

# INTRODUCTION OF PODCASTS IN REMOTE SENSING EDUCATION

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## Abstract

Education constantly presents new challenges. Currently, one of the most interesting is to find appropriate medium to communicate and share knowledge with new generations.

New technologies may offer ways to address this challenge. Blogs, wikis, podcasts [1-2] are just some of the latest and most innovative technologies which are pervading the free time of young people. Indeed, although within academic environments they are often considered not serious or reliable instruments for education, they have captured the interest of new generations, such as those looking on the web for people to communicate with or those unable to move without their iPod.

Remote Sensing is a relatively young subject that always generates interest among students, naturally concerned with the earth's future and fascinated by the idea of monitoring the conditions of its resources. As a scientific subject, remote sensing often needs mathematics and physics theories as support to its teaching. Moreover, the showing of images acquired by different sensors is valuable to develop students' experience.

This paper deals with a completely new and innovative approach applied in the remote sensing class at the Surrey Space Centre, University of Surrey, in order to enhance the teaching and learning of remote sensing by means of *podcasts*, [2].

Podcasting refers to the method of timely delivery of content to people, students in this case, who have selected to 'subscribe' to receive the content. Podcasts files can be produced in a variety of formats, the main ones being: audio-only, audio with images (called 'enhanced') or video recordings. For this remote sensing class, audio-only formats were considered to be unlikely to capture the interest and attention of students, even if is the simplest format to produce.

One reason for exploring podcasts in this project is their portability which allows students to learn at opportune moments such as when travelling on a bus and teachers to assess without carrying lots of heavy papers and scripts everywhere.

In particular, in this paper I describe the experience got in the first year of a three-year project at University of Surrey in which Podcasts are introduced as part of the assessment (1st year) and supporting material to the lectures (2nd and 3rd year) in the Satellite Remote Sensing class.

The students were asked to prepare a Podcast (preferably in video or enhanced format) on Monitoring Earth's resources with Remote Sensing. In this they were asked to describe and comment, in no more than 10 minutes, on a remote sensing application in a field of their interest to be chosen from among some given in a list.

In the Podcast they were asked to cover the following:

1. Why your application needs remote sensing techniques
2. Which particular sensors are successful for your application and why
3. The most interesting results achieved in current literature
4. The present limits and the future challenges

Asking the students to produce something “popular” and not highly technical which could communicate and transfer a concept to everyone compelled them to think, discuss and debate about the most suitable words/video/time/pauses to transfer that particular concept. They had to think like a lecturer while preparing for the class.

To package the podcast the students had to learn the software Camtasia Studio 6.0 [3] which they downloaded and installed the 30-day trial version. Camtasia is a really powerful software enabling the recording of onscreen activity and editing this into a polished video that can then be shared.

In the final step, the students were asked to convert their Camtasia final product in a format compatible with iPod touch or iPhone device (.mv4). Consequently some requirements were also given to them in terms of the minimum text height, quality and size of the image.

At the conference the overall 1<sup>st</sup> year experience of this project will be presented, together with the best Podcasts the students realized.

A test was also submitted to students to let them reflect on this experience. Their feedback and reflections will be further commented.

This project has been awarded the Teaching with New Technologies (TeNT) award at the University of Surrey and is now starting its second year in which Podcasts will be used to supplement lectures or to introduce new topics in a more enjoyable format.

To the best of my knowledge, the experience carried on at University of Surrey, i.e. the production of remote sensing podcasts, is without precedent. Moreover, podcasts’ quality to give new life to subject matter suggests the adoption of new technologies everywhere is possible for enhancing learning experience and its portability particularly encourages its diffusion in countries where everyday students have to face long commutes.

## References

- [1] W.Richardson, *Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms*, Corwin Press, 2006.
- [2] R.Harrington, M.Weiser, *Producing Video Podcasts: A Guide for Media Professionals*, Elsevier, 2008
- [3] <http://www.techsmith.com/camtasia.asp>