



Summer School on Technology Enhanced Learning & Knowledge Management 2008

Workshop “*Mobile & Contextualized Learning*”

Instructions

June 2008
Ohrid, FYR of Macedonia

1 Introduction

Welcome to the workshop *Mobile & Contextualized Learning* and thank you for your interest! Since ancient times mankind captured historical episodes of their epochs in medial representations in order to pass this knowledge down to further generations. For example, prehistoric cave paintings provided semantic as well as episodic knowledge about early hunting habits or historic battles. Currently, modern techniques offer the possibility to transfer such knowledge to advanced digital forms, which additionally offer rich interaction. In our hands-on session you will experience, how mobile multimedia capturing and annotation can be combined with digital multimedia storytelling in order to create combinations of *semantic* as well as *episodic* knowledge in a collaborative manner together with your fellow participants. In this document we provide details about the intended use case scenario as well as organizational details.

2 Instructions

2.1 Evaluation Scenario

Besides just being a beautiful destination for this summer school, Ohrid and its lake were declared as UNESCO world cultural heritage site in 1980. Due to the diversity of multicultural influences on its history, Ohrid features a lot of interesting places and thus presents a perfect location for a mobile multimedia digital storytelling documentation scenario. During the whole summer school, you will have several opportunities to share your Ohrid impressions in form of annotated and automatically geotagged photos. Besides the workshop itself, proposed events for photo acquisition are the excursions to St. Naum and St. Jovan Bigorski on Sunday, June 15 and Wednesday, June 18 respectively. During the workshop split participants in several groups with individual assignments, that involve the following two basic tasks:

- Mobile Multimedia Documentation: capture, annotate & share media at different points of interest in the Ohrid area with an enabled mobile phone.
- Digital Non-Linear Multimedia Storytelling: contribute your Ohrid experiences to a collaborative story creation together with other workshop participants reusing the previously collected media.

During the workshop you will use the two applications *NMV Mobile* and *MIST*. *NMV Mobile* was lately developed as a mobile application for capturing, sharing, automatic geotagging, annotation and retrieval of digital images. The multimedia metadata part of the application is driven by MPEG-7 services offering multimedia annotation and retrieval features. *MIST* is a digital multimedia storytelling application, which is driven by MPEG-7 services as well as storytelling-related services and supports the creation of *non-linear multimedia stories*.

Primary objective of this workshop is to give you an impression of how these applications can be used in real-life learning scenarios. Additionally, we give you the opportunity to rate the quality of the underlying services afterwards. Thereby, the workshop outcome is manifold. You will benefit by experiencing new techniques used for technology enhanced learning and will probably densify your knowledge about the Ohrid area by collecting media and collaboratively structuring them in stories. The stories you created can then be used as learning material by other users of the system. Finally, we benefit from your feedback.

2.2 Evaluator Account

Before you participate, you will first need an evaluation account. For the creation of such an account, you can use the following simple registration form: <http://nillenposse.dyndns.org/register.php> Accounts will be equipped with sufficient service access rights and with membership in the community “*Ohrid Summer School 2008*”.

2.3 Evaluator Manual

In order to get familiar with the tools NMV Mobile and MobSOS Surveys Mobile used throughout the workshop, we have created a short evaluator manual. Additionally, we provide instructions for setting up an emulation environment on a regular PC, so in case you are not equipped with a capable mobile device, you can still use NMV Mobile on your regular machine. The evaluator manual is available from the workshop page ([evaluator-manual.pdf](#)).

2.4 Select Evaluation Platform

In order to run the mobile tools used throughout this survey you can select between three possible evaluation platforms:

- **Nokia N95 8GB:** the Nokia N95 8GB is equipped with a built-in 5 megapixel camera and a GPS receiver. Evaluation time on this device is limited to 10 minutes, since there is only one device available.
- **PC (Emulation):** the Sun Java Wireless Toolkit for CLDC 1.1 provides a complete building and emulation environment for running mobile applications on a Windows PC. The main advantage with emulation is that there are no restrictions regarding data transmission costs, since workshop participants can rely upon the WiFi infrastructure offered by Hotel Granit. Detailed setup instructions for the mobile tools emulation environment are provided in the evaluator manual.
- **Your Mobile Device:** If you own a mobile device that fulfills all of the following requirements you can possibly try our mobile tools on your own equipment.
 - CLDC 1.1/MIDP 2.0 compliant
 - equipped with built-in camera and GPS receiver
 - support for Java Location API (JSR 179)
 - support for Internet Connection (WLAN, 3G, GPRS/GSM, etc.)

