NIST IR 6554

NIST CENTENNIAL

3rd Annual Electronic Book 2000 Conference and Show

Changing the Fundamentals of Reading

Proceedings

September 25 - September 27, 2000

Sponsored By:

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NISTIR 6554

3rd Annual
Electronic Book 2000 Conference and Show
"Changing the Fundamentals of Reading"
Proceedings

Edited by:

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Linda McGee
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High Performance Systems & Services Division
Information Technology Laboratory
National Institute of Standards and Technology
Gaithersburg, MD 20899-8950

September 2000

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/
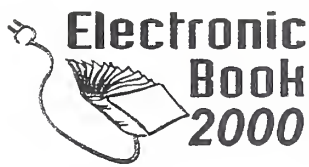
Welcome to the Electronic Book 2000 Conference and Show!

Think back to 1997, when there was hardly a mention of the concept of electronic books, or ebooks. Yes, the Internet and the Web had begun to take hold as a force to reshape the way we handle and disseminate information. And we kept abreast of these developments mainly through what we read: magazines, books, and newspapers. The fascination of the Web and the rush to have a presence on this dynamic platform overshadowed another phenomenon that was beginning to manifest itself in our lives: digital convergence. Digital convergence is the blending of two or more technologies, or sub-systems to form an integrated system that has unique functionality beyond the mere addition of its sub-components. We are witness to this phenomenon as digital convergence starts to unfold in our every day lives: telephony and network becomes voice over IP; analog photography and microchips leads to digital photography; film, micro-mirror devices, and optical disc storage become digital cinema; and finally displays, software, and semiconductor storage become electronic books. What a difference three years has made!!
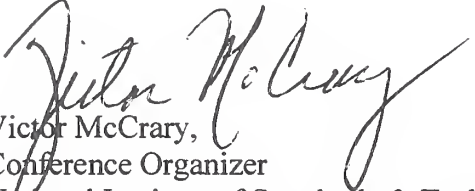
Since the world's first ebook conference was sponsored by NIST in 1998, the industry has grown enormously in size, interest, and expectations. The theme for this conference is "changing the fundamentals of reading", but we could have more direct and left it at "changing the fundamentals – period!" At 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. Topics of major interest to be covered include:

- **Overview and New E-Book Technologies:** New developments over the past year, what are the new products and services, and who are the new players;

- **E-Book Authors Forum:** As an author how do I get started, and what are the changing roles for authors, agents and publishers in this new medium for content;
- **E-Book Applications:** Applications of electronic books, libraries, and enterprise wide applications;
- **International Electronic Book Activities:** Activities and offerings from global e-book authors and manufacturers;
- **E-Book and Government:** A special track devoted to applications for electronic books in the Federal Government;
- **The Digital Divide and Accessibility:** Addressing whether electronic books will narrow or widen the gap for those who do not have access to the Internet, as well as the latest in Braille reader technologies for electronic books;
- **Standards and Interoperability:** Current status of hardware and software standards for electronic books;
- **Digital Rights Management:** Begun at last year's conference, the latest in technologies and platforms for the secure transfer of electronic content for e-books;
- **Business Models:** What are the best ways to market and sell electronic books, what is the competitive environment; e.g. print-on-demand.
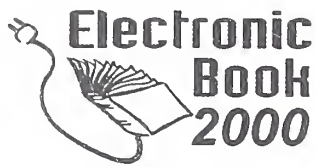
Also, this year's conference features over thirty exhibitors devoted to electronic books and related technologies and services. Please take time to attend the exhibition and evening reception.

The electronic book industry is poised to take off and bring many changes to the way we absorb and manage our knowledge assets. The past two years have been devoted 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 these areas so that consumers can get the content they want, anywhere they want. Finally, we see ebooks has one key component towards digital convergence information systems that will give end-users a more vibrant, and embellished information experience. Welcome to the digitally convergent world. Welcome to Washington, D.C. Welcome to Ebook 2000!!!

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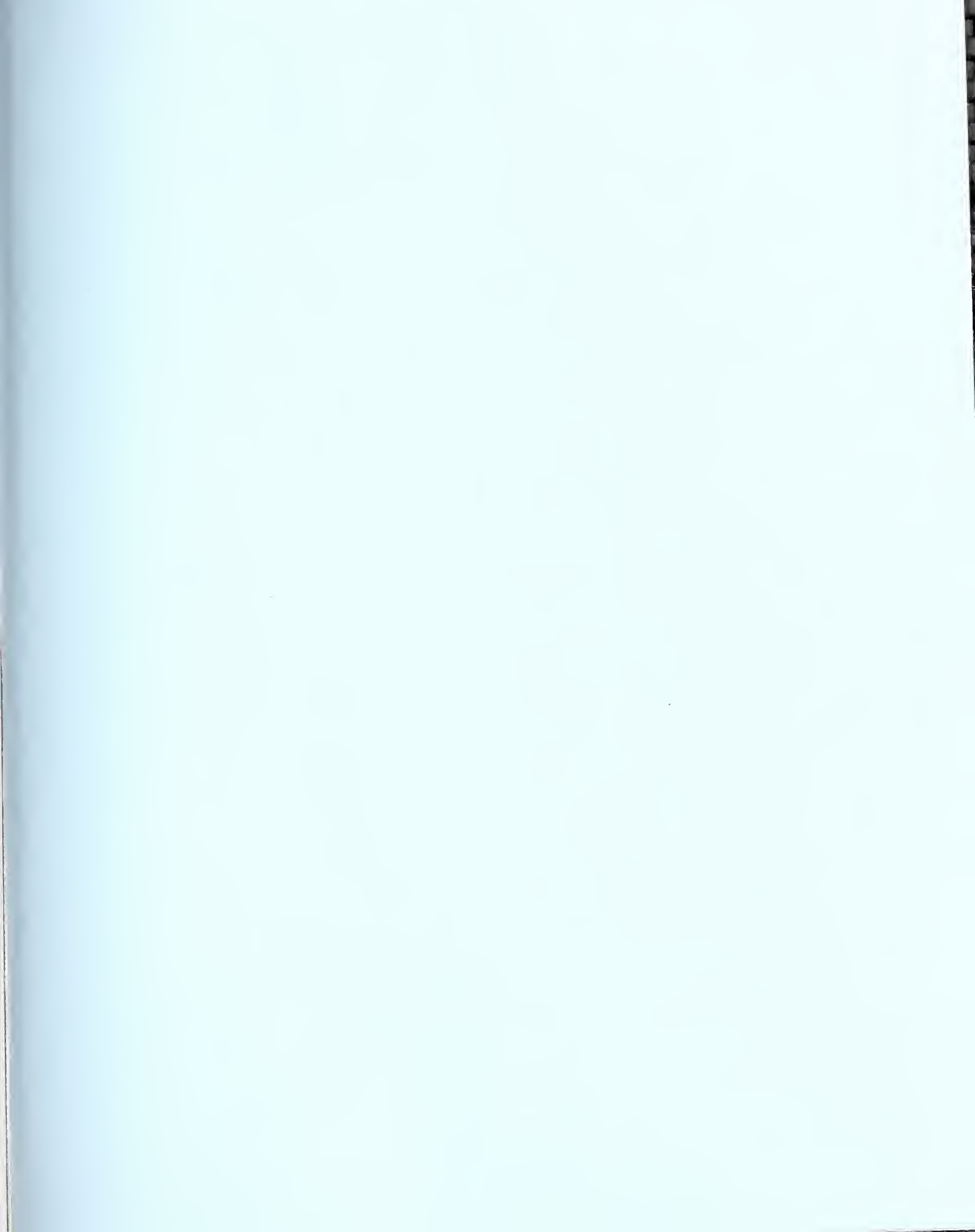
Program Agenda

Monday, September 25, 2000

Session A: Introduction and New Technologies   <u>Amphitheater</u>
Session Chair: *Dr. Victor McCrary, Acting Chief,*
High Performance System and Services Division,
<u>*National Institute of Standards and Technology*</u>

8:30 a.m. - 8:45 a.m.
Raymond Kammer, Director,
<u>*National Institute of Standards and Technology*</u>
"Opening Remarks: Welcome to Electronic Book 2000"

8:45 a.m. - 9:00 a.m.
Dr. Susan Zevin, Deputy Director, Information Technology Laboratory
<u>*National Institute of Standards and Technology*</u>
"Opening Remarks: Welcome to Electronic Book 2000"

9:00 a.m. - 9:30 a.m.
Dr. Victor McCrary, Acting Chief, High Performance System and Services Division
<u>*National Institute of Standards and Technology*</u>
"Ebooks 2000: Turning the Corner in 2000"

9:30 a.m. - 10:00 a.m.
Morning Keynote Speaker: *Steve Canepa, Vice President,*
Marketing-Global Media and Entertainment Industry, <u>*IBM Corporation*</u>
"Readers Choice: Digital Technology and the Future of Books"

10:00 a.m. - 10:30 a.m.
Ken Brooks, Vice President, <u>*Barnes and Noble*</u>
"E-Book Formats and Sales Channels: Where is the Money?"

10:30 a.m. - 11:00 a.m.   **MORNING BREAK**

11:00 a.m. - 11:30 a.m.
Alan Balutis, Director, Advanced Technology Program, <u>*Department of Commerce*</u>
"The Advanced Technology Program: Research Partnerships for Innovation"

11:30 a.m. - 12:00 p.m.
Dick Brass, Vice President of Technology Development, <u>*Microsoft*</u>
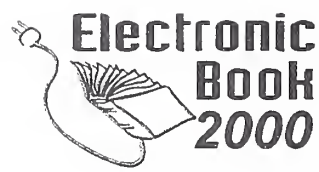**"Prosperity or Piracy?"**

12:00 p.m. - 2:00 p.m.   **LUNCH AND**
          OPENING OF THE EBOOK EXHIBITS   <u>Atrium Hall</u>

Session B: E-Book Applications Session   Amphitheater
Session Chair: *Dr. Joan Fuller, Program Manager,*
Standards Reference Data, National Institute of Standards and Technology

2:00 p.m. - 3:30 p.m.

James Sachs, Chief Executive Officer, SoftBook Press
"Why e-Books Could Fail: Dynamic Reader Services"

Dr. Maurice Cuffee, Practicing Physician, Howard County General Hospital
"Is There an E-Book in the House? Potential E-Book Uses by Medical Professionals"

Afternoon Keynote Speaker: *Joe Eschbach*
Vice President, ePaper Solutions Group, Adobe Systems
"eBooks; Today and Tomorrow"

3:30 p.m. - 4:00 p.m.   **AFTERNOON BREAK**

4:00 p.m. - 4:30 p.m.
Tom Diaz, Vice President, Product Development, Glassbook, Inc.
"New Developments in E-Book Software"

4:30 p.m. - 5:00 p.m.
Donald Katz, Founder and Chairman, Audible, Inc
"Redefining the Product via New Technologies: The Audible Story"

Session C: Authors Forum I   Atrium Ballroom B
Session Chair: *Dave Howell, Alexandria Digital Literature*

2:00 p.m. - 2:30 p.m.
Steve Potash, Founder, Chief Executive Officer, OverDrive Systems, Inc.
**"Authors Now Have the Power! How Content Owners Can Affordably Control
Their Own eBook Business from Title Production to Secure Distribution"**

2:30 p.m. - 3:00 p.m.
John Feldcamp, Chief Executive Officer and Founder, Xlibrius Corporation
"E-books Beyond 'The Planet': What We Know and What We Don't"

3:00 p.m. - 3:30 p.m.
Richard Tam, Chief Executive Officer, iUniverse.com, Inc.
"e-Books by the Chapters"

3:30 p.m. - 4:00 p.m.   **AFTERNOON BREAK**

4:00 p.m. - 4:30 p.m.
Afternoon Keynote Speaker: *Ed Marino, Chief Executive Officer, Lightning Source*
"Content Explosion: Empowering Authors with Technology"

4:30 p.m. - 5:00 p.m.
John Rutledge, *President*, <u>*Dead End Street, LLC*</u>
"Intellectual Property: A Zero Sum Game"

5:00 p.m. - 5:30 p.m.
Troy Williams, *Founder & Chief Executive Officer,* <u>*Questia Media, Inc.*</u>

Session D: Standards and Interoperability Panel <u>Atrium Ballroom A</u>
Session Chair: *Jordy Potman,* *Guest Researcher,*
<u>*National Institute of Standards and Technology*</u>

2:00 p.m. -2:30 p.m.
Jordy Potman, *Guest Researcher,* <u>*National Institute of Standards and Technology*</u>
"eBook Standards"

2:30 p.m. - 3:00 p.m.
Richard Lysakowski, *Executive Director,*
<u>*Collaborative Electronic Notebook System Association*</u>
"eBooks and eNotebooks? Moving Authoring and Publishing from Workstations to Handhelds*"*

3:00 p.m. - 3:30 p.m.
Jonathan Hahn, *Chairman, EBX Working Group,* <u>*Versaware, Inc.*</u>
"E-Book Standards, Convergence and Interoperability"

3:30 p.m. - 4:00 p.m.   **AFTERNOON BREAK**

4:00 p.m. – 4:30 p.m.
Sandra K. Paul, *Executive Director,* <u>*Book Industry Study Group, Inc. (BISG)*</u>
"Metadata for E-Books: TWO New Standards Under Development"

4:30 p.m. - 5:00 p.m.
Robert Bollick, <u>*Association of American Publishers (AAP)*</u>

5:00 p.m. - 5:30 p.m.
David Lindrum, *Senior Director of Epistemology and Pedagogy MetaText,* <u>*netLibrary*</u>

The Open eBook Forum   <u>Meridian Rooms</u>
Working Groups Status
3:00 p.m. - 5:00 p.m.

Exhibitor Reception   <u>Atrium Exhibit Hall</u>
Sponsored by IBM & Adobe
6:00 p.m. - 8:00 p.m.

Tuesday, September 26, 2000

Session E: International E-book Activities   **Atrium Ballroom A**
Session Chair: Magdalena Navarro, Office of International Affairs
National Institute of Standards and Technology

9:00 a.m. - 9:20 a.m.
Bruno de Sa Moreira, Co-Founder, General Manager, 00h00.com
"EBook Publishing: A European Perspective"

9:20 a.m. - 9:40 a.m.
Dr. Renato Iannella, Chief Scientist, IPR Systems Pty Ltd
"Digital Rights Down Under"

9:40 a.m. – 10:00 a.m.
Olivier Pujol, Chairman & Chief Executive Officer, Cytale, S.A.
"A European Perspective on the eBook Market"

10:00 a.m. - 10:30 a.m.
David Contreras, President and Chief Executive Officer, PlazaDigital
"Digital Activities in the International Arena: Spanish and Portuguese Language Markets"

10:30 a.m. -11:00 a.m.   **MORNING BREAK**

11:00 a.m. - 11:20 a.m.
Qihao Miao, Deputy Director & Research Professor, Shanghai Library
"Ebook in China From a Librarian's Perspective"

11:20 a.m. - 11:40 a.m.
David Pearman, Founder & Chief Executive Officer, Universal Publishing Solutions Online
"Building the eBook Market – A UK Perspective"

11:40 a.m. – 12:00 p.m.
Zoltán Mikolás, Chief Strategist, eBookOne.com
"An e-merging World: eBook Activities in Europe and Latin America"

12:00 p.m. - 2:00 p.m.   **LUNCH (on your own)**

Session F: E-books Changing Libraries, Government,
*Business, and Learning ** Panel Session ***   **Atrium Ballroom A**
Panel Moderator: James Neal, Johns Hopkins University

2:00 p.m. - 5:00 p.m.

Janet Ormes, Assistant Chief Information Officer for Library and Information Services
NASA's Goddard Flight Center
"E-books in Federal Libraries"

Barbara Silcox, *Chief, Research Library & Information Program*
Office of Information Services (OIS), National Institute of Standards and Technology
**"From Desktop to Hand-Held Devices: Are eBooks a Viable Mechanism for
Distributing Resources from the NIST Virtual Library (NVL)"**

Thomas Peters, *Center for Library Initiatives, Committee on Institutional Cooperation*
"Texts and Text-Bearing Devices"

3:30 p.m. - 4:00 p.m.   **AFTERNOON BREAK**

Robin Bryan, *Help Desk Coordinator,*
Public Library of Charlotte and Mecklenburg Counties, North Carolina
"PLCMC Rocket eBook Project"

Roberto Esteves, *Chief, Information Resources Management, San Francisco Public Library*

Christopher Warnock, *President and Chief Executive Officer, ebrary.com*

Session G: E-Books: Tools for Bridging the Digital Divide
                 ** Panel Session **   Atrium Ballroom B
Session Chair: John Roberts, Electronics Engineer,
National Institute of Standards and Technology

9:00 a.m. – 12 Noon

John Roberts, *Electronics Engineer, National Institute of Standards and Technology*
"Rotating Wheel Braille Display Provides Low-Cost Accessibility to E-Books"

George Kerscher, *Emerging Technologies Coordinator, Recording for the Blind and
Dyslexic*
"eBooks, Education, and Access by Students with Disabilities"

Mark Hakkinen, *isSound Corporation*
"Next Generation Audio eBooks"

10:30am-11:00am   **MORNING BREAK**

Lori Perine, *Deputy to the Associate Director, Technology, White House
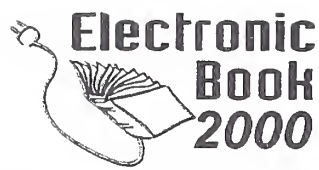Office of Science and Technology Policy*
"Creating Digital Opportunity: Administration Policy and Technology Initiatives"

Dr. Calvin Lowe, *President, Bowie State University*
"E-Books; A Component in the Technology Plan of a Small University"

Stan Walker, MD/Randall Walker, MD, *Walker Reading Technologies*
"Applying Cognitive Science to Improve Human Reading"

12:00 p.m. - 2:00 p.m.   LUNCH (on your own)

Session H: Business Models to Support
E-Book Businesses   <u>Atrium Ballroom B</u>
Session Chair: *Sol Rosenberg, Senior Vice President, Co-Founder, <u>Versaware</u>*

2:00 p.m. - 2:30 p.m.
Sol Rosenberg, Senior Vice President, Co-Founder, <u>Versaware</u>
"Solutions for Publishers or It's the 'Content," Stupid"

2:30 p.m. - 3:00 p.m.
Kirstie Chadwick, Chief Executive Officer, President and Co-Founder, <u>DigitalOwl</u>

3:00 p.m. - 3:30 p.m.
Afternoon Keynote Speaker: ***Steve Dienna**, Global Segment Executive-Publishing,*
<u>IBM Corporation</u>
"Creating Value in a Digital E-conomy"

3:30 p.m. - 4:00 p.m.   **AFTERNOON BREAK**

4:00 p.m. - 4:20 p.m.
James Shaffer, Chief Executive Officer, <u>Clickshare Service Corp.</u>
"Why E-books Could Fail: Dynamic Reader Services"

4:20 p.m. – 4:40 p.m.
Michael Fragnito, Vice President, eBooks, <u>Barnes and Noble.com</u>
"The Varieties of e-Book Publishing"

4:40 p.m. - 5:00 p.m.
Richard Katzmann, Chief Executive Officer, <u>goReader</u>
"Electronic Textbooks – Giving Them What they Want"

5:00 p.m. – 5:20 p.m.
Jonathan Schull, Founder & Chief Science Officer, <u>SoftLock.com, Inc.</u>
"Peer to Peer Copying: Protecting Copyrights and Profitability"

5:20 p.m. – 5:40 p.m.
Adam Kimberly, Vice President, Strategic Development, <u>netLibrary</u>

Wednesday, September 27, 2000

Session I: Digital Rights Management   <u>Amphitheater</u>
Session Chair: Mike Broomhead, <u>ContentGuard, Inc.</u>

9:00 a.m. – 9:20 a.m.
Carol Risher, Senior Vice President, Business Development, <u>Savantech, Inc.</u>
"Digital Rights Management: Connecting the Pieces"

9:20 a.m. – 9:40 a.m.
Robert Handlvosky, Director for Business Development, <u>RightsMarket, Inc.</u>
"DRM for the Scientific, Technical, and Medial Market Place"

9:40 a.m. – 10:00 a.m.
David Goldstein, Chief Technology Officer, <u>Versaware, Inc.</u>

10:00 a.m. - 10:30 a.m.
Matthew Moynahan, Sr. VP/General Manager, Publishing, <u>Reciprocal, Inc.</u>
"DRM: Making \$\$\$ and Sense of the Economics of E-Books"

10:30am-11:00am   **MORNING BREAK**

11:00 a.m. - 11:20 a.m.
Mark Miron, Chief Executive Officer and President, <u>ContentGuard, Inc.</u>

11:20 a.m. - 11:40 p.m.
Martin Eberhard
"Copyrights in the Digital World: Facts and Fiction"

11:40 a.m. – 12:00 Noon
Dennis McNannay, Vice President of Publishing, <u>InterTrust</u>
"DRM – The Trust Utility Model"

Session J: Authors Forum II   <u>Atrium Ballroom B</u>
Session Chair: *Warren Adler, Author*
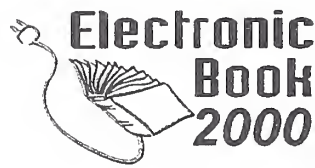
9:00 a.m. - 9:30 a.m.
Warren Adler, Author, <u>War of the Roses</u>
"Power to the Author"

9:30 a.m. - 10:00 a.m.
Richard Curtis, Founder and Chief Executive Officer, <u>E-Reads</u>
"Here Comes Everybody! - The Challenge of Branding a Million Self-Published Books"

10:00 a.m. - 10:30 a.m.
Judy Kirkpatrick, Executive Vice President and General Manager, MightyWords
"Readers, Writers, Everywhere: The New Markets and Expanded Opportunities in e-Publishing"

10:30 a.m. - 11:00 a.m.　　　　　　　　　**MORNING BREAK**

11:00 a.m. - 11:30 a.m.
Robert McCormack, Chief Operating Officer, 1stBooks Library
"How Authors Can Successfully Publish eBooks"

11:30 a.m. - 12:00 a.m.
Dave Howell, Chief Executive Office & Founder, Alexandria Digital Literature
"Gold in the Jungle: A Map of e-Publishing for the Professional Author"

Session K: eBook/ePublishing Strategies
from Publishing Leaders　　　　　　　**Atrium Ballroom B**
Session Chair: *Sol Rosenberg, Sr. Vice President and Co-Founder, Versaware*

2:00 p.m. - 5:00 p.m.
Description: When it comes to eBooks and ePublishing, there is no shortage of confusing buzzwords, with a healthy dose of dreams and plans for the 'future.' Which begs the question "What do we do now? What are the opportunities in ePublishing today?" In this panel featuring a cross-section of Leaders from various segments of Publishing, you can learn what people are doing today, actual case-studies on what is working (and what isn't) and real strategies for your business.

Participants:
- *Ed Marino, President & Chief Executive Officer, Lightning Source, Inc.*
- *Sol Rosenberg, Sr. Vice President & Co-founder, Versaware Inc.*
- *Alison M. Pendergast, Vice President, Director of Technology, Pearson Education's Addison Wesley Higher Education Group*
- *Michael Cader, President, Cader Books and Editor & Chief, eBook Columnist Publisher's Lunch*
- *Ted Treanor, President, Alexandria Digital Literature*

AFTERNOON BREAK
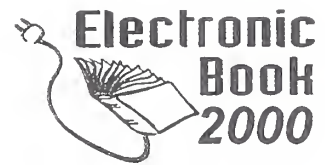*Sponsored by Microsoft Corporation*

Open eBook General Body Meeting　　　　　　　**Atrium Ballroom A**
2:00 p.m. – 5:00 p.m.
**ALL ARE WELCOME!**

Electronic
Book
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E-BOOK 2000 Conference
September 25-27, 2000
ITC-Washington, DC

Preliminary List of Sponsors
(as of 9/14/00)

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National Information Standards Organization

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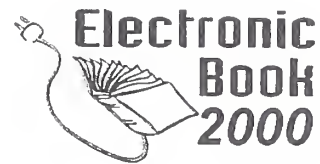
E-BOOK 2000 Conference
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ITC-Washington, DC

Preliminary List of Exhibitors
(as of 9/14/00)

1st Books Library	1stbooks.com
Adobe Systems Inc.	adobe.com
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SecoData	secodata.com
SoftLock.com	softlock.com
TechBooks	techbooks.com
Texterity, Inc.	texterity.com
UltraLife Batteries	ulbi.com
Versaware Technologies, Inc.	versaware.com
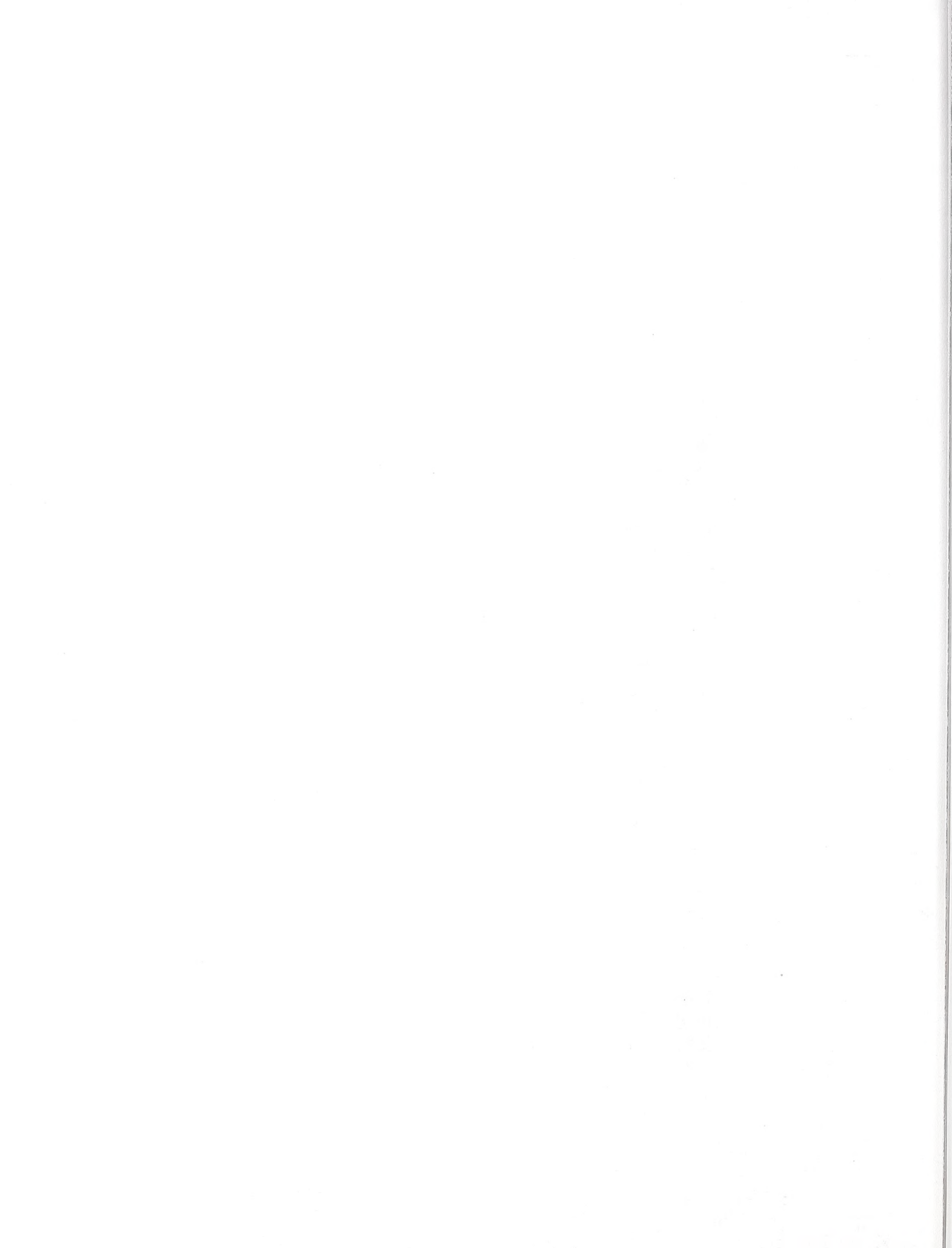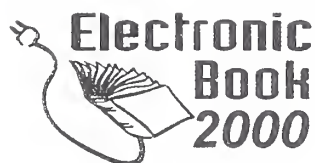
ACKNOWLEDGEMENTS

I would like to thank the following people who have given hearts, minds, and their time to make Ebook 2000 a success:

To Mary Floyd who has kept us all together and kept us going!!!

