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Project Title	Planets
Title of Deliverable	Progress report on training programme
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Contributing Sub project and Work package	DT/6
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Abstract

This document is a report on the progress of the Planets training programme during Year 3. It describes the various plans made, events delivered and their evaluation, conclusions from actions taken and plans for future activities.

Keyword list

Training, awareness-raising, adoption, take-up.

Contributors

Person	Role	Partner	Contribution
Jane Humphreys	Communications Officer	BL	Extensive comments

Document Approval

Person	Role	Partner
Jane Humphreys	DT Sub Project Lead	BL

Distribution

Person	Role	Partner

Revision History

Issue	Author	Date	Description
0.1	Vittore Casarosa (HATII)	06/04/2009	Initial draft version for internal review
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0.3	Vittore Casarosa (HATII)	05/05/2009	Third draft version from JH comments
1.0	Vittore Casarosa (HATII)	12/06/2009	Final version with reviewers' comments

References

Ref.	Document	Date	Details and Version
DT6-D2	Year 2 Report on Training	June 2008	Final version
PM1-D2	Implementation Plan M25-M42	December 2008	Version 3.2

EXECUTIVE SUMMARY

This document is a report on the progress of the Planets training programme during Year 3. It describes the training plan, the events delivered, the outcomes, the conclusions from actions taken, and the plans for future activities.

The work package was designed to be delivered as a modular training programme. This resulted in self-contained sessions that could be used for Planets-specific training and for collaborative events with EC-funded partners such as the WePreserve initiative.

Subsequent development of the organiser and the trainer template packs, in order to standardise the training materials, has ensured consistent approaches to the organisation and evaluation of the training events. The training materials were the basis for developing templates to support outreach activities in DT10.

Year 3 training events took place in October 2007, in Prague and in March 2008, in Barcelona as part of the WePreserve Training Events. These events used a variety of teaching methods, including hands-on exercises, delegate interaction, and access to supporting online materials. Both events were successful. Good attendance and highly positive feedback demonstrated the effectiveness of the programme structure and confirmed the growing interest in the results of the projects that were featured.

In Year 4, DT6 will produce a Training Plan to support the delivery of an ambitious programme comprising combined Training and Outreach events that are targeted at library, archival, and large data collection-holding institutions. The events will be supported by online training materials and continued participation in joint activities with partners and projects of the FP6 and FP7 pprogarams. The combined approach will provide a streamlined and coherent Training and Outreach programme for Planets and thus ensure a broad and successful take-up of the project's output.

TABLE OF CONTENTS

1. Training Work package and Planets Implementation Plan

This document reports on the progress and evolution of the Planets Training Programme in the Year 3 (June 2008 to May 2009 inclusive). It describes the objectives, the undertaken activities, and the outcomes against the objectives. It also contains an outline of activities for the Year 4 in light of the findings from the Year 3.

This evaluation builds on the learning from the Year 2 Report on Training (DT6-D2), issued in June 2008.

2. Objectives of Year 3 Training

Year 3 training activities support the overall objectives of the Dissemination and Take-up sub project to:

1. Educate prospective users and suppliers about Planets and its role in supporting preservation of digital objects in institutions in Europe.

2. Equip prospective end-users and suppliers with the information and skills they need to adopt Planets and stimulate its uptake.

3. Inform stakeholders about the milestones in the project and how to take advantage of Planets output in their organisations

4. Engage with end-users and suppliers to understand their needs and use the gained insights to inform the development of the project.

5. Collaborate with other EU FP6 and digital preservation organisations to coordinate activities and communicate clearly the respective roles and responsibilities.

The DT6 Training Work package aims to advance the work of Planets by providing an educational framework that will enable core communities to acquire adequate basic information, knowledge, and skills to apply the project's methods, tools, and services to their own collections and products. Its specific objectives are to:

1. Stimulate the take-up of Planets methods, products, and services by providing a conduit between the innovations created within the project and their subsequent exploitation and adoption by potential user communities.

2. Offer learning opportunities for the staff in archives, libraries, and other large content-holding institutions and promote the take-up of Planets methods, practices, and technologies.

3. Build on the DT10 supplier vendor activities to provide an introduction to Planets for consultancy organizations, SME technology developers, and vendors.

4. Deliver an Online Learning Support Facility to support face-to-face courses and to offer additional education opportunities to our primary user communities.

5. Promote collaboration with other EU preservation projects to ensure an optimal digital preservation educational programme for the European Community.

The activities scheduled in the Implementation Plan for M25 to M42 are to:

1. Deliver one training event by M31
2. Deliver four further training events by M42
3. Collaborate with other EU funded preservation projects, DPE and CASPAR
4. Collaborate with other work packages in the Dissemination and Take-up sub project (in particular DT10) and streamline the dissemination, outreach, and training activities
5. Deliver a report on the progress of the training programme by M35 (this report)
6. Deliver a revision of the training plan by M37
7. Develop online training material by M42.

Section 2 of this document summarises the progress against the plan, including the cooperation with other European Commission-funded digital preservation projects and the Outreach Work package, DT10.

Section 3 provides an overview of the two Planets training events that took place in Year 3 - the DPE/Planets/CASPAR/nestor Joint Training Event "Starting Out: Preserving Digital Objects – Principles and Practice", held on 13-17 October 2008 in Prague, Czech Republic, and the DPE/Planets/CASPAR/nestor Joint Training Event "The Preservation Challenge: Basic Concepts and Practical Applications", held on 23-27 March 2009 in Barcelona, Spain.

Section 4 summarises lessons learned from the Year 3 training activities.

Section 5 outlines the plan for the Year 4, including the reasons for combining the Outreach and the Training activities into five consolidated events from M37 (June 2009) to M48 (May 2010).

Appendix 1-2 contain the programmes for each event and their evaluation.

Appendix 3 presents the proposed programme for the Year 4.

3. Achievements of the Training Work package

Informed by the experience from the events in the Year 2 and the feedback from participants and speakers, the Training Work package has addressed objectives 1, 2, 3 and 5 of the Year 3

Implementation Plan (see above) through cooperation with the DT10 Outreach Work package and contact with other preservation projects and activities. It has delivered items 1, 3, 4 and has proposed and confirmed arrangements to deliver items 2, 5 and 6. A shortage of resource has meant that the work on delivering online materials (item 7) had to be postponed to Year 4.

3.1   Delivery of training events

The first Planets training event in Year 3 was a joint initiative, coordinated by the WePreserve initiative, and took place in Prague on 13-17 October 2008. Also the second Planets training event was a joint initiative, coordinated by WePreserve, and took place in Barcelona on 23-27 March 2009.

WePreserve is led by HATII and provides a collaborative Forum for the three major projects funded by the European Commission in FP6: Digital Preservation Europe (DPE), Cultural, Artistic and Scientific Knowledge for Preservation, Access and Retrieval (CASPAR), and Preservation and Long-term Access through NETworked Services (PLANETS). The Forum also includes the German Network of long-term digital preservation expertise (nestor) and the Digital Curation Centre (DCC). It comprises an annual meeting and uses a portal for preservation and curation projects with the events calendar, information board and resources, and joint training and educational activities.

Both events were aimed to introduce the participants to the principles of digital preservation through discussion of featured projects and to provide an opportunity to apply this knowledge through a series of practical, hands-on exercises. Section 4 summarises the objectives and outcomes of each event. Appendices 1 and 2 contain the programme and event evaluations.

DPE, on behalf of WePreserve, took the lead in organising these events, sourcing the venue and managing the logistics and related expenses. Planets participated in defining the technical program, contributing time and effort to the lecturers, and covering the travel expenses for their participation in the events.

3.2   Collaboration with other digital preservation projects

The number of projects and institutions offering digital preservation training has increased in recent years (see for example the activities of DPE – Digital Preservation Europe) and a wide variety of courses is now available to organisations and end-users who wish to learn about theories, processes, and techniques. Most of the publicly-funded projects and initiatives in digital

preservation have a mandate to disseminate their findings and provide specific training. At the same time they have limited resources to commit to these activities.

Collaboration across partner projects provides benefits to both organisers and delegates by (i) minimising duplication of efforts and un-necessary competition, (ii) making a good use of training resources, dissemination channels, and inter-disciplinary training opportunities, and (iii) presenting EC initiatives in digital preservation in a cohesive and coherent way. Participants benefit from the clarity about the purpose of the events and the confidence that the events provide a real value to them. They gain awareness about the range of research and development tools and services that are available to support them in their preservation duties, and have access to multi-disciplinary perspectives on preservation issues. Projects also raise collective awareness about a range of user community needs, increase their credibility amongst users communities, and develop a shared infrastructure for digital preservation training to enable reuse of training materials.

Planets has made a substantial contribution to these collaborative efforts through its participation in the two WePreserve events mentioned above, and in the the WePreserve Annual Conference, held in Nice on 28-30 October 2008. It was drawing on the user communities of all Framework Programme 6 partners (WePreserve, DPE, Caspar, Shaman and Protage) for dissemination of mailings and event announcements.It also incoporated a sign up facility for the DPE community in its user community registration form.

3.3   Joint plan with the Outreach Work package

Planets project outputs are now reaching sufficient maturity to be demonstrated and recommended as components of solutions that address digital preservation issues and merit the workshops in their own right. Creating a sustained interest and adoption of Planets requires that the audience understands the issues involved in digital preservation and the need to take actions, and to fully appreciate the important role that Planets plays. There is an overlap between the Planets DT10 Outreach awareness-raising activities and the in-depth training in order to provide the knowledge and the skills required to use Planets tools, which is the responsibility of DT6.

It was suggested in the DT10 Outreach Plan in May 2008 that DT10 and DT6 events be combined. This was raised again in the team discussions in December 2008. Feedback from the speakers highlighted the need to better coordinate the activities across the two work packages since a separate plan for Outreach, with five events planned between M30 and M42, and another one for Training, with four additional events planned between M30 and M42, would put an unbearable load on the technical experts in terms time and effort and yield substantial expenses for travel and subsistence for such a large number of events.

For that reason, the programme management of DT6 and DT10 decided to establish a programme and infrastructure to support combined Outreach and Training events in Year 4. This will be described in detail in the forthcoming revised Training plan, a deliverable DT6-D4 in M37.

DT6 has participated in DT10 monthly conference calls. The teams exchanged bi-weekly activity reports to keep each other updated about respective activities and participated in a productive face-to-face workshop in London on 26 February 2009. A close cooperation has been achieved with the Danish Statsbibliotek, the Local Host of the first joint event which will take place in Copenhagen on 22-24 June 2009. The organisation of this event has been a true team effort and will hopefully serve as a model for organizing future events.

3.4   The Planets Training Programme

The initial training plan was based on a modular structure for the programme, comprising 15 modules which, in most cases, could be delivered either independently or in combination with other modules:

Planets-1: Digital preservation and the Planets approach

Planets-2: The preservation planning process

Planets-3: Identifying essential characteristics of digital objects (objective trees)

Planets-4: Building a preservation plan using the Planets approach

Planets-5: Preservation planning decision support tool (Plato)

Planets-6: Preservation approaches

Planets-7: Planets registries

Planets-8: Preservation action toolset (migration, emulation)

Planets-9: Characterisation framework

Planets-10: The testbed environment

Planets-11: Carrying out a testbed experiment

Planets-12: The Planets interoperability framework/architecture

Planets-13: Installation/configuration of a Planets service node

Planets-14: Wrapping tools as Planets services

Planets-15: Creation and integration of external data sources

Planets tools and services have been presented with a lower level granularity, consolidating the original modules into six major topics that reflect the structure and components of the project. As Planets tools and services are in a more mature stage, presenting them in larger clusters allows a more global view of the project.

Topic 1: Digital preservation and the Planets approach (include Planets 1 and 2)

Topic 2: Preservation planning decision support tool – Plato (include Planets 3, 4 and 5)

Topic 3: Preservation actions (include Planets 6, 7 and 8)

Topic 4: Characterisation framework (include Planets 9)

Topic 5: The testbed environment (include Planets 10 and 11)

Topic 6: The Planets interoperability framework/architecture (include Planets 12, 13, 14 and 15)

Since the training events in Year 3 were joint events coordinated by WePreserve, the material developed for training was initially made available through the WePreserve Moodle. In addition to the presentations and exercises used during the events, participants were provided with additional material one week in advance and one week following each training event. The plan was to provide the same material on the Planets Moodle. That was achieved for Year 2. However, due to the staff shortage, for the events in Year 3 the updating of the Planets Moodle has not been done yet and it will be delayed to Year 4.

4. Training Events in Year 3

The aims of the joint training events promoted by WePreserve were to introduce the participants to a number of key digital preservation principles and provide them with an opportunity to apply knowledge through a number of practical hands-on exercises.