However, be warned about the fact that during the usage of the mobile tools, your mobile device will repeatedly use an internet connection, which can cause tremendous costs. We intend to relieve you from these costs by offering free prepaid cards. Anna and Zina will buy those cards on-demand from local providers in Ohrid in case we could identify your device as capable.

If you are interested and think your device fulfills all requirements, please try to download and install a prebuilt JAR containing NMV Mobile and MobSOS Surveys Mobile. Dominik is responsible for the technical realization of the workshop scenario and will provide installation support.

2.5 Use NMV Mobile

Now, that you are familiar with the evaluation scenario and have an evaluator account, you are ready to start working with NMV Mobile. Open the application on your evaluation platform and log in with your evaluation account. During the login process you will be asked a number of questions regarding the access to certain device features, such as location from GPS receiver, access to file system, etc. Answer affirmative to all of these questions. After a successful login you begin on the NMV main screen. From the main menu you can explore supported features. As a first guidance we recommend the following example walkthrough:

1. Begin with a tag-based media search: search for specific keywords and browse results.
2. Capture one or two images; share and annotate them.
3. Finally try to retrieve the images you shared before using tag-based media search again.

The evaluator manual provides basic documentation on the use of the most important features. During your session your activity as well as mobile context information (e.g. GPS location, community context, etc.) is logged for scientific purposes only. Please feel free to use NMV Mobile as long and often as you want.

2.6 Use MIST

In order to demonstrate, that media previously captured, annotated and shared during excursions with mobile devices can then be used in collaborative storytelling sessions. The structure of stories is defined by the MOD (Movement Oriented Design) principle originally developed by Prof. Nalin Sharda at Victoria University in Melbourne, Australia.

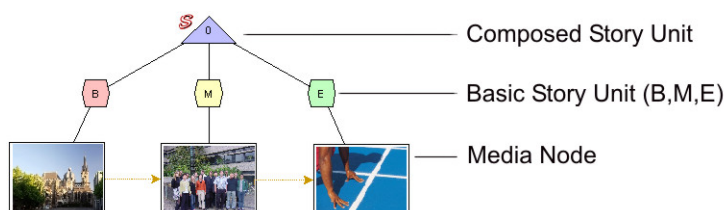


Figure 1: Basic MOD Story Structure

Thereby, each story defines a begin, a middle and an end *story unit*, each of which can be recursively decomposed. To each basic story unit a number of media can be assigned. Non-linear multimedia stories can be created by defining several complete paths between media nodes attached to begin, middle and end units. Thereby, individual story paths can be understood as media sequences.

Log in to MIST with your evaluation account. For our scenario, we have already created a basic story skeleton, that is further refined by you during the summer school. As a first guidance we recommend creating a new story path by adding an alternative begin to an existing story:

1. choose action *“open existing story”*; select story *“Summer School 2008 - Impressions of Ohrid”*.
2. choose one of the existing begin story units.
3. open the story unit context menu with a right mouse-click.
4. choose action *“Add Medium”*
5. enter a media search expression and select one of the results.

6. the resulting media node is attached to the begin story unit as a thumbnail.
7. open the attached medium's context menu with a right mouse-click on the thumbnail.
8. choose action *"Insert Edge"*
9. in the story graph, select one of the media attached to a middle story unit.
10. consume the new story path on the *"Viewer"* tab.

The above example should give you a first idea of basic MIST usage. Further instructions can be found in the instructional video to be found on the workshop page.

2.7 (Optional) Complete Questionnaires (15-20 min)

During your NMV Mobile and MIST sessions, you will have used the following services:

- MPEG-7 Multimedia Content Service: Media Annotation & Retrieval
- MOD Storytelling Service: Story Creation/Editing

If you are interested, we would like to ask you to fill in the *MobSOS Questionnaire on Mobile Multimedia Community Service Success* for two services by using our mobile survey participation tool *MobSOS Surveys Mobile*. Further details on this tool are available from the evaluator manual. Open the tool on your evaluation platform and log in with your evaluator account.

In order to fill in the questionnaires perform the following steps:

- select survey *"Ohrid Summer School Survey 2008"*
- select your community *"Ohrid Summer School 2008"*
- select service *"MPEG-7 Multimedia Content Service"* and complete the *"MobSOS Questionnaire on Mobile Multimedia Community Service Success"*.
- select service *"MOD Storytelling Service"* and complete the *"MobSOS Questionnaire on Mobile Multimedia Community Service Success"*.

After submitting questionnaire answers your contribution to the survey is complete. Later on, we present the results of our survey including the analysis of both monitoring and questionnaire answer information.

3 Final Remarks

Thank you very much for your participation!

If you encounter any problems or have further questions, please do not hesitate to contact any of us. Best regards from Aachen, and we are looking forward to meet you in Ohrid.

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