To Ray Kammer, Karen Brown and Brian Belanger for their support and encouragement of our research efforts in electronic books and to assist the electronic book industry. In particular, I like to thank them for their willingness to let us take risks!!

To Secretary of Commerce Norman Y. Mineta, Deputy Secretary Robert Mallett, and Under Secretary for Technology Dr. Cheryl L. Shavers for their support and enthusiasm for the NIST efforts in electronic books – thank you!

To folks in the NIST Public & Business Affairs Office for their support, in particular Mat Heyman, Phil Bulman, Mike Newman, and Barb Cuddington for their efforts in making the public aware of NIST's role in electronic books.

To our friends at the National Information Standards Organization (NISO) – Pat Harris, Jane Thomson, and Nancy Knight for their partnership over the past two years in making our exhibits a real success --- and for always going the extra mile! Thank you!!

To the conference team of Linda McGee, Pamela Gorres, Jennifer Quinn, Seth Kardos, Brooke Davis, Sean Ginevan, Alyssa Smith, Annette Shives, Tammy Clark, Michele Bitler, Matthew Handler, and Chris Keithley for their belief in ebooks and their drive to see the industry come together.

To the NIST Conference Staff of Patrice Boulanger, Lori Phillips-Buckland, and Kim Snouffer for their assistance, patience, and flexibility in helping us organize this event.

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

To Jordy Potman, Nicholas Guttenberg, David Martin, and Matthew Handler for developing new and novel software applications for the NIST prototype ebook.

To all the members of the ISIS Group 895.04 who have stood behind these efforts, and have been there when it counts!!

To Joan Fuller for sharing her vision of ebooks in the scientific and technical fields.

Electronic Book 2000
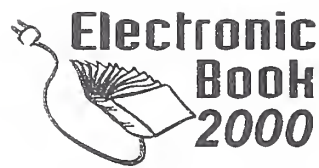
To Dean Collins for his inspiration and support during the years for this project and many other "out-of-the box" efforts in information technology --- you're the best!

To all the staff of Division 895 who have supported our efforts in electronic books, and had the patience with our evangelism for this cause.

To Gordon Lyon, Jack Newmeyer, John Antonishek, Judy Devaney, and Xiao Tang --- the best set of group managers around, and who have supported this effort in addition to their responsibilities.

To William Mehuron and Susan Zevin of the Information Technology Laboratory for their support of our efforts.

To Steve Potash, Ed Neuman, Steve Stone, Brenda Crowley, Mark Walters, Sol Rosenberg, Harlan Ellison, Jim Sachs, Dave Contreras, Richard Curtis, Mike Burrows, Martin Eberhard, Sandy Paul, Will Manis, Mike Broomhead, and all the members of the ebook industry who have supported my efforts (and me!) through the years.

To Albert Paul, Reginald Galimore, Chuck & Diane Williams, Fred Byers, Jim Garrant, Naomi Churchill-Earp, Gabe Hodziewich, Paul & Benita Vassallo, Ty Gibson, Dominique Shepherd, Bob Shepard, George Miller, Bill Jackson, David King, Shirley Hurwitz, Mary-Deirdre Coraggio, Shukri Wakid, Marlon Walker, Lisa Greenhouse, Barbara Silcox, Alvin Williams, Sean McCrary, Helene Wilson, Michelle Patterson, JoAnne & Bill Braime, Grazyna Guttenberg, Alicia Clay, and Karen Dacres for their friendship, kindness, support, and encouragement "to keep the faith" during the ups and downs.

Finally to Francesca, Max, and Mercedes for their love, and constant support.
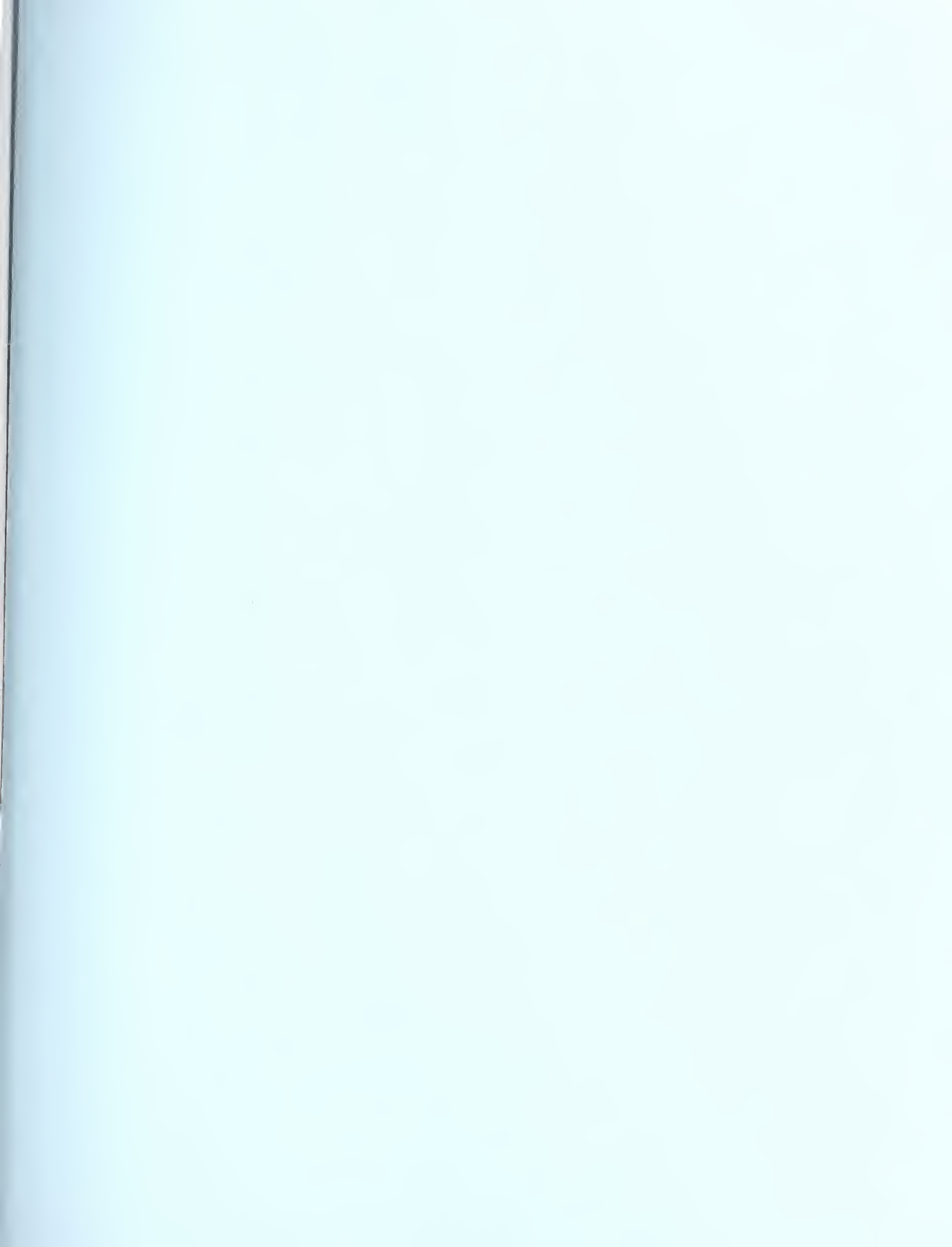
Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Raymond Kammer was nominated by President Clinton on September 4, 1997, to serve as Director of the National Institute of Standards and Technology. After being confirmed by the U.S. Senate, he took office on November 12. An agency of the U.S. Commerce Department's Technology Administration, NIST promotes U.S. economic growth by working with industry to develop and apply technology, measurements, and standards. As NIST Director, Mr. Kammer oversees a staff of approximately 3,300 and a budget of about $700 million. More than half of the staff is composed of scientists and engineers located a the NIST campuses in Gaithersburg, MD, and Boulder, CO.

Mr. Kammer served on an acting basis as the Chief Financial Officer, the Assistant Secretary for Administration and the Chief Information officer for the Department of Commerce. As Deputy Director of NIST from 1980 to 1991 and 1993 to 1997, Mr. Kammer was responsible for the day-to-day operation of the Institute and for long-range planning and policy development. The primary mission of NIST 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. It carries out this mission through a portfolio of four major programs: Measurement and Standards Laboratories – that provide technical leadership for vital components of the nation's technology infrastructure needed by U.S. industry to continually improve its products and services; the Advanced Technology Program – accelerating the development of innovative technologies for broad national benefit through R&D partnerships with the private sector; a grassroots Manufacturing Extension Partnership with a network of local centers offering technical and business assistance to smaller manufacturers; and a highly visible quality outreach program associated with the Malcolm Baldridge National Quality Award that recognizes business performance excellence and quality achievement by U.S. manufacturers, service companies, educational organizations, and health care providers.

From 1991 to 1993, Mr. Kammer was Deputy Under Secretary of Commerce for Oceans and Atmosphere in NOAA. In that position, he served as NOAA's Chief Operating Officer and was responsible for overseeing the technical projects of this $2 billion agency which has a staff of over 14,000. NOAA has five major programs: the National Weather Service; the National Marine Fisheries Service; the National Environmental Satellite, Data, and Information Service; the National Ocean Service; and the Office of Oceanic and Atmospheric Research.

Mr. Kammer began his career with the Department of Commerce in 1969 as a program analyst. Prior to his appointment as Deputy Director of NIST, Mr. Kammer held a number of positions at NIST and in the Department of Commerce involving budgetary and program analysis, planning and personnel management. During his tenure as Deputy Director, he also held positions as Acting Director of NIST, Acting Director of the National Measurement Laboratory at NIST, and Acting Director of the Advanced Technology Program at NIST.

Mr. Kammer has chaired several important evaluation committees for the Department of Commerce, including reviews of satellite systems for weather monitoring and the U.S. LANDSAT program, and of the next generation of weather radar used by the U.S. government. He also served on the Board of Directors of the American Society for Testing and Materials, a major international society for the development of voluntary standards for materials, products, systems, and services.

His awards include both the Gold and Silver Medals of the Department of Commerce, the William A. Jump Award for Exceptional Achievement in Public Administration, the Federal Government Meritorious Executive Award, and the Roget W. Jones Award for Executive Leadership. Mr. Kammer received his bachelor of Arts degree from the University of Maryland in 1969.
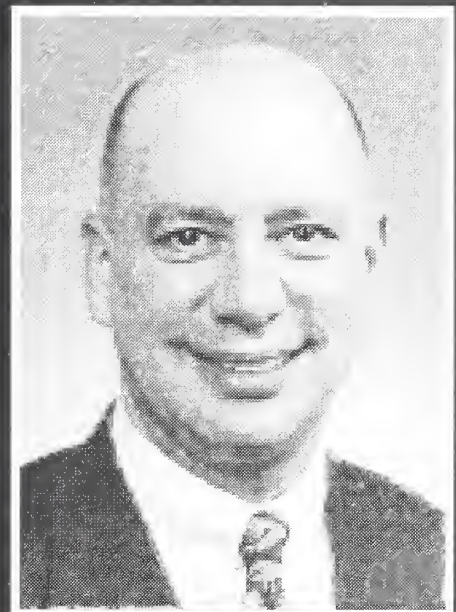
Raymond Kammer

Director

National Institute of Standards and Technology (NIST)

www.nist.gov

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Dr. Victor R. McCrary is currently the Acting Chief of the High Performance Systems and Services Division at the National Institute of Standards & Technology in Gaithersburg, Maryland. In his current position, he leads a group of researchers, and computer scientists in NIST's Information Technology Laboratory. His group is responsible for providing all data, telecom, and central computing resources to the 3,500+ NIST staff. His organization also conducts research in flat panel displays, high performance computing, network computing, scientific visualization, optical disk (DVD) storage and reliability, biometrics, electronic books, micro-e-commerce, HDTV, and image recognition. 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, and a Braille reader for electronic books. He is past president of the Open eBook Forum, an industry group dedicated to the development and promotion of standards for electronic books. Concurrently, Dr. McCrary is an adjunct professor in the Executive Masters of Technology Management Program at the University of Pennsylvania. The program is jointly administered by the Graduate School of Engineering and the Wharton School of Business.

Dr. McCrary 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. Dr. McCrary has authored or co-authored over 40 technical papers in refereed journals and co-edited two books. In 1990, Dr. McCrary received the "Most Promising Engineer of the Year Award", presented by U.S. Career Communications and Mobil Oil Corporation, for his efforts in the field of semiconductor crystal growth. In March 1992, he received the "Pioneer of the Year Award" from the National Society of Black Engineers (NSBE) & the Motorola Company, also for his efforts in the field of semiconductor crystal growth Dr. McCrary was selected in 1996 to the College of Distinguished Lecturers by Sigma Xi, The Scientific Society.

This year 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 Gold Medal is the Department's highest honor, for which Dr. McCrary will receive this award from the Secretary of Commerce, September 13, 2000. The NIST Braille reader was featured in the September 2000 issue of *Wired Magazine*.

Victor's philosophy toward his work and his life is to keep your eye on the prize —whatever that maybe, give your personal best at what ever you achieve, take risks, give lots of love to those who'll never know, and don't take yourself to seriously. "Always look to do the right thing, instead of doing things right!!!"

Victor McCrary

**Acting Division Chief
High Performance
Systems & Services
Division**

NIST

www.nist.gov/div895

**"E-Books 2000:
Turning the Corner in
2000"**

Electronic Books: *Turning the Corner in 2000*
Electronic Book 2000
September 25, 2000

Victor McCrary
National Institute of Standards & Technology

NIST   victor.mccrary@nist.gov

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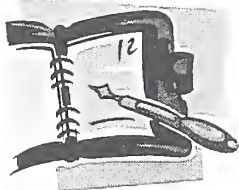
- '98 – NIST E-Book Workshop
- '99 – First meeting of the Open e-Book Initiative in S.F.
- '99 – Japan's MITI announce e-book initiative

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

E-Book: *Standards*

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

E-Book: *Players (lots of 'em!!)*

- goReader
- Audible Inc
- Xlibris
- iUniverse
- Dead End Street
- CENSA
- 00h00.com
- Shanghai Library
- isSound
- Savant Tech
- Clickshare
- e-Reads
- Cirrus Logic
- RightsMarket
- Association of Electronic Publishers (AEP)

E-Book: *Business/News*

THESTANDARD
INTELLIGENCE FOR THE INTERNET ECONOMY

April 04, 2000, 10:35 AM PST

CMG! Writes Net Book-Finder an $18 Million Check !

Atlans has raised a total of $30 million, including a vote of confidence from Ingram.

E-Books: *Market Predictions*

Forrester Research predicts the market for downloaded books will skyrocket from:

$12 million in 1999 (1% of on-line book sales)

$426 million in 2004 (13% of on-line book sales)

Ebooks allow you to sell books at one-half the price,

giving the authors 50% of the royalties,

with 6 times the profits!

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

- technical journals
- education (and save that back pain!)
- medical practioners
- enterprise applications
- government; e.g. the IRS

E-Book Journals: Physical Review

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

Series I (1893) Vol. I to XXXV	Series II (1913) Vol. 1 to 138	RMP (1929)	PRL (1958)	Series III (1970) PRA, PRB PRC & PRD Vol. I to 77	PRE (1993) PRST-AB 1998

Online ~ 1995
PROLA 1985 to 1946
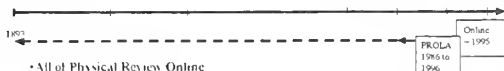
1893

- 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

NIST 2

DATA COLLECTION - E-BOOKS IN THE SCHOOLHOUSE

✓**APPLICATION STRATEGIES (LOGISTICAL)**

✓**INSTRUCTIONAL APPROACHES**

NIST   EDUCATION

E-Book: *Technologies*

- IBMs TeraStore Technology
- eInk/Xerox's Wand
- Cirrus Logic's chips for RCA e-book
- MS Reader
- Adobe's PDF Merchant

E-Book Future Trends

- Convergence in storage, telephony, one device (super PDA!!) *watch out for DVD!!!*
- Recombinant mixed media – reuse of current digital assets; embellishment of legacy assets (similar to colorizing of movies!!)
- Accessibility
- Full multimedia

Convergence

FUNCTIONALITY

MOBILITY

COMPLEXITY/PRICE

Download theoretical times

"Minutes" downloads (For a 1MB file)

| modem 14.4 kbps | modem 28.8 kbps | modem 56 kbps | ISDN (BRI) 128kbps |

Security and network congestion - not considered !!

"Seconds" downloads (For a 10 MB file)

| T1 1.54 Mbps | E1 2.04 Mbps | ASDL 6 Mbps | CM2 8Mbps | CM3 30 Mbps | ATM 622 Mbps |

IBM HDDs in E-books

IBM

- 340 MB microdrive
  - 850 novels (400 pages each)
  - Semester's worth of student text in college (10 text books)
  - Legal / medical textbooks (with graphics)
- 12 GB Travelstar
  - 12 million pages of text
  - 50 magazines (with color and photos)
  - .5 million web pages (with graphics)

SmartMedia™
超小型大容量記録媒体として
携帯情報機器向けに市場を拡大

E-Books for the Visually Impaired
Low –Cost Braille Reader
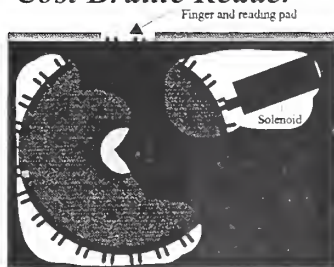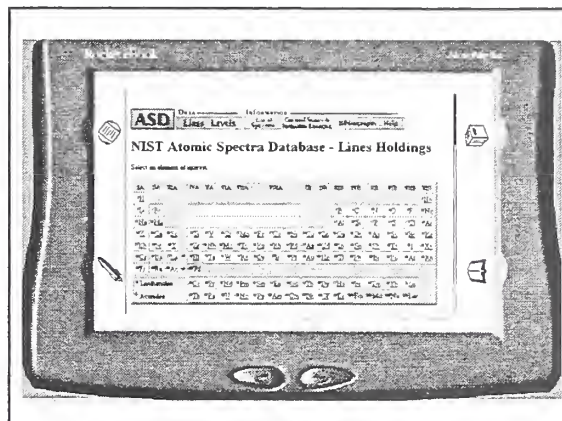
E-Books: *Coming Events*

- September 25-27 – EBook 2000 Washington, D.C. www.nist.gov/ebook2000
- October 31-November 1 – ePub Expo, New York
- November 6-7 – e Book World, New York
- December 11 – 12 – BookTech West, San Francisco

Electronic Book 2000

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As Vice President, Marketing, Global Media and Entertainment Industry, Mr. Canepa is responsible for IBM's strategy, market-share, mind-share, revenue, business relationships, solution development and offerings for entertainment, sports, broadcast, cable, publishing and advertising customers worldwide. He served as Director of IBM Global Media and Entertainment solutions before assuming his broader segment marketing responsibilities.

Mr. Canepa played a key role in profitably growing the Global Media and Entertainment solutions business from startup to a worldwide organization with more than 250 members. This organization has helped media and entertainment customers to extend and enhance their core brands by applying digital technologies to streamline existing operations, to enable new revenue sources and to create value by better managing, distributing and re-purposing digital content for interactive businesses.

Mr. Canepa has extensive knowledge of how the application of technology can be used to create value for an organization. In addition to his management responsibilities, Mr. Canepa has participated in the structuring and negotiation of more than 100 complex consulting, services, product and partner agreements. He has also developed the business strategy and plan for two interactive World Wide Web ventures.

Mr. Canepa joined IBM in January 1983 as a sales trainee in Los Angeles. He has over 16 years of experience building and leading significant sales, marketing, consulting and systems integration organizations. He has consistently demonstrated success not only in the application of technology to business problems, but also in the design and development of organizations and businesses that are focused on that objective. He is recognized as an innovative leader with uniquely strong talents in both strategic and operational areas.

Mr. Canepa graduated from UCLA in 1982 with two bachelor of arts degrees: Economics and Political Science with Phi Eta Sigma honors. He received an MBA from UCLA, graduating in 1990 with Beta Gamma Sigma and top-marketing thesis honors. He has attended the Wharton School financial management program and the IBM President's class and International President's class at Harvard University's faculty club.

Steve Canepa

Vice President, Marketing
IBM Global Media and Entertainment Industry

www.ibm.com

"Readers Choice: Digital Technology and the Future of eBooks"
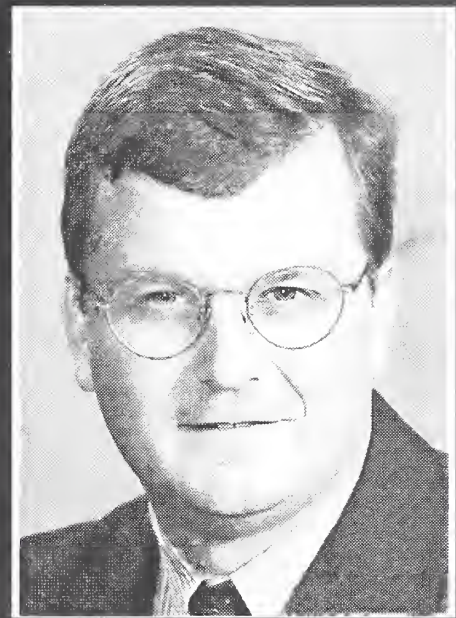
Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Ken Brooks is Vice President of Digital Content at Barnes & Noble, Inc. and President of EP Ventures, Inc. He joined Barnes & Noble in 1999 where he founded EP Ventures, a Philippines-based text conversion and composition company, as well as the 1873 Press, a POD and eBook publishing entity. Ken has held several senior management positions in publishing, including Vice President of Operations, Production, and Strategic Planning at Bantam Doubleday Dell and Vice President of Customer Operations at Simon and Schuster.

Prior to his entry into publishing, Ken was a Senior Manager in Andersen Consulting's Logistics Strategy Practice. He holds a Bachelor's and Master's degree in Industrial Engineering from the Georgia Institute of Technology.

Ken Brooks

Vice President

Barnes and Noble, Inc

www.barnesandnoble.com

"E-Books Formats and Sales Channels: Where is the Money?"
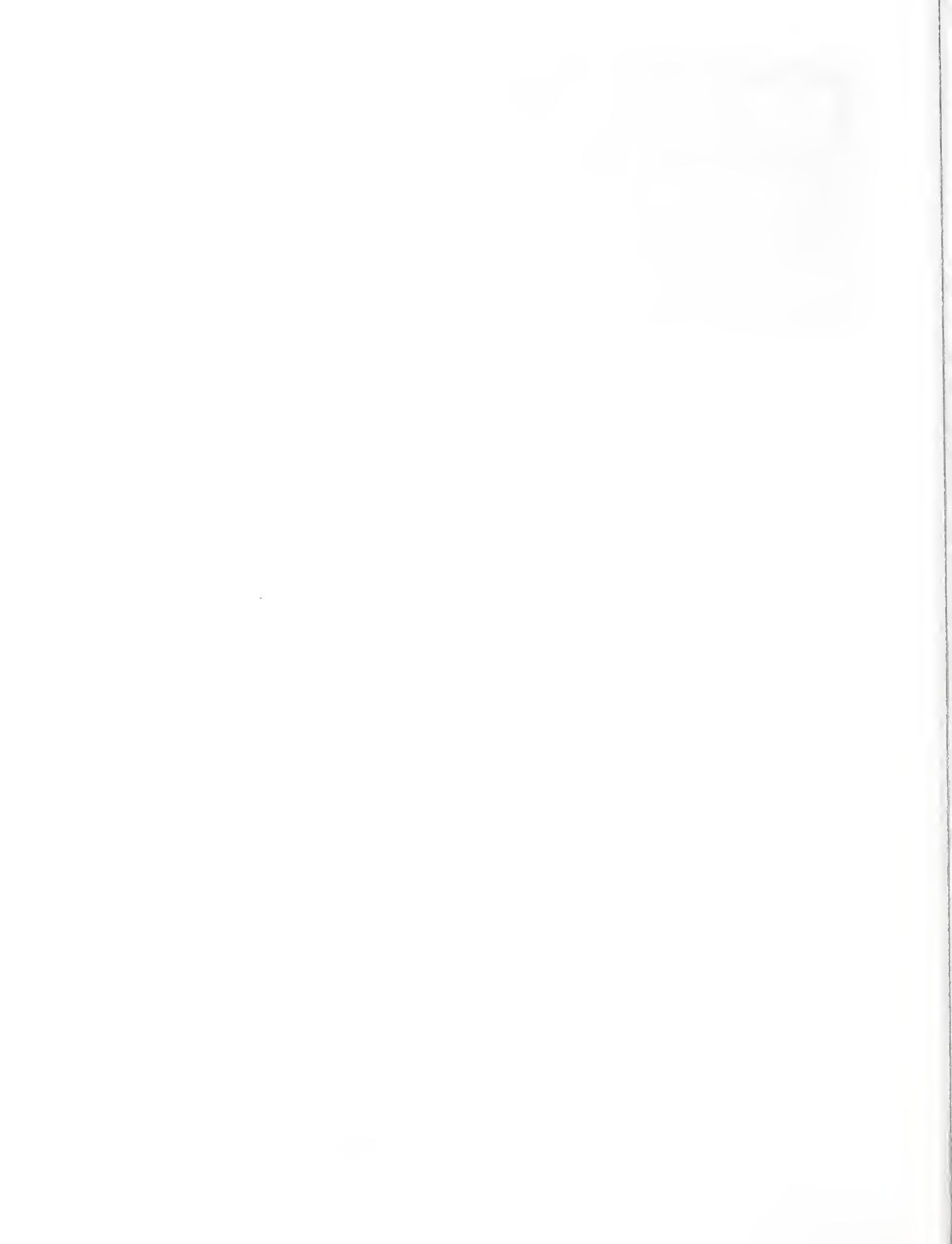
Electronic Book 2000

Alan Balutis came to Washington in 1975 as a National Association of Schools of Public Affairs and Administration (NASPAA) Fellow. He worked in a variety of budget, personnel, policy and legislation, and management analysis positions at the then Department of Health, Education and Welfare (HEW) before coming to Commerce in 1979.

Prior to coming to Washington, he served as an Assistant Professor of Political Science at the State University of New York at Buffalo and worked with the New York State Legislature and the National Conference of State Legislatures. He is the author or co-author of four books, over 100 articles, and numerous conference papers on government reorganization, legislative reform, budgeting, and internship programs.

