The Memory of the World in the Digital Age: Digitization and Preservation

An international conference on permanent access to digital documentary heritage

26 to 28 SEPTEMBER 2012
Vancouver, British Columbia, Canada
Sheraton Vancouver Wall Centre
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Welcome to the conference

The digital age has revolutionized our habits, behaviours and expectations. It is impacting on identities and cultures, while transforming the shape of the knowledge that we will transmit to future generations as our legacy.

Maintaining access to knowledge is a core UNESCO priority that guides our work to develop and encourage policies ensuring the survival of the world’s memory. This International Conference, *Memory of the World in the Digital Age: Digitization and Preservation*, is a key initiative to facilitate the transmission of knowledge in support of global development goals.

The Conference will provide a platform for connecting people and institutions, private and public, from across the world. It is an opportunity to forge new strategic alliances to safeguard knowledge. It will also pave the way for strengthening UNESCO’s action to promote knowledge and share experiences on digital heritage preservation.

I welcome all conference participants and encourage everyone to explore all aspects of preserving knowledge in digital form, in order to craft solutions that promote sustainable and equitable development for all.

Irina Bokova
Director-General
UNESCO
Explore the World Wonders with Google.

Artworks from over 150 partners, 40 countries. 1 Google Art Project.

gooleartproject.com

Google Cultural Institute

Art Project powered by Google
A message from the mayor

On behalf of the citizens of Vancouver and my colleagues on City Council, I want to extend my warmest welcome to the delegates of the UNESCO Conference in Vancouver.

Vancouver is a city that leads in the areas of entertainment, business and innovation. It is an extraordinary community with its cultural diversity and breath-taking natural environment. From the sea to the sky, we feel that Vancouver is a place like no other. I hope that in addition to attending the conference, you are able to experience the many cultural and recreational activities the City has to offer. I know everyone involved in organizing the event will ensure your time with us is special.

We hope you enjoy your stay in Vancouver and you have a wonderful meeting.

Gregor Robertson
Mayor

A message from the president

There was a time in human history when the greatest threat to the recorded knowledge of humankind was fire. Established in the 3rd century BC, the Library of Alexandria in Egypt held an estimated 400,000 documents. It acted as an archive for past empires and a sanctuary for sacred writings, literature and chronicles. In addition to the main Library, another 42,800 documents were held within a “daughter library” called the Temple of Serapis. After fire destroyed the main Library in 48 BC, scholars continued to utilize the collection held within the Temple of Serapis, until it, too, was wasted by fire in 391 AD.

We can never know the full extent of what was lost in those two fires, but we do understand the danger posed by our modern equivalents: computer hacking, power failures, and the corruption of backup files. Mitigating these threats has become the modern equivalent of protecting the storehouse of human wisdom. From challenges posed by technology to those of economics, politics and culture, a global and collaborative effort is required in order to digitally preserve recorded knowledge for future generations.

As host of this UNESCO conference, UBC embraces the opportunity to participate in this crucial multi-national effort. As delegates, what you help to preserve now will unlock answers for generations to come. It is my honour and pleasure to welcome all of you here. I look forward to the outcomes of your deliberations, and to a future in which the learning, discoveries, and contributions made by the world’s greatest thinkers are secure and shared freely by all.

Stephen J. Toope
President and Vice-Chancellor
Microsoft in Education
Anytime Anywhere Learning for All

At Microsoft, we are committed to helping students and educators realize their full potential. By partnering with education communities around the world, we strive to deliver relevant, effective and scalable solutions that focus on improved learning outcomes for all.

Microsoft has partnered with UNESCO since 2004 to apply technology in Education and is a proud sponsor of the UNESCO Memory of the World in the Digital Age: Digitization and Preservation conference.

Learn more at Microsoft.com/education
Conference committees

STEERING COMMITTEE
Michel Benard, Google
Carlos Castro, World Intellectual Property Organization, Geneva
Wiebke Dalhoff, International Federation of Library Associations and Institutions, The Hague
Pauline Dugré, Canadian Commission for UNESCO, Ottawa
Luciana Duranti, University of British Columbia, Vancouver
Stuart Hamilton, International Federation of Library Associations and Institutions, The Hague
Caroline Haythornthwaite, University of British Columbia, Vancouver
Dominique Levasseur, Canadian Delegation, Paris
David Leitch, International Council on Archives, Paris
Alethea Lodge-Clarke, Microsoft, New York
Natasa Milic-Frayling, Microsoft, Cambridge
Jonas Palm, Swedish National Archives
Ingrid Parent, University of British Columbia, Vancouver
Guilda Rostama, World Intellectual Property Organization, Geneva
Dietrich Schüller, Information for All Programme, UNESCO / Working Group on Information Preservation
Michèle Stanton-Jean, Government of Québec, Paris
Jānis Kārklīns, Assistant Director-General, UNESCO
Joie Springer, UNESCO
Maria Lioulou, UNESCO

PROGRAMME COMMITTEE

Chairs
Luciana Duranti, Canada
Jonas Palm, Sweden

Members
Sharon Alexander-Gooding, Barbados
Allan Bell, Canada
Paul Conway, United States
Adrian Cunningham, Australia
Mariella Guercio, Italy
Shadrack Katuu, Kenya
Lekoko Kenosi, Botswana
Claudia Lacombe Rocha, Brazil
Jeremy Leighton John, United Kingdom
Michael Losavio, United States
Chileshe Lusale, Zambia
Hemalatha Ramasamy, Malaysia
Saeed Rezaei Sharifabadi, Iran
Dietrich Schüller, Austria
Joie Springer, UNESCO
Ken Thibodeau, United States
Anne Thurston, United Kingdom
Jian Wang, China

Secretary
Elizabeth Shaffer, Canada

PLANNING COMMITTEE
Jānis Kārklīns, Assistant Director-General, UNESCO
Maria Lioulou, UNESCO
Joie Springer, UNESCO
Caroline Haythornthwaite, University of British Columbia
Ingrid Parent, University of British Columbia
Jewel Buksa, BUKSA Strategic Conference Services
The University of Toronto Libraries is proud to partner with the University of British Columbia Libraries to sponsor this important conference and to work with partner libraries across Canada.

TO PRESERVE FOR FUTURE GENERATIONS
THE DOCUMENTARY HERITAGE OF CANADA

Memories should do more than linger. We can help.

SLAIS, The iSchool at the University of British Columbia, prepares professionals for leadership in planning, implementing, and promoting the preservation, organization and effective use of society’s documentary heritage, both in digital and in traditional form. Internationally recognized, the School offers a Master of Archival Studies, a Master of Library and Information Studies, a Master of Arts in Children’s Literature, and a Doctoral degree. To hire our graduates or students, or to find out more about becoming a student yourself, visit us online at www.slais.ubc.ca.

On the occasion of the UNESCO Conference “Memory of the World in the Digital Age: Digitization and Preservation”, SLAIS welcomes delegates from around the world to its city and campus, and proudly recognizes the members of its community who have contributed to making this conference a success:

- Dean Gage Averill and the Faculty of Arts for financial support
- UBC University Librarian Ingrid Parent and SLAIS Director Caroline Haythornthwaite, Co-Chairs of the conference Planning Committee
- Professor Luciana Duranti, Co-Chair of the conference Program Committee
- The SLAIS students who developed the Electronic Preservation Initiatives (EPI): A UNESCO Memory of the World Database
- The SLAIS faculty and students presenting papers
- The SLAIS student volunteers
ABOUT THE CONFERENCE

The UNESCO International Conference, Memory of the World in the Digital Age: Digitization and Preservation, will explore the main issues affecting the preservation of digital documentary heritage, in order to develop strategies that will contribute to greater protection of digital assets and help to define an implementation methodology that is appropriate for developing countries, in particular.

Although knowledge today is primarily created and accessed through digital media, it is highly ephemeral and its disappearance could lead to the impoverishment of humanity. Despite the adoption of the UNESCO Charter on the Preservation of Digital Heritage in 2003, there is still insufficient awareness of the risks of loss of digital heritage.

Digital information has economic value as a cultural product and as a source of knowledge. It plays a major role in national sustainable development as, increasingly, personal, governmental and commercial information is created in digital form only. But digitized national assets also constitute an immense wealth of the countries concerned and of society at large. The disappearance of this heritage will engender economic and cultural impoverishment and hamper the advancement of knowledge.

CONFERENC GOALS

The safeguard of digital documents is a fundamental issue that touches everyone, yet most people are unaware of the risk of loss or the magnitude of resources needed for long-term protection. This Conference will provide a platform to showcase major initiatives in the area while scaling up awareness of issues in order to find solutions at a global level.

Ensuring digital continuity of content requires a range of legal, technological, social, financial, political and other obstacles to be overcome. It is hoped that the Conference will lead to:

- the launch of specific initiatives related to digital preservation and to the fostering of access to documentary heritage through digitization;
- development of digitization policy guidelines;
- the upgrading or revision of the UNESCO Charter on the Preservation of Digital Heritage;
- the identification of the legal frameworks that would facilitate long-term digital preservation;
- agreement on the promotion or development of exchange standards; and
- the definition of the respective roles of professions, academics, industry and governments in addressing various issues and of a model for their cooperation.

PROGRAMME

Conference sessions will explore the main issues affecting the preservation of digital documentary heritage globally. Participants will be engaged in discussions that assess current policies in order to propose practical recommendations concerning permanent access to digital documentary heritage. Keynote speakers include leading international experts in the preservation of and digital access to cultural heritage. A call for abstracts for oral presentation elicited 240 submissions globally; approximately 100 were accepted.
BECAUSE
LEGENDS
NEVER
DIE.

DIGITIZING OUR
COLLECTIONS FOR
GENERATIONS TO
COME

McGill
Library
Bibliothèque

Azerbaijan
PRESERVING FOR THE WORLD
General information

SOCIAL EVENTS – WHERE, WHEN, WHAT TO WEAR

Welcome Reception
26 September 2012
1815 – 1930
Sheraton Wall Centre Hotel
Pavillion Ballroom
Dress: Business Formal

Dinner and Museum of Anthropology Tours
27 September 2012
1730 – 2200
Museum of Anthropology, University of British Columbia
Dress: Business Casual
Tours of the Museum to follow dinner.
Transportation provided to and from the Sheraton Wall Centre.
Bus to Museum departs from the North Tower lobby:
1730
Bus back to hotel begins:
2130

MEALS AND REFRESHMENTS
Food provided at the Conference includes:
► Daily mid-morning and mid-afternoon refreshment breaks
► Daily lunches
► Welcome Reception (Wednesday)
► Dinner at the Museum of Anthropology (Thursday)
Note: Breakfast or early morning coffee is not provided.

