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Experience from the 1st Year running a Massive High Quality Videoconferencing Service for the LHC

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In the last few years, we have witnessed an explosion of visual collaboration initiatives in the industry. Several advances in video services and also in their underlying infrastructure are currently improving the way people collaborate globally. These advances are creating new usage paradigms: any device in any network can be used to collaborate, in most cases with an overall high quality.

To keep pace with this technology progression, the CERN IT Department launched a service based on the Vidyo product.

This new service architecture introduces Adaptive Video Layering, which dynamically optimises the video for each endpoint by leveraging the H.264 Scalable Video Coding (SVC)-based compression technology. It combines intelligent AV routing techniques with the flexibility of H.264 SVC video compression, in order to achieve resilient video collaboration over the Internet, 3G and WiFi.

We will present an overview of the results that have been achieved after this major change. In particular, the first year of operation of the CERN Vidyo service will be described in terms of performance and scale: The service became part of the daily activity of the LHC collaborations, reaching a monthly usage of more than 3200 meetings with a peak of 750 simultaneous connections.

We will also present some key features such as the integration with CERN Indico. LHC users can now join a Vidyo meeting either from their personal computer or a CERN videoconference room simply from an Indico event page, with the ease of a single click. The roadmap for future improvements, service extensions and core infrastructure tendencies such as cloud based services and virtualisation of system components will also be discussed.

Vidyo's strengths allowed us to build a universal service (it is accessible from PCs, but also videoconference rooms, traditional phones, tablets and smartphones), developed with 3 key ideas in mind: ease of use, full integration and high-quality.

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