

NISTIR 6817

**4th Annual NIST
Electronic Book 2001 Conference and Show
“Authors, Applications & Accessibility”**

Conference Proceedings

Edited by:

Victor McCrary
Mary Floyd

Convergent Information Systems Division
Information Technology Laboratory

November 2001



U.S. Department of Commerce
Donald Evans, Secretary

Technology Administration
Phillip Bond, Under Secretary of Commerce for Technology

National Institute of Standards and Technology
Karen Brown Acting, Director

NISTIR 6554, "3rd Annual Electronic Book 2000 Conference and Show 'Changing the Fundamentals of Reading' Proceedings" will be available for purchase from our sister agency, the National Technical Information Service (NTIS), 1-800-553-6847. Use order number PB2000-108035.

The Web address for ordering from NTIS is: <http://www.fedworld.gov/onow/>



Welcome to the NIST Electronic Book 2001 Conference and Show!



Welcome to the Fourth Annual NIST Electronic Book 2001 Conference and Show. The theme for this conference is “Authors, Accessibility, and Applications”, and again we offer a technology buffet from which to choose on the subject of electronic books and their broad applications, both present and future. At this year’s conference, we feature over fifty speakers to discuss how electronic books will change the way we read, publish, distribute, and disseminate information since Guttenberg printed his first book in the 1500s. Sessions of special interest include:

Government Initiatives & New Technologies for E-Books/E-Publishing: Here about the Advanced Technology Program and opportunities to submit proposals to fund your high-risk, enabling technology;

Rights Management for Digital Content: To Pay or Not to Pay: Approaches taken by vendors, and end-users to protect digital content;

E-Publishing: Business Publishing Solutions & Opportunities for the 21st Century: Business models and case studies from the industry’s leading e-publishers;

Libraries and E-Books: Implementation and Policy Challenges: The use of electronic books to transform today’s libraries to disseminate information in the next millennium;

E-Learning: Advance to the Head of the Class: The best application for which electronic books can become a supporting technology platform;

Standards and Interoperability: Setting the Standards & Providing Access to Close the Divide: Focusing the discussion around standards and interoperability which are crucial for market growth and consumer acceptance.

This year’s conference features over exhibitors devoted to electronic books and related technologies and services. Please take time to attend the exhibition and evening reception.

The industry has targeted its efforts to developing a standard for electronic content, as well as, pushing for content interoperability between the many interfaces it takes in the



delivery chain to get digital content securely from content provider to end-user. We will see more activity in the areas of digital rights management, and device interoperability.

We continue to push for standards in the following areas so that consumers can get the content they want, anywhere they want:

- ◆ content packaging & formatting
- ◆ content encapsulation & decapsulation
- ◆ content transfer & delivery
- ◆ content consumption & manifestation
- ◆ content storage

Finally, many thanks to our conference co-sponsor, the National Information Standards Organization, our corporate sponsor Adobe Systems, and the support of the Advanced Technology Program.

Welcome to Washington, D.C. Welcome to Ebook 2001!!!

Victor McCrary,
Conference Organizer
National Institute of Standards & Technology, NIST



ACKNOWLEDGEMENTS

This Conference results from a collaboration of many people over many months. There were many unexpected challenges that tested the teamwork and commitment of all involved.

NIST and NISO extend their thanks to all those who so generously gave their hearts, minds, talent, and time to make **Electronic Book 2001** a success. Special thanks go to:

Karen Brown, NIST's Acting Director, for supporting and encouraging the research efforts on electronic books and facilitating the development of standards for the electronic book industry. Special thanks to Karen for encouraging us to take risks and demonstrate the value we bring to this emerging industry.

Secretary of Commerce Donald Evans, Deputy Secretary Samuel Bodman, Phillip Bond, Under Secretary of Commerce for Technology, and Assistant Secretary for Technology Policy Bruce Mehlman for their support and enthusiasm for NIST and their understanding and dedication to NIST's value to American industry and the American public.

NISO's ebook team: Pat Harris, Jane Thomson, Marilyn Geller, October Ivins, and Jim Lichtenberg for their hard work, great ideas, and partnership. A simple "Thank you" is hardly enough.

Director, William Mehuron and Deputy Director, Susan Zevin of the NIST Information Technology Laboratory for their continuous support of our research and development efforts.

Mary Floyd, Convergent Information Systems Division (CISD) executive assistant extraordinaire, who has kept us on-track and focused.

All the speakers and panelists participating in Electronic Book 2001 who came through during this extraordinary time to tell their ebook story.

Adobe and all of the Ebook exhibitors for their commitment to this conference.

The staff of the NIST Public & Business Affairs Office, in particular Mat Heyman, Phil Bulman, Mike Newman, and Barb Cuddington, for their good work in building public awareness of NIST's role in electronic books.

Pamela Houghtaling for her marketing assistance.

The CISD Conference team: Jennifer Quinn, Kate Holman, Elizabeth Williams, Alyssa Smith, Matthew Handler, David Martin, Jonathan Griffin, Christopher Griffin, Christie Iletto, Barry Newton, and Chris Keithley.

Fred Byers, Ebook 2001 webmaster, for always going the "second mile" and sharing his creative design skills --- Fred you are the best!

The NIST Conference Staff: Patrice Boulanger, and Kim Snouffer for their unflinching assistance, patience, and flexibility in organizing this event.



John Sanderson, Ed Mai, and their staffs for their constant support in developing high quality conference materials – year-after-year!!

Harris Liebergot, of the NIST Advanced Technology Program for his vision and support of our research efforts in electronic books and the dissemination of digital content.

Omid Omidvar, David Hermreck, Barbara Cuthill, and Marc Stanley of the NIST Advanced Technology Program for constant support of our efforts.

The NIST Braille Reader Development Team of John Roberts, Oliver Slattery, Gina Rodgers, Brett Swope, David Kardos, Volker Min, and Edwin Mulkens for their dedication in building a prototype that will make ebooks accessible to all.

John Costello, Sean Ginevan, Nicholas Guttenberg, and Pamela Shepard for developing new and novel software applications for the NIST prototype ebook.

All the members of NIST's Convergent Information Systems Division 895 who have stood behind these efforts, and have been there when it counts!

Gordon Lyon, and Xiao Tang --- the best set of group managers around --- who have supported this effort in addition to their responsibilities.

Steve Potash, Ed Neuman, Allen Renear, Steve Stone, Brenda Crowley, Mark Walters, Sol Rosenberg, Harlan Ellison, Jim Sachs, Richard Curtis, Mike Burrows, Martin Eberhard, Sandy Paul, Mike Miron, Joel Poznansky, Diane Berry, Paul Vassallo, Mitch Freedman, Laura Campbell, and all the members of the ebook industry and librarians who have supported my efforts (and me!) through the years.

Albert Paul, Reginald Galimore, Angela Oddone, Alicia Clay , Chuck and Diane Williams, Jim Garrant, Gabe Hodziewich, Benita Vassallo, Ty Gibson, Dominique Shepherd, Bob Shepard, David King, Willie May, Brian Belanger, Mary-Deirdre Coraggio, Lisa Greenhouse, Gordon Lyon, Xiao Tang, Barbara Silcox, Alvin Williams, Sean McCrary, Jeri McCrary, Mike and Lynn McCrary, Harriet Lora, Helene Wilson, JoAnne and Bill Braime, Grazyna Guttenberg, Wayne Cooper, Vicki Cooper, and Karen Dacres for their friendship, kindness, support, and encouragement “to keep the faith” during the ups and downs.

Finally, to Francesca McCrary and Max McCrary for their love and constant support.



Electronic Book 2001 Conference

November 5-7, 2001

Ronald Reagan Building and International Trade Center
Washington, DC

Corporate Sponsor

Adobe Systems Inc.



****Exhibitors****
(as of 10/26/01)

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The Advanced Technology Program (ATP) bridges the gap between the research lab and the market place, stimulating prosperity through innovation. Through partnerships with the private sector, ATP's early stage investment is accelerating the development of innovative technologies that promise significant commercial payoffs and widespread benefits for the nation. As part of the highly regarded National Institute of Standards and Technology, the ATP is changing the way industry approaches R&D, providing a mechanism for industry to extend its technological reach and push out the envelope of what can be attempted.

Technology research in the private sector is driven by today's global, economic realities. The pace of technological change is faster than ever before, and victory goes to the swift. These realities force companies to make narrower, shorter-term investments in R&D that maximize returns to the company quickly.

The ATP views R&D projects from a broader perspective - its bottom line is how the project can benefit the nation. In sharing the relatively high development risks of technologies that potentially make feasible a broad range of new commercial opportunities, the ATP fosters projects with a high payoff for the nation as a whole - in addition to a direct return to the innovators. The ATP has several critical features that set it apart from other government R&D programs:

- ATP projects focus on the technology needs of American industry, not those of government. Research priorities for the ATP are set by industry, based on their understanding of the marketplace and research opportunities. For-profit companies conceive, propose, co-fund, and execute ATP projects and programs in partnerships with academia, independent research organizations and federal labs.
- The ATP has strict cost-sharing rules. Joint Ventures (two or more companies working together) must pay at least half of the project costs. Large, Fortune-500 companies participating as a single firm must pay at least 60 percent of total project costs. Small and medium-sized companies working on single firm ATP projects must pay a minimum of all indirect costs associated with the project.
- The ATP does not fund product development. Private industry bears the costs of product development, production, marketing, sales and distribution.
- The ATP awards are made strictly on the basis of rigorous peer-reviewed competitions. Selection is based on the innovation, the technical risk, potential economic benefits to the nation and the strength of the commercialization plan of the project.
- The ATP's support does not become a perpetual subsidy or entitlement - each project has goals, specific funding allocations, and completion dates established at the outset. Projects are monitored and can be terminated for cause before completion.

Further information can also be found on the program's web site: www.atp.nist.gov

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The second generation of e-books, soon to be released, will include a color screen, a large amount of memory to store content on and an internal modem. In November 2000, Cytale will be the first European company to offer an electronic book built around these technologies.



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The Open eBook Forum (OeBF) is an international trade and standards organization. Our members consist of hardware and software companies, publishers, authors, users of electronic books, and related organizations whose common goals are to establish specifications and standards for electronic publishing. The Forum's work will foster the development of applications and products that will benefit creators of content, makers of reading systems and, most importantly, consumers.

The guiding values of the OeBF are to strive toward:

- Providing a forum for the discussion of issues and technologies related to electronic books.
- Developing, publishing, and maintaining common specifications relating to electronic books and promoting the successful adoption of these specifications.
- Promoting industry-wide participation of electronic publishing through training sessions, guidelines, and demonstrations of proven technology.
- Identifying, evaluating and recommending standards created by other bodies related to electronic books.
- Encouraging interoperable implementations of electronic book related systems and providing a forum for resolution of interoperability issues.
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ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

Agenda

- 2:00pm-2:30pm **Russ Wilcox**, Vice President and GM, E-Ink
“Electronic Ink Displays for E-Books: Latest Progress, Availability, & Performance”
- 2:30pm-3:00pm **Harold Henke**, IBM Learning Services
“pBook on eBooks: Lessons Learned”
- 3:00pm-3:30pm **Omid Omidvar**, Program Manager,
Advanced Technology Program, Department of Commerce,
National Institute of Standards and Technology
“Accelerating EBook Technologies”
- 3:30pm-4:00pm *Break Service* *Atrium*
- 4:00pm-4:20pm **Anji Kalita Cornette**, Division Director, The Cutting Corporation
“Multimedia E-Book: A Multisensory Experience Anywhere: The New Generation of E-Book for Leisure and Learning”
- 4:20pm-4:40pm **Richard Curtis**, President, ereads.com
David Marlin, President, Metacommet Systems
“Efficient Royalty Management for E-Book Publishers”
- 4:40pm-5:00pm **Ira Goldstein**, Chief Scientist, Hewlett-Packard Company
- 5:00pm – 5:30pm **Thierry Brethes**, CEO, Mobipocket
Winner of the Frankfurt 2001 eBook Technology Award
“Why PDAs are the perfect platform for eBooks”

Monday, November 5, 2001

Afternoon

Ballroom A

Standards and Interoperability:

Setting the Standards & Providing Access to Close the Divide

Moderator: **John Roberts**, Convergent Information Systems Division
National Institute of Standards and Technology

- 2:00pm-2:30pm **Shimon Rosenberg**, Business Development,
Apex e-Publishing Data Services
“Create Once, Use Many”



ELECTRONIC BOOK 2001

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- 2:30pm-3:00pm **George Kerscher**, Senior Officer, Recording for the Blind & Dyslexic
James Pritchett, Project Manager, Digital Audio
“Meeting Everybody’s Needs: Converting Print Textbooks to Electronic and Accessible Forms”
- 3:00pm-3:30pm **James Hendler**, Professor, University of Maryland
Tim Berners-Lee, (co-author) 3Com Founders Chair, Laboratory for Computer Science, MIT
- 3:30pm-4:00pm *Break Service* *Atrium*
- 4:00pm-4:20pm **John Roberts**, Convergent Information Systems Division, National Institute of Standards and Technology
“The NIST Rotating Braille Reader for Electronic Books”
- 4:20pm-4:40pm **Gunter Hille**, CEO, dibi GmbH
“OeB 1.0 - a dead-end street?”
- 4:40pm-5:00pm **David H. Rothman**, Coordinator, TeleRead
“TeleRead: The Case for a Well-Stocked National Digital Library System for All”
- 5:00pm-5:30pm **Alison Lingane**, Senior Project Manager, Bookshare.org
“Books without Barriers”
- 6:00pm-8:00pm *Exhibitors Reception (Sponsored by NISO)* *Atrium*

Tuesday, November 6, 2001

All Day

Amphitheater

E-Learning: Advance to the Head of the Class

Moderator: **Frederick Byers**, Convergent Information Systems Division
National Institute of Standards and Technology

- 9:00am-9:30am **James Alexander**, Director, eBooks, Adobe
“Use and Impact of eBooks within Educational Environments”
- 9:30am-10:00am **Ray Snouffer**, Computer Security Division
National Institute of Standards and Technology
“Distance Learning and NIST’s Security Testing Programs”



ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

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- 10:00am-10:30am **Randall Walker**, Walker Technologies
Stan Walker, Walker Technologies
“Cognitive Text Presentation to Improve Reading & Learning”
- 10:30-11:00am *Break Service* *Atrium*
- 11:00am-11:30am **Lew Gossage**, Senior Vice President & General Manager, XanEdu
- 11:30am-12:00pm **Tom Peters**, Director, Center for Library Initiatives
“Is There an E-Text in this Class?: E-Books in College Classrooms”
- 12:00pm-2:00pm *Lunch on your own*
- 2:00pm-2:30pm **Carlos Bazzarella**, Poliplus Software
“eTextBooks and the added value to learning”
- 2:30pm-3:00pm **Gill Hope**, CEO, Founder, hopeandcare International, Inc.
“The Role of Soft Book Technology in Transforming Healthcare”
- 3:00pm-3:30pm **Eric Roberts**, Research Consultant, Army Distance Learning Laboratory
- 3:30pm-4:00pm *Break Service* *Atrium*
- 4:00pm-4:30pm **Andres Nannetti**, Co-Founder and Chief Executive Officer, Rovia, Inc.
- 4:30pm-5:00pm **David Howell**, Founder & Chairman of the Board, Seattle Book Company
“The Right Book in the Right Place at the Right Time: Using E-Books to Promote a Love of Reading”

Tuesday, November 6, 2001

All Day

Ballroom A

Rights Management for Digital Content

Moderator: **Gordon Lyon**, Convergent Information Systems Division,
National Institute of Standards and Technology

- 9:00am-9:30am **David Sidman**, CEO, Content Directions, Inc.
“U.S. Debut of DOI-EB: Bringing the DOI to Market for the Book Industry”



ELECTRONIC BOOK 2001

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- 9:30am-10:00am **Peter Yianilos**, Chief Technology and Architecture Advisor,
Franklin Electronic Publishers
“Developing DRM for eBookMan and Making it Work”
- 10:00am-10:30am **Steve Potash**, Founder and CEO, OverDrive
President, Open eBook Forum
“The Need for Standards for Digital Rights Management for eBooks”
- 10:30am-11:00am *Break Service* *Atrium*
- 11:00am-11:30am **Leo Dwyer**, COO, RosettaBooks.com
“Digital Rights Management: Means Something Different to Everyone”
- 11:30am-12:00pm **Scott Edwards**, Vice President,
The Software & Information Industry Association
- 12:00pm-2:00pm *Lunch on your own*
- 2:00pm-2:30pm **Howard Singer**, Senior Vice President, Marketing & Product Strategy,
Reciprocal
“The Ten Commandments of Digital Rights Management”
- 2:30pm-3:00pm **Warren Adler**, Author
- 3:00pm-3:30pm **Mike Miron**, Co-chairman of the Board of Directors & CEO,
Content Guard
“XrML: The Language for Digital Rights Management™”
- 3:30pm-4:00pm *Break Service* *Atrium*
- 4:00pm-4:30pm **Kevin Weatherly**, Sales Executive, SealedMedia
*“Driving Internet Publishing Revenues with Digital Rights
Management Technology”*
- 4:30pm-5:00pm **Peter Taarnhøj**, AudioText A/S Copenhagen

Wednesday, November 7, 2001

Librarians Day

Ballroom A

Libraries and E-Books: Implementation and Policy Challenges

Moderator: **Mary Case**, Association of Research Librarians



ELECTRONIC BOOK 2001

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- 9:30am – 9:45am Overview and Introductions
- 9:45am-10:15am **James Billington**, Librarian of Congress
- 10:15am-10:45am **Alan Adler**, Vice President, Public Affairs, Association of American Publishers (AAP)
- 10:45am–11:15am Librarian Panel: discussion of the Issues
Chris Rippel, Central Kansas Library System
“What is the purpose of ebooks in libraries?”
Andrew Pace, North Carolina State University
Betty Day, University of Maryland
- 11:45am-12:00pm Morning Wrap Up and Q&A
- 12:00pm –2:00pm *Lunch*
- 2:00pm-2:30pm TBA
- 2:30pm-3:00pm **Clifford Lynch**, Executive Director, Coalition for Networked Information

Wednesday, November 7, 2001

All Day

Amphitheater

E-Publishing: Business Publishing Solutions & Opportunities for the 21st Century

Moderator: **Sol Rosenberg**, President, Dynamic Digital Content

- 9:15am- 9:45am **Sol Rosenberg**, President, Dynamic Digital Content
- 9:45am-10:15am **Martin Hensel**, President/CEO, Texterity
- 10:15am-10:45am **Isabelle Aveline**, Founder, Zazieweb
- 10:45am–11:15am *Break*
- 11:15am –11:45am **Nancy McAllister**, CEO, C&M Online Media, Inc.
“Interfacing with Writers: Online v. Print”



ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

Agenda

- 11:45am-12:15pm **Barbara Kline Pope**, Director, National Academy Press
P.K. Kannan, Safeway Fellow, Associate Professor of Marketing and Associate Director, Center for E-Service, Robert H. Smith School of Business, University of Maryland
"Will They Pay? The Relationship Between Consumer Attitudes, Usage, Situations, and Willingness to Pay for E-Books"
- 12:15pm –2:00pm *Lunch*
- 2:00pm-2:30pm **Marilyn Jenkins**, President, CEO, CyberRead
"CyberRead: Turning Pages to the Future of Reading!™"
- 2:30pm-3:00pm **Kirstie Chadwick**, President, Digital Owl
"Mobilizing Premium Information Securely through End-User Communities"
- 3:00pm-4:00 pm Panel Discussion:
"Success Stories in Electronic Publishing"
Chairperson:
Tom O'Brien, Business Development Director, Apex ePublishing
Panelists:
Mark Sandler, Librarian, University of Michigan Libraries
Stephen Rhind-Tutt, President, Alexander Street Press
Todd Watson, DDS, Founder, Vital Source Technologies, Inc.
Barb Beach, Senior VP, Strategic Development, The Gale Group
- 4:00pm Panel Discussion:
"How to Succeed in Raising Capital for Electronic Publishing"
Chairperson:
Joel Poznansky, President, Apex ePublishing
Panelists:
Mark L. Capaldini, Managing Dir., MCG Capital Corporation
George Beckerman, Partner Focus Enterprises
Lou Pugliese, Novak Biddle
Robert "Todd" Watkins, Founder, Vital Source Technologies, Inc.



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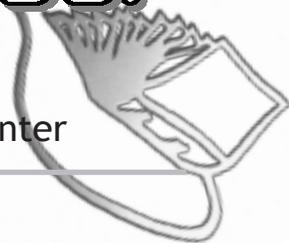
- **Electronic Book 2000: Changing the Fundamentals of Reading** is available to download in PDF format (7.32 MB file). The proceedings are available in a bound book through the National Technical Information Service (NTIS). Orders can be placed by calling 1-800-553-6847 or by ordering online through <http://www.fedworld.gov/onow/>. The order number is PB2000108035. Copies can be purchased for \$47.00 (paper copy or CD-ROM), \$23.00 (microfiche). Compiled by Dr. Victor McCrary, Jennifer Quinn, Alyssa Smith, and Christie Iletto, the proceedings contain the conference agenda as well as presentations and biographies of the speakers at the Conference.
- **Electronic Book '99: The Next Page** is available both at NTIS and downloadable in PDF format (17.0 MB file). The proceedings are also available through the National Technical Information Service (NTIS). Orders can be placed by calling 1-800-553-6847 or by ordering online through <http://www.fedworld.gov/onow/>. The order number is PB2001-106741. Copies can be purchased for \$47.00 (paper copy or CD-ROM), \$23.00 (microfiche). Compiled by Dr. Victor McCrary, Jennifer Quinn, and Alyssa Smith, the proceedings contain presentations and biographies of the speakers at this Conference.
- **Electronic Book '98: Turning a New Page in Knowledge Management** is available both at NTIS and downloadable in PDF format (4.77MB file). The proceedings are also available through the National Technical Information Service (NTIS). Orders can be placed by calling 1-800-553-6847 or by ordering online through <http://www.fedworld.gov/onow/>. The order number is PB2001-106319. Copies can be purchased for \$47.00 (paper copy or CD-ROM), \$23.00 (microfiche). Compiled by Dr. Victor McCrary and Alyssa Smith, the proceedings contain presentations and biographies of the speakers at this Conference.
- **NIST Prototype Linux Electronic Book Reader.** The NIST Linux Platform OEB Viewer is a combination parser and viewer for Open EBook documents. At this time, it can display most types of formatting and most document features, although tables and links do not currently work. This software is also capable of generating a searchable index of individual documents or chapters from an OEB package file. This software runs in X11 and requires libpng, libjpeg, and ncurses along with the standard X11 libraries. Documentation is included with the archive in the text file named 'README'. You will need to use **tar** to decompress the archive once downloaded.

ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

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Ronald Reagan Building and International Trade Center



Karen Brown

Acting Director
NIST
www.nist.gov

Karen H. Brown is the National Institute of Standards and Technology's acting director and deputy director. As a non-regulatory agency of the U.S. Department of Commerce's Technology Administration, NIST's mission is to strengthen the U.S. economy and improve the quality of life by working with industry to develop and apply technology, measurements, and standards through a portfolio of four major programs: the NIST Laboratories, the Baldrige National Quality Program, the Manufacturing Extension Partnership, and the Advanced Technology Program. Brown oversees a \$800M annual operating budget and 3,300 on-site staff complemented by

2,000 manufacturing and business specialists serving smaller manufacturers around the country.

Brown came to NIST as deputy director in January 1999. Previously she was a Distinguished Engineer at IBM Microelectronics in Hopewell Junction, N.Y. Brown also served (on assignment from IBM) as director of lithography for SEMATECH from 1994-1998. Brown's 22-year career at IBM concentrated on solving problems in semiconductor lithography and microelectronics. She has a proven track record in management, having successfully met the challenges of moving ideas from the laboratory into manufacturing. Brown also has a keen awareness of the impact of national and international standards on U.S. industry and the economy, having held a variety of

standards leadership positions in Semiconductor Equipment and Materials International and helping to bring a semiconductor fabrication line on-board in France.

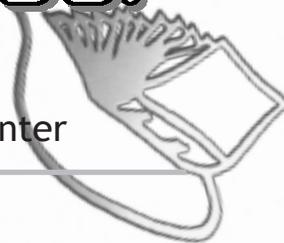
A native of Schenectady, N.Y., Brown holds a B.A. in chemistry and in history, and a Ph.D. in chemistry from the University of Rochester.

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William Mehuron

Director
Information Technology Laboratory
NIST
www.itl.nist.gov

Dr. William O. Mehuron is the Director of the Information Technology Laboratory (ITL) of National Institute of Standards and Technology (NIST), Department of Commerce in Gaithersburg, Maryland. He is also the Chief Information Officer at NIST.

ITL's mission is to strengthen the U.S. economy and improve the quality of life by working with industry to develop information technology. The laboratory works with industry, research, academic and government organizations to develop and demonstrate information technology capabilities that are usable, secure, scalable and interoperate.

The laboratory also provides the information technology service (desktop computing, scientific computing and network) capabilities to the entire NIST organization. Detailed information about ITL can be found at <http://www.itl.nist.gov>.

Dr. Mehuron has held a number of senior management and technical positions in the Federal Government (including civilian, defense and intelligence agencies) and the high technology industry. In these positions, he has been responsible for research, development and acquisition of information systems, sensor and observing systems, and advanced electronic systems.

He was with the National Oceanic and Atmospheric

Administration (NOAA) from 1995 until 1999 where he served as Director of the NOAA Systems Acquisition Office. He also served as the Acting Deputy Under Secretary (DUS) of NOAA from 1997 until 1998 with line management responsibility for the 12000+ staff NOAA organization. During his tenure with NOAA he directed the development and acquisition of major systems (information systems, satellite and radar systems, and other sensor systems).

Earlier in his government career, Dr. Mehuron was Director for Research and Engineering at the National Security Agency (NSA) where he was responsible for the research, technology, development and systems acquisition programs of NSA. In addition to the in-house

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activities, he guided a substantial amount of work performed by the industrial base and academia.

In the private sector, Dr. Mehuron has held senior management positions with several advanced technology organizations where he was responsible for research and development efforts in a number of areas including: high-performance work stations, fiber optic networks, network management and security software, computer and communications security products and systems, automated message handling systems, integration of commercial off-the-shelf computer hardware and software, and computer-aided engineering (CAE) design software products and systems.

Dr. Mehuron received a BSEE degree With Distinction from Purdue University. He earned an MSEE and Ph.D. degrees from the University of Pennsylvania. He has also attended the Harvard University Executive Program in National and International Security and an Executive Management Program at the Wharton School of the University of Pennsylvania.

He was awarded the SES Distinguished Rank Award at the National Security Agency for excellence in system acquisition management and leadership. He

also received the NSA Exceptional Civilian Service Award for extraordinary performance and exceptional accomplishment, leadership, and personal dedication to the furtherance of the NSA mission.

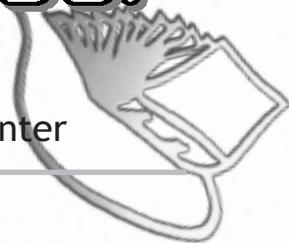
Dr. Mehuron was awarded the Distinguished Engineering Alumnus award from Purdue University in 1991 for outstanding engineering accomplishment in the military, government and private industry. He is a member of the Institute of Electrical and Electronic Engineers (IEEE).

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Susan Zevin

Deputy Director
Information Technology Laboratory
NIST
www.nist.gov

Dr. Susan F. Zevin is the Deputy Director for the Information Technology Laboratory (ITL) of the National Institute of Standards and Technology (NIST), Department of Commerce in Gaithersburg, Maryland. As Deputy Director, Dr. Zevin manages the daily operations and services of the Laboratory, overseeing its research program in the development of standards and performance measures for information technology and leading the implementation and delivery of information technology services

in support of the NIST Chief Information Officer.

Dr. Zevin has more than 26 years of progressive professional and executive experience in managing large scientific and technical service delivery organizations. Particular emphasis has been on product development and operational implementation based on constituent needs. Dr. Zevin has particular experience in creating long-term goals and objectives, understanding the conversion from development to operations, and implementing promised outcomes.

Prior to joining ITL, Dr. Zevin was with the National Oceanic and Atmospheric Administration (NOAA) for more

than 26 years in a variety of technical and management positions, most recently as the Deputy Assistant Administrator for the National Environmental Satellite Data and Information Services. In this position she managed the NOAA National Data Centers; oversaw the design, implementation and management of environmental information systems; established a new National Coastal Data Development Center; and developed formal agreements with major news organizations, utility companies and financial exchanges for new climate information services. It was during this time that she led the analysis of critical milestones, costs and implementation planning for a new national satellite operations control facility and created a

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NOAA digital earth and space facility for near real-3-d visualization of environmental data sets.

She also served as Deputy Assistant Administrator, NOAA, National Weather Service where she oversaw the daily operations of the National Weather Service, including operational programs such as aviation, marine, agriculture, fire weather, public warnings and forecasts, hydrologic services, and supporting infrastructure such as training, facilities, electronics, and international programs.

Prior to that she was the Director, National Weather Service, Eastern Region where she managed the provisions of public weather services for 16 eastern states, and oversaw the modernization of weather services facilities, including building 22 new sites, installing new radars and technology suites, and reorganizing 800+ employees.

During her early career she was involved in many international projects including, a detail to the World Meteorological Organization in Geneva Switzerland; installing a real-time flood forecast system on the Yellow and the Yangtze Rivers in China; and evaluating a flood forecast system project in Jamaica.

Dr. Zevin received a B.A degree in Geography from the Uni-

versity of Pittsburgh. She earned a M.S. (Cum Laude) in Geography from the University of Tel Aviv and her Ph.D. in Hydrology and Water Resources from the University of Arizona.

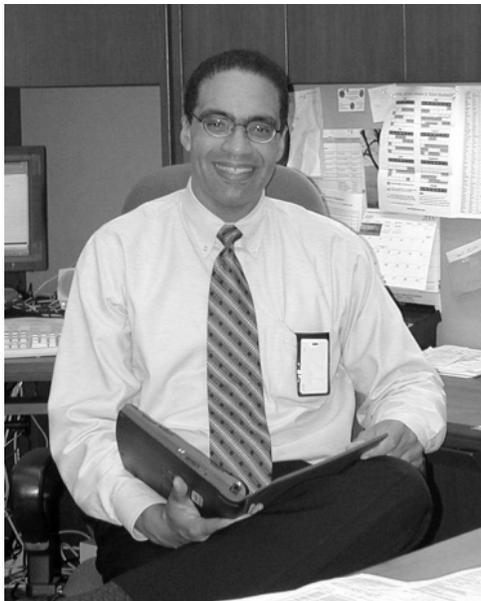
Dr. Zevin was awarded the University of Arizona Alumni Distinguished Citizen Award in 1996. She is a Fellow of the American Meteorological Society (AMS) and served as an elected member of the Council.

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Dr. Victor R. McCrary is currently chief of the new Convergent Information Systems Division at the National Institute of Standards & Technology in Gaithersburg, Maryland. In his current position, he leads a group of approximately 50 researchers, computer scientists and students in NIST's Information Technology Laboratory. His organization conducts research into convergent information systems emphasizing standards for the exchange, storage, and manifestation of digital content. Topical areas include, digital data preservation, biometrics, electronic books, trust management, interactive digital television, and digital cinema. Dr. McCrary organized the world's first conference on electronic books in October 1998, and subsequent conferences in 1999,

and 2000. His research group has developed a prototype of the electronic book reader, and a low-cost Braille reader for electronic books which recently received a 2001 R&D 100 Award. In 2000, he was a co-recipient of the Gold Medal from the Department of Commerce, for his leadership in catalyzing the electronic book industry, facilitating standards for the e-book industry, and the development of a Braille reader for e-books. The NIST Braille reader was featured in the September 2000 issue of *Wired Magazine*. He also served as the chair and past-president for the newly formed Open Electronic Book Forum, an industry group dedicated to the development and promotion of standards for electronic books.

Victor is also an adjunct professor in the Executive Masters of Technology Management Program at the University of Pennsylvania. The program is

Victor McCrary

Chief Convergent Information Systems
Division
NIST
www.nist.gov/div895

“When is a eBook not an eBook”

jointly administered by the Graduate School of Engineering and the Wharton School of Business. He received his doctoral degree in 1985 from Howard University. He received an Executive Masters of Science & Engineering from the University of Pennsylvania in May 1995. Victor has authored or co-authored over 40 technical papers in refereed journals and co-edited two books. His view on life is simple, “concentrate on doing the right things than on doing things right!”.

When is an eBook not an Ebook?

Victor McCrary
**Convergent Information
Systems Division**
Electronic Book 2001
November 5, 2001



NIST
National Institute of
Standards and Technology
Technology Administration
U.S. Department of Commerce

e-book: *ee-büch*

Definition: a) Electronic content that is transmitted and/or displayed on a device or system to be read by the viewer similar in experience to reading a physical book; b) the reading system itself, usually portable for display of electronic content

ebook; e-Book; e-book, E-Book, E-book

E-Book: *History* (over the past 2 years!)



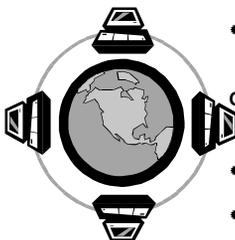
- '98 – NIST E-Book Workshop
- '99 – First meeting of the Open e-Book Initiative in S.F.
- '99 – Japan's MITI announce e-book initiative

E-Book: *History* (over the past 2 years!)

- '99 – Open eBook Publication Standard 1.0
- '99 – Gemstar acquires SoftBook, NuvoMedia
- '00 – Open eBook Forum founded
- '00 – Riding the Bullet distributed as 400,000 e-books
- '00 – MS Reader debuts
- '01 – OEB version 1.01



E-Book: *Standards*



- Open eBook (OEB) 1.0 – e-content (not devices!!)
www.openebook.org
- OEB 1.01 now available
- EBX – secure transfer of content
- XrML – extended solution?
- AAP initiatives
DRM is the big issue

E-Book: *Applications* *where do we start?**

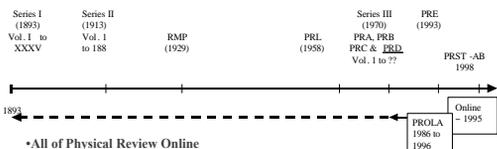
- technical journals
- education (and save that back pain!)
- e-learning – **librarians are key!**
- medical practitioners
- enterprise applications
- government; e.g. the IRS, Defense

* see the Presidents Information Technology Advisory Committee (PITAC) Report, February 1999

<http://www.ccic.gov/ac/report/>

E-Book Journals: Physical Review

1893 - 640 pages, 1999 ~ 94 K pages, ~ 2M pages in total



- All of Physical Review Online
- Eventually back to 1893
- Inter linked with other collections
- Content format varies over time - image, pdf, postscript to SGML / XML

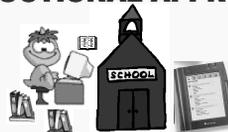
• Provide format options to take advantage of technology
Robert A. Kelly Electronic Book 99

NIST²

DATA COLLECTION - E-BOOKS IN THE SCHOOLHOUSE

APPLICATION STRATEGIES (LOGISTICAL)

INSTRUCTIONAL APPROACHES

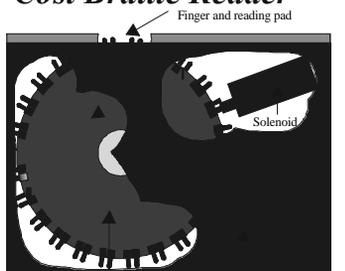


NIST

Electronic Book '99 Workshop



E-Books for the Visually Impaired Low-Cost Braille Reader



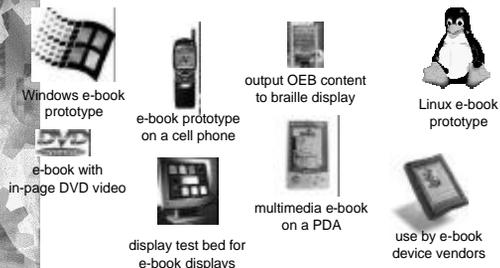
NIST

Rotating wheel with shaft

Cover (partially cut off to show mechanism)

NIST OEB Implementation Project

- Applications of OEB Software Framework



Accessibility - the NIST Braille Reader

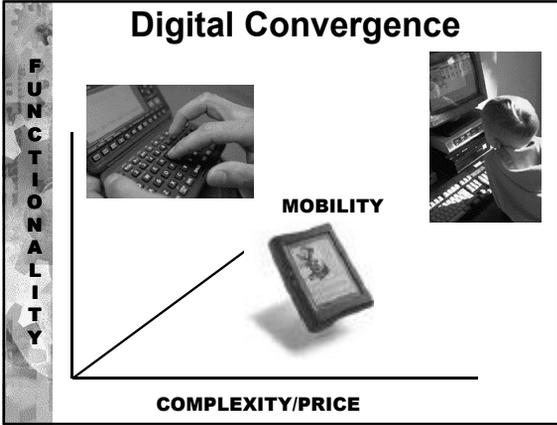


- Supporting accessibility for electronic books, Internet access, etc.
- A proof-of-concept prototype.
- A non-visual display technology
- Possible spinoff: tactile graphic display.
- Possible use for VR systems.

