JISC Final Report

Project Information			
Project Acronym	MACFOB		
Project Title	Multimedia Annotation and Community Folksonomy Building		
Start Date	01 January 2008	**End Date**	31 March 2009
Lead Institution	University of Southampton		
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Project Web URL	http://www.synote.ecs.soton.ac.uk http://www.synote.org		

JISC Final Report

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Acknowledgements

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Executive Summary

The MACFOB project has successfully achieved its aim of developing a web-based multimedia annotation tool to meet the important and pervasive user need of making multimedia web resources (e.g. podcasts) easier to access, search, manage, and exploit for students, teachers and other users. This has been accomplished through developing the application Synote which supports the collaborative creation, editing and viewing of synchronised notes, bookmarks, tags, links images and text captions. To help explain this new approach, the project has invented two new technical terms: 'Synnotation' to denote a synchronised annotation and 'Synmark' to denote a synchronised bookmark that can contain a title, note, tags and links. Synote can work with a wide range of multimedia sources hosted anywhere on the web and stores the annotations separately on the Synote server, which has the capability of hosting annotations of millions of hours of recordings. Users can repurpose the same recordings for many different teaching and learning scenarios.

The Synote client is a JavaScript application that has been developed for all major browsers using the Google Web Toolkit. A user permissions system allows users to specify who will be able to annotate their recordings and read their annotations.

The performance, efficiency and effectiveness of the software was evaluated by using Synote for a number of undergraduate courses and this showed that students like using Synote, found it useful and easy to use and would like more recordings and lectures to be available in this way.

With regard to dissemination, the software has been made widely available for trial to members of the JISC community and demonstrated in workshops and conferences, while research papers will continue to be published in conferences and journals.

There are two main ways to use Synote: to provide access to audio &/or video recordings of lectures that students have already attended or to provide audio &/or video learning material that students have not seen before. For students to want to attend lectures that are being recorded for replay using Synote, students would want a facility to be able to have any notes they have taken during lectures automatically synchronised with the lecture recordings in Synote. We hope to be able to develop this facility through future possible JISC funding. We are also now in the process of investigating what will be required to integrate Synote with various repositories at the University of Southampton. Further developments and improvements and trials will be sustained beyond the programme end date.

An example scenario for the use of Synote might be:

> "Mike records a narrated PowerPoint of his lecture and as the students are leaving his class he uploads this into Synote which automatically creates a clickable index from the slide titles and turns his speaker notes into a transcript of his presentation synchronised with the recording of his voice and the slides. He quickly adds some questions students should think about for next week as well as the URLs of some other resources (including a section of a recording he made the previous year) and synchronises these with the relevant parts of lecture. When Sally, a first year student sits down at her computer all this material is available on the web allowing her to search the slides and text transcript and notes for specific topics and then replay recordings from that point. She annotates the recording with notes made from the text book to aid revision for the exam and she also tags and highlights a section of the transcript she doesn't understand fully so that Mike can clarify it for her. She needs to go to lunch and so she inserts a synchronised bookmark into the recording so as to be able to continue later exactly from where she left off."

Background

The new generation of Web applications emphasise social interaction and user participation through social networks, Although multimedia has become technically easier to create (e.g. recording lectures) and users can easily bookmark, search, link to, or tag (i.e. classify) the WHOLE of a podcast or video recording available on the web they cannot easily find, or associate their notes or resources with, PART of that recording. As an analogy, users would clearly find a text book difficult to use if it had no contents page, index or page numbers. Therefore the growing amount of knowledge available in multimedia format has yet to achieve the level of interconnection and manipulation achieved for text documents via the World Wide Web and so realize the exciting opportunities for learning that can occur in 'Web 2.0' and 'social software' environments. With the advent of media storage sites such as YouTube [1], Blinkx [2], Blip Tv [3], LiveVideo [4], it has become extremely easy for users to upload and share their videos. This has led to a challenging demand to find easy and efficient solutions to handle these vast multimedia data archives and synchronised annotations provide an elegant solution to handle continuous media.

The provision of synchronized text captions (subtitles) and images with audio and video enables all their communication qualities and strengths to be available as appropriate for different contexts, content, tasks, learning styles, learning preferences and learning differences. Text can reduce the memory demands of spoken language; speech can better express subtle emotions; while images can communicate moods, relationships and complex information holistically. Deaf learners and non-native speakers may also be particularly disadvantaged if multimedia involving speech is not captioned.

