktop_slides.smil	✓
557791c19_desktop_slides_480p_1000.mp4	557791c19_desktop_slides.smil	✓
557791c19_desktop_slides_720p_2000.mp4	557791c19_desktop_slides.smil	✓
557791c19_mobile_1080p_4000.mp4	557791c19_mobile.smil	✓
557791c19_mobile_360p_800.mp4	557791c19_mobile.smil	✓
557791c19_mobile_480p_1000.mp4	557791c19_mobile.smil	✓
557791c19_mobile_720p_2000.mp4	557791c19_mobile.smil	✓

Re-submit slaves to CDS

Re-generate SMIL

## New HTML5 viewer for recorded lectures

The CERN Recording Service provides recordings from 19 CERN rooms in a web lecture format (with synchronized speaker and slides). To give users a better control on the player side, we developed a new interactive HTML5 viewer with a built-in THEOPlayer.

## Central Encoding System

With 19 CERN rooms capable of webcast and recording, about 300 live webcasts and 1200 lectures recorded every year, we needed a tool for our operators to easily start webcasts and recordings. We developed a Central Encoding Interface, from which our operators see all the planned events for a given day and with one click can start webcasting and/or recording. With this new interface we manage to almost eliminate issues where operators forget to start the webcast and with an automatic stop, we now support webcasts and recordings which finish out of standard working hours without additional manpower expenses.

## Service statistics for last years

Recorded lectures

Year	Count
2013	974
2014	1185
2015	1099

Live webcasts

Year	Count
2013	260
2014	268
2015	271

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