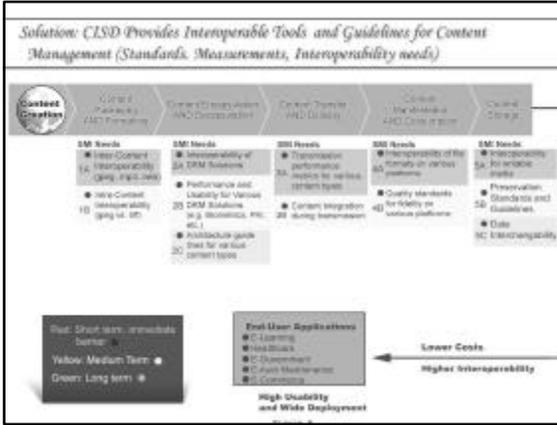
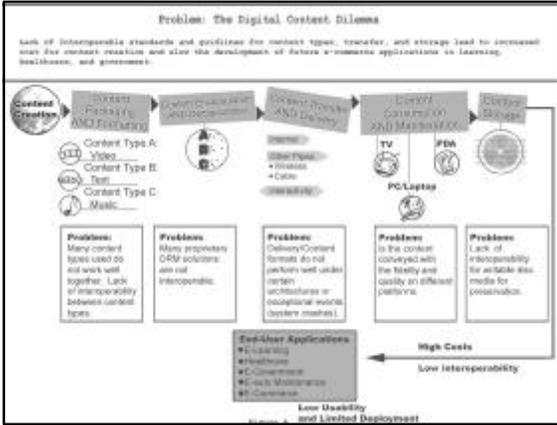
E-Book Future Trends: 2001 -2005

- Convergence in storage, telephony, one device (super PDA!!) + DVD!!!
- Recombinant mixed media - reuse of current digital assets; embellishment of legacy assets (similar to colorizing of movies!!)
- Accessibility - to all, whenever, wherever
- Full multimedia - immersive learning tool





- ### The Digital Dilemma: Issues Facing the Industry for Digital Content
- Copyright ownership and management
 - Standards for storage media and content
 - Standards for content exchange
 - Technologies and architectures to provide low-cost anonymity and security
 - Fidelity and integrity of content manifestation



- ### The Issues the Industry Faces and must address to be successful!
- price point to high –lower retail cost (~\$300.00)
 - cross-industry DRM standards must emerge – no content, empty e-book!
 - communities must converge – librarians and publishers must be on the same team
 - focus enterprise applications; e.g. learning, healthcare – not on dime-store novels!
 - government is your friend – so let's work together!

For more information on our products & services:
www.itl.nist.gov
www.itl.nist.gov/div895
 victor.mccrary@nist.gov

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Patricia Harris

Executive Director
National Information Standards
Organization
www.niso.org

Patricia Harris is the Executive Director of the National Information Standards Organization a nongovernmental, nonprofit organization which develops and promotes technical standards used by information services, libraries, and publishers globally.

Harris has been the Executive Director of NISO since 1983. In that time the organization's membership has grown from thirty-eight members to over seventy-five, the organization's scope has expanded to embrace digital content, its

actively involved in standards development activities at the national and international levels. She has been a member of the American National Standards Institute's Information Systems Standards Board, the ANSI Organizational Member Council, and the ANSI Executive Standards Council.

Harris is the secretary of the International Organization for Standardization's Technical Committee 46 Subcommittee 4 on Technical Interoperability.

Harris has an M.S. in Library Science from the

University of North Carolina-Chapel Hill and the B.A. from Randolph-Macon Woman's College. She has worked at Princeton University, the American Library Association, the U.S. Department of Education, and the Library of Congress.

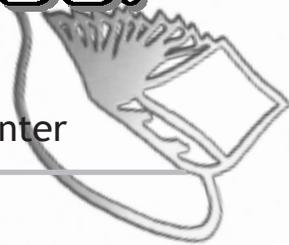
budget has grown four-fold, and NISO has launched a print and electronic publications program.

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Jack Romanos

President & Chief Operating Officer
Simon & Schuster
www.simonsays.com

Jack Romanos was named president and chief operating officer of Simon & Schuster in 1998. He is responsible for the publishing and business activities of all divisions of the company, which include the Simon & Schuster Adult Publishing Group, Simon & Schuster Children's Publishing, Simon & Schuster New Media, Simon & Schuster Online, Simon & Schuster U.K., and Simon & Schuster Australia.

Mr. Romanos had been president of the Simon & Schuster Consumer Group since 1991. Prior to that he had been president of the mass market division since 1987 and before that president of the Trade Group, from 1985 until its units were realigned as part of the

Consumer Group. Mr. Romanos joined the company in January 1985, as president of Pocket Books.

He began his publishing career at Fawcett Publications. After seven years there he joined Bantam Books in 1973, and held a number of positions in sales and marketing over the next eight years. He was made publisher of the company in 1981. Under his direction Bantam, a leading paperback publisher, expanded into hardcover and juvenile publishing.

Mr. Romanos was born in Stamford, Connecticut on November 1, 1942. He received a bachelor's degree in business administration from the University of Connecticut in 1965.

Simon & Schuster, the publishing operation of Viacom

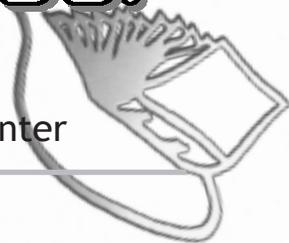
Inc., is a global leader in the field of general interest publishing, dedicated to providing the best in fiction and nonfiction for consumers of all ages, across all printed and multi-media formats. Its divisions include Simon & Schuster Adult Publishing Group, Simon & Schuster Children's Publishing, Simon & Schuster New Media, Simon & Schuster Online, Simon & Schuster U.K., and Simon & Schuster Australia. For more information about Simon & Schuster, visit our website at <http://www.simonsays.com>

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Alberto Vitale

Former Chairman and CEO
Random House, Inc.
Chairman, International Ebook
Award Foundation

“The Future of the Book”

Alberto Vitale is the former Chairman and Chief Executive Officer of Random House, Inc., having served in that position from 1989 to 1998. Random House, a division of Bertelsmann AG, is the world's largest English-language general trade book publisher. Through its many prestigious imprints, it publishes some of the foremost writers of our time in hardcover, trade paperback, mass market paperback, electronic, multimedia, and other formats.

Born in Italy in 1933 and educated at French and Italian schools, Mr. Vitale received his doctorate in economics from the university of Turin. He came to the United States in 1957 as a Fulbright Scholar to attend the

Wharton School at the University of Pennsylvania.

Mr. Vitale began his career at Olivetti in 1958 and, later, at I.F.I., the holding company of the Agnelli family, where he became a principal corporate officer and played a key role, among other things, in its acquisition of Bantam Books. In 1975 he entered the publishing world when he joined Bantam as Vice President, Administration. When Bertelsmann acquired Bantam in 1977, Mr. Vitale became Executive Vice President and Chief Operating Officer, as well as President of the Bertelsmann Publishing Group, Inc. In June 1985 he was named Chief Executive Officer of Bantam, and

in January 1987 President and Chief Executive Officer of the newly formed Bantam Doubleday Dell Publishing Group, Inc.

Mr. Vitale joined Random House, Inc. as Chairman, President and Chief Executive Officer in November 1989, becoming Chairman and Chief Executive Officer in 1996 when he appointed a President and Chief Operating Officer. He was named Chairman of Random House's Supervisory Board in July 1998 when the company was acquired by Bertelsmann, bringing together Random House and Bantam Doubleday Dell in one company known as Random House, Inc.

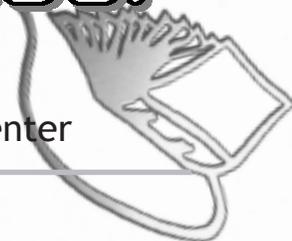
Mr. Vitale is a former Vice Chairman of the Association of American Publishers;

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Co-Chairman of the Publishers Committee at the New York Public Library; and a member of the Board of Overseers of the University of Pennsylvania Library and, formerly, the Wharton School. He is actively involved in the Gallatin Division of New York University, as well as its Oscar Dystel Fellowship.

Mr. Vitale was the first recipient of the Fulbright Award for Outstanding Individual Achievement. He has also been honored by Brandeis University, and he received the America's Democratic Legacy Award from the Anti-Defamation League. The French government has designated him a Chevalier des Arts et des Lettres.

Mr. Vitale is a member of the board of Random House, Inc., as well as Client Distribution Services Inc., Versaware Inc, "At table.com", and the Council of the United States and Italy (headed by David Rockefeller and Giovanni Agnelli, Chairman and controlling stockholder of FIAT). He is a member of The Council on Foreign Relations, The Economic Club of New York, The Century Club and the Metropolitan Club.

He is also a member of The Board of Advisors for the Center for Publishing at New York

University and in October 1999 was named Chairman of the Frankfurt e.book Award, established and sponsored by Microsoft.

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James Alexander

Director
eBooks
Adobe Systems, Inc.

James Alexander is Director, eBooks at Adobe Systems, Inc. where he spearheads the strategy and implementation for the eBooks business line. Prior to Adobe, James founded and served as Chief Executive Officer of venture-backed Mibrary, a New York-based software start-up founded in 1999 to make ebooks and other digital content easier for consumers to use.

An active member of several industry trade groups and standards efforts, James serves on the Association of American Publishers' (AAP) Enabling Technologies Committee and chairs the New York New Media Association's Digital Content

Special Interest Group. In addition, he co-chaired the Electronic Book Exchange's (EBX) Marketing Committee and recently served as chair of the Open eBook Forum's (OEBF) DRM Working Group Subcommittee on Business Models.

James is a veteran software executive with more than 10 years of experience in assembling and mobilizing world-class teams around technology-driven products. Prior to Mibrary, in 1994 he co-founded eWatch— the first hosted software application used by more than 800 blue-chip companies to track what is being said about their brands online. eWatch is now owned by PR Newswire, a division of United Business Media plc (LSE:UBM).

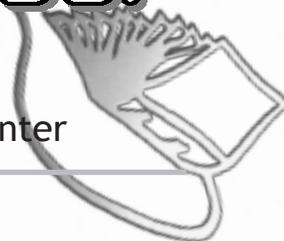
James is a frequent public speaker and is regularly quoted in the news media about technology issues. He has appeared on CBS's *60 Minutes*, CNBC, PBS and Monitor Radio. Quotes have appeared in *Yahoo Internet Life*, *The New York Times*, *Fortune Magazine*, *Smart Money Magazine*, *The Washington Post*, *Newsweek*, *Working Woman*, *POV Magazine* and *Wired Magazine*.

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Mitch Freedman

Director
Westchester Library System

Director, Westchester (NY) Library System. Manages cooperative library service agency of approximately 50 staff, serving 38 public libraries and a population of 875,000; includes the management of technology, bibliographic control, ILL, age level consultation, and a variety of outreach services. Has management responsibility for implementing and operating WESTLYNX, an online circulation, catalog, Web gateway, and database services system; 580

Canada. Includes consulting for libraries in North America, Europe, Africa and Asia; most recently consulted for the National Library of Latvia and the research libraries of Latvia regarding the implementation of information technology; and, a major networking and technology study for the California State Library in 1993-1994. Published primarily on technology, management, and technical services issues; *Connection Development: Web Lessons from Westchester...* in

online PCs at 43 sites on a wide area network.

P u b l i s h e r ,
*U*N*A*B*A*S*H*E*D Librarian[™]*. Consulted, gave speeches, or attended meetings in more than half of the states in the U.S. and in

Library Journal (9/1/99); an invited paper, *Processing for the People*, in the Centenary Issue (1/1/76) of *Library Journal*; and three separate years, selected for the *Best of Library Literature*. Edited: *The Nature and Future of the Catalog*; and *Five Circulation System Case Studies*. On editorial board of: *Public Library Quarterly*; and *Advanced Technology—Libraries*.

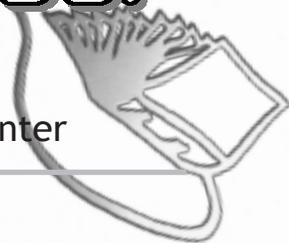
ALA President-Elect, 2001-2002. Numerous library organizations and committees at national and local levels; includes having been elected President of ALA's Library and Technology Association and to the ALA Council several times (current term expires in 2001); served as chair of the ALA Pay Equity Committee.

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Omid Omidvar

Program Manager
Advanced Technology Program
NIST
www.nist.gov

“Accelerating EBook Technologies”

Dr. Omid Omidvar is program manager in the Advanced Technology Program of the National Institute of Standards and Technology, U.S. Department of Commerce. He is working on areas of Biometrics, Pervasive Computing, Bioinformatics and Virtual Tele-presence. He joined ATP as the technical program manager of Digital Video Program. Digital Video is a \$122 million program which includes High Definition Television (HDTV). Prior to joining ATP he worked as a research scientist in areas of

Optical Character Recognition for IRS and Finger Print Classification for FBI, and Face Recognition for Visual Image Processing Group in Advanced Systems Division of Information Technology Laboratory at NIST.

Dr. Omidvar was the technical director of the SPPARC center a supercomputing facility funded by the National Science Foundation in Washington, DC. He also has conducted research for NASA on the design of neurocontroller for robotics arms with neural networks and Fuzzy systems. He was the Chief Technology Officer of Technology Research International. He has been a consultant to IBM, Northrop Grumman, Sun Micro Systems,

Oak Ridge National Laboratory, Department of Defense. He also was a technology assessment fellow at Department of Treasury.

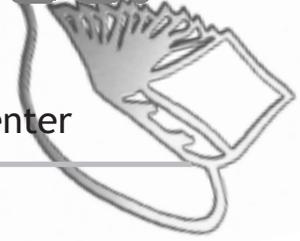
Dr. Omidvar authored numerous technical papers, books and journal papers in areas such as Computer Architectures, Machine Vision, Neurodynamics of Learning, Robotics and Control, Finger Print, and OCR. Dr. Omidvar was the Editor-in-Chief of the “Journal of Artificial Neural Networks” a publication of Ablex publishing corporation. Dr. Omidvar has published ten volumes of books in areas such as Machine Vision, Robotics, Control Theory, Computer Architecture, Pattern Recognition, Neural Networks. These are Ablex and Academic Press Publications. His latest book is on Shape

ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

November 5 - 7, 2001

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Recognition and is published by Intellect Press of UK. He has organized and run conferences in image processing, neural networks, robotics and control.

Dr. Omidvar's undergraduate degree is in Industrial Management and Engineering, his MS degree in Computer Engineering and his Ph.D. degree is in Computer Science. His research interest includes Financial Engineering, HDTV, Digital Video, Wireless Communications, Intelligent Systems, Wafer Scale Integration, Robotics and Control, and Computer Vision. He is a member of SMPTE, NAB, IEEE, ACM, INNS, and MAA. He also has received his MBA degree from George Mason University.

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Russ Wilcox

Vice President & General Manager
E Ink

“Update on Electronic Ink”

Russ Wilcox holds P&L responsibility for licensing and product sales at E Ink, encompassing business development, sales, marketing and application engineering. One of the founders of E Ink, Wilcox led the company during its first ten months of operations as Vice President of Business Development. He was instrumental in recruiting the initial team, securing debt and equity financing, licensing intellectual property and developing corporate relationships. For the past 3 years, Wilcox has served as a General Manager leading commercialization of new products. Wilcox was previously Director of PC Products for venture-backed

recognition interface, leading a 30-person cross-functional team through corporate partnering, product definition, technical development, quality assurance and marketing launch. Prior to that he started an Internet storefront that grew sales by 20% for a local software retailer. While at Mercer Management Consulting and Corporate Decisions Inc. (CDI), Wilcox was a strategy consultant to senior management of major technology companies in the U.S. and Europe regarding business definition, product marketing, customer loyalty and financial valuation. Wilcox earned honors degrees from Harvard College in Applied Mathematics and the

PureSpeech, Inc., where he managed the development of a telephony product with speech

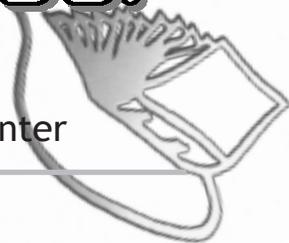
Harvard Business School MBA Program where he was named a Baker Scholar.

ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

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Harold Henke

Seniore-Learning Engineer
IBM Learning Services

“pBook on eBooks: an authors journey”

Harold Henke has worked in the computer industry for 20 years. His first job in the computer industry was as a student loading punch cards into an IBM computer (at that time, he did not know the difference between COBOL and a baseball). He has been active in the design and evaluation of distance education courses and programs for over 10 years. He has been an Adjunct Professor at City University in Seattle, Washington, where he taught communication courses to “nontraditional” students and also developed technical training courses for Boeing and IBM.

He has been involved in defining IBM’s electronic book strategy as the IBM eBook Integrated Product Development team leader. He was also IBM’s representative to the Open Electronic Book Forum. Most

recently, he has worked within IBM’s Learning Services as a curriculum architect where he managed a portfolio of education assets for global deployment.

He recently co-published an article: Factors Influencing Attrition in a Corporate Distance Education Program in the United States Distance Learning Association, Education at a Distance magazine. He also has presented papers at conferences sponsored by ACM, GATE, and IEEE and was a featured speaker at the Global Alliance for Transnational Education 2001 conference in San Jose, Costa Rica and at the ACM SIGDOC 2001 conference in Santa Fe, New Mexico.

In addition to working in the field of distance education, he has also been a “nontraditional” student who completed his

Masters at the University of Phoenix. He is currently a “distance education student” who is writing his dissertation: A Study of the Use of Paper Book Metaphors in the Design of Electronic Books as partial fulfillment for a Doctorate of Computing Technology Education, Nova-Southeastern University.

He is also the author of Electronic Books and ePublishing, Springer, ISBN 1-85233-435-5. He maintains a website, www.chartula.com, where he publishes articles on electronic books, electronic publishing, and distance education. He is also available for consultation including development of surveys and white papers on electronic publishing and distance education.

pBook on eBooks: An Author's Journey

Harold Henke
November, 2001



Presented by Harold Henke, author of:
Electronic Books and ePublishing, Springer, 2001,
ISBN 1-85233-435-5
Available from www.springer-ny.com, www.springer.co.uk,
www.springer.de, www.amazon.com, and www.bn.com

Authoring Process

- Choosing an authoring tool is important. Select a tool that enables you to export your "content" to multiple formats.
- Most leading authoring tools like Adobe FrameMaker and Microsoft Word can export into multiple formats.
- Many tools (often free) available to get content into specific formats such as LIT and OEB. For example, OverDrive provides tools to create a LIT book.

Authoring Process: Questions

- What type of book are you writing? The content is a factor in choosing an authoring tool. For example, are you writing a novel or a textbook? How many pages, chapters, sections, and so forth. The more complex, the more robust tool you need.
- What does the publisher require? Specific fonts, typefaces, headers, footers, and so forth. Most publishers provide author guidelines for paper books but not for eBooks.
- If you publish both a pBook and eBook, then how much conversion will be required?

Finding a Publisher

- Brand name. The author-server-user model works best if the author has a brand name. Important factor in finding a publisher. (Not a new issue; always an issue.)
- Publisher supports eBook or just pBook? Many publishers have imprints for eBooks. Some publishers only want to handle paper books.
- Self-publishing? Must consider audience, brand, and marketing. (Also called vanity publishing.)
- Self-self-publishing. Create your own website and publish your own book.

Finding a Publisher: Questions

- Who is my audience? Which publisher best fits the audience?
- How important is it for me to publish my book to as many distribution channels as possible? Do I want to publish only an eBook or an eBook and pBook?
- How much am I willing to promote/market my book?
- What is the purpose of writing the book? Making money? Creating a reputation? Creating a career? Or do I just want to publish what I have to say?
- How much help do I need? Am I my own editor? Illustrator? Marketing agent?

Contract and Rights

- Who owns the rights? Most "modern" contracts include the electronic book version. Consider if you publish paper only, who controls the right to publish an electronic version later.
- How are the rights protected? If an eBook, will the publisher protect the asset using Digital Rights Management?
- If self-publishing, how do you protect your rights? (With my book, used Acrobat 5.0 and prohibited changing or printing the eBook.)

Contract and Rights: Questions

- Does an eBook or print on demand book ever go out of print?
- If there is a second edition and you published both an eBook and a pBook, then will both versions be updated?
- What is the publisher's plans for selling your eBook? How do they plan to protect your content?
- How does the publisher or retailer keep track of eBook sales?

Why a Paper Book?

- What the publisher wanted. Publishers understand the paper book business (well at least they understand the risk) and they have not changed their business models.
 - Imprints seem to be the way for publishers to test the ePubublishing market.
- Genre. The book is quite dense with text, tables (18), and graphics (16). Based on research, for deep reading, paper is still preferred.
 - This has to do with display resolution and how the display is lit. Perhaps, electronic paper will remove this obstacle.

Genre: Not All Books Are Read Equally

- Novels are read serially, business documentation and textbooks are read in bits and pieces to complete a task or study a particular subject. Search is important for business documentation but not novels. Industry is currently focused on the novel and perhaps limited by that focus. Some focus is moving to textbooks because of profit and market acceptance by "gameboy" generation.
- For deep reading, people prefer paper books because of factors like annotation, contrast, flicker, glare, illumination, resolution, and thickness. Some of these factors but not all will be resolved in the future. This is described more fully in *Electronic Books and ePublishing*.

The Compromise?

- Published a complete version in Adobe Acrobat Portable Data Format for use with Adobe Acrobat Reader 5.0 with Search. Included a word (catalog) index for full-text search. Research shows that users will want to search the book when looking for specific information.
 - Published selected chapters in Microsoft LIT and Palm format (courtesy of MobiPocket).
 - Added audio commentaries throughout the book.
 - Graphics are black and white in the pBook but color in the eBook.

Lessons Learned: Part One

- Distribution. Decide what you want to publish, an eBook, a pBook, or both.
- Features. If an eBook, decide early on what features you want to include such as audio and video. Audio and video require much more planning than outlining, indexing, or writing the book.
- Typefaces. Had to reformat the pBook to eBook using a different typeface for electronic display. Time consuming and required "repagination" of the eBook.

Lessons Learned: Part Two

- Time. Creating the "enhanced" eBook took much more time to create than expected. Creating audio clips was time consuming. For example, one to two minutes of recorded audio commentary required about 30 to 45 minutes of planning and production time.
- Production time. Whether electronic or paper, production time does not go away.

Pleasant Surprises

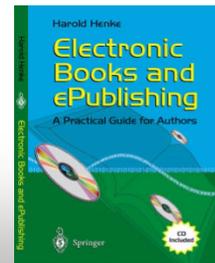
- Looks good on the bookshelf. There is something to be said for a colorful paper book cover.
- Book signings. Having a pBook makes book signings possible.
- Creating "DVD extras", the audio commentary, was fun, liberating, and expanded my role as an author.
- Providing a eBook and pBook seemed like a good value for the consumer.

pBook on eBooks

- *Electronic Books and ePublishing*, Springer, 2001, ISBN 1-85233-435-5. The first "serious" book on electronic books with 240 pages, 16 illustrations, and 18 tables. Includes electronic version in Adobe Acrobat Reader format which is fully-hypertext linked and includes full-text search index. Also, sample chapters in Microsoft Reader and MobiPocket (PalmPilot) format.
- Includes commentaries from authors and industry experts from companies and organizations like Everybook, IBM, Indiana University, Kent State University, Microsoft, MobiPocket, National Institute of Standards, Rochester Institute of Technology, RR Donnelley and author, Warren Adler.

About The Author

- Published *Electronic Books and ePublishing*, Springer, 2001, ISBN 1-85233-435-5.
- Publishes articles on distance education and electronic publishing at www.chartula.com.

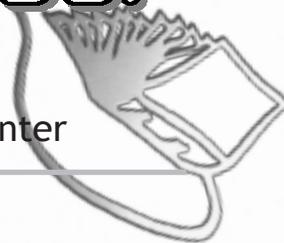


ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

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Anji Kalita Cornette

Division Director
The Cutting Corporation
www.cuttingrichmedia.com

“Multimedia E-book: A Multisensory Experience Anywhere: The New Generation of E-book for Leisure and Learning”

Anji (Ranjita) Cornette joined The Cutting Corporation in 1989. For the last seven years she has been head of the MARADD (Marketing, Archives, Research and Development and Digital Engineering) Division, which was created as a result of her research and diligence in the advancement of new technologies specifically geared toward the audio industry.

Since 1995, Anji has led a team of engineers at Cutting, who began researching the migration of audio delivery from cassette duplication to digital and Internet delivery.

In 1996, the R & D group at The Cutting Corporation developed their first streaming audio website. This site incorporated Real Networks

Real Audio streaming. It was the first version of an audio/electronic text book and featured audio clips and text from *The Wizard of Oz*.

Since then, Anji has worked with her R & D team to create Internet Audio services such as Audio Rich Emails, Streaming Audio and Rich Media Websites and most recently the Multimedia Electronic book which is currently under a business process patent filing.

Currently, there are demonstrations of the Multimedia E-book with audio content from The Naval Institute Press and AOL/Time Warner.

Anji has over twelve years of experience with the sound engineering and technical aspects of archival and sound preservation

collections. Additionally, over the years, she has provided key input for the inventions of proprietary equipment essential for the advancement of archival and sound preservation recordings.

Anji and her R & D staff are currently creating the second version of the Multimedia Electronic Book utilizing Voice Recognition technologies.

Anji holds a Bachelor of Fine Arts in Music composition with a minor in Industrial Management from Carnegie Mellon University and a Masters of Business Administration in Small Business, Entrepreneurship and Technology from The George Washington University.

Multimedia E-book: A Multisensory Experience Anywhere

The New Generation of E-book for
Leisure and Learning

The Cutting Corporation

Anji Kalita Cornette

Division Director

4940 Hampden Lane, Suite 300

Phone (301) 654-2887 ext. 22

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Multimedia E-book – What is it?



- Integration of text, audio, graphic images, video & 2D/3D animation elements.
- Primary feature is the ability to have all its elements cross reference each other.
- Can also be linked to the world wide web, giving it the ability for an infinite amount of resources.

Current Places of Use

- **Academic Arena**
Many universities offer their courses online, accessible over a hand held computer.
- **For Leisure**
The new E-book has begun integrating multimedia clips and semi-synchronized audio.
- **In Healthcare**
E-books allow the doctors to reference books, email prescriptions and communicate with others.
- **Learning Disabilities**
Discuss the application of the Multimedia E-book to those with learning disabilities.

Accessibility of the Multimedia E-book

- Currently runs on desktop computers and pocket PCs.
- Intent for future portable devices, across all computer platforms and wireless devices.

EXAMPLE

Colder Than Hell

The 2 M's & E's of the Multimedia E-books:

- Multiple Navigation Access Points
- Multiple Modes of Presentation
- E-Interactivity
- E-Portability

Search:

Multiple navigation access points designed to synchronize via: text search, audio timeline search, index search, graphics search etc.

Multiple modes of presentation: list of headings, abstract, deliverable via audio only, audio/video only, audio, video & text or any combination of these.

E-interactivity: hyperlinks internally or externally to the Internet, contact with author and other readers etc.

E-portability: accessible across various computer platforms & various wireless/mobile device platforms.

The Technology

- Perception in the industry that electronic books must mimic paper books.
- Multimedia capabilities are limited on current E-books.

The Multimedia E-book is Different

- Uses text as its base, and branches off with audio and video content.
- Switches between different media types, or plays various ones at the same time.
- Its player is required to be capable of images, video, music, text, e-commerce, & advanced navigation.

Dissemination of Information

- Over every electronic device from cell phone to video game console.
- 802.11 & Bluetooth technologies allow devices to communicate with each other.
- Multimedia E-book producer must be capable of merging whatever form of media they wish into their stories.
- Example –The News

- Multimedia E-book exists as a pool of information.
- Current crop of portable E-book players are designed to be text readers.
- Computer type devices are evolving to a point where they can handle Multimedia E-books.

- Most advancements in the recent PDA/cell phone hybrids.
- Some of the technologies on the new cell phones include java-based video games, streaming radio stations, programmable voice commands, and e-commerce.
- Internet access is no longer restricted to the desktop computer.

Wide Accessibility

- **Future Devices and why they'll be able to play Multimedia E-books**
 - Wireless access will be enabled with promising technologies like 802.11 & Bluetooth network transport protocols
- **Aiding Technology for Reading Disabilities and the Handicapped**
 - Format and player agnostic
 - Same file can stream into a top of the line computer is playable over an antiquated telephone or Braille reader

- According to the U.S. Department of Education, more than 1 in 6 children (17.5%) will encounter a learning problem to read during the first three years of school

(1999-2000 National Learning Center for Disabilities)

- U.S. Government statistics show 25 million Americans (one in ten) are functionally illiterate. The primary cause is dyslexia or one of its many variations such as Attention Deficit Disorder

(1999 Access Able Net)

- **President Bush mandated that all multimedia material must be 501c compliant meaning that anyone with disabilities can access the same information**

- **Former Presidents Clinton's concern with the emerging Internet age**

- "Digital divide"
- As technology progressed knowledge conveyed on high tech devices would not be accessible to people with disabilities

The Multimedia E-book Addresses This Issue

- Capable of playing on any device
- Synchronized text to speech conversion
- Voice navigation for mobility
- Technology for everyone to enjoy

Multimedia E-book: A Multisensory Experience Anywhere

The New Generation of E-book for Leisure and Learning

The Cutting Corporation

Anji Kalita Cornette
Division Director
4940 Hampden Lane, Suite 300
Phone (301) 654-2887 ext. 22
Fax (301) 654-3271
cuttingrichmedia@aol.com
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- Integration of text, audio, graphic images, video & 2D/3D animation elements.
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Current Places of Use

- **Academic Arena**

Many universities offer their courses online, accessible over a hand held computer.

- **For Leisure**

The new E-book has begun integrating multimedia clips and semi-synchronized audio.

- **In Healthcare**

E-books allow the doctors to reference books, email prescriptions and communicate with others.

- **Learning Disabilities**

Discuss the application of the Multimedia E-book to those with learning disabilities.

Accessibility of the Multimedia E-book

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Demonstration

Colder Than Hell

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- Voice navigation for mobility
- Technology for everyone to enjoy

Limitless Applications

- School
- Entertainment (Hollywood and Music Industries)

Demonstration

AOL/TW – *Tyger Tyger*

Peer to Peer and Indie Publishing

Thank You!

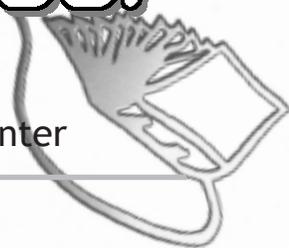
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Richard Curtis

(co presenter with David Marlin)

President

e-reads

www.ereads.com

“Efficient Royalty Management for E-Book Publishers”

Late in 1998, Richard Curtis announced the formation of e-reads, a publisher dedicated to reissuing, in e-book and print formats, previously published books in such popular categories as romance, fantasy and science fiction, and thrillers. The company commenced operation in 1999 with over 1200 titles, many by famous names in their fields, and concluded strategic alliances with all a dozen major distributors including Amazon.com, Barnes & Noble, and Ingram Book Company. As a byproduct of his e-book activities, he collaborated with a programmer to create the Royalty Tracker, a program designed to quickly convert vast amounts of royalty information generated by e-book vendors into simple royalty statements.

In addition to running e-reads, Curtis is also president of

Richard Curtis Associates, Inc., a leading New York literary agency. He is also a well known author advocate and author of numerous works of fiction and nonfiction including several books about the publishing industry.

He graduated from Syracuse University in 1958 with a BA in American Studies and from the University of Wyoming with a Masters degree, also in American Studies. He joined Scott Meredith Literary Agency after graduation, and was foreign rights manager there for seven years. In 1967, he launched a freelance writing career, and has had some fifty books published by many major houses. In the early 1970's, he began his own literary agency, and in 1979 incorporated it.

Richard Curtis Associates, Inc. currently represents close to 150 authors in all fields. The agency reports millions of dollars in annual sales for leading authors in every area of nonfiction and in such categories of fiction as romance, westerns, thrillers, science fiction, and fantasy.

His interest in emerging media and technology has enabled him to help authors anticipate trends in publishing and multimedia. He has lectured extensively and conducted panels and seminars devoted to raising consciousness in the author and agent community about the future of communications.

Early in the 1980's, he started writing an advice column for *Locus*, a science fiction

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newsletter, and out of his articles several books have been published including HOW TO BE YOUR OWN LITERARY AGENT, BEYOND THE BESTSELLER, MASTERING THE BUSINESS OF WRITING, and THIS BUSINESS OF PUBLISHING. He has testified as an expert witness in several publishing trials.

He was the first president of the Independent Literary Agents Association and was President of the Association of Authors' Representatives in 1996 and 1997. His company served for over a decade as agency for the Science Fiction Writers of America. In 1994, he received the prestigious Romance Writers of America Industry Award for Distinguished Service to Authors. In 1999 he was invited to serve on the editorial advisory board of *Writer's Digest*. In 2000 he was invited to serve on the advisory board for the publishing Master in Science program at Pace University.

Richard Curtis was born in 1937, is married, and has two children. He currently resides in Manhattan. His hobbies are sports, music and painting.

EFFICIENT ROYALTY MANAGEMENT FOR E-BOOK PUBLISHERS

Abstract of presentation for E-Book 2001 by Richard Curtis and David Marlin

E-book publisher Richard Curtis and programmer David Marlin have created Royalty Tracker, a program designed to cure a major problem that e-book publishers are beginning to experience: how to convert reports from multiple e-book distribution sources into simple royalty statements to authors. Royalty Tracker not only solves it, but enables publishers to perform in minutes what would otherwise take weeks or even months of labor.

Unlike traditional book publishers whose royalty reporting cycle is semi-annual, e-book publishers work on a monthly or quarterly reporting basis. That is because online retailers –“e-tailers” — issue monthly statements and checks to them. As pleasant as the prospect of being deluged with royalties may seem, it can be a nightmare if e-book publishers cannot promptly and efficiently convert the data and cash flow into comprehensible royalty reports and checks to authors. The problem is complicated by the fact that each e-tailer uses a different format to report to e-book publishers.

Royalty Tracker solves these and many other problems by importing each retailer’s digitized royalty file (excel, csv, etc.). Using ISBN numbers or any unique identifier that may be developed in the future, Royalty Tracker reshuffles the information and drops it into a uniform template. At the same time it calculates the total transactions per title, then produces a royalty statement tallying sales from all sources, chargeable expenses (such as advances or manufacturing fees), and splits (if any) among multiple authors. Finally, the Royalty Tracker prints a statement and check. Disbursements are tied in to annual IRS 1099 reporting and other accounting programs.

Introductory remarks by Richard Curtis

I’m Richard Curtis, president of e-reads, a publishing company launched at the beginning of 2000. As many of you may know, e-reads publishes reissues of out-of-print books in popular categories like science fiction, thrillers, and romance. We publish them in all e-book formats as well as print on demand. At the current time we have over 1500 titles on our list of which approximately 500 are actually in distribution. We are not retailers or “e-tailers.” Rather, we distribute our books through a network of retailers such as Barnes & Noble, Gemstar, Palm, Overdrive, Adobe, amazon, and Fictionwise.com. Each of these retailers displays our books on their web sites, sells them to consumers, takes a retail markup averaging 50%, and remits a sales statement and check to us. In some cases these are issued quarterly, in most cases monthly.

About a year ago, after we began to collect statements from retailers, I could see a disaster shaping up. Even though our retailers were only reporting a handful of sales for a handful of titles, their monthly and quarterly statements contained more information than our bookkeeper could possibly retype, and retype accurately: ISBN numbers (remember, one ISBN for each edition of one title), list prices, discount schedules, and other information were pouring in from multiple sources. What was worse is that each retailer used its own spreadsheet format – some with last name/first name, some with first name/last name, some with ISBN listed first, others with title or author listed first, and so on. The statements were printed on paper and arrived in the mail accompanied by a check.

As pleasant as the prospect of being deluged with royalties may seem, we realized it would quickly become a nightmare if we were not able to promptly, efficiently, and accurately convert the data and cash flow into comprehensible royalty reports and checks to authors. And I realized that if e-reads was experiencing this problem, other e-publishers would soon be experiencing it as well. This turned out to be true, as we have learned from talking to many companies large and small.

I contacted software developer David Marlin and asked him to help solve the problem. Say hello to David. David had been a programmer for the Publicity Assistant, a publicity program used by HarperCollins, Random House, Penguin Putnam, and dozens of other publishers. He had also developed a number of other systems for the publishing industry, including a cost accounting system at Grove Atlantic and an author/agent database.

David addressed the problem by creating a program that imports the royalty information from each distributor and instantly converts it into royalty reports to content providers. To test the Royalty Tracker, e-reads deployed it in the third quarter of 2000, and not a moment too soon as the flow of royalty statements began to crest far above my poor bookkeeper's ability to enter the data manually. It worked perfectly: The Royalty Tracker digests huge sales spreadsheets and in moments converts them to royalty reports and checks. Today, any competent bookkeeper with reasonable computer skills can learn the ropes in a couple of sessions, and of course we provide personal and online support.

That was just the beginning. As David refined the Royalty Tracker he enhanced it with numerous features that make it a powerful tool for generating all sorts of performance reports that go way beyond telling authors how many Gemstar, Palm, or Microsoft Reader sales they made last month.