In Commerce, he worked as Director, Office of Systems and Special Projects (1983-84), as Director, Office of Management and Organization (1984-87), as Director for Budget Planning and Organization (1987-94), as Director of Budget, Management and Information (1994-1998), and as Deputy Chief Information Officer (1998-2000). He was named to his current position, Director of the Advanced Technology Program, in April 2000. The Advanced Technology Program (ATP) co-funds with industry high-risk research projects to develop enabling technologies that can form the basis for new and improved products, manufacturing processes and services. It stimulates partnerships among companies of all sizes, universities, and the rest of the R&D enterprise.
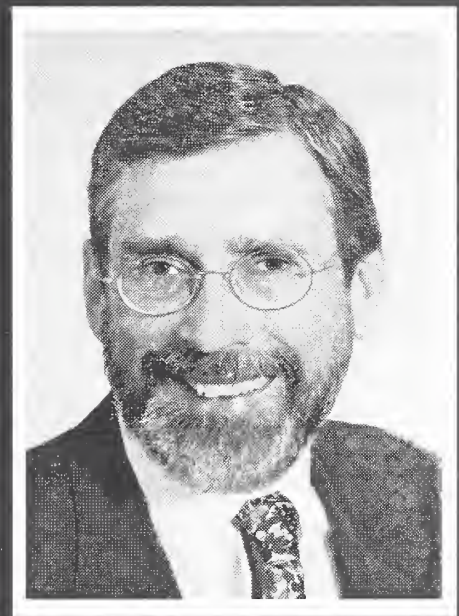
Alan Balutis

Sr. VP/General Manager Reciprocal Publishing

Reciprocal, Inc

www.reciprocal.com

"The Advanced Technology Program: Research Partnerships for Innovation"

Advanced Technology Program (ATP)

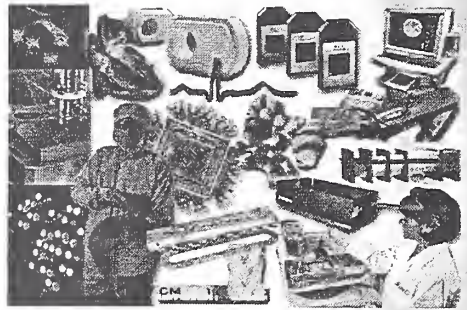*Research Partnerships for Innovation*

Alan P. Balutis
Director, ATP

www.atp.nist.gov
1-800-ATP-FUND

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Advanced Technology Program

Ten Years of Innovation and Impact

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The Competitive Environment

- Advances in technology account for more than *50 % of U.S. economic growth*

- Global competition has forced a focus on *short-term return* on investment

- Now more than ever, our nation's economic well being depends on *rapid development and commercialization* of technology

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ATP Stimulates Industry

To tackle the R&D challenges of the 21st Century

- ATP Mission:
  - ✓ Accelerate the development of innovative technologies
  - ✓ For broad national benefit
  - ✓ Through partnerships with the private sector

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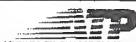

Technology Offices Relationship with Industry

- **Development**
  - ✓ Support industry efforts to define high-risk, innovative projects and solicit related proposals for the ATP
  - ✓ Explore highest priority technical opportunities and barriers with American industry
  - ✓ Enable greater understanding of ATP criteria & objectives among industry through education and outreach
- **Selection**
  - ✓ Responsible for bringing together the qualified experts, which include ATP staff, to effectively manage the peer-review selection process that is based on the ATP criteria
- **Management**
  - ✓ Collaborate with awardees to ensure project success
  - ✓ Government's technical & business representatives
    - Monitor project technical and business progress against agreed milestones and expenditures

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Investments in Innovative Technologies

Electronics and Photonics ($329 M)
- Microelectronics
- Optoelectronics
- Optics Technologies
- Power Technologies
- Wireless Electronics
- Organic Electronics

Biotechnology ($254M)
- DNA Technologies
- Tissue Engineering
- Drug Discovery Methods
- Proteomics
- Medical Devices & Imaging
- Microfluidics

Manufacturing ($180 M)

Information Technology ($389 M)
- Advanced Learning Systems
- Component-Based Software
- Digital Video
- Information Infrastructure for Healthcare
- Electronic Commerce
- Dependable Computing Systems
- Technologies for the Integration of Manufacturing Applications

Chemistry and Materials ($344 M)
- Chemical Processing
- Sensors
- Metabolic Engineering/Catalysis
- Combinatorial Methods
- Separations/Membranes
- Materials Processing
- Advanced Materials
- Nanotechnology
- Material Interfaces

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The Difference ATP Makes

With the ATP, R&D is:

- Higher risk
- Creating leap-frog technologies
- Leading to multiple applications
- Expanding company & national competencies
- Broadly diffused

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A Decade of Innovation

- The Program is celebrating its 10th Year
- 468 projects awarded with 1,067 participants and 1,027 subcontractors (157 Joint Ventures)
- $3 billion of advanced technology development funded
  - ✓ ATP Share = $1.496 billion
  - ✓ Industry Share = $1.499 billion
- Small businesses are thriving
  - ✓ > 50% of projects led by small businesses
- More than 145 Universities participate
- Nearly 20 national laboratories participate

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Early Program Impacts

- Developing **Leap-frog Technologies**
  - ✓ 37% of applications represent "new-to-the-world" solutions
- Leading to **Multiple Applications**
  - ✓ 4.5 applications per project
- Resulting in 100 **Commercialized Technologies**
- Stimulating **Collaboration**
- Accelerating **High Risk R&D**
  - ✓ 86% ahead in R&D cycle

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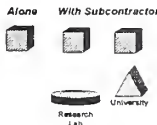

What ATP Can Do for You

- Early financial support
  - ✓ Reduced risk for R&D investment
- Research support
  - ✓ Information on assembling a JV
  - ✓ Links to additional technical resources
- Recognition
  - ✓ Leverage for additional financing
  - ✓ External validation
- Independence
  - ✓ Companies retain their intellectual property rights

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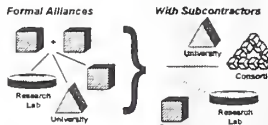
ATP Eligibility

SINGLE COMPANIES

Alone | With Subcontractors

Research Lab | University

- For-profit company
- 3-year time limit
- $2M award cap
- Company pays indirect costs
- Large companies cost share >60% of project cost

JOINT VENTURES

Formal Alliances | With Subcontractors

Research Lab | University | University | Consortium | Company | Research Lab

- At least 2 for-profit companies
- 5-year time limit
- No limit on award amount
- Industry share >50% total cost

  - Intellectual property is owned by the for-profit companies
  - ATP encourages teaming arrangements - most projects involve alliances

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Is ATP Right for You?

☑ Broad Economic Benefits to U.S.?

PROPOSAL TO THE ATP

☑ Path-Changing R&D?

PROJECT CONCEPT

☑ ATP Necessary?

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Should You Apply to the ATP?

Winning involves ...

- Consistent commitment to higher-risk R&D
- Early and continuous commitment to commercialization
- Cost-sharing
- ATP cooperative agreement requirements
- Impact assessment requirements

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Getting Started

Proposal Development the ATP Way ...

- Identify an opportunity
- Identify technical barriers to realizing the opportunity
- Relate technical barriers to specific R&D objectives
- Plan research to eliminate barriers
  - ✓ Innovative   ✓ Coherent
  - ✓ Feasible   ✓ Integrated
- Present details of R&D plan
- Develop commercialization strategy
  - ✓ Target applications   ✓ Plan for broader diffusion

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Pre-Proposals

Year-round submission ...

- Written feedback in approximately 2 weeks
- Pre-proposals can be submitted twice
- 4 pages plus cover
- 5 questions on technical and economic merit

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ATP Criteria

Critical Elements of a Proposal ...

TECHNOLOGY

ECONOMICS

- **Scientific and Technological Merit (50%)**
  - ✓ Innovations in the Technology
  - ✓ High Technical Risk & Feasibility
  - ✓ Quality of R&D Plan
- **Broad-Based Economic Benefits (50%)**
  - ✓ Economic Benefits
  - ✓ Need for ATP Funding
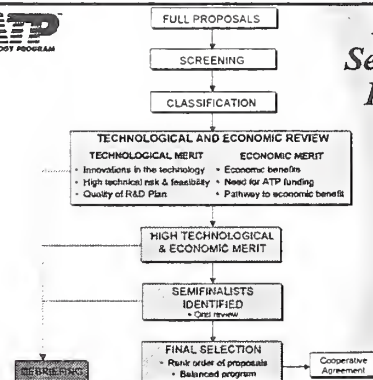 - ✓ Pathway to Economic Benefits

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Proposal Evaluation

Scientific & Engineering Peer Review

PROPOSAL

Business & Economic Peer Review

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Project Selection Process

FULL PROPOSALS → SCREENING → CLASSIFICATION → TECHNOLOGICAL AND ECONOMIC REVIEW

TECHNOLOGICAL MERIT	ECONOMIC MERIT
• Innovations in the technology	• Economic benefits
• High technical risk & feasibility	• Need for ATP funding
• Quality of R&D Plan	• Pathway to economic benefits

→ HIGH TECHNOLOGICAL & ECONOMIC MERIT → SEMIFINALISTS IDENTIFIED (Oral review) → FINAL SELECTION (• Rank order of proposals • Balanced program) → Cooperative Agreement

DEBRIEFING

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Current Portfolio of IT-Related Technology Areas

- **Component-Based Software**
  - ✓ Reusable Software
  - ✓ Specialized Components
  - ✓ Automated System Assembly
- **Adaptive Learning Systems**
  - ✓ Knowledge-bases
  - ✓ Delivery Mechanisms
  - ✓ Multi-sensory Interfaces
- **Technologies Integrating Manufacturing Applications**
  - ✓ Real-time Mfg Data Sharing
  - ✓ Manufacturing Execution Systems
  - ✓ Supply-chain Integration
- **Motor Vehicle Mfg and Other**
  - ✓ Material Forming & Removal Processes
  - ✓ Assembly Processes
  - ✓ Tolerancing and Metrology

- **IT for Health Care**
  - ✓ Virtual Medical Training
  - ✓ Healthcare Informatics
  - ✓ Knowledge Services
- **Digital Video**
  - ✓ Video and Multimedia
  - ✓ Protocols & Interoperability
  - ✓ Data Compression

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ATP and EBook

Areas currently supported by ATP where Ebook-related technologies are likely to play a role:

- Adaptive Learning Systems
- Component-Based Software
- IT for Healthcare

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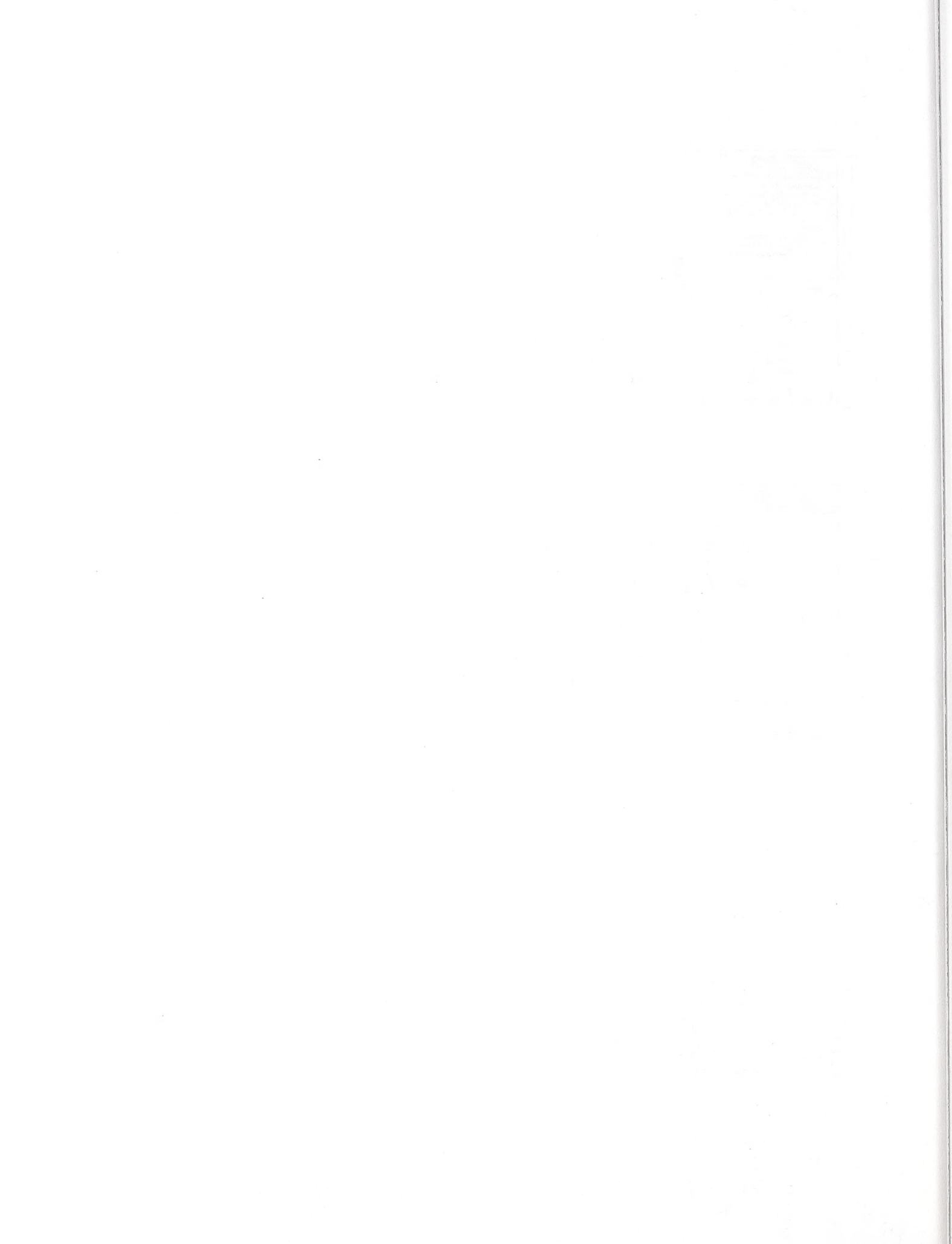

Contact Information

www.atp.nist.gov

To Get on the ATP Mailing List:

Call toll-free: 800-ATP-FUND (800-287-3863)

Fax your name and address to: (301) 926-9524

Send an e-mail message to: atp@nist.gov

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Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
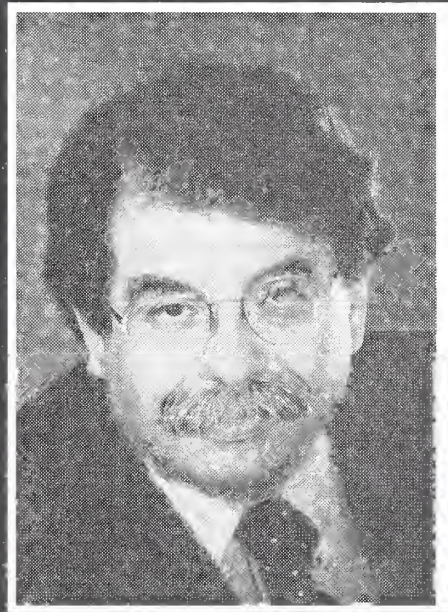## Reagan Building and International Trade Center

Dick Brass is the vice president of technology development in the Business Productivity Group. His responsibilities include organizing and executing Microsoft's effort in the emerging field of electronic book software, "eBook" devices and tablet PC's.

Prior to joining Microsoft in November 1997, Brass was employed eight years at Oracle Corp. — first as president of Oracle's Data Publishing subsidiary and then as Oracle's senior vice president for Corporate Affairs. In the mid-1980s, Brass founded General Information Inc., which produced some of the first software telephone directories, as well as popular business directories in print form.

Brass is perhaps best known for developing the first dictionary-based spelling checker software, as well as the first electronic thesaurus — The Random House Electronic Thesaurus — in 1981. His firm, Dictronics Publishing, acquired the exclusive electronic rights to many of the world's most important reference works, including The Random House Dictionary, Roget's International Thesaurus, Black's Law Dictionary, the Chicago Manual of Style, and similar works abroad. Wang Laboratories purchased Dictronics in 1983, and Brass then served as director of Electronic Publishing at Wang.

In the 1970s, Brass was features editor of the Daily News in New York City. He also reported for WNBC-TV, the Wall Street Journal and the New York Post.

Brass attended Cornell University. He lives in Seattle with his wife, Regina, a physician.
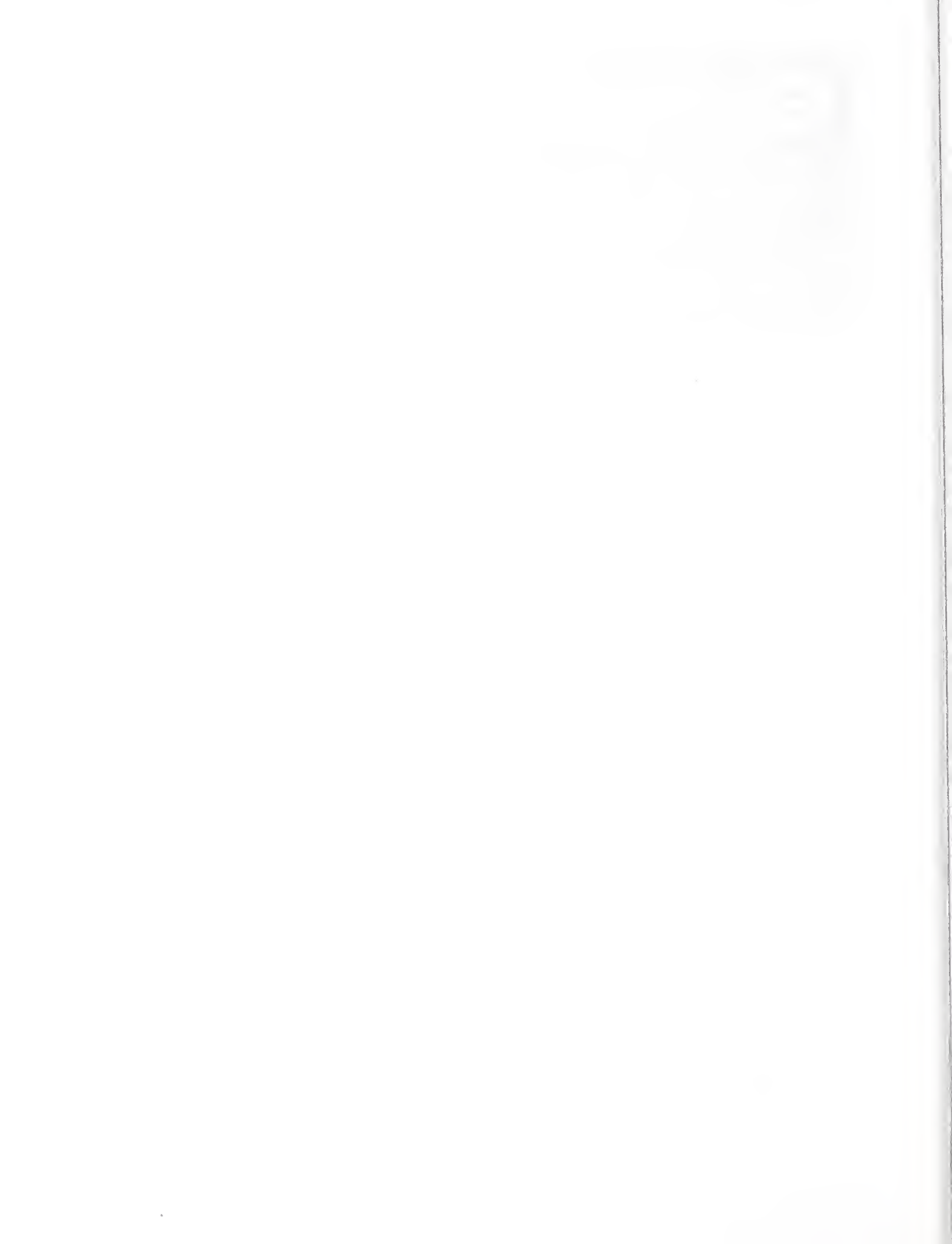
Dick Brass

Vice President, Technology Development

Microsoft

www.microsoft.com

"Propserity or Piracy?"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

James Sachs, CEO of SoftBook(r) Press, is well known as the patent holder for the PC mouse and developer of over 100 notable electronic and software products. In addition to the computer mouse and the first Internet appliance eBook Reader, Mr. Sachs was also principal creator of Teddy Ruxpin, the best-selling animated talking product in history.

Prior to founding SoftBook, Mr. Sachs co-founded Personal Robotic Company and Elfin Technologies and held top positions at Hasbro and Worlds of Wonder and was an original principle of IDEO, the nation's leading product development company. Mr. Sachs received a bachelor's degree from the University of Michigan and a master's of science degree from Stanford University.

James Sachs

CEO

Softbook Press, subsidiary of Gemstar-TV Guide

www.softbook.com

"Why eBooks Could Fail: Dynamic Reader Services"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Maurice Cuffee, M.D. is a practicing physician at Howard County General Hospital. He received a B.A. in Economics at Haverford College, a Doctor of Medicine at UMAB, and M.B.A. studies at the University of Baltimore.

Dr. Cuffee is a committee member at Howard County for implementation of the meditech computer system and a member of the committee at Howard County for the sale of the hospital to the Johns Hopkins Medical System.

Maurice Cuffee, M.D.

Practicing Physician, Howard County General Hospital

"Is There an E-Book in the House? Potential E-Book Uses by Medical Professionals"

"Is There An E-book In The House"

Potential E-book Uses By Medical Professionals

Presented By Maurice Cuffee MD

The Medical Professional Has Conflicting Informational Needs

- Need for accurate knowledge base
- Need for updated knowledge base
- Need for access to patient data
- Need for secure patient data

Importance of Resolving Conflicts

- 25% of patients being treated for high blood pressure are not at their goal blood pressure

- 16,000 deaths/year due to gastroentestinal bleeding resulting from medications

- 100,000 deaths/year attributed to health professionals errors

Barriers To Resolving Conflicts

- Too many journals

Barriers To Resolving Conflicts

- Too many journals
- Varying levels of expertise of journal authors
- Too many articles per journal

Barriers To Resolving Conflicts

- Too little information
- 1)insurance companies changing approved drugs lists with little to no informing of physicians
- 2)patient eligibility lists which are updated monthly
- 3)patient data availability

Barriers To Resolving Conflicts

- Variations in information from one insurance company to the next

Drug Formulary Variations

- Same drug made By different manufacturers covered differently;
- Example- lisinopril-one insurance covers as prinivil, another covers as zestril; writing for the wrong one gets you a phone call
- Same class of drugs covered differently

Variations In Information From Drug Companies

- Specialist participation
- Procedure authorization

Barriers To Resolving Conflicts

- Need for portability of data:
- Doctors with multiple offices
- Doctors with multiple hospital privileges
- Doctors with need to access data at home/on vacation

How The E-book Can Be A Solution

- Accessible knowledge base
- Patient management
- Coordination with managed care

Accessible Knowledge Base

- Information can be downloaded and updated at provider's convenience
- Information can be tailored to user's need
- Drug warnings/ adverse reactions can be downloaded as alerts

Patient Management

- Files of complicated patients can be stored and password protected
- New data can be downloaded as tests become available
- Articles can be linked to patient's records

Coordination With Managed Care

- Provider manuals and specialist list downloaded
- Formularies downloaded, eliminating calls for approval
- Patient eligibility updated monthly

Potential E-book Sponsors

- Insurance companies
- Pharmaceutical companies
- Medical journal/medical textbook publishers

Sponsors-Insurance Companies

- Cost cutting opportunities:
- Downloaded vs printed manuals-savings on printing,distribution,and revisions
- With downloaded manuals,patients referred to participating providers, decreasing out of network costs. One incorrect referral per primary care provider at @ $100 above network costs equals $10,000,000/month

Sponsors-Insurance Companies

- With downloaded manuals, patients referred to participating providers, decreasing out of network costs.
- One incorrect referral per primary care provider at @ $100 above network costs equals $10,000,000/month for the approximately 100,000 primary care providers in the U.S.

Sponsors-Insurance Companies

- Cost cutting opportunities:
- Downloaded formularies-with accurate formulary information, costs are decreased by providing effective medicines at a discount

Sponsors-Insurance Companies

- For example, Aetna US Healthcare, as of August 2,2000, is responsible for thirteen million patients. If $1/per patient per month was saved, over $156 million would be saved each year!!!

Sponsors Pharmaceutical Companies

- Ability to download focused drug sales presentations based on a physician's prescribing habits
- Company specific drug studies:
- Updates to frequent prescribers:

Sponsors Pharmaceutical Companies

- Comprehensive comparisons sent to high prescribers of competitors' products
- Interactive sales presentations for doctors too busy to see sales representatives during office hours

Sponsors Medical Publishers

- Decrease costs by providing cost effective versions of journals/textbooks
- Decrease costs by providing targeted versions of journals

Beneficiaries of E-books

- Doctors/nurse practitioners:
- Availability of information
- Portability of information
- Timeliness of information

Beneficiaries of E-books

- Doctors/nurse practitioners:
- Decrease in papers/books accumulated
- Decrease in time spent managing patients
- Decrease in errors made caring for patients

Beneficiaries of E-books

- Medical students
- Textbooks/handbooks at on wards
- Potential storage device for patient information/note taking
- Potential for downloading lecture notes

Beneficiaries of E-books

- Emergency medical technicians

In Summary:

- Medical professionals need tools to increase efficiency while decreasing costs;
- Medical professionals need tools to manage large amounts of information;
- Insurance companies need tools to help medical professional better manage costs:

In Summary:

- Drug companies need better ways to distribute targeted information to busy professionals:
- E-book technology is a viable means of achieving these goals

5

Electronic Book 2000

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September 25-27, 2000
Reagan Building and International Trade Center

In his position as vice president of the ePaper Solutions Group at Adobe Systems Incorporated, Joe Eschbach oversees all aspects of Adobe Acrobat & eBook product management, marketing, and guiding overall Adobe strategy.

Before joining Adobe, Eschbach served as vice president of marketing and business development for Mitsuibishi Electric America and was director of Macintosh systems marketing and corporate development for Radius Inc. Gaining many years of senior product marketing and management experience, Eschbach also held positions within Apple Computer Inc.

Eschbach holds a bachelor's degree in economics and an master's in engineering from Washington State University, a master's in economics from Cambridge University in England, and a master's and a doctorate in engineering from Stanford University.

Joe Eschbach

Vice President, ePaper Solutions Group

Adobe Systems

www.adobe.com

"eBooks; Today and Tomorrow"

Electronic Book 2000

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Tom Díaz has built and led product development teams in several companies. Before Glassbook, he was Vice-President of Product Development at Iris Associates, which develops Lotus Notes. As Director of Engineering at Security Dynamics, he and his team developed the SecurID card and ACE Server.