Participants were expected to leave the events with:

- understanding of key digital preservation issues and challenges

- appreciation of the roles and responsibilities involved in a digital preservation activity

- knowledge about the reference model for Open Archival Information System (OAIS)

- familiarity with file formats considered beneficial for preservation

- developed understanding of the role and use of preservation metadata

- knowledge of the preservation planning process and its role in creating preservation strategies

- insight into the concepts of trust and trustworthiness in the context of digital preservation

- knowledge of issues relating to audit methodologies and self-certification of digital repositories

- knowledge about the outputs of European research and development projects.

Events also provided participants with networking opportunities to connect with researchers, international experts, and practitioners across disciplines and national boundaries

4.1   DPE/Planets/CASPAR/nestor Joint Training Event "Starting Out: Preserving Digital Objects – Principles and Practice" National Library of the Czech Republic, Charles University, Prague, Czech Republic, 13-17 October 2008

4.1.1   Description

The training event, *'Starting Out: Preserving Digital Objects – Principles and Practice',* was held at the National Library of Czech Republic and Charles University, Prague, on 13-17 October 2008.

The event targeted digital preservation practitioners and researchers from archives, libraries and museums, and institutions such as data archives, government departments, and legal and commercial sectors with an interest in digital preservation. Sessions covered specific aspects of digital preservation and comprised introductory lectures, group work, presentation of results, and discussion. The diverse professional background and experience of the participants resulted in a lively debate that facilitated sharing of opinions and experience and raising specific issues. Participants were provided with a one week pre-event and one week post-event online training through the WePreserve Moodle.

Since the venue, logistics, and expenses were organised by DPE this kept the registration fee for members of the DPE and WePreserve community very low, i.e. 100 € for the whole event (for non members the fee was 250 €). The social programme included a welcome reception the evening before the course began, guided tours through the old part of the Prague National Library and the historical seat of the Charles University, and a social event and dinner. This provided more informal networking opportunities.

4.1.2   Evaluation

The aim of the event was to attract between 25 and 30 delegates. Final attendance was twenty-seven delegates and eleven trainers. Almost half of the delegates (48%) represented the library community, followed by research and academic institutions (19%). The remainder of attendees represented archives, commercial companies, and nongovernmental organizations.

Attendance by sector
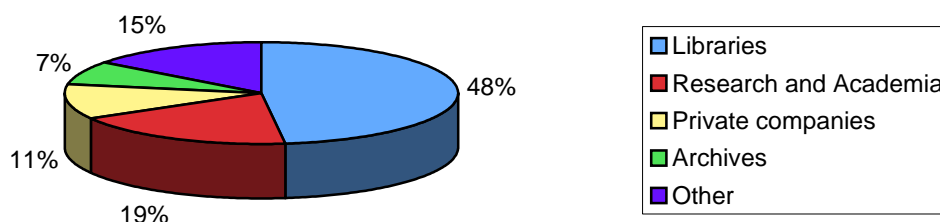
By asking delegates how they learnt about the event we found that the most effective way of disseminating information about the event was 'by word of mouth' (35%), followed by promotion by individual institutions and mailing lists (27%), and by the preservation projects web sites (15%). It is worth mentioning (for future actions) that the Planets website was not indicated as one of the sources. The majority of delegates attended because of their interest in digital preservation (74%%), followed by their interest in DPE, Planets, CASPAR and nestor projects (22%).

92.6% of attendees completed the feedback form, which asked them to rank performance against the core objectives, with 1 corresponding to 'bad' and 5 to 'excellent'. The following table summarises their feedback against each objective, where the row labelled "Actual" indicates the percentage of delegates who rated the event 'good' or higher on the particular criterion. The Planets project has set as a target to achieve 70 per cent of delegates rating events as 'good' or better against the objectives, as indicated in the 'Target' row. The negative difference between the target and the actual performance is shown in red.

	How effective were the speakers?	How would you rate the teaching methods?	How would you rate the structure of the event?	How useful was the background documentation?	How would you rate the organisation of the event?	How well did you feel that the event addressed the main topic?
Target	70	70	70	70	70	70
Actual	87	64	87	63	100	84
Variation	17	6	17	7	30	14

100 % of respondents stated that the event met their expectations. The majority (60%) said that they had left with a better understanding of the key areas of digital preservation, overview of the issues surrounding it, and knowledge about current digital preservation initiatives in Europe. Almost half (44%) stated that they had gained an understanding of the need for preservation planning and documentation, and of existing standards and toolkits. Two mentioned that they had gained helpful ideas for the development of strategic initiatives in their own countries.

A significant number of respondents (44%) said they liked the social elements of this event. In particular, they enjoyed meeting other participants from a range of institutional backgrounds. They enjoyed working with them, discussing issues, and exchanging knowledge. Half of the respondents (48%) indicated specific sessions that interested them. The *file characterization session* is leading the list, followed by *the risk assessment* (DRAMBORA) and *planning* (Plato). One participant noted the importance of all four preservation projects coming together to collaborate and demonstrate their way of handling digital preservation. In terms of improvement, 37% suggested the need for more practical examples, hands-on exercises, and case studies. On the negative side, 33% of the respondents found the course too intensive and sessions too long, indicating that it was hard to concentrate, especially in the afternoons.

4.2 DPE/Planets/CASPAR/nestor Joint Training Event "The Preservation Challenge: Basic Concepts And Practical Applications" University of Barcelona, Institute of Catalan Studies, Barcelona, Spain, 23-27 March 2009

4.2.1 Description

The joint DPE/Planets/CAPAR/nestor training event, *'The Preservation Challenge: Basic Concepts and Practical Applications',* was held at the University of Barcelona and the Institute of Catalan Studies, Barcelona, on 23-27 March 2009. The event illustrated the practical applications of tools developed by DPE, Planets, CASPAR and nestor.

Break-out sessions involved dividing participants into small groups to review and discuss the topics presented during the lectures, with the guidance of the presenters. Participants were provided with one week pre-course and post-course online Moodle training.

The event aimed to attract practitioners and researchers from the archives, libraries, and museums sector as well as from other institutions such as data archives, government departments, and legal and commercial sectors with an interest in the topic of digital preservation.

A social programme included a welcome reception the evening before the course began, hosted by the Municipality of Barcelona, and a social event and dinner hosted by the Catalunya Library (Biblioteca de Catalunya).

4.2.2 Evaluation

The event aimed to attract between 25 and 30 delegates. Final attendance was thirty-three delegates and twelve trainers. One third of the attendees (33%) represented the research and academic institutions, followed by the library community (22%). The remainder of delegates represented archives, commercial companies, and local government.

Attendance by sector
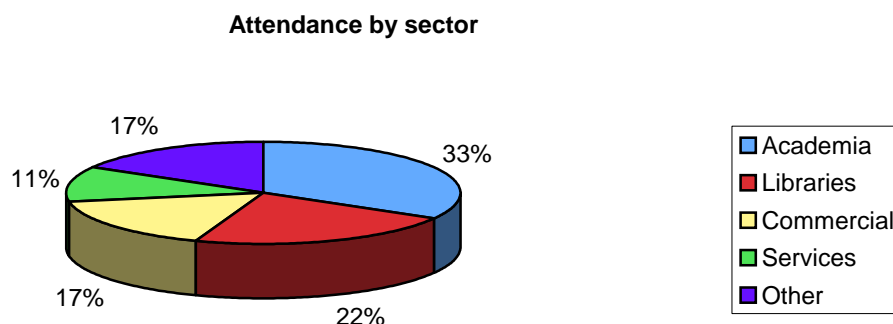
The two most effective methods of communicating information by which delegates learnt about the event were 'word of mouth' (35%) and promotion by individual institutions and mailing lists (35%), followed by the preservation projects web sites (17%). It is worth mentioning (for future actions) that the Planets website was not indicated as one of the sources. The vast majority attended because of their overall interest in digital preservation (94%), followed by an interest in DPE, Planets, CASPAR and nestor projects (29%).

52% of attendees completed the feedback form, which asked them to rank performance against the core objectives, with 1 corresponding to 'bad' and 5 to 'excellent'. The following table summarises their feedback against each objective, where the row labelled "Actual" indicates the percentage of delegates who rated the event 'good' or higher on the particular criterion. The Planets project has set as a target to achieve 70 per cent of delegates rating events as 'good' or better against the

objectives, as indicated in the 'Target' row. The negative difference between the target and the actual performance is shown in red.

	How effective were the speakers?	How would you rate the teaching methods?	How would you rate the structure of the event?	How useful was the background documentation?	How would you rate the organisation of the event?	How well did you feel that the event addressed the main topic?
Target	70	70	70	70	70	70
Actual	77	77	76	43	94	94
Variation	7	7	6	27	24	6

100 % of respondents stated that the event met their expectations. The majority (64%) said that they had left with a better understanding of the key areas of digital preservation, an overview of the issues surrounding it, and knowledge of innovative approaches to the problem. Another significant portion (29%) stated that they had gained a good knowledge of the existing projects and available tools. One respondent specifically indicated the Planets Testbed methodology as being helpful for their work, both in policy making and technical fields.

Almost half of the respondents (47%) indicated the lecturers and the variety of perspectives as the most valuable part of the event, followed by the practical activities and brainstorming (35%). 23% of the respondents highlighted the value of the social and networking aspects of the event, in particular, meeting participants with different backgrounds and different views, discussing issues with them, and exchanging ideas. Finally, 17% of the respondents specifically indicated the Planets Testbed as the most valuable session of the event. In terms of improvement, 35% suggested to include more practical examples, hands-on exercises, and case studies, and 17% expressed the desire to have more written documentation during the event.

5. Conclusions from Feedback to Year 3 Training and Implications for Year 4

The training events met their objectives and participants' expectations by providing them with useful knowledge to take back to their own institutions.

Participants appreciated the internationally established lecturers who assisted them in understanding the main concepts and issues of digital preservation and showed them how to use these concepts and address the issues in practice through a number of hands-on exercises.

Participants also appreciated the informal exchange of ideas and group discussions with other researchers, international experts, and practitioners as well as the social aspects of the event organisation. This will hopefully be the first step towards establishing a new community of future collaborators in the field of digital preservation.

The structure of the events and lectures and the lecture format have proven to be too intensive and demanding at times. Participants expressed a desire for more practical examples and more hands-on exercises involving specific preservation tools and case studies.

It was recommended that an earlier access to recommended readings could result in gaining a better understanding and mastering of the teaching material presented during the course itself.

These findings mirror feedback from the Year 3 Outreach events.

6. Year 4 Training

As a result of the cooperation between DT10 and DT6 and based on the input from speakers and past events evaluation, the Training and Outreach events will be combined in the Year 4.

The plan foresees the delivery of five combined Outreach and Training events, starting in June 2009, according to the following schedule.

- Copenhagen, Denmark, 22-24 June (Local host: State and University Library)
- Sofia, Bulgaria, 21-23 September (Local host: Austrian National Library and Bulgarian Academy of Sciences)
- Bern, Switzerland, November 2009 (Local host: Swiss Federal Archives)
- London, UK, January 2010 (Local host: The National Archives of UK)
- Rome/Pisa, Italy, Spring 2010 (Local host: British Library and local support)

The first day will address executives, Heads of IT, Curation and Preservation staff, and managerial staff, and will aim to develop a business case and an understanding of the issues related to long-term preservation of digital objects and the value of Planets approach, tools, and technology. Days two and three will address the staff responsible for digital preservation, i.e., the preservation and curation staff and the IT staff. It will aim to provide technical information and experience of the Planets framework, preservation planning, characterisation, preservation action, and test tools, with a strong emphasis on the practical aspects of preservation and the hands-on exercises. The audience is expected to gain experience with common problems encountered when dealing with preservation issues and to learn how Planets can help to address them.

Pre-reading will be issued in advance of each training event and presentations will be made available via the Planets website after each event.

DT6 has assumed responsibility for the delivery of the Training programme and will work with the Local host (i.e., the partner mostly responsible for the logistics and the budget of the event) to deliver each event based on the original DT10 effort. The overall structure of the event will be maintained throughout all the events except for possible changes due to the experience derived from the first events, the inclusion of regional case studies, and the updates to reflect integration of the new Planets components as the project progresses through the Year 4.

A detailed description will be presented in the DT6-D4 Training Plan for the Year 4 and the DT10-D4 Outreach Plan. Appendix 3 contains the proposed programme.

7.   Appendix 1 – The Prague event

7.1   Delegate Pack

DPE/Planets/CASPAR/nestor
Joint Training Event

Starting Out: Preserving Digital Objects – Principles and Practice

Prague, Czech Republic
13-17 October 2008

Delegate Pack

Lecturers and Session Presenters

- ***David Giaretta****,* Associate Director for Development, STFC Rutherford Appleton Laboratory.

- ***Carlo Meghini,*** Researcher, The Institute for Science and Technology of Information of the Italian National Research Council (ISTI-CNR).

- ***Esther Conway,*** Technical Analyst, STFC Rutherford Appleton Laboratory.