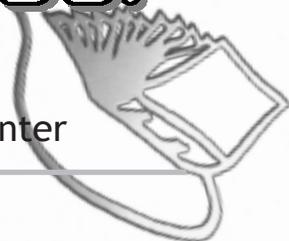
I'm now going to turn the podium over to David who will give you a visual tour of our product.

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Ronald Reagan Building and International Trade Center



David Marlin

(co presenter with Richard Curtis)

President

MetaComet Systems LLC

“Efficient Royalty Management for E-Book Publishers”

David Marlin, President of MetaComet Systems LLC, has been creating software for the publishing industry for several years. In early 2000, he teamed up with a prominent e-book publisher to create the MetaComet Systems flagship product, Royalty Tracker – a unique software system that optimizes the process of converting sales into royalties.

Marlin graduated with a BA from Columbia University, and worked as a software engineer for several companies in the Boston area, including The Boston University Medical Center and IDX Systems. Marlin went on to earn his MBA from Columbia Business School with a focus in

marketing and operations. He then managed the American Express Corporate Purchasing Card website, where he led the project of converting the static website into a dynamic, data driven, customer oriented destination.

In addition to running MetaComet Systems, Marlin is also co-chair of the BASIC (Book and Serial Industry Communications) “Post Transactional Digital Sales” committee, which has been tasked with creating the standard for transmitting e-book sales data from retailers to distributors and publishers.

Marlin’s portfolio includes the Royalty Tracker; the Talent/Agent Tracker system originally developed for Hyperion; the

Publishing Cost Accounting System originally developed for Grove Atlantic; and the Reviewer Analysis system developed on spec and in use at several university and art-related publishers. He has also worked extensively as a developer of Publicity Assistant, the publishing industry standard for public relations software.

David Marlin resides in Western Massachusetts, where he regularly indulges in his hobbies of skiing, mountain biking, and reading.

Royalty Tracker

From Sales to Royalties
System Overview

Topics

- The Problem
- The Answer
- Demo

The Question

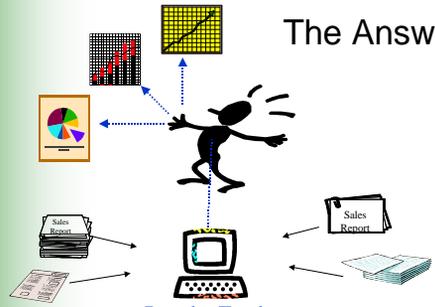
Do you manage your sales data?



Or does your sales data manage you?

There must be a better way!

The Answer



The Answer: A system which provides...

- Rapid importing of sales data
- Easy management of contracts
- Instant generation of royalty statements
- Seamless integration with external accounting systems
- Intuitive, easy to use, technologically advanced software

Our Goal: Efficiency & Accuracy

Manual data entry takes valuable time and increases the number of errors.

Royalty Tracker

- Erases 90% of data entry time
- Detects errors in sales data
- Automates regular reports

Royalty Tracker

Our Goal: Seamless Integration

No more need to look up, compare and compile files from the drawer

Vendors:

- Lightning Source
- Gemstar
- Peanut/ Palm
- Microsoft
- Adobe
- Reciprocal
- Others

Royalty Tracker

Accounting Systems

- VistaComp
- Qsolutions
- SAP systems
- Your systems

MetaComet Systems, 2001

Royalty Tracker

Our Goal: Instant Analysis

Sales information at your fingertips how you want it; when you want it!

Sales information

- Analyzed in aggregate or by individual title/cp
- Customized to your needs

MetaComet Systems, 2001

Royalty Tracker

Add-On Benefits

You benefit from unique functionality others need from their systems.

- Check printing & envelope addressing
- 1099 forms

MetaComet Systems, 2001

Royalty Tracker

Demonstration

Royalty Tracker Provides

- Efficiency & Automation
- Seamless Integration
- Instant Analysis

Run live demo...

MetaComet Systems, 2001

Royalty Tracker

The End

- Efficiency & Automation
- Seamless Integration
- Instant Analysis

MetaComet Systems, 2001

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Ira Goldstein

Chief Scientist, Commercial Printing,
Imaging & Printing Systems
Hewlett-Packard Company
www.hewlett-packard.com

“Beyond the Covers: Expanding the Traditional Book to the Web”

Ira Goldstein is Chief Scientist, Commercial Printing, Imaging and Printing Systems at Hewlett-Packard. In this role, he advises HP divisions on future technology directions, presents HP's directions to the community, and manages external R&D on advanced topics. Previously, he has managed a research center at HP Laboratories and product divisions in the areas of software development, networking, imaging and security. He has also been director of The Open Group Research Institute, a scientist at Xerox Palo Alto Research Center and a professor at MIT. He holds a Ph.D. in applied mathematics

from MIT and a BA in pure mathematics from Harvard.

During his career at HP, he has managed programs that have produced advanced technology and later products in the areas of object-oriented programming, distributed software development environments, display software and hardware, expert systems, and operating system technology. His group developed the foundation for HP's very successful delivery of client-server computing. At The Open Group, he built major programs focussed on distributed computing, scalable, secure operating systems, and worldwide web technology. His team developed the operating system that shipped on the Intel Paragon

computers, at the time the fastest scalable computers in the world. At Xerox PARC, he contributed to the evolution of Smalltalk and developed architectures for personal information environments. At MIT, he worked with graduate students to develop AI languages that integrated rules and scheme-like data structures. He also contributed to the development of the Logo language. His thesis was in the area of program analysis and automatic debugging of software errors.

He has given numerous keynote addresses, including presentations at Webnet in Toronto and at the United Nations. He co-chaired the second and fourth International Worldwide Web conferences. He has been a

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principal investigator on contracts from DARPA, the National Science Foundation, the Office of Naval Research, MITI and Esprit. Dr. Goldstein has also worked with most of the major computer companies, many of which have been investors in The Open Group. He has managed international organizations with laboratories in the U.S. and France. In 1986, he was selected by Science Digest as one of the nation's top scientists under forty.

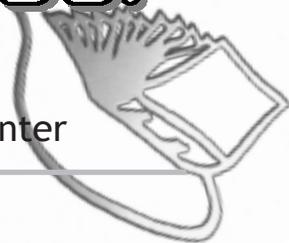
Ira lives in Concord, MA, with his wife and two children. His home is a modern Internet environment with both wired and wireless connections to workstations, servers and network peripherals (printers, scanners). All of this technology makes it possible for Ira to read his email and browse the Internet from his hottub.

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Thierry Brethes

CEO

Mobipocket

www.mobipocket.com

“Why PDAs are the perfect platform for eBooks”

Thierry Brethes is CEO and co-founder of Mobipocket, a french startup software company developing cross-platform eBook reading technology. Prior to founding Mobipocket, he was CTO & co-founder of Octo Technology, an IT consulting company specialized in IT architecture & distributed computing. He started his career as a consultant at Atos. He graduated from Ecole des Mines de Paris, one of the top french engineering schools.

MOBIPOCKET

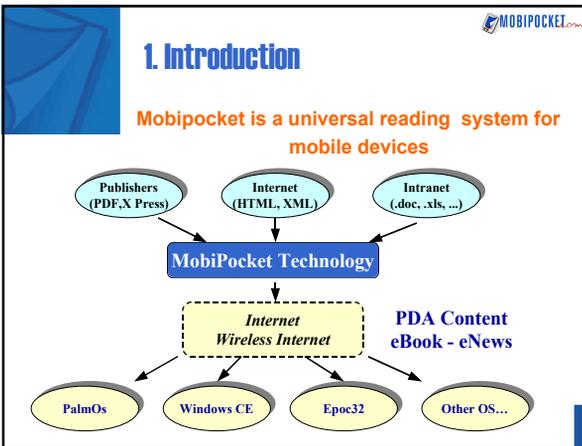
Technology Overview

Thierry BRETHERS, CEO,
tbrethes@mopocket.com

Nov. 2000

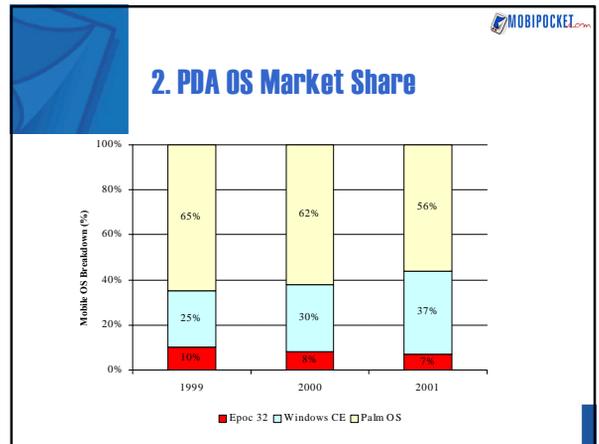
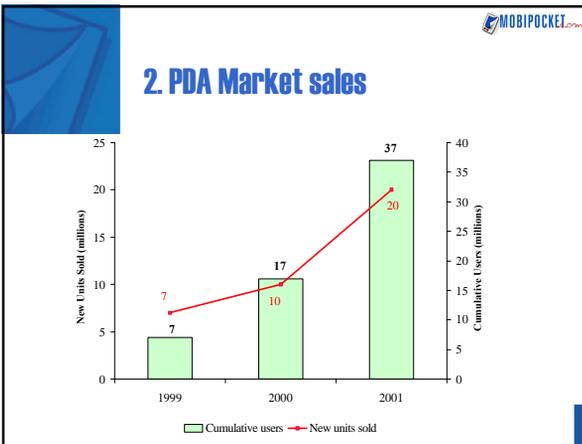
Presentation of MobiPocket

1. Introduction
2. Market opportunity
3. MobiPocket Reader
4. MobiPocket Publisher
5. MobiPocket DRM



2. Market opportunity

- ePublishing market : US \$ 2.5 billion in 2003 (Forrester)
- PDAs market (excluding smartphones) : 37 million units in 2001
- 3 main incompatible PDA Operating System : PalmOs, WindowsCE, Epoc32
- => PDAs are the most promising mobile platform for electronic reading



2. MobiPocket Momentum

- **Principal Member of the Open eBook consortium**
- **More than 250 000 Reader downloads since September 1999**
- **More than 150 eNews and 4000 eBooks available**
- **Tethnology awards:**
 - Best eBook Technology 2001 Frankfurt eBook Fondation
 - Mobipocket Reader awarded 2nd best PDA enabler by ZD Net (May 2000), with 5 star rating

2. Selected Content Providers

- | | |
|-----------------------------|--------------------------------|
| ■ Havas | ■ Les Echos (Pearson) |
| ■ Hachette (pending) | ■ La Tribune |
| ■ Maxima | ■ Le Figaro |
| ■ Versaware | ■ Libération |
| ■ Reed Elsevier | ■ Le Nouvel Observateur |
| ■ ZDNet | ■ Challenges |
| ■ NextMedia | ■ L'Equipe |
| ■ Sing Tao | ■ Marianne |
| ■ MPH Online | ■ Les Inrockuptibles |
| ■ Réseaux et Télécom | ■ Cadres Online |
| ■ NewsFam.com | ■ Avocats Online |
| ■ Overgame.com | ■ Team Palmtops |

2. Technology Partnership

- **Wireless**
 - Major agreement with one Mobile Phone manufacturer for the Wireless market
- **PDA Bundling**
 - Palm : MBP Reader in the top 4 CD companion color applications
 - PocketPC : Discussions with HP, Casio for European market
- **Portal**
 - Major agreement with one of the top portal for distributing content and integrating with their Ad system

MobiPocket.com Technology

- **eReading : MobiPocket Reader**
- **ePublishing : MobiPocket Publisher / Web Companion**
- **eDistribution : Digital Rights Management**

3. eReading : MobiPocket Reader

- **Universal eBook Reader for all PDAs**
 - Native support of all **existing standard file formats**: TXT, HTML, PRC DOC
 - Extended support for the MobiPocket **XDOC PRC** File format (**Open-eBook** compliant)
- **Available on all PDA platforms**
 - **Windows CE 2.0 and above** (PPC, HPC, HPCPro, Pocket PC, HPC2000)
 - **PalmOs v2.0 and onwards** (Pilot Personal / Pro, Palm III, Palm IIIx, Palm V, Palm Vx, Palm VII, Visor, Palm IIIc, M100, TRG Pro, Sony...)
 - **Psion** (Epic32) : Psion Series 5 / 5mx, Revo, Psion Series 7 / NetBook...
 - **Embedded Linux**
- **Localized versions**
 - English, German, French, Chinese, Japanese (DBCS support)

Reader : Functions

- **A paperback like reading experience...**
 - **Page by page** text formatting (no scroll bars!)
 - **Full justified text with hyphenation** (like any paper book)
 - **Bookmarks** and annotations
 - Turn a page by touching the screen
 - Table of contents, cover page, indexes,...
- **Powerful functions**
 - Native support of **Open-eBook** and **XML/HTML/CSS format**
 - Complete eBook personalization : change font size, type, color,
 - Full text search
 - Integrated and extensible **dictionaries** support
 - **Multimedia** : embedded Images (BMP, GIF) and MP3 player integration
 - Infra-Red send / receive for non encrypted eBooks

Reader : Screen shots

One click access to: Table Of Contents, Bookmarks, Font Size

Page number and clickable navigation menu

Bookmarks and annotations

Full justified text, hyphenation and ample margins for paperback reading experience

Clickable progression bar for easy eBook browsing

Open-eBook Support

- **All HTML / CSS tags supported, including**
 - Hyperlinks
 - Tables
 - Images
- **Support of MetaData**
 - Displayed by the Reader (menu MobiPocket > eBook info)
- **Support of Guides**
 - Displayed by the Reader as additional menu items in the navigation menu
- **Support of Tours**
 - Currently ignored by the Reader, support for the next release

XDOC PRC File Format

- **XDOC PRC file format is MobiPocket extension to the standard DOC PRC Palm community format (same binary file, same compression algorithm)**
- **XDOC contains :**
 - An open-eBook publication, including images
- **Content is encrypted**
- **The Header contains the encrypted user PID**

MobiPocket Rendering Engine

- **One unique file format (XDOC PRC) for all devices containing the optimal rendering (OEB HTML + CSS + 256 color palette images) as defined by the Publisher**
- **Reader performs the best match between actual device rendering capabilities and the optimal rendering in terms of:**
 - Font types and sizes
 - Device screen size
 - Device color/black and white capabilities (image palette matching)
 -

eBook Rendering on Windows CE / PalmOS

Windows CE Palm Size PC

Palm IIIc

Image support PalmOS / Windows CE

PalmOS 3.5 (Palm IIIc)

PalmOS 3.2 (Palm V)

WinCE PocketPC

WinCE HPC Rendering



WinCE HPCPro eBook Rendering



Epc32 Rendering

Pision Series 7



Supported PalmOs devices



Supported WinCE HPC



Supported WinCE HPC Pro



Supported WinCE PalmSize PC



Casio E105



Compaq Aero 2100



HP Jornada 420



Everex Freestyle



Philips Nino 510

Supported WinCE PocketPC



Supported Epoc32 Devices



Psion Series 5, 5mx



Psion Revo



Psion Series 7, netBook



Ericsson MC218

Special functions for PocketPC

- Integrates with the Pocket **Windows Media Player** (tag <SOUND>) for playing MP3/WMA files
- Integrates with the **Sound Recording Engine** (new tag : <RECORD>)
- Integrates with the **Pocket Outlook** for sending emails
- Integrates with the **Pocket Internet Explorer** for launching external URLs

MobiPocket Reader Executable Sizes

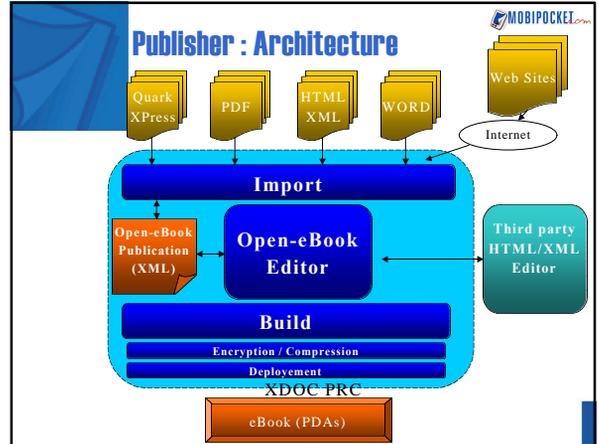
- **For PalmOs**
 - Setup program : 1 Mb (including the PC Web Companion app.)
 - Executable on the PDA : **70 Kb**
- **For Windows CE**
 - 1 Setup program : 1,6 Mb (including the PC Web Companion app.)
 - Executable on the PDA : **160 – 200 Kb** (depending on the processor)
- **For Epoc32**
 - Setup program : 1,3 Mb (including the PC Web Companion app.)
 - Executable on the PDA : **150 Kb**

Software Evolutions : MBP Reader

- Porting to **Franklin eBookman** (Q4 2000)
- Porting to **Embedded Linux** (Q4 2000)
- **SubPixel Rendering** on color PalmOs/WinCE (Q1 2001)
- **Wireless support** (eBook download / eNews extraction) on Palm/WinCE/Epoc32 (Q1 2001)
- Integration with Visor / Sony MP3 Player on Palm (Q1 2000)
- **Share annotations/ bookmarks with others on the Web / IR** (Q2 2001)

4. ePublishing : MobiPocket Publisher

- **eBook publishing Application**
 - Available for Windows 95/98/NT/2000
- **Based on standards**
 - First implementation of **Open-eBook** specification for PDAs
 - Builds a **unique cross-platform eBook** file format (XDOC PRC)
 - Integration with any third party HTML/XML editor
 - Support of CSS style sheets
- **Advanced import functions**
 - Generates an open-eBook publication from any PDF, Office, TXT, HTML existing file



Publisher : Screen shots

Import any TXT, HTML, DOC PRC file into an Open-eBook Publication file

Generate a cross platform, encrypted, compressed XDOC eBook for PDAs

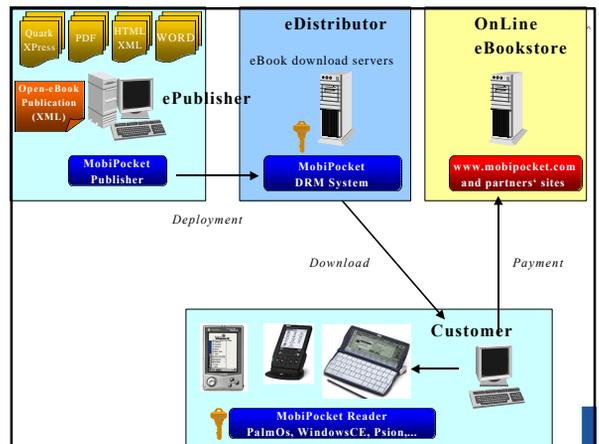
View and Edit all parts of an Open-eBook publication File : Manifest, Spine, Meta-Data, Tours and Guide

MobiPocket Publisher SDK

- Available as set of **ActiveX** components
- **Script** the import/publishing of OEB publications into cross-platform XDOC PRC eBook files
- Do **batch processing** / integration into an eProduction workflow
- Enables **Automatic deployment** to MobiPocket eDistribution Server

5. eDistribution : MobiPocket Digital Rights Management (DRM)

- **Objectives**
 - To offer the best level of security for authors, editors and online bookstores
 - To be very flexible (multiple security levels) to meet various security needs
 - To keep it very simple for the customer
- **Content Encryption**
 - Guaranties that the eBook content can't be extracted/ modified by a third party
 - Random private symmetric 128 bit encryption key
- **Unique Signature of each eBook**
 - Guaranties that the eBook file bought cannot be read by anyone else other than the buyer
 - Based of the **encryption of a unique identifier** (PDA serial number)



MobiPocket DRM Server

- **Available as a SDK for**
 - Microsoft Windows NT/2000 (IIS)
 - Any java based Web Server
- **SDK for Microsoft IIS**
 - A set of ASP pages and server-side ActiveX components
- **SDK for Java-based Web Server**
 - A set of JSP pages and servlet components
 - Runs with Jrun, Tomcat, IBM WebSphere,....

Contact us

- **Address**

104 av. du Président Kennedy 75016 PARIS, FRANCE
tel: +33 1 42 24 14 00
- **WebSite**

<http://www.mobipocket.com>
- **Nathalie TING, CTO**

nting@mobipocket.com



<http://www.mobipocket.com>

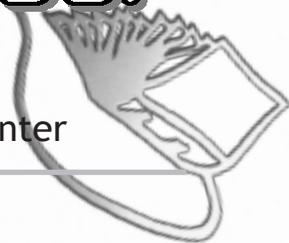
Do you believe in Mobility?

ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

November 5 - 7, 2001

Ronald Reagan Building and International Trade Center



John Roberts

Project Leader
NIST

www.nist.gov/Div895

“The NIST Rotating Braille Reader for Electronic Books”

devices. John has conducted display research since 1993.

John Roberts is Program Manager for the Advanced Display Technology Systems lab, within the Information Technology Laboratory at the National Institute of Standards and Technology (NIST). This lab is dedicated toward research on the role of displays (including, but not limited to visual displays) for content manifestation in information technology systems. Current projects include development of new display characterization techniques, investigation of stereo display requirements and electronic book readers, and development of new Braille and tactile graphic display technology for E-books and other information

The NIST Rotating Braille Reader for Electronic Books

John Roberts, Oliver Slattery, Brett Swope

Information Technology Laboratory

November 2001

<http://www.nist.gov/braille>



Ebooks Highlight the Need for Accessibility

- The pervasive digital world already gets information “most of the way there”
- New laws, regulations, legal precedents
- Growing market for products to meet legal requirements and organization policies
- Public relations (both negative and positive)
- Social benefit: inclusion, increased productivity

Challenge for Braille - High Cost!

- Hundreds of piezo actuators (one per dot)
- Cost is the main limit to market size
- Braille is bulky
 - full line displays have poor portability
 - short line displays require many hand motions
- Piezo actuators require high drive voltage



The NIST Rotating-Wheel Braille Display

- Offers dramatically lower cost
- Standard Braille
 - a pleasant reading experience
 - user-selectable reading modes
- No high voltages required
- Can be made extremely compact
 - while keeping many of the usability benefits of a long line display

Project History

- Electronic Book '98 (October 1998)
 - Judith Dixon, others called for improved accessibility for electronic books
 - NIST identified the high cost of Braille as an accessibility issue
- 2nd Generation prototype functional September '00
 - Later reconfigured for improved performance – 300 chars/minute, production versions will be much faster
 - Exhibited at NFB Convention, July 2001

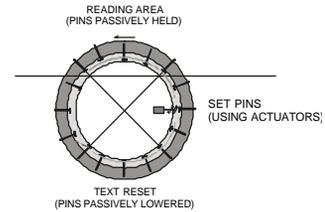
NIST 2nd-Generation Design

- Braille on the rim of a rotating wheel
- Braille dots set as they move past a single set of actuators
- Braille pattern is preserved for 1/3+ of wheel rotation
 - 16 characters readable at a time on prototype
- Pins are reset outside of the reading area

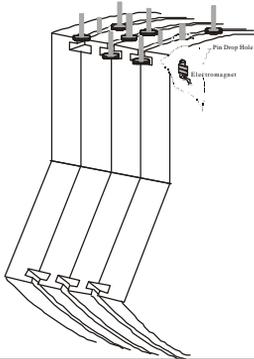
Advantages of NIST Design

- Uses only 3 actuators (4 for 8-dot Braille)
- Allows multiple finger reading
- Even though wheel is curved, feels like a straight line of Braille text to the user
- “Strong” dots to resist finger pressure
- Durability, replaceable module structure
- Compact: size of portable CD player or less

Assembled Wheel with Non-Rotating Insert



Pin Placement Concept

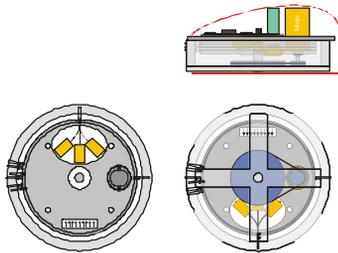


Assembled 2nd-generation Prototype

- Showing drive motor, wheel with Braille dots, solenoids, drive electronics and computer interface.



Proposed Compact Design (about the size of a portable CD player)



Manufacturing Advantages

- Extremely low cost
 - Most major components can be injection molded or stamped
 - Pins: screw machine or other methods
 - Possible sale price: \$1000 (compare \$5-15K)
- No high voltages, reasonable power use
- Possible “pop out” user replaceable mechanical module (much faster repair)

User Controls

- **Wheel speed** (determines reading rate)
- **Stop/start mode** (optional mode for reading motionless text)
- **Navigation controls** (e.g. NISO/ DAISY Digital Talking Book protocol)
- **Position indicators** (context switch, table column separators, etc.)

Example Portable Devices

- PDAs
- Ebook readers
- Communications devices
- Navigation, interaction with environment
 - GPS, local broadcast from stores, offices, etc.
- Financial transactions (e.g. ATMs)
- Information kiosks

Recent Work on Tactile Graphics

- Many blind and visually impaired people have told NIST about the need for refreshable tactile graphics
- Needed to convey graphical/image content
- Embossers can produce tactile graphics on paper or plastic media, but consume media for every picture produced (non-refreshable)

Refreshable Tactile Graphics

- Re-use the same surface for multiple images
 - Same principle as a refreshable Braille display
- Applications include:
 - Illustrations in an ebook
 - Web page graphical content
 - Incremental addition of detail – can be important for tactile graphics
 - Engineering or artistic design applications

The Engineering Challenge of Tactile Graphics

- Tactile surface requires thousands to tens of thousands of pins, closely spaced
- Conventional approach: one actuator for each pin
- Many times the cost of a Braille display

NIST Approach to Reducing the Cost of Tactile Graphics

- An extension of the concepts of the NIST Braille display
- The pins that make up the tactile surface are passive devices (no individual actuators)
- Pins are set into position to form a pattern, then locked for reading
- After reading, the pins are unlocked, and reset so new graphic can be drawn

Features of the NIST Design

- One or a small number of actuators controls thousands of pins – a huge reduction in cost
- Vector drawing approach – works well with line drawings
- Supports incremental drawings – pins can be unlocked and additional features added (current design does not permit incremental erasures)

Status of Tactile Graphics Work

- Passive pin array with vector drawing system
- Driven by a modified plotter – draw time is independent of pin density
- First successful operation in the lab: October 15, 2001
- Automated pin lock and reset need to be implemented, plus better software drivers for writing operation
- Visit the lab to try out the current version!

First Laboratory Prototype Tactile Graphic Display

- Driven by modified plotter
- Over 3600 pins
- Set by a single actuator – vector drawings



NIST Braille/Tactile Display Team



Oliver Slattery, Edwin Mulkens, John Roberts, Brett Swope, David Kardos (not shown: Volker Min, Michael Sutton, Gina Rodgers, Nicholas Guttenberg, Tracy Comstock)

Thanks to:

- Victor McCrary, Xiao Tang, ITL/NIST
- Fernando Podio - Braille ebook idea
- NIST Shops
- NFB and other accessibility organizations, people who have provided feedback, encouragement
- Curtis Willoughby, Brian Buhrow, George Kerscher, others - engineering suggestions

For More Information:

<http://www.nist.gov/braille>

or contact:

John Roberts, project manager

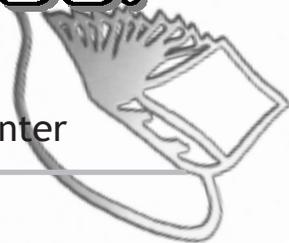
john.roberts@nist.gov

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Shimon Rosenberg

Director

e-Book Business Development

Apex ePublishing Data Services, LLC

www.apexinc.com

“Create Once, Use Many”

Shimon Rosenberg is a veteran of the Electronic Publishing Industry. He started in 1995 working with some of the earliest interactive CD-ROM products for FutureVision Multimedia, which became part of The Learning Company. In 1998, he joined a team of executives that left The Learning Company to establish Versaware. There Mr. Rosenberg introduced some of the earliest e-Book concepts to traditional publishing companies.

Earlier this year Mr. Rosenberg joined Apex ePublishing as the Director of e-Book Business Development. Apex is the leading conversion provider for the e-Book industry and other information industries.



APEx

*Create Once, Use Many:
Maximizing Your e-Book Investment*

2001 e-Book Conference

Shimon Rosenberg

Apex ePublishing

- Founded in 1988
- 2,000 Employees
- 9 Production Facilities in India
- Project Management and Software Design Based in USA
- Leader in Conversion Services for:
 - Informational Databases (Legal, Financial, Medical, etc.)
 - Academic & Research Libraries
 - Professional Journals
 - Educational Publishers (STM, Humanities, General, etc.)
 - Newspaper Repositories
 - Geospatial
 - e-Books

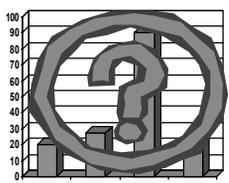


Survey Results

Of the following, which will be the dominant e-book format in the year 2005?

1. LIT
2. PDF
3. Other

You Answered:

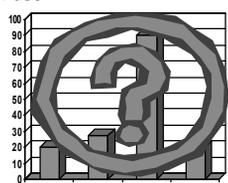



Survey Results

What is the most significant added value that e-books provide?

1. Portability/convenience
2. Enriched information/indexing
3. Access/ease of use
4. Low cost
5. Other

You Answered:

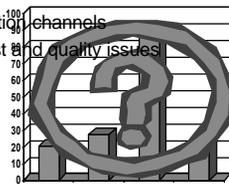



Survey Results

To be successful, what is the most important obstacle for the e-book market to overcome?

1. Non-user friendly hardware
2. Uncertainty of digital rights protection for publishers
3. Limited distribution channels
4. Conversion cost and quality issues
5. Other

You Answered:

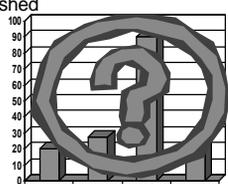



Survey Results

Which type of book will be most successful as an e-book?

1. Textbooks
2. Reference
3. Novels
4. Self-published
5. Other

You Answered:




Survey Results

By the year 2020, will the library have become a book museum?

Yes / No

You Answered:

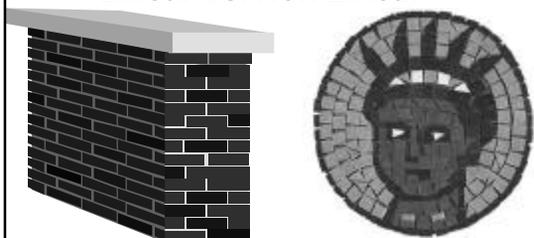


What Kind of Content Do You Have?



2 Basic Types of e-Book Content

Linear Vs. Non-Linear



Linear Content

- Meant to be read from beginning to end
- Delivered as a whole unit
- Parts cannot be taken out of context
- Simple Structure: Sentence, Paragraph, Chapter



Linear Content

Conversion Methodology

- Promise of OEB
- Formats du jour Still Emerging
- Consider Neutral Format
- Economies of Scale
- Systematic Implementation
- Focus is on Distribution and Delivery



Non-Linear Content

- Published for informational value
- Referenced
- Parts can be taken out of context
- Can have complex structure
- Can be used in many different forms electronically
- Forms backbone of databases



Non-Linear Content



Implementing e-Content Strategies

- Step 1 - Planning
 - How many ways can this content be used?
 - What other content can this be combined with to add value to both?
 - What other ways can you add value to the content and to the end-user?
 - Define access models and distribution possibilities



Non-Linear Content



Implementing e-Content Strategies

- Step 2 - Structuring
 - Use Access Models to define structure
 - Ensure that structure incorporates:
 - Flexible tagging
 - Neutral format
- (The best search engine does not compare to a good tagging structure)



Non-Linear Content



Implementing e-Content Strategies

- Step 3 - Implement Selling Strategies
 - Test, Test, Test!!!



What Distinguishes Apex

- ✓ *Conversion Technologies*
- ✓ *Production Management Systems*
- ✓ *Systematic Project Implementation*



Thank you



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 845-304-6222

Please visit us in booths 37,38 or
 on the web at www.apexinc.com.

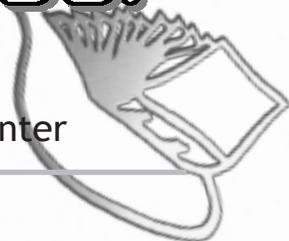


ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

November 5 - 7, 2001

Ronald Reagan Building and International Trade Center



George Kerscher

(co presenter with James Pritchett)

Senior Officer

Recording For the Blind & Dyslexic in the
USA

**“Meeting Everybody’s Needs:
Converting print textbooks to
electronic and accessible
formats”**

George Kerscher, Senior Officer, Accessible information, is employed by Recording For the Blind & Dyslexic in the USA. He has been on loan to the DAISY Consortium since 1997 as their International Project Manager. In May of 2000 he was elected as Chairperson of the Board of Directors of the Open eBook Forum. He also serves as Co-chair of the Steering Counsel for the Web Accessibility Initiative.

Mr. Kerscher has worked in the disability field for more than 15 years developing standards for the representation of information for persons with print disabilities. In 1997, he founded Computerized Books for the blind and Print

Disabled. He is also a founding member of the International Committee for Accessible Document Design. Most recent standards developments are with the DAISY Consortium, the NISO committee for Digital Talking Books, and on the Open eBook Forum Publication Structure working group.



Recording for the Blind & Dyslexic
(RFB&D)

Meeting Everybody's Needs: Converting print textbooks to electronic accessible formats

By:

George Kerscher, Senior Officer, Accessible Information
Email: Kerscher@montana.com

&

Dr. James Pritchett, Project Manager, Digital Audio
Email: JPritchett@rfd.org

Goals

- To demonstrate how a XML source file encoded using DAISY / NISO DTD can be created to simultaneously produce:
 - An <OeB> Publication Structure 1.01 publication
 - A DAISY Digital Talking Book (DTB) project ready to record
 - Braille-ready files
- To prove that XML files can be cost effectively created from the print version.
- To showcase how accessible XML benefits publishers by also giving them eBook products.

Step 1

1. Identify conversion vendor
2. Explain NISO XML DTD and provide guidance
3. Review marked up files from vendor
4. Provide feedback on conversion

IMPORTANT: The source files must be complete, in the correct linear reading order, and marked up correctly!

Step 2

Create Package file

1. Create manifest
2. Identify metadata requirements
3. Create the DAISY / NISO "Package file"
4. Create a style sheet for non-<OeB> base elements
5. Create the <OeB> "Package file"

NOTE: At this point you have both a valid <OeB> Publication Structure 1.01 document and a DAISY / NISO version.

Creating the final forms

- OeB documents are normally compiled into a distribution format specific for each reading system. We took the <OeB> Publication Structure 1.01 document and created a Microsoft Reader (lit) version; and any <OeB> conforming reading system can take these files and produce a distribution document.
- We pulled the DAISY / NISO version into a recording tool that supports the DAISY format and recorded the text. This give us a multimedia version with synchronized text and human narration. DAISY conforming multimedia reading systems present the Digital Talking Book (DTB) to the user.
- We took the XML source document and ran it through a Braille translator that is DAISY / NISO aware and automatically formatted the document. Braille specialists review the translation and make corrections and do particularly tricky formatting such as for tables and other constructs that require human intelligence.

Best Practices and Lessons Learned

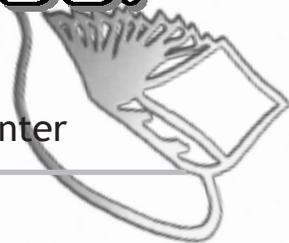
- The source XML is the key to success.
- Whichever vendor you choose, make sure they are willing to establish a solid, long-term relationship.
- Provide clear guidelines for the tagging. For the DAISY/NISO DTD, a comprehensive set of *Structure Guidelines* is available.
- Provide your vendor samples of particularly difficult pages that are marked up correctly.
- Review the delivered product closely and insist the vendor correct mistakes.
- Invest the time with your vendor to ensure consistent results with future projects.

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James Pritchett

(co presenter with George Kerscher)

Project Manager

Recording For the Blind & Dyslexic in
Princeton, NJ

“Meeting Everybody’s Needs: Converting print textbooks to electronic and accessible for- mats”

James Pritchett has a varied background; he has worked in the fields of music, computers, digital sound, publishing, and information technology. He holds degrees in music and musicology from the University of Maryland—College Park and New York University. As a software designer/programmer, he has collaborated with composers at the computer music studios of Brooklyn College—CUNY and Princeton University. In the mid-1990s he worked in the research arm of Peterson’s, a publisher of information on higher education and lifelong learning. At Peterson’s, Dr. Pritchett managed several databases and data collection projects that were used

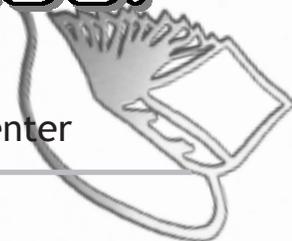
to create both print and online publications. Since 1999 he has worked at the national headquarters of Recording for the Blind & Dyslexic in Princeton, New Jersey. Dr. Pritchett is a project manager in the information technology area at RFB&D, where he provides software and systems support for all varieties of digital content. He is also a contributor to the specifications work of the Daisy Consortium, the NISO Digital Talking Book committee, and the Open eBook Forum’s Publication Structure Working Group.