User requirements have been established through studies which have shown how teachers and learners benefit from making annotations to help search and manipulate recordings of lectures or classes to find and make use of information. Consultations within the University of Southampton, including the University's podcasting user group, have confirmed the user needs, interest in involvement in the concept and synergy with the University's road map to support and empower learners in their studies. Dr Wald in collaboration with the international Liberated Learning Consortium has conducted a number of qualitative and quantitative user studies involving questionnaires, interviews, focus groups and observations with learners and staff that have established the importance of text captions for searching multimedia transcripts. User needs analyses and evaluations have also been conducted with learners at the University using both low and high fidelity prototype technologies and interfaces and have included reflection by learners on how they learn using recorded multimedia and how synchronized notes and tags could assist them. These studies confirmed the importance of captions for searching the recordings and reading the transcripts and the value of being able to personally annotate the recordings (e.g. bookmarks, notes and tags) and search these annotations. Other research also supports these identified user needs (e.g. Filochat [5], Dynomite [6], NoteLook [7], eClass [7], Talkshow [8]).

The importance of the identified user need of making multimedia accessible and searchable through the creation of synchronised transcripts and captions is supported by Google's encouragement for people to caption their multimedia before uploading it to Google and their addition of a subtitling annotation facility to Youtube [10]. Project Readon [11], Overstream [12] and dotSUB [13] also have been developed to display manually created captions for videos that are however non-searchable. Manual captioning is time consuming and costly but speech recognition has been demonstrated to provide a cost-effective way of automatically creating accessible text captions and transcripts synchronised with audio and video and so allows audio visual material to be manipulated through searching and browsing the text. The appearance on the web of Everyzing [14] which uses speech recognition to create a searchable transcript from podcasts or multimedia recordings provides further evidence for the importance of the identified user need and the value of this approach. However Everyzing does not display fully synchronised captions and so does not meet the identified user accessibility needs. Dr Wald has collaborated with IBM and the international Liberated Learning Consortium since 1999 to investigate how speech recognition captioning can enhance learning and to develop ViaScribe [15] which uses speech recognition to create synchronized searchable transcripts, slides and captions from multimedia recordings of live or recorded speech or video and demonstrates the following features:

- The text can be highlighted and scroll automatically in time with the speech
- The controls can move backwards or forwards through the presentation or pause it
- The browser 'find' facility can search for text and play the multimedia from that position
- Selecting a slide thumbnail will move the presentation to that position
- Selecting a slide in the text frame will open it full size in a separate window
- The frames and slide thumbnails can be resized

Investigations of existing annotation software (including trials and discussions with developers and users) have shown the widespread recognition of the importance of the identified user need of supporting the creation of annotations e.g.:

- The Memetic [16] project's overall aim was to extend the functionality of the next generation AccessGrid [17] collaboration environment with advanced meeting support and information management annotation tools that were developed in CoAKTinG [18] which drew on the extensive multimedia retrieval and open hypermedia knowledge and experience gained through ECS Southampton's earlier research (e.g. HyStream [19], Microcosm [20]).
- JISC and NSCF digital libraries programme funded the development of Project Pad [21] to assist learners in interacting with digital multimedia archive recordings.
- Transana [22] software for professional researchers analyses multimedia data and the NXT [23] set of libraries and tools was developed for the manipulation, query and analysis of multimedia language data while Vannotea [24] is a research tool based on the W3C Annotea project [25].
- OneNote [26] , Tegrity [27] and Panopto [28] enable learners to take notes that are synchronized with recordings so that selecting a note replays the recording from that point.
- Proprietary non-standard formats [29] [30] [31] requiring proprietary media players can be used to create enhanced podcasts by embedding markers in a multimedia file to jump to predetermined spots in a presentation.
- Video annotation tools proliferate (e.g. Youtube [32],PLYmedia [33], Viddler [34] and Asterpix [35], Veotag [36], VideoANT [37]) but don't support the full required functionality.

No existing technology satisfied all the identified user needs and it was therefore necessary to develop software that:

- Works with web multimedia and stores annotations separately;
- Synchronises captions, images, tags, links, notes and bookmarks;
- Enables users to add, and search for, annotations quickly and easily;
- Supports private or shared annotations;
- Is accessible.

Aims and Objectives

The MACFOB project successfully achieved its aim to develop a web-based multimedia annotation tool to meet the important and pervasive user need of making multimedia web resources (e.g. podcasts) easier to access, search, manage, and exploit for students, teachers and other users through developing and deploying technologies that support the creation of synchronised notes, bookmarks, tags, images and text captions.

