#ETD2021: Open Scholarship in a Post-Pandemic World
24th International Symposium on ETDs
Nov. 15-18; United Arab Emirates University, VIRTUAL

“Welcome Note and Opening Presentation”

Edward A. Fox, Ph.D., Professor
• fox@vt.edu http://fox.cs.vt.edu
• Dept of Computer Science (& ECE by courtesy)
• Virginia Tech, Blacksburg, VA 24061 USA
• NDLTD: Exec. Director, Chairman of the Board
Outline

• Acknowledgments

• NDLTD

• Opportunities
  – Content, Collection
  – Information Life Cycle, Quality
  – Services
  – Research
Acknowledgments

- Family, mentors, teachers, colleagues, students
- All those working with ETDs
- NDLTD (ndltd.org=theses.org=dissertations.org) Networked Digital Library of Theses and Dissertations
  - Members, Board, Committees,
  - Working Groups, Task Forces
- ETD 2021 Conference Team
- Presenters, Attendees, Sponsors
- UAEU team
Acknowledgements (2): Mtgs

- 1987 mtg in Ann Arbor: UMI, VT, Arbortext, Softquad
- 1992 mtg in Washington: CNI, CGS, UMI, VT + 10U’s
- 1993 mtg in Atlanta: Monticello Electronic Library
- 1994 mtg at VT: stds: PDF + SGML + multimedia
- 1996 mtg with funding by SURA and then also by the US Dept. of Education (FIPSE)
- 1997 meetings in UK, Germany, ...
- 1998 – 1st symposium – Memphis (20)
- 1999 – 2nd symposium – Blacksburg (70)
- 2000 – 3rd symposium – St. Petersburg, FL (225)
- 2001 – 4th symposium – Caltech, Pasadena (200)
- 2002 – 5th symposium – BYU, Provo, Utah
- 2003 – 6th symposium – Berlin (NDLTD inc. as int’l non-profit)
- 2004 – 7th symposium – U. Kentucky, USA
- 2005 – 8th symposium – Sydney, Australia
Acknowledgements (3): Mtgs

- 2006 – 9th symposium – Quebec City, Canada
- 2007 – 10th symposium – Uppsala, Sweden
- 2008 – 11th symposium – Aberdeen, Scotland
- 2009 – 12th symposium – Pittsburgh, PA, USA
- 2010 – 13th symposium – Austin, TX, USA
- 2011 – 14th symposium – Cape Town, S. Africa
- 2012 – 15th symposium – Lima, Peru
- 2013 – 16th symposium – Hong Kong
- 2014 – 17th symposium – Leicester, England
- 2015 – 18th symposium – New Delhi, India
- 2016 – 19th symposium – Lille, France
- 2018 – 21st symposium – Taipei, Taiwan
- 2019– 22nd symposium – Porto, Portugal
- 2020– 23rd symposium – United Arab Emirates
The Networked Digital Library of Theses and Dissertations

www.NDLTD.org

Advocate:
Training Authors
Expanding Access
Preserving Knowledge
Improving Graduate Education
Enhancing Scholarly Communication
Empowering Students & Universities

Leader of the Worldwide ETD (Electronic Thesis and Dissertation) Initiative
ND LTD: www.ndltd.org

• N D Ltd or Noodle TD
• Vision: Every thesis and dissertation in the world is:
  – Devised to take advantage of the most helpful electronic publishing methods
  – Shared globally and easily found
  – Supported by a suite of digital library services to aid authors, researchers, learners, universities
  – Preserved and migrated permanently
NDLTD: Mission

The Networked Digital Library of Theses and Dissertations (NDLTD) is an international organization dedicated to promoting the adoption, creation, use, dissemination, and preservation of electronic theses and dissertations (ETDs). We support electronic publishing and open access to scholarship in order to enhance the sharing of knowledge worldwide. Our website includes resources for university administrators, librarians, faculty, students, and the general public. Topics include how to find, create, and preserve ETDs; how to set up an ETD program; legal and technical questions; and the latest news and research in the ETD community.
Journal: J-ETD.org, j-etd@ndltd.org
Journal of Electronic Theses and Dissertations

• Open-access. Please support!

