RPI URP Proposal for RCOS - Chronicle

Zach Fry & Bobby Zheng
1/31/2012

As students at a prestigious Science, Technology, Engineering and Mathematics university, there exists a demand for recording and chronicling lectures and tutoring sessions for use at a later time. There currently are several ways of recording these classes or meetings, including video recorders and audio/tape recorders. In order to record a classroom session now, the recorder must bring with them a specific device that is designed solely for the task of recording this video, which is often bulky and difficult to use when considering battery life or finding an outlet to keep it recording. Also, the recorder must take into account the how they are going to store this recording, whether it be on a tape or using a recorder with a built in memory. Once the recorder has figured out how to record this session and has actually recorded it, they then must find a way to organize all of their recordings so that they can access them. This often calls for rewinding tape to find where the recording started, or having to overwrite past sessions if memory is running out on the current recording device. This entire process is cumbersome and a huge pain for something that should be easy to use and could end up being a major help for students wanting to revisit lectures for important information.

Chronicle is our attempt to remedy this situation. Because smartphones are exponentially taking the market for mobile telephones, and because they all have built in recording functionality, we see an opportunity to solve the aforementioned problems. Chronicle is an application for smartphones that would allow someone to use their smartphone's built in media recorder and synchronize these recordings to a schedule for easy organization and access. The application would use a schedule loaded with a student's classes and other routinely scheduled events to tag and organize recorded videos of events. The schedule could be manually entered using a smartphone, or imported using some other calendar format such as Google Calendar, Microsoft Outlook, or other organizational applications. Chronicle would then be able to automatically archive the recorded media onto a designated computer, thus conserving space on the phone's internal memory. Another feature would include functionality for allowing the user to set up reminders to record depending on the time and eventually location. Because Chronicle is written for smartphones, the need to carry around a specific device for recording is remediated, and organizing these recordings would then become a trivial process of pushing a few buttons.

Our project also calls for development of software that would be loaded onto a PC that would tag other media files such as classroom lecture slides, handouts, and activities, and save these files in the organized folders alongside the recorded videos. This would give the recorder a way to view the organized media files, and the ability to search for files using tagged keywords. Initial development would initially take place on the Android platform, but we would be open to port development over to the IOS platform after learning a little more about the platform.

<u>Timeline of work:</u>

Establish standards for archival of videos

Implement UI for manually entering schedule

Implement media recording framework

Implement automatic archival of videos (usb cable or WiFi)

Implement PC UI to browse media

Implement media tagging

Implement PC search function

Implement importing/exporting schedule (google calandar, outlook)

Implement ability to load media onto a cloud (Amazon, Google)