Methodology

Development has been largely to plan and we have been successful in minimizing the risks identified in the proposal. In spite of unforeseen delays we have still managed to approximately follow our original work plan and project timetable. We have achieved this by using the Google Web Toolkit to produce a JavaScript/HTML/CSS based application rather than using Flex/Flash as originally envisaged in order to ensure we had a prototype available as early as possible for users to trial. The Synote client is a JavaScript application that has been developed for all major browsers using the Google Web Toolkit. User feedback on the initial prototypes led to the inclusion of additional features not originally planned, including:

- User profiles to store user preferences

- User access permissions to control who can annotate recordings and read these annotations
- Database search
- Transcript text and synchronisation editing
- Support for importing a wider range of subtitling/captioning formats
- Narrated PowerPoint conversion tool and import facility to simplify providing recorded material for use in Synote
- Support for a wider range of video formats
- Investigation of authentication to access media behind password logins

Figures 1 & 2 schematically show the system that has been developed while figures 3 & 4 show actual screen displays of the Synote prototype.

The technology was developed using feedback from usability studies with cycle-by-cycle management by the Project Steering Committee, comprising of the project Investigators and members of the project implementation team and user representatives. Day-to-day and week-to-week management was undertaken by the Project Manager, working in consultation with and under the strategic direction of Principal Investigator and Project Steering Committee.

Software development and implementation was broken in to different work packages with their respective objectives and outcomes. These work packages were carried out approximately as scheduled:

		Year 1			Year 2												sustain
WORKPACKAGES		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	
1 Staff Recruitment																	
2 Ethics Approval																	
3 User recruitment																	
4 Work with JISC		Project Plan, Reports & 2 days/year contribution to the e-Framework															
5 Dissemination																	➔
6 S/W Dev & Eval		phase1			phase 2			phase 3				phase 4				p'5	
7 Continuation																	➔

