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Streaming recorded Lessons using a TabletPC

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Key words: *Streaming, Recorded Lessons, Tablet PC, Podcast,*

Abstract:

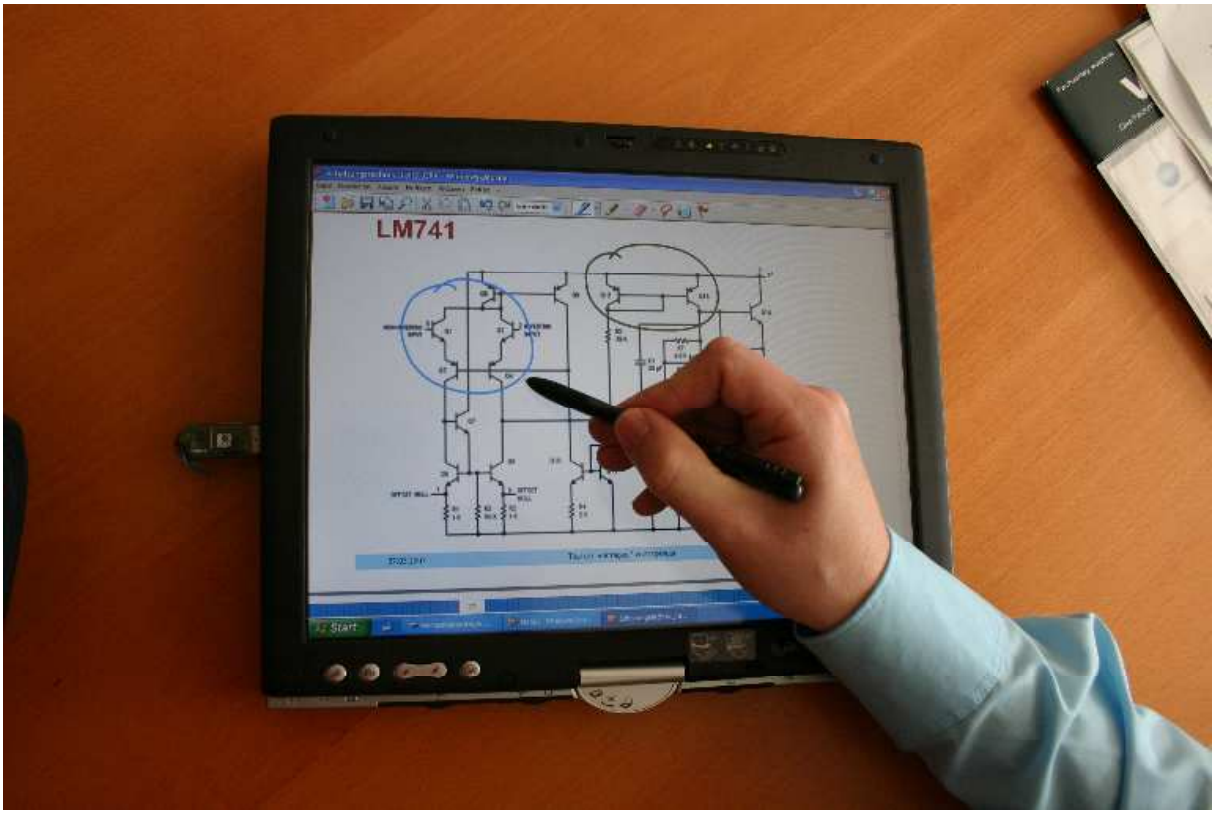
At our university of applied sciences we are working with part time students which sometimes can not come to the lessons because they are tied up with business. Those lessons where the lecturer is talking and there is only a little interaction with the students are now recorded. The major aspect why this recordings are so popular by our students is the fact that we are recording the desktop of the lecturers laptop and their voice. Instead of writing on the chalkboard the lecturers are writing on the screen of the TabletPCs. So the student who has missed the course can get nearly the same information as if he had been in the course. Everything that has been visualised is on the desktop recording even the voice of the lecturer. The streaming file becomes about 10 Mbyte/h and could be streamed by students who have signed for the course.