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AUTHORS, APPLICATIONS, & ACCESSIBILITY

November 5 - 7, 2001

Ronald Reagan Building and International Trade Center



James Hendler

(co presenter with Tim Berners-Lee)

Professor

Department of Computer Science, Institute
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University of Maryland

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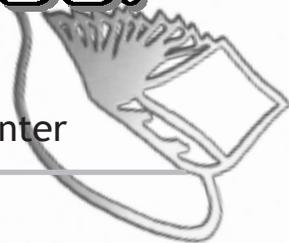
Jim Hendler is a Professor of at the University of Maryland, where he has joint appointments in the Department of Computer Science, the Institute for Advanced Computer Studies and the Institute for Systems Research, and he is also an affiliate of the Electrical Engineering Department. He is the author of several books and over 100 technical papers in artificial intelligence, robotics, intelligent agents and semantic web systems. Hendler was the recipient of a 1995 Fulbright Foundation Fellowship, is a member of the US Air Force Science Advisory Board, and is a Fellow of the American Association for Artificial Intelligence. He is also the former Chief Scientist of the Information Systems Office at DARPA.

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Tim Berners-Lee

(co presenter with James Hendler)

3Com Founders Chair

Lab - CS

Massachusetts Institute of Technology

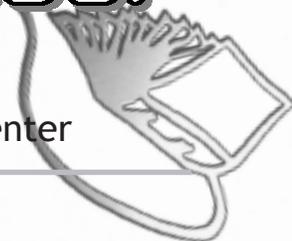
Tim Berners-Lee is a graduate of Oxford University, England. He now holds the 3Com Founders chair at the Laboratory for Computer Science (LCS) at the Massachusetts Institute of Technology (MIT) and directs the World Wide Web Consortium, an open forum of companies and organizations with the mission to lead the Web to its full potential. In 1989, he invented the World Wide Web, an internet-based hypermedia initiative for global information sharing. while working at CERN, the European Particle Physics Laboratory.

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Gunter Hille

CEO
didi GmbH

Gunter Hille studied Physics at the University of Hamburg and graduated with a M. Sc. degree in 1976. After working as an IT consultant for several years, he returned to academic life in 1980, working as a scientist and lecturer at the Computer Science Dept./University of Hamburg. His fields of research were Pattern Recognition, Artificial Intelligence and Information Retrieval Systems. In 1994, he left the University and founded his first company, which is responsible for "Projekt Gutenberg-DE" and provides internet services for German publishers.

In 1998, he founded "dibi Medien Entwicklung und Vertrieb GmbH", a company working in all fields of

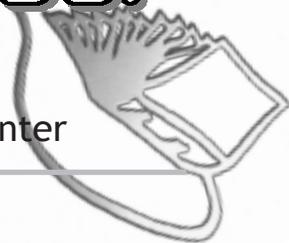
the electronic publishing industry: conversion, secure distribution and web shop applications.

ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

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David Rothman

National Coordinator
TeleRead

“TeleRead: The Case for a Well-Stocked National Digital Library System for All”

David H. Rothman, an editor-writer specializing in technology and business, has long been interested in affordable knowledge for the non-elite. A former poverty beat reporter, he has been refining his TeleRead plan for a decade.

TeleRead proposes a *well-stocked* national digital library. It would be rich in e-books and other copyrighted content. Public-domain items and museum-style exhibits online can be extraordinarily valuable, but Rothman believes they should merely be the start. Rothman tells how to cost-justify a TeleRead library and integrate it with local schools and libraries while fairly paying writers, publishers and other content creators. He also envisions TeleReads for other countries. Rothman offers

Spanish-language material at teleread.org and has attracted mailing-list members from Mexico, India, Pakistan and Israel, not just the States. He has spoken at the World Bank and Instituto Tecnológico y de Estudios Superiores de Monterrey.

Among other writings, Rothman is the author of “Copyright and K-12: Who Pays in the Network Era?” (part of a series on educational technology—commissioned by the U.S. Department of Education). Rothman also contributed to *Scholarly Publishing: The Electronic Frontier*, an information science collection from The MIT Press and the American Society for Information Science. His chapter is “TeleRead: A Virtual Central Database without Big Brother.”

In addition, Rothman has written about TeleRead for

Computerworld, the *Washington Post* and *U.S. News & World Report*, and he testified on his proposal in November 1993 during the first hearings on copyright and the National Information Infrastructure.

Accustomed to skepticism from the standard suspects, Rothman nostalgically remembers the days when TeleRead was deemed impractical because affordable modems would never go faster than 9,600 bps.

More enthusiastic about TeleRead has been William F. Buckley, Jr., who, in a syndicated column, wrote: “Andrew Carnegie, if he were alive, would probably buy TeleRead from Mr. Rothman for \$1, develop the whole idea at his own expense, and then make a gift of it to the American people.”

TeleRead: The Case for a *Well-Stocked* National Digital Library System for All

David H. Rothman, National Coordinator
of TeleRead: Bring the E-Books Home

TeleRead's Background: This noncommercial proposal tells how to use technology to promote literacy and learning in general and encourage similar efforts in other countries. TeleRead is also the name of a small, Net-based group with email subscribers in the United States, Israel, Mexico, India and Pakistan (teleread.org). TeleRead articles have appeared in the *Washington Post*, *Computerworld* and *U.S. News & World Report*. An earlier version of the present TeleRead plan is the concluding chapter of *Scholarly Publishing: The Electronic Frontier* (MIT Press/ASIS). William F. Buckley, Jr., has written two favorable columns on TeleRead idea, which I have been advocating for the past decade.

Why TeleRead Is a "Must": Do we really want to replicate online the "savage inequalities" of our schools and libraries? In one year, a budget-strapped California county spent just 25 cents per resident on books and other library content. The success of a Chicago parochial school with RocketBooks suggest that e-books can be a cost-effective way to expand reading choices for the children of low-income parents. At the same time, TeleRead would help the elite, too, by increasing the variety of books available in Bethesda, not just Anacostia. Moreover, e-books at home would be valuable to aging baby boomers who may not be able to drive to the library, or whose eyes could benefit from the enlarged type on the screens of e-book-readers. If nothing else, TeleRead is a way to help text survive and thrive in a multimedia age—a worthy goal in itself.

Main Elements of TeleRead: A well-stocked national digital library system would focus on books but also be rich in *appropriate* multimedia and expand on the valuable American Memory project. Aid would go to local libraries and schools to help absorb the technology and content. Beyond educational benefits, cost-justification would occur through greater government efficiency and promotion of Net commerce at a crucial time. In addition, TeleRead would offer remote and on-site assistance to other countries in the form of help with the technology, the absorption of it, the legalities and the library science details. In the standards area, TeleRead could build on the work of groups like the Open eBook Forum and the National Information Standards Organization—and, yes, also use the expertise of the Convergent Information Systems Division at the National Institute of Standards and Technology.

Beneficiaries: First, schoolchildren, other learners and our underfunded libraries, which devote just a fraction of their money to actual content. Second, content-creators. Third, the e-book industry—hardly stellar so far in its marketing to schools and libraries. Fourth, business in general, which would enjoy a better-educated workforce. Fifth, everyone, in terms of cultural preservation. One of the goals of today's terrorists is the extermination of "Satanic" cultures, especially America's. TeleRead would help protect content, not just the networks that transmitted it. With books, art, music and other culture backed up—through closely monitored archives on different storage media and in many countries—fanatics could not completely destroy any nation's library. Do not be surprised if the physical Library of Congress is eventually on the hit list of a bin Laden-style terrorist. While TeleRead could never bring incinerated books, paintings or recordings back to life in their physical forms, it at least could preserve the words, images and sounds.

Participants: Libraries, museums, content-providers, nonprofits, individual philanthropists and corporations would all have roles. The library and museum systems would help supply the general infrastructure

and work with content-providers to set the general direction. Nonprofits and individual philanthropists would contribute content or finance it. TeleRead servers could house, for example, a “William and Melinda Gates Collection.” Even after the dotcom debacle, billions of dollars are looking for the right charity, and TeleRead would help send more of it in the direction of the librarydom. As for corporations, they could donate money to TeleRead, provide technical services, and, of course, in the case of publishers, sell content.

How TeleRead Differs from Many Existing Visions: Most of all, TeleRead would offer better integration of a national digital library system into the schools and the rest of society. Second, it would be closer to the Carnegie version of “free” libraries than most other plans even though not everything would be free. Third, TeleRead could let users store content on their own machines for fast reference *and* the sharing of books with friends. Tracking of accesses could still occur through techniques already planned for commercial use. Fourth, TeleRead would offer massive archives for both public accesses and backup. Fifth, it would systematically cost-justify itself with inexpensive multi-use machines that could display e-books in style but also work with government forms and Net commerce, as well as word-processing, spreadsheets and other common applications. TeleRead would encourage the e-book industry to sell machines to libraries and schools at discount or perhaps even give them away in some cases. Lent out to the public, these demo units would boost the demand for e-book-friendly computers and more quickly drive down costs to the point where just about all machines would be privately owned. Please note that while most American families own computers, tens of millions still lack them—probably less for economic reasons than because of the technological challenges. An integrated approach like TeleRead, combining the most suitable technology with the human side, could use libraries to address this problem.

Role of Content Providers: TeleRead would enable publishers and writers to worry less about the details of distribution and marketing and more about content. The plan could pay by the number of accesses. Large publishers could gamble money up-front to be able to qualify for larger payments later on. Whether librarians like it or not, the publishing industry will insist that the popularity of commercial book influence the amount of compensation granted. But at least with TeleRead library books, publishers would have to pay to play in the big leagues, so that a few best-sellers would not dominate the spending on content. TeleRead strives for the balance missing from certain library-originated plans. It is fair both to schoolchildren and Random House. Ironically, if we find that technology cannot prevent massive piracy, a library approach could be more helpful to publishers than alternatives—by making it easier to collect money for content and by making thousands of books “free” and thus of less interest to pirates. TeleRead could combine both the library distribution system and the spine of a commercial one. Content-providers could decide whether to sell books commercially through the digital library system, at prices they wanted, or offer them for royalties decided by the TeleRead system. Most books go out of print within a few years. So a typical pattern might be for many worthwhile commercial books to become TeleRead offerings in time. TeleRead would actually mean *more* revenue for good publishers. What’s more, book-sellers could either become publishers themselves or offer enhanced versions of the TeleRead catalogue and database. A good example is Amazon.com, which collects readers’ comments on individual items and which aggressively cross-promotes.

TeleRead and Public Libraries: Certain librarians and hangers-on see electronic books as threats to their careers or at least their bureaucratic turfs. *Library Journal* has denied me a space to discuss TeleRead; and meanwhile a *Journal* editor has misleadingly implied that TeleRead would favor books by popularity alone. Her column ignored TeleRead’s pay-to-play feature, which would open spigots of money for less popular books. She was pandering to turf-fixated librarians who hate the idea of ordinary mortals easily finding titles that librarians have not blessed. Critics ignore the fact that TeleRead could limit

searches to items approved by local or national libraries, just so the readers toggled in this filtering. Quite perceptively, John Iliff, a veteran reference librarian and a former co-moderator of an influential library list on the Internet, has compared TeleRead to fluoride. He wishes that certain librarians were more like dentists and fretted less about job protection and more about the commonweal. Actually, as John and I both know, TeleRead would be a godsend to librarians since they could spend less time as clerks and stock-room workers and more time creating and annotating hyperlinks, packaging information and knowledge in other ways, and serving as mentors to library users. TeleRead would *not* eliminate the reference desk. Local librarians, moreover, could even create customized search engines and link sets and otherwise adapt the national collection to serve the exact needs of their own users. A library in Gloucester, Massachusetts, for example, could assemble detailed links on the latest technologies for sword-fishing. What's more, librarians and teachers could work more closely than at present; and, either in person or from afar, librarians could help guide schoolchildren and other library users through research projects. Also of interest to local librarians, TeleRead for years has called for local and state libraries to participate with national libraries and content experts in the selection of books for the national collection. Furthermore, TeleRead would not prevent local libraries from purchasing e-books and other items just for their localities. They could even use the national infrastructure as a way for local people to obtain this content, the only difference being the geographical access limitation. If enough local libraries kept acquiring a title, it might be a signal for the national collection to include it. Finally let me note one recent change in TeleRead in regard to libraries—a modification that may save a few elderly librarians from fatal coronaries. I have dropped the idea of publishers gambling money to be able to bypass librarians; that would be unnecessary if distribution systems for libraries and the commercial side overlapped sufficiently.

The Schools: TeleRead would encourage reading and learning by making it easier for children to discover books that exactly reflected their interests. Children could even beam books to each other, via infrared, without having to call them up online, although the accesses would later be reported automatically to assure compensation to publishers. TeleRead could make use of the natural “ecology of learning”—with teachers and librarians serving as foresters rather than dictating the location of every little bush. At the same time, since the hardware, software and library systems were so well integrated, TeleRead could better handle school and parental filtering than alternatives could. Best of all, books could be more current and cheaper without all that paper and ink to keep replacing.

Case History: I am grateful to Searchlight eBook Training, Inc. (eBook-Training.com) for calling my attention to the achievements of one of its clients, St. Elizabeth's Catholic School on the Southside of Chicago, where the teachers report that ebooks have saved money and intensified children's interest in reading. Librarians and others should worry less about paper and ink and cardboard—and more about the *words* and whether children will grow to love books. A fourth-grader named Shaneka has nicely explained why the children in Mrs. Devers' class are e-book enthusiasts. She mentions such delights as the ability to alter the size of the print or change the background from light to dark. But her first reason is the one about which educators and librarians should care the most, regardless of the medium. “Ebooks are fun,” she says, “because you can read stories.” In the case history at teleread.org, I explain how St. Elizabeth's has succeeded—not by turning teachers into technowhizzes, but by making it easier for them and their students to interact in very traditional and meaningful ways.

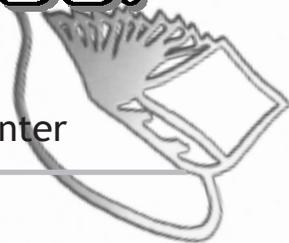
Contact information: David Rothman, rothman@clark.net, telephone 703-370-6540. Address: 805 N. Howard St., #240, Alexandria, VA 22304. A hyperlinked version of this document is at <http://www.teleread.org/ebook2001preview.html>. For time reasons, the forthcoming PowerPoint presentation will omit many of the details here.

ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

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Alison Lingane

Senior Product Manager

Bookshare

www.Bookshare.org

“Books without Barriers”

Founded by Benetech, a nonprofit that harnesses technology to serve humanity, Bookshare.org will provide an extensive online library of digital books to people who are blind or have significant reading disabilities. Bookshare.org is building this online library with Napster-type technology that allows people to share books that have been scanned and then transferred to either voice or Braille. But unlike Napster, Bookshare.org *is totally legal*, having been developed in cooperation with the Association of American Publishers and lawyers to meet copyright law requirements.

“Bookshare.org will bring a bookstore or library’s sense of infinite possibilities to people who haven’t been able to experience it before because of print disabilities such as blindness or severe dyslexia,” says Senior Product Manager Alison Lingane. “We’re offering independence and access to

information to people who’ve been limited in this area until now.”

Lingane has helped individuals realize their own promise before. For four years, this Harvard biology major helped inner-city youth learn the basics of running their own small businesses at Berkeley Youth Alternatives. At BYA, Lingane taught teens business skills – to do market research, formulate business plans, and then run the businesses – as well as important life lessons. Her BYA experience firmly convinced Lingane of the power of business to help people help themselves.

That, plus her strong belief in the importance of businesses built in the social interest, moved Lingane to concentrate on technology and social ventures for her MBA at Berkeley’s Haas School of Business. While in school, her inventiveness, energy, and commitment to social entrepreneurship led Lingane to co-

found the *Haas Social Venture Plan Competition*. With funding for prizes from corporations and foundations she helped secure, the competition, now in its third year, encourages students at the nation’s leading business schools to build businesses to work for the public good – ventures that measure success by their social and environmental impacts as well as by dollars and cents.

Finding in Benetech the socially and financially responsible business model she championed at Berkeley, Lingane joined Bookshare.org this spring. She had previously been Director of Product Development at 501Click Corporation, responsible for its top revenue-generating product.



Bookshare.org

Books without Barriers

A Benetech Initiative
Alison Lingane
November, 2001



Benetech Background

12 year history developing adaptive tech

- Silicon Valley nonprofit organization
- Sold successful reading system business last year
- 35,000+ reading system users in 60 countries and 12 languages
- Bookshare.org is first of new adaptive tech projects



The Bookshare.org Opportunity

Book access is what we are addressing

- Few publications available in specialized formats
- Active scanning helps fill this gap
- Web based library of scanned materials
- Disabled community helps themselves
- Launch end of 2001



The Copyright Exemption

Chafee Amendment: 17 U.S.C. § 121

- Congress and publishing industry supported access through this law
- Key requirements:
 - Authorized entity
 - Non-dramatic works
 - Copyright notice
 - Specialized formats (Braille, audio or digital text)
 - Proof of print disability



The Bookshare.org Solution

Members and volunteers create the content

- Users scan books and upload to central server
- All books verified by staff
 - Basic quality
 - Legal requirements met
 - Not duplicates
- Authorized members download encrypted books for access



Distribution channel for e-books

Reach a new market

- Bookshare.org search brings up list of accessible books from other sources
- Refer users to accessible books
 - E-books
 - Traditional libraries for the blind
- Publishers reach a hard-to-reach market



Specialized Formats

As the law requires

- NISO / DAISY 3.0
 - Digital talking book standard
 - DAISY software player
 - Reads book in synthetic voice
- BRF
 - Digital Braille
 - Braille devices or printers



Security for Bookshare.org

Seven Point Digital Rights Management Plan

- Qualified users
- Contractual Agreement
- Copyright notice



Security for Bookshare.org

Seven Point Digital Rights Management Plan

- Encryption
 - Tied to individual, not to book
- Watermark / Fingerprint
- Security database
- Security watch program



Learnings for the Industry

An "experiment" to watch

- Large online collection
- Subscription-based
- If it works, learn from it
- If it doesn't



Conclusion

Benetech's unique approach

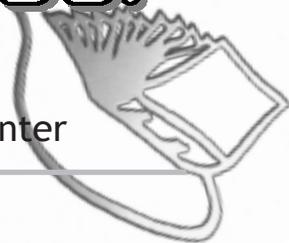
- Strong connections with stakeholders
 - Publishers, Disability Groups, Tech Industry
- Blend Internet file-sharing model with subscription and DRM
- E-books need critical mass to succeed
- Bookshare.org's potential for critical mass is high

ELECTRONIC BOOK 2001

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Ray Snouffer

Mathematician

NIST

www.nist.gov

“Distance Learning and NIST’s Security Testing Programs”

Mr. Snouffer has worked as a mathematician for the U.S. Federal Government since October of 1987. He began his career with the Defense Information Systems Agency (DISA) serving in a variety of roles including senior mathematician, lead software developer, and Project Officer for the Strategic Defense Analysis Project. In June of 1994, Mr. Snouffer accepted the position of Deputy National Program Manager for the U.S. Government’s Key Escrow program at the National Institute of Standards and Technology (NIST); taking over the position of National Program Manager in November of 1995. Since January 1997, Mr. Snouffer has served as the Director of the Cryptographic Module Validation Program. He also serves as the supervisor of the

Cryptographic Security Testing Program Area and the Manager of the Security Testing and Metrics Group of NIST’s Computer Security Division.

Distance Learning and NIST's Security Testing Programs

Ray Snouffer

Manager, Security Testing and Metrics Group

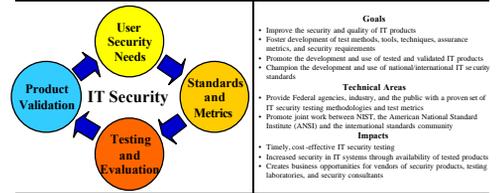
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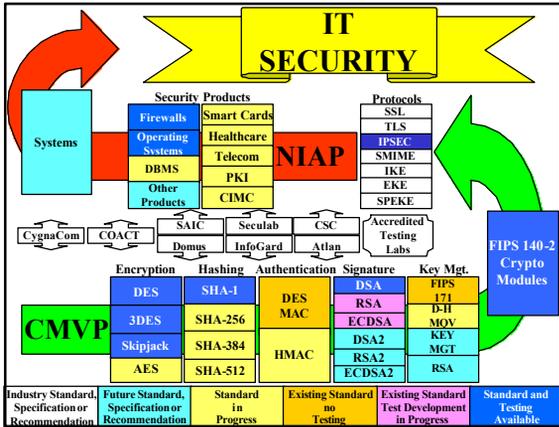
November 6, 2001



The Security Testing and Metrics Group



| | |
|--|---|
| Goals | |
| <ul style="list-style-type: none"> Improve the security and quality of IT products Foster development of test methods, tools, techniques, assurance metrics, and security requirements Promote the development and use of tested and validated IT products Change the development and use of national/international IT security standards | |
| Technical Areas | |
| <ul style="list-style-type: none"> Provide Federal agencies, industry, and the public with a proven set of IT security testing methodologies and test metrics Promote joint work between NIST, the American National Standard Institute (ANSI) and the international standards community | |
| Impacts | |
| <ul style="list-style-type: none"> Timely, cost-effective IT security testing Increased security in IT systems through availability of tested products Creates business opportunities for vendors of security products, testing laboratories, and security consultants | |
| Federal: | Collaborators |
| NVLP, State Dept., DoC, DoD, GSA, NASA, NIST, NSA, D&E, OMB | American National Standards Institute (ANSI), InfoGuard Laboratory, CMCT, Inc., CAPE Lab, Adva Laboratories, CORSEC Security Inc., Oracle, CISCO, Hewlett-Packard, Lucent, SAIC, Microsoft, Computer Sciences Corp., Arca, IBM, EDS, VISA, MasterCard, Anec, Checkpoint, Computer Assoc., RSA, Sun Microsystems, Network Assoc., Booz-Allen, Seculab Inc., Enturex, Silicon Graphics |
| Industry: | Major Projects |
| American National Standards Institute (ANSI), InfoGuard Laboratory, CMCT, Inc., CAPE Lab, Adva Laboratories, CORSEC Security Inc., Oracle, CISCO, Hewlett-Packard, Lucent, SAIC, Microsoft, Computer Sciences Corp., Arca, IBM, EDS, VISA, MasterCard, Anec, Checkpoint, Computer Assoc., RSA, Sun Microsystems, Network Assoc., Booz-Allen, Seculab Inc., Enturex, Silicon Graphics | <ul style="list-style-type: none"> Cryptographic Security Testing Cryptographic Module Validation Program National Information Assurance Partnership Common Criteria Evaluation and Validation Program International Recognition Arrangements Testing Laboratory Accreditation Automated Security Testing and Test Suite Development Industry Forums Education, Training, and Outreach Programs Conferences and Workshops |
| Global: | |
| United Kingdom, France, Germany, Japan, Korea, Canada, Netherlands, Australia, Italy, Spain, New Zealand, Finland, Sweden, Norway, Greece, Israel, ECMA, ICB, European, Mexico | |



Engaging the Education Sector "Distance Learning"

Definition: Distance Learning is simply learning from a distance, usually from home, or from a conveniently located off-campus site.

"Distance Education can help all Americans – including workers, parents, people in rural communities and people with disabilities – go to college by removing barriers of time and place through innovative technology." – Richard Riley, former U.S. Secretary of Education.

Distance Learning "The Issues"

- Determining student identity
- Providing:
 - Integrity for course materials
 - Confidentiality for student teacher interaction
 - Security for on-line registration and payment

Distance Learning "NIST's Role"

- Assist in Coalescing the IT security requirements of Distance Learning
- Develop new test methods for new technologies
- Provide guidance in the are of IT security and testing

Distance Learning “Strategy”

- Participation in existing national and international consortia and associations
- Speaking at existing major conferences
- Submission and publication of papers and articles in recognized journals and publications

Distance Learning “Impacts”

- Education Sector gains security and integrity in their mission to reach out and provide educational opportunities to a broader and more diverse learning community
- Greater availability of common security requirements and specifications for the education sector.
- Increased security in IT systems and networks through greater availability of evaluated and validated products

Distance Learning “Partners/Collaborators”

- Department of Education
- Public Broadcasting Service
- University Consortia
- CMVP Partners
- NIAP Partners

Today’s Climate

- Rapidly changing information technologies and compressed technology life cycles
- Growing complexity of IT products and systems
- Increasing connectivity among systems
- Dependence on commercial off-the-shelf IT products and systems
- Need for greater assurance in critical information infrastructures (both public and private sector)

Today’s Challenge

- Consumers have access to an increasing number of security-enhanced IT products with different capabilities and limitations
- Consumers must decide which products provide an appropriate degree of protection for their information systems
- *Impact: Choice of products affects the security of systems in the critical information infrastructure*

The Fundamentals

Building more secure systems depends on the use of---

- Well defined IT security requirements and security specifications
- *describing what types of security features we want...*
- Quality security metrics and appropriate testing, evaluation, and assessment procedures
- *providing assurance we received what we asked for...*

What Is Needed?

- Producers of IT products need to have a better understanding of consumer's information security requirements
- Consumers of IT products, systems, and networks need to have better ways to:
 - ✓ specify desired security features and assurances
 - ✓ assess the security claims made by producers

The International Standard Common Criteria-ISO/IEC 15408

What the standard is –

- Common structure and language for expressing product/system IT security requirements (Part 1)
- Catalog of standardized IT security requirement components and packages (Parts 2 and 3)

How the standard is used –

- Develop protection profiles and security targets -- specific IT security requirements and specifications for products and systems
- Evaluate products and systems against known and understood IT security requirements

Defining Requirements

ISO/IEC Standard 15408



A flexible, robust catalogue of standardized IT security requirements (features and assurances)

Protection Profiles



Consumer-driven security requirements in specific information technology areas

- ✓ Operating Systems
- ✓ Database Systems
- ✓ Firewalls
- ✓ Smart Cards
- ✓ Applications
- ✓ Biometrics
- ✓ Routers
- ✓ VPNs

Industry Responds

Protection Profile



Consumer statement of IT security requirements to industry in a specific information technology area

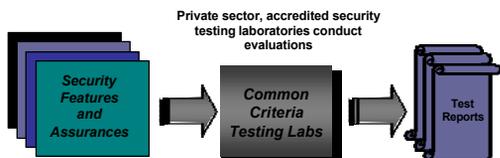
Security Targets



Vendor statements of security claims for their IT products

- ✓ CISCO Firewall
- ✓ Lucent Firewall
- ✓ Checkpoint Firewall
- ✓ Network Assoc. Firewall

Demonstrating Conformance

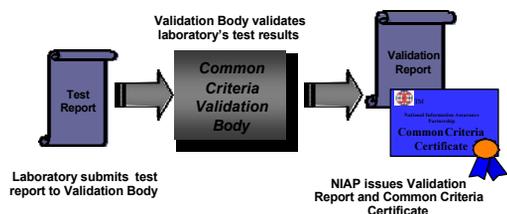


Vendors bring IT products to independent, impartial testing facilities for security evaluation

Private sector, accredited security testing laboratories conduct evaluations

Test results submitted to NIAP for post-evaluation validation

Validating Test Results



Laboratory submits test report to Validation Body

Validation Body validates laboratory's test results

NIAP issues Validation Report and Common Criteria Certificate

International Recognition of Test Results

Motivating Factors...

- Improve availability and range of choice of trusted products for consumers
- Reduce total cost of IT security testing and evaluation to developers
- Encourage formal IT security testing and evaluation

Mutual Recognition Arrangement

NIAP, in conjunction with the U.S. State Department, negotiated a Common Criteria Recognition Arrangement that:

- Provides recognition of U.S. issued Common Criteria certificates by 13 nations:
Canada, United Kingdom, France, Germany, Australia, New Zealand, Greece, Norway, Finland, Italy, Israel, Spain, The Netherlands
- Eliminates need for costly security evaluations in more than one country
- Offers excellent global market opportunities for U.S. IT industry

NIAP Testing Advantages

- Specification of security features and assurances based on an international standard
- Evaluation methodology based on an international standard---leading to comparability of test results
- Security testing laboratory expertise assessed by recognized national bodies; quality technical oversight provided by government experts
- Testing results recognized by many nations
- Reduced testing costs to sponsors of evaluations

NIAP Contact Information

National Information Assurance Partnership
100 Bureau Drive Mailstop 8930
Gaithersburg, MD USA 20899-8930

Director
Dr. Ron S. Ross
NIST-ITL
(301) 975-5390
ross@nist.gov

Deputy Director
Terry Lososky
NSA-V1
(301) 975-4060
mlsoson@missi.ncsc.mil

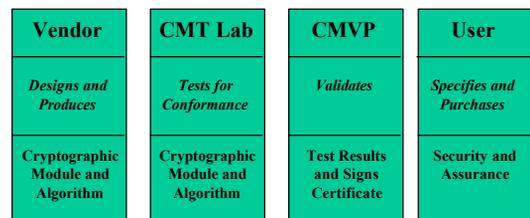
Technical Advisor
R. Kris Britton
NSA-V1
(410) 854-4458
britton@radium.ncsc.mil

Email: niap-info@nist.gov
World Wide Web: <http://niap.nist.gov>

Cryptographic Module Validation Program (CMVP)

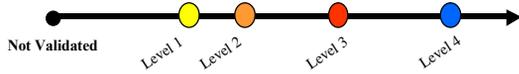
- Established by NIST and the Communications Security Establishment (CSE) in 1995
- Original FIPS 140-1 requirements and updated FIPS 140-2 requirements developed with industry input
- Five NVLAP-accredited independent testing laboratories
- Currently, over 160 validation certificates representing over 180 modules

FLOW OF A FIPS 140-1 VALIDATION



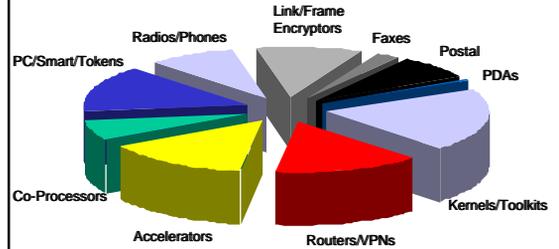
FIPS 140-2 Security Levels

Security Spectrum



- Level 1 is the lowest, Level 4 most stringent
- Requirements are primarily cumulative by level
- Overall rating is lowest rating in all sections

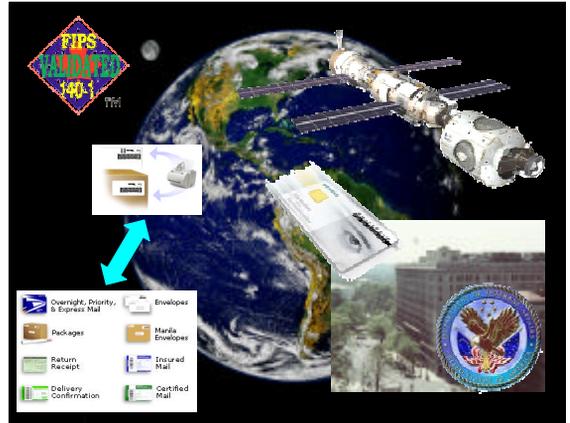
Validated Modules By Type



Participating Vendors

(as of July 30, 2001)

| | | |
|---|------------------------------------|--------------------------------|
| Alcatel | Fortress Technologies | Netscreen Technologies, Inc. |
| Algorithmic Research, Ltd. | Francotyp-Postalia | Network Associates, Inc. |
| Ascom Hasler Mailing Systems, Inc. | GTE Internetworking | Nortel Networks |
| Attachmate Corp. | IBM | Novell, Inc. |
| Baltimore Technologies (UK) Ltd. | Intel Network Systems, Inc. | Oracle Corporation |
| Blue Ridge Networks | IRE, Inc. | Pitney Bowes, Inc. |
| Certicom Corp. | Kasten Chase Applied Research | PSI Systems, Inc. |
| Chrysalis-ITS | L3 Communication Systems | RedCreek Communications |
| Cisco Systems | Litronic, Inc. | RSA Data Security, Inc. |
| Cryptek Security Communications, LLC | Microsoft Corporation. | Spyrus, Inc. |
| Cylink Corporation | Motorola, Inc. | Stamps.com |
| Dallas Semiconductor, Inc. | Mykotronx, Inc. | Technical Communications Corp. |
| Datakey, Inc. | National Semiconductor Corporation | Thales e-Security |
| Ensuredmail, Inc. | nCipher, Inc. | TimeStep Corporation |
| Entrust Technologies Limited | Neopost | Tumbleweed Communications |
| Eracom Technologies Group, Eracom Technologies Australia, Pty. Ltd. | Neopost Industrie | Corp. |
| Ericsson | Neopost Ltd. | VPNet Technologies |
| | Neopost Online | V-ONE Corporation, Inc. |
| | Netscape Communications Corp. | |



<http://www.nist.gov/cmvp>

- FIPS 140-1 and FIPS 140-2
- Derived Test Requirements (DTR)
- Annexes to FIPS 140-2
- Implementation Guidance
- Points of Contact
- Laboratory Information
- Validated Modules List



CMVP Contact Information

Cryptographic Module Validation Program
100 Bureau Drive Mailstop 8930
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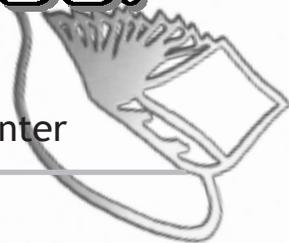
World Wide Web: <http://www.nist.gov/cmvp>

ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

November 5 - 7, 2001

Ronald Reagan Building and International Trade Center



Randall Walker Stan Walker

Walker Reading Technologies, Inc.
www.liveink.com

“Cognitive Text Presentation to Improve Reading & Learning”

Randall Walker, MD and Stan Walker, MD, formed Walker Reading Technologies, Inc. in 1996 with the desire to improve human reading by combining the latest advances in cognitive and computer sciences. With Randall's prior education in language science and neurology, and Stan's expertise as an ophthalmologist and vision scientist, the brother-physicians developed a method for text presentation that integrates the linguistic and visual processing tasks of reading – the Live Ink® text presentation method. With patents for Live Ink® text enhancement issued in the US in 1998 and 2001, and global patents also issued and pending, the Walker brothers have engaged advanced text engineering talent to translate complex language analysis algorithms into high-performance software that dy-

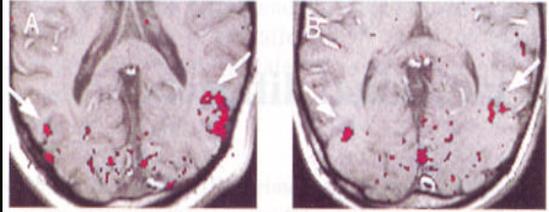
namically transforms any electronic text into the easy-to-read, “poetic-prose” Live Ink® format. As physicians and clinical scientists (Randall is an internist and assistant professor of Medicine at Mayo Clinic, and Stan is an ophthalmologist and assistant clinical professor of Ophthalmology at the University of Minnesota), they have also collaborated with cognitive scientists and educators, in order to obtain independent validation of Live Ink® in multiple research studies. Randall and Stan have found great satisfaction in seeing their methods used in schools and universities across the country, where Live Ink® is demonstrating significant increases in reading performance and learning achievement for all ages, and all types of readers. The Walker

brothers are also proud to have been awarded this year a research grant from the US Department of Education, which will enable them to further propagate Live Ink® technology, through the Internet, for students and teachers to use in their everyday reading activities. Having personally presented Live Ink® to thousands of reading specialists, educators, publishers, and technologists over the past several years, Randall and Stan are committed to making Live Ink® available to all learners, whether in schools or on the job. Both graduates of Notre Dame and Mayo Medical School, Randall and Stan now reside in Minnesota, and make their best discoveries while collaborating at the family cabins on a lake in northern Wisconsin.

Cognitive Text Presentation
to
Improve Reading & Learning

Randall Walker, MD
Stan Walker, MD
WRT – *Live Ink*®
www.liveink.com

Brain activity in visual cortex predicts individual differences in reading performance.



Better Reader

Poorer Reader

Stanford University. Domb JB, et al.
Proc. Natl. Acad. Sci. 1997 (Nov.25); 94: 13363-13366.

Speech is *Natural* ... 6,000,000 Years.

Speech is *Natural* ... 6,000,000 Years.

Text is an *Invention* ... 6000 Years.

Sumerian logographs from 4000 BC



quantity of the product:



≈ 135,000 liters

type of the product:



barley

accounting period:



37 months

SPKNWRDSRTHSMBLSFMNTLX
PRNCNDWRTTNWRDSRTHSMB
LSFSPKNWRDS.

2000 BC—Phoenician alphabet contained consonants only.

Spoken words are the symbols of mental experience, and written words are the symbols of spoken words.

1000 BC—the Greeks added vowels.

Spoken words are the symbols of mental experience, and written words are the symbols of spoken words.

200 BC—Aristophanes' plays with punctuation

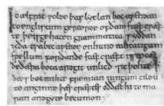
Spoken words are the symbols of mental experience, and written words are the symbols of spoken words.

700 AD—lower case

Spoken words are the symbols of mental experience, and written words are the symbols of spoken words.