In 1998 he and his partners designed the distributed copyright protection system used in Glassbook's electronic book products, and during 1999 the Glassbook team developed the Glassbook Reader and Glassbook Content Server, which figured prominently in phenomena like Stephen King's *Riding the Bullet.*
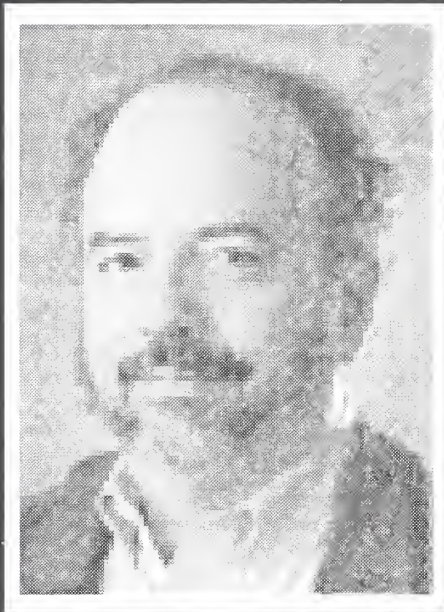
Tom Diaz

Vice President, Product Development

Glassbook, Inc

www.glassbook.com

"New Developments in E-Book Software"
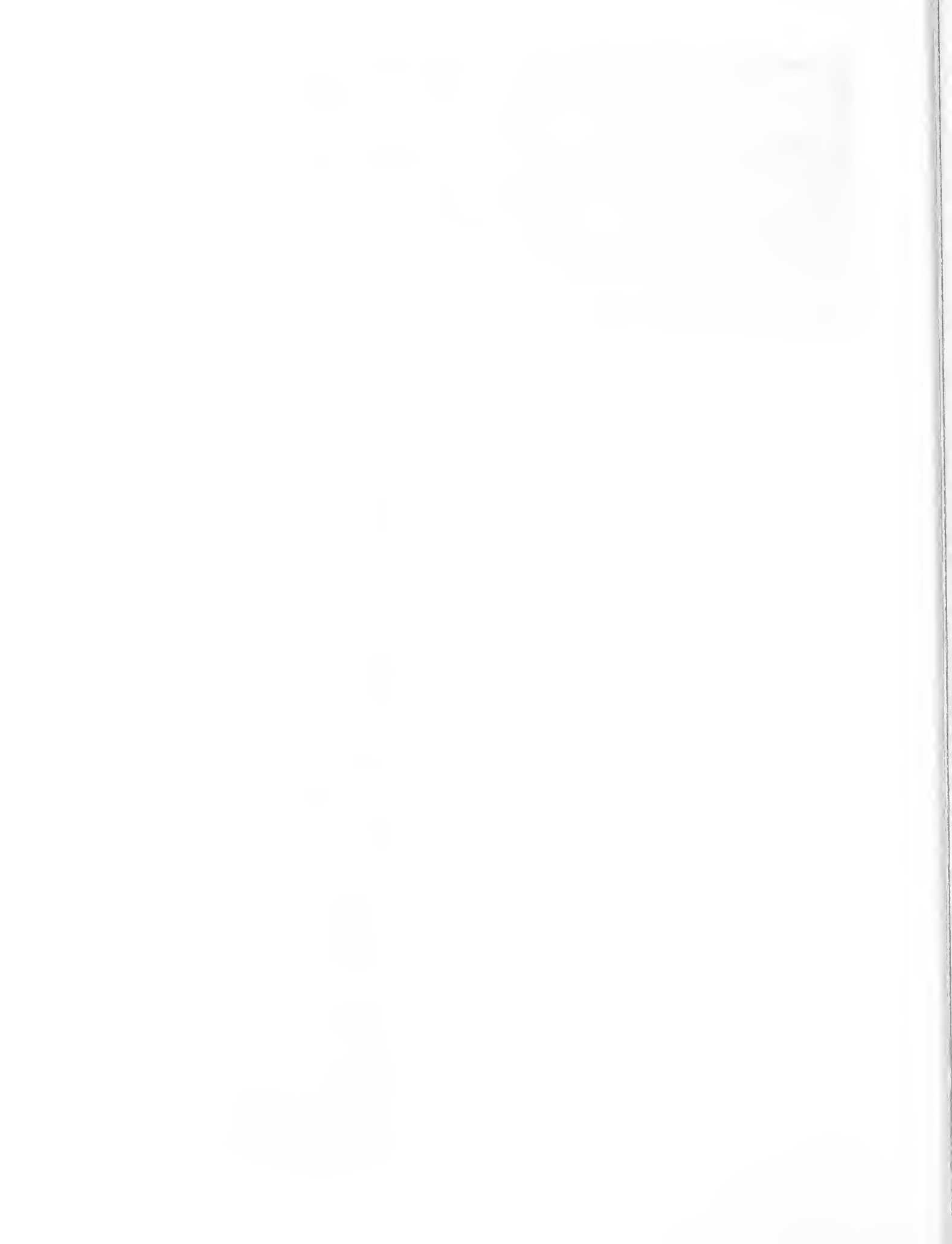
Electronic Book 2000

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Donald Katz is the founder and chairman of the board of Audible Inc., the leader in secure delivery and management of premium audio content via the Internet. He is also a respected author, lecturer, and business consultant. Katz is the author of *Just Do It: The Nike Spirit in the Corporate World*, which was published in June, 1994, by Random House. He is also the author of *Home Fires: An Intimate Portrait of One Middle-Class Family in Postwar America*, published in 1992 and a finalist for the 1992 National Book Critics Circle Award in general nonfiction. His first book, *The Big Store: Inside the Crisis and Revolution at Sears*, a 1987 national best-seller, won the 1988 *Chicago Tribune* Heartland Prize for nonfiction. He has served as a consultant on editorial, start-up, content development projects, and digital media issues for Fidelity Investments, Whittle Communications, Wenner Media, Time-Warner, and Mariah Publications. A long-time contributing editor, business, and technology columnist for *Esquire* Magazine, Katz has also served as a Contributing Editor for *Outside, Men's Journal*, and *Worth*, and a Special Contributor to *Sports Illustrated*. He has lectured widely on money and business issues, journalism, and nonfiction literature at universities, libraries, and corporate management conclaves. He was named the Entrepreneur of the Year for 1999 by Silicon Alley trade magazine Alley Cat News.

In 1995 Don founded Audible Inc., based in Wayne, NJ, with veteran software pioneer Tim Mott. The company has developed the first copyright-secure system for distributing audio via the Internet for playback at or away from the PC. Aiming to combine the growing popularity of spoken audio programming with the rapid development of commercial viability of the Internet, the company services audiobook listeners and Internet-savvy business professionals whose primary needs include staying informed of critical business information and having access to the best entertainment-based audio. Audible provides unique content services that allows customers to program their own listening time and take better advantage of their commute and travel time by delivering premium information and entertainment when and where they need it.
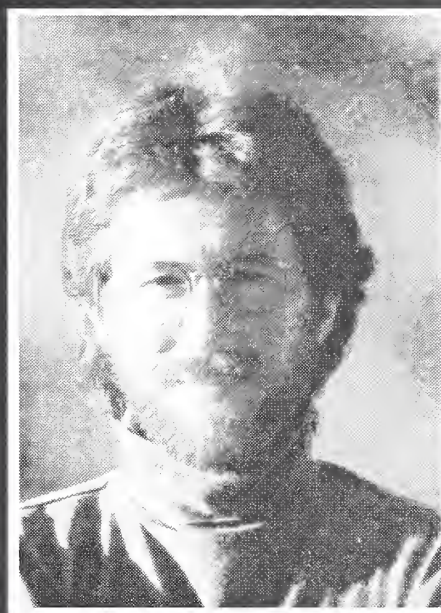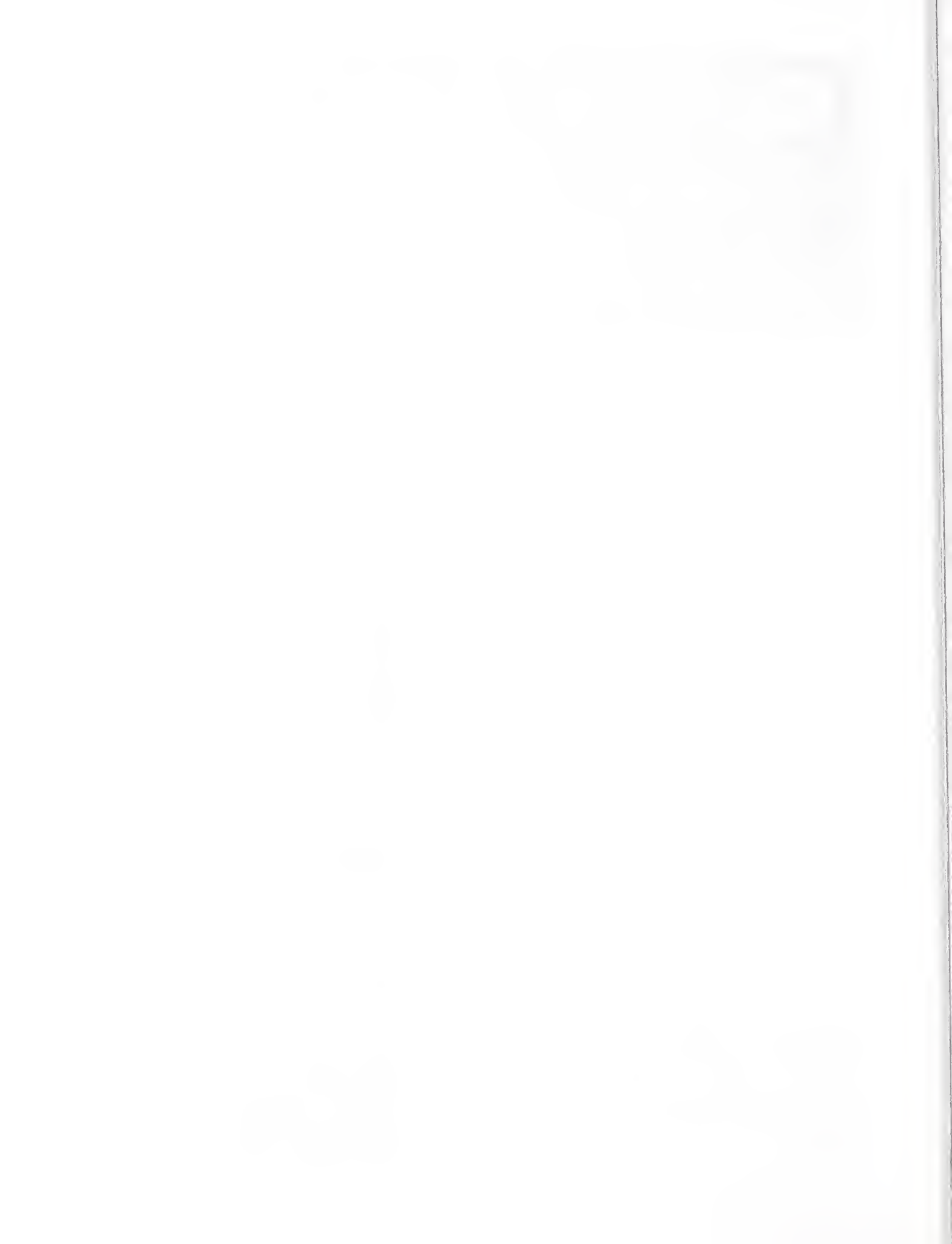

Donald Katz
Founder and Chairman
Audible, Inc
www.audible.com
"Redefining the Product via New Technologies: The Audible Story"

Electronic Book 2000

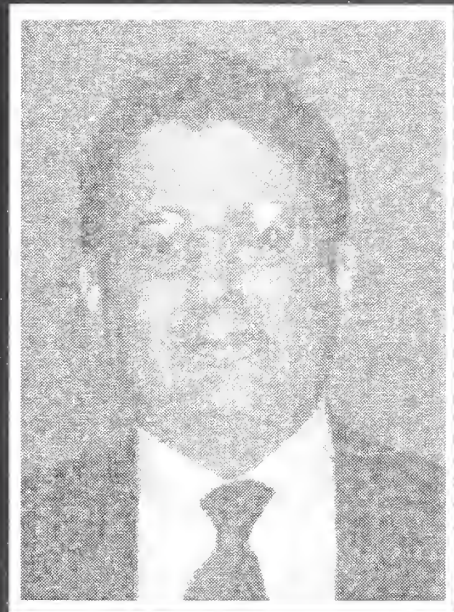## Changing the Fundamentals of Reading
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Steve Potash is the founder and CEO of OverDrive Systems, Inc., the developers of BookWorks, an electronic publishing software platform developed to support open eBook standards for commercial publishing on the Internet, CD-ROMs and eBook reading devices. Over the past decade, OverDrive Systems has developed more than 1,000 digital titles for professional, education and consumer markets. It has licensed its technology to divisions of Time-Warner, Simon & Schuster, McGraw-Hill, John Wiley & Sons, Harcourt Brace, IDG Books Worldwide, Thomson Publishing, Ziff-Davis and others.

Mr. Potash is an experienced trial attorney who has served as Special Counsel for the Ohio Attorney General's Office and consults technology companies on software licensing and Internet law matters. He holds U.S. software patents for document assembly applications. He is a member of the Authoring Committee for the Open eBook Specification Standard.

Mr. Potash holds a B.A. from the Ohio State University and a Juris Doctor from the Cleveland-Marshall College of Law.

Steve Potash
Founder, CEO

OverDrive Systems, Inc.

www.overdrive.org

"Authors Now have the Power!..."

Electronic Book 2000

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Reagan Building and International Trade Center

John Feldcamp is chief strategist of Xlibris, a writer community, print-on-demand publishing system, and self-publishing environment — where the writer always holds the rights to their work. Xlibris is headquarted in the Old City section of Philadelphia.

Before founding Xlibris, John was VP of Operations at Oki Business Digital, a publishing/new media subsidiary of a Japanese conglomerate, that he conceived and founded in the US in 1992.

A publishing expert and a writer himself, John is the creator and flag carrier of the author-centric vision and methods of Xlibris. John lives in New Jersey with his wife Nobue and their two children, Rae and Zachary.
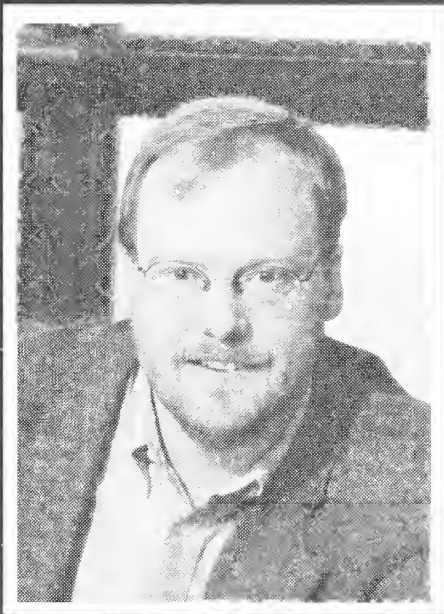
John Feldcamp

CEO and Founder

Xlibrius Corporation

www.Xlibrius.com

"E-Books Beyond 'The Plant': What We Know and What We Don't"

E-Books Beyond *The Plant*:

What we know; What we don't know

September 25, 2000

Xlibris

WHERE WRITERS BECOME AUTHORS

Business Model Issues

- What is the competitive environment

- What is the environment through time

- What are the best ways to market & sell
  electronic books

Xlibris

WHERE WRITERS BECOME AUTHORS

E-Books are:

- not a specific technology

- not a specific method of selling/distributing

- part of the overall change in thinking about how
  content is sold and distributed in the future

There are still more questions than answers

Xlibris

WHERE WRITERS BECOME AUTHORS

Xlibris:

- is not an E-Book company

- is an E-Publisher; enables direct access to the market

- is building a pipeline through which authors can
  output their content to all major formats

- is agnostic towards specific formats for deliverables –
  even a POD book is an E-Book

Xlibris

WHERE WRITERS BECOME AUTHORS

The overall digitalization of publishing

	Publishing	Distribution	Retail
Traditional Businesses	• Random House • Simon & Schuster • Time Warner • Penguin Putnam	• Ingram • Baker & Taylor	• Borders • Barnes & Noble • ABA
E-Businesses	• Xlibris • MightyWords • iUniverse	• Lightning Source	• Amazon.com • Barnes & Noble.com

Xlibris

WHERE WRITERS BECOME AUTHORS

Let's be frank about what we know:

- E-Books will ultimately completely replace books

  - Better, more compelling experience

  - When it happens, look out

  - Different technology, different economics, different industry

  - Many winners and losers

  - Critical issue — knowledge divide

Xlibris

WHERE WRITERS BECOME AUTHORS

E-Book 2000
Xlibris >> E-Book 2000 >> Let's be frank/2

Let's not hold our breath:

- E-Books will not dominate the market *yet*
  - The technology is not yet fully developed
  - Reading devices are still primitive
  - Outputs must be at least as good as physical books
  - An E-Book experience that doesn't suck is still several years away

Xlibris
WHERE WRITERS BECOME AUTHORS

E-Book 2000
Xlibris >> E-Book 2000 >> Let's be frank/3

Obvious things we don't yet know:

- How these businesses will work
- How much money the publisher gets
- How much money the author should get
- How distribution will work
  - Linear distribution model versus peer-to-peer cloud
- The message on business models is that there aren't any yet
- Questions are more important than answers

Xlibris
WHERE WRITERS BECOME AUTHORS

E-Book 2000
Xlibris >> E-Book 2000 >> Let's be frank/4

Scary things we don't yet know:

- How and whether publishers, distributors and retailers continue to exist
- Why authors need any of these guys
- How consumers operate and benefit from E-Books
- Many players will take a piece, but who, and how big?

Xlibris
WHERE WRITERS BECOME AUTHORS

E-Book 2000
Xlibris >> E-Book 2000 >> Reviewing the industry

Who are the players?

	Publishing	Distribution	Retail
Traditional Businesses	• Random House • Simon & Schuster • Time Warner • Penguin Putnam	• Ingram • Baker & Taylor	• Borders • Barnes & Noble • ABA
E-Businesses	• Xlibris • MightyWords • iUniverse	• Lightning Source	• Amazon.com • Barnes & Noble.com

Xlibris
WHERE WRITERS BECOME AUTHORS

E-Book 2000
Xlibris >> E-Book 2000 >> Who gets what?

Who gets what?

- Retailers get 40% for *listing* a data file?
  (everybody lists everything — Yahoo as retailer)
- Distributors get 10% for *storing* a data file?
- Publishers get 40% for — what? — *selecting* a file?
- Authors get 10% for creating 90% of the value?
- All current models likely to get trashed

Xlibris
WHERE WRITERS BECOME AUTHORS

E-Book 2000
Xlibris >> E-Book 2000 >> How E-Books enter the market

How E-Books enter the market

- E-Book short-term value is in vertical market applications (e.g. short content, reference material)
- E-Book middle-term value is in legal references, textbooks, etc.
- Mass-market E-Books do not arrive until E-Books are better than printed books

Xlibris
WHERE WRITERS BECOME AUTHORS

E-Book 2000

Print-on-Demand

- POD is not competitive with E-Books
- Bridge technology until fully-baked E-Books arrive
- Operates in parallel with E-Content formats
- Most companies will ultimately offer both

Xlibris
WHERE WRITERS BECOME AUTHORS

E-Book 2000

Stephen King & E-Book Marketing

- Book marketing as a subject already doesn't work
- King methods only work for King
- Fundamental problem — how do you market 500,000 books a year?
- The only companies capable of effectively marketing anything in the E-Space are the consumer aggregators/retailers
- Back to the future — E-Tailers as small-town bookstores

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WHERE WRITERS BECOME AUTHORS

E-Book 2000

The players — who wins?

- Platforms — Microsoft + somebody else
- Devices — nobody wins
- Publishers — the quick and the dead
- Distributors — win in a linear model or vanish in a cloud
- Retailers — bookstores and video stores in the same boat
- Consumer aggregators — Amazon, Yahoo, AOL
- Authors and consumers

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E-Book 2000

Conclusions

- E-books ultimately win, but not tomorrow
- Critical to be engaged and learn
- Multiple formats co-exist in near term as technology issues get ironed out
- We all have time to figure out how to survive

Xlibris
WHERE WRITERS BECOME AUTHORS

E-Book 2000

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WHERE WRITERS BECOME AUTHORS

Electronic Book 2000

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Richard Tam, founder and CEO, iUniverse.com, the leading digital content service provider for authors, publishers and institutions. iUniverse.com has a wide range of partnerships including Barnes & Noble, IDG Books Worldwide and PricewaterhouseCoopers. iUniverse.com has operations in Silicon Valley, California; Lincoln, Nebraska; New York, New York; Bellevue, Washington; and Shanghai, China. The company employs over 300 people worldwide.

Richard has over 20 years of experience in the semiconductor, computer, and data storage industries. He is a holder of five US patents and a faculty member of the online MBA program at University of Phoenix.

Richard Tam

CEO

iUniverse.com, Inc

www.iUniverse.com

"eBooks by the Chapter"

Slide 1

iUniverse
Content Customized. On-demand, on any platform.

eBooks by the Chapter

Richard Tam
CEO, iUniverse.com

September 26, 2000

Slide 2

iUniverse
Content Customized. On-demand, on any platform.

Modular Content

"The demands of the digital age will give rise to a world of 'modular media', which we define as: Media that consumers dynamically assemble where individual interest, context, time, and device come together."

Deconstructing Media, Forrester Research, March, 2000

Slide 3

iUniverse
Content Customized. On-demand, on any platform.

Enabling Technologies

Digital technology is the great enabler of customized content
- *The Internet*
- *eBook delivery platforms*
- *Digital Rights Management solutions*
- *Print-on-Demand*
- *Learning Management Systems*
- *XML*

Slide 4

iUniverse
Content Customized. On-demand, on any platform.

Mass Customization

From mass production to mass customization
- Mass customization available over a large selection of content
- Content consumed anytime, anywhere, anyformat

Slide 5

iUniverse
Content Customized. On-demand, on any platform.

Two-Way Communication

The Internet allows a two-way connection between content creators and their customers

- Efficient and effective delivery platform

- Ultimate one to one marketing mechanism

Slide 6

iUniverse
Content Customized. On-demand, on any platform.

Empowerment

"We have to recognize and accept that advances in technology are bringing more and more information under the direct control of the end user. The technology is 'empowering' the individual to find and use the information he or she wants when it is needed. The genie of customization is out of the bottle."

Joe Dionne, former CEO of McGraw-Hill
Transformation in the US College Textbook Market,
Venkatraman, 1993

Pent Up Demand

Custom publishing is the fastest growing segment of the higher education publishing market

- 25 percent annual growth over the past seven years (Simba)
- Professors want to ADOPT course materials that fit the scope and order of their syllabus
- Professors want to CREATE course materials (core and supplementary) that fit the scope and order of their syllabus
- Students only want to USE—and *PAY for*—course materials that fit the scope and order of their professors' courses

---

Customization: A Case Study

"This fall, a few hundred books will take a new form on the Internet. They will be sold in component parts that can be mixed and matched. The customization is possible because of a deal announced between iUniverse and IDG Books, the publisher of the Dummies guidebooks, Frommer's travel guides and Cliffs Notes."
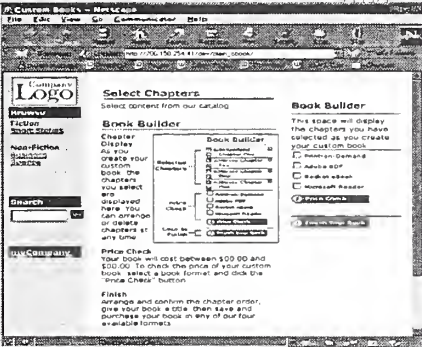
New York Times, front page feature, July 18, 2000

The Customization Process

How it Works
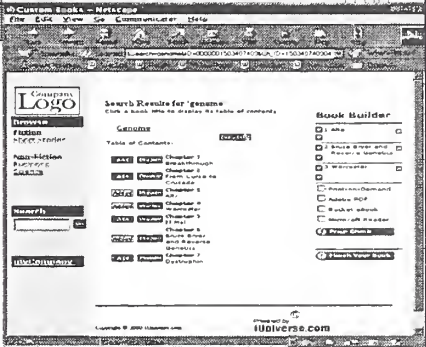
The Customization Process

Book Builder

Customized Creation

"The real value in educational content, in our view, is not simply in putting existing content online, but taking advantage of the Internet's unique attributes to create new content. The network effect. It's global reach. Its interactivity."

Source: Merrill Lynch Global Growth Group
"The Knowledge Web:
People Power – Fuel for the New Economy"

From Repurposing to "Rethinking"

Rethinking content in the age of the Internet

Content, from the outset, to be created, marketed and consumed in flexible modules which are readily combined into rich clusters of new content and delivered via multiple platforms through multiple channels

Slide 1

iUniverse
Content Customized. On-demand, on any platform.

Create, Customize, Capitalize

Look for...

- an ever greater empowerment of authors, publishers and content consumers

- a continuous revolution on the content-creation side of the publishing process *(new technologies, new enabling tools, new participants, new opportunities)*

- an explosion in market opportunities for customizable content

Slide 2

iUniverse

Content Customized. On-demand, on any platform.
Empowering writers and transforming publishing with technology-based services for content customization, management, and distribution.

Thank you.

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
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Ed Marino has 25 years of business experience principally in the computer and imaging industries. As President & CEO of Lightning Source, formerly Lightning Print, Mr. Marino heads the industry pioneer in print-on-demand services.

Mr. Marino was most recently President of Danka Services International, a 3000-employee document management outsourcing company with over 450 customer locations in 12 countries worldwide. Danka Services International, formerly Kodak Imaging Services, was acquired from Eastman Kodak. In the fall of 1997, as President of DSI, Mr. Marino coordinated with IBM and Ingram Industries to establish Lightning Print, and made digital technology services available to the book publishing industry.

Mr. Marino joined Kodak in 1990 as a Division Vice President for Marketing and Sales. He moved to Kodak Imaging Services after several successful executive level assignments within Kodak's Professional Imaging Division.

Mr. Marino started his career as a computer systems design engineer with such companies as Burroughs and Control Data Corporation. While in the technology field, Mr. Marino authored several technical papers and spoke at technical conferences across the nation. Mr. Marino also developed his own full service, software and IT outsourcing company.

A native of Philadelphia, PA, he received his B.S. in Electrical Engineering from Temple University and M.S. in Electrical Engineering and Computer Science from Drexel University.

Mr. Marino also serves on the Board of Directors for Presstek Inc., a publicly traded company, and is active with Habitat for Humanities and Junior Achievement.
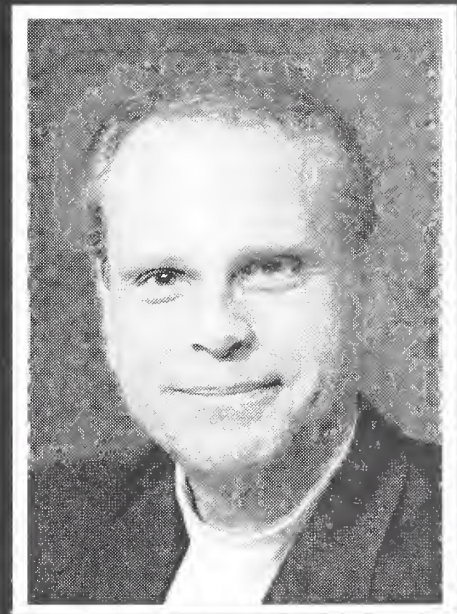
Ed Marino

President & CEO

Lightning Source

www.lightningsource.com

"Content Explosion: Empowering Authors with Technology"

Lightning Source
The Digital Content Connection

Content Explosion:
Empowering Authors with Technology

Ed Marino
President & CEO

---

eContent and the Author

More Titles
More Marketing Options
More Creative Energies

The Digital Library is the Key

---

eContent and the Author

• *More Titles*
  – *Through Lightning alone, Publishers are adding over 1,000 titles per month to Titles @Ingram*
  – *Fewer titles will "go out of print"*
  – *More Authors (the cost to publish a book has gone from thousands of dollars to hundreds of dollars)*

---

eContent and the Author

• *More Marketing Options*
  – *More Selection*
  – *It is no longer just the "cover-to-cover" book*
  – *Product Packages*

---

eContent and the Author

• *More Creative Energies:*
  – *Not be bound by the printed page any longer*
  – *Delivering your message*
  – *Synthesizing material*

The Digital Library
How It Works

The Final Book

Title, TOC, Index... | Chapter 1 | Chapter 2

... Objects ... | ... Objects ... | ... Objects ...
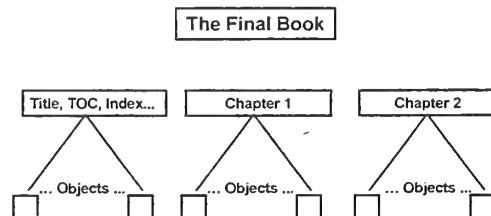
eContent and the Author

- *Conclusion:*
  - *Digital Library Technology*
    - *Understand it*
    - *Use It*
  - *The Content Explosion is Real*
    - *Don't Ignore it*
  - *Authors can be the major beneficiary of Technology*

Lightning Source

Electronic Book 2000

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John Paul Rutledge has more than a dozen years of business experience and is a pioneer in the multimedia publishing business. Having received a bachelor's degree in philosophy from Loyola Marymount University, a juris doctor cum laude from Howard University School of Law, and a master of laws degree in real property development from the University of Miami School of Law, Mr. Rutledge at the University of Calgary in Alberta, Canada, and has authored academic and popular texts, including Drafting a Publishing Agreement: Lessons from the Real World, 16 U. MIAMI ENT. & SPORTS L. REV. (2001).

Mr. Rutledge has an abundance of experience in copyright, trademark, high technology and general corporate law. He has drafted and negotiated dozens of publishing agreements, handled software anti-piracy matters, drafted software and website development agreements, OEM, ASP, and webcasting agreements, patent and merchandise licenses, terms of use, privacy statements, promissory notes and security agreements. Likewise he has prepared tour, band member, employment, independent contractor and session agreements, researched digital music performances and prepared copyright registration applications for well known musical groups.

