

transLectures: Transcription and Translation of Video Lectures

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Summary

Online educational repositories of video lectures are rapidly growing. An example of this is *VideoLectures.NET*, a free and open access educational video lectures repository. Transcription and translation of video lectures in *VideoLectures.NET* is needed to make them accessible to a wider audience. However, similarly to other repositories, most lectures are neither transcribed nor translated.

The aim of *transLectures* is to develop innovative, cost-effective solutions to produce accurate transcriptions and translations in *VideoLectures.NET*, with generality across other Matterhorn-related repositories. The starting hypothesis is that there is only a relatively small gap for the current technology on automatic speech recognition and machine translation to achieve accurate enough results in the object collections we are considering; and that it can be closed by achieving the following three objectives:

- 1. Improvement of transcription and translation quality by massive adaptation.
- 2. Improvement of transcription and translation quality by intelligent interaction.
- 3. Integration into Matterhorn to enable real-life evaluation.

The main result of *trans*Lectures will be a set of cost-effective tools to produce accurate transcriptions and translations in *VideoLectures.NET* and other Matterhorn-related repositories. Indeed, these tools will be tested in *VideoLectures.NET* and in a smaller repository of Spanish video lectures, *poliMedia*. For transcription, we will consider English and Slovenian in *VideoLectures.NET* (more than 90%) and Spanish in *poliMedia*. For translation, we will consider the language pairs: $en \Rightarrow es$, $en \Rightarrow sl$, $en \rightarrow fr$ and $en \rightarrow de$.

Upon successful achievement of the project, its techniques will probably spread over many educational repositories, enabling them to overcome language barriers and reach wider audiences.