900 AD—spaces between words.

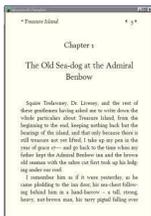
1000 AD



1500 AD

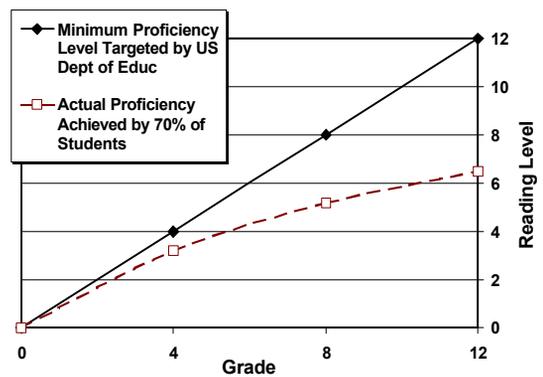


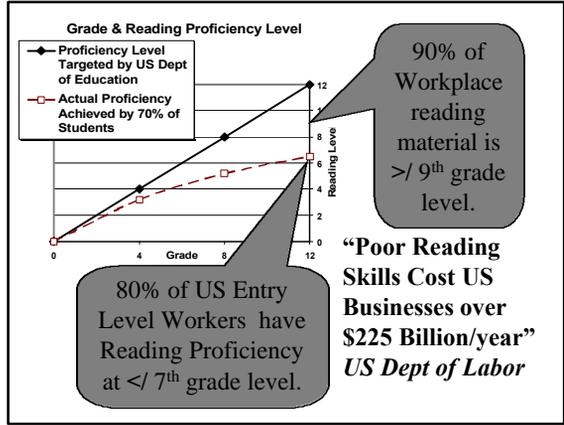
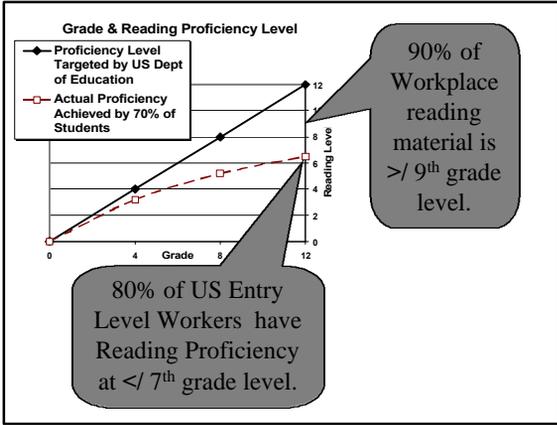
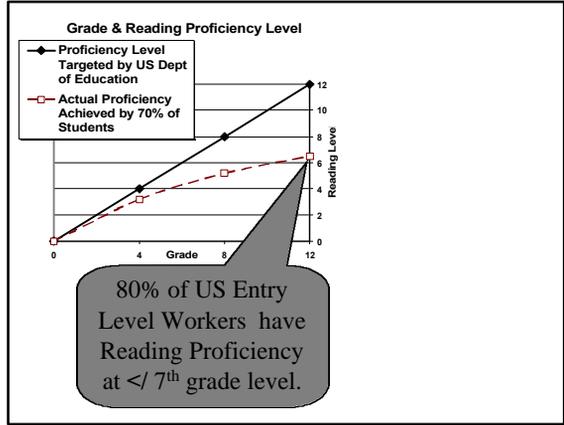
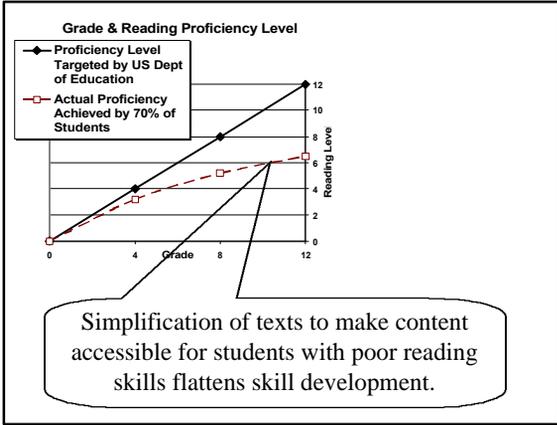
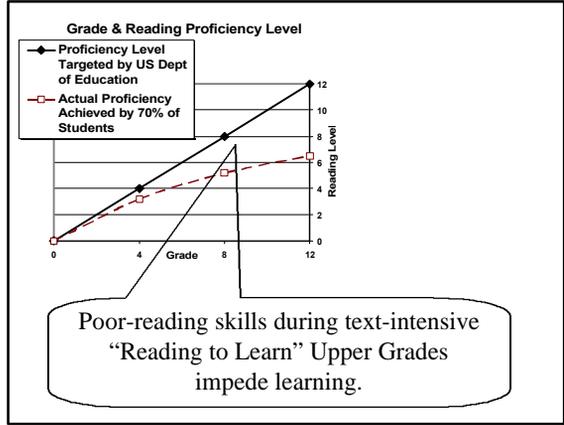
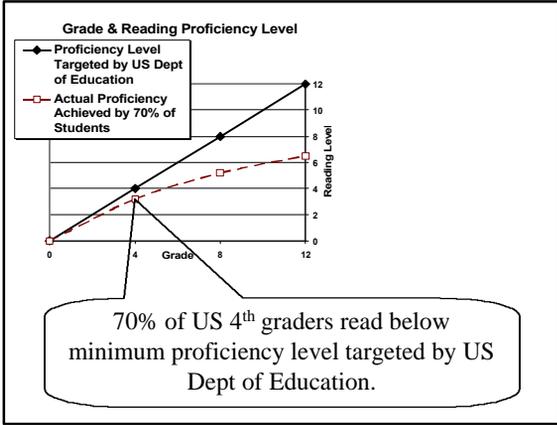
2000 AD

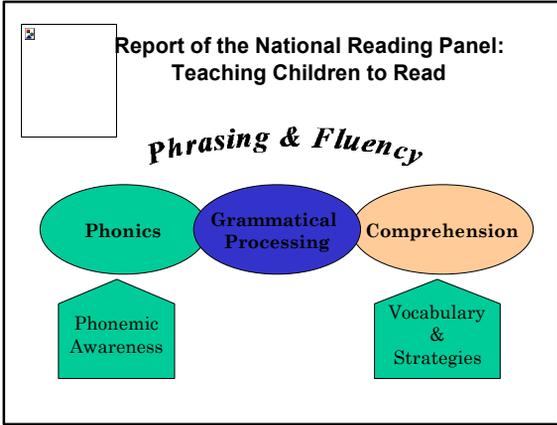
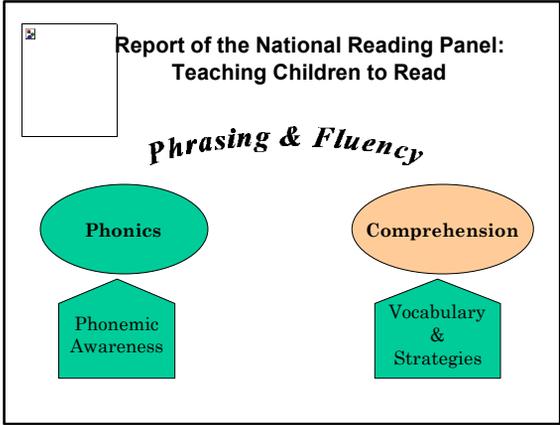
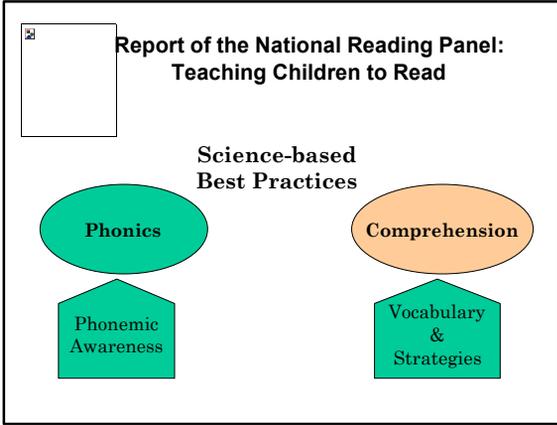


Same formatting for the past 1000 years.

Grade & Reading Proficiency Level

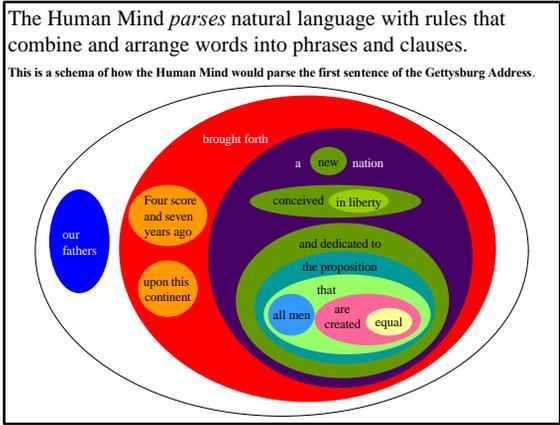
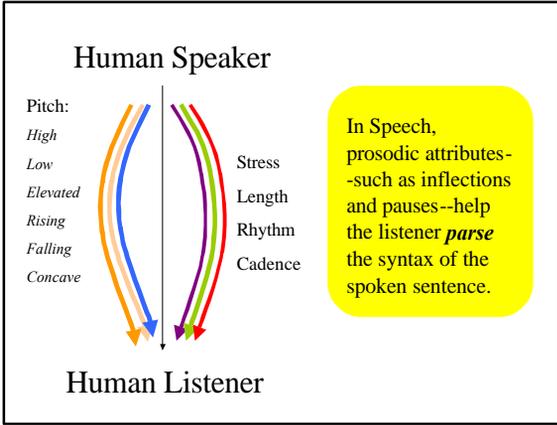




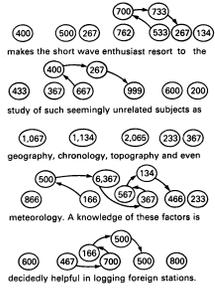


MRI Evidence: Dynamic Collaboration
between the **lexical** and **grammatical** processing tasks of reading

Cerebral Cortex, Vol. 11, No. 3, 223-237, March 2001
The Neural Bases of Sentence Comprehension: a fMRI Examination of Syntactic and Lexical Processing.
Timothy A. Keller, Patricia A. Carpenter and Marcel Adam Just
Center for Cognitive Brain Imaging, Carnegie Mellon University



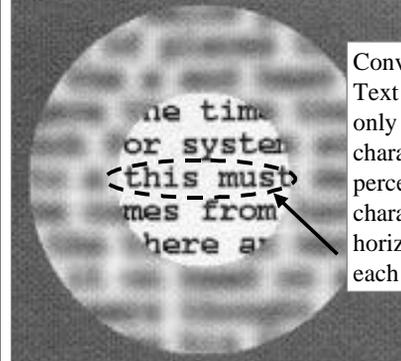
Regressions = ~20% of the eye-movements in reading



- At verbs or potential verbs
- After missing small, critical function words needed for disambiguating possible verbs.
- At phrase boundaries and new sentences.

Regressions reflect the *work of parsing.*

The Reading Eye-Span:



Conventional Text presentation only permits character perception of ~9 characters in a horizontal row at each fixation.

Competition for Attention in Visual Processing

“A Sea of Words”

“One of the most challenging activities for the visual attention mechanism in modern civilization.”

Squire Trelawney, Dr. Livesay, and the rest of these gentlemen having asked me to write down the whole particulars about Treasure Island, from the beginning to the end, keeping nothing back but the bearings of the island, and that only because there is still treasure not yet lifted, I take up my pen in the year of grace 17__ and go back to the time when my father kept the Admiral Benbow inn and the brown seaman with the sabre cut first took up his lodging under one roof.

In Block Text – Minimal character-specific information can be processed outside of the oval.

Everything else only competes for visual attention, while adding no informational value.

Squire Trelawney, Dr. Livesay, and the rest of these gentlemen having asked me to write down the whole particulars about Treasure Island, from the beginning to the end, keeping nothing back but the bearings of the island, and that only because there is still treasure not yet lifted, I take up my pen in the year of grace 17__ and go back to the time when my father kept the Admiral Benbow inn and the brown seaman with the sabre cut first took up his lodging under one roof.

Live Ink®: US Patents 5,802,533 and 6,279,017

Analyze the Text Content:

- Syntax
- Other Grammatical Attributes
- Punctuation
- Word Difficulty
- Pronunciation



Give Shape to the Text with the Results of the Text Analysis.

Spoken words are the symbols of mental experience, and written words are the symbols of spoken words.

900 AD—spaces between words.

Spoken words
are the symbols
of mental experience,
and written words
are the symbols
of spoken words.

2000 AD
LiveInk®

LiveInk® Reading Format

Conveys visual cues
to sentence content
through a patented method
of formatting text
in the pleasing,
poetic-prose style
that you
are reading right now.

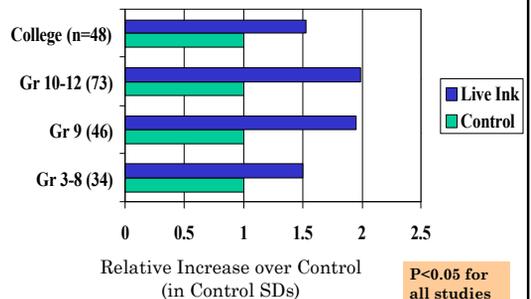
LiveInk® format
is very easy
on the eyes,
because it
doesn't force you
to track long lines
of horizontal text.

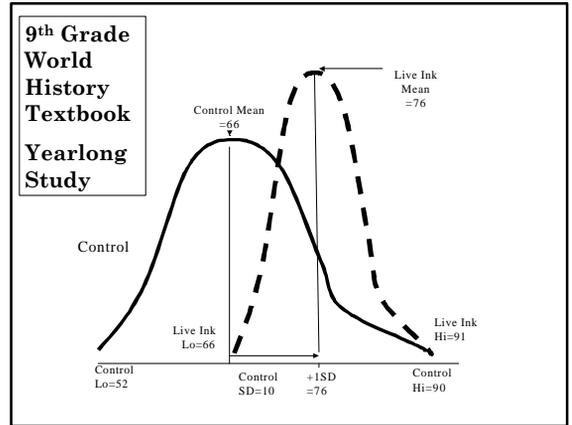
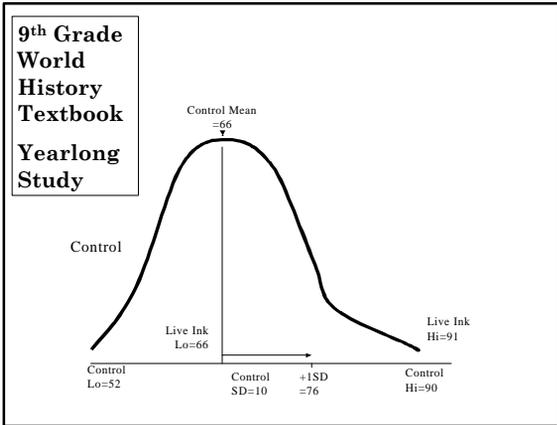
Instead,
your eyes float
down the screen,
absorbing sentences
that have been broken down
through
computerized
grammatical analysis
to improve the brain's ability
to extract meaning
and build comprehension.

Cognitive Science and Reading Comprehension Research

- 4 separate, independent studies
- Over 200 students
- Grades 3 through 13
- 1 year-long study, 3 single-session studies
- Similar pattern of benefit

Live Ink: Comprehension Increase
in 4 Different Age Groups

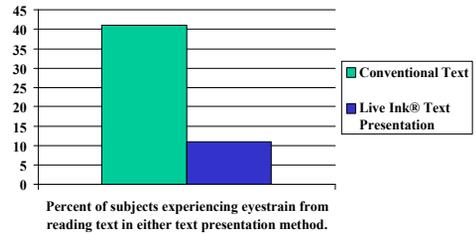




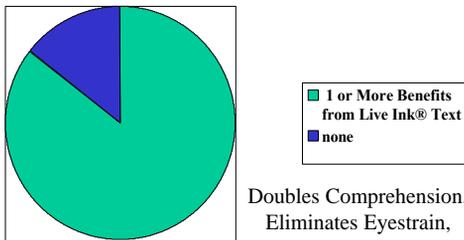
Additional Educational Benefits

- Increases Syntactic Awareness.
- Makes complex writing more accessible, thereby further increasing reading skill.
- Encourages Oral Reading, leading to higher student self-esteem and engagement.
- Group Reading and Review.

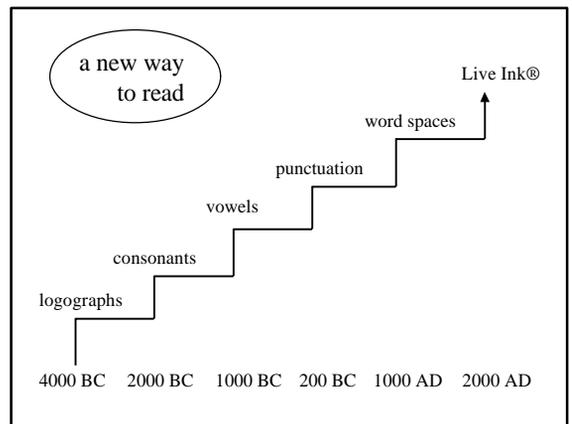
LiveInk® Eliminates Eyestrain by 75%.



LiveInk®: Instant & Compelling Benefits for 85% of Readers



Doubles Comprehension,
Eliminates Eyestrain,
&/or
Is Immediately Preferred.



ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

November 5 - 7, 2001

Ronald Reagan Building and International Trade Center



Tom Peters

Director
Center for Library Initiatives
CIC

“Is There an E-Text in This Class?: E-Books in college Classrooms”

Tom Peters is the Director of the Center for Library Initiatives at the Committee on Institutional Cooperation (CIC), the academic consortium of the Big Ten universities and the University of Chicago. An academic librarian for fourteen years, Tom has worked previously at Western Illinois University in Macomb, Northern Illinois University in DeKalb, Minnesota State University at Mankato, and the University of Missouri at Kansas City. A native of Fort Dodge, Iowa, he did his undergraduate work at Grinnell College, where he majored in English and philosophy. He earned his library science degree at the University of Iowa. His second master's degree

(in English) was completed at the University of Missouri at Kansas City. His practical library experience includes reference service, library instruction, collection management, and administration. He has written numerous articles on topics ranging from transaction log analysis to browsing. He has written two books (most recently, *Computerized Monitoring and Online Privacy* [1999] published by McFarland). His article “Gutterdammerung (Twilight of the Gutter Margins): E-Books and Libraries” appeared in volume 19, issue 1 (2001) of *Library Hi Tech*, and he wrote a special report on e-books for the 2001 edition of the *Bowker Annual*. He also is serving as guest editor of an upcoming theme issue of *Li-*

brary Hi Tech on e-books, due out late in 2001. His current interests include privacy in online environments, digital library initiatives, collaborative online reference services, and all things “e” (e-books, e-publishing, e-commerce, e-resources, e-ink, etc.).

Is There an E-Text in This Class?: E-Books in College Classrooms



Tom Peters
CIC Center for Library Initiatives
NIST/NISO eBook 2001 Conference
Washington, DC
November 6, 2001

Goal

- *Develop a method for assessing e-book projects and programs in higher education courses.*

Overview of My Talk

- Six Factors
- Key e-book Functionality for Higher Education
- Projects and Programs
- Very Tentative Conclusions
- Recommendations

Six Key Factors

- Type of Institution
- Nature of the Course
- Discipline (Topic Area)
- Type of E-Book
- Type of Content
- Immersion Level

Factor 1: Type of Institution

- 2-yr, 4-yr, or university
- Public or Private
- Carnegie Classifications

Factor 2: Nature of the Course

- Required or Elective?
- Majors and/or Non-Majors?
- Lower Division Undergraduate
- Upper Division Undergraduate
- Master's Level
- Doctoral Level

Factor 3: Discipline

- Humanities
- Social Sciences
- Sciences
- Law
- Medicine

Factor 4: Type of E-Book

- Web-Based
- Software-Based
- Reading Devices

Web-Based E-Books

- netLibrary
- Questia
- ebrary
- Books24x7
- Safari
- ACLS History E-Book Project
- BiblioVault

Software-Based E-Books

- Microsoft Reader
- Adobe Acrobat eBook Reader

E-Book Reading Devices

- Gemstar/RCA REB 1100 & 1200
- Franklin eBookMan
- goReader
- Hiebook
- Palm, Visor, & Pocket PC
- Cell Phones (e.g., Kyocera)

Key E-Book Functionalities

- Search the entire text
- Browse and scan
- Add notes
- Highlight or underline
- Add bookmarks
- Draw and doodle
- Dictionary lookup
- Audio (both output and input)
- Color
- Text to speech

Factor 5: Type of Content

- Textbooks
- Primary and Secondary Works
- Reference Materials
- Instructor-Created Content
- Library Reserve Material
- Student-Created Content

Factor 6: Immersion Level

- Owners or Loaners?
- Types & Percentage of Course Content
- Content for Multiple Courses?
- Extra-Curricular Content?

Pilot Project & Programs

- U. of Virginia (Spring 2001)
- U. of Chicago (Spring 2001)
- Eureka College (Fall 2001)
- Spoon River College (Fall 2001)
- U. of Phoenix
- U. of South Dakota
- Adobe's eBook U Project

General Findings & Trends

- Hardware & Software Failure Rates are Unacceptably High
- Undergrad Adoption Quicker/Easier Than Grad Student Adoption
- Ownership is Good
- High Immersion is Good

Recommendations

- Professor-created and student-created content should be easily loadable
- Added notes should be easily downloadable
- Improve and particularize the dictionary lookup functionality
- Improve the scan and browse features
- Battery life should get the student through the day

Contact Information

- **Tom Peters**

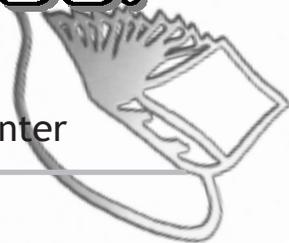
CIC Center for Library Initiatives
302 E. John Street
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Champaign IL 61820
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(217) 244-9239
www.cic.uiuc.edu

ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

November 5 - 7, 2001

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Carlos Bazzarella

Founder & CEO
Poliplus Software

“eTextBooks and the added value to learning”

Software has worked with several different companies providing compact software clones

Mr. Bazzarella graduated from the University of Waterloo with a degree in Computer Engineering. Upon graduating Mr. Bazzarella joined Go Corporation in Silicon Valley to work on the first Operating System (PenPoint) designed specially for Pen based operation on a tablet sized device. In some ways PenPoint and related machines provided the first opportunity to experiment with electronic books, as it was meant to be with a portable device.

Mr. Bazzarella founded Poliplus Software shortly after leaving Go Corporation with the vision of combining content with small and sophisticated interactive software. Over the years Poliplus

of larger systems. Some of the software developed includes a Circuit Simulator, a Computer Algebra System, a Dynamic Geometry System and a Algorithmic Test Generator. Mr. Bazzarella and the team at Poliplus Software have the experience and background to realize the potential of interactive eBook technologies.

eTextBooks and the added value to learning



By: Carlos Bazzarella



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Market Research Data

- Forrester predicts that **digital textbooks** will sell approximately **147 million units** and net \$3.2 billion in 2005, while **trade e-books** (including PC/PDA downloads and dedicated devices) will sell only **73 million units** and net \$674 million.



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Current Learning

- Paper based textbooks
- CDROM (supplemental materials)
- Related web sites
- 3rd party educational products/software



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Convergence in Hardware

- Currently there are several different pieces of hardware used in learning whereas one single device would suffice.
- This device must be able to do lots of different things but primarily provide the best learning experience.



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Convergence in Software/content

- Instead of having several separate sources of learning materials, everything can be integrated into one portable hardware device using a book metaphor combining content with educational software.



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Content and Software

- ❑ Combine content and software similar to the way the internet evolved from its static start to what we currently have.
- ❑ Software should be invisible to the reader allowing the reader to manipulate the content unaware of the underlying software.



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What Can Software Do - 1

- ❑ Provide subject specific simulation tools such as a live circuit simulation instead of a static diagram for example.
- ❑ Provide calculation tools to allow students to experiment with 'what if' scenarios.
- ❑ Provide dynamically generated examples, exercises and quizzes.



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What Can Software Do - 2

- ❑ Provide dynamically generated animations and manipulatives to emphasize specific concepts.
- ❑ The key is that software must improve the learning experience from the reader's point of view.



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What Will It Take to Make eTextBooks Succeed

- ❑ Reasonably priced multi-purposed portable devices.
- ❑ Compelling interactive titles that offer a lot more than just what you can get with a paper textbook.
- ❑ Wireless leverage.
- ❑ The whole industry working together to develop the next experience in learning.



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Will eTextBooks Succeed ?

- ❑ Yes, simply because they will provide substantial added value over other learning alternatives.



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The End

Please feel free to come talk to us

Together we can make
eTextBooks succeed



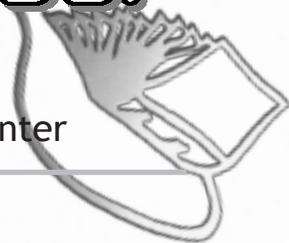
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Gill Hope

Founder & CEO
hopeandcare International, Inc.
www.hopeandcare.tv

As Founder and CEO of hopeandcare International, Ms Hope has been dedicated to the improvement and universalization of preventative and rehabilitative healthcare around the world.

hopeandcare International Inc. is currently involved in a range of international projects. These include establishing a global network that will improve people's access to world-class health care, defining a Human Asset Care™ policy for 514,000 military personnel on 70 US Air Bases, and establishing Healthy Living Centres™ in six African countries. In February 2001 she

was asked by the US President's Information Technology Advisory Committee to propose a way to allocate US\$1 billion for shifting the paradigm from acute to preventative healthcare. In June 2001, Ms Hope will propose a continent-wide treatment program for up to 25 million people with HIV/AIDS in Africa at a Special Session of the United Nations in New York. The program is based on a four-step protocol developed by hopeandcare International using alternative therapies; it aims to eliminate the virus, detoxify the body, and restore health to infected people across Africa.

Prior to founding hopeandcare International Ms Hope had excelled in a number of

fields and overcame much adversity with the health crises. Ms Hope was born in Staffordshire, England on the 25th of January, 1962. Purposely following a vocational, rather than an academic route, she got an Advanced Diploma in Information Technology at The Royal Society of Arts in London. From 1991 to 1994 she completed seven therapy qualifications and is currently studying for a PhD in Bioinformatics/Biotechnology. At age 25, she received the British Sales and Marketing Award. She was recognized for her exemplary work by the Rank Organization in repositioning and revitalizing an ailing tourism brand, resulting in a return of \$8 M from an initial investment of \$23 M.

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After a series of deaths in her immediate family, in 1987, Ms Hope decided to turn her negative experiences positively, and to pursue her dream: to use technology and holistic medicine to provide cheaper, faster, and better preventative healthcare. She began her global research odyssey at the Dead Sea in Israel by studying skin therapies. Ms Hope has researched different healthcare systems in 21 countries. She studied various herbal products in Malaysia, aromatherapy in Egypt, eco development in Holland, seaweed therapy, sublingual delivery of therapies, and vitamin supplementation in France, spa treatments and hydrotherapy in Austria, government funded health care systems, cancer, and stroke treatments and vitamin and mineral testing in the UK. Furthermore, private provision in the US, infrastructure based public health systems in Cuba, high government investment in Switzerland, and the integration of naturopathic and allopathic medicine in Italy. While in Singapore from 1997 -98, she studied the impact of stress, caused by the rapidly developing economy from agrarian to high technology, on the whole population.

Ms Hope has spent most of the last four years developing and

implementing the global infostructure that will make her dreams a reality. This has involved integrating over 28 technology partners, and over 65 suppliers, to create the network through which hopeandcare International can deliver individualized person-to-person health information, treatment, and referrals around the clock and around the globe. This impressive undertaking has positioned hopeandcare International at the leading edge of modern technology, while it also delivers therapies based on ancient wisdom and natural holistic products and processes. When launched, it will be a network capable of handling eight million transactions per month. Also during this time, Ms Hope applied her creative energy into the development of VITA, the world's first Virtual Therapist. VITA uses cutting edge Artificial Intelligence technology, in order to dramatically reduce the diagnostic cycle time. Ms Hope also invented a technology for global telephone counselling that reduces average delivery time from 24 days, to a mere 17 seconds. This technology is in addition to a number of process patents ready for filing.

Ms Hope's current activities include promoting a

holistic therapy protocol for HIV/AIDS patients in Africa, participation in The President's Information Technology Advisory Committee in the US, and customizing her unique Human Asset Care™ program for the US Department Of Defence. She is also preparing for the publication of a series of 18 concise health guides, all about her philosophy of health and conditions, such as HIV/AIDS, stress, diabetes, cancer, and strokes.

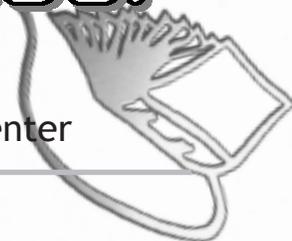
Ms Hope is described by those who know her well, as a combination of a "Martha Stewart of stress" and a "hi-tech Mother Teresa". She qualifies as a "renaissance woman" by being a visionary, therapist, businesswoman, inventor, technologist, manager, integrator, pioneer and thought leader. No one can describe her career path as conventional, but throughout her career, she has shown her ability to get things done, motivate others, and focus single-mindedly on improving the health and well being of people around the world.

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Eric Roberts

Research Consultant
Advanced Distributed Learning
Co-Laboratory

Dr. Roberts is a research consultant with the Advanced Distributed Learning Co-Laboratory in Alexandria, VA, working toward the development of standards for Sharable Content Objects that can maintain their original instructional integrity even when being dis-aggregated and re-aggregated in unanticipated ways. In earlier work, he researched and developed instructional and decision-support technologies in both industry and academe.

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Andres Nannetti

Co-founder & CEO
Rovia, Inc.

Andres leads Rovia's strategy and business development efforts and has overall administrative and financial responsibility for the company. Andres, along with Co-founder and CTO Pedro Zayas, initially conceived of the unique concept of device-independent security for electronic information. Armed with this vision, Andres has taken Rovia from a two-person startup to a position as leader for secure content access and de-facto standard in the educational textbook market.

Previously, Andres worked at JP Morgan in the Latin America Mergers & Acquisitions Group where he was involved in numerous buy and sell side transactions covering various

industries in the region.

Before JP Morgan, Andres founded and led Paintball Sports de Colombia S.A. from inception to acquisition, where he introduced the now widely popular sport of paintball to Colombia.

A graduate of the Massachusetts Institute of Technology, he holds a Bachelor of Science in Economics.

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Dave Howell

Founder & Chairman of the Board
Seattle Book Company
www.seattlebook.com

“The Right Book in the Right Place at the Right Time: Using E-Books to promote a Love of Reading”

Mr. Howell is the visionary and creator of Seattle Book's reading recommender (Hypatia) and file conversion system (the RosettaMachine). He represents the company as a speaker and panelist at national conferences and conventions, including E-Book 2000 and the World Science Fiction Convention. Before founding the Seattle Book Company in 1996 (as Alexandria Digital Literature, www.AlexLit.com), Mr. Howell was creator and former Director of the Book Publishing Division of game publisher Wizards of the Coast, Inc. now a division of Hasbro. He developed Wizards' online customer service department, recruited editors, and developed best-selling printed

titles based on the successful card game, Magic, The Gathering. Dave@SeattleBook.com.

The Seattle Book Company is an independent e-publishing company that has specialized in recreational reading. It has a catalog of over 700 works, primarily science fiction, fantasy, and horror, in all lengths from poetry to novels. The company's first site went live in November of 1996, and they started selling e-books in March of 1998. February of 1997 saw the initial deployment of Hypatia, the company's reading recommending system, based on collaborative filter technology developed at the company. This unique tool, which continues to get rave reviews from the public, contains over two

million ratings from thousands of readers, which is used to select and recommend from a master catalog of nearly a hundred thousand works.

The RosettaMachine is the Seattle Book Company's solution to the Babylon of current e-book file formats. Starting from a master file created in NLE, the company's XML based markup language, the RosettaMachine provides on-the-fly conversion into more formats than offered by any other publisher.

A meeting at the second NIST e-book conference, E-book 99, led to the Seattle Book Company acquiring one of the oldest e-publishers around, Mind's Eye Fiction.

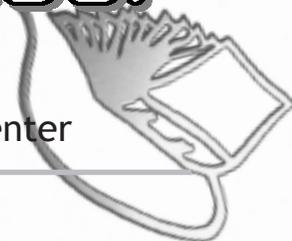
Besides e-books, current product offerings by the Seattle

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Book Company also include e-book infrastructure. The dynamic cataloging system, the recommending engine, and the RosettaMachine are components of the customizable eBookstore package that the Seattle Book Company deploys for corporate clientele, public web sites, and other entities that look to monetize their eyeballs.

The Right Book in the Right Place at the Right Time:
Using E-Books to Promote a Love of Reading
By Dave Howell

Most librarians and teachers have experienced the frustration of seeing people, especially teens, decide that reading is tedious or just not fun. They've also experienced the victory of putting a book into somebody's hands that happens to be just the right catalytic agent to spark a love of reading; that cool story that the reader can't put down, the one that makes all the difference.

It's probably true that there are some people that just won't enjoy reading no matter what you put in their hands, but there are also lots of missed opportunities. But particularly with younger readers, we may only have a couple of chances to hit them with their own Anne of Green Gables or Harry Potter before they reject reading as a recreational activity.

The Problem

1. How do we identify titles that are more likely to be engaging for a specific individual reader?
2. If a title is identified, how can we ensure the availability of the work?
3. How do we ensure that the individual can read it when they're looking for it?

E-books can help us have The Right Book, in the Right Place, at the Right Time.

The Solution

I'll be presenting a brief overview of Seattle Book Company's initiative to provide access to Hypatia, its book recommending collaborative filter, to libraries as a uniquely powerful solution to the first step of the problem.

The role of electronic text, and the e-publishing industry, in improving the availability of works, is a key component of the second step. Obscure, genre-specific, or out-of-print works are a valuable resource for igniting a love of reading. To support libraries need for less popular works means finding ways of making publishing, republishing, and e-publishing these works economically feasible for the publishing industry.

Finally, E-books have the potential to allow even small branch libraries to stock hundreds of thousands or millions of volumes, and to make available works that were released in small print runs or have become unavailable. The audience will be invited to participate in a discussion of various licensing models for libraries that mesh the library's desire for service to its clientele with publishers and authors requirements for revenue.

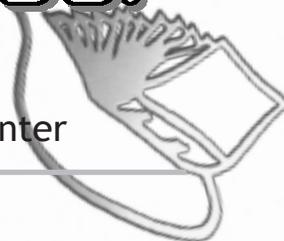
The text of the presentation was not available as these proceedings went to press. I hope to have a more complete text available after the conference at [Http://www.seattlebook.com/ebook2001/RightBook.html](http://www.seattlebook.com/ebook2001/RightBook.html)

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David Sidman

CEO

Content Directions, Inc.

www.contentdirections.com

“U.S. Deput of DOI-EB: Bringing the DOI to market for the Book Industry”

Prior to founding Content Directions, Inc. in August 2000, David Sidman was Director of New Publishing Technologies at John Wiley & Sons, a leading global publisher of print and electronic products. His responsibilities included positioning Wiley as a successful electronic publisher through a combination of strategy development, internal projects enabling organic growth, and external acquisitions/investments. His accomplishments included establishing the online sales channel for print products (both through relationships with online bookstores and through Wiley's own Web Catalog), developing an internal R&D program which has incubated many of Wiley's electronic products, and initiating projects to develop the back-office

production and e-commerce systems needed to support online publishing. At the industry level, in cooperation with other publishers and the AAP, he has founded and/or driven many key initiatives such as the DOI and ONIX, as well as various standards involving Metadata, E-Books, Digital Rights Management, etc.

Prior to Wiley, David was Director of Strategic Technologies for Moody's Investors Service, IT Director for the International Capital Markets Division of Barclays Bank, and various other positions involving Wall Street and the Information Industry. He is a graduate of Harvard University.

David currently serves as the technical project lead on the DOI-EB project, which is building DOI-based applications for the

Book industry in the same way that the DOI-X project (which he also project-managed) built the reference-linking application which led to the creation of CrossRef in the Scientific Journal industry. 80 international publishers have now assigned more than 3.5 million DOIs, and are using it to cross-link the world's primary science literature.

Content Directions, Inc. is the first approved commercial Registration Agency for the Digital Object Identifier (DOI), a key component of the infrastructure of the next-generation Internet, and a key to creating a viable e-commerce market for digital content, digital rights management, and other B2B and B2C services online. The DOI is a unique and universal identifier for digital content in the same way that the

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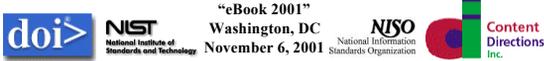
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UPC (bar code) is a unique and universal identifier for physical products, and it also provides a similar function: to enable diverse computer systems to talk to each other about an online product, and thereby automate the entire distribution and sales chain. The DOI also provides a permanent, deep link to the content owner's website or to any other services which the content owner wishes to enable, in contrast to a URL which only points to a single location, and which "breaks" whenever the address it represents goes out of date. The underlying technology for the DOI was developed by the primary architect of the Internet itself, Dr. Robert Kahn and his non-profit research institution the Corporation for National Research Initiatives (CNRI), in order to provide a more robust and permanent linking mechanism than today's URL. Having successfully driven the DOI's adoption in the Scientific Journals sector, Content Directions is now implementing the DOI in the Book industry as well as all other content industries such as Music, Video, Photography, etc.