REGISTRATION DESK HOURS
Location: North Tower Lobby
Tuesday 25 September: 1900 – 2100
Wednesday 26 September: 0730 – 1800
Thursday 27 September: 0730 – 1700
Friday 28 September: 0800 – 1200

SIMULTANEOUS INTERPRETATION
Plenary sessions and a number of concurrent sessions will be simultaneously interpreted from English-French or French-English. Pick up headsets from the registration desk.

CONTACT INFORMATION FOR HOTEL
Sheraton Vancouver Wall Centre Hotel
1088 Burrard Street
Vancouver, British Columbia, Canada
Phone: 604.331.1000 or 1.888.627.7058

Hotel Concierge
For information about the city of Vancouver, including restaurants and transportation, please visit the concierge located in the North and South Tower lobbies of the Sheraton Vancouver Wall Centre Hotel.

EMERGENCY INFORMATION
Police, Ambulance, Fire – dial 911
We invite delegates to explore the UBC campus, including these events and attractions:

**Wu Han Chi: One Family – Two Nations Exhibition** / Sept. 13 – 26, 2012
Asian Centre Auditorium, 1871 West Mall
A native of Taishan, Kwantung province, Wu Han-Chi (1872-1913) had been elected as a member of the lower house of the first formal parliament in 1913. He played an active role in uprisings that shaped the future of modern China and was assassinated on political grounds.

Irving K. Barber Learning Centre, 1961 East Mall, Level 1
A display of texts produced on missionary printing presses in British Columbia, 1850s to 1910s.

**The Wallace B. Chung & Madeline H. Chung Collection** / Ongoing
Irving K. Barber Learning Centre, 1961 East Mall, Level 1
The Chung Collection is a 25,000 piece collection that tells the journey of early British Columbia history and the development of the Chinese community in Canada. Designated as a national treasure by the Canadian Cultural Property Export Review Board.

Stay connected with UBC Library after the conference – bookmark library.ubc.ca or follow us on Facebook or Twitter @ubclibrary.
Tuesday 25 September 2012
1830 – 1930
Location: Sheraton Wall Centre, Pavilion Ballroom D

Trust, rights and digital preservation
David Giaretta, Director, Alliance for Permanent Access (APA), and Alliance Permanent Access to the Records of Science in Europe Network (APARSEN)

This address is offered to the UNESCO Conference attendees by the Peter Wall Institute of Advanced Studies at UBC (www.pwias.ubc.ca). This public and free event concludes the Peter Wall Institute’s interdisciplinary Exploratory Workshop on “Trust and Conflicting Rights in the Digital Environment,” directed by Luciana Duranti and held on the UBC campus on 24-25 September 2012.

For more information see the workshop web site at www.digitaltrust.pwias.ubc.ca/

Presentation of Awards
The public address will be followed by the conferring of the Emmett Leahy Award and a reception offered by Huron Legal, the Peter Wall Institute, and the School of Library, Archival and Information Studies at the University of British Columbia, in the course of which the ARMA International Education Foundation will award its scholarships to the 2012 winners. Also this part of the event is open to the public and free.

Saturday 29 September 2012
Session 1: 1000 – 1200
OR
Session 2: 1400 – 1600
Location: UBC Robson Square, Rm. C440

Archivematica 0.9 Workshop
Peter Van Garderen, Courtney C. Mumma, Artefactual Systems Inc.

This tutorial-style workshop offers hands-on instruction using the first beta release of the open-source Archivematica digital preservation system. Led by the Archivematica design team, attendees will process sample digital materials from ingest through to archival storage and access. Attendees will use their own laptops to access cloud-hosted copies of the web-based Archivematica system and complete the tutorial steps.

Requirements: WiFi capable laptop and web browser (Minimum Browser Requirements: IE 9+, Firefox 10+, Safari 5.1, Chrome 16+)

Cost: CAD $199

Maximum attendees per session: 20

To register go to: http://archivematica.org/workshops
**Wednesday 26 September 2012**

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<tr>
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<th>Event</th>
<th>Location</th>
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<tr>
<td>0900 – 0930</td>
<td>Introductions and framework</td>
<td>Grand Ballroom</td>
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<tr>
<td>0930 – 1000</td>
<td>Ken Thibodeau, National Institute for Standards and Technology</td>
<td>Pavilion Ballroom</td>
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<tr>
<td>1000 – 1030</td>
<td>Seamus Ross, University of Toronto</td>
<td>Pavilion Ballroom</td>
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<tr>
<td>1030 – 1100</td>
<td>Break</td>
<td>Pavilion Ballroom</td>
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<tr>
<td>1100 – 1130</td>
<td>Luciana Duranti, University of British Columbia</td>
<td>Pavilion Ballroom</td>
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<td>1130 – 1200</td>
<td>Anne Thurston, International Records Management Trust</td>
<td>Pavilion Ballroom</td>
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<tr>
<td>1200 – 1330</td>
<td>Lunch</td>
<td>Grand Ballroom</td>
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<tr>
<td>1330 – 1510</td>
<td><strong>CONCURRENT SESSIONS</strong></td>
<td>Grand Ballroom</td>
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<tr>
<td></td>
<td><strong>Theme</strong></td>
<td>Grand Ballroom</td>
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<tr>
<td></td>
<td>A: Intellectual property infrastructure initiatives for digital heritage</td>
<td>Junior A/B</td>
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<td>B: Preservation infrastructures: Current models and potential alternatives</td>
<td>Junior C</td>
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<td>C: Challenges related to digitized material</td>
<td>Junior D</td>
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<td>D: The CODATA Mission: Preserving scientific data for the future</td>
<td>Port McNeill</td>
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<td>E: Preserving tradition and performing arts in digital form</td>
<td>Parksville</td>
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<td>Workshop 1: The Archivematica Project: Meeting digital continuity’s technical challenges</td>
<td>Pavilion D</td>
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<td>Showcase 1: Decoding the Memory of the World</td>
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<td>Showcase 2: Preserving digital heritage</td>
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<td>1330 – 1350</td>
<td>H. Christenson, J. Wilkin</td>
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<td>I. Pescini, W. Volpi</td>
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<td>O. Stokkmo, A. Guadamuz, F. X. Nuttall, M. A. Wilkinson</td>
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<td>E. Griffin</td>
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<td>K. Madsen, Mincaye, R. Katikala, C. Ross</td>
<td>Pavilion Ballroom</td>
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<td>1350 – 1410</td>
<td>E. Townsend Gard</td>
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<td>F. G. Mwangi</td>
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<td>P. Caldwell</td>
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<td>L. Kenosi</td>
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<td>1410 – 1430</td>
<td>J. Franklin</td>
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<td>S. Ross, V. Owen, M. Ouma</td>
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<td>S. Del Greco</td>
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<td>J. Langdalen</td>
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<td>1430 – 1450</td>
<td>K. Hennessy</td>
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<td>H. Stancic, I. Milosevic, A. Rajh</td>
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<td>D. R. F. Taylor, T. Lauriault</td>
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<td>L. Sorensen, T. Jones</td>
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<tr>
<td>1450 – 1510</td>
<td>Discussion</td>
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<td>Discussion</td>
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<tr>
<td>1510 – 1540</td>
<td>Break and exhibits/posters</td>
<td>Pavilion Ballroom</td>
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</table>
1540 – 1700 **CONCURRENT SESSIONS**

<table>
<thead>
<tr>
<th>Theme</th>
<th>A Beyond access: Digitization to preserve culture (SI)</th>
<th>B Strategies for building digital repositories</th>
<th>C Intellectual property and the protection of traditional knowledge</th>
<th>D Digital forensics for the preservation of digital heritage</th>
<th>E Giving a permanent digital voice to the silenced</th>
<th>Workshop 2 Roles and responsibilities in digital preservation decision making: Towards effective governance</th>
<th>Showcase 3 National Film Board of Canada digital transformation – From films to bytes: How the NFB embraced digital technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room</td>
<td>Grand Ballroom</td>
<td>Junior A/B</td>
<td>Junior C</td>
<td>Junior D</td>
<td>Port McNeill</td>
<td>Parksville</td>
<td>Pavilion D</td>
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<tr>
<th>Time</th>
<th>Presenters</th>
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<tr>
<td>1600 – 1620</td>
<td>B. Ferland, T. Muller</td>
<td>N. Grindley</td>
<td>C. Lee, K. Woods</td>
<td>R. V. Lewin</td>
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<td>1620 – 1640</td>
<td>J. Van Oudenaren</td>
<td>K. Bradley</td>
<td>C. Rogers, J. L. John</td>
<td>T. Reilly</td>
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<td>1640 – 1700</td>
<td>Discussion</td>
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1700 – 1715 Break and exhibits/posters

1715 – 1815 **OPENING CEREMONY (SI)**

1815 – 1930 **WELCOME RECEPTION**

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**Thursday 27 September 2012**

0900 – 1030 **PLENARY 2 (SI)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenters</th>
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<tr>
<td>0900 – 0930</td>
<td>Brewster Kahle, Internet Archives</td>
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<td>0930 – 1000</td>
<td>Vinton Cerf, Google</td>
<td>Vinton Cerf, Google</td>
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<td>1000 – 1030</td>
<td>Jeanne Sheldon, Microsoft</td>
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<td>Jeanne Sheldon, Microsoft</td>
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<td>1030 – 1100</td>
<td>Break and exhibits/posters</td>
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1100 – 1215 **CONCURRENT SESSIONS**

<table>
<thead>
<tr>
<th>Theme</th>
<th>A National strategies as the foundation of togetherness</th>
<th>B Web 2.0 products as documentary digital heritage: Can we access and preserve them?</th>
<th>C The role of culture in digitisation and digital preservation</th>
<th>D Open archival information system reference model: Answer or inspiration?</th>
<th>Workshop 3 Digitization of small sound collections: Problems and solutions</th>
<th>Showcase 4 InterPARES: The Brazilian experience</th>
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<td>Room</td>
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<td>1140 – 1200</td>
<td>E. Bodé</td>
<td>L. Nathan, E. Shaffer</td>
<td>X. Wang, Y. Nie</td>
<td>J. Boel, A. Cowling, C. Michotte, A. Torrance</td>
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<tr>
<td>1200 – 1215</td>
<td>Discussion</td>
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</table>
1215 – 1330 Lunch Grand Ballroom