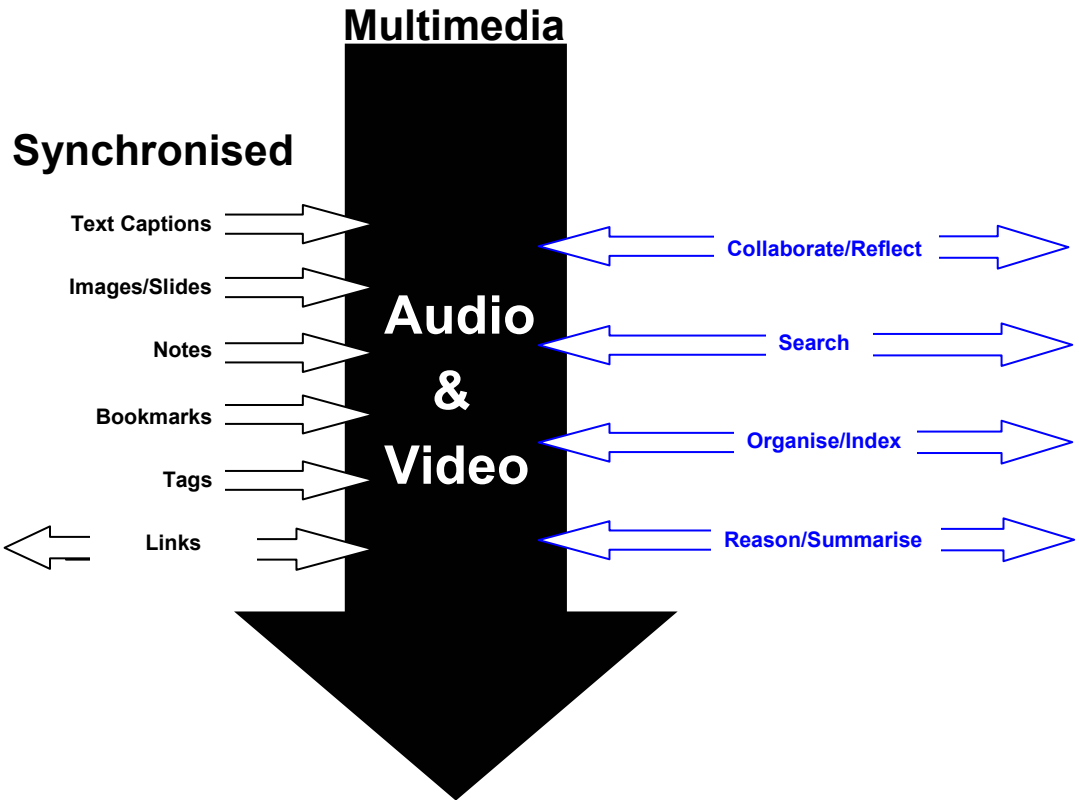

Figure 1. MACFOB system overview

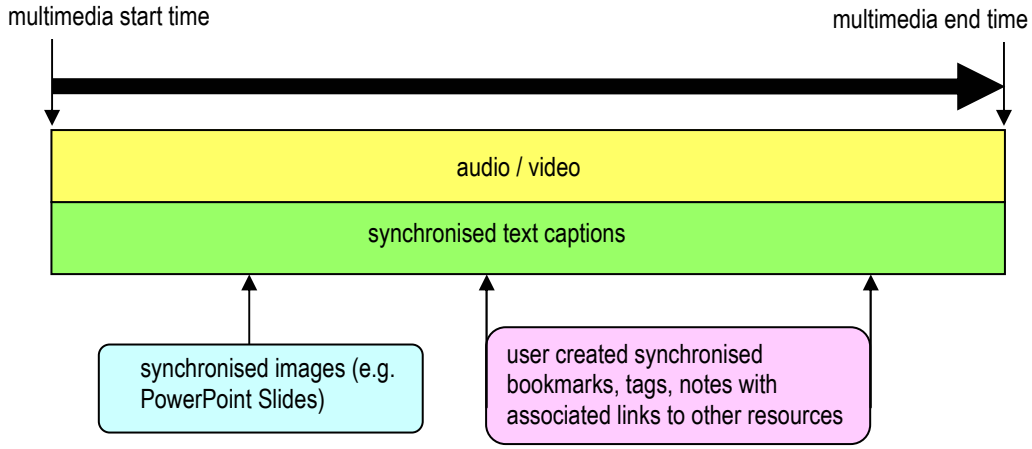

Figure 2. Time-based view of MACFOB system

The performance, efficiency and effectiveness of the software was evaluated by using Synote for a number of undergraduate courses and this showed that students like using Synote, found it useful and easy to use and would like more recordings and lectures to be available in this way. An example questionnaire is shown in Appendix A.

Implementation

The project has proceeded largely to plan and a project Manager and the two programmers were hired with some delays (including the project manager having to return to Pakistan for almost two months to wait for his work permit and visa to be renewed) One programmer however left soon after being recruited and the other reduced their hours to part time and so new programmers have had to be recruited.

Staff from a wide range of schools and support services at the University of Southampton (e.g. Electronics and Computer Science, Management, Oceanography and Earth Sciences, Chemistry, Nursing and Midwifery, Information Systems Services, Learning and Teaching Enhancement Unit, Library) participated in the system and functionality trials of the software. The application has been made available to the members of MACFOB steering committee, some teachers and postgraduate students, and others who have expressed an interest (e.g. Emerge Community, JISC digitisation program, Techdis, International Liberated Learning Consortium, Members of the JISC/NSF funded spoken word project from Glasgow Caledonian and Northwestern Universities). Synote has also been demonstrated informally at the JISC Innovations Forum. Staff used the software as part of their normal teaching commitments and so it was available for use by students on modules in the first semester of the 2008/2009 academic year. The majority of student users have come from the school of electronics and computer science.

Active participation has occurred in various JISC activities (Emerge Community online workshops, Users and Innovations Program project meetings, Meeting with Critical friend, JISC Innovations Forum etc.) The project plan and progress report was provided on time to JISC.

Dissemination of the project has occurred through the project website and blog and through members of the steering group the Emerge Community, Users and Innovations Program project meetings, Meeting with Critical friend, JISC Innovations Forum as well as personal contact with JISC digitisation program staff, Techdis, International Liberated Learning Consortium, Members of the JISC/NSF funded spoken word project from Glasgow Caledonian and Northwestern Universities.

Synote, an annotation system that meets the requirements has being developed to add to the synchronised multimedia captions, images, and slides demonstrated using ViaScribe, the facility for users to also create tags and notes and bookmarks and links[i]. The system design will allow the future incorporation of other specific types of annotation such as audio, video, animations, drawing etc. However these were not identified as a current priority user need and can also be achieved with the prototype system through linking to external files. Synote builds on the experience with ViaScribe to allow users to search, browse and add synchronised annotations (notes, tags, bookmarks, images/slides, links, and captions) to recordings and any existing user annotations.

The software development phases/iterations have proceeded to plan. The third demonstrator of the software released in October 2008 enabled titles and tags to be entered as well as notes and also allowed entry of the start and end timings through selection of the relevant synchronised text transcript. An additional feature not in the original proposal but identified by users as valuable was the ability to select, present and reorder a sequence of video/audio clips without needing to actually physically edit the whole recording.

We have begun to explore ways to obtain further funding for the continuation of the software development.