“U.S. Debut” of DOI-EB: Bringing the DOI to Market for the Book Industry

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Outline

1. What is the DOI (Digital Object Identifier)?
2. * * * Live Demo * * *
3. Further information; how you can participate

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What is the DOI (Digital Object Identifier)?

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4

What is the DOI?

- “The DOI is the UPC (Bar Code) for objects of intellectual property on the Internet.” Two aspects:
 1. **Uniquely identifies content** - therefore enables computers to execute transactions of all kinds: Buy, Sell, Syndicate, Track, Compute Royalties, Clear Rights, Enforce Copyright, Grant Permissions... *including its full life-cycle within the Content Repository - both pre-publication and post-publication (archival)*
 2. **Provides a Stable, Persistent Link to the Content Itself** (or to the Owner’s website)
- Initiated (1996) in order to:
 - a) create an e-commerce market for intellectual property online
 - b) protect copyright in that market (otherwise no one gets paid)

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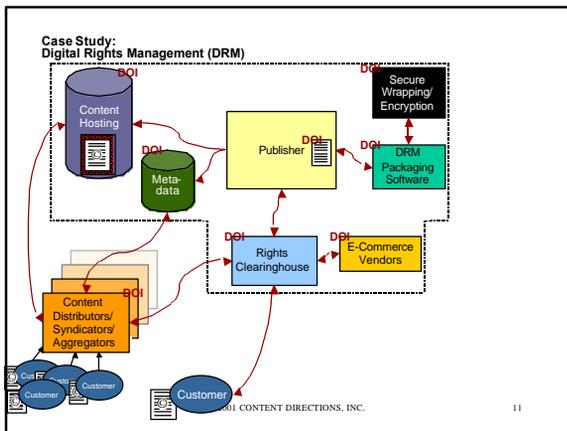
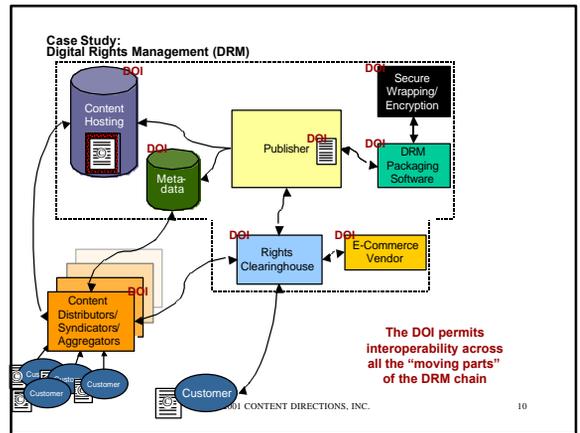
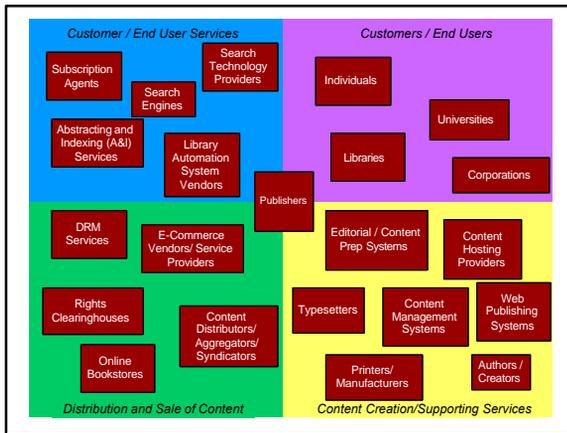
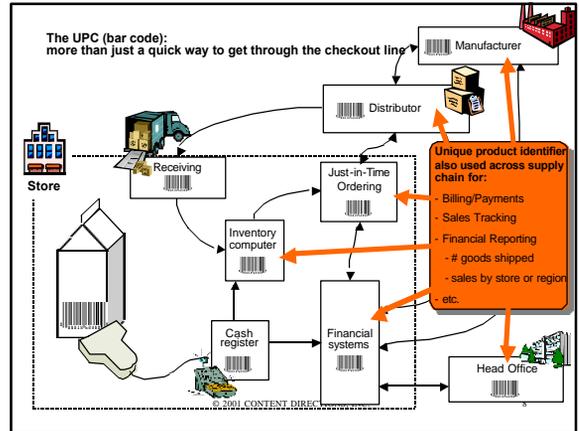
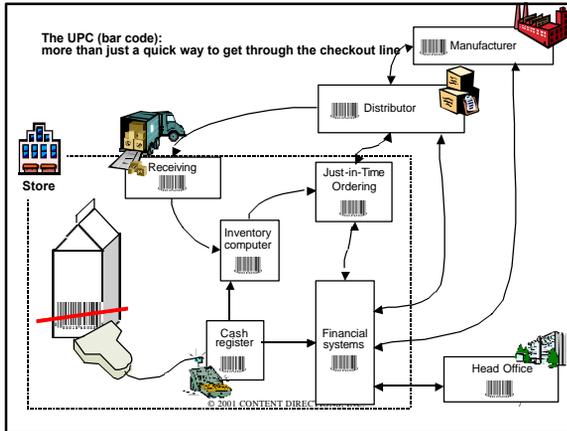
#1 - Unique Content ID

- Any type of content: text, music, film, video, photographs, software...
- Any level of granularity: whole book, individual chapters, illustrations, data sets, tables, music tracks, versions (e.g. dif. resolutions)...
- Compatible with (superset of) any & all other numbering schemes (ISBN, ISSN, ISWC, UPC...)
- Once assigned, never changes (“A DOI is Forever”)
- Why is a unique ID so important for transactions?

(UPC/Bar Code example...)

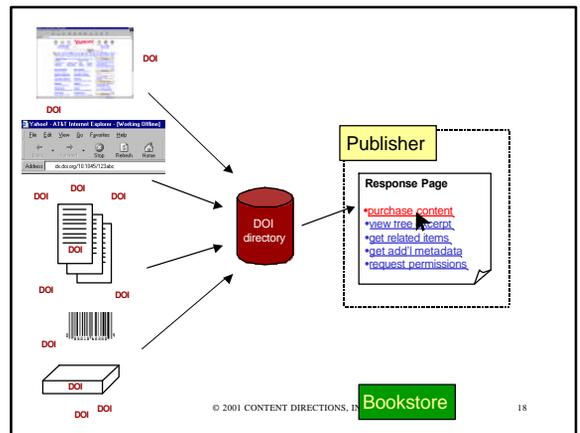
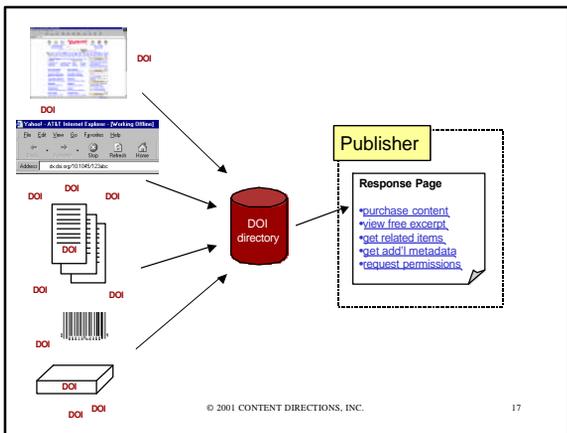
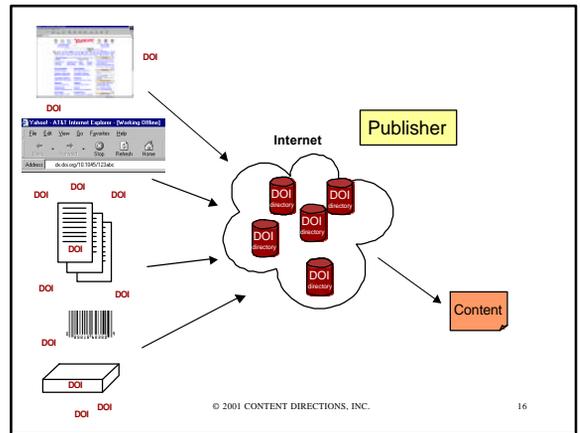
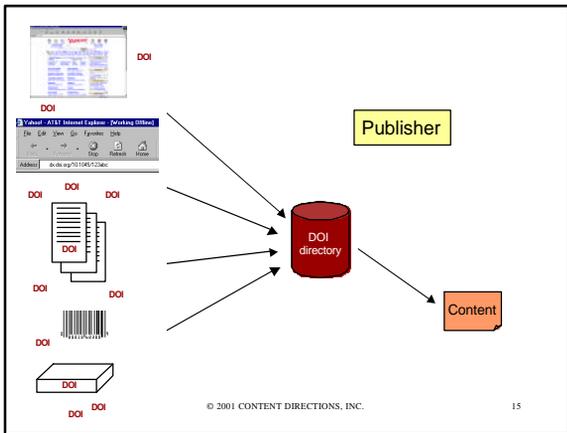
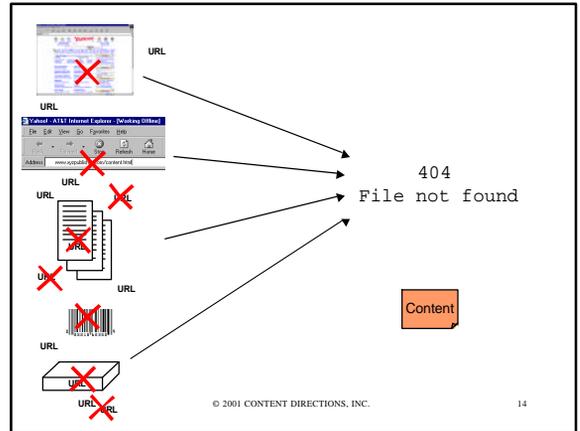
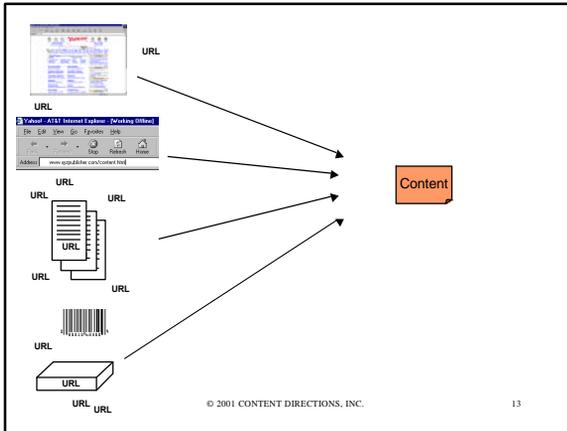
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#2 - Persistent Identifier

- DOI never changes, but URL does: Content Owner maintains the correct URL pointer in a directory
- Directory is similar to Domain Name System (DNS): single directory logically, but distributed physically
- If maintained faithfully, a DOI link survives:
 - moving the content to a different server
 - Content Owner's sale of that content unit/product line
 - acquisition of Content Owner by another company



* * * Live Demo * * *

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We Need Participation!

- Publishers, of course. But also...
- All players in the Digital Distribution chain:
 - E-tailers
 - Distributors
 - Syndicators
 - Aggregators
 - DRM vendors
 - Content Management/Web Publishing vendors
 - Digital Asset Management vendors
 - Publishing Services (e.g. ASPs)
 - Consulting Firms/Systems Integrators

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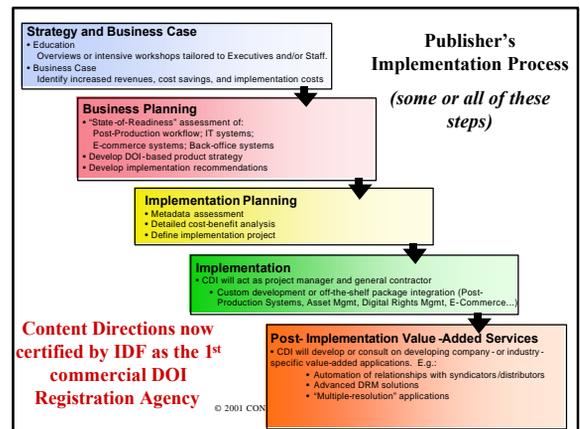
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How to participate?

- Contact Steve Mooney (IDF) for specifics (s.mooney@doi.org)
- But depending on level of participation & contribution by other players, goal is to prototype the following new applications:
 - Cross-linking between reviews, references, vertical portals, indexing services, search engines, etc. – and primary content
 - Cross-linking among content from different publishers
 - “Recombinant,” “granular,” “component-based” publishing
 - Cross-selling of related items
 - Automation of distribution processes, sales tracking, royalties
 - DRM (including Superdistribution)
 - Peer-to-peer file sharing (but with usage tracking & payments)
 - (and more...)

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Further Information & Contacts

- Review the AAP/Andersen Consulting DOI recommendations: <http://www.publishers.org/home/ebookstudy.htm>
- View the SIIA White Paper on DOI & DRM: <http://www.sii.net/divisions/content/doi.pdf>
- International DOI Foundation (IDF): <http://www.doi.org>
 - DOI-EB Executive Sponsor: Steve Mooney (s.mooney@doi.org)
- Content Directions, Inc.: <http://www.contentdirections.com>
 - DOI-EB Technical Project Manager: David Sidman (dsidman@contentdirections.com)

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Thank you!

David Sidman
CEO
CONTENT DIRECTIONS, INC.
“The DOI Experts”



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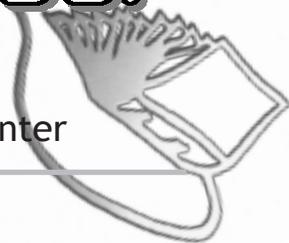
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Peter Yianilos

Chief Technology Officer
Franklin Electronic Publishers
www.overdrive.com

Dr. Peter N. Yianilos has distinguished himself over the past two decades as a pioneer in the area of eBooks and electronic publishing. In October 2000, Dr. Yianilos received the first annual Frankfurt eBook award for his work on eBookMan, the world's first open but secure consumer computing platform. His algorithms and data structures for advanced data compression and retrieval, as well as his product concepts and designs formed the basis for the first commercially successful mass-marketed hand-held electronic books, ranging from spellers and dictionaries to Bibles and encyclopedias. These products represent an established segment of the consumer electronic market, and Franklin remains the market leader in this category.

He is Chief Technology and Architecture Advisor to Franklin Electronic Publishers, Chairman of

Netrics.com — an emerging company in the area of intelligent database search and analysis, and leader of the Intermemory.net distributed storage project — recently serving as special editor for the September 2001 issue of IEEE Internet Computing Magazine, focusing on distributed storage.

Dr. Yianilos received his Ph.D. in computer science from Princeton University, and also holds B.S. and M.S. degrees from Emory University where he studied Mathematics, Computer Science, and Physics. He is the author of numerous scholarly publications and patents in areas that include algorithms and data structures, synthetic and artificial intelligence, information retrieval and digital libraries, data compression, and computational biology.

His work in electronic

publishing began in 1979 at the first company he founded, Proximity Technology Inc. The designs for early eBooks such as hand-held spellers were executed at that time. Commercial implementations of Yianilos' research at Proximity have been used under license by over 200 companies worldwide to provide linguistic functions such as spelling error detection and correction in tens of millions of products such as typewriters, word processing software, database systems, and computers. At Proximity, Dr. Yianilos also designed and led the development of the PF474 VLSI device. This chip was among the first to explore the implementation of non-traditional functions in silicon and was featured on the December 1983 cover of 'Electronics Magazine'. In 1988 Proximity became a subsidiary of Franklin.

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Dr. Yianilos is an advocate of excellence in public education, and in 1996 co-founded the Princeton Charter School, where he serves as President of its Board of Trustees.



Developing DRM for eBookMan and Making it Work



Peter N. Yianilos,
Chief Technology and Architecture Advisor

1986-1999

- A **publisher** who sells content in dedicated hand-held electronic form: dictionaries, reference books, bibles, and other titles.
- The world is ready for the next step: mainstream mass-marketed ebooks with web-downloaded content.



Data via the Web + PC...

- There were industry concerns about secure delivery via internet/Web/PC
- But this mode of delivery is a **force of nature** and we took it as a given and resolved to make it fully secure



Secure but Open – world's first

- Device maker: **the world wants open platforms**
- Publisher: **must be fully secure**
- These are hopelessly in conflict... right?
- Wrong



Secure from the ground up

- When security is considered starting with hardware, up through the OS, open-but-secure becomes possible
- In fact, it can be **easier than trying to bandage** an existing system, or add on to an existing closed system.



Layers and Sandboxes

- A secure **sandbox** is easily generated inside of which programs and files can play
- They need not be aware that they are **inside**
- Nobody outside can **see** in
- So security can be easily layered onto an existing programs and content
- Just name your files with an **S**



Rx for "Open but Secure"

- Hardware has **crypto identity**, **bootstrap**, and **MMU**
- Only boots an **authenticated OS**
- User "**firewalls**" – can't see registers or unmapped memory
- Content (program/data) always encrypted outside the device
- Upon arrival licenses checked then decrypted into memory
- program can only map it, if it is authorized to do so
- Objects **transparently encrypted/decrypted** as they leave/enter
- First "open but secure" environment – just happens to be a hand-held eBook

PATENT PENDING



Limits of Protection

- Hardware attacks **can't be entirely prevented**
- This is OK except for certain markets
- But the attacker should only get content for the broken device – **no global secrets**



Not just for IP protection

- Computers are getting crowded
- Keeps each application in its own tamper-proof sandbox
- So it's harder for another to interfere
- Also harder for the user inadvertently damage the configuration
- Computers become more like the appliances they really need to be**



There will be Multiple High-level DRMs

- ... like it or not!
- So we built a **substrate** that allows us to connect to all of them easily – **eliminating** the need for **complex** and only **quasi-secure** obfuscation and tamper-resistant **technology**



Direct and Indirect

- Our substrate allows direct **vending** of content to our platform
- But also allows indirect cooperation with higher level DRM designs
- So our approach is really **high-level DRM agnostic**



Consumer product implies...

- Returns...** and the need for license transfers.
- This takes place without publisher overhead.
- A limited number of system "**brain transplants**" are allowed.



There will not be one Format

- So we separate security from the format
- A single **container** systems wraps up content of all kinds, including executable programs
- The container is opened by the OS when an object is loaded onto the platform
- So an authorized program can access content directly, with **no built-in cryptography**



Example: Animated Textbooks from our tradition of adding value

- Between games and books lie interesting **hybrids**
- We see publications consisting of a **program plus associated data files** delivering such content
- They can be developed without regard to DRM, and it is layered on during publication
- **So developers need not be DRM-savvy**



There will be Multiple Readers

- We build an open platform, and already there are 1000's of registered developers
- The platform now comes with the **Mobi** and Franklin readers
- The result is **full OEB compliance, and security, out of the box**



Vertical and Corporate Publishing

- In important segment of our revenue is already derived from **vertical and corporate publishing**
- Our new platform provides a simple, secure, and affordable **end-to-end secure solution** for publishing within **large security sensitive enterprises – public or private**

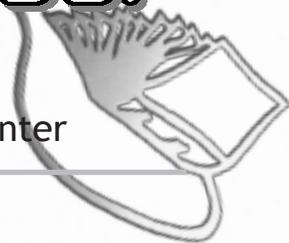


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Steve Potash

Founder & CEO
OverDrive
www.overdrive.com

Steve Potash is the founder and CEO of OverDrive (www.overdrive.com) in Cleveland, Ohio. OverDrive is a worldwide leader in ePublishing software, Conversion, eCommerce & DRM and eBook Distribution via its Content Reserve Division. OverDrive is a strategic partner to Microsoft Corporation for the proliferation of eBooks format and provides secure eBookstore hosting services for publishers and retailers in the US and in Europe.

OverDrive provides content conversion and management services for all eBook formats from its Cleveland offices and from OverDrive Jamaica, its eBook Data Center in Montego Bay, Jamaica. Mr. Potash has licensed technology to divisions of Time-Warner, Simon & Schuster, IDG

Books, McGraw-Hill, John Wiley & Sons, Thomson Publishing, Ziff-Davis and others. Mr. Potash, an accomplished trial lawyer, is one of the Authors of the Open eBook Specification and serves on the Board of Directors for the Open eBook Forum.

NIST eBook 2001

Steve Potash, CEO
 steve@overdrive.com

**The Need for Standards for
 Digital Rights Management for eBooks**
 November 6, 2001

- **OverDrive, Inc. is a worldwide leader in technology services to the publishing and eBook market.**
- **OverDrive provides DRM, eCommerce and distribution services for major eBook publishers and retailers in the US and throughout Europe.**
- **As a result of eBooks using different Digital Rights Management services (DRM), publishers, retailers and consumers are confused and EVERYONE wants a better experience.**



eBook Digital Rights Management business models are evolving in the market

- eBook software and hardware vendors have provided their own language, options and business models
- Publishers and retailers have been experimenting with "**Version 1.0**" eBook platforms to gauge consumer acceptance
- Success has been elusive and growth has been modest over past year

Active US & International eBookstores
 Each with different product and DRM models

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A few of OverDrive's 300+ Content Partners - Coping with DRM options and vendors to build eBook market

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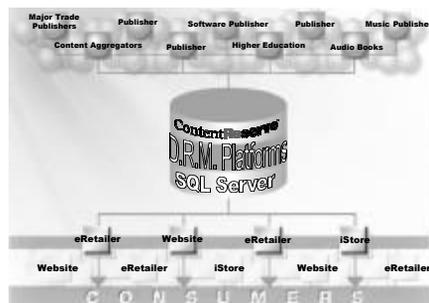
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**OverDrive Manages a Network of Publishers supplying Retailers
with different eBook formats and DRM usage**



**Questions for the eBook Market to resolve
the “DRM Challenge”**

- Can DRM standards for eBooks evolve?
- How long is acceptable to solve challenge before we lose consumers, retailer and publisher support?
- Who will provide leadership? (MPEG, W3C, SDMI, OeBF)
- With the lack of interoperability in eBook formats, where do we begin?

A few of the eBook DRM issues

- Microsoft Reader (V. 1 & 2) support 3 levels of protection
 - Microsoft Reader V. 2.0 modified (improved) Pocket PC support and number of users for Owner Inscribed
- Adobe Acrobat eBook Reader (EBX)
 - Options for Publisher/Retailer to provide different versions of same eBook with different rights
 - Copy/Paste, Print, Timed Use, Transfer/Lend
 - Requires Acrobat “**eBook**” Reader – versus Acrobat
 - Still Legacy DRM businesses with Acrobat PDF DRM (non-eBook product line)



- The Leading eBook Standards Body and Trade Association
- Publisher of “**OeBF Publication Structure**”
- New **Education** and **Business Development** Committees and Special Interest Groups to promote eBook marketplace
- Tackling DRM and associated Issues

Members include:



- | | |
|---|--|
| • Adobe Systems Incorporated | • Books24x7.com |
| • Agfa Monotype Corporation | • CAS - Computed Air Services |
| • American Foundation for the Blind | • Cast, Inc. |
| • American Library Association | • CDI Systems Ltd. |
| • American Printing House for the Blind | • Certicom Corp. |
| • Apex Data Services | • Chief Officers of State Library Agencies |
| • Association of American Publishers | • Cloakware Corporation |
| • Autotext A/S | • Consolidated Graphics |
| • Baker & Taylor | • ContentGuard, Inc. |
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| • SOMEDIA S.R.L. | |
| • Stonehouse Productions | |
| • TechBooks | |
| • The Cutting Corporation | |
| • The Hadley School for the Blind | |



OeBF Rights & Rules Working Group

- The mission of the Rights and Rules Working Group is to create an open and commercially viable standard for interoperability of digital rights management (DRM) systems, providing trusted exchange of electronic publications (ePublications) among rights holders, intermediaries, and users.

OeBF Rights & Rules Working Group

- **Chair**
 - Scott Edwards, The Software & Information Industry Association
- **Vice Chairs**
 - Tom Diaz, Adobe Systems Incorporated
 - Yoram Yaacovi, Microsoft Corporation

Rights and Rules WG Scope of Work

- Glossary of terms and definitions
- Balance privacy issue
- Interact with existing international standards.
- Data definition (format and meaning) of rights-defining object.
- Use cases models
- Define “trust” usage
- Upward compatibility
- Trust levels for vendors and products

Rights and Rules WG Scope of Work

- Definition of mutual authentication and trust by clients and servers
- Super distribution techniques
- Processing rules for handling rights objects
- Metadata formats and Identifier systems
- Applicable laws and regulations
- Build interoperable products

Help define the next stage of eBook progress Join the Open eBook Forum

- www.openebook.org to Join and participate
- Bob Bruce, Executive Director
bbuce@openebook.org
- Join a Working Group for Standards and Technical Participation
- Help Build the eBook Market by joining the Education or Business Development and Networking Committees
- Learn about Open eBook Requirements Portal

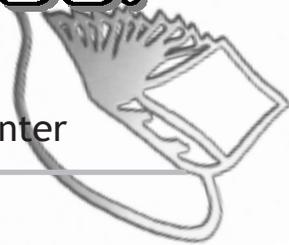


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Leo Dwyer

Director & Chief Operating Officer
RosettaBooks
www.RosettaBooks.com

Leo Dwyer is a Director and Chief Operating Officer of RosettaBooks, the leading electronic publisher dedicated to the expansion of quality e-Reading in the education and consumer markets taking full advantage of the rapidly evolving electronic media.

RosettaBooks is a private New York based company that was founded in January 2000. The Company secures the exclusive electronic rights to great copyrighted books of the 20th century and then distributes those electronic books through all commercially viable channels including eBook retailers, promotional web sites, focused educational channels, as well as the company's own retail website (see www.RosettaBooks.com .)

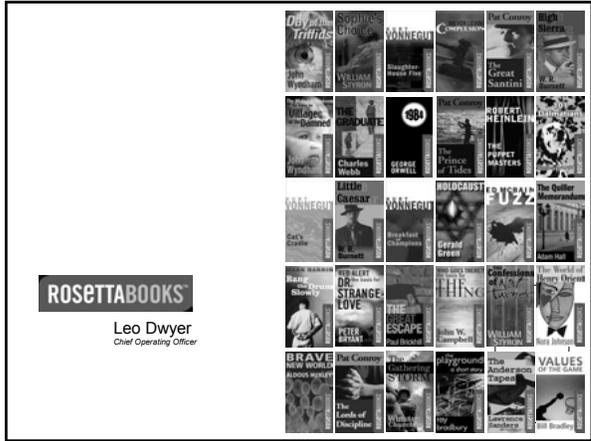
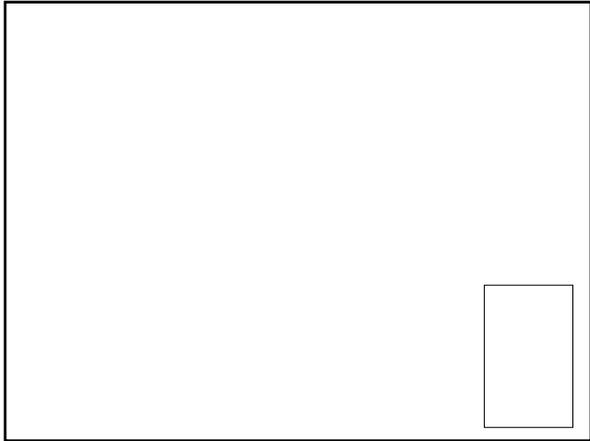
RosettaBooks has successfully secured the exclusive electronic rights to works from legendary authors such as Aldous Huxley, Kurt Vonnegut, William Styron, Winston Churchill, George Orwell and Pat Conroy.

As e-reading becomes more and more a part of an everyday activity, RosettaBooks will become more and more important for the authors who created books of enduring quality and the readers who enjoy them.

Prior to joining RosettaBook, Mr. Dwyer has had extensive experience managing startup and high growth businesses. As project manager for New York Waterways, he was responsible for systems/operational design and startup of an intermodal passenger ferry-bus system that has been cited as the best example of

private sector mass transit initiatives in the US. The system currently carries 30,000 passengers daily between NY and NJ. As Co-Managing Director of King Island Dairies P/L, a branded specialty consumer products company, Mr. Dwyer managed through four consecutive years of 40% compounded growth. He is a graduate of Washington University, Harvard Business School and the Harvard Graduate School of Design.

At RosettaBooks, Mr. Dwyer's is responsible for strategy, finance, developing content conversion and distribution systems as well as establishing strategic alliances with hardware manufacturers, software developers, and retail distribution channels.



Digital Rights Management

Means Something Different to Everyone

| | | |
|--|--|---|
| <p>Publishers</p> <ul style="list-style-type: none"> • Reciprocal • Lightning Source • Content Guard • Content Reserve • Infracore • InterTrust | <p>Software Developers</p> <ul style="list-style-type: none"> • Cryptography • Encryption • Digital Keys • Secure Sockets | <p>Netziens</p> <ul style="list-style-type: none"> • 1st Amendment • "Fair Use" • Dmitri Sklyarov • Big Brother • DMCA |
| <p>Retailers</p> <ul style="list-style-type: none"> • \$\$\$'s Spent • Technology • DAS Servers • EBX Servers • Customer | <p>Hardware Developers</p> <ul style="list-style-type: none"> • Binding to Hardware • Binding to Media • Open vs Closed OS's | <p>Authors</p> <ul style="list-style-type: none"> • Protection of Precious Property |
| | <p>Consumers</p> <ul style="list-style-type: none"> • Pain in the Butt | |



Digital Rights Management

adj.

1. of or pertaining to a digit or finger.
2. resembling a digit or finger.
3. manipulated with a finger or the fingertips: a digital switch.
4. displaying a readout in digital form: a digital speedometer.
5. having digits or digitlike parts.
6. of, pertaining to, or using data in the form of numerical digits.
7. Computers.involving or using numerical digits expressed in a scale of notation to represent discretely all variables occurring in a problem.
8. of, pertaining to, or using numerical calculations.



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Digital Rights Management

n.

1. That which is just, morally good, legal, proper, or fitting.
2.
 - a) The direction or position on the right side.
 - b) The right side.
 - c) The right hand.
 - d) A turn in the direction of the right hand or side.
3. often Right
 - a) The people and groups who advocate the adoption of conservative or reactionary measures, especially in government and politics. Also called right wing.
 - b) The opinion of those advocating such measures.
4. **Sports.** A blow delivered by a boxer's right hand.
5. **Baseball.** Right field.
6.
 - a) Something that is due to a person or governmental body by law, tradition, or nature.
 - b) Something, especially humane treatment, claimed to be due to animals by moral principle.
7. A just or legal claim or title.
8.
 - a) A stockholder's privilege of buying additional stock in a corporation at a special price, usually at par or at a price below the current market value.
 - b) The negotiable certificate on which this privilege is indicated.
 - c) A privilege of subscribing for a particular stock or bond. Often used in the plural.



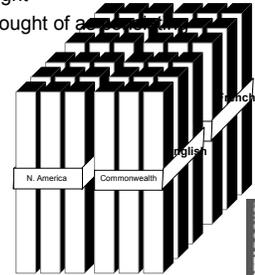
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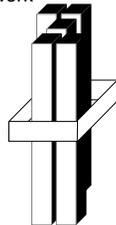
Digital Rights Management

- **Authors** own the copyright
- The copyright can be thought of as a "bundle of sticks"
 - Hard Back
 - Trade Paperback
 - Audio Rights
 - Performance
 - Movie
 - Serialization
 - Condensation
 - Multimedia
 - Electronic Edition
- With the added dimensions of Geography and Language for each right.



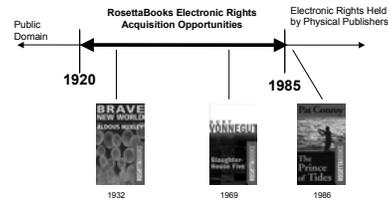
Digital Rights Management

- **Authors** grant **Limited licenses** to publishers to produce various editions of the work
 - Hard Back
 - Trade Paperback
 - Audio Rights
 - Performance
 - Movie
 - Serialization
 - Condensation
 - Multimedia
 - Electronic Edition
- Rights not explicitly granted are **retained** by the author



Digital Rights Management

Electronic rights were not granted in publishing contracts until sometime between 1985 and 1995, meaning the electronic rights to copyrighted books originally published before 1985 are today available directly from Authors or their estates



Digital Rights Management

- n.
- The act, manner, or practice of managing; handling, supervision, or control; management of a crisis; management of factory workers.
 - The person or persons who control or direct a business or other enterprise.
 - Skill in managing; executive ability.

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 - Skill in managing; executive ability.

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DRM

The act, manner, or practice of handling, supervision, or control...
of
...a just or legal claim or title...
to
..... data in the form of numerical digits.

But why? To what end?

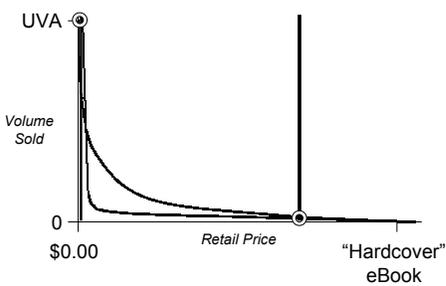
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Why Manage Digital Rights?

To maximize the value of the digital / electronic right for the Author/Rights Holder.

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eBook Economics 101



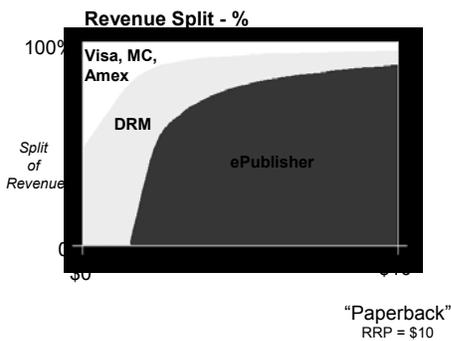
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eBook Economics 101



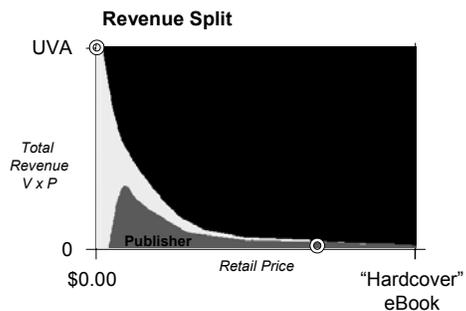
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eBook Economics 101



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eBook Economics 101



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Current DRM Tools

- Attempt to Treat "E" just like "P"
 - Purchase once
 - Own it forever
 - Priced like "P"
 - Don't allow publishers to Max value of "E"

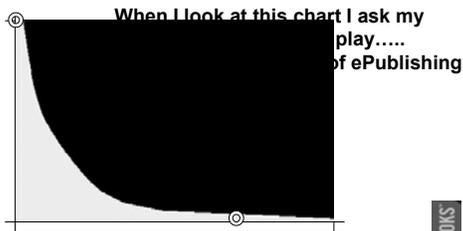
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What is Needed

- Experimentation Flexibility
 - Time based rights:
 - Clock from purchase – 10 min, 10 hours, 10 days, 10 weeks
 - Clocked Reading Time - 10 min, 10hours, 100 hours of read Time
 - Preview eBook for 10 minutes
 - The option to attach the right to – a device, a person, an organization, a geographic area, a domain.....
 - Ability to migrate rights across hardware and software platforms
 - Ability for publisher to selectively enable permissions to duplicate soft copy – hard copy – partial – complete – frequency/amount

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The Future



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Review

- DRM is about maximizing the value of the DR.
- It appears that value is maximized with high velocity lower priced transactions.
- DRM providers must revisit DRM pricing models.
- A "D" right is different than a "P" right – if all we do is try to make "D" = "P" we will fail.
- To date too much effort has gone into trying to make "D" = "P" .
- We can currently only guess about when, where, how and why people will read digital books.
- Unless we experiment we will never learn.
- We need flexible DRM tools to explore the frontier.

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"The best security in the world is the right business model!"

Howie Singer - Reciprocal

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Quality e-Reading

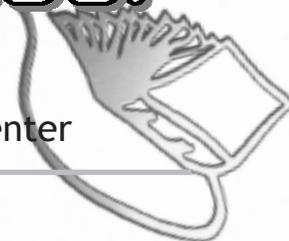


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Kevin Weatherly

Sales Executive
Sealed Media

“Driving Internet Publishing Revenues with Digital Rights Management Technology”

Kevin S. Weatherly is a Sales Executive with SealedMedia, the leader in the commercial Digital Rights Management industry. SealedMedia offers a powerful content sealing, licensing and protection solution enabling publishers of business and consumer information to use the Internet to increase sales, improve marketing efficiency, and transform content assets into new revenue streams. Mr. Weatherly brings more than eight years of sales and business development experience to his position managing the New York sales division of SealedMedia. Beginning his career as a Registered Representative for Olde Discount Corporation, which

has since been acquired by H&R Block, Kevin went on to hold a senior sale position in the Institutional Division of Charles Schwab & Co., Inc. Subsequent to working with Schwab, Kevin took a position as Senior Manager of Strategic Consulting at MDE Information Technology, Inc, a New Jersey based software development company. Prior to joining SealedMedia, Kevin worked as a Sales Manager in the Business Solutions Group at Dmind Corporation, a New York based software development and Internet services company, that services such clients as American Advertising Federation, The Reserve Mutual Funds, and Avid Technologies, among many others.

