

Software & Multimedia Development  
Quarterly Report  
5 April 2001

This quarter comprised two developments:

- The LearnCanada Video Sharing & Annotation Server was developed and deployed.
- Progress was made on videoconference capture and video indexing.

The Video Sharing & Annotation (VSA) Server is running on CA\*net3 from NRC. Functionality on VSA includes the ability of teachers to upload digital video, encoded as Quicktime, to view such videos, and to add textual annotation to the videos. Additional functionality includes password and privacy management, whereby a teacher can specify which other teachers are allowed to share and annotate his/her video.

VSA was introduced to the LearnCanada teachers at a videoconference at the end of February. Small problems were discovered and subsequently fixed. Use of the VSA has been limited by teachers' ability to capture, edit, Quicktime-encode, and upload video. The teachers' ability to provide video is being addressed at the school boards. Nevertheless, several relevant videos are available on the server at this time, along with meaningful annotation from teachers.

Capture of videoconference is a surprisingly difficult task. Most recently we have used digital video cameras to capture participants at one or more sites, as well as capturing the ISABEL screen.

Indexing video for search will be very valuable. The basic idea is to apply speech technology to the soundtrack, and create a search index from the words spoken in the video. Three commercial systems were evaluated through vendor presentations: Virage, MediaSite, and Excalibur. All three cost in the \$100k - 150k range, and are designed for media-asset companies, such as television broadcasters. We decided not to purchase such a system, and are considering building. Trials with IBM Via Voice and non-broadcast quality video have been carried out. The recognition results are not sufficient for transcription, but are sufficient for indexing, search, and automatic summarization. Visits with three speech companies were held: VoicelQ; LocusDialog; and SpeechWorks. We do not yet know whether these companies have more appropriate speech engines (i.e. than IBM or Dragon) for video indexing.