Very enthusiastic and positive feedback has been received that supports the identified benefits to users of enabling the different media's communication qualities and strengths to be available as appropriate for different contexts, content, tasks, learning styles, learning preferences and learning differences.

The main strand in this project was the development of a web based multimedia system to make educational podcasts and lectures easier to search, manage, understand and interact. The software development and evaluation was iterative involving UIDM stages one, two and three, with five phases/iterations and three demonstrators with a final version at the end of the project. Analysis and design and development of demonstrators involved usability studies including iterative evaluation of screen and interaction design with users to finalise software design for deployment for teaching, learning, training and information provision. Demonstrators were evaluated using quantitative and qualitative evaluations and observations based on deployment by users. Synote is available at www.synote.org for any author to contribute resources and annotations but the code is available for institutions to download from Sourceforge if they wish to host their own sites.

Outputs and Results

The main project outputs and impacts on the teaching, learning or research communities are:

- The Synote application that has been developed through this project has the capability to handle most of the types of audio and video formats available on the web. Users' created bookmarks, tags and annotations on these media recordings are stored at Synote server. Since the audio or video recordings are stored by users on their chosen web accessible space, the Synote server only stores text annotations, so millions of hours of recordings can be catered for.

- Synote works on synchronisation of audio and video to accessible text captions and transcripts, allowing audio visual material to be manipulated through searching and browsing the text. Similarly images, tags, links, notes and bookmarks are also synchronised with audio and video to provide innovative methods of accessing and annotating multimedia.

- Synote enables users to add, and search for, annotations quickly and easily. These annotations can be further used for a number of web 2.0 type collaborative applications.

- Synote supports private or shared annotations. This is achieved by providing the feature of creating groups and adding members to these groups. The members can be read, annotate or write permissions.

- Synote has been designed for accessibility.

Figures 3 and 4 show actual screen displays of the Synote prototype. A tool has also been developed to create Synote presentations from narrated PowerPoint or unnarrated PowerPoint files or images with audio recordings. The tool also will allow Synote to create Synmarks from the slide title and text and notes and timings and a synchronised transcript if this is typed into the slide notes. A user permissions system is also being included to allow users to specify who will be able to annotate their recordings and read their annotations. Synote has a manual editing system for creating synchronised transcriptions and slides and will be able to play most media sources through the use of Media Player and JW Player. Synote is a JavaScript application that has been developed using the Google Web Toolkit and tested using Internet Explorer, Firefox, Google Chrome and Safari. Recordings used in Synote can be created especially for teaching or can be audio and video recordings of actual lectures. Screen Captured Recordings of animated PowerPoints have also been used where the images of the slides did not convey the information fully.

When the recording is played the currently spoken words are shown highlighted in the transcript. Selecting a Synmark, transcript word or Slide/Image moves the recording to the corresponding time. The browser 'Find' facility can be used to search the transcript or Synmarks and a search facility is being developed for more advanced searching of all the annotations stored on the database. Since the audio or video recordings are stored by users on their chosen web accessible space the Synote server only stores the text annotations and so millions of hours of recordings can be catered for. Toggling Autoscroll can ensure the current selection stays visible in the panel or allow the user to scroll manually. The displayed size of the slides and the video can be altered by the user, as can the

amount of the screen display used to display the transcript or the Synmarks. A Synmark can have a Title, a note that can contain valid HTML code, tags separated by spaces and an ID of the next Synmarked part of the recording to jump to if required. The start time is automatically entered and is the time in the recording corresponding to when the Synmark was created. If some text in the transcript is selected before creating a Synmark then the corresponding start and end times are entered automatically and the selected text can be highlighted if required. All of the content or just one line of the individual user's Synmarks or everybody's Synmarks can be displayed and Synmark information can be sorted and hidden. Users can edit or delete their own Synmarks. Information for the whole time period of the recording or only part of it can be printed and the user can choose to print information for the whole of the recording within this time period or only the Synmarked parts of it and select whose Synmarked parts. The user can also choose whether they want to print the transcript and/or the Presentation Slides/images and/or the Synmarks and select whose Synmarks and which information in the Synmarks. Initial evaluations with students in classes have shown that students like using Synote, find it useful and easy to use and want more recordings and lectures to be available in this way.