- ***Hans Hofman,*** Senior Advisor at the Nationaal Archief (National Archives) of the Netherlands.

- ***Manfred Thaller,*** Professor of Historisch-Kulturwissenschaftliche Informationsverarbeitung, University of Cologne.

- ***Angela Dappert,*** Senior Analyst, The British Library.

- ***Christoph Becker,*** PhD researcher at the Department of Software Technology and Interactive Systems at the Vienna University of Technology.

- ***Luigi Briguglio,*** Project Manager, Engineering Ingegneria Informatica S. p. A. Italy Research & Development Laboratory

- ***Stefan Strathmann****,* Research & Development, Göettingen State and University Library (SUB).

- ***Perla Innocenti,*** Preservation Researcher, HATII at the University of Glasgow.

Course Timetable:

Sunday, 12 October 2008
18.00:   Overview of the joint training school and Introduction to the Lecturers
            (Prof. Seamus Ross, HATII at the University of Glasgow).
19.00:   Opening Reception

Monday, 13 October 2008
08:30 – 09:00:   Registration
09:00 – 11:15:   Introduction in Digital Preservation
            (*Dr. David Giaretta*, STFC Rutherford Appleton Laboratory).
11:30 – 13:00:   OAIS Model and Representation Information
            (*Carlo Meghini*, ISTI-CNR, Pisa, Italy)
14:00 – 15:15:   Preservation Analysis Workflow and Preservation Descriptive Information
            (*Esther Conway*, STFC Rutherford Appleton Laboratory)
15:30 – 17:45:   Digital Preservation Process: Preparation and Requirements
            (*Hans Hofman*, National Archives of the Netherlands)

Tuesday, 14 October 2008
09:00 – 10:00:   Guided tour of Klementinum
10:00 – 13:30:   File Formats, Significant Properties
            (*Manfred Thaller*, University of Cologne)
14:30 – 18:00:   Preservation Metadata
            (*Angela Dappert*, British Library)

Wednesday, 15 October 2008
09:00 – 12:30:   Preservation planning including PLATO
            (*Christoph Becker*, Vienna University of Technology)
13:30 – 17:00:   Preservation infrastructure
            (*Luigi Briguglio*, Engineering Ingegneria Informatica, Italy, R&D Laboratory)
18:00:   Social event

Thursday, 16 October 2008
09:00 – 10:00:   Guided tour of Karolinum
10:00 – 13:30:   Trusted Repositories
            (*Stefan Strathmann*, Göettingen State and University Library)
14:30 – 15:30:   Exercises on Preservation Descriptive Information
            (*Esther Conway*, STFC Rutherford Appleton Laboratory)
15:45 – 18:00:   Self audit and self-certification principles using DRAMBORA toolkit
            (*Perla Innocenti,* HATII at the University of Glasgow)

Friday, 17 October 2008
09:00 – 12:45:   WePreserve Forum
14:00 – 14:30:   Participants' Feedback and closing

Session I:

Introduction to Digital Preservation

Lecturer and Session Leader:
Dr. David Giaretta
Associate Director for Development, STFC Rutherford Appleton Laboratory & CASPAR

Abstract:

This presentation will provide an overview of issues in digital preservation. It will address the following questions:
- what is Digital Preservation?
- what types of things might be preserved?
- how is information digitally encoded?
- what are the threats to preservation?

The session will include an exercise, which will ground these ideas in their own experience and will conclude by analyzing the threats and provide ideas about what we need in order to preserve digitally encoded information.

Session outline:

09:00 – 11:15 *Lecture and exercise* (135 minutes): Introduction to Digital Preservation

Session II:

OAIS Model and Representation Information

Lecturer and Session Leader:
Carlo Meghini
Researcher, The Institute for Science and Technology of Information of the Italian National Research Council (ISTI-CNR) & CASPAR

Abstract:

The session will cover the fundamental aspects of the OAIS model, with emphasis on its information structure. The main concepts defined by OAIS will be introduced, to the end of familiarizing with the basic OAIS ontology. The introduced notions will be exemplified, using material taken from CASPAR test beds. At the end of the session, the attendees will have learned the basic view of OAIS concerning the preservation of information, and the main structure of the underlying technical model.

Session outline:

11:30 – 13:00 *Lecture* (90 minutes): OAIS Model and Representation Information

Session III:

Preservation Analysis Workflow and Preservation Descriptive Information

Lecturer and Session Leader:
Esther Conway
Technical Analyst, STFC Rutherford Appleton Laboratory & CASPAR

Abstract:

The session will continue by examining the CASPAR preservation analysis workflow, which was developed in response to the challenge of digital preservation. This challenge lies in the need to preserve not only the dataset itself but also the ability it has to deliver knowledge to a future user community. The preservation objective that a data set is capable of achieving for particular future designated user community will have specific preservation metadata requirements, which in turn has implications for the preservation actions an archive must carry out. The session will propose a practical exercise where course participants are asked to examine an extract from an 18th century book on medical remedies as part of a home work exercise. Groups are then set a preservation objective for a specific designated user community and asked to explore the preservation metadata they feel would be necessary to create an OAIS compliant Archival Information Package.
The session will be continued on Thursday, where group findings will be presented, discussed and commented for the benefit of all the groups.

By the end of this session participant should be able to:

- Have an overview of the CASPAR preservation analysis workflow
- Understand how to meaningfully define a preservation objective and designated community
- Understand how preservation metadata consists of both Preservation Descriptive Information and Representation Information
- Create preservation information flows based on requirements
- Understand constituent elements of resulting preservation plan

Session outline:

Monday:
14:00 – 14:45   *Lecture* (45 minutes): Preservation Analysis Workflow and
                Preservation Descriptive Information
14:45 – 15:00   *Exercises* (15 minutes): Introduction to practical exercise
                (to be discussed on Thursday)

Thursday:
14:30 – 15:10   *Presentations* (40 minutes): Group presentations of the practical exercise
15:10 – 15:30   *Discussion* (20 minutes): Discussion and conclusions

Session IV:

Digital Preservation Process: Preparation and Requirements

Lecturer and Session Leader:
Hans Hofman
Senior Advisor at the National Archives of the Netherlands, DPE & CASPAR

Abstract:

Organisations create and use increasingly digital information in conducting their business. The management and preservation of this digital information requires a different approach than paper-based information, particularly more active attention in order to prevent its loss.
In order to develop an appropriate decision making process that will support this pro-active approach new methods are needed. Such a process has been developed in different European projects, such as Delos and Planets. This session will discuss these new methods and explore the main components of the preservation planning process. An important part of it will be the identification of requirements in a given business context.

The key questions addressed in this session include:

- What are the main components that need to be understood in taking decisions for preserving digital objects?
- How can organisations determine the requirements for preservation?
- How to use these requirements in order to identify the best preservation strategy?

By the end of the session, participants will get an understanding of:

- the main components of the decision making process for digital preservation
- what factors will impact on digital preservation decisions
- how to derive requirements and criteria
- how to document decisions in a preservation plan.

Participants will be able to apply the presented approach in their own organization.

Session outline:
15:30 – 16:45   *Lecture* (75 minutes): Digital Preservation Process: Preparation and Requirements
16:45 – 17.30   *Exercise* (45 minutes): Digital Preservation Process:
                Preparation and Requirements
17:30 – 17:45   *Discussion* (15 minutes): The groups present their results, followed by discussion

Session V:

File Formats and significant properties

Lecturer and Session Leader:
Prof. Manfred Thaller
Professor of Historisch-Kulturwissenschaftliche Informationsverarbeitung, University of Cologne & Planets.

Abstract:

Extracting characteristics from files is the base line for the automatic handling of a number of important steps in preservation, notably when connected to the evaluation of the quality of migration tools and the automated evaluation of migrations. We start by looking at the principle of a "file format", get a hands on feeling for the difference in quality file formats provide for long term preservation and discuss, what formats to choose for what.

We continue by some theory, using the example of the European commission project Planets, to show how a consistently dynamic approach looks like, who tries to evaluate the performance of migration tools moving from one format to another, based on automatic analysis of the characteristics of files. For that Planets uses two formal languages to (a) translate format specifications into a machine interpretable language, which allows general purpose software to extract properties from a large number of file formats, and, (b) to map the content of files encoded in a different model into a common content model, which allows automated comparison of the content of two files encoded in different file formats.

This presentation concludes with some thoughts which characteristics of digital files doe not reside in the file, but in the software which is used to display it and how the approaches discussed before can be extended to take care of these problems..

By the end of this session, participants should:

- have an overview on why file formats are important for preservation and what makes a file format useful for long time preservation
- get a familiarity with different file formats currently considered beneficial for preservation
- have an insight view into the „characterisation extraction" approach of the PLANETS project.

Session outline:

10:00 – 11:30   *Lecture* (90 minutes): File Formats, Significant properties
11:45 – 12:45   *Exercise* (60 minutes): File Formats, Significant properties
12:45 – 13:30   *Discussion* (45 minutes): The groups present their results, followed by discussion

Session VI:

Preservation Metadata

Lecturer and Session Leader:
Angela Dappert
Senior Analyst, The British Library & Planets

Second Authors: *Priscilla Caplan, Rebecca Guenther, Brian Lavoie*

Abstract:

Metadata can play a vital role in enabling the effective management, discovery, and re-usability of digital information. Preservation metadata provides provenance information, documents preservation activity, identifies technical features, and aids in verifying the authenticity of a digital object. Version 2.0 of the PREMIS Data Dictionary for Preservation Metadata was released in March 2008 as the *PREMIS Data Dictionary for Preservation Metadata, version 2.0.*. This course introduces this core set of metadata elements and explains how it might be implemented in a preservation repository.

By the end of this session, participants should be able to:

- define the types of information needed for digital objects to be preserved for the long term and describe some possible implementations
- explain the entities defined in the PREMIS data model and give examples of the types of metadata that fall under each entity
- demonstrate the use of the PREMIS data dictionary and apply it in an XML context
- clarify how relationships between archived digital objects are expressed with PREMIS entities and semantic units.

Session outline:

14:30 – 16:00   *Lecture and exercise* (90 minutes): Preservation metadata
16:15 – 18:00   *Lecture and exercise (105 minutes):* Preservation metadata

Session VII:

Preservation Planning including PLATO

Lecturer and Session Leader:
Christoph Becker
PhD researcher at the Department of Software Technology and Interactive Systems at the Vienna University of Technology, Planets & DPE

Abstract

This session examines the process involved in planning the preservation of digital objects. To this end, the Planets preservation planning workflow provides a solid, repeatable way of specifying preservation plans in a well-documented and accountable way.

The approach defines the basic context and representative sample objects for the collection at hand, describes the requirements and the significant properties of the objects, discovers available strategies and tests the chosen options. Evaluation and analysis of the outcomes leads at a recommendation on how to treat the digital objects. Based on this recommendation, a preservation plan for a collection of objects is defined.

This session first discusses the main elements of a preservation plan. We then concentrate on the planning workflow and the approach of defining requirements in a hierarchical structure called *objective tree*. Participants will be introduced to Plato, the Planets preservation planning tool, which supports and automates the workflow.

In the practical session, we will define objective trees for specific scenarios in an interactive workshop setting.

Preservation Planning workflow

```
Define requirements
        ↓
Evaluate alternatives
        ↓
Analyse results
        ↓
Build preservation plan
        ↓
Preservation Plan
```

**The key questions addressed in this session include:**

- What is a preservation plan? What does it contain?
- How do you determine which preservation strategy will be most suitable to meet the requirements of your particular digital content and your users?
- How can you define your requirements on a preservation strategy?
- How can you evaluate and document which preservation action tool is the best for your particular situation?

By the end of this session, participants should:

- understand the main influence factors guiding preservation planning
- have knowledge and understanding of the Planets preservation planning workflow
- have understanding and practical experience in requirements definition for digital preservation
- have knowledge how to develop a solid preservation plan for digital objects.