1 Inspiration and possibilities

Inspired by a presentation at the 6th business meeting of the forum neue medien Austria in 2003 [1] we started using tablet PCs for our presentations. Instead of using a laptop with a fixed (Powerpoint) presentation where you just jump from one sheet to the next with the use of the program Windows-Journal it is possible to add notes on your presentation. Furthermore you just start with an empty sheet and write on the screen like you used to do on your old overhead projector. It sounds simple but now you got back the didactic possibilities that you have lost by changing from the old overhead to the handsome new laptop & beamer. Of course you can do nice little things with Microsoft Powerpoint, but you need a lot of time.

2 Interactive and easy

As a teacher you can now draw line after line to show the students how small things can be combined to a large picture. Of course you may give them a handout with the printed picture but “one picture tells you more than hundred words” you must understand what that picture means. In a presentation you can talk about that picture, you can point on some places to show the details but often you can not remove the unnecessary information.
On the tablet PC you start with an empty sheet and make a simple draft while the students are watching and listening, so for the students it is now easier to understand how the small things are combined to the “great picture”. Before we had our first tablet PC we made it at the chalkboard with only a few colours, without the possibility to undo your last drawing and without the possibility to save the picture. With the tablet PC your classroom teaching can get a lot easier.



We tried to keep technology as simple as possible so that all of our lecturers are able to use it, so we use the program Windows-Journal which is delivered by the Windows XP Tablet PC Edition. So you just buy a tablet PC and it is ready to use. You can import several documents from powerpoint to pdf, the windows journal converts them into pictures and now you can add notes on top.

3 Recording Lessons

Since the first CBTs you can use several programs to just record what you are doing with the mouse on your computer. A lot of CBTs were sold for the ECDL where the learner is instructed how to use several office programs. The technology is well known, the new thing is if you use a tablet PC in your classroom for visualisation and combine it with the recording of your voice you got 90 percent of your lesson. You just miss your gesture, body language and facial expression, you still have your phonetic accentuation!
We decided to use the screen capture software camtasia from techsmith (www.techsmith.com), there are also products from Microsoft and Adobe/Macromedia. For recording the voice we use either a USB-microphone or a wireless microphone from AKG which enables the lecturer to walk through the classroom while talking about a projected picture. The recording file of a 60 minutes lesson has about 200 MByte an therefore is of course to large to share it over the internet.

4 Sharing videos on the internet

At our university of applied sciences we are working with part time students which sometimes can not come to the lessons because they are tied up with business. Those lessons where the lecturer is talking and there is only a little interaction with the students are now recorded. We have to convert the recordings on a server over night using FFMPEG (ffmpeg.mplayerhq.hu) and the streaming files becomes about 10 Mbyte/hour. We put them on our learning

management server so they can be streamed only by those students who have signed for the course. Most of the lecturers only agree to share the videos by streaming and only for their students, most of them are afraid that mistakes can become public.

5 Feedback of our students

We asked our students if they like it and what they are using the videos for, the result is:

- 92 percent want us to record the lessons
- 75 percent use it to repeat something they did not understand
- 53 percent use it to prepare for the exam
- 40 percent missed the lesson

Some teachers were afraid that the students would no longer come to their evening lectures if everything is recorded but that will never happen. Our students told us that it is nice to have a recording of the complete lesson if they have missed one. Also they watched some sequences to prepare for the exam, but they told us they don´t want to sit at home watching 20 hours of recorded lessons. Think of yourself, try to watch a webinar for one hour is o.k. but think of 10 recordings with 90 minutes, that's not the way you want to learn.

6 Summary

The major outcomes of this project (founded by the MA 27) are:

1. With a TabletPC you can make a more interactive lesson compared with a powerpoint presentation
2. Writing on the screen of the TabletPC can easily be recorded in combination with voice
3. The students like it
4. The students use it for preparing for the exam, we had less bad marks
5. The lecturers are doubtful and have to get positive feedback from the students

References:

[1] Prof. Max Mühlhäuser; E-Learning Quo vadis?, (mms://video.uni-klu.ac.at/iwas/muehlhauser_lan.wmv)

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