

# Flash is Dead. Finally.

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It's been for almost 10 years that CERN has been providing live webcast of events using Adobe Flash technology. This year is finally the year that flash died at CERN! At CERN we closely follow the broadcast industry and are always trying to provide our users with the same experience as they have on other commercial streaming services. With Flash being slowly phased out on most of the streaming platforms, we moved as well from Flash to HTTP streaming. All our live streams are delivered via the HTTP Live Streaming (HLS) protocol, which is supported in all modern browsers on desktops and mobile devices. Thanks to HTML5 and the THEO-Player 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.

For On Demand Video, to reach our users on any device, we improved the process of publishing recorded lectures with the new release of the CERN Lecture Archiving system - Micala. We improved the lecture viewer, which gives our users the best possible experience of watching recorded lectures, with both video of the speaker and slides in high resolution. For the mobile devices we improved quality and usability to watch any video from CDS even on low bandwidth conditions.

We introduced DVR functionality for all our live webcasts. Users that arrived late on the webcast website, now 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 DVR functionality we are able to provide recording right after the webcast is finished.

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 start webcast and recording easily. We developed a Central Encoding Interface, from which our operators see all the 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 recording which finish out of standard working hours without additional expenses.

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## Secondary Keyword (Optional)

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## Tertiary Keyword (Optional)

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