Session outline:

09:00 – 10:30   *Lecture* (90 minutes): Preservation Planning including PLATO
10:45 – 11:45   *Exercise* (60 minutes): Preservation Planning including PLATO
11:45 – 12:30   *Discussion* (45 minutes): The groups present their results, followed by discussion
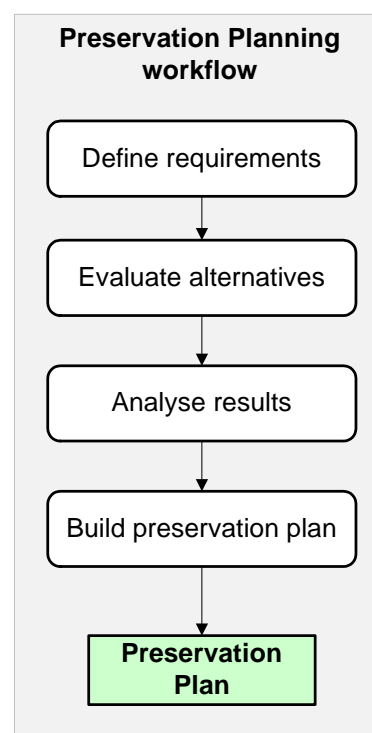
Session VIII:

Preservation Infrastructure

Lecturer and Session Leader:
Luigi Briguglio
Project Manager, Engineering Ingegneria Informatika S. p. A. Italy Research & Development
Laboratory & CASPAR

Abstract:

The presentation of the session is structured in 3 main sections:
- A premise to the Digital Preservation, in order to introduce its key concepts and open issues which are addressed by the OAIS Reference Model (ISO:14721:2002);
- The introduction to the CASPAR Preservation Infrastructure, a suitable service oriented implementation of the OAIS Reference Model, and its Key Components;
- Overview of the CASPAR Key Components

The objective of this training session is to show the "conceptual framework" provided by OAIS Reference Model ISO:14721:200, and how it may be concretely implemented.
Main focus of the training session is not the specific implementation of the CASPAR Infrastructure but the rationale behind the design of the Infrastructure itself and its own Key Components.

Session outline:

13:45 - 15:00   *Lecture* (75 minutes*)*: Preservation Infrastructure
15:15 - 16:00   *Lecture* (45 minutes): Preservation Infrastructure
16:00 - 16:45   *Discussion* (45 minutes)
16:45 - 17:00   *Post Questionnaire Evaluation Test* (15 minutes)

Session IX:

Trusted Repositories

Lecturer and Session Leader:
Stefan Strathmann
Researcher & Developer at the Göettingen State and University Library (SUB), DPE & nestor

Abstract:

This session explains the relevance of trust in the area of digital preservation. The focus lies on an introduction in the nestor Catalogue of Criteria for Trusted Digital Repositories.

The key questions addressed in this session include:
- What is trust in this area?
- Why is trust important for digital preservation?
- Which activities are ongoing to establish trust?
- How can trust be established?

This session aims to:
- explain the needs and challenges of trust in digital preservation in general
- provide an overview on initiatives dealing with the establishing of trust in digital preservation
- introduce to the nestor Catalogue of Criteria for Trusted Digital Repositories
- explain the main principles of the nestor criteria catalogue

By the end of this session the students will:
- get a sense of the relevance of trustworthiness for digital archives
- have an overview on different ways to establish trust
- have an insight view on how to use the nestor criteria catalogue (or an other community tool) to implement trust

Session outline:

10:00 – 11:30   *Lecture* (90 minutes): Trusted Repositories
11:45 – 12:45   *Exercise* (60 minutes): Trusted Repositories
12:45 – 13:30   *Discussion* (45 minutes): The groups present their results, followed by discussion

Session X:

Self Audit and Self-certification using DPE/DCC Drambora toolkit

Lecturer and Session Leader:
Perla Innocenti
Preservation Researcher, HATII at the University of Glasgow & DPE

Abstract:

This introductory module will provide a contextual overview of the need for an evidence-based evaluation of digital repositories, an overview of existing audit methodologies in digital repositories and will offer an overview of the DCC and DPE pilot audits to date. The tutorial will then move to demonstrate how institutions can make use of the DRAMBORA toolkit to design, develop, evaluate, and refine new or existing trusted digital repository systems and workflows. This will involve a walkthrough of the criteria checklist with practical examples based on the pilot audits.

This course will enable attendees to:
- Comprehend the concepts of trust with regards to digital repositories;
- Recognize the need for evidence-based evaluation for building trust in digital Repositories;
- Have a overview of existing audit methodologies of digital repositories;
- Understand how the DRAMBORA toolkit can be used to help design and develop systems and workflows that can help build trusted digital repositories.

Gain an overview of the skillset required to undertake a thorough assessment of digital repositories using the DRAMBORA toolkit

Session outline:

15:45 – 17:00   *Lecture* (75 minutes): Self Audit and Self-certification using
                DPE/DCC Drambora toolkit
17:00 – 17:45   *Exercise* (45 minutes): Self Audit and Self-certification using
                DPE/DCC Drambora toolkit
17:45 – 18:00   *Discussion* (15 minutes): The groups present their results, followed by discussion

Biographical Sketches of the DPE/Planets/CASPAR/nestor joint Training Event Lecturers

David Giaretta has published many scientific papers in refereed journals and given presentations at many international conferences, scientific as well as technical.

In 2003 he was awarded an MBE for services to Space Science. He is now Associate Director for Development in the DCC and has played an active role in all aspects of the project.

He leads the CASPAR project, where he is the project co-ordinator. CASPAR, with a total spend of 16M Euros, 8.8 M€ from the EU, seeks to address fundamental issues of digital preservation. Fundamentally new work is being undertaken in the preservation of digitally encoded information in the science (STFC and ESA), cultural heritage (UNESCO) and contemporary performing arts (IRCAM and others).

In addition he leads the PARSE.Insight EU project, which started in March 2008 with total spend 2.5 M€ and which will help to define the EU research infrastructure supporting digital preservation.

He also leads the work which aims at producing an ISO standard for audit and certification of digital repositories, following on from the work of the RLG/OCLC/NARA working group of which he was also a member and is leading the work to revise the OAIS Reference Model.

Carlo Meghini is a prime researcher at the Istituto dell Scienza e delle Tecnologie della Informazione of the Italian Research Council, where he was hired in 1984 in the database group. His main interests are Information Systems and Digital Libraries in particular. He has participated in many National and European Projects, recently in the FP6 Integrated Project BRICKS and Network of Excellence DELOS. He is currently Stream Director of the CASPAR Integrated Project. He is a member of several Programme Committees, including those of the European Conference on Digital Libraries and the Foundations of Knowledge and Information Systems Conference. He has published more than 60 papers in scientific conferences and journals. He is a co-author of the Multimedia Information Retrieval Model entry of the Encyclopaedia on Database Systems.

Esther Conway originally trained in Physics at Imperial College London after which she worked as a professional librarian specializing in scientific information, during which time she took a Masters in Information Systems and Technology at City University. Esther has also worked for several years in the area of commercial publishing as a Solutions Consultant for Thomson Learning working on large scale digital archives. In her most recent position she works as a technical analyst based at the Rutherford Appleton Laboratory. She is involved in a number of different digital preservation projects including the DCC, PARSE Insight and CASPAR.

Hans Hofman is senior advisor on digital longevity at the Nationaal Archief of the Netherlands. He is involved in several committees and projects at government and municipal level with respect to recordkeeping, metadata, digital preservation and open standards in e-government. On the international scene he is co-investigator and representative of the Nationaal Archief in the Inter Pares 2 research project (http://www.interpares.org), since 2000 he is representing the Netherlands in the ISO TC46/SC11 on Records Management, in which committee he is Chair of the Working Group on Recordkeeping Metadata, and he represents the Nationaal Archief in recent European projects such as the preservation cluster of the DELOS2-project (www.dpc.delos.info), PLANETS (www.planetsproject.eu) and Digital Preservation Europe (www.digitalpreservationeurope.eu). He has acted as codirector of ERPANET (2001-2004, www.eropanet.org).He has given numerous presentations and written many articles on topics like digital preservation, recordkeeping metadata and electronic records management.

Manfred Thaller born in 1950. PhD (Modern History) 1975, University of Graz, Austria. PostDoc Sociology, Institute for Advanced Studies, Vienna, 1978. 1978 - 1997 research fellow / senior research fellow at the Max-Planck-Institut for History, Göttingen. Research on a general methodology of historical computer science. Since 1995 also professor of "Historical computer Science" at the University of Bergen, Norway. Visiting prof. Jerusalem (1987), London (1993), Firenze (1993). 1997 - 2000 founding director of the "Humanities Information Technology Research Programme" and the attached research centre of the University of Bergen, Norway. 2000 onwards Prof. of "Historisch Kulturwissenschaftliche Informationsverarbeitung" (Humanities Computer Science) at the University at Cologne, Germany. Applied research projects in the Library area / Digitization of Cultural Heritage: ca. 20 digitization projects. Among them: Archives: "Duderstadt". Digitization of archival documents (1996 - 1999);
Libraries: Medieval Codices: CEEC (http://www.ceec.uni-koeln.de), CESG (http://www.cesg.unifr.ch);
Incunabula: vdlb (http://inkunabeln.ub.uni-koeln.de/);
Modern prints: MPER (http://www.mpier.uni-frankfurt.de/dlib/);
Art History: Prometheus (http://www.prometheus-bildarchiv.de/).
Major European Digital Library project participation: Delos (http://www.delos.info/);
Planets - here respnsoble for character extraction in long term preservation project (http://www.planets-project.eu/);
ENRICH

Angela Dappert is a Senior Analyst at the British Library. Her current focus is on conceptual modelling of preservation planning and preservation characterization within the Planets project, a four-year project co-funded by the European Union to address core digital preservation challenges. She has previous experience with eJournal ingest, digital rights modelling, and digital metadata standards. She serves as a British Library representative on the PREMIS Editorial Committee. In the past Angela has worked at the Siemens Research Laboratories in Munich and at the Stanford University Knowledge Systems Laboratory. She has worked as a consultant for The University of California Extension Service and Schlumberger Oilfield Services. Angela holds a Dipl. Inform. Med. from the University of Heidelberg and an M. Sc. in Computer Sciences from the University of Texas at Austin.

Christoph Becker is currently a PhD researcher at the Department of Software Technology and Interactive Systems at the Vienna University of Technology. He received his BSc and MSc in Computer Science and an MSc in Economics and Computer Science from the Vienna University of Technology in 2004, 2006, and 2007. Since 1998, he has been working as an independent IT consultant and software architect in a wide range of IT projects in different domains. He has published several papers in reviewed international conferences and is actively involved in various research projects in the field of Digital Preservation. His main research interest in Digital Preservation is Preservation Planning.

Luigi Briguglio received a degree in Electronic Engineering at University of Padua in 1996. In 2001 he joined Engineering, and actually he is a Project Manager Junior at the Engineering R&D Laboratory. He is involved as Technical Director in IST European R&D Projects and provides his experience in software architecture development process. He is tutor of degree thesis and stage too. Currently he leads the work on the overall architecture in the CASPAR Project, which aims to research, develop and integrate advanced components to be used in a wide range of preservation activities. Past experiences: INFM (National Institute for the Physics of Matter) for design and realisation of a SNOM microscope controller. Long experience in industrial system automation, specially in distributed control systems and supervision software.

Stefan Strathmann acts as preservation officer in the Research and Development Department (RDD) at the Göttingen State and University Library (SUB). He coordinates the institutions activities in the field of digital preservation and is involved into several digital preservation projects like nestor, DPE, PARSE.Insight etc.

The main digital preservation topics he deals with are policy issues, digital preservation on institutional level, trusted repositories, training & education and national/international cooperation.

Perla Innocenti is a Preservation Researcher at HATII, University of Glasgow and Co-Principal Investigator in the EU-funded project Sustaining Heritage Access through Multivalent ArchiviNg (SHAMAN), in which she is leading the Requirements Analysis work package and refining the DELOS reference model in the context of scientific documents. She is also involved in repository design, audit research as part of DigitalPreservationEurope (DPE), coordinating activities and development for the Digital Repository Audit Method Base on Risk Assessment (DRAMBORA) Toolkit. Perla has contributed to usage models research within the project Preservation and Long-term Access through NETworked Services (Planets), to the investigation of the potential application of the DRAMBORA toolkit in the context of digital libraries within the DELOS project and to the refinement of the DELOS Reference Model in relation to digital preservation. She has a background as a researcher specializing in information systems for industrial design and as a digital librarian at Politecnico di Milano, Italy, where she coordinated digital library, digitization and library portal projects. She has worked as a consultant and collaborator in digital libraries and e-learning projects, and is author and co-author of numerous publications. The results of her research has been presented at a range of international conferences, including VSMM International Conference on Virtual Systems and Multimedia (2002), Dublin Core International Conference (2002), European Academy of Design Conference (2003), DELOS conferences on Digital Libraries (2007), iPRES-International Conference on the Digital Preservation (2007), IS&T Archiving (2008), ICA-International Conference of Archives (2008), International Convention Records Management Association of Australasia (2008), eChallenge Conference (2008). Perla studied at University of Rome "La Sapienza" and Scuola Normale Superiore di Pisa.

7.2 Feedback summary for the Prague event

DPE/Planets/CASPAR/nestor joint training event 'Starting out: preserving digital objects – principles and practice'

National Library of the Czech Republic, Charles University
Prague, Czech Republic
13-17 October 2008

The joint DPE/Planets/CAPAR/nestor training event, 'Starting out: preserving digital objects – principles and practice', was held at the National Library of Czech Republic and Charles University, Prague, on 13-17 October 2008. The event introduced participants to a number of key digital preservation principles and provided them with an opportunity to apply this knowledge through a number of hands-on exercises. In addition to the face to face training students were also provided with one week pre-course training and one week post-course training through the DPE moodle. The course was held in cooperation with the "WePreserve" Forum, providing participants an insight into cutting-edge research and development activity from a number of European Commission funded projects and with further networking opportunities to meet other researchers, international experts and practitioners across disciplinary and national boundaries. The event was targeted at practitioners and researchers from the archives, libraries and museums sector, as well as other institutions such as data archives, government departments, legal and commercial sectors with an interest in the topic.