• Managing Editor: Charles J. Greenberg

• Executive Editor: Edward A. Fox; Associate Editors: Suzanne Lorraine (Suzie) Allard (USA), Ramesh C. Gaur (India), Charles J. Greenberg (USA), Libio Huaroto (Peru), William A. Ingram (USA), Ana Sofia de Sousa Machado Mota (Portugal), Prashant Pandey (Australia), Ana Pavani (Brazil), Joachim Schöpfel (France), Janette Wright (Australia).
Global ETD Search

Search the 6,186,907 electronic theses and dissertations contained in the NDLTD archive:

Type something to start searching...

advanced search tips ▼   how to contribute records ▶
union.
ndltd.org/
portal/
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Spirit of NDLTD

• Assuage fears -> build confidence -> promote sharing
• Help make a **better** (smaller) world
• **Win-win-win** (everyone can benefit)
• Have **fun** helping others
• Build on **standards**
• **ETDs are preservable, popular, expressive** -> “**better**”

• **Doable**, feasible, learnable, affordable, sharable

• Please support NDLTD!
## NDLTD Board of Directors

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Organization</th>
<th>Country</th>
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<tr>
<td>Allen Arnoldsen</td>
<td>Controller, Harold B. Lee Library</td>
<td>Brigham Young University</td>
<td>USA</td>
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<tr>
<td>Amina Itani</td>
<td>E Resources Expert</td>
<td>UAE University</td>
<td>United Arab Emirates</td>
</tr>
<tr>
<td>Ana Pavani</td>
<td>Associate Professor of Electrical Engineering</td>
<td>Pontifícia Católica Universidade de Portugal</td>
<td>Brazil</td>
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<tr>
<td>Andreas Degkwitz</td>
<td>Chief Librarian</td>
<td>Humboldt University of Berlin</td>
<td>Germany</td>
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<tr>
<td>Austin McLean</td>
<td>Director, Scholarly Communication and Dissertation Publishing</td>
<td>ProQuest LLC</td>
<td>USA</td>
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<tr>
<td>Charles J. Greenberg</td>
<td>Health Sciences Library Director</td>
<td>Rowan University School of Osteopathic Medicine</td>
<td>USA</td>
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<tr>
<td>Edward A. Fox</td>
<td>Professor of Computer Science</td>
<td>Virginia Tech</td>
<td>USA</td>
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<tr>
<td>Eric F. Van de Velde</td>
<td>Independent Consultant and Owner</td>
<td>EVdV Consulting</td>
<td>USA</td>
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<tr>
<td>Gabriela Meijas</td>
<td>Engagement Manager, Global Consortia</td>
<td>ORCID</td>
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<td>Gail McMillan</td>
<td>Director, Scholarly Communication</td>
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<tr>
<td>Hussein Suleman</td>
<td>Associate Professor of Computer Science</td>
<td>University of Cape Town</td>
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<tr>
<td>Iryna Kuchma</td>
<td>Open Access Programme Manager</td>
<td>Electronic Information for Libraries (eIFL)</td>
<td>The Netherlands</td>
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<td>Janette Wright</td>
<td>Dean of Libraries</td>
<td>United Arab Emirates University</td>
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<td>Joachim Schöpfel</td>
<td>Associate professor in information sciences</td>
<td>University of Lille</td>
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<td>Libio Huaroto</td>
<td>Manager Research</td>
<td>Universidad Peruana de Ciencias Aplicadas UPC</td>
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<td>Mariam Al Jaberi</td>
<td>Head of Digital Library Service</td>
<td>UAE University</td>
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<td>Director and Copyright Officer for the Office of Library Services</td>
<td>Charles Darwin University</td>
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<td>Ramesh C. Gaur</td>
<td>Dean and Director (Library &amp; Information)</td>
<td>Indira Gandhi National Centre for Arts (IGNCA) (Ministry of Culture, Government of India)</td>
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<tr>
<td>Sanjaya Mishra</td>
<td>Education Specialist, eLearning</td>
<td>Commonwealth of Learning</td>
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<td>Library Director</td>
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<td>Associate Professor and Associate Director</td>
<td>The University of Tennessee</td>
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<tr>
<td>Teresa M. Green</td>
<td>Graduate Academic and ETD Services Specialist</td>
<td>The University of Toledo</td>
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<tr>
<td>William A. Ingram</td>
<td>Assistant Dean, University Libraries</td>
<td>Virginia Tech</td>
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How You Can Participate

• Be a: Member (individual, institution, consortium)

• Join: NDLTD Committees, Working Groups:
  – Awards (Charles Greenberg)
  – Communications (Iryna Kuchma)
  – Conference (Ramesh Gaur)
  – Finance (Austin McLean)
  – Membership (Joachim Schöpfel)
  – Nominating (Janette Wright)
  – Union Catalog (Ana Pavani)

• Be an: Ambassador (local, national, global)
• Meet people 18 November in Regional Meetings
Invitation:
to extend your involvement in the global ETD community

• You are invited to serve as an ambassador for NDLTD,
  – to connect with those back home,
  – sharing about ETD 2021.