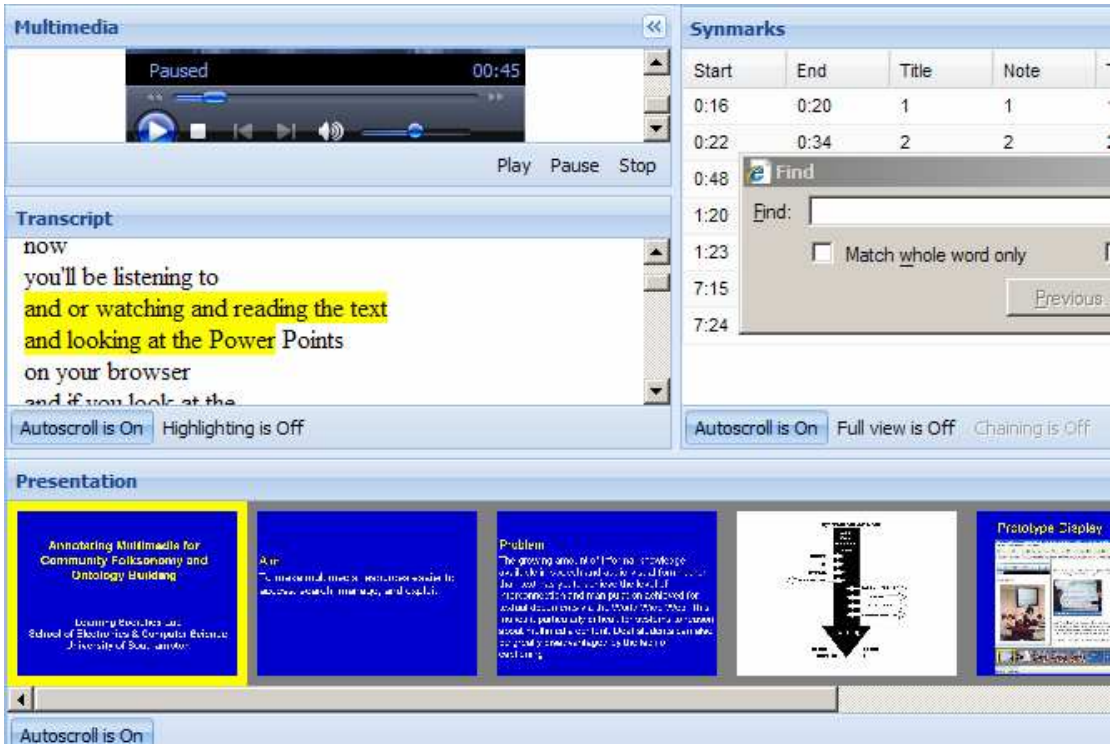

Figure 3. Synote interface

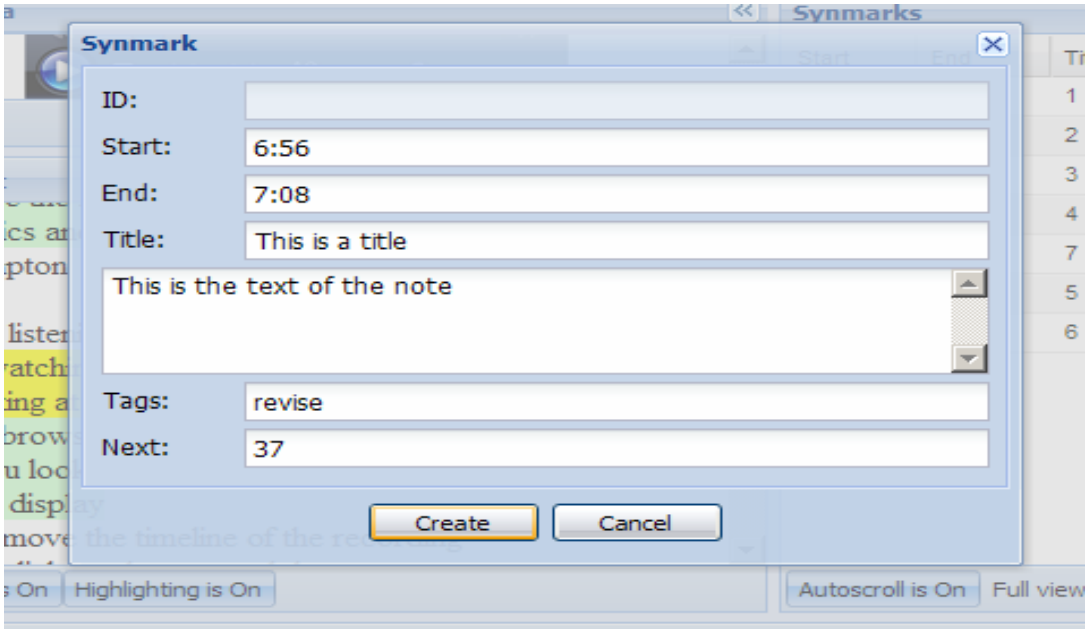

Figure 4. Synmark creation

Outcomes

The project's outcomes have met the identified user need of making multimedia web resources (e.g. podcasts) easier to access, search, manage, and exploit for learners, teachers and other users through developing and deploying technologies that support the creation of synchronised notes, bookmarks, tags, images, links and text captions.