Driving Internet Publishing Revenues with Digital Rights Management Technology

By Kevin Weatherly

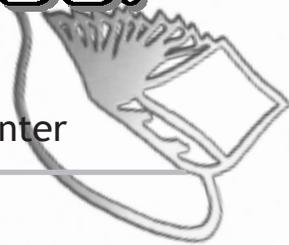
Today lack of copyright control on the Internet has prevented publishers from exploiting the Net to its full commercial advantage. The advent of Digital Rights Management technology has opened the potential for controlled delivery of content over the Internet. The challenge now for publishers is to exploit this opportunity to develop new net revenues. To be successful they must understand the capabilities and limitations of technologies and apply them to fulfilling the demand for Internet access for their products and services. They are caught between arriving on the Internet too late and risking their future on ill-founded technology. On the Internet the consumer is king and they will drive the success of competing strategies.

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Howard Singer

Sr. Vice President
Marketing and Product strategy
Reciprocal

“The Ten Commandments of Digital Rights Management”

As Reciprocal’s Senior Vice President of Marketing and Product Strategy, Singer oversees the company’s long-term strategic product planning and positioning, corporate communications and messaging, as well as public relations. His primary objective is to build on Reciprocal’s successes and further the company’s position as a leading provider of infrastructure services that enable the distribution of digital assets.

Singer’s understanding of DRM and digital distribution services are unparalleled in the industry, and he brings formidable technical knowledge and marketing insight to all of Reciprocal. Prior to his role with product strategy, Singer

spearheaded business development for Reciprocal. During that time, he led Reciprocal’s efforts to develop and implement Sony Music’s digital download service, the first time a major music company sold songs from their top artists while complying with the industry’s secure digital music standards.

The Ten Commandments of Digital Rights Management

Howard M. Singer, PhD
Senior VP, Marketing & Product Strategy
Reciprocal
hsinger@reciprocal.com

1. Thou Shalt Make It Easy for Consumers
2. Thou Shalt Put Lots of Content Out There
3. Thou Shalt Not overprice
4. Thou Shalt Not Restrict Usage Just Because You Can
5. Consumers Will covet their unauthorized files if the real deal isn't good enough
6. Thou Shalt Build Your Market with Controlled Freebies
7. Thou shalt not believe that any protection technology is foolproof
8. If you think you can build it yourself, thou shalt think again
9. To be successful, though shalt build relationships with Channels, Connections, Devices and not just Content
10. Just Do It: Patience is NOT A Virtue!

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Warren Adler

Author

Warren Adler is the author of 23 popular novels, two of which have become major motion pictures, the classic *The War of the Roses* and *Random Hearts*. Adler's latest novel, *Mourning Glory*, will be published by Kensington Books on August 7, 2001.

Warren Adler is currently one of the few, perhaps the only novelist in the world that has had all his books digitized. Benefitting from his foresight to gain control of the rights to his books from the original publishers, he has ambitiously reissued his titles which are now available in trade paperback and hardcovers editions under the imprint Stonehouse Press. Adler owns all his e-rights to his books, making him unique among authors. The titles are also available as e-books.

A product of the New York public school system, Adler graduated from Brooklyn Technical High School and New York University, where he majored in English literature. Inspired by his freshman English professor Don Wolfe, Adler went on to pursue creative writing with Dr. Wolfe when he taught at the New School, and studied under Dr. Charles Glicksburg while there as well. Among his classmates were Mario Puzo, William Styron, and many other talented writers.

After graduating from NYU, Adler worked for the *New York Daily News* before becoming the editor of the *Queens Post*, a prize-winning weekly Long Island newspaper. Serving in the Army during the Korean War, he was the Washington Correspondent for Armed Forces Press Service in the Pentagon.

Prior to becoming a novelist, Adler had a distinguished business career. He owned four radio stations and a TV station, ran his own public relations and advertising agency in Washington, D.C., and co-founded *Washington Dossier* magazine with his wife and son. With the publication of his first novel in 1974, Adler decided to pursue writing full-time.

Ten of Adler's novels have been sold or optioned to the movies and Lifetime Television is currently poised to produce a series based on his popular mystery character Fiona Fitzgerald.

When he is not writing, Adler lectures on creative writing, movie adaptation, and the future of e-publishing. He is the founder of the Jackson Hole (Wyoming) Writers Conference. He divides his time between New York City and Jackson Hole.

Presentation by author Warren Adler before NIST Convention, Nov. 6th 2001

Last year at this convention, I announced my intention of putting all of my 23-backlist novels on the web. I had concluded that it was the only alternative available for an author like myself with a large backlist of books, translated into 30 foreign languages, many of them declared out-of-print by various publishers.

I had pointed out then that my books had survived two adaptations to major motion pictures *The War of the Roses*, now a cult classic, and *Random Hearts*, a movie starring the aging heartthrob Harrison Ford, now making the rounds on TV screens throughout the world. There was also one wonderful adaptation of three of my short stories into a PBS miniseries called “The Sunset Gang”. Thus, I laid claim to my fifteen minutes of fame. Ahead, I saw only a dark future of galloping anonymity, a condition that, I still view as highly unsatisfactory.

My objective in reaching out to the lifeboat that I perceived floating on the web was to extend my literary career during and beyond my lifetime, attempt to brand my authorial name and give me assurances that my books would be available during the life of my copyrights, meaning seventy-odd years after my demise. Call it looking ahead.

To many this action was seen as an act of extreme egoism, temporary insanity and possibly, great or blind courage. I am happy to report that it was all of the above.

As I speak all of my novels are, indeed, available in the English language on the web in most, if not every e-book format and Print-on-Demand configuration both in hard cover and trade paperback. Creating this infrastructure required, in addition to an inordinate outlay of hard cash, an enormous effort of will and tenacity. Think of what it required. I had to be sure I owned all the rights. I did not want to court violations in cover art and had to create entirely new covers, opting for a generic design. To make matters more complicated, I had to recreate the novels in every competing digital format.

There is, after all, no one standard. No need to preach to the choir here. You all know the drill. In fact that’s why we’re here. My 24 books are now listed in over 240 ISBN numbers since each volume in each format requires it. The process is akin to sausage making. You don’t want to know what ingredients go into it, but I am happy to report that the worst is over. My books are now ubiquitous and available for sale everywhere books are sold on the net and in brick and mortar stores.

Now that the English language infrastructure is complete, I am in the process of exploring conversions in other languages. My plan is to start with the European languages, then move on to those in Asian tongues.

The thing about this process is “in for penny, in for a pound.” It’s like an addiction. I am also exploring putting my work in audio formats, where I have the rights. The technology currently exists for making digital movies at a fraction of the cost involved in current movie making. Perhaps some day.

So now I’ve gone and done it. So what! Now I’ve been going around the world telling people that I’ve done it and what I’ve learned. I’ve spoken in Paris, London, and Frankfurt and continue to spread the word of my project at every available podium on our continent.

The strange thing about my predicament is that I've discovered that I am the only author in the world, with my output, vetted by major publishers, who has done this. Am I a visionary or a fool? That will be for others to judge.

Here is what I have learned. And remember I am speaking only from the author's point of view, not just an author, but also a novelist, not just a novelist, a mainstream novelist, meaning that I am not a genre writer although six of my books can be roughly categorized as mysteries.

I consider my books modestly popular. Let us say they are an acquired taste, hybrid concoctions of thrillers, stories about love, sex and general angst, characters in the throes of deep conflicts locked mostly in dysfunctional relationships with a flash of dark humor thrown in here and there. In other words, a compendium of contemporary life in America.

The results of my first couple of months of activity are as follows:

1. I am selling a lot more books than I had when they were out-of-print and my sales were nil. Now that's a no-brainer. What is most important to note is that a revenue flow has begun, thank God. I am gaining more and more readers daily, some as far away as China or Russia. I know because they write to me and I answer them. Don't listen to the nay sayers in the media. I tell you from personal experience. E-books are selling. Print-on-Demand is selling. Not enough for the big publishers locked into their own expectations and paradigms requiring instant results, but they are selling. The trickle has become a stream and the stream is expanding faster than our media moguls know. When will the stream become a river? Sooner than we think.
2. I am beginning to discover who exactly is reading my books, allowing me to interact with them by e-mail. I am harvesting their names and slowly building my list of loyal followers. It is akin to looking for the raisins in raisin-bran, but by patience and persistence the list is growing.
3. I have discovered which format is winning the e-book sales wars and which e-tailers are doing the best for my books. Please don't press me on this. I don't want to piss anybody off. Remember, too, that I am operating in an environment where genre books, particularly science fiction have been dominant. E-tailers have put my books in the category of contemporary fiction, which I accept as reasonably descriptive.
4. While my new books are being published by traditional publishers with cross-referencing to my website and other e-tailers, I expect to have increasing difficulties obtaining exclusive e-book rights of my future novels. Nevertheless, as I build my own infrastructure and develop my cyber-marketing skills I am beginning to glimpse a value-added element to any future novels and believe that I will find a happy medium to share e-rights with my future publishers.
5. I have always known that my principal challenge will be marketing, creating awareness of my authorial name, in other words, branding. To achieve this, I am sending a periodic letter, which I call an e-sheet, to both readers and interested parties with every increasing frequency. The letter contains news and information of interest to my circle, items such as new formats and languages introduced, if any, new ways of receiving my work. For example, one of my e-tailers is offering my short stories as single purchases in lieu of the collected stories in book form and is also offering short stories previously published to which I own the rights. The e-sheet also reports on any movie or television deals, if any and other little tidbits of interest, including my pearls of wisdom of events of the day. If any of you wish to receive these frequent tomes I would be happy to collect cards and put you on our list. You might find them surprisingly interesting and, if you don't, we have a farewell option. I am also exploring postings on news groups and other methods of contacts via e-mail and, of course, an emphasis on harvesting names and e-mails of potentially interested parties. Nor am I averse to advertising, although finding the targets represent a further

challenge. Indeed, this talk and the many talks that I am making around the world is all part of the marketing strategy. I post these visitations on my site.

6. I have discovered that readers are also interested in the lives of authors, heaven knows why, but I am always happy to oblige and my website www.warrenadler.com has sections where one can see how I live and learn as much about me as I am willing to divulge.
7. There is also the element of experimentation. For example, a number of years ago I wrote a novel titled *Bound for Glory* which was about the rescue of a young woman from a cult. In those years, I had difficulty finding a publisher who was interested in the subject matter. The basic theme of the novel was how a sinister and determined cult could brainwash people into believing that there was a paradise awaiting them after death if they would just adhere to the teachings of the cult leaders. Since timing is, after all, everything in life, I put it on ice after a couple of submissions, believing that the moment would come when this subject would generate more interest. Alas, it has, with tragic results. We all now wonder how young men can give up their lives for such a dubious reward as 72 virgins with dark eyes. 72 virgins for an eternity. This is paradise? Give me a break. Thus, the timing is perfect. My novel is right on target. Submitting it now to a publisher would probably get interest but the time required to get it into the marketplace would be too long. Thus, I will be putting it out as an e-book and Print-on-Demand in a month and market it through my own sources. Just an experiment, but, in my opinion, worth the effort.

This then is an interim report on my wild and woolly project. My commitment remains focused and disciplined. I am quite encouraged by these preliminary results and will continue to press ahead. At this stage, I can see no downside to this effort and I truly believe that, while it is still quite lonely on this ocean of uncertainty, other authors will eventually discover my wake and put their boats in the water to follow it.

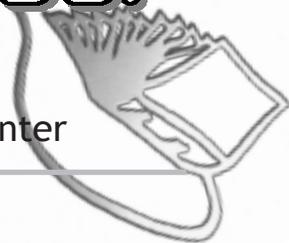
In the meantime, as a gesture of solidarity with our mutual cause, may I suggest that you buy a book or two or perhaps a complete set. They look lovely on a library shelf. But then you can judge for yourself whether my project is noteworthy or foolhardy.

ELECTRONIC BOOK 2001

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Michael Miron

Co-chairman of the Board of Directors &
CEO

ContentGuard, Inc.

www.contentguard.com

Michael Miron is co-chairman of the Board of Directors and chief executive officer (CEO) of ContentGuard, Inc. Miron is responsible for the overall business strategy and execution of ContentGuard's mission to accelerate Internet content delivery across all content and media types, on a worldwide basis. Miron was previously president of the Internet Business Group at Xerox Corporation, where he was responsible for the development of

responsible for long-term corporate strategy, corporate initiatives, mergers and acquisitions, strategic alliances and Internet strategy and infrastructure. He also was an officer of the corporation.

Miron joined Xerox in 1998 from AirTouch Communications in San Francisco, where he was vice president of Corporate Strategy and Development. Prior to this, he worked in strategy and analysis at

new Internet-related transaction and service businesses. Miron also held the position of senior vice president of Corporate Business Strategy and Development at Xerox, where he was

Salomon Brothers Inc. in New York from 1990-96. He also worked at McKinsey & Company in New York from 1986-90, and at International Business Machines in Rye Brook, N.Y., from 1981-86.

Miron received a Bachelor's degree from Cornell College of Engineering in 1977 and a Master's degree in Management from Northwestern University in 1981.



**The Language for
Digital Rights Management™**

*Electronic Book 2001
Applications, Authors and Accessibility*

November, 2001



CONTENTGUARD™

The Promise of eContent

Delivering digital works
over the Internet



Content Publishers Want:
New products and services
New channels
Lower cost

Consumers Want Content:
Any time
Any where
Any form



CONTENTGUARD™

DRM Challenges

- ⊙ *Consistent specification and interpretation of usage rights and their terms and conditions for DRM stakeholders -- creators, providers, distributors and consumers*
- ⊙ *Effective rights management and protection of digital content across the entire value chain -- from creators distributors to consumers*
- ⊙ *DRM interoperability across multiple platforms, formats, and content consumption applications*
- ⊙ *Rapid development and deployment....We Hope*



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DRM Requirements

Trusted Systems that ...

- ⊙ *Secure and protect digital contents*
- ⊙ *Persistently honor usage rights, conditions and obligations specified for digital contents*

A Common Language that ...

- ⊙ *Provides a uniform mechanism to describe specifications of rights and their conditions and obligations for distributing and using digital contents*
- ⊙ *Enables trusted systems to exchange digital contents and interoperate for end-to-end DRM*



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The Standards Arena

- ⊙ MPEG
- ⊙ OeBF / EBX
- ⊙ W3C
- ⊙ XACML
- ⊙ IDRM / IRTF
- ⊙ DOI
- ⊙ Prism
- ⊙ IPTC - NewsML
- ⊙ SDMI
- ⊙ SMPTE DCinema
- ⊙ XKMS
- ⊙ XBRL
- ⊙ RIXML
- ⊙ IRML
- ⊙ ICE
- ⊙ cIDf
- ⊙ ISMA
- ⊙ ETC., ETC.



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OeBF Rights & Rules WG

- ⊙ **Call for Requirements issued July**
- ⊙ **Requirements Collected as of August 31st**
- ⊙ **Coordination and Prioritization**
- ⊙ **Input of OeBF Requirements re: REL to submitted to MPEG**
- ⊙ **Decision to form a Rights Expression and Trust Model Subgroups under discussion**



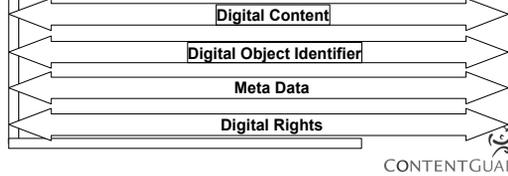
CONTENTGUARD™

MPEG 21 RDD - REL

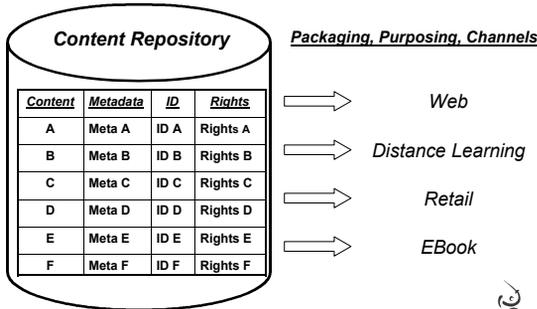
- ⊙ Call for Requirements complete
- ⊙ Sydney Meeting : Call for Proposals for REL was issued
- ⊙ Proposals Due November 2001
- ⊙ Processed in Pattaya, Thailand



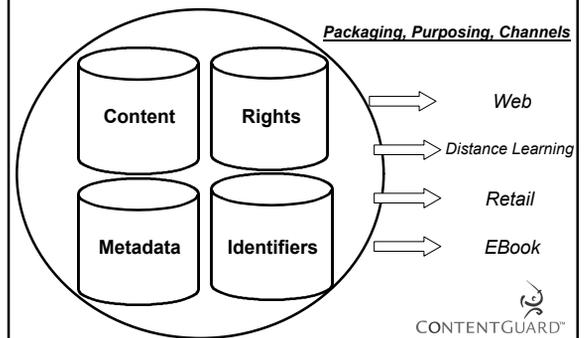
Digital Supply Chain



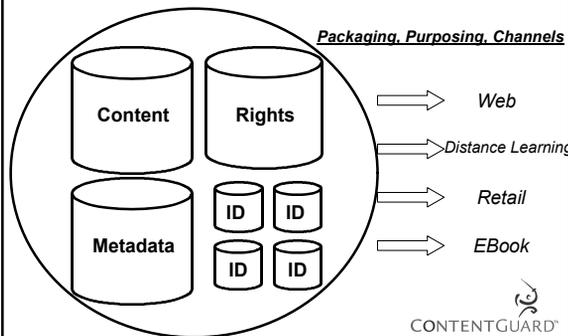
Content and Its Distribution



Content and Its Distribution



Content and Its Distribution



What is XrML?

XrML – eXtensible rights Markup Language

- ⊙ Originates from Xerox PARC in 1994
- ⊙ Provides specifications of rights and associated conditions and obligations for distributing and using digital contents
- ⊙ Supports content integrity and entity authentication and confidentiality within the specification
- ⊙ Enables trusted systems to interoperate for end-to-end DRM
- ⊙ Is highly flexible, customizable, and extensible
- ⊙ Is available at www.xrml.org



Business Models Supported in XrML

- Unlimited usage
- Flat fee sale
- Pay per view
- Preview
- Promotion
- Subscription/Membership
- Transfer
- Gifting
- Library loan
- Site/volume license
- Rent
- Multi-tier models
- Territory restricted
- Component based model
- User types based model
- Payment to multiple Rights Holders
- Superdistribution
- Composite content
- Personal lending



XrML Rights Expressions

Each "rights expression" in XrML specifies a combination of

- what rights are available or granted,
- for how many times,
- within what time period,
- under what access conditions,
- for what fees,
- within which territory, and
- with what obligations



XrML Conditions & Obligations

- Conditions for granting individual rights
 - Fee (ticket, monetary – flat, per use, interval use, metered use)
 - Time (from, until, interval, metered)
 - Access control (principal, security level)
 - Maximum Count
 - Territory (physical location, digital domain)
- Obligations when exercising individual rights
 - Usage Tracking
 - Watermarking



XrML Evolution

- | | |
|---|--|
| <p>DPRL 1.0 ('94-'96) Xerox</p> <ul style="list-style-type: none"> ● Focus on machine enforceable rights | <p>XrML 1.0 (4/00) ContentGuard</p> <ul style="list-style-type: none"> ● Conversion to XML Based language ● Additional Extensions |
| <p>DPRL 2.0 ('97-'99) Xerox</p> <ul style="list-style-type: none"> ● XML based syntax that enables specification of rights information (fees, terms, and conditions) for documents | <p>XrML 1.03 (8/00) ContentGuard</p> <ul style="list-style-type: none"> ● Enhancements added to increase flexibility <p>XrML 2.0 (11/01) ContentGuard</p> <ul style="list-style-type: none"> ● Support for More Business Models ● Broader Access Control Processing Rules |



THE END

....is only the beginning.
The rights language is the easy part.

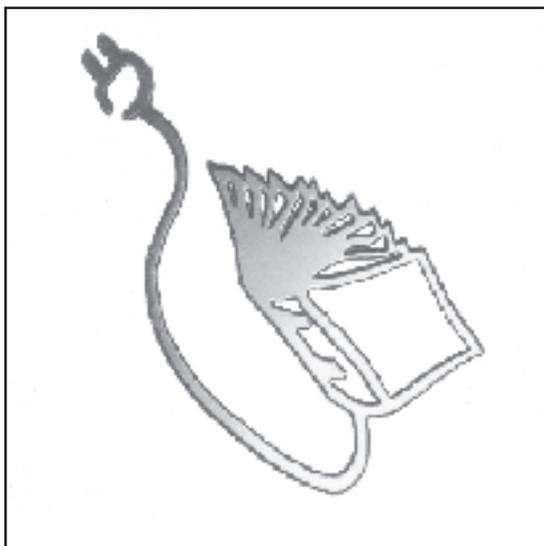


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Kevin Weatherly

Sales Executive
Sealed Media

“Driving Internet Publishing Revenues with Digital Rights Management Technology”

Kevin S. Weatherly is a Sales Executive with SealedMedia, the leader in the commercial Digital Rights Management industry. SealedMedia offers a powerful content sealing, licensing and protection solution enabling publishers of business and consumer information to use the Internet to increase sales, improve marketing efficiency, and transform content assets into new revenue streams. Mr. Weatherly brings more than eight years of sales and business development experience to his position managing the New York sales division of SealedMedia. Beginning his career as a Registered Representative for Olde Discount Corporation, which

has since been acquired by H&R Block, Kevin went on to hold a senior sale position in the Institutional Division of Charles Schwab & Co., Inc. Subsequent to working with Schwab, Kevin took a position as Senior Manager of Strategic Consulting at MDE Information Technology, Inc, a New Jersey based software development company. Prior to joining SealedMedia, Kevin worked as a Sales Manager in the Business Solutions Group at Dmind Corporation, a New York based software development and Internet services company, that services such clients as American Advertising Federation, The Reserve Mutual Funds, and Avid Technologies, among many others.

Driving Internet Publishing Revenues with Digital Rights Management Technology

Today lack of copyright control on the Internet has prevented publishers from exploiting the Net to its full commercial advantage. The advent of Digital Rights Management technology has opened the potential for controlled delivery of content over the Internet. The challenge now for publishers is to exploit this opportunity to develop new net revenues. To be successful they must understand the capabilities and limitations of technologies and apply them to fulfilling the demand for Internet access for their products and services. They are caught between arriving on the Internet too late and risking their future on ill-founded technology. On the Internet the consumer is king and they will drive the success of competing strategies.

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Peter Taarnhøj

Founder & President

Auto Text

www.autotext.com

Graduate, Master degree in Law Copenhagen University 1972.

1972 – 1982 Internal Revenue Service, Copenhagen.

1982 - 1996 CEO and owner of the leading tax and legal publishing company in Denmark. Sold this company in 1995 to the international publishing group Wolters Kluwer.

1996 founded a Danish venture company, Comlex, specialising in providing seed money to new companies within the publishing and information industries (www.complez.com). Comlex presently has interests in 10 such companies.

1998 Comlex acquired AutoText Sweden (a 15 year old company and market leader in digital conversion of text) and with this as base is setting up companies in other European countries specialising in helping publishers,

universities, government agencies and other owners of information that is to be or could be distributed in both paper and electronic form.

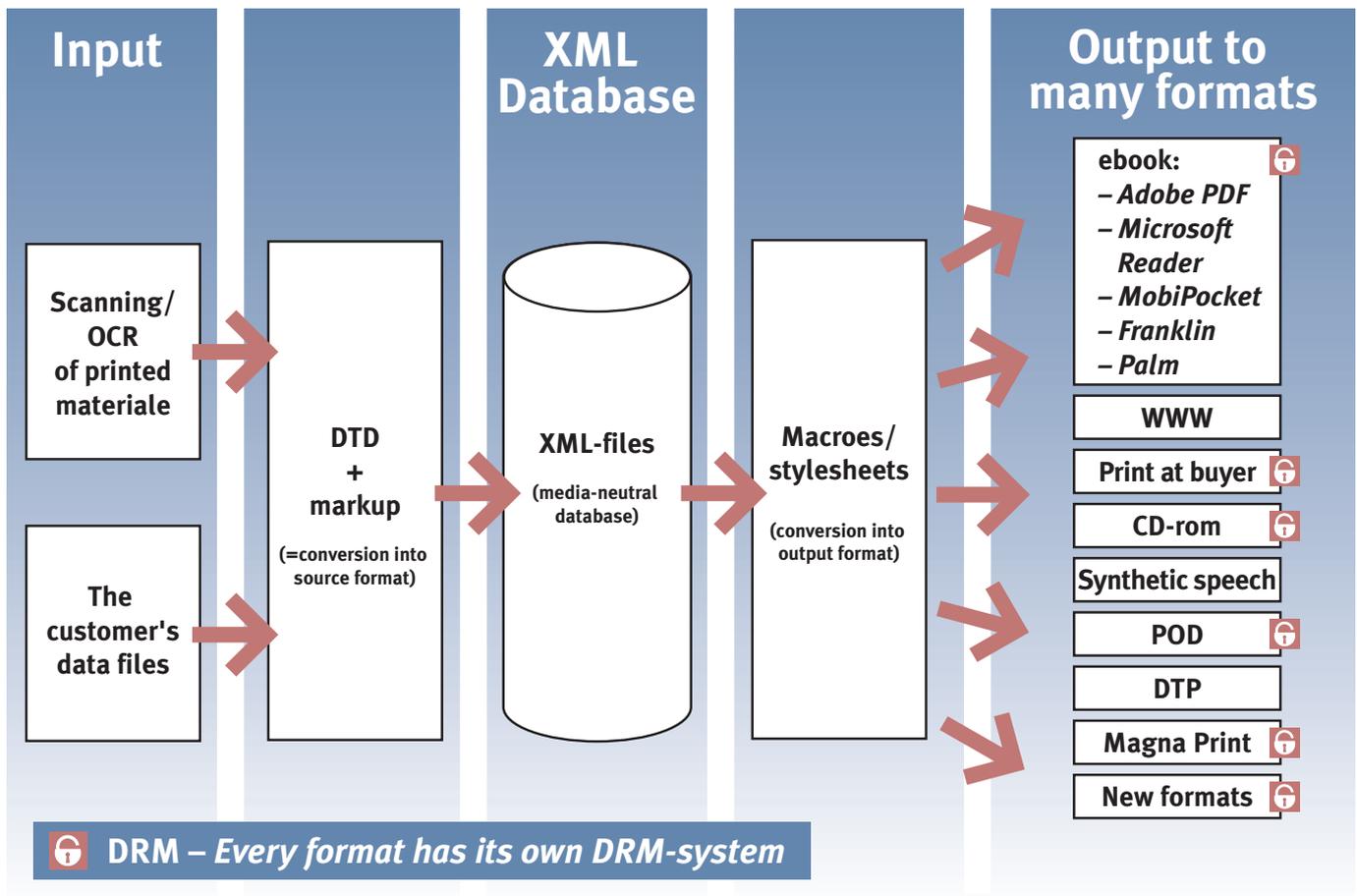
AutoText provides all the services and components needed to convert a traditional book into an e-Book or a Print-On-Demand book and hereafter deliver the electronic book to an end user with copy protection, Digital Rights Management and secure payment systems. AutoText will interact with any production systems the publisher already has in place. We base our company and business strategy on the recommendation, that only if the publisher uses data in a general media neutral format can he deliver his products fast enough and at a low enough price to satisfy the markets demands.

AutoText International is with AutoText in Denmark as base setting up sister companies in other

European countries; we are presently located in Denmark, Sweden, Holland and Spain. More information at www.autotext.com.

Chairman of the electronic committee of the Danish Publishers association.

Media-neutral workflow



Media-neutral workflow is a process consisting of several steps. Each document is by means of scanning and/or conversion converted into a media-neutral format, which presents the possibility of generating many different output formats.

Input can be either printed material, whether a book or other information material, or an already existing data file.

The input document is marked up in a source format (XML - eXtensible Mark up Language) on the basis of a DTD (Document Type Definition). This is a rule set, which defines the structure of the input documents.

The DTD ensures that the structure of the marked up documents is consistent, since the mark up is checked by comparing it to the belonging DTD.

The source format is now a media-neutral format, which by means of macros and style sheets can be converted to one or more output formats. Whether eBook, Print-On-Demand, DTP or other formats.

Since the process consists of several elements, one can need assistance with the entire process or just parts of it. AutoText helps adjust and carry out the process, cf. the wishes and needs of the individual.

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Willem Fenengastraat 29
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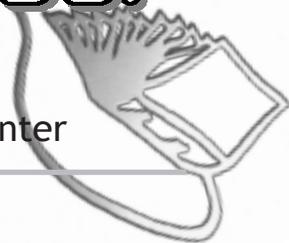
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www.autotext.com

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James Billington

Librarian of Congress

www.loc.gov

On April 17, 1987, Pres. Ronald Reagan nominated historian James H. Billington, director of the Woodrow Wilson International Center for the Scholars at the Smithsonian Institution to be the thirteenth Librarian of Congress. Hearings were held by the US Senate on July 14, 1987; the American Library Association neither endorsed nor opposed the nomination. Billington was confirmed on July 24. He took the oath of office in the Library's Great Hall on September 14, 1987. Participants in the ceremony included the congressional leadership, Pres. Ronald Reagan,

and Chief Justice William H. Rehnquist, who administered the oath on the Library's 1782 Aiken Bible. James H. Billington was born on June 1, 1929, in Bryn Mawr, Pennsylvania.

Dr. James H. Billington, a leading American historian of Russian culture and the Librarian of Congress, has traveled to Russia with presidential, congressional, academic, and church delegations during the past 40 years. In 1992, he arranged and brought to the United States the first exhibition ever held from secret Soviet archives with the cooperation of the Russian authorities.

A Rhodes scholar at Oxford and former professor at Harvard and Princeton Universities, Billington is the author of the classic *The Icon and*

the Axe, an interpretive history of Russian culture, and *Russia Transformed: Breakthrough to Hope*, an eye-witness account of the failed Communist coup of 1991 and of the emergence of Russia as a democratic nation. He has also authored the companion book to *The Face of Russia* series.

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Chris Rippel

Head of continuing education
Central Kansas Library System
www.skyways.org/central/ebooks/

“What is the purpose of ebooks in libraries?”

Chris Rippel is currently head of continuing education for the Central Kansas Library System (CKLS) headquartered in Great Bend, Kansas.

Chris is interested in ebooks because he loves books and libraries and believes that ebooks can improve the way libraries provide books to patrons. Chris maintains a Web site encouraging these ideas: “Can ebooks improve libraries?” at www.skyways.org/central/ebooks/. Chris has spoken to librarians about ebooks in Kansas, Chicago, and New Mexico. He has written two articles about ebooks, an article about Questia in Foreword magazine and about the Role of Ebooks in Libraries for Library Hi-Tech.

Chris Rippel joined CKLS in 1989, he has a BA from Berea

College and a MLS from Florida State University. He has worked for the Central Kansas Library System in Great Bend, Kansas since 1989, holding various positions in reference, interlibrary loan and now is Head of Continuing Education.

Chris also enjoys teaching elderly adults how to use computers. To facilitate this effort, Chris created Mouserise www.ckls.org/~crippel/computerlab/tutorials/mouse/page1.html. Mouserise is now translated into Spanish and Danish and is used around the world for teaching adults to use a computer mouse.

What is the purpose of ebooks in libraries?

Chris Rippel, Central Kansas Library System, Great Bend, Kansas

www.skyways.org/central/ebooks/

What is the purpose of ebooks in libraries? In this presentation, one librarian discusses three roles for ebooks in libraries. Each role has a unique mission. Each mission determines how librarians should select, purchase, organize, and circulate ebooks. Before discussing these roles, let me reveal the hidden agenda behind my presentation.

1. I am an ebook evangelical because I believe the right ebook technology can improve the way libraries provide books to patrons. Therefore, I want the right ebook technology to succeed and libraries to be users of that technology.
2. I believe that success of a new media does not require equaling the quality of presentation of old media. New media must provide merely adequate quality of presentation plus benefits in convenience and, possibly, price. Millions watch movies on little television screens far inferior to showings in movie theaters because 1) television quality is adequate and 2) cable and video suppliers provide superior convenience and lower movie prices, after substantial investment in the television, VCR player or cable. I believe current ebook technology provides adequate presentation of text, but not adequate convenience or pricing needed for success.
3. If ebooks were convenient, libraries could demonstrate the convenience of ebooks to millions of readers. Imagine the following scenario. A patron asks a librarian for a book not owned by the library. After a few computer searches, the librarian replies, "We can borrow the printed book from another library in about a week or we can purchase, download, and check-out the ebook version right now. Which do you want?"

When most readers think of ebooks they mentally compare reading print books with reading on a computer screen. This comparison ebooks will seldom win. However, the above scenario presents a comparison ebooks can win and some patrons will choose ebooks. Surveys of volunteers who have tried ebooks show that more than half of readers who try ebooks, like ebooks. (See skyways.lib.ks.us/central/ebooks/usability.html)

1. Only role 3 below actually motivates patrons and librarians to choose ebooks because only role 3 improves library service. Ebook manufacturers and publishers should consider creating the systems needed for role 3 to market ebooks to readers. There are 129,289 libraries in the United States. (See www.ala.org/pio/factsheets/howmany.html) In 1998, Americans averaged seven visits to a library. One in ten visits a library more than 25 times a year. Eight-one percent of library visitors check-out books. (www.ala.org/pio/factsheets/gallupoll.html)
2. Librarians need to be involved with ebooks to guide ebook manufacturers and publishers how to create technology libraries can, at least, easily use and, even better, improve library service.

Role 1 introduces current ebook technology to patrons. This is what most libraries circulating hand-held readers are doing now. Discussion of this role describes how librarians currently handle ebooks and the problems librarians face with current ebook technology.

Hardware: Libraries purchase hand-held ebook readers for circulating to patrons. According to my own list of "Libraries with ebooks" (See www.skyways.org/central/ebooks/libraries.html), librarians mostly purchase Rocket eBooks and RCA REB 1100s.

Acquiring text: Librarians select ebook versions of best-selling paper books to entice patrons into try the new technology.

After titles are selected, titles are downloaded and loaded into the ebook reader by staff trained for this specific task. These titles are usually purchased from retail Web sites providing ebook versions of best-selling paper books (e.g., Barnesandnoble.com and Powells.com).

Though some libraries mix different genres in the same ebook reader, many librarians dedicate each ebook reader to a specific genre. So libraries have mystery ebook readers, romance ebook readers, non-fiction readers, and, some libraries, children readers and young adult readers.

Marketing: Since the technology is being promoted, the focus of marketing is on the hand-held ebook reader. Even cataloging most often focuses on ebook readers rather than ebook titles. A survey of cataloging by 25 libraries listed in my “Libraries with ebooks” shows that 17 libraries catalog the only the ebook hardware. When the ebook reader is cataloged, the titles and authors are listed in the 505, 700 and/or 740 MARC (**M**achine **R**eadable **C**ataloging) fields. (See the MARC record below.) One problem with listing titles in ebook readers is keeping the cataloging up-to-date as titles are added and removed from the ebook reader.

Another problem is the inability to attach subject headings to specific titles in the readers. Most cataloging of ebook readers have only “Electronic books” as a subject heading. However, placing titles of the same genre into one reader would allows attach general subject headings, such as “Love stories” shown below. I asked CKLS’ cataloger, Kathleen Mitchum, to provide the following cataloging of a Rocket eBook Reader.

| | | | |
|---------------|-----|----|---|
| Leader | LDR | | 00000nrm 2200000 a 4500 |
| Trans Date | 005 | | 20010608165343.0 |
| Fixed Data | 008 | | 010607s1999 caunnn s 00 rneng d |
| Cat. Source | 040 | | ¶ a CD5 |
| Local Call# | 099 | | ¶ a Ebook Aphrodite |
| Title | 245 | 10 | ¶ a [Rocket eBook] ¶ h [realia] |
| Title:Varint | 246 | 3 | ¶ a Rocketbook |
| Edition | 250 | | ¶ a Pro ed. |
| Imprint | 260 | 0 | ¶ a Mountain View, Calif. : ¶ b NuvoMedia, ¶ c 1999. |
| Phys Descript | 300 | | ¶ a 1 electronic reading device ; ¶ c 11 x 18 x 4 cm. + ¶ e 1 stylus + 1 AC adaptor + 1 carrying case + 1 screen cloth. |
| Note:Content | 505 | 0 | ¶ a The villa / Nora Roberts — The endearment / LaVyrle Spencer — Legend / Jude Deveraux — Random House dictionary — Rocket eBook user’s guide. |
| Note:General | 500 | | ¶ a Ebook ID#: pugblibr67530. |
| Subj:Topical | 650 | 0 | ¶ a Electronic books. |
| Genre/Form | 655 | 7 | ¶ a Love stories. ¶ 2 gsafd |
| Subj:Loc Top | 690 | | ¶ a Ebook readers. |
| Subj:Loc Top | 690 | | ¶ a Electronic book readers. |
| AE:Pers Name | 700 | 12 | ¶ a Roberts, Nora. |

| | | | | |
|--------------|-----|----|-----|----------------------------|
| AE:Pers Name | 700 | 12 | ¶ a | Spencer, LaVyrle. |
| AE:Pers Name | 700 | 12 | ¶ a | Deveraux, Jude. |
| AE:Title Dif | 740 | 02 | ¶ a | Villa. |
| AE:Title Dif | 740 | 02 | ¶ a | Endearment. |
| AE:Title Dif | 740 | 02 | ¶ a | Legend. |
| AE:Title Dif | 740 | 02 | ¶ a | Random House dictionary. |
| AE:Title Dif | 740 | 02 | ¶ a | Rocket eBook user's guide. |

Circulation: Since ebook readers are expensive, some libraries (e.g., Glencoe (Illinois) Public Library, Monroe County (New York) Library System, Patchogue-Medford (New York) Library, DeForest (Illinois) Public Library) require signing “acceptable use” agreements defining how to treat ebook hardware and promising to pay replacement costs. (See skyways.lib.ks.us/central/ebooks/recommendations.html#agreements)

Since ebook readers have numerous parts (e.g., reader, stylus, screen cloth, AC adapter, and zippered container), many libraries buy additional cases to contain all the parts. Circulation staff must also count the parts during check-in. (See www.rpl.richmond.bc.ca/rplinfo/eprocedures.html)

Circulation staff in Princeton (New Jersey) Public Library and Richmond (British Columbia) Public Library also train patrons how to use ebook readers. (See skyways.lib.ks.us/central/ebooks/training.html)

Role 2 provides ebook titles to patrons wanting ebooks in a way similar to how libraries now provide audiobooks and videos. Role 1 focused on ebook technology. Role 2 returns to libraries’ traditional focus on titles, in this case ebook titles. This role explains changes needed for integrating ebook titles into libraries’ traditional work and organization.