John P. Rutledge

President

Dead End Street, LLC

deadendstreet.com

**"Intellectual Property:
A Zero Sum Game"**

Electronic Book 2000

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Reagan Building and International Trade Center

Jordy Potman is a Guest Researcher in the Information Storage and Integrated Systems (ISIS) group within the Information Technology Laboratory at the National Institute of Standards and Technology (NIST).

Jordy has been working on a number of eBook related projects within the ISIS group. These projects include the development of an Open eBook Publication Structure Software Framework, a software library that simplifies the development of applications that use eBook content in the Open eBook Publication Structure (OEBPS) format. He is also involved in the NIST Office of Information Services eBook project, a project to demonstrate and analyze the use of electronic books in a technical library environment.

Jordy has been a Guest Researcher at NIST since September 1999. He is on an internship from the University of Twente in the Netherlands, where he is working on his masters degree in Electrical Engineering with a minor in Computer Science.
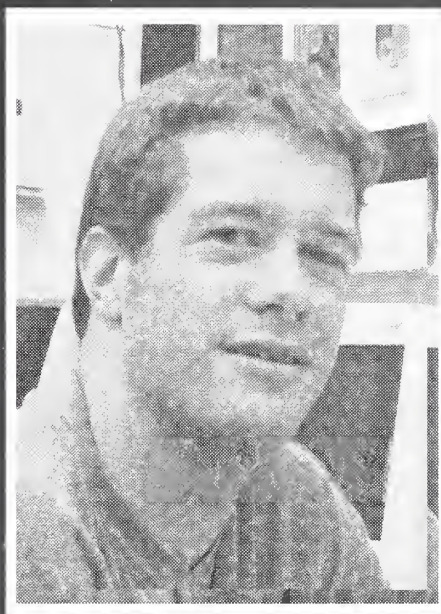
Jordy Potman

Guest Researcher

NIST/ITL

www.itl.nist.gov/ div895/isis/

"eBook Standards"

eBook Standards

Jordy Potman
jordy.potman@nist.gov

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

NIST CENTENNIAL

Introduction

This presentation tries to answer the following questions about eBook standards:

- Why eBook standards?
- What eBook standards are necessary?
- What are the current eBook standard initiatives?
- Where are these proposed eBook standards applied already?

Why eBook Standards?

- Open standards are required for acceptance of new media: CD, MP3, VHS, DVD
- Various devices are used or will be used for reading eBooks: PCs, PDAs, dedicated reading devices, etc.
- Interoperability is required so content can be used on any device, independent of the vendor of the device

---

What eBook Standards are necessary?

- Content format standard
- File format standard
- Digital Rights Management (DRM) standard
- Distribution standard
- Book product information standard

---

eBook Standard Initiatives

Content format standard proposals:
- Open eBook Publication Structure (OEBPS)
- Portable Document Format (PDF)

Open eBook Publication Structure (OEBPS)

- Developed by the Open eBook Forum, an organization of reading system manufacturers, software companies, publishers and authors
- Based on XML, HTML and CSS

Portable Document Format (PDF)

- Developed by Adobe Systems Incorporated
- Relies on the Postscript imaging model to describe text and images in a device-independent and resolution independent manner

eBook Standard Initiatives

File format standard proposals:
- Open eBook File Format

Open eBook File Format (OEBFF)

- Developed by two electronic book companies: Nuvomedia and SoftBook Press.
- Based on the Multipurpose Internet Mail Extensions (MIME) specification

eBook Standard Initiatives

Digital Rights Management standard proposals:
- Electronic Book Exchange System (EBX)
- Extensible rights Markup Language (XrML)

Electronic Book Exchange System (EBX)

- Developed by the EBX Working Group
- eBook content is encrypted using a symmetric key encryption algorithm
- Uses vouchers encoded in XML for storing eBook content decryption key and eBook permissions
- Vouchers are encrypted using a public/private key encryption algorithm for distribution

Extensible rights Markup Language (XrML)

- Developed by ContentGuard, Inc.
- Language in XML for describing specifications of rights, fees, and conditions for using digital content
- Relies on trusted systems for secure distribution of content and rights, fees and condition specifications

eBook Standard Initiatives

Distribution standard proposals:
- Electronic Book Exchange System (EBX)

Electronic Book Exchange System (EBX)

- Developed by the EBX Working Group
- Defines protocols for: distribution between publisher and bookseller, delivery to consumers, giving or lending between consumers and transfer between libraries and consumers

eBook Standard Initiatives

Book product information standard
- ONIX International

ONIX International

- Developed by EDItEUR, Association of American Publishers (AAP), Book Industry Communication (BIC) and Book Industry Study Group, Inc (BISG)
- Language in XML that covers a subset of EPICS for describing book product information

eBook Standard Applications

Content format standards

Open eBook Publication Structure (OEBPS)

- Used by OverDrive's ReaderWorks software as an input format for creating Microsoft Reader titles
- Softbook's Personal Publisher can convert Microsoft Word documents into Open eBook format
- Softbook's Professional Publisher can convert documents from desktop publishing applications into Open eBook format

Portable Document Format (PDF)

- Used by Adobe Acrobat Reader
- Used by Glassbook Reader

eBook Standard Applications

File format standards

Open eBook File Format

- Current specification is not meant for implementation

eBook Standard Applications

Digital rights management standards

Electronic Book Exchange System (EBX)

- Currently only a draft specification
- Used by the Glassbook Reader and the Glassbook Content Server

Extensible Rights Markup Language (XrML)

- Used in ContentGuard's digital rights management solution
- Base of Microsoft's digital rights management system

eBook Standard Applications

Distribution standards

Electronic Book Exchange System (EBX)

- Currently only a draft specification
- Used by the Glassbook Reader and the Glassbook Content Server

eBook Standard Applications

Book product information standards

ONIX International

- Barnes and Noble use a subset of ONIX for Microsoft Reader eBook product information

Conclusion

- OEBPS is starting to catch on for content conversion software
- Lack of a file format and DRM limit use of OEBPS for content delivery to reading devices
- PDF not well suited for display on reading devices with different screen sizes

Conclusion (continued)

- Numerous Digital Rights Management and content distribution solutions available
- Open eBook standards are at the moment not widely used
- Still quite far away from true interoperability
- eBook market at the moment looks more like the software market than the CD market

Web Sites

OEBPS:	www.openebook.org/specification
PDF:	www.adobe.com/products/acrobat/
	adobepdf.html
OEBFF:	www.nuvomedia.com/oebffor
	www.softbook.com/enterprise/oebff.asp
EBX:	www.ebxwg.org
XrML:	www.xrml.org
ONIX:	www.editeur.org/onix.html

Contact Information

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Electronic Book 2000
Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Dr. Rich Lysakowski is the Executive Director of the Collaborative Electronic Notebook Systems Association (CENSA), a global group catalyzing robust markets for advanced R&D automation products. CENSA's members include corporations, regulatory agencies, and patent offices worldwide. He has 20 years experience in various scientific, engineering, marketing, and project management roles in the private and public sectors.

As an employee and consultant he has worked for many pharmaceutical, chemical, high technology, and computer hardware and software companies worldwide. He has a Ph.D. in Physical and Analytical Chemistry.
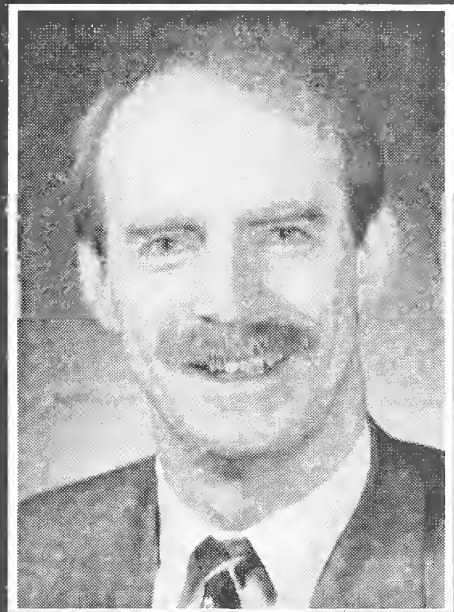
Dr. Rich Lysakowski

Executive Director

Collaborative Electronic Notebook Systems Association

www.censa.org

"eBooks and eNotebooks? Moving Authoring and Publishing from Workstations to Handhelds"

Electronic Book 2000

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Jonathan D. Hahn, Director of Internet Technology at Versaware, Inc., is the Chairman of the EBX Working Group, dedicated to the publication of a Standard for Digital Rights Management of Electronic Books.

Mr. Hahn has a wide variety of experience in dealing with interoperability issues. He was, in fact, the first to automate the process of downloading enterprise data from an EBCDIC legacy system to a spreadsheet on a PC (a brand new Compaq One – serial number 927).

More recently, Mr. Hahn participated in the meetings held in Washington, DC in November 1998, leading to the creation of SDMI, the Secure Digital Music Initiative.

As Executive Chairman of EBX, Mr. Hahn is pioneering the movement to eliminate duplication of effort and promote cooperation between the various organizations confronted by the challenges of Electronic Publishing, Distribution and Digital Rights Management.

Relationships ranging from resource sharing to formal liaisons encouraging the formulation of Standards that maximize interoperability will reach maturity during the course of the coming year.

Among the organizations already enlisted are the Motion Picture Experts Group, whose MPEG-21 effort deals an a particularly granular level with the components that comprise a publication, and the Open eBook Forum (OEBF), specializing in the structure of publications and the larger legal and sociological issues implicit in electronic book publication and distribution.
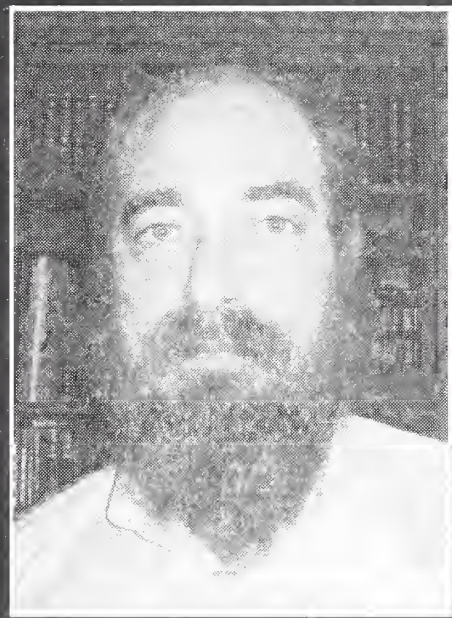
Jonathan D. Hahn

Chairman of the EBX Working Group

Versaware, Inc.

www.versaware.com

"E-Book Standards, Convergence, and Interoperability"

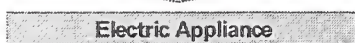## eBook Standards, Convergence and Interoperability

Electronic Book 2000

Jonathan D. Hahn

- **EBX Working Group – Chair**

- **OEBF DRM WG – Active Member**

- **EBX Liaison to Industry (MPEG...)**

- **Day Job – Versaware**

- **mailto:jdh@versaware.com**

2

Standards

- **"Red Book" CD** ◁ Cassette Player

- **HTML** ◁ Cellular Phone (WAP/WML)

- **110/220 v 60/50 Hz**

  Transformer

  Electric Appliance

3

Convergence

- **eBooks may contain Content originally produced (and licensed) for traditional media**
  - Photos
  - Videos
  - Sound Tracks
- **eBooks may be "consumed" using generic appliances and applications (Browser/PDA/MP3/cellular phone device)**

4

Interoperability

- **Interoperability within a standard**
  - Basic Architectures
  - File Formats
  - Metadata
  - Authentication Mechanisms
  - Transcryption
  - Secure Authenticated Channels

5

Interoperability

- **Interoperability between standards**
  - Common DRM Components
    - Object Ids
    - Authentication Methods
    - Trust Models
  - Diverse DRM Components
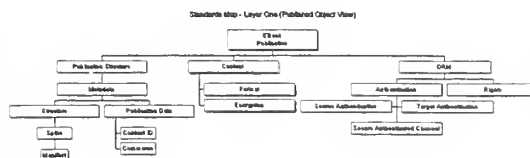   - Namespaces
    - Mapping Conventions

6

Standards for EBX

OeB
ONIX
MPEG-4
EBX
MPEG-7
doi>
<indecs>
SDMI
MPEG-21
ODRL
Dublin core

7

Standards in eBook Space

Standards Map - Layer One (Published Object View)

8

Standards for EBX

- OeB – Publication Structure
- ONIX – Comprehensive Publication Data
- doi> - Content Identification
- <indecs> - Commercial metadata
- Dublin Core – Generic Publication data
- MPEG-4 – "Multimedia on the web"
- MPEG-7 – "Multimedia Content Description Interface"
- MPEG-21 – "Multimedia Framework"
- SDMI – Functional Requirements for a Secure Distribution Architecture, Hardware Numbering Scheme

9

Shift in Paradigm

Client-Server → Peer to Peer

Web Sites → Napster-Gnutella

Standards Domination → Standards Interoperation

10

Standards for EBX

OeB
doi>
ONIX
MPEG-4
EBX
<indecs>
MPEG-7
SDMI
MPEG-21
ODRL
Dublin core
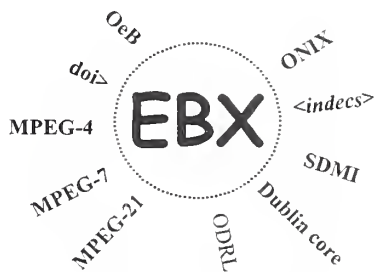
11

Challenges

- **Duplications**
  - E-Commerce
  - ID Schemes
- **Ellipses**
  - Rights Expression Vehicles
  - Trusted Channels

12

EBX Approach

- **Be Interoperable**
  - Integrate ability to express metadata in the appropriate language
- **Cooperate with Industry Standards**
  - Liaison
  - Coordinated Action
  - Information Dissemination

13

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eBook Standards,
Convergence
Interoperability

Thank you!

Jonathan D. Hahn   jdh@versaware.com

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Sandra K. Paul is a Certified Systems Professional (CSP) and industrial psychologist, with an M.A. from Hunter College and an A.B.D. from the City University of New York. She received her systems and data processing training in the Management Department of J. K. Lasser & Company, the accounting firm. There she analyzed problems and implemented systems for various clients, primarily publishers. She joined Random House in 1967. Her responsibilities included: inventory management; managing the systems and procedures, cost accounting, and other operating departments; and acting for the corporation in industry-wide standardization.

In September, 1978 she established SKP Associates, a management consulting firm to those in the publishing, library, bookselling, recording, and related industries. SKP Associates currently functions as Managing Agent for publishing industry associations, including the Book Industry Study Group, Inc. Sandy became the Executive Director of the Study Group in July, 2000. She was responsible for the design and implementation of a national computer-based book buying cooperative and she was the primary force in the establishment and growth of the Book and Serials Industry Systems Advisory Committees (BISAC and SISAC). She played a major role in the implementation of the International Standard Book Number and was the catalyst in BISAC's and SISAC's adoption of bar code standards. She was also instrumental in the formation and growth of the National Information Standards Organization, which develops and maintains standards for libraries, information science and publishing. She has taught graduate courses on book publishing in New York University's Master's Program in Publishing and spoken at many professional and association meetings. She is listed in *Who's Who in the World, Who's Who in the East, Who's Who of American Women, Who's Who in Finance and Industry, Who's Who in the Computer Industry, Who's Who in Entrepreneurial Women, Who's Who in Professional & Executive Women, Who's Who in Technology, American Publishing Who's Who, the World Who's Who of Women, Who's Who of Women Executives, Who's Who Directory of Online Professionals, Who's Who of American Business Leaders, International Who's Who of Professional & Business Women,* and *Who's Who in U.S. Writers, Editors & Poets.*

Other professional activities include: Past Chairperson, Information Systems Standards Board of the American National Standards Institute and current member of ANSI's Executive Standards Council; Past Chairperson and NISO Fellow (1989), National Information Standards Organization; Past Chairperson, Secretary and Subcommittee Chair, Book Industry Systems Advisory Committee; Past President and Systems Professional of the Year (1977), Metropolitan Chapter, Association for Systems Management; Editor and Associate Publisher, *Electronic Publishing Business*; Past President and Book Woman Award Winner (1987), Women's National Book Association; Past Chairman and Fannie Simon Award Recipient (1984), Publishing Division, Special Libraries Association. She currently serves on the Board of Directors of Transaction Publishing, the Editorial Advisory Board of *ForeWord Magazine*, the Editorial Board of *Publishing Research Quarterly*, and the Board of Advisors for New York University's Center for Publishing.

Sandra Paul

Executive Director

Book Industry Study Group

www.bisg.com

"Metadata for E-Books: Two New Standards Under Development"

Electronic Book 2000
Changing the Fundamentals of Reading
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Reagan Building and International Trade Center

Mr. Bruno de Sa Moreira is the Co-Founder and General Manager of 00h00.com. In 1995, he became the Director of the Multimedia Department at Flammarion. There he produced a dozen CD-ROMs, several of which received prizes, and went on to be popular titles in foreign markets. Prior to that he was Marketing Manager for the European Union's support platform for independent European audiovisual producers.

He earned a Master of Business Administration from France's leading business school, École des Hautes Étrudes Commerciales de Montréal. He also holds a Bahelor of Sociology from La Sorbonne, Paris University and a Film Production degree from University of California, Los Angeles.

Bruno de Sa Moreira

Co-Founder
General Manager

00h00.com

www.00h00.com

"EBook Publishing: A European Perspective"

Electronic Book 2000

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Renato Iannella is Chief Scientist at IPR Systems which provides technology solutions for the on-line trading of digital assets requiring the management of intellectual property rights. He is responsible for research, development, and standards strategies for IPR Systems? products and services. IPR Systems is developing the OzAuthors digital book exchange service for authors and publishers of electronic works.

Renato is an active member of the World Wide Web Consortium (W3C) and holds a position on the W3C Advisory Board. Renato is also a member of the Dublin Core Metadata Initiative (DCMI) Advisory Committee and the Executive Committee representative for the Electronic Book Exchange (EBX) Working Group.
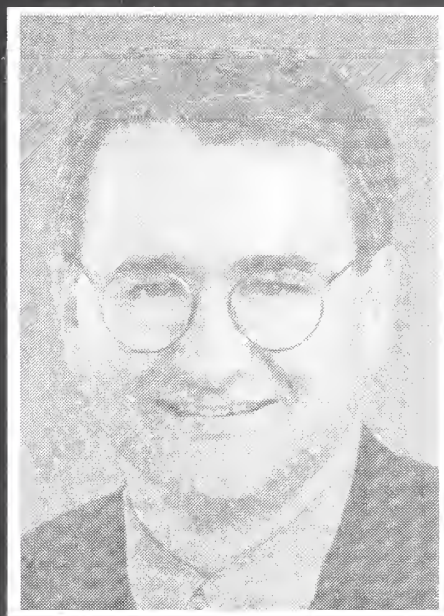
Dr. Renato Iannella

Chief Scientist

IPR Systems Pty Ltd

www.iprsystems.com

"Digital Rights Down Under"

EBook 2000
Washington DC, USA
25-27 September 2000

Digital Rights Down Under

Dr Renato Iannella
IPR Systems Pty Ltd
Chief Scientist

renato@iprsystems.com.au
http://www.iprsystems.com.au

Overview

- IPR Systems
  - Vision
- Down Under
  - OzAuthors Service
  - DBX Software
- Digital Rights
  - Open Digital Rights Management
 - Open Digital Rights Language
- Conclusions

Who is IPR Systems?

- Independent Intellectual Property Management Software Developer
- Formed August 1999
- Commercialisation of the work of the Propagate Project from 1996
- Privately funded through individual investors
- Fully resourced to deliver systems & tools
- Australian-based with a Global Vision...
  - ...unlocking the value of information

Vision: Digital Re-Use

From traditional Media "Creation Waterfall"
- Pay for possession
- Limited re-use rights available
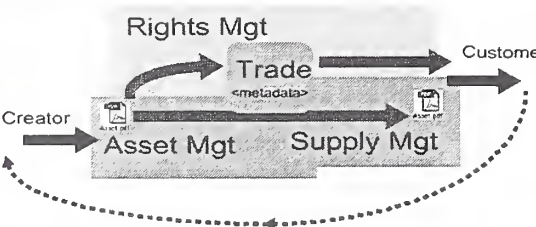- Up front purchase of simple rights

Towards "Creation LifeCycle"
- Blurring between creation and use towards re-creation and re-use
- Pay for usage, not possession
- Share the rights, share the revenue
- Require Trusted Third Parties (TTP) to validate rights and trades

---

Vision: Supply Chain

Rights Mgt

Trade
<metadata>

Customer

Creator

Asset Mgt   Supply Mgt

OzAuthors Service

- OzAuthors online digital ebook marketplace
- Joint Venture with the Australian Society of Authors
- An online service for rightsholders and their customers
  - Content Providers: Authors, Agents, Publishers
  - Promote their works in a new and safe digital environment setting usage and payment levels
    - Supports "Fee and Free"
  - Value-add services (resources, reviews...)
- http://www.ozauthors.com.au

1

OzAuthors Service

Content Providers Benefits

- Provides low cost method of digital self-publishing
  - Worthwhile to access smaller markets for works
- Encourages direct "pay per usage" revenue
- "Business Templates" to reduce overhead
- Writing tools and advice
- **Consumer Benefits**
  - Rich array of works and talent
  - Flexible purchase options (eg parts of ebooks)
  - Interact with Authors

Title	Writing for the Poetry Book Market
Author/s	Purcell, Brian
Description	Provides the reader with a realistic framework for poetry publishing
Category	Reference

Add to my booklist

Publisher	Australian Society of Authors
Pub. date	January 1, 1998, AUSTRALIA
Edition	3rd Ed.
OZA No.	pbk-5
Form	Article Sections 5
Words	4,300

- Preparation
- Markets
- Submissions to magazines, newspapers and journals
- Coping with rejection
- Heading toward book publication
- Publish a book
- Career prospects

Preview	Read	Print	Hard copy	Other
view preview	$1.00	$5.00	not available	not available

Digital Book Exchange (DBX)

- Trading eCommerce Software for Digital Assets
- Flexible Vocabularies
  - Parties, Content, Rights
- Flexible Models
  - Rights management, Content processes
- Standards-based
- Interface to "down-stream" Systems
  - Content protection, tracking
- Core software for multiple sectors
 - software, learning objects, audio/video...

DBX-Functional Architecture
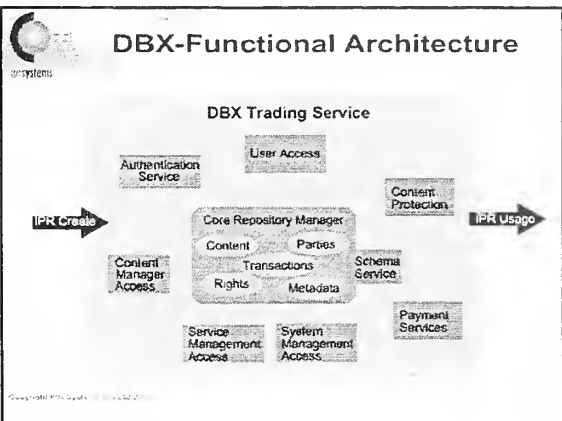
DBX Functions

- Typical online ecommerce service
  - Shopping baskets and payments
  - Simple and complex searching
  - Notifications/reporting
    - New additions for customers
    - Usages and revenues for authors
  - Author content upload and management
    - Service authorisation/approval
- Java/Component-based Architecture
  - Metadata-based core repository
  - Directory-enabled

DBX- Metadata Model
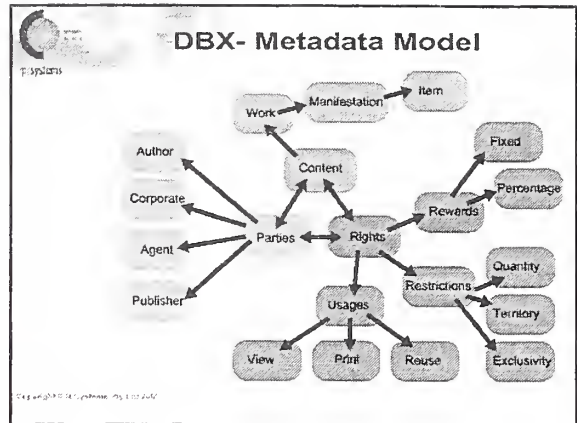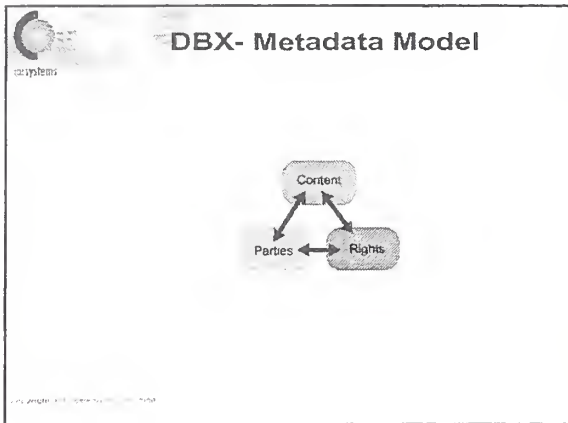
DBX- Metadata Model

DBX - Metadata Standards

- Overall Model
  - <indecs> and IFLA "compatible"
- Parties
  - Based on vCard Standard (Internet RFC2426)
  - Roles (as per ONIX)
- Content
  - ONIX International (EDItEUR/AAP/BIC/BSIG)

- Coming...
  - OpenEbook
  - EBX

DBX - Rights Metadata

- Complex matrix:

  - Balanced with current Technologies (for protection) and Usability (complexity)
- Proposed Australian Rights Holders Register
  - Independent directories of parties/works/rights
  - Industry service for current/authoritative data
  - Reduce risk & increase tradeable content

Digital Rights: New Standards

Open Digital Rights Management (ODRM)
- Open principles focused on Semantic/Technical interoperability across multiple sectors

ODRM Technical, Social, and Legal Framework

- ODRA - Architecture
- ODRL - Language
- ODRT - Trading
- ODRP - Protection

W3C Workshop - Lead to Working Group

Open Digital Rights Language

- Semantics of a core ODRM Language
  - Open or trusted environments
- Foundation for sector specific rights standards
  - Interoperability across sectors

    - XML encodings
    - Proposed W3C NOTE
    - http://purl.net/ODRL/
    - Feedback welcome...

Conclusions

- IPR Systems undertaking leading R&D into technology infrastructure for Open Digital Rights Management (ODRM)
- OzAuthors is a tangible implementation of our core principles
  - Win-win for Rights Holders and Consumers
- Supporting new Digital Rights Standards efforts
  - Compete at the application level not the standards layer
- Digital Rights is Global - International participation is the "right stuff"

Electronic Book 2000

Olivier Pujol has been the chairman and CEO of Cytale since January 1999, when he joined the group of business angels that founded the company in 1998 to develop the Electronic Book in Europe. He is a co-holder of 3 international patents developed by Cytale.

Prior to joining this start-up, he was the head of the strategy, mergers and acquisitions department for Honeywell-Europe. He built his experience as a engineer and a manager in the oil business, and then as a consultant. For over 10 years, he has worked in many different fields, and lived in 7 different countries worldwide, before coming back to France, to start the Electronic Book adventure.

Olivier Pujol holds an MBA from INSEAD and a MSc from Ecole Centrale de Paris (France). He is 36 years old.