Synote has met the user needs identified in the project proposal: i.e. to:

Enable learners …

i. to search text transcripts for specific topics and then replay recordings from that point
ii. to read captions rather than listen to recorded speech to support learning style preference, deafness, or English as a second language
iii. who find the more colloquial style of transcribed text easier to follow than an academic written style to use the transcript of lectures to support their understanding of text books and academic articles
iv. to insert a bookmark at a particular point in a recording so as to be able to continue later from where they left off
v. to link to sections of recordings from other resources (e.g. documents, web pages etc.) or share these sections with others
vi. to tag and highlight sections of recordings/transcripts they don't understand fully so they can revisit them later for clarification
vii. to annotate recordings with notes and URLs of related resources (e.g. documents, websites etc.) at specific places in a recording to clarify issues and support revision
viii. to tag recordings using their own terms as a personal index. A community folksonomy 'index' can be created from everyone's tags to help provide a shared understanding and a more detailed and complete index.

Enable teachers/lecturers …

ix. to index their recordings using syllabus topic tags
x. to provide synchronized slides and text captions to accompany podcasts
xi. to identify which topics need further clarification from the pattern of learners' 'not understood' tags
xii. to provide feedback on learner-created recordings of presentations (e.g. 'good use of voice', 'good use of audio visual material')

xiii. to ask learners to annotate recordings of their group meetings using unstructured or structured tags to provide evidence of their contributions as part of the module assessment
xiv. to analyse unstructured tags learners use (folksonomy) to help create structured tags (ontology) for indexing future recordings
xv. to tag recordings with URLs of related resources (e.g. documents, websites etc.)
xvi. to link to and use sections of existing multimedia without having to edit the recording

Enable administrative and support staff …
xvii. to caption and add images to information or training recordings and tag with indexes and also URLs of related resources.

Need for a Real-time annotation system: The main outcome of MACFOB is the Synote application which enables students to annotate recordings AFTER a lecture. Discussions with students have identified that the introduction of Synote will result in many students deciding NOT to attend lectures as they would need to copy their notes taken during lectures into the system after the lecture and synchronise them manually with the recording. Since this would involve them replaying the whole of the lecture again, students have said that because of the extra work involved they would therefore not attend lectures and instead just take notes for the first time while watching a replay of the lecture as then their notes will be automatically synchronised with the recording. However, if it was possible for the notes taken DURING the live lecture to be automatically synchronised with the lecture recording then they have said that they would indeed attend lectures. We submitted a proposal in response to the JISC Circular 4/08: Learning and Teaching Innovation Grants: Call for Initial Proposals for the development of a Real-Time Annotation system that will automatically create time stamping of students digital notes, bookmarks and tags created during lectures so that they can be automatically incorporated into the MACFOB Synote system without students having to retype them into the system after the lecture. There is no similar system available and it will add great value to the outcomes of the MACFOB project for JISC and the users. Our proposal was shortlisted but was not selected as those evaluating the proposals to the JISC Circular 4/08 call stated that we should resubmit once the MACFOB project had finished and Synote was no longer a prototype.

Synchronised recordings have been made available at http://www.synote.org.

The MACFOB team have been involved in a number of dissemination activities including

- The Project Website (http://www.synote.ecs.soton.ac.uk)
- The Project Blog (http://blog.lsl.ecs.soton.ac.uk/synote)
- Dissemination within Southampton University has occurred through members of the steering group and dissemination outside the university has occurred through the Emerge Community, Users and Innovations Program project meetings, Meeting with Critical friend, JISC Innovations Forum as well as personal contact with other JISC programmes (Rachel Bruce, Alastair Dunning, Balviar Notay), Techdis, International Liberated Learning Consortium, Members of the JISC/NSF funded spoken word project from Glasgow Caledonian and Northwestern Universities.

Published Conference Paper: 'Multimedia Annotation and Community Folksonomy Building' presented at ED-MEDIA--World Conference on Educational Multimedia, Hypermedia & Telecommunications in Vienna in July 2008 and available at http://eprints.ecs.soton.ac.uk/16576/

In addition to further presentations at JISC events and conferences, presentations on the project were given in:

June 2008

- Net4Voice Liberated Learning Workshop from 2nd June to 5th June 2008. (Net4Voice is a European project involving Italian, German and UK members of the Liberated Learning Consortium of Universities worldwide with an aim to advance speech recognition technology

and techniques to create and foster barrier-free learning environments to improve accessibility to information.)