Hardware: Libraries may still purchase ebook readers to circulate for patrons or load library titles on patrons’ own ebook readers. Current ebook technology causes several problems. One problem is the many parts of a reader that patrons can lose. Susan Gibbons suggests that a one piece reader is better for libraries. Since patrons seldom check out more than 10 titles at a time, libraries also do not need expensive ebook readers with memory to store hundreds, even thousands, of titles.

Acquiring text Librarians select titles by reading reviews about the book. At this time, *Library Journal* reviews some ebooks. *Booklist*, another popular source of book reviews for librarians, does not review ebooks. Ebook publishers wishing to sell to libraries should submit their titles to these magazines and other review sources for review.

Librarians select ebook titles their patrons would read as ebooks. In role 1, librarians select ebook versions of popular paper books. If patrons prefer reading best-selling books in paper format, librarians can purchase ebook titles only available as ebooks. Powells.com sells over a thousand ebook titles in horror, mystery, romance, and thrillers. Though some ebook titles are vanity publications, ebook titles are winning book awards, even against paper publications. Libraries should introduce good ebook writers to their patrons.

Like Role 1, after titles are selected, they are purchased and downloaded by staff trained for this specific task. Some ebook publishers and vendors create barriers to purchasing by librarians. One major barrier is by accepting only credit card payments. Any publisher wishing to sell to libraries should accept purchase orders and bill libraries for purchases. Major vendors, Barnesandnoble.com, Powells.com, and Amazon.com do support purchase orders.

Finally, libraries worry about storing ebook titles on vendors’ own computers (e.g., SoftBook). Storing titles on another’s computers denies librarians their duty for archiving titles for future generations.

Librarians' sensitivity toward this duty varies with the type of library and the material. Nevertheless, ebook publishers wishing to sell to libraries should be aware that such factors will effect what and how librarians view the purchasing or licensing of digital materials.

Marketing: Browsing is the most common way patrons find reading material in public libraries. A major problem with ebooks is their invisibility to these browsers. Ebook publishers could help browsers with printable bookmarks, cover art and fly-leaf descriptions for printing out on 8.5" X 11" paper for placing in binders and, possibly, software producing virtual bookshelves on computers.

While role 1 cataloging focused on ebook readers, role 2 catalogs ebook titles. Cataloging titles provides a better description of titles including attaching specific subject headings to specific titles. Below is Kathleen Mitchum's cataloging of Pauline Baird Jones' *Byte Me*.

| | | | |
|---------------|-----|-----|---|
| Leader | LDR | LDR | 00000nam 2200000 a |
| 4500 | | | |
| Trans Date | 005 | | 20010608165343.0 |
| Fixed Ad mat | 006 | | m d |
| Fixed Ph Des | 007 | | cz gz |
| Fixed Data | 008 | | 010606s2000 wiu s 00 f eng d |
| Cat. Source | 040 | | ¶ a CD5 |
| ISBN | 020 | | ¶ a 1582006989 |
| Local Call# | 099 | | ¶ a Ebook R917 |
| ME:Pers Name | 100 | 10 | ¶ a Jones, Pauline Baird. |
| Title | 245 | 10 | ¶ a Byte me ¶ h [computer file] / ¶ c Pauline Baird Jones. |
| Edition | 250 | | ¶ a eBook Ed. |
| Imprint | 260 | 0 | ¶ a Amherst Junction, Wisc. : ¶ b Hard Shell Word Factory, ¶ c c2000. |
| Phys Descript | 300 | | ¶ a 1 computer file. |
| Series:Title | 440 | 0 | ¶ a Lonesome lawman ; ¶ v 2 |
| Note:Award | 586 | | ¶ a EPPIE finalist, 2001 |
| Subj:Topical | 650 | 0 | ¶ a Electronic books. |
| Genre/Form | 655 | 7 | ¶ a Love stories. ¶ 2 gsafd |
| Subj:Loc Top | 690 | | ¶ a Ebooks. |
| MRF Access | 753 | | ¶ a Gemstar RCA REB reader |
| MRF Access | 753 | | ¶ a Rocket eBook reader |

Circulation: Proper focus of role 2 upon titles means that patrons select only the ebook titles they want in the ebook reader they check out. Providing this option is difficult with current ebook technology because ebook titles are linked to specific ebook readers.

The most desirable solution for libraries would be the capability of loading any library ebook title into patrons' own hardware. Though netLibrary provides this capability for those reading netLibrary ebooks on personal computers, I am not aware of software that ebook manufacturers and publishers trust to

protect copyrights of titles for hand-held ebook readers. I hope the previous sentence is incorrect by the time of this conference.

Until this statement is incorrect, two librarians propose compromises which allow patrons to choose the titles loaded onto the ebook hardware they check out. Deborah Wiesehan of Patchogue-Medford (Suffolk, New York) Public Library purchases the same titles for each of her library's ebook readers. Susan Gibbons of the Electronic Book Evaluation Project (See www.rrlc.org/ebook/ebookhome.html) proposes linking all the library's ebook titles to all of the library's ebook readers. Audible.com does this for all the digitized audiobooks in MP3 format purchased by the libraries in her project.

Role 3 uses the unique features of ebooks to improve library services. Improving library services with ebooks requires changes in ebook technology and library organization. The following paragraphs outline such changes.

Hardware: Ideally, libraries would be able to load their ebook titles in patrons' ebook readers and, thereby, reduce libraries need to purchase and maintain hardware. Nevertheless, libraries probably should provide ebook readers for patrons without their own hardware and reading in the library.

Acquiring text: Since ebooks can be downloaded from Web sites in minutes, purchasing of books could be postponed until patrons request titles. Kalamazoo Public Library circulates Audible.com digitized audiobook titles on 20 Diamond Rio MP3 players. In their contract with Audible.com, Kalamazoo agreed to spend \$6,000 between March 1, 2001 and February 28, 2002 for digitized audiobooks in MP3 format. Audible.com bills Kalamazoo the list price of books multiplied by the number of simultaneous uses for each title.

Around 80% of titles purchased are requested by patrons. Kalamazoo's desk staff can purchase titles at patrons' requests when requested titles are hardbacks on the current New York Times Best-seller List or are an Oprah's book or are written by one of the 181 authors on KPL's "Book My Favorites" automatic reserve program. Requested titles not on these lists are passed on to professional librarians who make a decision about purchasing within 24 hours.

"Empowering staff to make immediate purchases has been an important, if unorthodox, aspect of the MP3 experiment. Digital downloads have on more than one occasion been delivered to customers well in advance of our ability to serve print customers. John Grisham's *A Painted House* and Stephen King's *Dreamcatcher* were available digitally long before the audiotape versions arrived. Digital downloads also made certain titles available immediately when all other library copies were unavailable. A patron looking for P.D. James' *Death in Holy Orders* to determine if it would be a good selection for her book group found that all of our print copies were circulating. AV staff purchased the title, transferred it to an MP3 player and delivered it to a very happy patron (who just happened to be one of the library trustees)." ("Audible.com and MP3 Player: First Quarter Report" at www.kpl.gov/av/audible.pdf.)

Marketing: Role 3 requires browsing aids and cataloging described in role 2. In addition, since ebooks are being purchased immediately at patron's request, libraries' catalogs could list ebook titles on vendors' Web sites available for immediate downloading. The catalog of even a small library could, therefore, list tens or hundreds of thousands of ebook titles.

Circulation: As mentioned above, the ideal for libraries is the capacity to load library ebook titles on patrons' hand-held ebook hardware. Software would control the length of check-out. When the due date arrive, titles are automatically become unavailable on patrons' devices. This would eliminate returns,

overdues, rehelving, etc. Furthermore, the moment titles become available, library circulation systems could automatically email out notices to patrons on “hold” lists that titles are now available for pick-up.

Analysis of the three roles

Role 1’s focus on ebook hardware does an admirable job introducing current ebook technology to patrons. Unfortunately, current ebook technology is difficult for libraries to handle. Attachment of ebook titles to specific ebook readers is the biggest problem, but role 1’s focus on hardware as shown in the cataloging of ebook readers raises additional problem.

Role 2’s focus on ebook titles better integrates ebook technology into traditional library work. Full implementation of role 2 requires some changes in ebook technology by ebook manufacturers and publishers, changes these groups may not wish to make.

Neither roles 1 or 2 motivate patrons or librarians to use ebooks. Role 3 does motivate patrons and librarians to try ebooks because role 3 improves the ability of libraries to provide books to patrons. I encourage ebook distributors to look closely at the business model being developed by Audible.com and Kalamazoo Public Library.

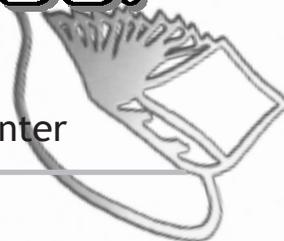
For more details about these roles, visit, “Can ebooks improve libraries?” at www.skyways.org/central/ebooks/. Thank you for reading this presentation and listening to me if you attended my presentation.

ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

November 5 - 7, 2001

Ronald Reagan Building and International Trade Center



Andrew Pace

Head of Systems
North Carolina State University Libraries

Andrew K. Pace entered The School of Library and Information Science at The Catholic University of America, in Washington D.C in 1994. While concentrating in book arts and cataloging, Pace was introduced to and instantly enthralled by a new medium: the World Wide Web. After completing his Masters while working full-time in the Library and Information Science Library, he took a job with Innovative Interfaces, Inc. in Emeryville, California. There, he started on the Help Desk, eventually moving up to Product Manager for several successful products, including WebPAC, KidsOnline, Z39.50 Client and

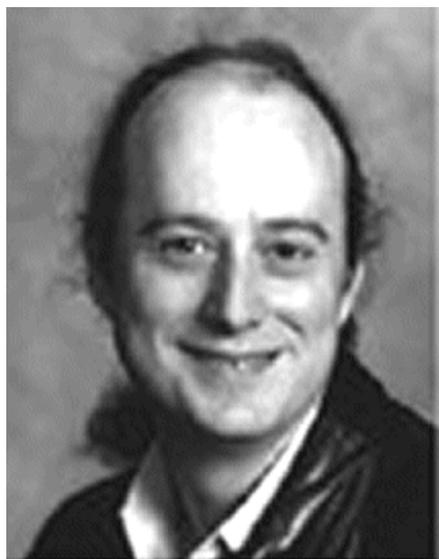
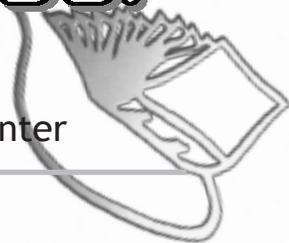
Server, and Electronic Course Reserves. In 1999, he left the private sector to return to a university setting at North Carolina State University Libraries, where he is currently Head of Systems. At NCSU Libraries, he has participated in several successful initiatives, including E-Book circulation, netLibrary integration, and a laptop lending program. Pace has a regular column in *Computers in Libraries* magazine titled "Coming Full Circle," and is currently working on a book for ALA Editions—*Strange Bedfellows: When Libraries, Vendors, and Dot-coms Meet*—due for December 2002 publication. He describes himself as both an iconoclastic traditionalist and a cynical optimist.

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Clifford Lynch has been the Director of the Coalition for Networked Information (CNI) since July 1997. CNI, jointly sponsored by the Association of Research Libraries and Educause, includes about 200 member organizations concerned with the use of information technology and networked information to enhance scholarship and intellectual productivity. Prior to joining CNI, Lynch spent 18 years at the University of California Office of the President, the last 10 as Director of Library Automation. Lynch, who holds a Ph.D. in Computer Science from the University of California, Berkeley, is an adjunct professor at Berkeley's School of Information

Clifford Lynch

Executive Director
Coalition for Network Information
www.cni.org

Management and Systems. He is a past president of the American Society for Information Science and a fellow of the American Association for the Advancement of Science and the National Information Standards Organization. Lynch currently serves on the Internet 2 Applications Council; he was a member of the National Research Council committee that recently published *The Digital Dilemma: Intellectual Property in the Information Infrastructure*, and now serves on the NRC's committee on Broadband Last-Mile Technology.

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Sol Rosenberg

Founder & President
Dynamic Digital Content

At the forefront of electronic publishing revolution for much of the last decade, Sol Rosenberg, founder of Dynamic Digital Content is the leading expert at helping publishers develop and implement strategies for presenting and selling their content in with what is now e-possible.

This blending of communications and high-technology goes back to 1985, when Mr. Rosenberg began the first nationally syndicated radio show focusing on computers. He started Futurevision Multimedia, a software publishing Company, which was later acquired by The Learning Company. Mr. Rosenberg also served in executive

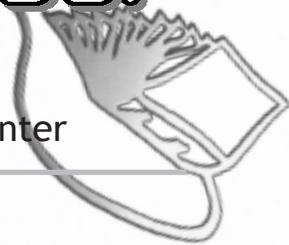
management roles with The Learning Company, developing high-profile electronic reference properties with major publishers worldwide.

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Isabelle Aveline

Founder

Zazieweb

www.Zazieweb.com

Isabelle Aveline is the founder of the French web site zazieweb.com, community site for *e-readers* (active readers who like exchanging and discussing with each other through the web).

Zazieweb.com was born during the spring 1996, at a time where one could hardly find any French literature in the web.

Zazieweb.com is acting as an interface between people, texts and all possible parties which can exist between people and books. It contributes thus to the "reengineering" of their relationships. Zazieweb has today an active community of thousands of French speaking *e-readers*.

Isabelle believes that the web can not be a mere "showcase" : the priority should be to create a valuable content on the web ; on the other hand, virtual space should not conflict with the real space... Isabelle's dream is to combine cyberspace efficiency with the intimacy of a barbecue party in a garden !

Isabelle is also working actively with other French institutions involved in the electronic books like Enssib (Lyon).

Isabelle started her career as bookseller then as journalist. After a multimedia master from the Royal College of Arts, she joined in the mid 80's the advertising agency CLM/BBDO and managed internet and intranet projects.

Isabelle Aveline holds degrees in literature and philosophy. She has been awarded *Chevalier des Arts et des Lettres* from the French government.

ELECTRONIC BOOK 2001

AUTHORS, APPLICATIONS, & ACCESSIBILITY

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Ronald Reagan Building and International Trade Center



Nancy McAllister

CEO

C&M Online Media, Inc.

www.cmonline.com

“Interfacing with Writers - Online v. Print”

In 1976, as a celebration of the bicentennial, Nancy McAllister began The New South Company to publish the work of a group of Southern poets. The New South Company became a vehicle for publishing several books by Southern authors. Before that she edited both print and film at the Center for Disease Control in Atlanta.

Nancy McAllister received the M.F.A. from the writing school at the University of North Carolina at Greensboro. She has published poetry and fiction. She taught writing and technical communications at UNC-Charlotte, North Carolina State University, and the Eindhoven University of Technology (Netherlands). At NCSU she joined a print publishing project as the production and rights chief.

The project wrote and published social studies books for the North Carolina Public Schools, eventually partnering with Macmillan.

Nancy McAllister was the managing editor of *Postmodern Culture* from 1990 through 1993. PMC was the first online peer-reviewed journal in the humanities. PMC was published on the Internet before the availability of the World Wide Web.

In 1994 Nancy McAllister with her husband David F. McAllister established C&M Online Media, Inc. and Boson Books for publishing books on the World Wide Web. The company is a melding of backgrounds in writing, publishing, and computer science. Boson Books offers writers the extraordinary opportunity of global distribution,

and around-the-clock availability. With the establishment of C&M Online Media, Nancy McAllister and her partner began to develop book publishing on the Web. They saw new possibilities in the new medium for acquisition and editing, for book preparation and distribution, and for digitized text, sound, and images.

On the subjects of ebooks and online publishing, Nancy McAllister has published papers at SIGDOC -ACM, participated in a panel discussion sponsored by the Conference for Entrepreneurial Development, presented a seminar for writers at Francis Marion University, and was a featured speaker at Barnes & Noble.

Interfacing with Writers Online v. Print

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Introduction

When first-time or even experienced writers approach an online publisher, they have usually given up on prestige, on fame, on fortune; that is, on being published in print.

We formed our online publishing company in January 1994 to provide publication and an audience for the works of just such writers. These writers who come to us, especially those who came during the early years, we hail as pioneers.

Online publishers may be bombarded with manuscripts by writers who are disappointed, apprehensive, and ill- or misinformed about online publication. On the other hand, by the time a writer has been rejected by print publishers, he or she may have developed a spirit of adventure and a rebelliousness that appreciates publication in a new, go-to-hell medium. The writer whose works are out of print or whose new work is no longer wanted by print publishers is also ready for online publishing.

How do we help writers find happiness with online publication when what they most want is print publication? They have been, or imagined themselves, on the top of the mountain. Are they now ready for what is on the other side?

The Writers

The writers we work with and publish are generally in one of four categories when we meet them through their submissions.

1. Writers who are disappointed, apprehensive.
2. Writers who have been thoroughly rejected by print publishers.
3. Writers whose works are out of print or whose new works are no longer wanted by their former agents or publishers.
4. Writers who understand that self-publication or vanity publication either in print or online is a waste of their intellectual property.

These writers we see know relatively little about online publication—what it is and what it can do for their books. Their information or misinformation comes from the media, agents, print publishers, and even from their own well-meaning organizations. The misinformation is usually in five areas.

1. The costs in time and money to launch a book online
2. The efficacy of piracy protection—let alone how online works are protected.
3. The effectiveness of reviews.
4. How an online book is marketed.
5. What the monetary returns should be.

When we first see writers, most, we would say, feel they are at the place of last resort. These writers are, almost without exception, all good writers who want to get their works out to an audience. They want accurate information about online publishing and they want to cooperate with the new medium.

In some cases, our writers don't have computers. A few others cannot use a keyboard at all. The majority, however, are proficient with word-processing software. In all cases, they somehow manage to prepare their digital manuscripts according to our requirements. They meet deadlines. They are eager to help us promote their works.

The Relationship

Since both we the online publisher and the technology of online delivery and marketing are new to the writer, we often have a writer who misunderstands our responsibility. We must orient the writer to the actuality of online publishing—the writer's role and the publisher's role.

From the start we have had a sound contract as our foundation for working with writers. Through our contract, we have several aims or intentions.

1. To show our appreciation for writers' bravery in entrusting their works to us.
2. To put them at ease and to inspire their confidence for the duration of our relationship.
3. To restore their confidence in their work
4. To engender confidence in us as a reputable and legitimate publishing house
5. To have them feel successful as writers published online.

We are acutely aware that by signing our publication contract, writers turn over their intellectual property to us to do unimaginable things to it. We want to earn their trust. We want them to feel confident in our ability to publish their books and to disseminate them to readers in a way that will return royalties to the writers.

When we contract to publish a book, we give it the best of what online has to offer at the time. We constantly hold out our conviction that online book sales will grow and will become a staple among readers.

Next, we have the job of explaining that even an online publisher has to have a contract valuable enough to edit the book, to prepare the writer's Web site, to disseminate the book in multiple distribution formats, to present the book to reviewers, and to follow the book over time on the writer's behalf.

We want writers to understand that publishing is a business, that as a business it must have value, that we must invest in books we have an audience for, and that we are also obligated to follow through on our stated responsibility to our writers.

We have offset some of the concerns about the staying power and legitimacy of online publishing by upping our royalty. We began with a 20% royalty. When the handheld computers Rocket-eBook and SoftBook came into operation and we began selling books through them, we changed all our contracts to a 25% royalty. As the distribution shakeout continues, we look for an opportunity to again increase the royalty.

Most of the questions that follow upon reading our contract come from inexperienced writers or from writers who think they have been abused and cheated elsewhere. Experienced writers see a contract that contains expected emphases. The contract is not good for us, if it is not good for the writer. If we have a reputation of cheating writers out of their rights, we won't get the writers we want.

Further, we must educate that the purpose of a contract is the base of a balanced business relationship between writer and publisher: it is a mutual, solid, long-term binder. Our reputation, which rests on these basics, is also the essential key for the writer.

Four Sticking Points

Term disagreement. The length of our term has sometimes been a problem. Two or three years ago, we encountered a spate of writers who wanted a very short term. The reason for this is that at about that time several online publishers entered the business who were, we think, trying to acquire as many books as possible as fast as possible. These new publishers were offering yearlong contracts. We explained that the value in our company resides in a writer's granting us long-term rights. We need time to make the writer's work valuable—especially given the new medium—and then having made it so, have earned the further right to keep the mutual benefits of the value going. The several writers who insisted on short-term contracts have disappeared from our radar—we did not come to any agreement.

This is an example of a misunderstanding of what a business is, of what makes a business valuable, and of what binds each party to a high standard of performance. It is not surprising to us that most of our contracts are made with experienced writers—writers who understand what is reasonably possible and what isn't.

Publishing costs. Related to understanding what constitutes a business is knowing something about what constitutes the main business expense. Through misinformation, many writers have come to believe that publishing online costs the publisher little or nothing. One of the points we have to make is that, while we don't have the hazard and the immutability of mistakes that print publishing has, we still have significant costs. That publishing a writer's book represents an investment on our part, that there is nothing whimsical about our decision to publish a writer's book on the Web.

Costs add up fast for personnel time in the technical areas of site design and management; image processing, compression, and computer graphics techniques; applying markup languages and encryption for an array of distribution outlets; and keeping current with changes in all of the above. These operations are in addition, of course, to editorial operations and the routine formatting that has to be done before any of the more technical aspects come into play.

After all is said and done, we do not take on writers if we find them unreasonable or unremittingly hostile. Handling disagreeable people and disagreeable relationships is not part of our workday or our ongoing purpose. We have been surprised a couple of times. A writer comes to us, professing to want online publishing, to understand and appreciate what it is, and then after a contract is signed, plays dumb, demands a print book too, professes not to know what is in the contract.

Piracy fear: Regarding piracy, we explain to writers that we use available technology to strike a balance between no protection and protection that prevents a reader/purchaser from owning a book. By owning a book, we mean that the purchaser ideally would be able to make one copy as a backup. Software programs allow this; it is a traditional stance in the digital marketplace. Also, the purchaser may feel entitled to make a copy that may be lent to a friend. This is usual in the print marketplace. Surely, too, the purchaser wants a copy that may be transferred to new, upgraded hardware. And enough flexibility must be allowed to take in the concept of fair use. Without at least some of these features, the potential readership would be discouraged from buying.

In our years in the business, we have run the gamut of digital rights management, as it is now known, or DRM. We cannot be sure that writers understand the issues inherent in DRM. Our emphasis with a writer is on reassurance.

POD: The attention given to the technology for rapid, single-book manufacturing that is called print on demand or POD has caused a relapse in some writers we thought had learned to enjoy the freedom and

magic of online publication. The power of reason leaves, and the obsession with print replaces it. This is a continuing and hard-to-counter malady.

We announced a year or so ago that we were undertaking a pilot program in POD with a half-dozen books. Many of our writers jumped to the conclusion that we would therefore immediately provide copies of their books in print so that they would be able to sell them locally to friends and family who—they insist and we won't argue—prefer print books. It does no good to explain to these writers why they came to us in the first place. Can we provide their books in print? Yes, we can. Will we? Probably not. Why not? We don't market to a print audience. We are established online publishers. Our aim is to develop readerships that will download books for reading in digital form. Our distribution is aimed at those readerships. Our business plan is a simple and elegant vision for their books.

If a writer tries to hold us up for POD; that is, to insist that POD be part of the contract before he or she will sign, then we let that writer go. We are very disappointed in those writers who cannot or will not retain the lessons they have learned before we met them. We have sent some of our most insistently clambering writers to the new, large-scale "custom" publishers to find print publication. We can think of only one who persisted until, ultimately, he had a print book brought out. That writer, by the way, was not satisfied with either the book or the service and is still pestering us to print his books—because we will do them "for free."

Conclusion

Although print is the prize writers seek, we have demonstrated to our writers that online publishing offers them a new perspective on their work, as it taps audiences for books that don't fit the print model or for small-audience books or revitalizes out-of-print books. We're proud of what we do with and for writers. We enjoy this work. We can think of no better component to a writer's work than online publishing, and the writers we publish agree. Online publishing may be concurrent with print or audio, or it may be a writer's sole representation for his work.

Our interest eight years ago was with the technology of delivery and with forging mutually beneficial business relationships with writers. Each year since then, we have seen new developments that put the online delivery of books in an increasingly positive situation.

Now, we have effective marketing tools for the books we publish. Established and respected print publications are available in the realm of reviews. There are also extraordinarily impressive Web review sites for genre books, especially science fiction and Old West. Online distributors now exist to handle formats for all the handheld readers as well as full-screen and laptop computers. As the distributors' advertising and marketing expertise improves so do our sales.

Our passion does not wane. Our conviction has more and more support in the marketplace as time goes on. Our job is to keep our writers informed and keep the good books coming—online.

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Barbara Kline Pope

(co presenter with P.K. Kannen)

Director

National Academy Press

“Will They Pay?: The Relationship Between Consumer Attitudes, Usage Situations, and Willingness to Pay for E-Books”

Barbara Kline Pope is director of the National Academy Press (NAP)—publisher for THE NATIONAL ACADEMIES (National Academy of Sciences, National Academy of Engineering, Institute of Medicine, National Research Council). She is responsible for an active and growing publishing house of both scholarly and trade books. Prior to her position as director, she was NAP’s marketing director. Her areas of special interest include the use of the Web as a dissemination and marketing tool and developing content for general audiences. She holds an M.S.(1990) from the University of Maryland and a B.S. (1981) from

Indiana University of Pennsylvania. Recent research articles she has authored are on the topics of business models for the digital publishing arena and the use of information sources among organizational buyers. She may be reached at bkline@nas.edu.

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Smith School of Business
University of Maryland

“Will They Pay?: The Relationship Between Consumer Attitudes, Usage Situations, and Willingness to Pay for E-Books”

P. K. Kannan is Safeway Fellow, Associate Professor of Marketing and Associate Director of the Center for E-Service in the Robert H. Smith School of Business at the University of Maryland, College Park. He received his Ph.D. in Management from Purdue University. His current research focus is on e-commerce, centering around marketing information services on the Internet and wireless, pricing information products, and marketing research. As part of this research focus, he has been currently working with IBM Institute for Advanced Commerce on an e-coupon project, and also with National Academy Press on pricing information products. He has pub-

lished several research articles in journals such as *Marketing Science*, *Management Science*, *Communications of the ACM*, *International Journal of Research in Marketing*, and *International Journal of Electronic Commerce*. Dr. Kannan is an Associate Editor for *Decision Support Systems and Electronic Commerce* and serves on the editorial board of *Journal of Service Research* and *International Journal of Electronic Commerce*. He is the Chair for the American Marketing Association Special Interest Group on Marketing Research and is a member of the American Marketing Associa-

tion, The Institute of Management Science, and the American Statistical Association. He has consulted for companies such as Frito-Lay, Pepsi Co, Giant Food, SAIC, Fannie Mae, Proxicom and IBM.

Will They Pay? The Relationship Between Consumer Attitudes, Usage Situations, and Willingness to Pay for E-Books

Barbara Kline Pope
Director, National Academy Press
and
P.K. Kannan
Safeway Fellow and Associate Professor of Marketing
The Robert H. Smith School of Business
University of Maryland

National Academy Press

- Current Business Model on the Web
 - Free browsing
 - Charge for printed copy
- Mission
 - Disseminate the works of the National Academies
 - Fully support the cost of its own operation

New Web Business Models

- Selected Issues in E-Content Distribution
 - Cannibalization of Print
 - Bundling/unbundling
 - Product quality
 - Pricing*
- Reasoned Approach to Making Decisions

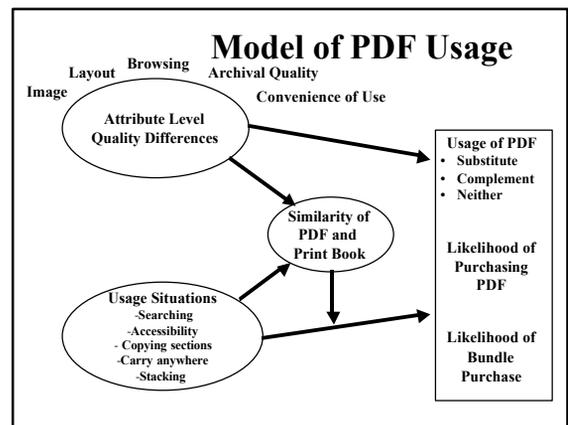
*Discussion of pricing issues is taken from the research study and is not any indication of any pricing policy to be set by National Academy Press.

Research Grant from Andrew W. Mellon Foundation

- Research Issues
 - Online vs. offline customer base profiles
 - Effectiveness of free online browsing
 - Design and pricing of e-content
 - Electronic unbundling of content
- Research Methodology
 - Descriptive research (Surveys)
 - Causal study (Experiments)

Offline Survey

- Overview of Survey
 - General purchase behavior
 - NAP-specific experience
 - Beliefs, attitudes, and intentions toward the e-format books versus printed books (PDF)
 - Demographics
 - n=270



Offline Survey

- Highlights of Results From Offline Customers
 - Cost seems to be the only attribute in which the e-book fares better than a printed book.
 - For browsing, convenience of use, and archival quality, e-books are believed to be less useful than the printed book.
 - Most respondents indicate that printed books are of higher quality and more convenient than e-format books.

Offline Survey

- There is a tie between the two formats for ease of searching—a surprising finding.
- Because the respondents perceive the printed book and the electronic PDF format to be somewhat similar, they prefer to buy a book in printed format if the prices are the same.
- The majority of the respondents who tend to purchase books offline prefer to have printed books instead of PDFs, most likely due to the printed book's portability and tangibility.

Impact of Attribute Level Quality Differences

- Respondents who rated the PDF quality to be the "same" or "above" on each of the five attributes, rated PDF and Print to be more similar

same, above → more similar

- Respondents who rated "same" or "above" also more likely to use PDF as substitutes, more likely to buy PDF

same, above → substitute use, more likely to buy PDF
worse → more likely not to use PDF at all

Impact of Usage Situations

- If the usage situations involves significant searching, the need for access from anywhere, and significant copying then
 - More likely to buy PDF
 - More likely to use PDF as substitute
 - No impact on buying bundled forms

Impact of Usage Situations

- If the usage situations involve need for portability or shelving books
 - Less likely to buy PDF
 - Less likely to use PDF
 - Less likely to buy in bundled forms

Other Results

- The more similar the formats are perceived to be
 - The more likely the respondents are to use PDF as substitutes.
 - The percentage of respondents using print in addition to PDF remains the same.
 - The less likely they are not to use PDF.

Other Results

- Respondents who tend to use PDF as substitutes for print are
 - More likely to share their printed books.
 - More likely to share printed books with business colleagues and friends.

Implications for Product Line Design & Pricing

- Mixed bundling strategy appropriate
 - Print
 - PDF
 - Print and PDF
- Target substitute user segment – PDF price closer to print book price
- Target the complement user segment – price bundle of PDF and print a little higher than Print book price

Implications for Product Line Design & Pricing

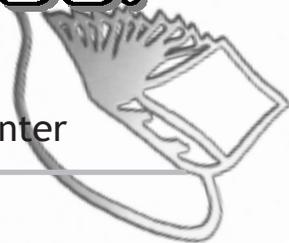
- Safe entry strategy to test market
- Impact of improving e-book quality on substitutes/complement perceptions

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Marilyn Jenkins

President & CEO
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www.cyberread.com

Marilyn Jenkins, President and Chief Executive Officer of CyberRead, has an extensive background in business administration, marketing and technology. Since March 1999, Ms. Jenkins has operated as both the CEO and Lead Technical Developer for CyberRead. She has developed and managed publisher relationships, and she has overseen the development of the CyberRead Web site to insure digital rights management and copyright protection for publisher titles. CyberRead, as one of the first eBook companies to the Internet, specializes in digital rights management, digital conversion and digital distribution of book content and other electronic documents.

Marilyn Jenkins

President, CEO



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Rip Van eBook

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Where are eBooks Today?



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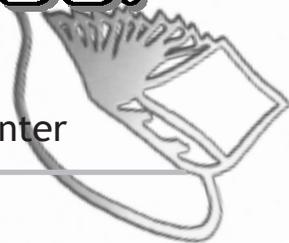


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Mark Capaldini

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Mark L. Capaldini is managing director of MCG Capital Corporation, a solutions-focused financial services firm serving the converging communications, information services, media and technology industries. Mark has been president of three companies in the information services industry and leads MCG's information services practice. His experience as an operating executive gives him a special perspective on the challenges and opportunities facing information services companies.

Previously Mark was president and chief operating officer for PC Data, Inc., a provider of Internet Audience Measurement services and sales/market share data for PC products.

At Congressional Information Service, a subsidiary of LEXIS-NEXIS, he served as president and chief executive officer and led the development of a unique national consortium licensing arrangement for LEXIS-NEXIS Academic Universe. Mark was also president of Legi-Slate, Inc., an on-line legislative information service and a subsidiary of The Washington Post Company. He spent eight years in various positions at Claritas, Inc., a provider of demographics, segmentation, and precision marketing information services. Mark has also worked for The Washington Post, for Arthur Andersen & Company, and as a consultant for the Strategic Business Solutions unit of Holland & Knight Consulting.

Mark has served on the Board of Directors of the Information Industry Association and received its 1996 Leadership Award. Mark earned his MBA from Harvard Business School and his BS in Engineering & Applied Science from Yale.

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George Beckerman

Partner

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George Beckerman, along with all Focus partners, assists the senior management of client companies with revenue growth, mergers, acquisitions, corporate finance, corporate development and alliance strategies.

Mr. Beckerman is the Focus partner coordinating the Firm's rapidly expanding information services practice area, which includes software, telecom, and services companies, in addition to content providers.

Since 1981, Mr. Beckerman has successfully advised senior management in over 125 information, software, publishing services and other technology companies. He joined Focus in 1997, when Information Publishing Services, the company

he founded in 1981 as Beckerman Associates, merged with Focus Enterprises.

During his information industry career, Mr. Beckerman was an executive co-founder in closely-held DIDSco, a geo-spatial software developer; International Trade Advisory Services, a technology-oriented export promotion service formed in concert with Deloitte and NBW; Federal Marketing Services, a research service assisting manufacturers selling goods and services to the federal government; and MarketResearch.com, an information provider to marketers in technology and consumer goods producers. He also held chief executive positions in units of publicly-held Washington Post Company and Primark.

Mr. Beckerman began his career in government service, with the New York City Commission on City Finances and with the Federal Aviation Agency at JFK, where he worked on defense preparedness, airline hijacking matters and promoting aviation's contribution to international business. He moved to Washington to join the U.S. Department of Commerce, where he served in the Office of Business Lending, in the Office of the Secretary, and as Chair of the Department's Business Task Force on Counterterrorism.

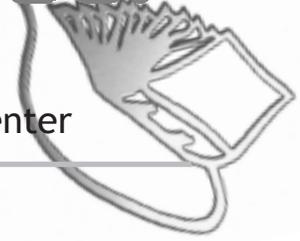
Mr. Beckerman was a National Defense Education Fellow at New York University's Graduate School of Public Administration and is a graduate of Queens College, CUNY. He was an active member of the Software

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& Information Industry Association and now represents the Firm in the Newsletter & Electronic Publishers Association. He is a frequent speaker at industry conferences.

Mr. Beckerman is the founder of the Capital Content Network, a successful Washington-based networking and information program for senior executives.

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Robert “Todd” Watkins

Founder

Vital Source Technologies, Inc.

Dr. Robert “Todd” Watkins is the founder of Vital Source Technologies, Inc. Dr. Watkins has a BA in Psychology and DDS from UNC-Chapel Hill and serves as adjunct faculty at 5 health science universities. Dr. Watkins developed the VitalViewer technology during 12 years of applied informatics research while on faculty at UTHSCSA in San Antonio. Todd lives in Chapel Hill with his wife Lisa and children Katie and Alex.