Twenty seven participants and eleven trainers attended the event. At the end of the course participants were provided with a feedback form to complete. Twenty five forms were returned, giving a response rate of 92.6%. The following is a summary of the responses.

About the event

The first seven questions related to various aspects of the event. Participants were asked to provide ratings between one and five with one being poor and five being excellent.

1. How effective were the speakers?

[note: only 23 responses out of a possible 25 were received for this question]

1=0

2=0

3=13%

4=83%

5=4%

2. How would you rate the teaching methods?

1=0

2=0

3=36%

4=52%

5=12%

3. How would you rate the structure of the event?

1=0

2=0

3=13%

4=39%

5=48%

4. How useful was the background documentation?

[note: only 24 responses out of a possible 25 were received for this question]

1=0

2=12%

3=25%

4=46%

5=17%

5. How would you rate the organisation of the event?

[note: only 24 responses out of a possible 25 were received for this question]

1=0

2=0

3=0

4=21%

5=79%

6. How well did you feel that the event addressed the main topic?

1=0

2=0

3=16%

4=44%

5=40%

7. Did this event meet your expectations? If not, why not?

YES=25

NO =0

8. What will you be able to take from this event back to your own organisations?

All participants responded to this question. The majority highlighted that they would take back to their own workplaces a better understanding of the key areas of digital preservation, a broad overview of the issues surrounding it, knowledge about current digital preservation initiatives in Europe. A significant number of participants also mentioned gaining an understanding of existing standards and toolkits, the need for preservation planning and documentation, helpful ideas regarding the development of strategic initiatives in their own countries. Some participants highlighted specific sessions as providing useful information. Six respondents stated the preservation planning process as being a helpful approach for their work, whilst three noted OAIS model and two file formats. One participant indicated that their organisation would be interested in seeking contacts with Planets. One noted that there is the need for other colleagues to attend similar training events.

9. What else would you like to have seen covered at this event?

Seventeen participants provided responses to this question. The majority highlighted the need for more practical examples (7 participants), hands-on exercises and case studies (6 participants). Two participants indicated that they would have liked more technical information, more topics about hardware and methods of data storage, whilst another two would have liked to hear more about web archiving. One participant specifically commented that he was satisfied with the course and could not think of any changes.

10. What did you like best about this event?

[Please note that participants could provide more than one answer to this question.]

All participants responded to this question, with a variety of answers. A significant number of participants highlighted the value of the social elements of this event. In particular, several stated that they enjoyed meeting other participants from range of institutional backgrounds, working with them, discussing and exchanging knowledge (7 participants). Four participants mentioned that they liked the speakers, topics and material available on Moodle. The sessions on file formats (8 participants, DRAMBORA (5 participants), PLATO (2 participants) and digital preparation and requirements (1 participant) received specific praise, with one participant commenting that he discovered so many tools during the event which could help to build a trusted digital repository.

Six participants remarked on the organization and overall atmosphere of the event. One respondent mentioned the group work and practical exercises as being the most valuable aspects of the course. And finally one participant noted the importance of all four projects coming together to collaborate demonstrating their way of handling digital preservation.

11. What did you like least?

Twenty participants responded to this question, but only one aspect received a large amount of criticism. Eight participants commented that course was too intensive and sessions too long, it was hard to concentrate, especially in the afternoons. Four participants also commented that some sessions were too long or too technical and as a result it was hard to retain all of the information presented. One participant also commented that some speakers were hard to understand, cause their voices were too quiet.

Two participants highlighted the lack of background documentation as an issue, with the recommended readings not made accessible early enough. Other points noted in individual responses were that there was an overabundance of food, the lunch breaks were too long, that they did not like moving from one place to another and one participant commented on the mattress in their accommodation.

12. How did you hear about this training event?

An organisation or institution (please specify): -

- National Library of the Czech Republic – 3
- HATII (University of Glasgow) – 2
- Slovak National Museum – 1
- Colleague – 9
- Web search – 1
- Planets website – 0
- DPE website – 1
- CASPAR website - 2
- nestor website – 1
- WePreserve website - 0

- Other – 5

The other methods included learning about the event from various mailing lists and discussion groups.

Participants could provide multiple answers to this question. The most effective method was clearly word of mouth, with nine attendees learning about the event from a colleague. Promotion by individual institutions was also successful, with six attendees hearing through the library, museum or university (they were members of staff or students from these organisations). This highlights the importance of the brand we have built surrounding WePreserve in relation to the success of our events.

The evidence of four responses stating the DPE, CASPAR and nestor websites as their source indicates the growing use of these sites as a place to learn about current events and developments in digital preservation. In contrast no attendee noted the Planets or WePreserve websites as alerting them to the event. Mailing lists and discussion groups were also very popular sources of information, with 5 attendees mentioning them.

13. What motivated you to attend?

Participants could provide multiple answers to this question. By far the most popular reason for attendance was an overall interest in digital preservation (20 participants), showing a continued need for introductory courses in this field. This was also the most common answer to be provided on its own (9 participants). The next most popular reason was an interest in DPE, Planets, CASPAR and nestor projects who ran the event (6), emphasising the importance of the training activities for these projects. Location (5) and speakers (4) were also a significant reason.

14. Additional comments

Only five participants provided additional comments, and the comments were very diverse. Participants asked for more interesting events like this (1 participant), for a course on the preservation tools (1 participant) and for more information in Moodle before training event starts (1 participant). One participant commented that this event could benefit from shorter presentations and more hands-on experience. Finally one more participant commented that was too many hand-outs.

About you

15. Who do you work for?

Again multiple answers to this question were possible. The sector with the most attendees was the library community (13), followed by academic institutions (4). Given the nature of the conference linked to the event, the backgrounds of the speakers and the promotion channels used, this result is not surprising. Presence of four participants from academic institutions indicates increasing interest in digital preservation from this group. Two participants from archives, commercial companies and consultancy also attended the event. There was one participant from Nongovernmental organization and one from Research council. Alternative sectors and demographic groups could be successfully targeted in the future if an alternative dissemination strategy is followed.

16. What is your function?

The participants of this training event held very diverse roles. Five participants identified themselves as librarians, and three as analysts and/or consultants. Individuals from more technical posts were also well represented with two system administrators, a support engineer, a web archivist and an IT specialist. The remaining positions listed were Digital curator, Project manager, Manager of archivists and IT, Digital preservation department assistant, Digital Repository developer, Director-library advisor, Scientific associate, Researcher and two Students.

Conclusions

The overall feedback confirms that this training event was a great success. The organisation was highly rated, and the course met all participants' expectations, providing them with useful knowledge to take back to their own institutions. Participants particularly appreciated the informal exchange of ideas and group discussions with other researchers, international experts, and practitioners. The sessions also generated interest in current developments and solutions, including those from the DPE, Planets, CASPAR and nestor projects.

The structure and speakers received high praise as well. Though the lecture format could prove too intensive and tiresome at times. Participants expressed a desire for more practical examples and would appreciate more hands-on exercises involving specific preservation tools and case studies. These comments clearly demonstrate the value of providing hands-on exercises to the learning experience of the attendees.

Another issue, which requires refinement in future iterations of this course, is the earlier access to background documentation. Earlier access to recommended readings would result in the students better understanding and mastering the teaching material presented during the course itself.

By providing students with the opportunity of meeting colleagues and exchanging information and experiences of digital preservation, we hope to have helped establish and develop a new community of future collaborators that will endure for years to come.

8.   Appendix 2 – The Barcelona event

8.1   Delegate Pack

DPE/Planets/CASPAR/nestor Joint Training Event

The Preservation Challenge: basic concepts and practical applications

Barcelona, Spain
23-27 March 2009

Delegate Pack

Lecturers and Session Presenters

- ***Manfred Thaller,*** Professor at the University of Cologne.

- ***Carlo Meghini,*** Researcher, The Institute for Science and Technology of Information of the Italian National Research Council (ISTI-CNR).

- ***Claudio Prandoni****,* Consultant, MetaWare SpA.

- ***Marlis Valentini,*** Researcher, MetaWare SpA.

- ***Max Kaiser****,* Head of Research and Development, Austrian National Library.

- ***Brian Aitken,*** Software Developer and Designer, HATII at the University of Glasgow.

- ***Christian Keitel***, Project manager, the Landesarchiv Baden-Württemberg.

- ***Asger Blekinge-Rasmussen,*** IT Developer, State and University Library of Denmark.

- ***Angela Dappert,*** Senior Analyst, The British Library.

- ***Hannes Kulovits****,* PhD researcher at the Department of Software Technology and Interactive Systems at the Vienna University of Technology.

- ***Andreas Rauber,*** Associate Professor at the Department of Software Technology and Interactive Systems at the Vienna University of Technology

- ***Hans Hofman,*** Senior Advisor at the Nationaal Archief (National Archives) of the Netherlands.

- ***Seamus Ross,*** Dean of the Faculty of Information Studies at the University of Toronto.

Course Timetable:

Sunday, 22 March 2009
18.00:   Overview of the joint training school and Introduction to the Lecturers.
19.00:   Opening Reception

Monday, 23 March 2009
08:30 – 09:00:   Registration
09:00 – 10:30:   Introduction in Digital Preservation
                 (*Manfred Thaller,* University of Cologne)
11:00 – 12:30:   OAIS: a Reference Model for Preservation
                 (*Carlo Meghini*, ISTI-CNR)
14:00 – 15:30:   Knowledge Service for Preservation
                 (*Carlo Meghini*, ISTI-CNR)
16:00 – 17:30:   A conceptual model for Authenticity
                 (*Carlo Meghini*, ISTI-CNR)

Tuesday, 24 March 2009
09:00 – 10:30:   An Infrastructure for Preservation
                 (*Claudio Prandoni*, MetaWare SpA)
11:00 – 12:30:   A case study on Intellectual Property Rights
                 (*Marlis Valentini,* MetaWare SpA)
14:00 – 15:30:   File Formats, Significant Properties
                 (*Manfred Thaller*, University of Cologne)
16:00 – 17:30:   A Testbed for Preservation planning
                 (*Max Kaiser*, Austrian National Library and
                 Brian Aitken, HATII at the University of Glasgow)
19:30:   Social event

Wednesday, 25 March 2009
09:00 – 10:30:   Trusted Repositories
                 (*Christian Keitel,* the Landesarchiv Baden-Württemberg)
11:00–12:30:   Planning for trusted repositories with PLATTER
                 (*Asger Blekinge-Rasmussen*, State and University Library of Denmark)
14:00–17:30:   Preservation Metadata
                 (*Angela Dappert*, British Library)

Thursday, 26 March 2009
09:00 – 12:30:   Preservation planning with PLATO
                 (*Hannes Kulovits,* Vienna University of Technology)
14:00 – 15:30:   Digital Preservation Process: Preparation and Requirements
                 (*Hans Hofman*, National Archives of the Netherlands)
16:00 – 17:30:   Self audit and self-certification using DRAMBORA
                 (*Seamus Ross,* the University of Toronto)

Friday, 27 March 2009
08:50 – 13:30:   WePreserve Forum
13:30 – 14:00:   Participants' Feedback and closing

Session I:

Introduction to Digital Preservation

Lecturer and Session Leader:
Prof. Manfred Thaller
Professor of Historisch-Kulturwissenschaftliche Informationsverarbeitung, University of Cologne & Planets

Abstract:

This presentation will provide an overview of issues in digital preservation. It will address the following questions:
- what is Digital Preservation?
- what types of things might be preserved?
- how is information digitally encoded?
- what are the threats to preservation?

Session outline:

09:00 – 10:30   *Lecture* (90 minutes): Introduction to Digital Preservation

Session II:

OAIS: a Reference Model for Preservation

Lecturer and Session Leader:
Carlo Meghini
Researcher, The Institute for Science and Technology of Information of the Italian National Research Council (ISTI-CNR) & CASPAR

Abstract:

The session will cover the fundamental aspects of the OAIS model, with emphasis on its information structure. The main concepts defined by OAIS will be introduced, to the end of familiarizing with the basic OAIS ontology. The introduced notions will be exemplified, using material taken from CASPAR test beds. At the end of the session, the attendees will have learned the basic view of OAIS concerning the preservation of information, and the main structure of the underlying technical model.