1330 – 1505 CONCURRENT SESSIONS

<table>
<thead>
<tr>
<th>Theme</th>
<th>A Collaboration in digital preservation or lack thereof: What works</th>
<th>B The economics of preserving digital information (SI)</th>
<th>C Is a new legal framework required for digital preservation or will policy do?</th>
<th>D Digital curation: Convergence of challenges, institutions and knowledge (SI)</th>
<th>E Digitization and digital preservation experiences in a developing country perspective</th>
<th>Workshop 4 ARCOMEM – Archive Community MEMories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parksville</td>
<td>Grand Ballroom</td>
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<td>Pavilion D</td>
<td>Port Alberni</td>
<td>Junior A/B</td>
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<tr>
<td>1410 – 1430</td>
<td>V. Reich</td>
<td>U. P. Cabral</td>
<td>J. R. Baron, S. Atfield</td>
<td>P. Forget</td>
<td>B. Oswald</td>
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<tr>
<td>1430 – 1450</td>
<td>S. Knight</td>
<td>P. Liebetrau</td>
<td>E. Goh</td>
<td>J. Bastian, R. Harvey</td>
<td>K. Christen, J. Anderson, M. Ashley</td>
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<tr>
<td>1450 – 1505</td>
<td>Discussion</td>
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1505 – 1530 Break and exhibits/posters Pavilion Ballroom

1530 – 1645 CONCURRENT SESSIONS

<table>
<thead>
<tr>
<th>Theme</th>
<th>A Ensuring that it won’t happen again</th>
<th>B Trusting records</th>
<th>C Web archiving as part of building the documentary heritage of our time</th>
<th>D Technology as the mediator of heritage and its relations to people</th>
<th>E Limited resources or expertise: Case studies in addressing the issue</th>
<th>Showcase 5 Dealing with radioactive waste over the generations – Preserving digital records and more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parksville</td>
<td>Port Alberni</td>
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<td>Port McNeill</td>
<td>Pavilion D</td>
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<td>1530 – 1550</td>
<td>V. Lemieux</td>
<td>L. Dong</td>
<td>H. Liu</td>
<td>I. King</td>
<td>J. B. Ntungirimana (SI)</td>
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<tr>
<td>1550 – 1610</td>
<td>M. Groover</td>
<td>M. Demoulin</td>
<td>G. Navarro</td>
<td>J. L. John</td>
<td>F. Al-Sabah</td>
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<td>1630 – 1645</td>
<td>Discussion</td>
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1645 End of sessions for the day Pavilion Ballroom

1730 – 2200 DINNER Museum of Anthropology, University of British Columbia

Bus transportation: Departs from North Tower lobby at 1730. See "General Information" for more details.

Friday 28 September 2012

0900 – 1000 PLENARY 3 (SI) Grand Ballroom

0900 – 0930 Ruediger Klein, Royal Netherlands Academy of Arts and Sciences

0930 – 1000 Dietrich Schüller, Phonogrammarchiv, Austrian Academy of Sciences

1000 – 1030 Break and exhibits/posters Pavilion Ballroom
### 1030 – 1225 CONCURRENT SESSIONS

<table>
<thead>
<tr>
<th>Theme</th>
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<tbody>
<tr>
<td>International perspective and cooperation</td>
<td></td>
<td>The world audiovisual memory: Practical challenges, theoretical solutions</td>
<td>Metadata and formats for digitalization and digital preservation</td>
<td>A methodology framework to ensure preservation</td>
<td>Digital objects as forensic evidence</td>
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<td>Room</td>
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<td>Pavilion D</td>
<td>Junior C/D</td>
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<tr>
<td>1110 – 1130</td>
<td>C. Ambaud</td>
<td>1130 – 1150</td>
<td>A. Jansen</td>
<td>L. Enns, G. Badesha</td>
<td>S. Katuu</td>
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<tr>
<td>1200 – 1225</td>
<td>Discussion</td>
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### 1225 – 1340 Lunch
- Grand Ballroom

### 1340 – 1515 CONCURRENT SESSIONS

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<th>Theme</th>
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<tr>
<td>Institutional and inter-organizational initiatives in digitization</td>
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<td>Preserving images: What do we need to know? (SI)</td>
<td>Small and large scale digitization: Towards a shared conceptual model</td>
<td>Preservation of audiovisual material</td>
<td>Trusting data and documents online</td>
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<td>1500 – 1515</td>
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### Showcase 6
**The Indian centre of excellence in digital preservation and InterPARES**
- Pavilion D

**Workshop 5**
Educing records professionals on topics on digital preservation
- Grand Ballroom
**Personal planner**

### Wednesday 26 September 2012

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>0900 – 1200</td>
<td>PLENARY 1: CONFERENCE RATIONALE</td>
<td>Grand Ballroom</td>
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<tr>
<td>1330 – 1510</td>
<td>CONCURRENT SESSIONS</td>
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<td>Grand Ballroom</td>
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<td>1640 – 1700</td>
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<tr>
<td>1715 – 1815</td>
<td>OPENING CEREMONY</td>
<td>Grand Ballroom</td>
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<tr>
<td>1815 – 1930</td>
<td>WELCOME RECEPTION</td>
<td>Pavilion Ballroom</td>
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### Thursday 27 September 2012

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<thead>
<tr>
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<tr>
<td>0900 – 1030</td>
<td>PLENARY 2</td>
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<td>1100 – 1215</td>
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### Friday 28 September 2012

**0900 – 1000**  
**PLENARY 3**  
**Grand Ballroom**

**1030 – 1225**  
**CONCURRENT SESSIONS**

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<th>A</th>
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<td>1030 – 1045</td>
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**1340 – 1515**  
**CONCURRENT SESSIONS**

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<td>Junior C/D</td>
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**1545 – 1630**  
**CONCLUDING PLENARY**  
**Grand Ballroom**

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**DINNER**  
**Museum of Anthropology, University of British Columbia**
Day 1: Wednesday 26 September 2012

PLENARY 1: CONFERENCE RATIONALE (SI)  Grand Ballroom

0900 – 0930  Introductions and framework
Chair: David Walden, Secretary-General, Canadian Commission for UNESCO
        Jānis Kārķiņš, Assistant Director-General, UNESCO

0930 – 1000  Wrestling with shape-shifters: Perspectives on preserving memory in the digital age
Chair: Luciana Duranti, University of British Columbia, Canada
        Ken Thibodeau, National Institute of Standards and Technology, United States

Starting with the basic question, “What is it?” digital preservation can present itself as the preservation of information technology, the preservation of the digital objects created using this technology, or the preservation of the information carried by such digital objects. Each of these alternatives has strengths; each has weaknesses; and each entails complications. This address will explore the shape-shifting character of digital memory and provide a framework for rational discourse about its multifaceted challenges.

1000 – 1030  The economics of digital creation, curation, and preservation
Chair: Maria Guerchio, University of Roma “La Sapienza”, Italy
        Seamus Ross, University of Toronto, Canada

Among the numerous challenges to the wholesale representation and preservation of our records in digital form is an economic one. Starting with a look at the costs for expertise, management and technology, this talk will examine the economics of digital preservation from both the cost and revenue sides with an aim to indicate what kinds of economic models might support the long term sustainability of our vast, and rapidly growing, array of digital materials.

1030 – 1100  Break and exhibits/posters  Pavilion Ballroom

1100 – 1130  Trust and conflicting rights in the digital environment
Chair: Jonas Palm, National Archives of Sweden
        Luciana Duranti, University of British Columbia, Canada

While evolving and emerging digital technologies serve the needs of governments, businesses and individuals to great advantage, the often unintended consequences of their use may be harmful. When WikiLeaks began publishing the largest set of confidential documents ever released, it exposed how endangered are our cherished, yet sometimes conflicting rights – secrecy vs. transparency, privacy vs. access – in the digital world. Moreover, making, storing and accessing records in the highly networked, easily hacked environment of the Internet, is creating liabilities that institutions may not have thought they were assuming. Can the data be trusted? Can the documents from which the data are derived be trusted or even traceable? Are they complete? Are they authentic? Who has access to them? How secure are they? The overview of these and other legal challenges will provide a framework for the many presentations discussing them.
**Digitization and preservation: Global opportunities and cultural challenges**
*Chair:* Lekoko Kenosi, University of Botswana
Anne Thurston, International Records Management Trust, United Kingdom

> Our societies have the greatest opportunity the world has ever known for preserving and sharing information and for empowering citizens through access to information. Information professionals can draw on a body of international good practice for managing digital information, developing the framework and skill sets needed to create, protect and preserve digital information that governments and citizens can trust and that will link generations across time. The challenge is to share this knowledge worldwide as rapidly as possible and to clearly articulate key preservation issues to the global governance and development community.

**1200 – 1330 Lunch Grand Ballroom**

**1330 – 1510 Concurrent Sessions**

### A
**INTELLECTUAL PROPERTY INFRASTRUCTURE INITIATIVES FOR DIGITAL HERITAGE**
*Session Chair:* Daphne Zografos Johnsson, World Intellectual Property Organization

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers and Affiliations</th>
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<tbody>
<tr>
<td>1330 – 1350</td>
<td>Intellectual rights and the HathiTrust Collection</td>
<td>H. Christenson, University of California; J. Wilkin, HathiTrust, United States</td>
</tr>
<tr>
<td>1350 – 1410</td>
<td>The Durationator copyright experiment: A tool for the world</td>
<td>E. Townsend Gard, Tulane University, United States</td>
</tr>
<tr>
<td>1410 – 1430</td>
<td>Beyond a legal framework: When the expectations of indigenous peoples collide with copyright law</td>
<td>J. Franklin, University of Washington, United States</td>
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<tr>
<td>1430 – 1450</td>
<td>Digital heritage and local cultural property rights discourse</td>
<td>K. Hennessy, Simon Fraser University, Canada</td>
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<tr>
<td>1450 – 1510</td>
<td>Discussion</td>
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### B
**PRESERVATION INFRASTRUCTURES: CURRENT MODELS AND POTENTIAL ALTERNATIVES**
*Session Chair:* Chinyere Otuonye, Natural Medicine Development Agency, Nigeria