Olivier Pujol

Chairman & CEO

Cytale S.A.

www.cytale.com

"A European Perspective on the eBook Market"

Slide 1

Cytale

The European perspective
on the E-Book market
by Olivier Pujol

Slide 2 — Company presentation

- Founded in April 1998 to develop the Electronic Book in Europe
- 2 rounds of funding ($10 millions), 30 people today
- A product to be launched on the market in November, in partnership with major French publishers
- A full solution for publishers
  - formatting solution, formatting workshop
  - on-line bookstore
- A full solution for the readers
  - portable dedicated reading device
  - personal access to on-line bookstore and library

Slide 3

- The reader's perspective
- The publisher's perspective
- The situation today
- Cytale's approach
- CytalePage™
- Future developments

Slide 4 — A reader's view on the e-book world

Paper books today

- Highly passionate attitude from clients
- Paper books have set the standards for comfort and quality in reading
  - The drawbacks of paper are not obvious to readers
  - Digital reading still needs to be demonstrated

... however

- Books are perceived as costly
- Access to books makes reading a far more difficult leisure than others

Customers need a commanding reason
to switch from paperback to electronic

Slide 5 — A reader's view on the e-book world

Expectations:

- Devices must meet a threshold of basic requirements on quality and comfort
  - E-books must offer a better reading experience in order to demonstrate the concept (cf. CD)
- Digital reading must be more than just "reading on a screen"
- Content should cover all needs of readers
- Technology is none of the reader's business: it must help, not deter

Message from the reader:
"keep it simple, help me love it"

Slide 6 — A content providers' view on the e-book world

- 500 years of improved performance (ink, paper, typography, layout, images…)
- A differentiation based on quality of authors and works
- Two priorities: promote (and satisfy) the good authors, attract the readers
- A permanent concern over the years: content security (cf. photocopy)

but people read less and less

- A strategic perspective: revive reading through new means (new multimedia products, new customers, lower costs)

A content providers' view on the e-book world

Expectations:

- Keep the content safe: avoid the threat of MP3
- Not waste time, money and energy with diverging standards
- Stay away from technological debates, remain independent from technology pundits
- Not step down in quality
- Not be side-tracked by new actors
- Preserve their ability to sponsor new authors and foster creation

> Message from the publishers:
> "keep it open, help me develop it"

Cytale

at

Electronic
Book 2000

NIST

September 25-27, 2000

<OeB>
Open eBook Forum

Summing up current needs

Readers	Content providers
• Devices.	• Devices with a wide acceptance by the public
– High definition, color screen	• A unique e-book standard for all devices and for bookstores
– Ease of use, book-like portability	• Quality of the layout
– versatility (press, books…)	– preserve brand image with readers
– Interoperability between devices and between digital bookstores	– preserve brand image with authors
• Content	• Security of the content
– Same choice as paper	• New creation possibilities
– Professional page layout	• Low investment
– Low price	

Cytale

at

Electronic
Book 2000

NIST

<OeB>
Open eBook Forum

The situation today

- No existing solution covers the needs of any stakeholder
  - Current devices are mostly steps back from the "codex" to the "volumen"
  - some security loopholes in the PC world
- Most actors are trying to adapt existing solutions to the new paradigm…

  … but the market still needs to establish the "dominant design", which will give to the customer a great reading experience, and qualify "digital reading"
- OEB is a perfect standard still in infancy…

  . but recent events have cast a shadow on its future

Cytale

at

Electronic
Book 2000

NIST

September 25-27, 2000

<OeB>
Open eBook Forum

What the market has taught us (*)

- The people who will enjoy digital reading are the people who like reading today…

  and they don't expect to read on PDAs or PCs, as comfort is insufficient for a full immersion in content
- These readers expect to be able to read everything on e-books (e.g. press, reference books, novels…)
- These readers are accustomed to quality
- The "dominant design" must serve today's needs of the readers
- The "dominant design" must offer all possible improvements to attract the consumer and create the market

Cytale

at

Electronic
Book 2000

NIST

September 25-27, 2000

<OeB>
Open eBook Forum

(*) from market studies

Cytale's approach: the 2 pillars
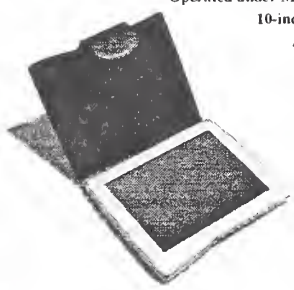
To serve the readers…	and to protect the authors
• Large color screen	• Encrypted data
• Audio and animation capabilities	• No transfer through PC
• Easy-to-use, instant connection from anywhere	• No tampering with the original work
• "Printer paper" layout quality	• Full respect of author rights
• Digital tools. notes, quick search, bookmarks.	• A strong data standard OEB
• Personal library	• A "rendering" standard
• Flexible display to match the readers eyesight	No compromise on quality, no chance on security

Cytale

at

Electronic
Book 2000

NIST

September 25-27, 2000

<OeB>
Open eBook Forum

Cytale: the product

Operated under Microsoft Windows CE
10-inch SVGA color screen
Assembled by Hitachi
16 MB book memory
Motorola processor
PCMCIA connector
5 hours autonomy

??????

Web browser IE 4.01
Reader: CytalePage ™

Cytale

at

Electronic
Book 2000

NIST

September 25-27, 2000

<OeB>
Open eBook Forum

Slide 1

CytalePage™

Format:
- One single file, extension **.opf, fully OeB**
- Page layout information for different font sizes and screen resolutions included
- Handles "page specific" typography rules for maximum reading pleasure

Reader:
- Any OeB reader can read this file
- Cytale's reader can read and use the specific layout information (or standard OEB)

Minimum investment

Equal access to reading for readers whatever the eyesight

Cytale at Electronic Book 2000

<OeB>
Open eBook Forum

Slide 2

CytalePage™

...and more

...and less

Cytale at Electronic Book 2000

<OeB>
Open eBook Forum

Slide 3

Cytale: the bookstore

- Content providers: established publishers, to ensure content "branding", promotion, and quality
- Content type: novels, reference books, newspapers, and more…
  - "from cooking recipes to poems", not to forget the latest books
- File type: ".oeb", including CytalePage features
- Services: personal library, and a range of selected web services
- Access: anywhere in the world
- Languages: as quickly as possible, any…

Cytale at Electronic Book 2000

<OeB>
Open eBook Forum

Slide 4

What's coming next? The value chain:

- Content creation: competitive
- Digitizing: competitive
- Format (OEB): non competitive
- Rendering: non competitive
- Content distribution: competitive
- Device: competitive

CytalePage ™
will be made available
to product OEMs and
content providers

Cytale at Electronic Book 2000

<OeB>
Open eBook Forum

Slide 5

What's coming next ? The future environment

- Dedicated platforms, synchronized via Internet
- PC world for creation
- E-Book world for reading
- One "family library" account, one "account manager" (secured device)
- Several specialized devices connecting to the "family account"

Cytale at Electronic Book 2000

<OeB>
Open eBook Forum

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Prior to starting PlazaDigital, Mr. Contreras was Director of Market Development-Latin America, Broadband Networks/Optical Networking at Lucent Technologies. Earlier, he led the E-Commerce group for Latin America at General Electric Information Services. In both cases, Mr. Contreras pioneered the introduction of new technologies in the region.

Backed by his expertise in the Internet, E-Commerce, and Latin American matters, Mr. Contreras has performed consulting and advisory assistance in these areas and has also written several Internet-related articles including "Online Bookselling Wars", the first case study about Amazon.com. Mr. Contreras holds an MBA from the J.L. Kellogg Graduate School of Management at Northwestern University, and a Master of Science degree in MIS from the University of Illinois.

David Contreras

President and CEO

PlazaDigital

www.plazadigital.com

"Digital Activities in the International Arena: Spanish and Portuguese Language Markets"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

- Visiting fellows from October 1989 to November 1990, Science Policy Research Unit, Sussex University, England; MS (1985) information science, BS(1982) in applied electronics
- Recent work and research interests including library application of information technology, eBooks, digital library, reengineering of the business process in library
- 80 papers(including 10 in English language) published in journals and conference proceedings
- Speaking and presenting in conferences and seminars in ten countries
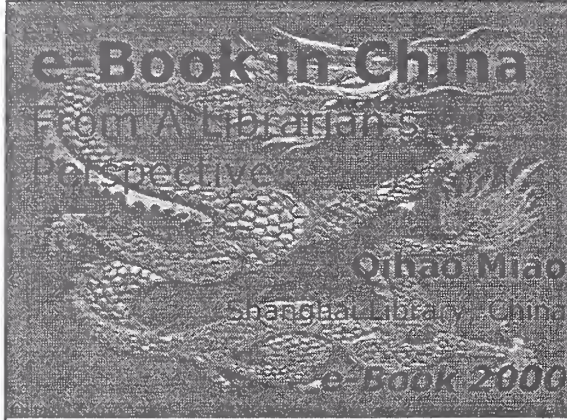
Qihao Miao

Deputy Director & Research Professor, Shanghai Library

qhmiao@libnet.sh.cn

"e-Book in China From a Librarian's Perspective"

e-Book in China
From A Librarian's Perspective
Qihao Miao
Shanghai Library, China
e-Book 2000

I will talking about:

- Internet in China

- Chinese e-Book: content, reader and service

- e-Book and library

Internet in China

The Coming of e-Age in China

- Upgrading infrastructure
- Fast growing Internet population
- Dotcom fever

Internet in China

China Internet Users million
Source: CNNIC
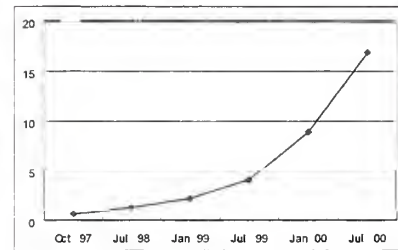
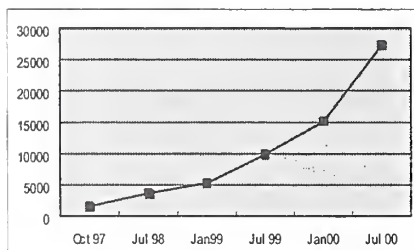
Internet in China

China Web Sites Statistics
Source: CNNIC

Chinese e-Book

Demand for e-Book

Recent CNNIC survey found that the lack of reading materials including books is one of most popular complaints by the Chinese netizen

Top 5 Web-based Bookshop in China

- dangdang.com
- foundbook.com
- bookmall.com.cn
- bookoo.com
- goshoo.com

e-Book Content Provider

- Stage I: CD-ROM and free garbage in Internet
- Stage II: Special web site, friendly file form, still free
- Stage III: With a business model, aware of intellectual property, fee-based

A sample of free e-Book
(cover page, www.eshu.yeah.net)
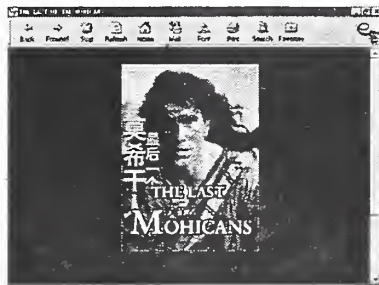
A website for original e-essay (http://www.rongshu.net)

e-Book Reader

- Two USA products came to China very soon after they turned up
- Preliminary reading device appears in the market
- Relevant hardware and software developments are underway

A Market available e-Book Reader in China

Jin Bo Lan

Weight: 100g

Screen: 2.4"X 1.6", carrying 30-Chinese character

Price: about US$60

e-Book and the New Book Industry

- Convergence of book industry players

- Threats to intermediary like publisher, bookshop and library

- How quick will it happen?

Qihao\09\26   13

Hardcopy Book Process

Qihao\09\26   14

e-Book Process

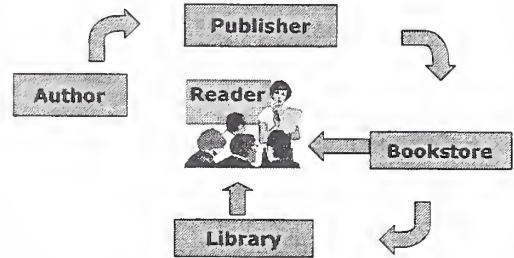Qihao\09\26   15
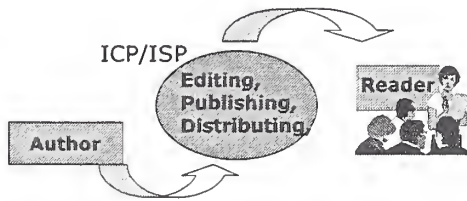
The Changing Role of Libraries

- The emerging new business model anticipates the need for re-positioning of library in the new book industry, if they want to survive

Qihao\09\26   16

Library as a part of content industry

1997 NAICS	1987 SIC
• 51: Information	• 81: Educational services
− 5141: Information Services	
• 51412: Libraries & archives	• 8231: Libraries

Qihao\09\26   17

e-Book and Library: Re-engineering

- Growth of digital publication and Digital Library projects are calling for a radical business process reengineering within Shanghai Library

Qihao\09\26   18

3

Shanghai Library and e-Book: Digital Content

- Collecting more digital contents: CD-ROMs, on-line databases, e-journals and e-books
- Launching project to digitize public domain collection (http://www.digilib.sh.cn/)

Shanghai Library and e-Book: BPR

- An *ad hoc* team formed to study the new business process of digital collection
- Meta-data research
- On-the-job-training for staff

Shanghai Library and   e-Book: Response

- Buying e-Book readers for testing(earliest library buyer)
- Restructuring bandwidth and storage in library Intranet
- Involved in e-Book joint venture

Rocket e-book, Softbook, Japanese e-dictionary, Chinese Jin Bo Lan, etc. **tested by Shanghai Library patrons**

Shanghai Library and e-Book: Our Goal

- A "Digital Library" based on existing physical body and staff
- A knowledge hub and navigator of electronic publication
- A test bed for new interfaces, i.e. new reading devices, Print-on-demand and e-ink/e-paper, etc.

Thank You! Any Question?

Please mail to:
qhmiao@libnet.sh.cn

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

David Pearman, Founder and Chief Executive Officer of Universal Publishing Solutions Online. David has 20 years experience of the Print and Publishing industry. He studied Print Technology at Brighton University and worked in the production department of a specialist printer. In 1990 he established a small-offset printing company which expanded to provide Print Management to major national and international institutions in the City of London.

In 1998, after hearing about electronic publishing, he founded Universal Publishing Solutions Online to research the burgeoning eBook industry. He has developed a considerable understanding of the market providing consultancy and articles for the media, most recently an interview for BBC Television News. He is a Principal Member of the OEBF and recently attended the inaugural meetings of the IEF (International eBook Forum) in Seoul, Korea.

David has been preparing comprehensive plans for entering the eBook industry and will be launching phase one of eBookCentric later this year. For a copy of today's presentation please email ebook2000@upso.co.uk

David Pearman

Founder & CEO

Universal Publishing Solutions Online

www.upso.co.uk

"Building the eBook Market – A UK Perspective"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Zoltán Mikolás was born in Budapest, Hungary in 1954. He earned a degree in software engineering at the Technical University of his native city in 1979.

His interest in writing and publishing drove him from his first workplace, a software developer center, to Budapest-based technical book publisher Müszaki Könyvkiadó, in those years the largest of its kind in the country. He became the editor of their computer books, developed publishing strategies and pushed for the introduction of desktop publishing in the production of books.

When, in 1986, U.S.-based International Data Group (IDG) established a subsidiary in Budapest, he was one of the first to join. He took part in launching Hungary's first IT business weekly, *Computerworld-Számítástechnika* and developed a series of pioneering IT newsletters in Hungarian and English, designed for senior company executives. While in this job, he carried out the first comparative IT market surveys in the country and contributed regularly to IDG's international news service.

In 1992, the local subsidiary of Germany-based Vogelverlag appointed him the deputy editor-in-chief of their newly launched IT business weekly *Heti CHIP*. Simultaneously, he founded a small media communications company, which prepared corporate newsletters, press releases and brochures, both in Hungarian and English, for Hungarian customers.

The following years brought important international experience. For the 1994-95 academic year, Mikolás was awarded a Hubert H. Humphrey fellowship at the College of Journalism of the University of Maryland at College Park, near Washington D.C. This middle career program gave him a unique opportunity to acquire new investigative skills, to visit U.S. publishers and to attend professional events. And he was in America just in time to witness the birth and the boom of the web.

The year Mikolás spent in the States also changed his private life. One of the Humphrey fellows of his group, an Argentine journalist, became his wife and, in 1995, he moved to Buenos Aires. After settling in the Argentine capital, for four years, he worked as a freelance columnist, writer, editor, translator and web application developer in English, Spanish and Hungarian. He lived far from Hungary, but maintained close business links. He was the co-founder and editor of *Internet Kalauz*, Hungary's first (and still leading) internet magazine.

In 1999, he accepted a challenging offer to become the on-line project manager of KJK-Kerszöv, Hungary's largest legal and business publisher, a subsidiary of Amsterdam-based global publishing house Wolters Kluwer. He now lives in Budapest with his wife and two sons.

Mikolás has been following the nascent e-book industry since the first NIST E-book Workshop. He is convinced that electronic publishing and e-books will have a particularly important and beneficial role in small languages like Hungarian, for which limited market size makes print relatively much more expensive. He is working on launching his own multilingual e-book portal, eBookOne.com and its Hungarian equivalent, eBookOne.hu.
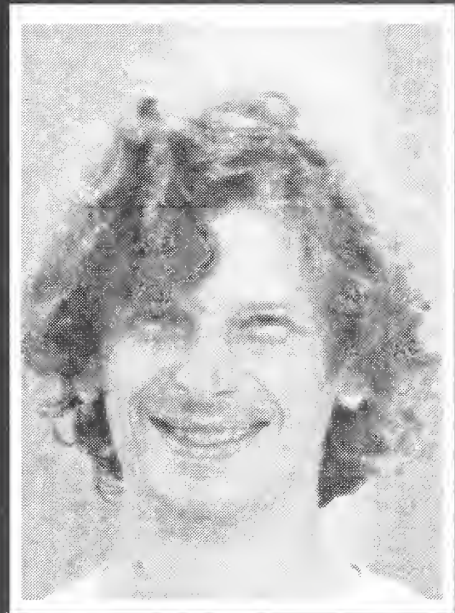
Zoltán Mikolás

Chief Strategist

eBookOne.com

"An e-merging World: eBook Activities in Europe and Latin America"

## An e-merging world

E-book activities in Europe and Latin America

Electronic Book 2000 Conference and Show
September 25-27, 2000, Washington D.C.
Zoltán Mikolás, eBookOne.com, Hungary
mikolas@ebookone.com

E-ssence

- Stats > countries, languages
- Hardware > fresh & hot from the Old World
- Content & services > "Episode I / The Phantom Menace"
- E-pilogue > the e-merging e-culture

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Stats > Map
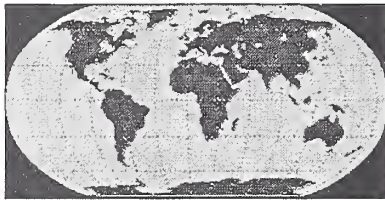
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Stats > Economy

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Stats > Languages
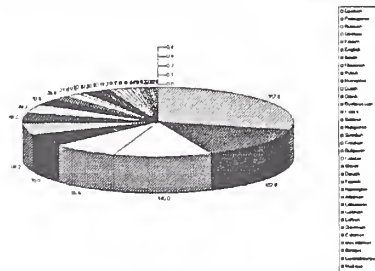
Zoltan Mikolás, eBookOne.com

Hardware > Cytale

- Developer / vendor > Cytale, France
- Availability > fall 2000, price: $430...$570
- Physical > 6.3" by 8.3" color LCD, 2.2 lb
- Storage > "15,000 pages"
- Internet > 56k internal modem

Zoltan Mikolás, eBookOne.com

Hardware > Cytale
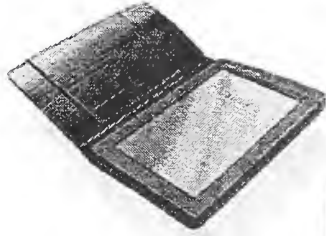
Hardware > Voyager

- Developer / vendor > Monec, Switzerland
- Availability > fall 2000, price: "well equipped laptop"
- Physical > 8.3" by 11.7" (A/4) color LCD, 2.7 lb
- Storage > 64 Mbyte RAM, 6.4 Gbyte HDD
- Internet > GSM mobile (56k internal)
- Plus > Mobile telephone, handwriting recognition, camera, navigation system

Hardware > Voyager

Services > 00h00.com, France

Services > SecoData, Germany

Services > eBook.nl, Holland

Services > MEK, Hungary
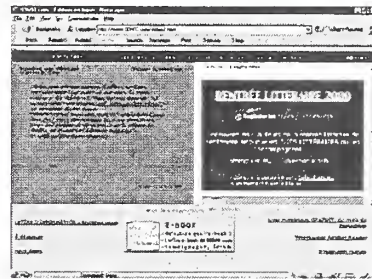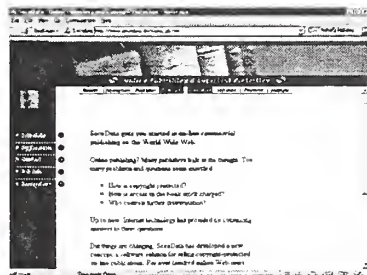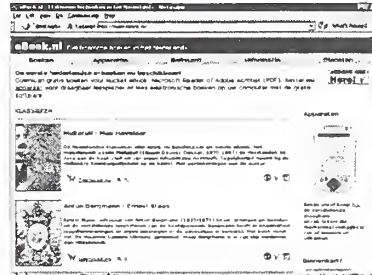
Zoltàn Mikolas, eBookOne.com

Services > Clarín, Argentina
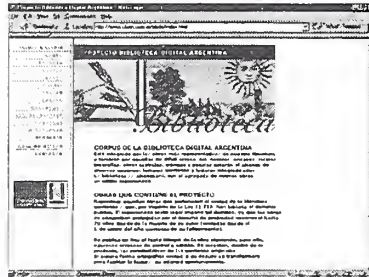
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E-pilogue

- E-books are especially important for small languages, for which print is relatively more expensive.
- E-books are particularly attractive for big languages, for which savings can be enormous.
- E-books build bridges between cultures and help create the e-merging new world.

Zoltàn Mikolas, eBookOne.com

Thank you!

Zoltàn Mikolás, eBookOne.com, Hungary
mikolas@ebookone.com

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Janet Ormes was recently named the Assistant Chief Information Officer for Library and Information Services at NASA's Goddard Space Flight Center. She has been working with NASA's libraries and information services for over 20 years, and also heads Goddard's Library Information Services Branch. She also serves on the Federal Library and Information Center Committee's Technology Working Group and chairs the Website Committee for the Federal Librarians Round Table of the American Library Association.

Ms. Ormes is responsible for managing the paper-based and electronic library resources at GSFC/Greenbelt and the Wallops Flight Facility, and for providing scientific, technical and management information to support over 6000 civil service and contractor scientists and engineers. She is also responsible for disseminating scientific information and promoting science literacy through the Library's Web Site, which includes over 900 pages and nearly 14,000 links. She has been credited with transforming the library operation from a storehouse of paper volumes to a leading-edge interactive electronic information resource. Her library recently hosted an Open House featuring electronic books which attracted a sell-out crowd.

Ms. Ormes has been a speaker at the American Library Association Conference, the Library and Information Technology Association Conference, Computers in Libraries, Electronic Documents Conference, National Academy of Science E-Journal Summit, and the Defense Technical Information Center National Conference. She has a Masters degree in Library and Information Science with a minor in Computer Science.

Janet Ormes

Assistant Chief Information Officer for Library and Information Services

NASA's Goddard Flight Center

www.nasa.gov

"E-Books in Federal Libraries"

Slide 1

E-Books in Federal Libraries

Janet D. Ormes, Assistant CIO
NASA/Goddard Space Flight Center

Goddard Space Flight Center

Electronic Book 2000

Changing the Fundamentals of Reading

Janet.Ormes@gsfc.nasa.gov   September 26, 2000   http://library@gsfc.nasa.gov

Slide 2

Goddard Space Flight Center

What's Not Happening

- Sent out request to Government librarian lists asking for experiences - no responses

- Goddard Library Open House featuring e-books - everybody interested

Slide 3

Goddard Space Flight Center

E-book Issues

- Lack of relevant content
- Proprietary formats
  - Lack of interoperability
  - Limits what can be accessed
- Question of who pays for devices -library or end-user?
  - Libraries would have to carve out of decreasing budgets; assume property management responsibilities
  - User - problems with compatibility; lack of motivation to acquire yet another device
- How to provide metadata and access?
  - Library catalog
    - Costly; tends to obscure ebooks
  - Vendor interface
    - May not be suitable for environment
    - Multiple vendors = multiple interfaces

Slide 4

Goddard Space Flight Center

GSFC Library Experience

- Acquired two sample e-book devices - Rocketbook and Softbook
  - People interested in examining them
  - Little relevant content available
- Subscribed to two "online" book services
  - NetLibrary and IT Knowledge
  - Over 2000 relevant titles
- Developed single interface for searching and browsing using InMagic dbTextworks

Slide 5

Books at the Goddard Library

Electronic Books (eBooks)
NEW! - *Check out our latest E-ditions for July 2000*

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Dictionaries	Earth Sciences	Engineering	General Science
Management	Mathematics	Other Topics	Physics

Slide 6

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Management	Mathematics	Other Topics	Physics

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Britannica Online
CRC Handbook of Chemistry & Physics
Landolt Börnstein
Wiley Encyclopedia of Electrical & Electronics Engineering

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IBM Redbooks, IBM Corporation, 4/9/98.
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Computer Science

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IBM Redbooks, IBM Corporation, 6/29/99.
Computer Science

Building AS/400 Internet-Based Applications with Java
IBM Redbooks, IBM Corporation, 1/12/99.
Computer Science

The Complete Java 2 Certification Study Guide
Simon Roberts, Philip Heller, and Michael Ernest, Sybex, Inc , 7/1/99
Computer Science

Connecting Domino to the Enterprise Using Java
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Introduction

PART I—The Programmer's Exam
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        Primitive Data Types
        Literals
        Arrays
        Class Fundamentals
            The main() method
            Variables and Initialization
        Argument Passing
        Garbage Collection
        Chapter Summary
        Test Yourself
    CHAPTER 2—Operators and Assignments
        Evaluation Order
        The Unary Operators
            The Increment and Decrement Operators ++ and --

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Dictionaries	Earth Sciences	Engineering	General Science
Management	Mathematics	Other Topics	Physics

eBooks Search Results

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A Dictionary Of Ecology
Allaby, Michael, Oxford University Press, 1998

Global Climate Change
Hoffman, Andrew J., 1961-, New Lexington Press, 1998

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Retrieval software DB/Text WebPublisher, provided by INMAGIC

Oxford
ECOLOGY
MICHAEL ALLABY

Dictionary Of Ecology -
Table of Contents

A Dictionary of Ecology
    From the Pref
    Preface to the
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    A
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    E
    F
    G
    H
    I
    J
    K
    L
    M
    N

Different Business Models

- IT Knowledge
  - More like subscribing to electronic journal -single price based on number of concurrent users
  - Approximately 2000 titles
- NetLibrary
  - More like traditional book model
    - Library "purchases" individual books and "loans" them out
    - If a book is on loan, nobody else can view
  - A few hundred titles potentially relevant to GSFC disciplines
  - Many titles listed are not yet available -agreements signed with authors, but content not converted yet
  - We are working with NetLibrary collection development person to add more titles in our field

Print-on-Demand

- Another emerging business model
  - Electronic storage, paper output
  - Print and bind
  - Ideal for out-of-print and small print runs
  - National Academy Press has experimented with this model
- Amazon.com and BarnesandNoble.com are becoming distributors
  - Acquire content from primary publishers
- Printers are expensive
  - Need sufficient volume to justify -e.g. bookstores and copy centers (Kinko's)
  - Libraries?

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Barbara Silcox is the Chief of the Research Library and Information program a tthe National Institute of Standards and Technology (NIST). She oversees all aspects of the Research Library's services, including the NIST Virtual Library (NVL), the Research Consultant Program, and the NIST Archives. She is responsible for developing strategies and providing direction for integrating emerging information technologies in the development and enhancement of new and existing user services. Ms. Silcox is the co-chair of the Technology Services (TS) Web & Database Group and co-represents TS on the NIST Information Coordinators group. She is currently co-leading a change management effort to help make TS a more customer-focused organization.