July 2008

- World Conference on Educational Multimedia, Hypermedia & Telecommunications in Vienna September 2008:

September 2008:

- NADP Conference: The Future of Supporting Students through Technology in association with Association on Higher Education and Disability (AHEAD) and Access Technologists Higher Education Network (ATHEN),

October 2008:

- Liberated Learning Consortium Annual Conference at the University of Bologna
- Languages & the Media 7th International Conference in Berlin

February 2009

- HEA workshop "Developing video analysis as a pedagogic and research tool for health care simulation: "
  http://www.health.heacademy.ac.uk/news-events/eventsbox/2009/18febworkshop/
- U&I ASEL project workshop planned but prevented due to bad weather

March 2009

- 'Unlocking Audio 2 – Connecting With Listeners': Conference at British Library

Papers have also being submitted to the following conferences taking place in 2009:

- CVHI
- AAATE
- HYPERTEXT
- ICALT
- EUNIS
- Learning on Screen Conference (British Universities Film & Video Council)

Conclusions

The project has successfully achieved its aim to develop Synote, a collaborative, web based synchronised annotation system for multimedia that stores annotations separately. Further developments and improvements of Synote will be sustained and trials continue beyond the programme end date of 31st March 2009. There has been a very positive response from students and staff who have said that they would like to continue to use this facility if more material was made available. For students to want to attend lectures that are being recorded for replay using Synote, students would however want a facility to be able to automatically incorporate notes taken in real time lectures with Synote. We are hoping to be able to obtain further funding to achieve this.

Implications

The project has the potential to have considerable impact on both teachers and learners since it facilitates the enhanced use of educational media available on the web. Further developments and improvements of Synote will be sustained and trials continue beyond the programme end date of 31st March 2009. There has been a very positive response from students and staff who have said that they would like to continue to use this facility if more material was made available. However for students to want to attend lectures that are being recorded for replay using Synote, students would want a facility to be able to automatically incorporate notes taken in real time lectures with Synote. We are hoping to be able to obtain further funding to achieve this. We are also now in the process of investigating how Synote can be integrated with various

repositories at the University of Southampton and are hoping to be able to obtain further funding to investigate how Synote can be integrated with other repositories containing video and audio material behind a login and password.

Recommendations

Make more audio and/or video teaching recordings available so that can be played without requiring a login and a password

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[30] http://www.microsoft.com/windows/windowsmedia/forpros/encoder/features.aspx
[31] http://www.highcriteria.com/products.htm
[32] http://www.youtube.com/t/annotations_about
[33] http://www.plymedia.com
[34] http://www.viddler.com/
[35] http://www.asterpix.com/
[36] http://www.veotag.com/
[37] http://ant.umn.edu/vae.php

APPENDIX A

Feedback on using synote

Please draw a ring around the most appropriate answer(s) and add any comments

How often have you used Synote?		Never		Once		More than once	
If your answer was 'Never' could you please give a reason:							
If you have used Synote:							
What Browsers have you used with Synote?		IE	Firefox		Google Chrome		Safari
How many different recordings have you listened to?		One		More than one			
How many Synmarks (notes) have you created?		None		One		More than one	
For how long have you used Synote?		Less than 20 minutes				More than 20 minutes	
Have you printed from Synote?		Yes	No				
Have you read the Synote Guide pdf?		Yes	No				
Have you listened to the Synote Guide recording?		Yes	No				
Would you like more modules to have recordings on Synote?		Yes	No				
Would you like recordings of lectures to be on Synote?		Yes	No				
How easy to use was Synote?	Very Easy	5	4	3	2	1	Very Difficult
How useful was Synote?	Very Useful	5	4	3	2	1	Useless
How useful were the Slide images?	Very Useful	5	4	3	2	1	Useless
How useful was the video?	Very Useful	5	4	3	2	1	Useless
How useful was the transcript?	Very Useful	5	4	3	2	1	Useless
How useful was the audio?	Very Useful	5	4	3	2	1	Useless
How useful was the print facility?	Very Useful	5	4	3	2	1	Useless
How useful was the Synmark/notes facility?	Very Useful	5	4	3	2	1	Useless

Many thanks for your help. We would also appreciate it if you could provide comments on your experience using Synote and any suggestions for how Synote could be improved.