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>1330 – 1350</td>
<td>An example to follow: An infrastructure for interoperability and governance in the Tuscan public system for digital preservation</td>
<td>I. Pescini, W. Volpi, Regione Toscana, Italy</td>
</tr>
<tr>
<td>1350 – 1410</td>
<td>The road to providing access to Kenya’s information heritage – Digitization project in the Kenya National Archives</td>
<td>F. G. Mwangi, Kenya National Archives and Documentation Service</td>
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<tr>
<td>1410 – 1430</td>
<td>A preservation infrastructure built to last: Preservation, community, and HathiTrust</td>
<td>J. York, HathiTrust, United States</td>
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“Archiving-as-a-Service”: Influence of Cloud computing on archival theory and practice
H. Stancic, I. Milosevic, University of Zagreb, Croatia; A. Raž, Agency for Medicinal Products and Medical Devices, Croatia

Panel 1 – Challenges related to access, identification, and re-use of digitized material
Session Chair: Stuart Hamilton, International Federation of Library Associations and Institutions
Panelists: O. Stokkmo, The International Federation of Reproduction Rights Organizations; A. Guadamuz, Creative Commons; F.X. Nuttall, Rights Management, Google; M. A. Wilkinson, Western Law School, Canada

The first theme of this session will provide an analysis of some of the increasingly important challenges relating to the access, identification, circulation and re-use of digitized material. Some Cultural Heritage Institutions (CHI) claim rights in digitized material that was originally in the public domain. This may constitute an obstacle in a cross-border context, as in some countries a work in the public domain that has been digitized remains in the public domain, while in others it does not. The discussions will therefore provide an opportunity to discuss different approaches, including standardization and rights management, and further common understanding on the copyright status of digitized material. The lack of clarity and harmonization of legislation on orphan works will be explored to identify the possibility of establishing a cross-border international framework recognizing orphan works and a remuneration mechanism of eventual right-holders.

The session will invite panelists to give their thoughts on the challenges and possible solutions. Audience members will be able to join the discussion and reflect on the possibilities for establishing a copyright regime to facilitate access and circulation of all categories of digitized material.

Panel 2 – Challenges related to preservation of digitized material: Exceptions and limitations and the role of libraries and archives
Session Chair: Victor Vazquez Lopez, World Intellectual Property Organization
Panelists: S. Ross, University of Toronto, Canada; V. Owen, University of Toronto, Canada; M. Ouma, Executive Director, Kenya Copyright Board

The panel will start by presenting the exceptions and limitations for preservation, in particular for libraries and archives whose mission includes preserving cultural heritage, promoting the flow of information and supporting learning and research. A reflection on exceptions for research, education purposes, and for libraries or for cultural heritage institutions, will provide an opportunity for WIPO to present its work with the Standing Committee on Copyright and Related Rights (SCCR), including the Draft WIPO Treaty on Exceptions and Limitations for the Persons with Disabilities, Educational and Research Institutions, Libraries and Archives.

Panelists will explore exceptions and limitations in their presentations, and there will be an opportunity for audience contributions. The discussions will also provide an opportunity to focus on the issue of legal deposit applied to digital content and the lack of harmonization of legal deposit regimes around the world.

THE CODATA MISSION: PRESERVING SCIENTIFIC DATA FOR THE FUTURE
Session Chair: C. Muller, Muller Media Conversions, United States

This session will describe initiatives taken by members of “Data-at-Risk” (DARTG), a Task Group of the Committee on Data for Science and Technology (CODATA, a body of the International Council for Science), to preserve scientific data that are in danger of loss because they are not in modern electronic formats, or have particularly short shelf-life. DARTG is seeking out sources of such data worldwide, knowing that many are irreplaceable for research into the long-term trends that occur in the natural world. By way of examples of the need for data rescue programmes, a description of rescuing Tide Gauge data will be followed by a report on the U.S. NCDC programme...
to steward its extensive archives of paper, fiche, and other media and to digitize them as resources permit. The session will continue with a discussion of the challenges of preserving and accessing maps which have been re-generated in interactive formats, and will conclude with an open discussion on these and related topics. These themes will also be illustrated in a digital poster.

1330 – 1350
► Recovering the Forgettery of the World
E. Griffin, Dominion Astrophysical Observatory, Canada

1350 – 1410
► Tide gauge data rescue
P. Caldwell, National Oceanographic Data Center, United States

1410 – 1430
► Environmental data through time: Extending the climate record
S. Del Greco, NOAA National Climatic Data Center, United States

1430 – 1450
► The map as a fundamental source in the Memory of the World
D. R. F. Taylor, T. Lauriault, Carleton University, Canada

1450 – 1510 Discussion

PRESErvING TRADITION AND PERFORMING ARTS IN DIGITAL FORM

Session Chair: Yvette Hackett, Canadian Heritage Information Network

The session will begin with a report on the findings from mapping patterns of human interaction among tribes in the Amazon to patterns on human interaction on the Internet and will show how the Waorani Indians can electronically document and share their culture with the rest of the world on their terms. It will then present a case study on the preservation of the sound archives of Radio Botswana using archival theory as guidance; the work conducted at the National Library of Norway to digitize the source material used in historical music editions and the entire process of creating critical editions of historical music; and the technological challenges encountered in building a repository for preservation of dance videos based on archival workflow.

1330 – 1350
► Life at the edge of the Internet: Preserving the digital heritage of indigenous cultures
K. Madsen, Mincaye, R. Katikala, Independent Researchers, Florida and Ecuador; C. Ross, Save America’s Forests, United States

1350 – 1410
► Digital madness, archival theory and the endangered sound archives of Radio Botswana
L. Kenosi, The University of Botswana

1410 – 1430
► Editing historical music in the age of digitization
J. Langdalen, The National Library of Norway

1430 – 1450
► Developing and implementing a digital video repository for legacy dance documentation: Dance Heritage Coalition’s secure media network
L. Sorensen, Bay Area Video Coalition, United States; T. Jones, New York Public Library, United States

1450 – 1510 Discussion

WORKSHOP #1
THE ARCHIVEMATICA PROJECT: MEETING DIGITAL CONTINUITY’S TECHNICAL CHALLENGES


Archivematica is a free and open-source digital preservation system developed by Artefactual Systems in part through funding from UNESCO. This interactive session will present the history of Archivematica and an overview of the system’s design, features and technical architecture. It will also provide examples of how the software is being used in projects worldwide, such as the International Monetary Fund, the University of British Columbia Library and the City of Vancouver Archives. The presentation will conclude with a discussion of future directions for the system, including the development of new features; the open-source business model; training and support services; and ongoing challenges to implementing Archivematica in developing countries.
1330 – 1420 Leader: J. Springer, Senior Programme Specialist, UNESCO
UNESCO’s Memory of the World Programme, under whose auspices this conference is being held, was established to safeguard endangered documentary heritage. In its 20 years of existence, the Programme has matured and made considerable achievements which will be presented in this session, in order to decode the mysteries of the Programme, and showcase examples of documentary heritage recorded with the use of different carriers of information from stone to bytes.

1420 – 1425 Break

1425 – 1510 Leaders: N. Milic-Frayling, Microsoft Research; B. van der Werf, Open Planets Foundation
This presentation will reflect on the fundamental aspects of digital media and the preservation challenges they present. It will discuss the Planets and Scape research efforts to devise effective preservation tools and methods. It will also inform about the Open Planets Foundation (OPF) that fosters an open community of practitioners and drives adoption of sound preservation practices. By leveraging state-of-the-art research and technologies, OPF provides practical solutions and expertise in digital preservation. Through active online presence, Hackathons, and Webinars, OPF supports learning, hands-on experience, and dissemination of best practices among its members and a broader community.

1510 – 1540 Break and exhibits/posters

1540 – 1700 Concurrent Sessions

BEYOND ACCESS: DIGITIZATION TO PRESERVE CULTURE (SI) Grand Ballroom
Session Chair: Ingrid Parent, University of British Columbia, Canada
The session will present digitization projects whose specific aim has been the preservation of culture across countries. Specifically it will present examples from Francophone and Lusophone countries, and will be concluded by a description the World Digital Library, an international collaborative project that fosters access to documentary heritage through digitization, capacity building, and technical assistance.

1540 – 1600 ► Safeguarding the Portuguese language documentary heritage: The Lusophone digital library
F. M. Melo Alves, J. A. Moreiro González, Universidade Carlos III de Madrid, Spain; J. M. Matias, International Association of Lusophone Digital Libraries, Portugal

1600 – 1620 ► Réseau francophone numérique (French Digital network)
B. Ferland, T. Muller, Bibliothèque et Archives nationales du Québec, Canada

1620 – 1640 ► The World Digital Library
J. Van Oudenaren, Library of Congress, United States

1640 – 1700 Discussion

STRATEGIES FOR BUILDING DIGITAL REPOSITORIES Junior A/B
Session Chair: Torsten Johansson, National Library of Sweden
This session will present different models developed for building digital repositories: the University of British Columbia Library’s Persistent Digital Collections Strategy and its areas of implementation, (issues of staffing, sustainability, and continuing acquisition); the work that the Joint Information Systems Committee (JISC) is
funding to build an evidence base of material that will provide organizations with practical and plausible reasons for investing in preservation; an examination of the notion of digital simplicity as implemented in a standalone system made with low cost components and open source software.

1540 – 1600
► A persistent digital collections strategy for UBC Library
B. Sprout, S. Romkey, University of British Columbia, Canada

1600 – 1620
► Building the business case for digital preservation
N. Grindley, Joint Information Systems Committee, United Kingdom

1620 – 1640
► Requirements for a remote repository
K. Bradley, National Library of Australia

1640 – 1700 Discussion

INTELLECTUAL PROPERTY AND THE PROTECTION OF TRADITIONAL KNOWLEDGE

1540 – 1700
► Panel 3 – Intellectual property and the protection of traditional knowledge and traditional cultural expressions: Exceptions and limitations for preservation and the re-use of digitized materials

Session Chair: Grand Chief Edward John (TBC)

This session will address the linkages between global initiatives undertaken for the preservation of cultural heritage, notably through digitization, and efforts to protect cultural heritage in the IP sense. It will highlight the synergies and harmony of legal protection and safeguarding and preservation as spearheaded by WIPO and UNESCO, respectively, but also shed light on related risks of undertaking preservation activities without proper IP measures in place.

This session is specifically intended to raise awareness of the interactions between the UNESCO intangible cultural heritage preservation and digitization exercises (including under the 2003 Convention) and the work of WIPO in the field of traditional knowledge (TK) and traditional cultural expressions (TCEs), and to encourage IP and cultural heritage specialists to engage with each other and to enrich each other’s work.