Prior to coming to NIST, Ms. Silcos directed a number of innovative technology-related information service activities in her posit ions at The George Washington University, the Corporation for Open Systems, and MCI Communications Corporation. She has a Master's Degree in Library Science from the University of Maryland.

**Barbara P. Silcox
Chief, Research
Library & Information
Program
Office of Information
Services (OIS)
NIST
http://nvl.nist.gov/pub/ois/**

**"From Desktop to
Handheld Devices:..."**

Electronic Book 2000

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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 thirteen 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 (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 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.). He currently is serving as guest editor of an upcoming theme issue of Library Trends on the topic of assessing digital library public services, and he serves as a column editor for the Journal of Academic Librarianship. The column, starting in 2001, will focus on issues related to academic library consortia.

Thomas A. Peters

Center for Library Initiatives

Committee on Institutional Cooperation

www.cic.uiuc.edu

"Texts and Text-Bearing Devices"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Robin Bryan received her undergraduate degree in Elementary Education from SUNY at Fredonia, and the M.L.I.S. from the State University of North Carolina at Greensboro. Bryan has been with the Public Library of Charlotte and Mecklenberg County since 1992 and currently is the Help Desk Coordinator in the Information Technology Department. She is an A+ Certified PC Technician. Most recently she coordinated the implementation of netLibrary at PLCMC and is the Team Leader for the Rocket eBook Project.

Robin Bryan

Help Desk Coordinator

Public Library of Charlotte and Mecklenberg County

"PLCMC Rocket eBook Project"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Mr. Warnock co-founded ebrary.com on the premise that a combination of the Internet and secure digital rights technology could forever alter the way individuals conduct research and publishers generate revenue. Prior to co-founding the company, Christopher acted as a consultant to Stanford and other universities to develop a method in which university presses could implement an electronic workflow solution for the delivery of their publications for electronic distribution. He also conducted feasibility research for Octavo Corporation, which publishes and preserves rare books and manuscripts using advanced digital tools and formats. From 1991 to 1996, he worked at Adobe Systems as a Systems Engineer Project Manager and Project Marketing Manager for Adobe Acrobat. Mr. Warnock holds a B.S. in Philosophy from the University of Utah.

Christopher Warnock

President & CEO

ebrary.com

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

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) as the human-machine interface 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 display technology for E-books and other information devices.

John has conducted display research since 1993, and participates in the display-related technical committees of the Video Electronics Standards Association (VESA).

John Roberts

Electronics Engineer

NIST/ITL

www.itl.nist.gov/ div895/isis/

"Rotating Wheel Braille Display Provides Low Cost Accessibility to E-Books

Rotating-wheel Braille Display Provides Low-cost Accessibility to Electronic Books

John Roberts, Oliver Slattery, David Kardos, Brett Swope, and Edwin Mulkens

Information Technology Laboratory

NIST   September 27, 2000

http://www.itl.nist.gov/div895/isis/projects/Braille/

Outline

- Importance of Information Accessibility
- Braille for Accessibility
- The NIST Rotating Wheel Braille Display
  - Origin
  - The second-generation design
- Future extensions of the technology

The Importance of Information Accessibility

- Digital technology: unprecedented access to information
- Information accessibility: making this opportunity available to as many as possible
- Everyone has "accessibility" needs at times
  - Accessibility technology may benefit mainstream users

Braille as a Path to Accessibility

- Millions of blind, visually impaired people in the United States
- Many times that number worldwide
- Speech and Braille: different reading experiences (some prefer one or the other)
- Existing Braille display technology is highly effective, but costly

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Existing Braille displays

- Produce a line at a time of Braille text
  - 6 or 8 dots per cell (Braille character)
  - Line length of 8 to 80 cells
  - Controls for next line, etc.
- Actuators are the main cost component
  - One actuator per dot, 6/8 per cell, $35-50/cell
  - Hundreds of actuators for a full line display
- Reliability issue - high maintenance costs

The NIST Rotating-wheel Braille Display

- Origin: calls for accessibility, Electronic Book '98
- Goal: make quality Braille displays available at greatly reduced price (up to 10x reduction)
- Applications:
  - All Braille display functions (computers, e-mail, web, etc.)
  - May out-perform existing displays for e-books

Project History

- Oct 98 (E-book '98): call for accessibility
- Sept 99 (E-book '99): working 1st-generation prototype - single finger reading
  - Sept-Dec: shown to public and to Braille users
  - User feedback: need for multiple-finger reading
- Jan 00: work started on 2nd generation design
- May 00: patent application filed

Second-generation NIST Braille Reader

- 3-4 actuators (vs hundreds for line display)
- Braille cells on rim of rotating wheel
  - Initial skepticism: "Braille users can't read moving text, can't read curved surface"
- **Expanded reading area** - multiple fingers
  - 4-inch wheel gives 20+ cell reading area
  - Larger wheel for bigger, flatter reading area
  - Smaller wheel (2 inch) for extreme portability

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.)

2nd Generation Design Approach
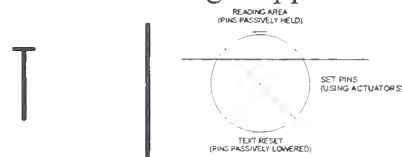
•Pins are shaped like a nail with rounded tip for the Braille dot
•Pin position (extended or retracted) controlled by head of pin

•Pins are mounted in a rotating wheel - rim of wheel is reading surface

•Non-rotating "Passive Pin Control System" in wheel

The Passive Pin Control System

As shaded block moves upward, non-moving ramp forces pins to extended position

Slotted ramp forces pins to retracted position **(ramps set pins to "default position")**

Setting and Holding Pins

Position retention device allows pins to be extended or retracted, but not to change state

Actuator (solenoid, piezo, air, or electromagnet) sets the pins, retention device holds them for reading

Assembled Wheel with Non-Rotating Insert

READING AREA
(PINS PASSIVELY HELD)

SET PINS
(USING ACTUATORS

TEXT RESET
(PINS PASSIVELY LOWERED)
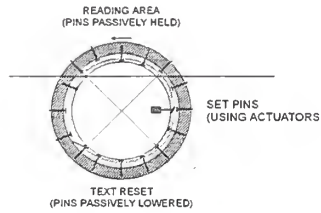
Side View of Wheel and Non-Rotating Insert
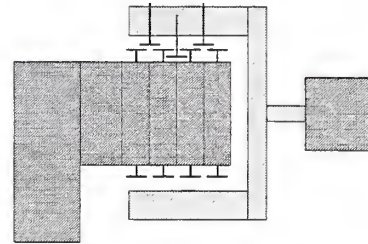
Pin Placement Concept

2:1 Scale Mechanical Prototype

Passive Position Retention Disks

Disk Dimensions

3

Outer Reading Surface
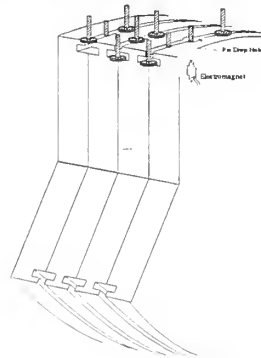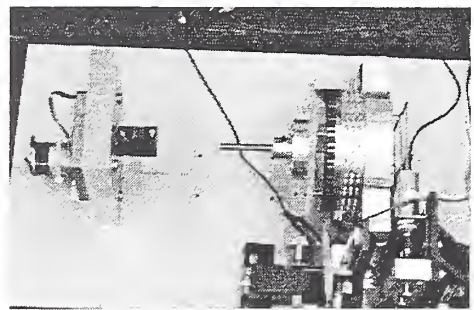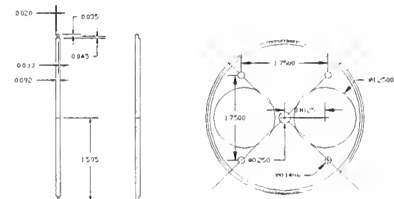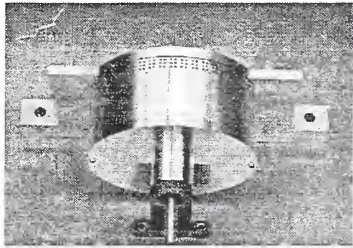

July 2000: Exhibit at NFB Convention in Atlanta

- Over 500 visitors: strong support for project
- Of ~250 Braille users, over 95 percent were able to read moving text on a rotating wheel
- Many performance requests, suggestions for configuration and implementation
  - Visitor comments are summarized on web page

Desired Outcome of the Project

- Manufacturers incorporate NIST Braille technology, add to display product lines
- Identified early markets:
  - Braille users who can't afford current displays
  - Education
  - Spare/backup displays (individuals, employers)
  - Portable use (e-books, PDAs, communications)

Future Extensions of Technology

- Linear displays
  - Flat bed of pins
  - Moving write head

- Page (multiline) displays
  - Finally affordable?
- Multilevel dots
  - Graphic applications?

Summary

- Non-visual displays are needed for accessibility
- Braille displays are highly useful, but prohibitively expensive for many users
- The NIST Braille reader technology has the potential to dramatically reduce Braille cost
- New potentials: high performance e-book reader, page displays, graphics

NIST Braille Display Team

Thanks to:

- Victor McCrary and the ITL management
- Fernando Podio - Braille ebook idea
- NIST Shops
- Accessibility organizations, people who have provided feedback on the design
- Curtis Willoughby, Brian Buhrow, George Kerscher, others - engineering suggestions

For More Information:

http://www.itl.nist.gov/div895/isis/projects/Braille/

Electronic Book 2000

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Mr. Kerscher became interested in electronic text in a much different way than most. He slowly lost his vision from Retinitis Pigmentosa. In 1985 he left his job teaching and went back for a masters degree in computer science. With the assistance of a talking computer, he was able to excel in the program at the University of Montana. It was during this time that he created computerized books from publishers typesetting data. It was clear to him that this kind of technology would inevitably take over the publishing world, as it was currently known.

The small non-profit company Mr. Kerscher founded merged with Recording For the Blind & Dyslexic in 1991. RFB&D distributed reference materials in electronic formats to supplement their analog audio collection. Between the analog cassettes and the searchable reference materials in electronic formats, the blind and print-disable consumers gained access to information for school and work. RFB&D asked Mr. Kerscher to continue following emerging technologies and standards for RFB&D.

Descriptive markup was the obvious direction for exploration. George became involved in the SGML community and with International standards activities. He contributed to the early developments of HTML and many of the mechanisms embedded in HTML were a direct result of his contributions. He was instrumental in the formation of the Web Accessibility Initiative (WAI) one of the four divisions of the World Wide Web Consortium (W3C). He is still co-chair of the WAI's Steering Committee.

In 1997, RFB&D agreed to place Mr. Kerscher on loan to the Digital Audio-based Information SYstem (DAISY) Consortium. The focus of the efforts of the worldwide collection of libraries for the blind and print disabled was to marry text and audio recordings in navigatable multimedia presentations. The standards developed by the DAISY Consortium under Mr. Kerscher's guidance applied XML, SMIL, and HTML recommendations of the W3C.

The importance of eBooks as a fundamental component of any accessible book drew Mr. Kerscher to the early efforts of the OEB Publication Structure group. Mr. Kerscher contributed to the 1.0 specification by providing guidance on accessibility issues. His personal goal is to see the day when all published information is available in electronic formats that are accessible to all. He believes the way to accomplish this goal is to facilitate the converging standards related to publishing information electronically. Mr. Kerscher was elected as the Chairperson of the Open eBook Forum (OeB) in May of 2000.

George Kerscher

Emerging Technologies Coordinator

Recording for the Blind and Dyslexic

"eBook, Education, and Access by Students with Disabilities"

eBooks, Education, and Access by Students with Disabilities

George Kerscher

Senior Officer, Accessible Information

Recording for the Blind and Dyslexic (RFB&D)

Project Manager to the Daisy Consortium

Chairman of the Open eBook Forum

RECORDING FOR THE BLIND & DYSLEXIC
50th Anniversary

daisy consortium

<OeB>
Open eBook Forum

Future of eBooks in Education is Huge

- The markets are college, high school, and elementary
- Currently we are just beginning to see exploration with eBooks
- The many potential advantages excite the educational leaders
- The potential for use by students with disabilities must be assured

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The OeB Publication Structure Addresses Accessibility

- Following the OeB Publication Structure 1.0 creates Accessible information
- Future OeB specifications are committed to accessibility
- Leading experts from the disability community are on the Publication Structure Working Group

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Reading Systems Must be Usable by Students with Disabilities

- It is information that is delivered through the Reading System that is important
- Some Reading Systems developers will concern themselves with accessibility and some will not
- It is essential that the eBook publications be made available through one or more Reading systems that meets ALL students' abilities
- It is likely that students with disabilities will be provided with a reading device that delivers the information that is suitable for that individual

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If You Want to Sell Your eBooks in the Education Marketplace

- Understand that Accessibility Laws require that ALL students have access to the information in electronic forms
- Follow the OeB Publication Structure specification
- Only use vendors who have demonstrated compliance with the OeB Publication Structure specifications
- Make sure the accessibility requirements are met as well
- Select distribution through Reading Systems that demonstrate accessibility features
- Work with organizations who focus on disability issues

What is RFB&D Doing?

- While RFB&D continues to be the nation's accessible educational library, we are moving into the new eBook and DAISY Digital Talking Book arena
- RFB&D is working with the American Foundation for the Blind (AFB) and the AAP to ensure that the electronic files you use for your eBooks will also meet laws that require publishers to provide files for educational access to the states
- RFB&D is in the process of converting the most widely circulated titles from our 80,000 analog collection to the new digital Talking Book Daisy Format
- RFB&D in 2001 will launch the Digital Talking Book service in the USA
- RFB&D in the future will need eBook files to facilitate production of eBooks with synchronized text and audio -- the ideal format for students with all types of disabilities
- RFB&D wants to work hand-in-glove with the educational publishing field

Electronic Book 2000

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Mr. Hakkinen is founder and Chief Technology Officer of isSound Corporation, a five year old firm that specializes in the development of technologies that provide audio-based access to information. The company is presently applying its technology to eBooks, telephony, and mobile devices.

Mr Hakkinen has worked in user interface research and development positions for over 20 years. Presently, he participates in a number of standards activities including the World Wide Web Consortium (W3C), the Open eBook Forum, the Library of Congress-NISO Digital Talking Book standard, and the Daisy Consortium. He has published and presented his research in speech user interfaces and accessibility.
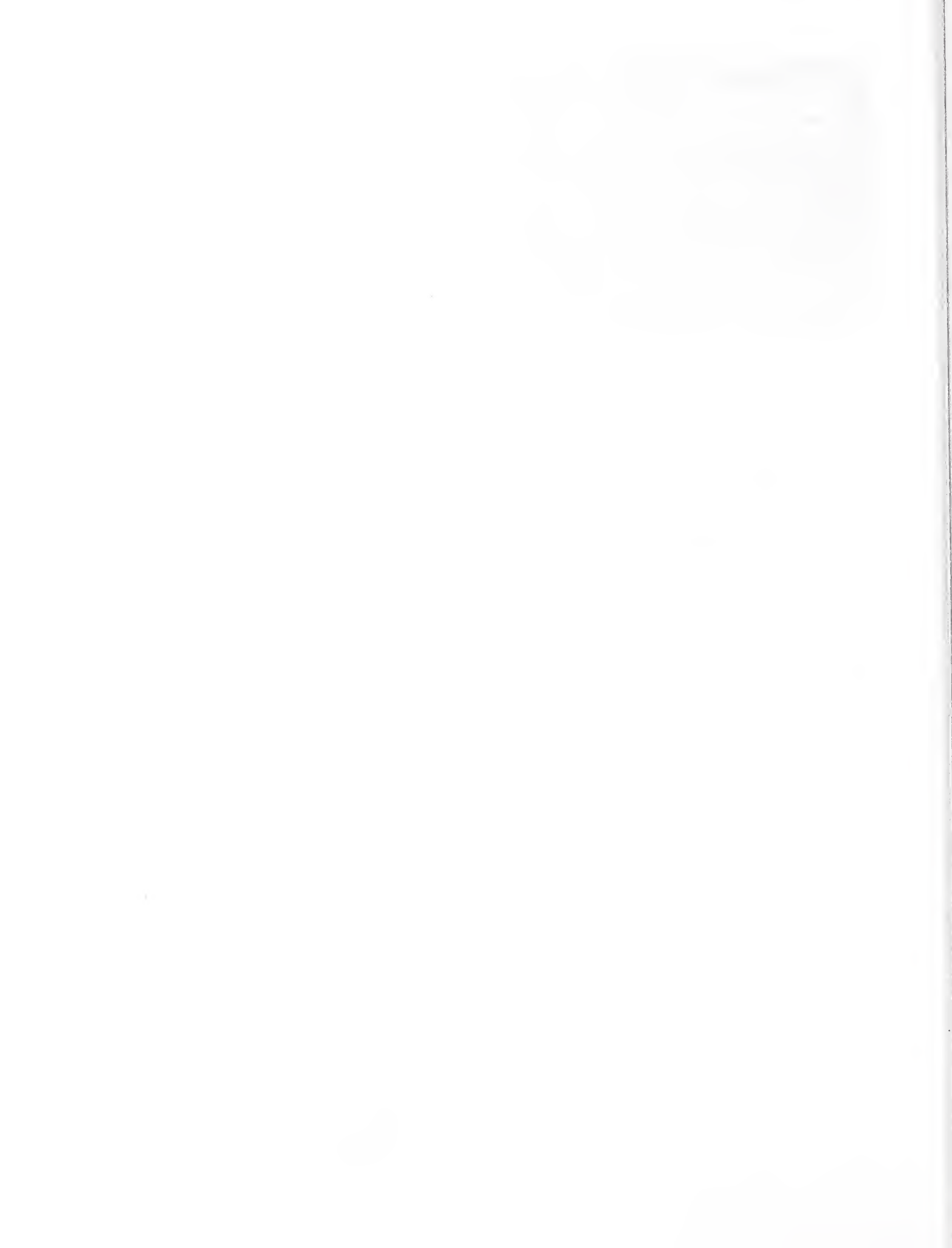

Markku Hakkinen

Founder and Chief Technology Officer

iS Sound Corporation

URL

"Next Generation Audio eBooks"

Electronic Book 2000

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Lori A. Perine joined the White House Office of Science and Technology Policy (OSTP) in February 1997. She served as a Senior Policy Advisor for Computing, Information and Communications, before being appointed Deputy to the Associate Director, Technology in early 2000. Ms. Perine advises on a variety of technology policy issues, including technical innovation and economic growth; technology partnerships; research initiatives; technical implications of global electronic commerce, education technology, and the digital divide; and technology-trade-competitiveness issues. She is OSTP's principal strategist for Federal support of innovation. Through the President's National Science and Technology Council (NSTC), she provides leadership across Federal executive agencies to establish national priorities and policy objectives for technology. She has successfully collaborated with industry, academia, and Congress to gain support for major Federal R&D initiatives such as the Next Generation Internet and Information Technology for the Twenty-First Century and was architect of the NSTC's Summit on Innovation in November 1999. Ms. Perine works closely with the President's Committee of Advisors on Science and Technology and the President's Information Technology Advisory Committee to develop guidance for the President on Federal R&D programs.

Previously, Ms. Perine served as Senior Policy Advisor for Technology to the Secretary of Commerce and earlier coordinated economic and policy analysis at the National Institute of Standards and Technology (NIST). She continues to sit on source evaluation boards for NIST's Advanced Technology Program's competitions in information technology.

Ms. Perine worked primarily in international energy sector planning and management before entering government service. While at the World Bank from 1984 to 1988, she co-authored several country assessments that evaluated energy sector strategies and established investment priorities for governments in Africa and South Asia. She subsequently founded her own firm to consult to the World Bank and other international organizations, before joining a management consulting firm to advise major U.S. petrochemical corporations.

Ms. Perine completed doctoral studies in organizational design and strategic planning at the Wharton School (ABD). She received an M.S. in Energy Management and Policy from the University of Pennsylvania and was graduated magna cum laude from Bryn Mawr College with an A.B. degree in Mathematics. Ms. Perine also studied Applied Mathematics at the Ecole Polytechnique Federale de Lausanne in Switzerland, under the auspices of the IIE/Fulbright-Hays Program. She is a member of the Panel of Experts for the Council on Competitiveness' Internet Learning Network, and an observer to the External Visiting Committee for the National Partnership for Academic Computational Infrastructure.

Lori A. Perine

Deputy to the Associate Director

Office of Science and Techonology Policy

ostp.eop.gov

"Creating Digital Opportunity: Administration Policy and Technology Initiatives"

Electronic Book 2000

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Calvin W. Lowe, a native of North Carolina, is the ninth president in the 135 year history of Bowie State University. His academic career began at North Carolina A&T where he graduated Magna Cum Laude with a Bachelor's Degree in Physics. He continued his graduate studies at the Massachusetts Institute of Technology, from which he was awarded the Master's and Doctorate in Physics. His teaching positions have included Assistant Professor of Physics at University of Kentucky, and Assistant and Associate Professor of Physics and at Hampton University. Wide recognition for his visionary insight, and effective leadership, have led to a variety of administrative positions that included: Chair of the department of Physics at Hampton University, Chair of the department of Physics at Alabama A&M. In both positions, new advances in research, educational firsts, and progressive university development were achieved. Prior to his appointment to Bowie State University, he served as Vice President for Research and Dean of the Graduate College at Hampton University. In these roles he directed faculty, graduate students, undergraduate students, and administrative personnel in the operation and administration of all university research activities, with annual receipts averaging $25 million.

Calvin Lowe

President

Bowie State University

www.bowiestate.edu

"E-Books; A Component in the Technology Plan of a Small University"

Electronic Book 2000

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Doctors Stan and Randall Walker both received their bachelors' degrees from the University of Notre Dame and their MD degrees from Mayo Medical School, and both also completed their medical training at Mayo Clinic.

Stan is now a practicing ophthalmologist, eye surgeon and clinical professor of Medicine at the University of Minnesota. In his practice, Stan has seen many patients who seek help for reading, but who have normal vision; as well as an increasing number of patients with computer reading eyestrain. Stan also has a special interest in the interaction of eye-movements and visual cognition, and the relationship between text difficulty and eyestrain symptoms.

Prior to his medical science training, Randall majored in modern foreign language. Randall also has a small visual defect that impedes his reading efficiency: for example the word "read" will appear as "road" under typical reading conditions. As Randall engaged in the extensive reading required for his medical career, (he is an assistant professor of medicine at Mayo Medical School, and specializes in Infectious Diseases), his visual defect, combined with his understanding of language structure and of the neurophysiology of reading, made him keenly aware of the complex interaction of vision, eye-movements, and syntactic parsing while reading.

In 1996, Randall patented the invention of extracting intrinsic conceptual structure from text and varying the presentation of the text, to depict this conceptual structure transparently with the individual words of the text and thereby improve human reading. The patent for this method and apparatus (now called LiveInk®) was issued by the US Patent Office in 1998 (US Pat. No. 5802533), with additional US and global patents pending.

Later that year, Randall and Stan formed Walker Reading Technologies, Inc. (WRT), to pursue research and development of the LiveInk® phenomenon. Together, they have studied, and integrated into software technology, diverse scientific findings made over the past 60 years in the fields of linguistics, visual perception, reading psychology and neuroscience.

While adjusting their clinical practice of medicine to continue this R & D, Randall and Stan have also enlisted expertise in software from a former-IBM senior software engineer, and from leading professors in the Cognitive Science of reading. With scientifically designed, iterative, and empirical testing, the Walker Brothers and their colleagues have made many new observations in the relationships between vision, eye-movements, and language processing that arise from LiveInk® text.

Over the past 2 years, the Walker Brothers have presented LiveInk® technology to many academic leaders in reading, learning disabilities, and education, and to industry leaders in software and publishing. Their most gratifying feedback has been from many individuals who had serious reading disabilities (despite normal intelligence), and who, for the first time in their lives, were able to read an entire book, because it was in the LiveInk® format.

Having now developed a LiveInk® text transformation engine and supporting software applications for commercial use, WRT is now entering the market development stage and is forming strategic partnerships with publishing and learning technology companies. WRT also continues its basic and clinical R & D, with ongoing projects at schools, universities and businesses across the country.
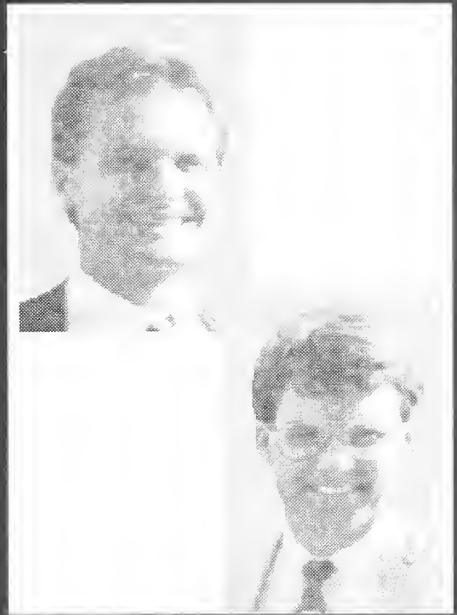
Stan Walker, MD
Randall Walker, MD

Walker Reading Technologies, Inc.

www.liveline.com

"Applying Cognitive Science to Improve Human Reading"

LiveInk® Technology

Applying Cognitive Science
to Improve Human Reading

Newsweek: November 22, 1999:

"Mass literacy is a relatively new social goal. A hundred years ago people didn't need to be good readers in order to earn a living. But in the Information Age, *no one* can get by without knowing how to read well and understand increasingly complex material."

Kantrowitz B, Underwood A.
Dyslexia and the New Science of Reading.
Newsweek. (pp 72-79). November 22, 1999.

College Readers: Federal Register Text

No *significant difference in IQ* between the best and poorest readers.

But *very wide difference* in Reading Comprehension scores between the best readers and the poorest readers.

NON-IMPAIRED   DYSLEXIC

Proc. Nat. Acad. Sci. Vol. 95, Issue 5, 2636-2641, March 3, 1998
Neurobiology
Functional disruption in the organization of the brain for reading in dyslexia
Sally E. Shaywitz, et al

Direct Correlation between

Activity in *Visual Processing Region* of the Brain

And a Person's Reading Ability—

including average Readers without Dyslexia

Better Reader   Poorer Reader

Demb JB, et al "Brain activity in visual cortex predicts individual differences in reading performance." Proc. Natl. Acad. Sci. 1997 (Nov.25); 94: 13363-13366.

Same IQ

Wide Continuum of varying MRI Brain Activity

Better Readers

Poorer Readers

The Reading-IQ Gap

Wide variations in reading ability that are *independent of IQ*.

At least two separate neurobiological mechanisms, likely others.

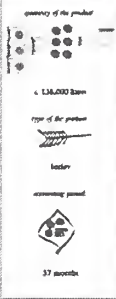*Spoken words are the symbols of mental experience, and written words are the symbols of spoken words.*

Aristotle--*On Interpretation*

Sumerian Logographs -- circa 4000 BC

Medium   Message

RT

SPKNWRDSRTHSMBLSFMNTLX
PRNCNDWRTTNWRDSRTHSMB
LSFSPKNWRDS

2000 BC—Phoenician alphabet contained consonants only.

SPOKENWORDSARETHESMYBO
LSOFMENTALEXPERIENCEAND
WRITTENWORDSARTHESMYBO
LSOFSPOKENWORDS

1000 BC—vowels added by the Greeks.

SPOKENWORDSARETHESMYBOL
SOFMENTALEXPERIENCE,ANDW
RITTENWORDSARTHESMYBOLS
OFSPOKENWORDS.

200 BC--punctuation

Spokenwordsarethesmybolsofm
entalexperience,andwrittenword
sarethesmybolsofspokenwords.

700 AD—lower case

2

Slide 1:

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

900 AD—spaces between words.

Slide 2:

1000 AD

1500 AD

2000 AD

Same formatting for the past 1000 years.