Session outline:

11:00 – 12:30   *Lecture* (90 minutes): OAIS Model and Representation Information

Session III:

Knowledge Service for Preservation

Lecturer and Session Leader:
Carlo Meghini
Researcher, The Institute for Science and Technology of Information of the Italian National Research Council (ISTI-CNR) & CASPAR

Session outline:

14:00 – 15:30   *Lecture and exercise* (90 minutes): Knowledge Service for Preservation

Session IV:

A conceptual model for Authenticity

Lecturer and Session Leader:
Carlo Meghini
Researcher, the Institute for Science and Technology of Information of the Italian National Research Council (ISTI-CNR) & CASPAR

Session outline:

16:00 – 17:30   *Lecture and exercise* (90 minutes): A conceptual model for Authenticity

Session V:

An Infrastructure for Preservation

Lecturer and Session Leader:
Claudio Prandoni
Consultant, MetaWare SpA & CASPAR

Second Author:
Marlis Valentini
Researcher, MetaWare SpA & CASPAR

Abstract:

This training session is aimed at explaining how CASPAR aims to solve, from the technical point of view, the problem of accessibility and intelligibility of digital data in the long term.
How can digital data still be used and understood in the future when systems, software, and everyday knowledge continues to change?
CASPAR approach will be presented as an implementation of the OAIS functional model, introducing CASPAR Key Components, i.e. the main building blocks which constitute CASPAR architecture, and giving an overview of their functionalities, their usage and their role in the digital preservation workflow.
The explanation will rely on the main concepts of the OAIS Reference Model.
The presentation is thought for non-technical people, and includes interactive sessions with exercises, demos and video projections.
The objective is to clarify how the digital preservation workflow is realised within CASPAR architecture.

Session outline:

09:00 - 10:30   *Lecture and exercise* (90 minutes*)*: An Infrastructure for Preservation.

Session VI:

A case study of Intellectual Property Rights

Lecturer and Session Leader:
Marlis Valentini
Researcher, MetaWare SpA & CASPAR

Second Author:
Claudio Prandoni
Consultant, MetaWare SpA & CASPAR

Abstract:

This training session is aimed at presenting the fundamental problems related to the preservation of intellectual property material, and how some of these problems have been addressed in CASPAR.
An archive must take care of Intellectual Property Rights because they impose legal limitations to the actions on the repository's contents. Final consumers are not allowed, by Law, to use freely rights-protected creations unless they have the proper permissions. For copyrighted works they must obtain permission through a license or through legislation (e.g. fair use in US, copyright exceptions in EU). The same is true for the archival institution that holds the rights-protected material; unless it has obtained the complete rights ownership by means of a transfer of rights, it needs an explicit authorisation to hold any copy, to perform any kind of modification and to distribute it.
The lesson will also include an overview of the Digital Rights Ontology developed in the project, exercises and practical demos.
The explanation will contain some references to the OAIS Reference Model and to CASPAR infrastructure.
The objective is to present CASPAR approach to the problem of identifying and preserving all the existing rights related to a digital work.

Session outline:

11:00 - 12:30   *Lecture and exercise* (90 minutes*)*: A case study of Intellectual Property Rights.

Session VII:

File Formats and significant properties

Lecturer and Session Leader:
Prof. Manfred Thaller
Professor of Historisch-Kulturwissenschaftliche Informationsverarbeitung, University of Cologne & Planets

Abstract:

Extracting characteristics from files is the base line for the automatic handling of a number of important steps in preservation, notably when connected to the evaluation of the quality of migration tools and the automated evaluation of migrations. We start by looking at the principle of a "file format", get a hands on feeling for the difference in quality file formats provide for long term preservation and discuss, what formats to choose for what.

We continue by some theory, using the example of the European commission project Planets, to show how a consistently dynamic approach looks like, who tries to evaluate the performance of migration tools moving from one format to another, based on automatic analysis of the characteristics of files. For that Planets uses two formal languages to (a) translate format specifications into a machine interpretable language, which allows general purpose software to extract properties from a large number of file formats, and, (b) to map the content of files encoded in a different model into a common content model, which allows automated comparison of the content of two files encoded in different file formats.

This presentation concludes with some thoughts which characteristics of digital files doe not reside in the file, but in the software which is used to display it and how the approaches discussed before can be extended to take care of these problems.

By the end of this session, participants should:

- have an overview on why file formats are important for preservation and what makes a file format useful for long time preservation
- get a familiarity with different file formats currently considered beneficial for preservation
- have an insight view into the „characterisation extraction" approach of the PLANETS project.

Session outline:

14:00 – 15:30   *Lecture and exercise* (90 minutes): File Formats, Significant properties

Session VIII:

A Testbed for Preservation planning

Lecturer and Session Leader:
Max Kaiser
Head of Research and Development, Austrian National Library, Planets

Brian Aitken
Software Developer and Designer, HATII at the University of Glasgow, Planets & DPE

Session outline:

16:00 – 17:30   *Lecture and demo* (90 minutes): A Testbed for Preservation planning.

Session IX:

Trusted Repositories

Lecturer and Session Leader:
Christian Keitel
Project manager, the Landesarchiv Baden-Württemberg & nestor

Abstract:

The session discusses some dimensions of trustworthiness in general and trustworthy digital repositories in particular. Some of the questions are:
- What is trustworthiness?
- Are there special digital ways to trustworthiness?
- What is a trustworthy digital archive?
- What are the central players and the most important challenges?

We will talk about the concepts of TRAC and DRAMBORA. We will examine the nestor criteria catalogue as a possible answer on these questions.

Session outline:

09:00 – 10:30   *Lecture* (90 minutes): Trusted Repositories

Session X:

Planning for trusted repositories with PLATTER

Lecturer and Session Leader:
Asger Blekinge-Rasmussen
State and University Library, Denmark, Digital Resources, DPE & Planets

Second author:
Colin Rosenthal, State and University Library, Denmark, Digital Resources

Abstract:

The purpose of this session is to present a tool PLATTER, the Planning Tool for Trusted Electronic Repositories which provides a basis for a digital repository to plan the development of its goals, objectives and performance targets over the course of its lifetime in a manner which will contribute to the repository establishing trusted status amongst its stakeholders. The goal of this session is to give the attendees the ability to use PLATTER as an aid in creating new repositories.
There exist a considerable diversity amongst the organisations which may be included under the term "digital repository". In PLATTER, this diversity is acknowledged and explicitly handled by requiring repositories as a first step in the planning process to answer a questionnaire which characterises the repository relative to other repositories. The characterisation is meant to help in comparing relevant requirements and plans with other repositories.
nestor, TRAC and Drambora are respected audit or certification tools, which are all based on the premise of an existing repository. PLATTER is not in itself an audit or certification tool but is rather designed to complement existing audit and certification tools by providing a framework which will allow new repositories to incorporate the goal of achieving trust into their planning from an early stage. To derive the issues that new repositories must plan for, from audit or certification tools is a non-trivial task, and is exactly what PLATTER have done. A repository planned using PLATTER will find itself in a strong position when it subsequently comes to apply one of the existing auditing tools to confirm the adequacy of its procedures for maintaining the long term usability of and access to its material.

Session outline:

11:00 – 12:30   *Lecture* (90 minutes): Planning for trusted repositories with PLATTER

Session XI:

Preservation Metadata

Lecturer and Session Leader:
Angela Dappert
Senior Analyst, The British Library & Planets

Second Authors: *Priscilla Caplan, Rebecca Guenther, Brian Lavoie*

Abstract:

Metadata can play a vital role in enabling the effective management, discovery, and re-usability of digital information. Digital preservation metadata provides provenance information, supports and documents preservation activity, identifies technical features, and aids in verifying the authenticity of a digital object. This course gives and introduction covering the following issues

- **Introduction to Digital Preservation Metadata**
    - What is Digital Preservation Metadata
    - Hands-on Exercise
    - Case Study: eJournals (1)

- **Preservation Metadata in Practice**
    - Workflow Issues
    - Tools and Standards
    - PREMIS Data Dictionary
        - Overview
        - Hands-on Exercise
        - Implementation Issues
    - Case Study: eJournals (2)

Benefits:
This course will enable the attendee to:
- Define the types of information needed for digital objects to be preserved for the long term
- Understand the OAIS metadata framework
- Understand the importance of tools and standards
- Know the entities defined in the PREMIS data model and give examples of the types of metadata that fall under each entity
- Analyze digital preservation metadata needs for a given repository application

Intended Audience: Information professionals with some technical knowledge about digital objects
- Novices
- Policy makers
- Preservation Managers
- Preservation Practitioners
- Preservation Trainers
- Researchers
- Preservation Experts (to e lesser degree)
- IT experts (to e lesser degree)

Session outline:

14:00 – 15:30   *Lecture and exercise* (90 minutes): Preservation metadata
16:00 – 16:45   *Exercise (*45 minutes): Preservation metadata
16:45 – 17:30   *Discussion* (45 minutes): The groups present their results, followed by discussion

Session XII:

Preservation Planning with PLATO

Lecturer and Session Leader:
Hannes Kulovits
PhD researcher at the Department of Software Technology and Interactive Systems at the Vienna University of Technology & Planets

Second Author:
Andreas Rauber
Associate Professor at the Department of Software Technology and Interactive Systems at the Vienna University of Technology, Planets & DPE

Abstract:

The rapid technological changes in today's information landscape have considerably turned the preservation of digital information into a pressing challenge. A lot of different strategies, i.e. preservation actions, have been proposed to tackle this challenge. However, which strategy to choose, and subsequently which tools to select to implement it, poses significant challenges. The creation of a concrete plan for preserving an institution's collection of digital objects requires the evaluation of possible preservation solutions against clearly defined and measurable criteria. Preservation planning aids in this decision making process to find the best preservation strategy considering the institution's requirements, the planning context and possible actions applicable to the objects contained in the repository. Performed manually, even evaluating a rather small number of possible solutions against requirements takes a good deal of time. Plato, a web based, interactive software tool, supports and partly automates this process. In this session we will show by means of Plato, how to create such a preservation plan.

Session outline:

09:00 – 10:30   *Lecture* (90 minutes): Preservation Planning including PLATO
11:00 – 11:45   *Exercise* (60 minutes): Preservation Planning including PLATO
11:45 – 12:30   *Discussion* (45 minutes): The groups present their results, followed by discussion

Session XIII:

Digital Preservation Process: Preparation and Requirements

Lecturer and Session Leader:
Hans Hofman
Senior Advisor at the National Archives of the Netherlands, DPE & CASPAR

Abstract:

Organisations create and use increasingly digital information in conducting their business. The management and preservation of this digital information requires a different approach than paper-based information, particularly more active attention in order to prevent its loss.
In order to develop an appropriate decision making process that will support this pro-active approach new methods are needed. Such a process has been developed in different European projects, such as Delos and Planets. This session will discuss these new methods and explore the main components of the preservation planning process. An important part of it will be the identification of requirements in a given business context.

The key questions addressed in this session include:
- What are the main components that need to be understood in taking decisions for preserving digital objects?
- How can organisations determine the requirements for preservation?
- How to use these requirements in order to identify the best preservation strategy?

By the end of the session, participants will get an understanding of:

- the main components of the decision making process for digital preservation
- what factors will impact on digital preservation decisions
- how to derive requirements and criteria
- how to document decisions in a preservation plan.

Participants will be able to apply the presented approach in their own organization.

Session outline:
14:00 – 15:30   *Lecture and exercise* (90 minutes): Digital Preservation Process:
Preparation and Requirements

Session XIV:

Self Audit and Self-certification using Drambora

Lecturer and Session Leader:
Seamus Ross
Dean of the Faculty of Information Studies at the University of Toronto & DPE

Abstract:

This introductory module will provide a contextual overview of the need for an evidence-based evaluation of digital repositories, an overview of existing audit methodologies in digital repositories and will offer an overview of the DCC and DPE pilot audits to date. The tutorial will then move to demonstrate how institutions can make use of the DRAMBORA toolkit to design, develop, evaluate, and refine new or existing trusted digital repository systems and workflows. This will involve a walkthrough of the criteria checklist with practical examples based on the pilot audits.