DIGITAL FORENSICS FOR THE PRESERVATION OF DIGITAL HERITAGE

1540 – 1600
► Accountability in preserving the Memory of the World
W. Liu, Florida State University, United States

1600 – 1620
► Automated redaction of sensitive data in collections: Toward responsible stewardship of digital heritage
C. Lee, K. Woods, The University of North Carolina at Chapel Hill, United States

1620 – 1640
► Shared perspectives: Digital forensics and ancestral computing
C. Rogers, University of British Columbia, Canada; J. L. John, The British Library, United Kingdom

1640 – 1700 Discussion
This session will discuss the documentation of events that have shaken specific countries and the world with them: the Occupy Movement in North America, Living Archives and radical social movements, and the Residential Schools system in Canada.

**Archiving large amounts of individually-created digital content:**

**Lessons from archiving the Occupy Movement**
H. Besser, New York University, United States

**Phoenix’s new jacket: Digitizing German-Jewish historical archives**
R. V. Lewin, Israel

**For the children taken ... The challenge to Truth Commissions in building digital collections for research and long term preservation**
T. Reilly, Canadian Truth Commission

**ROLES AND RESPONSIBILITIES IN DIGITAL PRESERVATION DECISION MAKING: TOWARDS EFFECTIVE GOVERNANCE**

**NATIONAL FILM BOARD OF CANADA DIGITAL TRANSFORMATION – FROM FILMS TO BYTES: HOW THE NFB EMBRACED DIGITAL TECHNOLOGIES**

**OPENING CEREMONY**

Musqueam Elder Larry Grant
Musqueam Welcome
Irina Bokova, Director-General, UNESCO
Jānis Kārklinš, Assistant Director-General, UNESCO
Ali Abbasov, Minister of Communications and Information Technologies, Republic of Azerbaijan
Axel Meisen, President, Canadian Commission for UNESCO
David H. Farrar, Provost and Vice President Academic, University of British Columbia, Canada
Jeanne Sheldon, Microsoft
Vinton Cerf, Google

**WELCOME RECEPTION**
Day 2: Thursday 27 September 2012

0900 – 1030 PLENARY 2 (SI) Grand Ballroom

0900 – 0930
- Mass digitization, library lending, internet archives
  Chair: Jonas Palm, National Archives of Sweden
  Brewster Kahle, Founder, Digital Librarian, Internet Archives, United States

While our users expect everything to be online, most materials are still held back by publishers, libraries, and archives. We have the money, the existing rights, and the civic responsibility to digitize, purchase digital materials, provide access, and preserve both physical and digital cultural works. Best of all, this can be done without a central point of control, be it a collective licensing organization or vendor. But we do need to start doing more and soon if we are to bring the richness of the 20th century’s publications to this generation. This talk will outline what the Internet Archive is doing with hundreds of libraries to bring books to a wide public as a possible illustration for others.

0930 – 1000
- Preserving the value of digital and digitized information
  Chair: Ken Thibodeau, National Institute of Standards and Technology, United States
  Vinton Cerf, Google

This keynote will be about efforts to stave off “bit rot” and to raise questions about adapting intellectual property concepts in a way that leads to preservation without loss of IP value to stakeholders, those who benefit from access to and use of information as well as those who have various rights in the information. It will advocate that the power in information is in its sharing, not in its hiding.

1000 – 1030
- Beyond paper to authentically digital documents
  Chair: Claudia Lacombe Rocha, National Archives of Brazil
  Jeanne Sheldon, Microsoft

Knowledge work is increasingly online and collaborative and the metaphor of digital paper limits the capabilities in document consumptions. The keynote will describe and show Office documents breaking out of the world of paper and discuss the implications for preservation.

1030 – 1100 Break and exhibits/posters Pavilion Ballroom

1100 – 1215 Concurrent Sessions

1100 – 1120 Session Chair: Jack Lohman, Royal British Columbia Museum & Archives, Canada
- National planning as the key for successful implementation of digitization strategies
  A. Vilks, Director, National Library of Latvia

1120 – 1140
- Preserving the memories of a nation: The Singapore Memory Project
  I. Chew, H. Jailani, National Library Board, Singapore

1140 – 1200
- Digital preservation policy of the Chamber of Deputies: Methodology for its development
  E. Bodê, Chamber of Deputies, Brazil

1200 – 1215 Discussion
### WEB 2.0 PRODUCTS AS DOCUMENTARY DIGITAL HERITAGE: CAN WE ACCESS AND PRESERVE THEM? Pavilion D

**Session Chair:** Jeremy Leighton John, The British Library, United Kingdom

The session will begin with an analysis of policy issues across institutions and organizations in the United States and of the codes of conduct that govern the documents produced in the Web 2.0 environment. It will then discuss how context is presented in a Web 2.0 environment and the impact of its description on user understanding, by comparing the sufficiency, completeness and reliability of archival description online. The session will be concluded by an investigation of what is required of social media system designers to ensure that the products of the use of social media can be preserved as digital heritage.

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<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>1100 – 1120</td>
<td>Unprotected memory: User-generated content and the unintentional digital archive</td>
<td>J. Schleser</td>
<td>American University, United States</td>
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<tr>
<td>1120 – 1140</td>
<td>Context in a Web 2.0 environment</td>
<td>H. Ryckman</td>
<td>Co-operators Group, Ontario, Canada</td>
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<tr>
<td>1140 – 1200</td>
<td>Social media, records, and cultural heritage: Revealing tensions and informing design</td>
<td>L. Nathan, E. Shaffer</td>
<td>University of British Columbia, Canada</td>
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<tr>
<td>1200 – 1215</td>
<td>Discussion</td>
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### THE ROLE OF CULTURE IN DIGITIZATION AND DIGITAL PRESERVATION Junior C/D

**Session Chair:** Rusnah Johare, University of Technology MARA, Malaysia

The session will begin with a discussion of "Information cultures", that is the values accorded to information and the attitudes towards it, and will illustrate the theoretical and methodological arguments with case studies of political, cultural and professional challenges of digitization and preservation of government information in Papua New Guinea, and from the United States and China.

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<tbody>
<tr>
<td>1100 – 1120</td>
<td>Preservation cultures: Developing a framework for a culturally sensitive digital preservation agenda</td>
<td>F. Foscarini</td>
<td>University of Toronto, Canada</td>
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<tr>
<td>1120 – 1140</td>
<td>Political, cultural and professional challenges for digitization and preservation of government information in Papua New Guinea: An overview</td>
<td>T. Kaiku, V. Puipui</td>
<td>University of Papua, New Guinea; Papua New Guinea National Archives and Public Records Services</td>
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<tr>
<td>1140 – 1200</td>
<td>Current situation, problems and prospect of digital preservation of the documentary heritage in China</td>
<td>X. Wang, Y. Nie</td>
<td>Wuhan University, China</td>
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<tr>
<td>1200 – 1215</td>
<td>Discussion</td>
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### OPEN ARCHIVAL INFORMATION SYSTEM REFERENCE MODEL: ANSWER OR INSPIRATION? Port McNeill

**Session Chair:** Kevin Bradley, National Library of Australia

The session will present different perspectives on using OAIS: the advantages of as well as the obstacles to its adoption in audiovisual archives in Switzerland and in national archives in Iran. It will conclude with the UNESCO Archives challenges.

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<tbody>
<tr>
<td>1100 – 1120</td>
<td>Digital archiving systems confronted with the OAIS reference model</td>
<td>S. Cavaglieri</td>
<td>Swiss National Sound Archives</td>
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</table>
1120 – 1140
► A model for managing digital pictures of the National Archives of Iran – Based on the Open Archival Information System Reference Model
S. R. Sharifabadi, M. Tajdaran, Z. R. Jambari, Alzahra University, Iran

1140 – 1200
► The digital memory of UNESCO. Records of international organizations: A unique context, very special challenges
J. Boel, A. Cowling, C. Michotte, A. Torrance, UNESCO Archives

1200 – 1215
Discussion

WORKSHOP

WORKSHOP #3
DIGITIZATION OF SMALL SOUND COLLECTIONS: PROBLEMS AND SOLUTIONS
Junior A/B

1100 – 1215
Leader: N. Wallaszkovits, Phonogrammarchiv, Austrian Academy of Sciences
The Workshop discusses digitization focusing on the structural, technical and conceptual problems of practical implementation and realization, such as: assessment of the collection’s state of preservation; assessment of required and available equipment; development of a preservation plan, proposing a prioritized sequence of actions, based on different urgencies for different parts of the collection; definition of equipment needed (test, analogue, digital) and design of a business plan of investment; training of the local staff in digital audio archiving techniques and methodology; installation of equipment and initiation of work; subsequent technical and conceptual support. Discussion also includes the implementation of an open source based database and server system, which can be individually adapted and expanded.

SHOWCASE

SHOWCASE #4
InterPARES: THE BRAZILIAN EXPERIENCE
Grand Ballroom

1100 – 1215
Leaders: C. Lacombe Rocha, National Archives of Brazil; A. Picone, University of Campinas, Brazil
This interactive session will demonstrate how the products and recommendations of the International Research on Permanent Authentic Records in Electronic Systems (InterPARES) Project can be adapted to a national context by showing how specific realities have been impacted by the implementation of such products and recommendations. The presenters will discuss the use of the terminology database, the development of a digital preservation policy for the Brazilian parliament and other institutions and organizations, as well as the development of a national standard for preservation formats.

1215 – 1330
Lunch
Grand Ballroom

1330 – 1505
Concurrent Sessions

A
COLLABORATION IN DIGITAL PRESERVATION OR LACK THEREOF: WHAT WORKS
Parksville

Session Chair: David Giaretta, Alliance for Permanent Access & APARSEN
The session will analyze programmes, financial plans and general documents approved by European agencies; the deliverables of European projects funded in the last decade and new promising initiatives to demonstrate the level of participation of archival institutions. It will then proceed to show examples of successful collaboration among different types of institutions in Sweden and the United States, and between the public and private sectors, describing the partnership between the National Library of New Zealand and Ex Libris to develop the Rosetta digital preservation system.

