

The Web Lecture Archive Project

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The size and geographical diversity of the LHC collaborations present new challenges for communication and training. The Web Lecture Archive Project (WLAP), a joint project between the University of Michigan and CERN Academic and Technical Training, has been involved in recording, archiving and disseminating physics lectures and software tutorials for CERN and the ATLAS Collaboration since 1999, when WLAP first recorded the prestigious CERN Summer Student Lectures and made them available as online Web Lectures. Ongoing demand for the recording of software tutorials, high energy physics workshops and general interest talks has driven our team to automate more and more of the recording, archiving, metadata tagging and publishing processes, in order to make possible the large-scale recording and dissemination of lectures with minimal human intervention. We have developed hardware and software solutions to automate the encoding and compression of audio, video and slides; defined a Lecture Object standard to facilitate the archiving and sharing of multimedia presentations in an open fashion, worked on a robotics camera tracking system to remove the need for a camera operator in tracking speakers, developed software to harvest text from captured slides, associating the resulting metadata with relevant sections within a lecture and radically improving search capabilities. Our group regularly records ATLAS and University of Michigan events, hosting a significant archive of hundreds of lectures for these communities, while simultaneously benefiting from each recording as a test bed for newly developed technologies. We present an overview of the project, with an emphasis on technologies currently in development.

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