This course will enable attendees to:
- Comprehend the concepts of trust with regards to digital repositories;
- Recognize the need for evidence-based evaluation for building trust in digital Repositories;
- Have a overview of existing audit methodologies of digital repositories;
- Understand how the DRAMBORA toolkit can be used to help design and develop systems and workflows that can help build trusted digital repositories.
- Gain an overview of the skillset required to undertake a thorough assessment of digital repositories using the DRAMBORA toolkit

Session outline:

16:00 – 17:30   *Lecture and exercise* (90 minutes): Self Audit and Self-certification
                using DPE/DCC Drambora toolkit

Biographical Sketches of the DPE/Planets/CASPAR/nestor joint Training Event Lecturers

Manfred Thaller born in 1950. PhD (Modern History) 1975, University of Graz, Austria. PostDoc Sociology, Institute for Advanced Studies, Vienna, 1978. 1978 - 1997 research fellow / senior research fellow at the Max-Planck-Institut for History, Göttingen. Research on a general methodology of historical computer science. Since 1995 also professor of "Historical computer Science" at the University of Bergen, Norway. Visiting prof. Jerusalem (1987), London (1993), Firenze (1993). 1997 - 2000 founding director of the "Humanities Information Technology Research Programme" and the attached research centre of the University of Bergen, Norway. 2000 onwards Prof. of "Historisch Kulturwissenschaftliche Informationsverarbeitung" (Humanities Computer Science) at the University at Cologne, Germany. Applied research projects in the Library area / Digitization of Cultural Heritage: ca. 20 digitization projects. Among them: Archives: "Duderstadt". Digitization of archival documents (1996 - 1999);
Libraries: Medieval Codices: CEEC (http://www.ceec.uni-koeln.de), CESG
(http://www.cesg.unifr.ch);
Incunabula: vdIb (http://inkunabeln.ub.uni-koeln.de/);
Modern prints: MPER (http://www.mpier.uni-frankfurt.de/dlib/);
Art History: Prometheus (http://www.prometheus-bildarchiv.de/).
Major European Digital Library project participation: Delos (http://www.delos.info/);
Planets - here respnsoble for character extraction in long term preservation project (http://www.planets-project.eu/);
ENRICH

Carlo Meghini is a prime researcher at the Istituto dell Scienza e delle Tecnologie della Informazione of the Italian Research Council, where he was hired in 1984 in the database group. His main interests are Information Systems and Digital Libraries in particular. He has participated in many National and European Projects, recently in the FP6 Integrated Project BRICKS and Network of Excellence DELOS. He is currently Stream Director of the CASPAR Integrated Project. He is a member of several Programme Committees, including those of the European Conference on Digital Libraries and the Foundations of Knowledge and Information Systems Conference. He has published more than 60 papers in scientific conferences and journals. He is a co-author of the Multimedia Information Retrieval Model entry of the Encyclopaedia on Database Systems.

Claudio Prandoni got his University Degree in Mathematics in July 2000 with final mark 110/110. In February 2001 he got a master in Applied Mathematics and since July 2001 he had been consultant of the Multimedia and Telematic Applications Center (META) of the Consorzio Pisa Ricerche (CPR), as part of the research and development staff. In January 2003 he started working as a consultant for Metaware Spa. He had been involved in several projects of the European Commission, expecially targeted at the tourism and cultural heritage sectors (TRADEX, CHANCE, TNT, IRENE, HARMOTEN, BRICKS), where he projected and developed trusted web applications based on smart card and XML technologies. Actually he is the project manager of the CASPAR project for Metaware Spa and he is the responsible for the Digital Right Management and the Security components as well as for the dissemination activities. His main skills regard applications security, Digital Right Management and IPR protection, database management, object oriented programming and web services development.
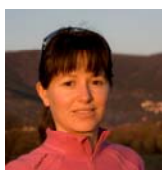
Marlis Valentini got a Master Degree in Computer Science in 2003 at University of Pisa. She carried out research activities, mainly focused on Data Mining, at the Computer Science department until 2005. Before joining Metaware S.p.A. in 2006, she has gained experience in the field of e-learning, working as Java developer. She currently belongs to the R&D staff of Metaware and is concerned with research and software development activities within EU-funded projects. Her major experience is in the field of Digital Preservation, in technological solutions for Digital Rights Management and for Access Control, and in Ontology Knowledge Engineering.

Max Kaiser is Head of Research and Development at the Austrian National Library <http://www.onb.ac.at>. He has many years of experience in international research and development projects in the areas of digital preservation, digitisation, and digital libraries. He graduated from the University of Vienna where he worked as a research associate before joining the Austrian National Library in 2000. Currently Max Kaiser acts as lead of the "Testbed" Sub-Project of the FP6 IP Planets <http://www.planets-project.eu>. He is member of the Executive Board and lead of the "Enhancement and Enrichment" Sub-Project of the FP7 IP IMPACT <http://www.impact-project.eu>. He is member of the Management Board of "Europeana V.1.0" which is building Europeana <http://www.europeana.eu>, the European Digital Library. He is also coordinator of the Europeana*Connect* project.

Brian Aitken joined the Humanities Advanced Technology and Information Institute (HATII) at the University of Glasgow in 2001 as a Systems Developer. He has worked both as sole developer and as leader of a development team on a wide range of successful projects, most recently Planets, for which he is leading the development of the Testbed, and Shaman, for which he is undertaking requirements definition. Previously he has managed and developed the websites for the Digital Curation Centre, DigitalPreservationEurope, Planets and DigiCULT. He has also developed content management systems and websites for several successful digitisation projects, including TheGlasgowStory, The University of Glasgow Story, a major digitisation of 16th century French emblem books and several History of Art websites.

Christian Keitel studied in Tübingen and Salamanca and received his PhD in medieval history. He was trained as an archivist in Marburg and Detmold (1998-2000). Since 2000 he is responsible for strategic questions on digital preservation within the Landesarchiv Baden-Württemberg. He published articles on appraisal, archival description and several themes of digital preservation. He is a member of several working groups, amongst them at nestor on certification and on standards, at DIN on digital preservation and at the Conference of the German State Archives on digital records, statistical records and geographical records.

Asger Blekinge-Rasmussen graduated from The University of Aarhus in 2007 with a Masters in Physics and Computer Science. Shortly after graduation, he was hired as an IT-developer by the State and University Library, where he still works. In this job he works on establishing a digital repository, called DOMS, for the digital content of the library. The repository is based on Fedora Commons, and his work have produced a lot of enhancements for Fedora, including a system for specifying datamodels in Fedora, which he is currently attempting to give back to the community. In 2008, he was seconded to the DPE project, where he worked on PLATTER. He is currently working, among other things, with the PLANETS framework in an effort to integrate Fedora.

Angela Dappert is a Senior Analyst at the British Library. Her current focus is on conceptual modelling of preservation planning and preservation characterization within the Planets project, a four-year project co-funded by the European Union to address core digital preservation challenges. She has previous experience with eJournal ingest, digital rights modelling, and digital metadata standards. She serves as a British Library representative on the PREMIS Editorial Committee. In the past Angela has worked at the Siemens Research Laboratories in Munich and at the Stanford University Knowledge Systems Laboratory. She has worked as a consultant for The University of California Extension Service and Schlumberger Oilfield Services. Angela holds a Dipl. Inform. Med. from the University of Heidelberg and an M. Sc. in Computer Sciences from the University of Texas at Austin.

Hannes Kulovits is currently a PhD researcher at the Department of Software Technology and Interactive Systems at the Vienna University of Technology. He received his Master in Business Informatics from the Vienna University of Technology in 2005. He is actively involved in several research projects in the field of Digital Preservation where his main focus lies in Preservation Planning and Recommender Systems.

Andreas Rauber is Associate Professor at the Department of Software Technology and Interactive Systems at the Vienna University of Technology. He is actively involved in several research projects in the field of Digital Libraries, focusing on the organization and exploration of large information spaces, as well as Web archiving and digital preservation. His research interests cover the broad scope of digital libraries, including specifically text and music information retrieval and organization, information visualization, as well as data analysis and neural computation. He is involved in numerous initiatives in the area of digital preservation, such as DPE - Digital Preservation Europe; Planets - Preservation and Long-term Access Networked Services; nestor - Network of expertise in Digital long-term preservation. He has been lecturing extensively on this subject at different universities, as part of the DELOS and nestor summerschools on digital preservation, as well as during a range of training events on digital preservation.

Hans Hofman is senior advisor on digital longevity at the Nationaal Archief of the Netherlands. He is involved in several committees and projects at government and municipal level with respect to recordkeeping, metadata, digital preservation and open standards in e-government. On the international scene he is co-investigator and representative of the Nationaal Archief in the Inter Pares 2 research project (http://www.interpares.org), since 2000 he is representing the Netherlands in the ISO TC46/SC11 on Records Management, in which committee he is Chair of the Working Group on Recordkeeping Metadata, and he represents the Nationaal Archief in recent European projects such as the preservation cluster of the DELOS2-project (www.dpc.delos.info), PLANETS (www.planetsproject.eu) and Digital Preservation Europe (www.digitalpreservationeurope.eu). He has acted as codirector of ERPANET (2001-2004, www.eropanet.org).He has given numerous presentations and written many articles on topics like digital preservation, recordkeeping metadata and electronic records management.

Seamus Ross is Dean and Professor Faculty of Information at the University of Toronto and Principal Director of DigitalPreservationEurope (DPE) (http://www.digitalpreservationeurope.eu). He was Professor of Humanities Informatics and Digital Curation and Founding Director of HATII (Humanities Advanced Technology and Information Institute) at the University of Glasgow, a Principal Director of ERPANET, a European Commission activity to enhance the preservation of cultural heritage and scientific digital objects (http://www.erpanet.org), and a key player in The Digital Culture Forum (DigiCULT Forum) which worked to improve the take-up of cutting edge research and technology by the cultural heritage sector (http://www.digicult.info). Before joining the University of Glasgow he was Head of ICT at the British Academy and a technologist at a company specialising in knowledge engineering. He earned a doctorate from the University of Oxford. Some of his publications are available at http://eprints.erpanet.org During 2005/6 Seamus Ross is Visiting Fellow at the Oxford Internet Institute, University of Oxford.

8.2   Feedback summary for the Barcelona event

DPE/Planets/CASPAR/nestor Joint Training Event: The Preservation challenge: basic concepts and practical applications

University of Barcelona, Institute of Catalan Studies
Barcelona, Spain
23-27 March 2009

The joint DPE/Planets/CAPAR/nestor training event, 'The Preservation challenge: basic concepts and practical applications', was held at the University of Barcelona and Institute of Catalan studies, Barcelona, on 23-27 March 2009. The event gave participants an awareness and understanding of the key digital preservation issues and challenges; introduced them to the reference model for Open Archival Information System (OAIS); provided participants with knowledge of the role and use of metadata and representation information needed for preservation; the preservation planning process and its benefits to overall digital preservation strategies, and an appreciation of the range of roles and responsibilities involved in digital preservation activities. These concepts were illustrated by the practical application of tools developed by DPE, Planets, CASPAR and nestor.

There also was a number of brief break out sessions where the participants, divided in small groups, had the opportunity to review and discuss among them the topics presented during the lectures, with the assistance and the guidance of the presenters themselves. Students were provided with one week pre-course and post-course online Moodle training as well.

The course was held in cooperation with the third "WePreserve" Forum, providing participants an insight into cutting-edge research and development activity from a number of EC funded projects and with further networking opportunities to meet other researchers, international experts and practitioners across disciplinary and national boundaries. The event was targeted at practitioners and researchers from the archives, libraries and museums sector, as well as other institutions such as data archives, government departments, legal and commercial sectors with an interest in the topic of digital preservation.

Thirty three participants and twelve trainers from eleven countries (from Europe, Canada, Southeast Asia and Middle East) attended the event. At the end of the course participants were provided with a feedback form to complete. Seventeen forms were returned, giving a response rate of 52 %. The following is a summary of the responses.

About the event

The first seven questions related to various aspects of the event. Participants were asked to provide ratings between one and five with one being poor and five being excellent.

1. How effective were the speakers?

1=0

2=0

3=23%

4=59%

5=18%

2. How would you rate the teaching methods?

1=0

2=0

3=23%

4=59%

5=18%

3. How would you rate the structure of the event?

1=0

2=0

3=24%

4=35%

5=41%

4. How useful was the background documentation?

[note: only 14 responses out of a possible 17 were received for this question]

1=0

2=0

3=47%

4=29%

5=14%

5. How would you rate the organisation of the event?

[note: only 16 responses out of a possible 17 were received for this question]

1=0

2=0

3=6%

4=38%

5=56%

6. How well did you feel that the event addressed the main topic?

1=0

2=0

3=6%

4=65%

5=29%

7. Did this event meet your expectations? If not, why not?

YES=17

NO=0

8. What will you be able to take from this event back to your own organisations?

Fifteen participants responded to this question. The majority highlighted that they will take back to their own institutions a better understanding of the key areas of digital preservation, a broad overview of the issues surrounding it, innovations how to approach the problem, knowledge about existing tools and current digital preservation projects. Some participants highlighted specific

sessions as providing useful information - one respondent indicated Planets testbed methodology for preservation planning process as being a helpful approach for their work, both in political and technical fields, whilst another participant noted OAIS model as helpful tool to encourage digital preservation activities. Two participants noted that this course helped them to realise they institutions are on a right way, doing the same thing what everybody else is doing and that there is a need to address the issue of digital preservation in a collaborative way. One participant indicated that the point of view of this training event was very enriching for him, helping to learn about specific needs of organizations focused on preservation of cultural and historical material. Finally, one participant noted that this event will be very useful to complete the development of a digital archive project in public administration for a mid-term preservation of electronic records.