1330 – 1350
► Digital preservation in Europe: Strategic plans, research outputs and future implementations – the weak role of the archival institutions
M. Guercio, University of Roma “La Sapienza”, Italy

1350 – 1410
► Models for national collaboration
R. Källman, The National Archives of Sweden

1410 – 1430
► Collaboration and digital collections
V. Reich, Stanford University Libraries, United States
### Implementing UNESCO guidelines for the preservation of digital heritage

**S. Knight, National Library of New Zealand, Ex Libris**

### Discussion

#### THE ECONOMICS OF PRESERVING DIGITAL INFORMATION (SI)

**Grand Ballroom**

**Session Chair:** Victoria Lemieux, University of British Columbia, Canada

This session will discuss economic models of long term digital preservation with reference to storage costs, investment and running costs, direct and indirect costs, as well as financial adjustments, depreciation and inflation with respect to labour costs. It will then show the low cost methods for the digitization of native writing materials in Sri Lanka and describe the role of independent professionals in assisting South African organisations to overcome and manage these challenges through project management, training, metadata creation, adoption of good practices, creation of policies, development of local guidelines and staff mentoring.

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<tr>
<td>1330 – 1350</td>
<td><strong>The economics of long-term digital storage</strong></td>
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<td><strong>D. S. H. Rosenthal, Stanford University Libraries, United States</strong></td>
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<tr>
<td>1350 – 1410</td>
<td><strong>Framework for modeling the cost of preserving digital information</strong></td>
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<td><strong>U. Boegvad Kejser, The Royal Library, Denmark; A. B. Nielsen, A. Thirifays, The Danish National Archives</strong></td>
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<tr>
<td>1410 – 1430</td>
<td><strong>Economically easy method to digitize oversized documents with special reference to Ola leaf manuscripts in Sri Lanka</strong></td>
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<td><strong>U. P. Cabral, National Library of Sri Lanka</strong></td>
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<tr>
<td>1430 – 1450</td>
<td><strong>Preserving our heritage: An independent advantage</strong></td>
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<td><strong>P. Liebetrau, Consultant, South Africa</strong></td>
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<td>1450 – 1505</td>
<td>Discussion</td>
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#### IS A NEW LEGAL FRAMEWORK REQUIRED FOR DIGITAL PRESERVATION OR WILL POLICY DO?

**Junior C/D**

**Session Chair:** Stuart Hamilton, International Federation of Library Associations and Institutions

The session will begin discussing the possible routes for developing legislation supporting digital preservation with examples from Canada and the United States. It will then show how Mexico and the United States have addressed issues related to the preservation of digital records/archives through both law and policy, in addition to a variety of “sensemaking” techniques. The session will be concluded with reflections on the ability of archival legislation to address digital archives’ requirements.

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<tr>
<td>1330 – 1350</td>
<td><strong>Building a legal framework to facilitate long-term preservation of digital heritage</strong></td>
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<td><strong>A. Sheppard, University of British Columbia, Canada</strong></td>
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<td>1350 – 1410</td>
<td><strong>Development of policies and requirements for ingesting and preserving digital records into a preservation system: Where to start</strong></td>
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<td><strong>A. Barnard, Consultant, Mexico</strong></td>
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<td>1410 – 1430</td>
<td><strong>Where light in darkness lies: Preservation, access and sensemaking strategies for the modern digital archive</strong></td>
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<td><strong>J. R. Baron, National Archives and Records Administration, United States; S. Attfield, Middlesex University, United Kingdom</strong></td>
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<tr>
<td>1430 – 1450</td>
<td><strong>Strengthening the regulatory framework in a digital environment: A review of archives legislation</strong></td>
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<td><strong>E. Goh, University of British Columbia, Canada</strong></td>
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<td>1450 – 1505</td>
<td>Discussion</td>
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### Session Chair: Giovanni Michetti, University of British Columbia, Canada

The session will present digital curation as devoted to ensuring digital continuity that cuts across the established memory institutions of museums, libraries and archives, while introducing new players such as IT professionals, electronic records managers, data librarians and Internet content managers. It will then discuss team building philosophy through the five stages of digital curation: acknowledge, act, consolidate, institutionalize, and externalize. Team building will be illustrated with case studies from l'Université du Québec en Outaouais (UQO) and Simmons College in New England.

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<tr>
<td>1330 – 1350</td>
<td>Digital curation: The challenge driving convergence across memory institutions</td>
<td>S. Higgins, Aberystwyth University, United Kingdom</td>
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<tr>
<td>1350 – 1410</td>
<td>Digital curation: Building an environment for success</td>
<td>J. Esposito, Penn State University, United States</td>
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<tr>
<td>1410 – 1430</td>
<td>Institutional celebrations: Catalytic events conducive to implementing digital preservation project meeting diverging stakeholder interests</td>
<td>P. Forget, Université du Québec en Outaouais, Canada</td>
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<tr>
<td>1430 – 1450</td>
<td>The convergence of cultural heritage: Practical experiments and lessons learned</td>
<td>J. Bastian, R. Harvey, Simmons College, United States</td>
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<td>1450 – 1505</td>
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### Session Chair: Joie Springer, UNESCO Memory of the World Programme

This session will discuss issues faced by the several parts of the world with respect to the use of digitization as a means of preservation and conservation, not only in relation to technological requirements for the type of documentary heritage they have, but also in terms of infrastructure, personnel, and financial resources, in addition to the issues shared with all countries. The presentations will discuss experiences in the Caribbean, East Africa, and the Pacific Islands.

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<tr>
<td>1330 – 1350</td>
<td>The preservation and conservation of heritage in the Caribbean: What challenges does digitization pose?</td>
<td>E. Watson, University of the West Indies, Barbados</td>
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<tr>
<td>1350 – 1410</td>
<td>Safeguarding the digital demographic heritage of Mali and the Democratic Republic of Congo</td>
<td>R. Marcoux, L. Richard, M. K. Konaté, Observatoire démographique et statistique de l’espace francophone, Laval University, Canada</td>
</tr>
<tr>
<td>1410 – 1430</td>
<td>Partnership in paradise: The importance of collaboration for handling traditional cultural expression material in the Pacific Islands</td>
<td>B. Oswald, Island Culture Archival Support, United States</td>
</tr>
<tr>
<td>1430 – 1450</td>
<td>Digital preservation and indigenous cultural heritage: The Mukurtu CMS Platform</td>
<td>K. Christen, Washington State University, United States; J. Anderson, University of Massachusetts, United States; M. Ashley, University of California at Berkeley, United States</td>
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<tr>
<td>1450 – 1505</td>
<td>Discussion</td>
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**WORKSHOP #4 ARCOMEM – ARCHIVE COMMUNITY MEMories**

**Leaders:** W. Runde, C. Cabulea, Deutsche Welle, Germany

This interactive session will show the particular angle of a multilingual media company (here: Deutsche Welle, Germany’s International Public Broadcaster, offering multimedia content in 30 languages) with regards to the new challenges and opportunities for digital media archives in times of pervasive Social Media. This will incorporate highly visual examples of data journalism based on archived Social Media content as a new source for news gathering, journalistic analysis and publishing.

1505 – 1530 Break and exhibits/posters

Pavilion Ballroom

**1530 – 1645 Concurrent Sessions**

**A ENSURING THAT IT WON’T HAPPEN AGAIN**

Session Chair: Jason R. Baron, United States National Archives and Records Administration

This session will explore losses of memory through three examples of debasement of financial memory systems along the supply chain for the now infamous private label residential mortgage-backed securities; the 2007 controversy surrounding the e-mail transmission and retention practices of the George W. Bush Jr. White House, focusing on the inadequacy of current safeguards in the United States to protect and preserve digital heritage artifacts generated by powerful administrative bodies. It will conclude with a series of recommendations which may serve to inform the development of future decision-making regarding the digital heritage of higher governmental bodies.

1530 – 1550 Financial records and their discontents: Safeguarding the records of our financial systems

V. Lemieux, University of British Columbia, Canada

1550 – 1610 Preserving e-mail: An American case study

M. Groover, University of British Columbia, Canada

1610 – 1630 The perfect archival storm: The transfer of electronic records from the G. W. Bush White House to the National Archives of the United States

K. Thibodeau, National Institute of Standards and Technology, United States

1630 – 1645 Discussion

**B TRUSTING RECORDS**

Session Chair: Martin Berendse, International Council on Archives

This session will discuss questions of legal, ethical, and cultural ownership and privacy across individuals and groups in relation to the medical environment and questions of authenticity of digitized records concerning legal records or records used as evidence; and the way in which the Alliance for Permanent Access (APA), through the APARSEN network of excellence, has brought together silos of research into authenticity, audit, reputation and quality, and integrated them under the heading of Trust.

1530 – 1550 The ethical and legal issues of historical mental health records as cultural heritage

L. Dong, The University of Texas at Austin, United States

1550 – 1610 From paper original to digital copy: Authenticity as a legal and organizational challenge

M. Demoulin, University of Namur; S. Soyez, State Archives, Belgium

1610 – 1630 Evidence based common vision and e-infrastructure for digital preservation

D. Giaretta, Alliance for Permanent Access

1630 – 1645 Discussion
WEB ARCHIVING AS PART OF BUILDING THE DOCUMENTARY HERITAGE OF OUR TIME

Session Chair: Jian Wang, Remnin University of China

The session will explore webarchiving through a presentation of two large Chinese Web archiving projects based on a crawling approach: the Web InfoMall in Peking University and the WICP (Web Information Collection and Preservation) in the National Library of China. Discussion will next focus on the construction of a network-interoperable digital repository of open access for the filing, preservation and distribution of documentary material in the Patagonia region, for use within the academic environment (including secondary and tertiary levels) and by the community. The final paper will present some experiments with emulation and migration technologies on INA’s web archive which spans 16 years and contains over 15 billion objects.

1530 – 1550  Chinese web archiving and statistical analysis on Chinese web archives
H. Liu, Remnin University, China

1550 – 1610  Implications of the web semantization on the development of digital heritage
G. Navarro, Universidad Nacional de la Patagonia Austral, Argentina

1610 – 1630  Preserving the web archive for future generations – Practical experiments with emulation and migration technologies
M. Holden, National Audiovisual Institute, France

1630 – 1645  Discussion

TECHNOLOGY AS THE MEDIATOR OF HERITAGE AND ITS RELATIONS WITH PEOPLE

Session Chair: Corinne Rogers, The University of British Columbia

The session will start with a pragmatic approach to preservation, restoration and presentation of artifacts of information technology developed by the Living Computer Museum in Seattle, Washington. It will then discuss the digital phenomenon as a manifestation of humanity's intimate relationship with advancing technology driving social and cultural change and how memory institutions may assist and enable the sustainability and reusability of personal archives for everyone. Finally, the “hybrid” perspective will be discussed where the interaction of individuals with technology is observed and the person and the information artifact are regarded as one unit.