• This week:
  – ask questions,
  – share your thoughts, and
  – help make both ETD2021 and the ETD movement a greater success.
Potential Collection Size

• Fall 2016 U.S. graduate schools: >1.8 million students enrolled in grad certificate, master's, or doctoral programs (https://cgsnet.org/ckfinder/userfiles/files/CGS_GED16_Report_Final.pdf)

• 2018 US degree holders


* Guess: 65 million ETDs could exist, with growth of 1M/year, if world count is at least 3X that of US (https://ourworldindata.org/tertiary-education#share-of-the-population-with-tertiary-education)
OAI - Open Archives Initiative: Technical Umbrella for Practical Interoperability…

...that can be exploited by different communities
The World According to OAI

Service Providers
- Discovery
- Current Awareness
- Preservation

Metadata harvesting

Data Providers

Diagram shows the flow of information from data providers to service providers through metadata harvesting.
Quality and the Information Life Cycle

Creation

Utilization

Distribution

Seeking

Active

Similarity

Accuracy

Completeness

Conformance

Describing

Organizing

Indexing

Archiving

Networking

Preservability

Accessibility

Preservability

Retrieval

Mining

Storing

Archiving

Networking

Discard

Inactive

Significance

Accessibility

Timeliness

Accessing

Filtering

Authoring

Modifying

Seeking

Relevant

Relevance

Seeking

Recommending

Searching

Browsing

Seeking

Preservability

Semi-Active

Inactive

Retrieval

Mining

Storing

Archiving

Networking

Discard
## Supporting Services across the Lifecycle

### Infrastructure Services

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<th>Add Value</th>
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<tr>
<td>Acquiring</td>
<td>Annotating</td>
</tr>
<tr>
<td>Cataloging</td>
<td>→ Classifying</td>
</tr>
<tr>
<td>Crawling (focused)</td>
<td>→ Clustering</td>
</tr>
<tr>
<td>Describing</td>
<td>→ Evaluating</td>
</tr>
<tr>
<td>Digitizing</td>
<td>→ Extracting</td>
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<tr>
<td>Federating</td>
<td>→ Indexing</td>
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<tr>
<td>Harvesting</td>
<td>Measuring</td>
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<td>Purchasing</td>
<td>Publicizing</td>
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<td>Submitting</td>
<td>Rating</td>
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<td>Reviewing (peer)</td>
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<td>Converting</td>
<td>Surveying</td>
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<tr>
<td>Copying/Replicating</td>
<td>Translating</td>
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<tr>
<td>Emulating</td>
<td>(language)</td>
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<td>Renewing</td>
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<td>Translating (format)</td>
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### Information Satisfaction Services

- Browsing
- Collaborating
- Customizing
- Filtering
- Providing access
- Recommending
- Requesting
- Searching
- Visualizing
Related Funded Grants


3. NSF IIS-0086227: Open Archives: Distributed services for physicists and graduate students (OAD): 2001-2004; PD Fox; German DFG PI E. Hilf


5. SOLINET (Southeastern Library Network, USA): Networked Digital Library of Theses and Dissertations: 2000. PD (project director) Fox


Opening Graduate Research
IMLS; 2019-2022; PI: William Ingram

• Early work: 2019-2021
  – Collecting: 500K +
    • English, Arabic Large universities, HBCUs, HSIs
  – Analyzing: parsing references for database
  – Extracting: tables, figures, definitions, references
  – Scanned ETDs -> improved metadata
  – Classification into ProQuest categories
  – Segmenting: chapters

• Goals: Pilot services + Software for universities, regions, nations
http://fox.cs.vt.edu/talks/2021/20211116
FoxETD2021opening.pptx

Questions?
Discussion?
Recommendations?

Chat with an
NDLTD Board or Committee member!

Thank You!

fox@vt.edu
fox@ndltd.org
j-etd@ndltd.org