9. What else would you like to have seen covered at this event?

Ten participants provided responses to this question. The majority highlighted the need for more practical exercises as well as practical examples, case studies and specific applications of different methods and tools (6 participants). Participants would have liked to hear more about the problems various institutions face in applying those tools and some results. Three participants indicated that they would have liked more information about file formats, preservation of evidence of legal documents and electronic signature. One participant specifically commented that he was satisfied with the course and could not think of any changes.

10. What did you like best about this event?

[Please note that participants could provide more than one answer to this question.]

All participants responded to this question, with a variety of answers. Training event lecturers (7 mentions) and several sessions, like Planets testbed (4 mentions), Preservation metadata (2 mentions) and Preservation planning tool PLATO (1 mention) received specific praise. Five participants mentioned practical activities and brainstorming as being the most valuable aspects of the course. Several participants highlighted the value of the social aspects of this event, in particular meeting other participants with different backgrounds and different views, discussing with them and exchanging knowledge (3 participants).

Four participants mentioned organization, mood and cosy approach of the event. One attendee noted that he enjoyed sessions oriented in a very participative way, which helped to retain attention of the attendees that might sometimes be lost due to the succession of several dense topics. Two participants enjoyed the possibility to learn more about current European projects involved in digital preservation. Finally one attendee specifically commented he liked everything.

11. What did you like least?

Eleven participants responded to this question, but no one aspect received a large amount of criticism. Two participants highlighted the lack of background documentation as an issue, commenting that it would be worth to receive printed presentations before each session in order to follow the explanations of speakers better. One comment was made concerning speakers, that some of them were not taking account of the knowledge level of participants. One participant noted presentation about Platter, as being least valuable aspect of a course and another participant commented that he did not like several lectures about authenticity.

Other points noted in individual responses were tiredness (1 mention), breakfast at the hotel (1 mention) and chairs (1 mention).

12. How did you hear about this training event?

An organisation or institution (please specify): -

- Biblioteca de Catalunya – 1

- Generalitat de Catalunya – 1

- Fondazione rinascimento digitale – 1

- Ex Libris – 1

- University – 2
- Colleague – 6
- DPE website – 1
- CASPAR website – 1
- WePreserve website – 1
- Other – 2

These included learning about the event from various mailing lists and discussion groups.

Participants could provide multiple answers to this question. The most effective method was clearly word of mouth and promotion by individual institutions, with six attendees learning about the event from a colleague and six attendees hearing through the library, archive, university or commercial company (they were members of staff or students from these organisations).

Three respondents stated the DPE, CASPAR and WePreserve websites as their source alerting them to the event. Mailing lists and discussion groups were also mentioned as a source of information.

13. What motivated you to attend?

Multiple answers were again accepted for this question. By far the most popular reason for attendance was an overall interest in this topic and digital preservation (16 mentions), showing a continued need for courses of this nature. This was also the most common answer to be provided on its own (9 mentions). The next most popular reason was an interest in DPE, Planets, CASPAR and nestor projects who ran the event (5 mentions). One participant stated that only interest in projects motivated him to attend, emphasising the importance of the training activities for these projects. One participant also mentioned location as a significant reason.

14. Additional comments

Only five participants provided additional comments, all of them being quite diverse. One participant commented on evaluation of speakers, another noted that structure of a course was not adequate. One participant commented that this event could benefit from shorter time than five days and the last one said it would be interesting to have a course based only on practise of presented tools.

About you

15. Who do you work for?

Multiple answers to this question were possible. The sector with the most attendees was the Academic institution (6) and library community (4). Given the nature of the conference linked to the event, the backgrounds of the speakers and the promotion channels used, this result is not surprising. Presence of three participants from commercial sector, two from consultancy and government of Catalonia indicates increasing interest in digital preservation from various groups.

16. What is your function?

The participants of this training event were responsible for very diverse functions. Three participants were librarians, whilst three were archivists or digital archivists. Individuals from more technical posts were also well represented with one computer administrator, Information technology director, Consultant in designing information systems and IT manager. The remaining positions listed were Research assistant, teacher, Technology and legal consultant, Digital libraries project manager, Business analyst and Documental resources manager.

Conclusions

Feedback confirms that this training event was successful. The teaching methods and organisation of the event was highly rated, and the course met all participants' expectations, providing them with useful knowledge to take back to their own institutions. Participants particularly appreciated the internationally established lecturers, who assisted them in understanding the main concepts of digital preservation and showed how to address those concepts in practice through a number of hands-on exercises. The particular sessions also generated interest in current developments and solutions, including those from the DPE, Planets, CASPAR and nestor projects.

Participants highlighted the value of informal exchange of ideas and group discussions with other researchers, international experts, and practitioners as well.

Participants expressed wishes for more practical examples and would appreciate more hands-on exercises involving specific preservation tools and case studies. These comments clearly demonstrate the value of providing hands-on exercises and indicate that more would be appreciated.

Another issue, which requires refinement in future iterations of this course, is background documentation. Printed handouts before each session would result in the students better understanding and mastering the teaching material presented during the course.

By providing students with the possibility of meeting colleagues and exchanging information and experiences about digital preservation, we hope to have helped establish and develop a new community of future collaborators that will endure for years to come.

9.   Appendix 3 – Programme for Year 4 Training Events

The program included here is the program finalized for the first Joint Outreach and Training event, which will be held in Copenhagen on 22-24 June. It is planned to maintain this same program also for the other events planned for Year 4, possibly with minor changes, due to the availability of the lecturers and the study cases.

Programme Day 1

Time	Activity	Speaker
08:30 – 09:00	Coffee and Registration	
09:00 – 09:30	**Introduction to Digital Preservation: Why preserve ?** Key-note session which sets out the **business case** for digital preservation ie: evidence that a problem exists, likelihood of imminent loss, consequences; governance issues and some idea of auditing the value of material that could be lost.	Ross King Austrian Research Centers
09:30 – 10:00	**The Preservation Action Cycle: Introduction to Planets** Introduction to the Planets framework and a summary of what Planets will do.	Clive Billenness British Library
10:00 – 10:30	**Preserving Digital Content** Explanation of the elements that make up digital preservation, the technical problems behind preservation; the options available and the decisions that need to be taken. This session should list out the **issues involved in preserving digital content**. The rest of the day will show how Planets will address these starting with planning.	Volker Heydegger University at Cologne
10:30 – 11:00	**Why do we have to plan preservation solutions?** The next sessions will go onto show how participants can work with Planets to address each of the issues highlighted in the Elements session.	Christoph Becker Vienna University of Technology
11:00 – 11:15	Break	
11:15 – 12:00	**Digital Preservation: How to Preserve** Introduction to the actions available to emulate environments and migrate content. It will introduce features and benefits of Planets such as Gap Analysis, Blueprint, Planets tools, wrapped tools, PA Registry. If possible include examples of Planets tools being used by real institutions.	Sara van Bussel The National Library of The Netherlands
12:00 – 13:00	Lunch	
13:00 – 13:45	**Tools: How to Understand Files** Significant properties of digital objects; issues with characterising digital content and tools within Planets that will help users to understand digital collections. It will include references to models, XCDL, XCEL and the Pronom and PC Registry. If possible include examples of how Planet tools are being used.	Jan Schnasse University at Cologne

13:45 – 14:30	**Digital Preservation: How to Verify** Introduction to the Planets testbed, Corpora and workflow that illustrates how the Testbed can be used to support digital preservation activities. If possible provide examples of the testbed being used in real institutions.	Maurice van den Dobbelsteen The National Archives of the Netherlands
14:30 – 14:45	Break	
14:45 – 15:45	**Digital Preservation: How to Plan** An introduction to Planets' digital preservation planning framework and workflow. This may incorporate references to key preservation planning outputs and benefits eg. models, Technology Watch, recommender tool. An introduction and explanation of the Plato tool and what it will do. If possible, include references to examples of Plato being used in the real world and how it has helped.	Christoph Becker Vienna University of Technology
15:45 – 16:30	**Tools: How to Integrate the Components of Digital Preservation** This session introduces the Planets framework and how it fits with Library and Archive IT and repository systems.	Ross King Austrian Research Centers
16:30 – 17:00	**Case Study** An example of how The National Library of the Netherlands is preserving digital content. An example of how one organisation has successfully tackled preservation of digital content, challenges and how it has overcome them. If possible it will include references to how Planets has or could help. This session should address practicalities ie. what it will cost, the resource that needs to be put in place, the size of the team; how to get up and running; follow-up assistance needed.	Barbara Sierman The National Library of The Netherlands
17:00 – 17:30	**Summary of Value and Benefits and Facilitated Discussion with Speaker Panel** **Thank you and Close – Invitation to attend Evening Reception** **Day One Certificates and Feedback Forms**	All day one speakers Clive Billenness British Library, moderator
19:00	**Dinner for participants**	

Programme Day 2

Time	Activity	Speaker
08:30 – 09:00	Coffee and Registration	
09:00 – 09:30	**Introduction to the Digital Preservation Scenario and to a "real collection".** Open with an introduction to a practical scenario to preserve a sample collection, consisting of Word documents (some with graphics and images), pdf documents (some with graphics and images), graphics and images in different formats, audio and video. The collection will be assembled by Planets.	Vittore Casarosa HATII at the University of Glasgow
09:30 – 10:30	**Preservation Planning with Planets** **Practical Exercise:** guided walk-through of the first three steps of the preservation planning workflow using Plato, presenting the steps, information collected, and allowing participants to work along using the planning tool Plato, up to the definition of the objective tree.	Hannes Kulovits and Christoph Becker Vienna University of Technology
10:30 – 10:45	Break	
10:45-11:30	**Group exercise: Define, present and discuss objective tree**	Hannes Kulovits and Christoph Becker Vienna University of Technology
11:30 – 13:00	**Characterisation of digital documents** Explain how different file formats (txt, pdf, doc, jpeg, JPEG2000, audio, video, etc) behave with regard to preservation. Explain what is involved in characterisation. Explain the characterisation tools available in Planets. **Practical exercise**: walk through a practical example with documents extracted from the sample collection using the Planets characterization tools (identification of file formats, Pronom, XCEL, XCDL).	Volker Heydegger and Jan Schnasse University at Cologne
13:00 – 13:45	Lunch	
13:45 – 15:30	**Preservation Actions** Explain the available strategies (migration and emulation) and the tools needed. Explain clearly the environments where Planets will be most useful. Introduce the Registry and the metadata needed to describe the tools. **Practical exercise**: demonstrate the use of the Registry and some preservation actions (migration, emulation (Dioscuri, GRATE)) on documents extracted from the sample collection. Evaluate different tools with a special focus on their fitness for long term preservation.	Sara van Bussel The National Library of The Netherlands
15:30 – 15:45	Break	

| 15:45 – 17:15 | **Benchmarking Preservation Tools: the Testbed Environment**

Detailed presentation of the functionality and the components of the Testbed, and the possible use of the Corpus and the Registry. Explanation of Testbed Workflow. Address practicalities of using Testbed in a real organisation.

Practical exercise: using in the testbed environment some of the tools seen in the previous sessions. | Maurice van den Dobbelsteen The National Archives of the Netherlands and Brian Aitken HATII at the University of Glasgow |
| 17:15 – 17:30 | **Day 2 closing session**

Review and summarize the main points of the day, and introduce Day 3. Solicit feedback from the audience. | Vittore Casarosa HATII at the University of Glasgow |

Programme Day 3

Time	Activity	Speaker
08:30 – 09:00	Coffee and Registration	
09:00 – 11:00	**Finalising a Preservation Plan** **Practical exercise**: Preparation of a complete preservation plan of the test collection. In a guided walk-through, participants will use the objective tree defined on the previous day to perform preservation actions on the selected objects, evaluate the results using characterization tools, and evaluate results using the characterization tools presented on the previous day. Running through phases 2, 3 and 4 of the Planets preservation planning process, the practical exercise will be completed and the resulting plan will be discussed and evaluated with the audience.	Hannes Kulovits Vienna University of Technology
11:00 – 11:15	Break	
11:15 – 12:45	**Validating the preservation plan with the Testbed tool** **Practical exercise**: part of the preservation plan developed in the previous session will be tested, in order to evaluate the practical aspect of the plan and, if needed, to test possible alternatives. Perform experiments using the selected tools and criteria elaborated in the previous slot. Execute the experiment in the Testbed. Discuss the results and the impact they could have on further preservation planning using Plato.	Brian Aitken HATII at the University of Glasgow
12:45 – 13:15	Light lunch	
13:15 – 14:15	**Pulling it all together: Implementing Digital Preservation using the Planets Interoperability Framework** Overview of the Planets Installation Package, the Workflow Design Tool, the Security aspects (authentication and authorization).	Clive Billenness British Library
14:15 – 15:00	**Round-up of the learning days, lecturer's panel, discussion and feedback.** **Certificates and Feedback Forms**	Lecturers Vittore Casarosa HATII at the University of Glasgow moderator