1530 – 1550  The turtle at the bottom: Reflections on access and preservation for information artifacts
I. King, The University of Washington, United States

1550 – 1610  Personal informatics: Digital archives for everyone and possible implications for cultural heritage
J. L. John, The British Library, United Kingdom

1610 – 1630  Challenges to capture the hybrid heritage: When activities take place in both digital and non-digital environments
E. Borglund, Mid-Sweden University

1630 – 1645  Discussion

LIMITED RESOURCES OR EXPERTISE: CASE STUDIES IN ADDRESSING THE ISSUE

Session Chair: Anne Thurston, International Records Management Trust

This session will look at different scenarios where the scarcity in resources and expertise has been addressed to the benefit of preservation. It will begin describing the strategies used in Burundi for court records in the absence of adequate technological, human and financial resources and legal support. Then it will show the difficulties involved in preserving in a secure and authentic way the museum identification cards database in Kuwait, and how these are being addressed. The session will close by describing the work conducted by The Hill Museum & Manuscript Library in Minnesota with local communities to preserve their endangered manuscript heritage.
Thursday 27 September 2012 continued

1530 – 1550  
► Preserving the collective memory in Burundi in the digital era:  
The Supreme Court case study  (SI)  
J. B. Ntungirimana, Court of Auditors of Burundi

1550 – 1610  
► Kuwait National Museum’s digital database  
F. Al-Sabah, Kuwait National Museum

1610 – 1630  
► The challenges of manuscript preservation in the digital age  
W. Torborg, T. Vann, Saint John’s University, United States

1630 – 1645  
Discussion

SHOWCASE #5  DEALING WITH RADIOACTIVE WASTE OVER THE GENERATIONS – PRESERVING DIGITAL RECORDS AND MORE  Junior A/B
1530 – 1645  
Leader: C. Pescatore, Organization for Economic Cooperation and Development, Nuclear Energy Agency  
The “RK&M” project of the OECD Nuclear Energy Agency represents one category of digital records users: those with a stake in preserving records, knowledge and memory of the management of long-lived radioactive waste – e.g. nuclear materials that remain toxic for tens of thousands of years. Different problems in RK&M preservation arise over different time scales, and the reference approach is to assume both a continuous chain of intergenerational sharing of responsibilities and that archives and even social organization may be lost over this period. Findings from RK&M studies (taxonomy of memory loss; supranational mechanisms to preserve RK&M; minimum set of records; monuments; heritage and artefacts; etc.) and our multidisciplinary workshops will be shared and discussed.

1645  
End of sessions for the day

1730 – 2200  
DINNER  
Museum of Anthropology, University of British Columbia

Join your colleagues for dinner and tours at the world-renowned Museum of Anthropology on the University of British Columbia Campus. A buffet-style dinner will be served in an outdoor tent overlooking the Pacific Ocean; after dinner you may visit the exhibits on your own or join a guided tour.

Dress is ‘Business Casual’. Comfortable shoes and a sweater/jacket are recommended.

Return transportation from the Sheraton Wall Centre is provided. Meet in the North Tower lobby.  
Bus to Museum: 1730  
Bus back to hotel begins at: 2130

Day 3: Friday 28 September 2012

0900 – 1000  
PLENARY 3 (SI)  
Grand Ballroom

0900 – 0930  
► Whose memory and memories? Culture, science and politics in the digital age  
Chair: Sean Thorpe, University of Technology, Jamaica  
Rüdiger Klein, Royal Netherlands Academy of Arts and Sciences

Questions of authority, authenticity and access are key issues as the future of knowledge is being reshaped by the tools and practices of the digital revolution. Culturally and politically a recalibration may be required. From the vantage point of actors involved in policy advice in the areas of culture and science, the paper highlights some of the imminent intellectual and institutional challenges (but also opportunities), reflecting on impressions from this conference and on the "next steps" in the background documents, and arguing for a global debate on the educational and investment needs that arise from the momentous changes we witness.

0930 – 1000  
► Challenges for the preservation of audiovisual documents  
Chair: Yvette Hackett, Canadian Heritage Information Network  
Dietrich Schüller, Phonogrammarchiv, Austrian Academy of Sciences
Generally, audiovisual data carriers are less stable than traditional text documents, and this has already led to deplorable losses, specifically of the early film heritage. But also modern carriers, specifically magnetic tapes, are prone to deterioration. The other threat is the fading of replay equipment, as technical development of audio and video has led to ever shorter life cycles of dedicated formats, leaving even well-preserved carriers as useless orphans. The paper explains the technical framework of digitization and digital long-term preservation, analyses the specificities of the various creative sectors of audiovisual documents, surveys the global situation with a special view on developing countries, and summarizes the strategic challenges to preserve these documents in the long term.

1000 – 1030 Break Pavilion Ballroom

1030 – 1225 Concurrent Sessions

A

INTERNATIONAL PERSPECTIVES AND COOPERATION

Session Chair: Pauline Dugré, Canadian Commission for UNESCO

This session will describe the action of international organizations and how they contribute to ensuring digital preservation on a global scale. Presentations will feature the work of international organizations such as IEDRO, FAO, UNESCO, OIF, ICA, and ISSN/PEPRS.

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<th>Presentation</th>
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<tr>
<td>1030 – 1045</td>
<td><strong>Climate services: A global community of collaboration</strong> C. M. Skarlupka, International Environmental Data Rescue Organization</td>
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<tr>
<td>1045 – 1100</td>
<td><strong>One year of efforts for digital preservation at Food and Agriculture Organization</strong> C. Nicolai, R. Oriente, F. Serván, Food and Agricultural Organization, United Nations</td>
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<tr>
<td>1100 – 1115</td>
<td><strong>Preservation of digital information in the information society: Problems and prospects.</strong> The outcomes of the Moscow Conference E. Kuzmin, UNESCO Information for All Programme</td>
</tr>
<tr>
<td>1110 – 1130</td>
<td><strong>Developing international cooperation between francophone heritage institutions:</strong> The action of the International Organisation of La Francophonie C. Ambaud, Francophonie numérique de l’Organisation internationale de la Francophonie</td>
</tr>
<tr>
<td>1130 – 1145</td>
<td><strong>Open Heritage: Developing and protecting the accessibility of information in a global market under pressure</strong> M. Berendse, National Archives of the Netherlands, International Council on Archives</td>
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<tr>
<td>1145 – 1200</td>
<td><strong>Archiving the world’s e-journals: The Keepers Registry as global monitor</strong> P. Burnhill, F. Pelle, P. Godefroy, F. Guy, M. Macgregor, A. Rusbridge, ISSN/PEPRS / The Keepers</td>
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<tr>
<td>1200 – 1225</td>
<td>Discussion</td>
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B

THE WORLD AUDIOVISUAL MEMORY: PRACTICAL CHALLENGES, THEORETICAL SOLUTIONS?

Session Chair: Mike Casey, Indiana University, United States

This session will start with a description of the situation of Film Archives in the context of the disappearance of film as the main production and distribution medium of the 20th Century and its replacement by digital means, and will continue with case studies where both practice and theory are factors in play. A presentation of the Coordinating Council of Audiovisual Archives Associations support for digitization of audiovisual collections, focusing on developing nations and communities around the world, via its “Archives@Risk” programme will be followed by a discussion of the digitization of the audio-visual patrimony of the Istituto Luce, based on an agreement with Google. Moving to born digital material, the session will then present the preservation of broadcast video by the School of Journalism at the University of British Columbia. The session will conclude presenting measures taken in Australia to prevent and recover a digital collection from a range of disasters.
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<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>1030</td>
<td>Treasures that sleep: Film archives in the digital era</td>
<td>J. Gagnon, Cinémathèque québécoise, Canada</td>
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<tr>
<td>1050</td>
<td>Seeing, hearing and moving heritage: Issues and implications for the world’s audiovisual memory digital age</td>
<td>C. Frick, Coordinating Council of Audiovisual Archives Associations</td>
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<td>1110</td>
<td>The digitization of films and photos of the Istituto Luce</td>
<td>E. Ceccuti, Archivio Storico Istituto Luce, Italy</td>
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<td>1130</td>
<td>Challenges and triumphs: Preserving HD video at the UBC School of Journalism</td>
<td>A. Jansen, University of British Columbia, Canada</td>
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<td>1150</td>
<td>Digital disaster recovery for audiovisual collections – The theory, the practice</td>
<td>R. Butler, M. Newnham, National Film and Sound Archives of Australia</td>
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<td>1210</td>
<td>Discussion</td>
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**Session Chair:** Peter van Garderen, Artefactual & Archivematica, Canada

The session will begin with a taxonomy of metadata and documentation required for the long-term preservation of digital records. This work is based on the modeling and metadata work from the InterPARES research projects and from current theory on documenting decisions made by the creator and the preserver. It will then present a system that permits the automatic extraction of metadata located in different applications and organization systems, the integration of that metadata with technical documentation from individual digital files, and the encoding of the integrated metadata as modified Dublin Core in an XML document associated with each individual file. This will be followed by a case-study of the Vatican Library and the conversion of the digitized images of its manuscript collection to the Flexible Image Transport System (FITS) format. The session will conclude with an analysis of the problem of autonomic management of “access copies” and an abstract approach enabling the delegation of the preservation processes that can be applied automatically to the access copies.

**METADATA AND FORMATS FOR DIGITIZATION AND DIGITAL PRESERVATION**

**Session Chair:** Peter van Garderen, Artefactual & Archivematica, Canada

The session will present media bias as well as the biases embedded in mark-up languages and digital representations of archival materials, thereby anticipating the socio-cultural challenges resulting from digital access. It will then discuss solutions through business-oriented descriptive systems at the Centre for Digital Information Management (CEDIF) at Mid Sweden University, policy and strategic development in the South African experience, and tools that facilitate the aggregation, management, and control of dispersed records sharing a common provenance.

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<tr>
<td>1030</td>
<td>Metadata and formats for digitization and digital preservation</td>
<td>J. Tennis, The University of Washington, United States</td>
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<td>1050</td>
<td>Ensuring a future for the past: Long-term preservation strategies for digital archaeological data</td>
<td>A. Rabinowitz, M. Esteva, J. Trelogan, The University of Texas at Austin, United States</td>
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<tr>
<td>1110</td>
<td>It FITS the Cultural Heritage! Formats for preservation: From spatial data to cultural resources</td>
<td>P. Manoni, Vatican Library, Vatican State; G. Michetti, The University of British Columbia, Canada</td>
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<td>1130</td>
<td>Working with file formats</td>
<td>L. Enns, G. Badesha, City of Surrey, Canada</td>
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<td>1150</td>
<td>Autonomic preservation of “access copies” of digital contents</td>
<td>W. Allasia, EURIX srl. Digital Media Technology, Italy; F. Falchi, C. Meghini, National Research Council, Italy</td>
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<td>1210</td>
<td>Discussion</td>
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**A METHODOLOGICAL FRAMEWORK TO ENSURE PRESERVATION**

**Session Chair:** Fiorella Foscarini, University of Toronto, Canada

The session will present media bias as well as the biases embedded in mark-up languages and digital representations of archival materials, thereby anticipating the socio-cultural challenges resulting from digital access. It will then discuss solutions through business-oriented descriptive systems at the Centre for Digital Information Management (CEDIF) at Mid Sweden University, policy and strategic development in the South African experience, and tools that facilitate the aggregation, management, and control of dispersed records sharing a common provenance.
Bias and balance in the preservation of digital heritage
A. Prodan, Cottbus University, Germany

Archives are not trees: Hierarchical representations in digital environment
G. Michetti, University of British Columbia, Canada

The archivist and the architect: Better digital information management by working together?
G. Samuelsson, Mid-Sweden University

ECM applications and digital preservation – Suggested policy bridge
S. Katuu, International Monetary Fund

Facilitating the aggregation of dispersed personal archives: A proposed functional technical and business model
C. Prom, University of Illinois, United States

Constructing and evaluating digital evidence for processes
C. Rudolph, N. Kuntze, Fraunhofer Institute for Secure Information Technology, Darmstadt, Germany

Forensic barriers: Legal implications of storing information in the Cloud
A. Alva, B. Endicott-Popovsky, S. David, University of Washington, United States

Models in collaborative and distributed digital investigation with ubiquitous computing and communication systems
D. Keeling, M. Lemon, M. Losavio, University of Louisville, United States

Cloud computing implications to digital forensics: A new methodology proposal
F. Marturana, University of Tor Vergata, Roma; S. Tacconi, Ministry of the Interior, Italy

Memory forensics: Extract file handles
A. Hay, G. Peterson, Air Force Institute of Technology, United States

Leaders: E. Shaffer, C. Rogers, D. Force, E. Goh, University of British Columbia

This session will introduce the digital preservation education modules developed in partnership by the InterPARES Project of the University of British Columbia and the International Council on Archives. It will highlight the scope and content of each module, elaborate on the network of Modules as they relate to issues in the management and preservation of digital records, and present the ICA Terminology Database, also developed at the University of British Columbia, which supports the education modules.
1340 – 1515 Concurrent Sessions

A  INSTITUTIONAL AND INTER-ORGANIZATIONAL INITIATIVES IN DIGITIZATION  Parksville

Session Chair: Allan Bell, University of British Columbia, Canada

This session will describe the challenges encountered by large institutions in carrying out digital preservation initiatives, will evaluate digitization standards and the technical difficulty of implementing them, and discuss how, not only the participation in networks of excellence like LIBER, but also inter-agency cooperation within the same country, can help to meet such challenges. However, when it comes to records, the issue of maintaining authenticity of large volume of materials through identity and integrity metadata remains overwhelming.

1340 – 1400  ▶  Digitization of documentary heritage collections in Indic language:
       Comparative study of five major digital library initiatives in India
       A. Das, J. Nehru University, India

1400 – 1420  ▶  Digital heritage preservation – Economic realities and options
       L. Weir, University of Ottawa, Canadiana

1420 – 1440  ▶  Positioning libraries in the digital preservation landscape
       S. Reilly, LIBER, the European Association of Research Libraries

1440 – 1500  ▶  Experiences from Digidaily – Inter-agency mass digitization of newspapers in Sweden

B  PRESERVING IMAGES: WHAT DO WE NEED TO KNOW? (SI)  Grand Ballroom

Session Chair: Sharon Alexander Gooding, University of the West Indies, Barbados

The session will illustrate the strategies used to ensure the preservation of analogue audiovisual archives in Senegal; the methodology for digitizing historical negatives; the requirements for the preservation of born digital images, and the knowledge issues that may hamper the preservation of both digitized and born digital materials.

1340 – 1400  ▶  Paths of memory: Audiovisual archives and identity in an African international organization
       A. Pam, Central Bank of the States of West Africa, Senegal

1400 – 1420  ▶  Digitization as a preservation strategy: Saving and sharing the American Geographical Society Library’s historic nitrate negative images
       K. Matusiak, University of Denver, United States; T. Johnston, University of Wisconsin-Milwaukee Libraries, United States

1420 – 1440  ▶  Born digital images: Creation to preservation
       J. Bushey, University of British Columbia, Canada

1440 – 1500  ▶  Essential skills for digital preservation:
       Addressing the training needs of staff in small heritage institutions
       A. Altobellis, Northeast Document Conservation Center, United States

1500 – 1515 Discussion

C  SMALL AND LARGE SCALE DIGITIZATION: TOWARDS A SHARED CONCEPTUAL MODEL  Junior C/D

Session Chair: Saeed Rezaei Sharifabadi, Alzahra University, Iran

The session will begin with a series of case studies on economic, professional and cultural factors affecting projects designed to advance digitization, online access, and digital preservation of small-scale collections. It will then present
large scale initiatives in the Netherlands and the United States (University of Michigan). The session will be concluded by the presentation of a conceptual model of the digitization process, based on a multimodal view on documents and their potential as providers of information, and a discussion of its potential usefulness in the analysis of the informative capacity of the digital representation, and for establishing trustworthy digitization processes.

### 1340 – 1400

- **Building sustainable digital cultural heritage collections:**
  Towards best practices for micro-level digital projects
  P. Botticelli, A. Clark, P. Montiel-Overall, University of Arizona, United States; R. Prouty, Arizona Library, Archives and Public Records, United States

### 1400 – 1420

- **Lessons learned from large scale digital preservation projects in the Netherlands**
  V. Wintermans, M. de Niet, Netherlands National Commission for UNESCO

### 1420 – 1440

- **Validating quality in large-scale digitization: Findings from research on image error**
  P. Conway, University of Michigan, United States

### 1440 – 1500

- **Lost in transit: The informative capacity of digital reproductions**
  L. Björk, National Library of Sweden

### 1500 – 1515

Discussion

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### PRESERVATION OF AUDIOVISUAL MATERIAL

**Port McNeill**

**Session Chair:** Dietrich Schüller, Phonogrammarchiv, Austrian Academy of Sciences, Austria

This session will begin with a survey of the efforts and publications of organizations such as the Audio Engineering Society (AES), the European Broadcast Union (EBU), the Society of Motion Picture & Television Engineers (SMPTE), the International Association of Sound and Audiovisual Archives (IASA) and their strategic consequences upon audiovisual preservation. Then it will explore freely available software tools developed by Indiana University that are used within its media preservation system; explore the basics of how video compression works and why, by its very nature, it is always inappropriate to create compressed video for preservation and will be concluded by a case study of preservation of sound and audiovisual collections in Latin America, specifically in Mexico.

### 1340 – 1400

- **Meeting the challenge of digital audiovisual preservation**
  B. Gordon, Harvard University, United States

### 1400 – 1420

- **Preservation planning for media collections: The Indiana University Media Preservation Initiative**
  M. Casey, Indiana University, United States

### 1420 – 1440

- **Video compression ... for dummies?**
  G. Blood, Consultant, United States

### 1440 – 1500

- **Ibero-American preservation platform for the of sound and audiovisual heritage**
  P. Pellizzari, Fonoteca Nazionale Svizzer, A. Hegewisch, Fonoteca Nacional de Mexico

### 1500 – 1515

Discussion

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### TRUSTING DATA AND DOCUMENTS ONLINE

**Port Alberni**

**Session Chair:** Yong Guan, Systematic Approaches to Digital Forensic Engineering, United States

Looking at the pervasive use of mobile technology and online storage, this session will show how critical electronic documents are often found in a phone web browsing history in the form of received emails, sites visited, attempted Internet searches and etc.; it will look at new forensic frameworks for assessing them; and will describe monitoring tools capable of establishing the performance reliability and security of service providers.

### 1340 – 1400

- **Investigating and analyzing the web-based contents on Chinese Shanzhai mobile phones**
  J. Fang, Z. L. Jiang, S. M. Yiu, L. Hui, K. P. Chow, N. He, University of Hong Kong
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<td>1400 – 1420</td>
<td><strong>Refining the framework of digital forensics</strong>&lt;br&gt;J. Huang, Y. Chen, K. Choo, X. Fu, UMass Lowell; Z. Ling, South East University, Nanjing, China</td>
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<tr>
<td>1420 – 1440</td>
<td><strong>Implementing digital forensic readiness for Cloud computing using performance monitoring tools</strong>&lt;br&gt;F.R. Van Staden, H. S. Venter, University of Pretoria, South Africa</td>
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<td>1440 – 1500</td>
<td><strong>Security monitoring for wireless network forensics (SMoWF)</strong>&lt;br&gt;Y. Cai, P. Ji, City University of New York, United States</td>
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<td>1500 – 1515</td>
<td>Discussion</td>
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**Showcase #6**<br>**THE INDIAN CENTRE OF EXCELLENCE IN DIGITAL PRESERVATION & InterPARES**<br>Pavilion D

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<tr>
<td>1340 – 1515</td>
<td><em>Leaders: D. Katre, Centre for Development of Advanced Computing, India; L. Duranti, S. Xie, University of British Columbia, Canada</em>&lt;br&gt;This session will present and discuss in an interactive mode the national vision for India’s digital preservation initiative; the steps taken for formulating the national digital preservation programme; the pilot digital repositories being developed in domains like government, culture, e-records; the tools, preservation strategies and standards being developed in Indian context; and how this resulted from an adaptation of the InterPARES findings, recommendations and guidelines for the Indian e-government system.</td>
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<td>Collence Chisita, Amos Bishi</td>
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<td>Na Cai, Laye Yao, Liu Liu</td>
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<td>Carole Payen</td>
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<td>Claudia M. Wanderley</td>
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<td>Anne Thurston</td>
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<td>Jan Marontate, David Murphy, Megan Robertson, Nathan Clarkson, Maggie Chao</td>
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