Slide 3:

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

900 AD—spaces between words.

Slide 4:

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

2000 AD
LiveInk®

Slide 5:

Treasure Island

Chapter 1

The Old Sea-dog at the Admiral Benbow

ClearType®

Slide 6:

Treasure Island

Chapter 1

The Old Sea-dog at the Admiral Benbow

LiveInk®

3

Slide 1:

Text Analysis and Varied Presentation: Over 1 million Computer Calculations per Sentence.

LiveInk®

Slide 2:

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.

Slide 3:

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

Slide 4:

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.

Slide 5:

Cognitive Tasks for Reading Comprehension

Focus Attention | Perceive Letters | Decode Words | Parse Syntax | Build Sentence Meaning

Slide 6:

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.

The Human Mind *parses* natural language with rules that combine and arrange words into phrases and clauses.

This is a schema of how the Human Mind would parse the first sentence of the Gettysburg Address.

LiveInk® Increases Reading Comprehension with First Use

Average Reading Comprehension Test Score (+/-s.e.) for Each Text Presentation Method

- Conventional
- Live Ink

$p < 0.05$

- 48 Subjects
- Expository Genre
- Monochrome Font

LiveInk® Helps Level the Playing Field of Reading

Baseline Intelligence Test Scores

Reading Comprehension Score with LiveInk®

$P < 0.05$

Reading Comprehension Score with Conventional Text

- Average Score in Conventional Text
- Average Score in LiveInk®
- ACT math + comp score (IQ)

Poorest Readers / Lower Middle / Upper Middle / Best Readers

Quartiles defined by scores in Conventional Text.

USA SNAPSHOTS®
A look at statistics that shape the nation

Digital eye strain

Among computer executives at this week's Comdex trade show, 86% report eye strain symptoms. Those who spend two hours or more a day at a PC who say they feel the following during or after PC work:

Eye fatigue	53%
Eye irritation	32%
Difficulty focusing	32%
Headaches	25%
Burning eyes	22%
Itching eyes	15%

USA Today, Page 1, November 21, 1997

LiveInk® Reduces Electronic Reading Eyestrain

- Conventional Text
- Live Ink® Text Presentation

Percent of subjects experiencing eyestrain from reading text in either text presentation method.

LiveInk® Gains Preference Among College Readers With Only 1 Hour of Use

Legend:
- ☐ Conventional Text Presentation
- ■ Live Ink® Text Presentation

LiveInk® Offers Compelling Benefits for 85% of College-Level Readers

Legend:
- ☐ 1 or More Benefits from Live Ink® Text
- ■ none

Doubles Comprehension, Eliminates Eyestrain, &/or Is Immediately Preferred.
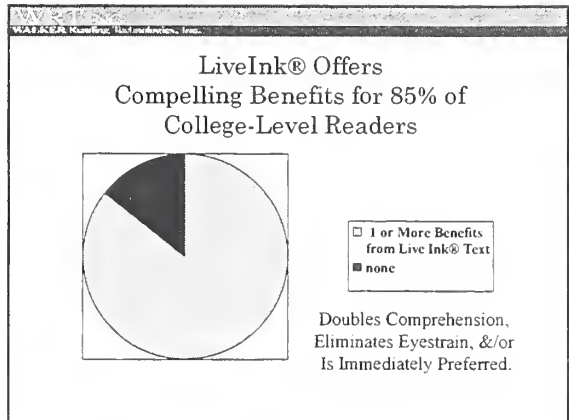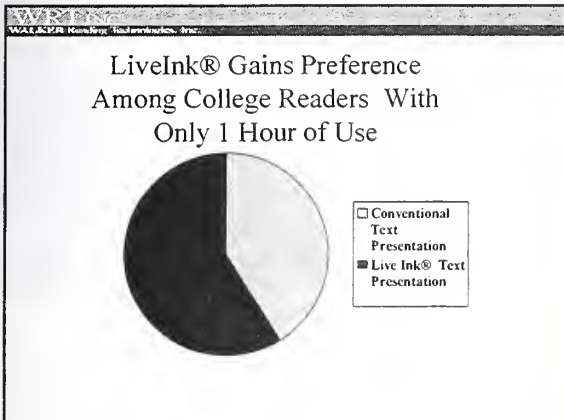
Other Benefits of LiveInk®

- Younger Readers.
- Older Readers.
- Productivity in the Information Workplace.
- English as a Second Language.
- New Aesthetics for the Reading Experience.

Possible Impact on Publishing Revenue (2005) in Billions.

Categories: Block Only*, LiveInk®, Both

Legend:
- ☐ Print
- ■ Ebook - Replacement Sales
- ■ Ebook - Incremental Sales

*AAP projection
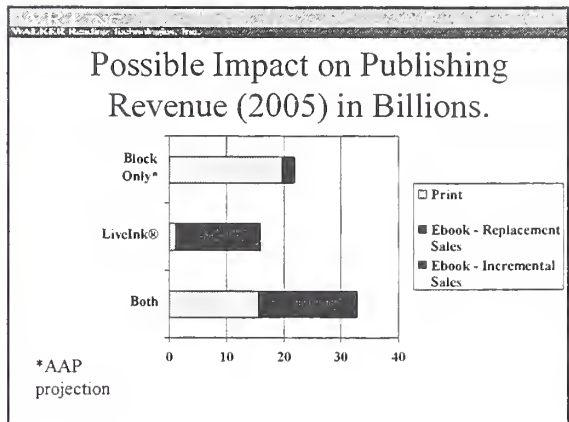
LiveInk® Technology & Products

- LiveInk® Text Transformation Services for e-Publishing, Business & Education.
- LiveInk® Preformatted CD-ROMs.
- LiveInk® Transformation Engine for High-Volume Text Publishers.
- LiveInk® / LiveRead™ PC-based Ebook System.

Stan Walker, MD
Randall Walker, MD

www.liveink.com

1-877-LiveInk

Kirstie has more than fifteen years of experience in the high-tech industry. Her experience includes five years of software development expertise, and ten years of new business development, marketing, and management at high-tech startup organizations.

Most recently, Kirstie was co-founder and managing partner of Vantage360, a start-up consulting firm. Previously, Kirstie was Director of Strategic New Business Development at Mentor Graphics, and was responsible for the formation, management and successful growth of Mentor Graphic's embedded system's telecommunication strategic business development group.

Kirstie was also the Director of Sales for the East Coast and Canada at ISR Global Telecom where she was the top sales director for all of her years at ISR. Former companies include Lockheed Martin, Wind River Systems, Sun Microsystems, Mentor Graphics, and ISR Global Telecom.

Kirstie is 34 years old and graduated Summa Cum Laude with a B.S. degree in Computer Science from the University of Central Florida.

Kirstie Chadwick

CEO, President, and Co-Founder

Digital Owl

www.digitalowl.com

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

As Global Segment Executive, Publishing, IBM Global Media and Entertainment Industry, Stephen D. Dienna is responsible for business relationships and the development and implementation of IBM worldwide strategy and marketing efforts in the publishing industry, representing newspapers, magazines, books, commercial printers and information providers/content aggregators.

Mr. Dienna joined IBM in 1995 after 19 years professional experience in the publishing industry. At IBM he worked in the media group as Global Solutions Executive for Media prior to his current position. In this position, he led IBM's efforts in developing technology solutions for the publishing industry. He established the Community Internet model in partnership with KOZ, Inc., the subscription model in partnership with ZEBRA, and a one-to-one marketing tool within the IBM Print on Demand system. Mr. Dienna currently works on strategic development of Lotus Workflow for print applications, Web model for publishing, and secured content delivery solutions for the publishing industry.

Prior to joining IBM, Mr. Dienna was a senior marketing executive for Atex, Inc., where his responsibilities included sales development. He participated on the management team during the Eastman Kodak's buyout of the company in 1993.

Before joining Atex, Inc., he served as Vice President at Integrated Newspaper Systems International where he developed IBM midrange enterprise resource planning systems linked to a text editing and advertising system.

Mr. Dienna also has done consulting for the publishing industry. As a consultant he focused primarily on the international market.

Mr. Dienna has a bachelor's degree in journalism from Sam Houston State University and a master's degree in media management from Southern Illinois University.

Steve Dienna

Global Segment Executive - Publishing

IBM Corporation

"Creating Value in a Digital E-conomy"

Electronic Book 2000

Changing the Fundamentals of Reading
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James B. Shaffer is CEO of Clickshare Service Corp., a Massachusetts startup that next year will launch an exchange service that matches owners of Internet user audiences with owners of digitally-deliverable content. Clickshare has just closed their second round of financing and is now beta testing. Unique features of Clickshare's technology include enabling behind-the-scenes wholesale/retail relationships among content owners and vendors.

Prior to Clickshare, Shaffer was a media executive with experience in newspapers, television, radio, commercial printing, direct mail, and Internet. From '91 to '99 he was CEO of Guy Gannett Communications, a diversified media holding company with operations in seven states. Starting in 1995, Guy Gannett Communications launched an award-winning family of web sites and was a pioneer in on-line communities. Shaffer also spent seven years as Chief Financial Officer of the Los Angles Times.

Mr. Shaffer's board affiliations have included KOZ.com, of Durham, N. C., an Internet community self-publishing service, and Atex Media Solutions.
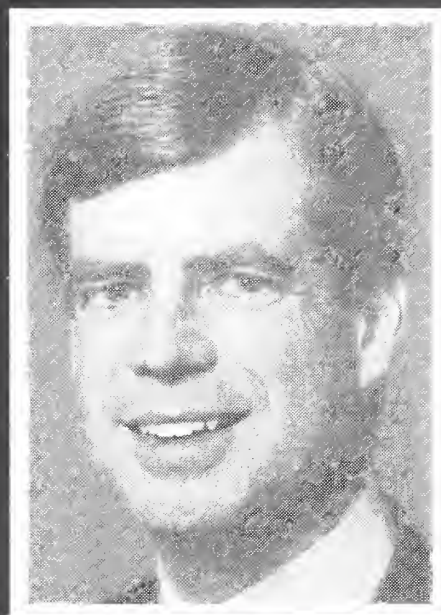
James B. Shaffer

CEO

Clickshare Service Corp.

www.clickshare.com

"Why E-Books Could Fail: Dynamic Reader Services"

Clickcshare Service Corp.

Slide 1
Why e-books could FAIL!
Dynamic Reader Services
James X. Shaffer
CEO, Clickshare Service Corp.
Clickshare

Slide 2 — Clickshare
Relationship and transaction infrastructure:
➢ Sharing customers
➢ Marketing content
On the Internet

Slide 3 — Clickshare — Organization of these remarks
1. "Tree book" technology still limits e-books
2. Opportunities of the new technologies
3. "Dynamic Reader Services?"
4. Issues for transaction & DRM platforms
5. The "ideal" transaction platform
6. One solution - Clickshare

Slide 4 — Clickshare — The Old Technology
Production technologies defined content delivery packages
and
delivery packages defined content
➢ Novels - the "book"
➢ Short stories - too short for a "book"
➢ Collections - of whatever - fit "book"
➢ Periodicals - "books" by the month, week

Slide 5 — Clickshare — Limitations of "Tree Books"
➢ Minimum economic size for content
➢ Minimum economic press run
➢ Can't be updated; must be replaced
➢ Long production cycle → Aging content
➢ Control of presses = control of business
➢ Rejection slips

Slide 6 — Clickshare — Limitations of "Tree Books"
➢ Images are static
➢ Color is expensive
➢ Sound comes as separate package
➢ No personalization of content
➢ One-way transmission of content
→ *Creative limitations*

07/29/99
1

Clickshare

Limitations of tree books now gone!

➢ **No minimum economic size for content**
➢ **No minimum economic press run**
➢ **Can be updated instantly**
➢ **Short production cycle**
➢ **Control of presses doesn't matter**
➢ **Rejection slips don't exist**

7

Clickshare

Limitations of tree books now gone!

➢ **Images can move**
➢ **Color is cheap**
➢ **Sound is integrated**
➢ **Easy personalization of content**
➢ **Two-way transmission of content**
  → *Creative opportunities*

8

Clickshare

But e-book marketing is still focused around tree books!

➢ **Existing books adapted to e-books**
➢ **Content still sold as "books"**
➢ **Static, silent, largely colorless**
➢ **No connectivity**
➢ **No personalization**

9

Clickshare

But the marketing is still focused around tree books!

Needed: A new marketing paradigm

10

Clickshare

What does the customer want?

Books?
Or
What books provide?

11

Clickshare

What does the customer want?

Information, entertainment, sure, but also:
➢ **Efficiency in ingesting, digesting info**
➢ **Stimulation, new experiences**
➢ **Convenience in purchasing, carrying, storing, sharing**
➢ **Connectivity**
➢ **Personalization**
➢ **Flexible content packages**

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Imagine!
- Customized, personalized books
- Sold by the click, piece, or unit of time
- Read on the train, listen in the car
- Bundled connectivity, networks
- Bundled library services
- Instant &/or periodic updates

e-Books
- Restrictive concept
- Implies all the old limitations

Dynamic Reader Services
Implies:
- Interactivity
- Content flexibility
- Personalization
- Connectivity

Coming Next Year?

D R S - 2001
(Dynamic Reader Services - 2001)

Elements of DRS
- Customizable content
- Sold, updated on demand
- Multi-media
- Internet connectivity
- Packaging flexibility: piece, time, bulk
- Ancillary services available
- Dynamic platform for transactions, DRM, value-added relationships

Internet Transaction Systems
- Internet built to manage information flow, not payment
- Like a phone grid without billing
- Limits e-books and tree books

*Also needed:
A new transaction system*

Transaction Issues with DRS
- Digital Rights Management
- Buyer financial security
- Buyer privacy
- New role for publishers, middlemen
- Billing/DRM/settlement systems

Clickshare

Limitations of Credit Cards, Wallet systems

- User concerns:
  - Convenience: user software, keystrokes
  - Pre-loaded digital cash
  - Security of personal data
  - Privacy of buying behavior
- Fraud – 3x that of physical commerce
- Minimum economic transaction size
- Lack of built-in DRM mechanism

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Clickshare

Policing Royalties
Two approaches

Make it hard to do the wrong thing
  - Encryption
  - Secure envelopes
  - Closed systems
  - Stephen King's "Riding the Bullet"

Make it easy to do the right thing
  - Stephen King's "The Plant"
  - Clickshare

20

Clickshare

Ideal Characteristics of DRS Transaction Platforms

  - End-user convenience, privacy, security
  - Device-independent, wireless compatible
  - Format (PDF, DEB, etc) independent
  - Handles all DRM schemes
  - Economical with small transactions
  - Simultaneous retail and royalty transactions
  - Publishers and middlemen can add value

  - Easy for content vendors to use

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Clickshare

Transaction Platforms

One Solution: Clickshare Service Corp.

Relationship infrastructure
  - Content Exchange
  - Customer Exchange

Clickshare
®

22

Clickshare

Elements of the Clickshare Service
(like a credit card, plus)

Clickshare-enabled vendor

(20 minutes to install software)

Clickshare Server

Internet

User's agent of choice

User with only browser software

(Bank, phone company, ISP, etc).

23
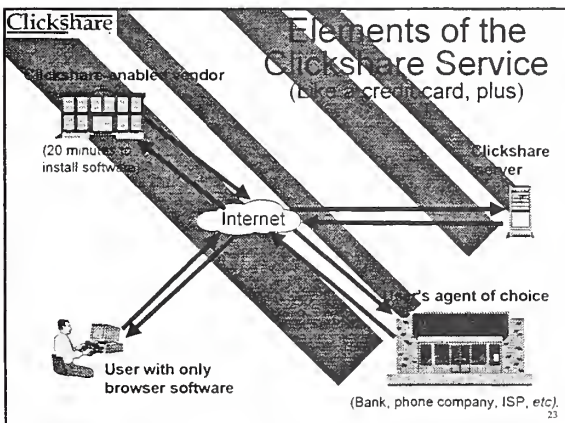
Clickshare

Clickshare's business model:

  - Give away the software
  - Enable value-added relationships in the digital content distribution chain
  - Operate "backshop" services
  - Take % of transactions

24

Value proposition for DIGITAL CONTENT OWNERS

- Wholesale to other sites
  (Reach new customers)
- Sell content from other sites
  (New things to sell existing customers)
- Dis-aggregate, sell by the click
  (New ways to package & sell)
- Receive royalties on every click!

The value proposition for USER'S AGENTS
(ISPs, portals, Banks, Telcos, etc.)

- Take a % of user's retail transactions
- Buy content wholesale, sell retail at agent's "content store"
- Negotiate perks & deals for users

Consumer Value Proposition

Clickshare operates in a business-to-business model, but enables end users to:

- Register once
- Purchase with one click from multiple sites
- Purchase anonymously
- Aggregate e-purchases into one bill

Wholesale Retail possibilities

Wholesale Retail possibilities

Wholesale Retail possibilities
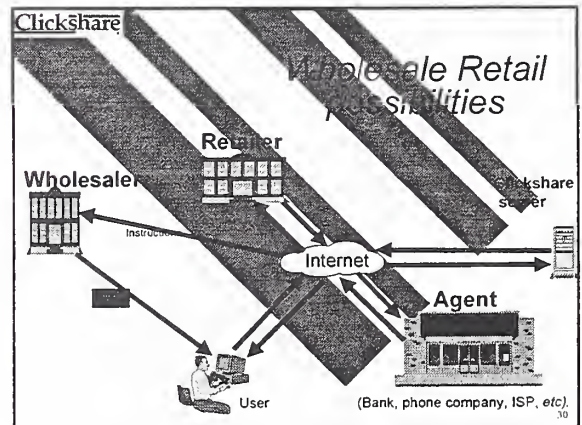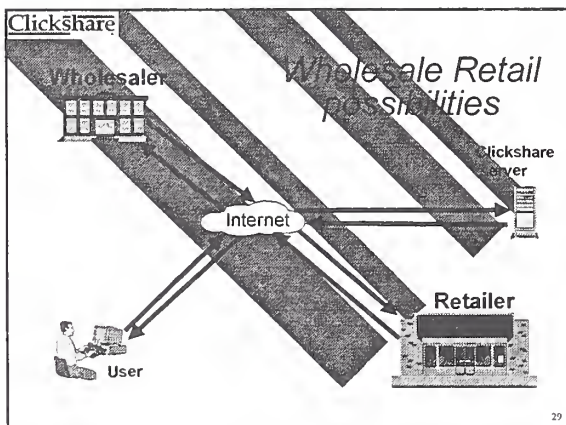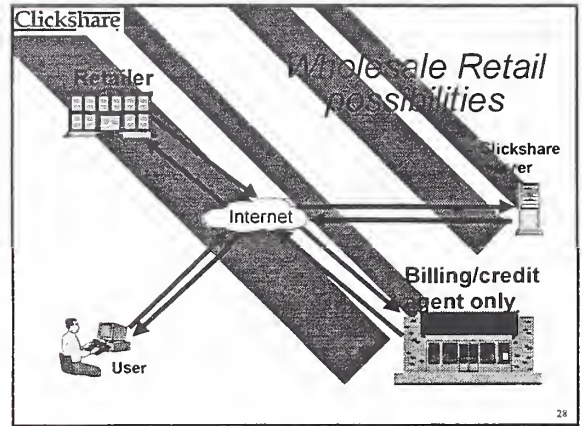
Clickshare

Distributed User Management

User relationships are *distributed* among…
"user owners" *distrusted agents.*

(Agent gives user an anonymous "digital calling card")

31

Clickshare

Distributed User Management

Enables sharing of customers without revealing their identity

Clickshare will enroll end users *en masse* via agents to create critical mass.

32

Clickshare

Clickshare's modest goal:

Be the ubiquitous world standard for sharing customers and marketing digital content.

33

Clickshare

Clickshare Status

➢ Technology ready NOW

➢ Won't launch until critical mass of launch partners is achieved

➢ Signing up launch partners now

34

Clickshare

Summary

➢ Tree books *should* be in decline
➢ e-books will fail
➢ Dynamic Reader Services will thrive
➢ We need to liberate our marketing vision beyond tree books, to:

A dynamic business
A service business
A business focused on readers

35

Clickshare

Dynamic Reader Services

36

Electronic Book 2000

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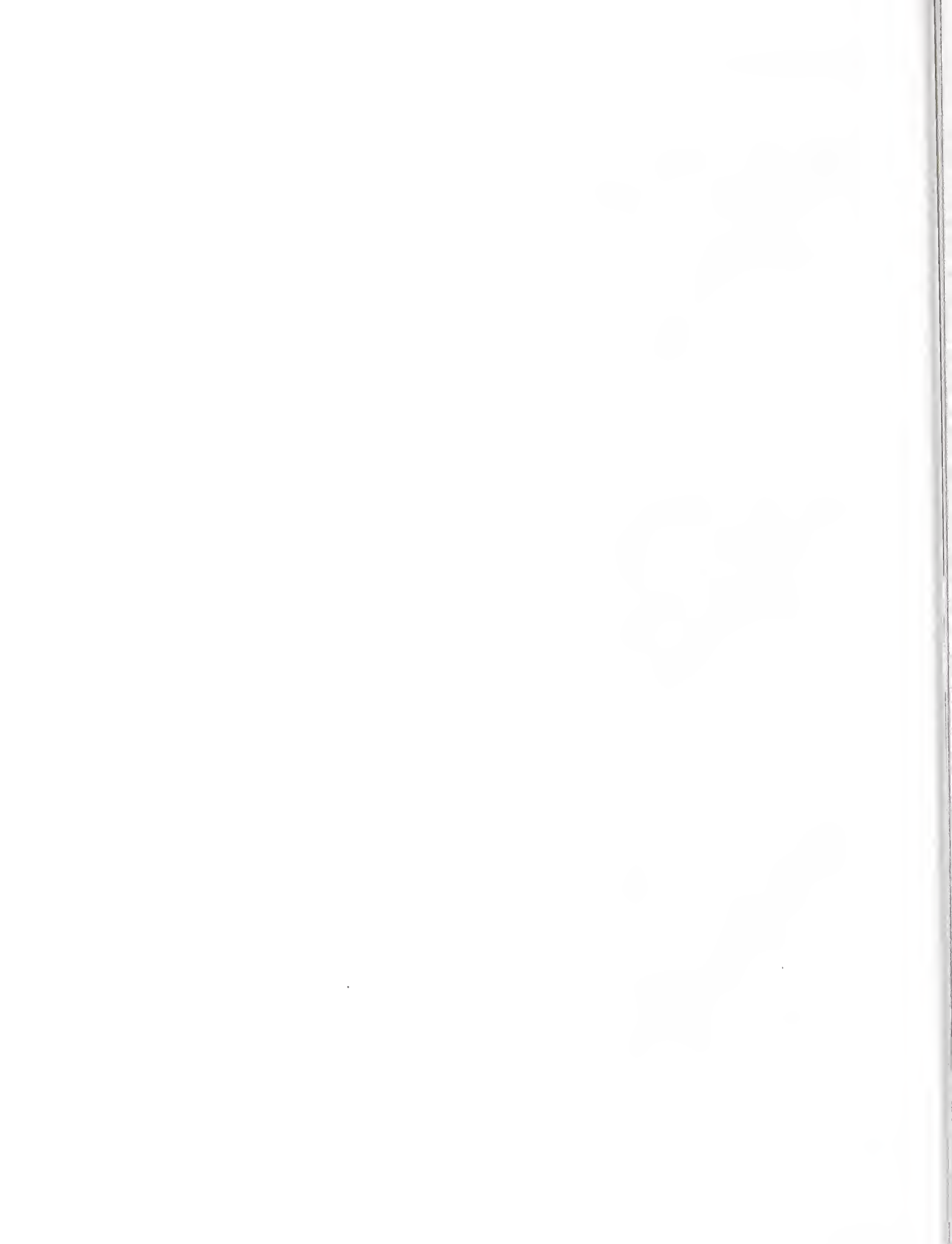Michael Fragnito has spent most of his twenty-five years in the publishing industry as a publisher of illustrated books, and the head of production and design departments. He was Managing Director of Clarkson Potter when that company transformed itself from a sleepy publisher of arcane art books into one of the leading publishers of commercial illustrated books. At that time Potter published the first books by Martha Stewart, as well as numerous other lifestyle books that went on to sell previously unheard of numbers for expensive coffee table books. In 1987 he joined Viking Penguin and revived the dormant Viking Studio Books imprint while also running the operations of the corporation. Studio enjoyed many successes during Fragnito's tenure, including the bestsellers MOTHER, BLUE DOG, and THE SECRET LANGUAGE OF BIRTHDAYS. After the merger of Penguin Putnam, he assumed the role of Senior Vice President of Production for the corporation's American companies.

Upon leaving Penguin Putnam, Fragnito had a brief stint as an entrepreneur and an author. He wrote and produced the very successful, ARK TO THE FUTURE, and began a consulting firm called Long Hill Publishing. As luck would have it, one of his clients was Barnes & Noble.com, where the CEO, Steve Riggio, had decided that the area of digital publishing and retailing was going to be a major part of the future of his company. It wasn't long before Steve's passion for the subject of eBooks had totally absorbed Michael, and he found himself heading up that area for B&N.com.

"I think it is clear", says Fragnito, "that eBooks are changing the definition of all of our existing relationships. Publishers, authors and retailers are seeing their roles shift and merge in ways that would have been inconceivable just a few years ago. It is an overused, but largely truthful statement that we now find ourselves at the start of a revolution, and I feel privileged to be one of the people at the epicenter of this dramatic change in our industry."

Michael Fragnito

Vice President, eBooks

Barnes and Noble.com

www.barnesandnoble.com

"The Varieties of eBook Publishing"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Dr. Jonathan Schull is the inventor of the SoftLock.com Solution and author of its issued and pending patents on information commerce. With an undergraduate degree in psychology from Reed College and a Ph.D. in biological psychology from the University of Pennsylvania, Dr. Schull has spent more than 30 years exploring behavior, evolutionary psychology and the spread of information through intelligent networks. These interests "seeded" his work on the propagation of digital goods through the Internet, beginning with some laboratory software he wrote for his animal behavior research. Schull came up with a system that allowed researchers and their students to try, buy and redistribute an instantly purchasable, but non-pirateable software product - and the fundamental concept behind SoftLock.com was born. In 1992, Schull gave up a tenured position at Haverford College, founded SoftLock.com and wrote the company's seminal patent. An active entrepreneur, public speaker and inventor, he also co-founded "Downtown Anywhere" (www.awa.com), the Internet's first virtual city. Dr. Schull also created the First Virtual Bank of Downtown Anywhere, one of the Web's very first micro-payment systems.

Dr. Schull is an internationally recognized authority and lecturer on intellectual property protection, information commerce, the new information economy and the nature of intelligence in biological and artificial systems. In addition to having appeared on NBC's Prime Time Live for work on dolphin cognition, Dr. Schull has written numerous articles related to the evolution and spread of adaptive knowledge and behavior, including: "Are Species Intelligent" (Behavioral and Brain Sciences, 1990), "The Uncertain Response in Humans and Animals" (Cognition, 1997), and "William and the World Wide Web," one of several articles and book chapters he has published about William James, the great American psychologist and philosopher.

Dr. Schull has received two coveted fellowships from the National Science Foundation and the National Institute of Mental Health, followed by an impressive list of more than a dozen other fellowships, grants and awards. A founder of the General Evolution Research Group and former associate editor of World Futures: the Journal of General Evolution, Dr. Schull now shuttles regularly between his home in Rochester, New York and SoftLock.com's headquarters in Maynard, Massachusetts.

Jonathan Schull

Founder and Chief Science Officer

SoftLock.com, Inc.

www.softlock.com

"Peer to Peer Copying: Protecting Copyrights and Profitability"

SoFTLOCK

Peer to Peer Copying;
Protecting Copyrights and Profitability

Jonathan Schull, Founder

SoftLock.com, Inc.
Five Clock Tower Place
Suite 440
Maynard, MA 01754

I worry when publishers talk about copyright education...

"When you think about the awesome potential of television to educate....

...aren't you glad it *doesn't?*

---

the e-publishing nightmare

(wake up and smell the coffee!)

Content Provider
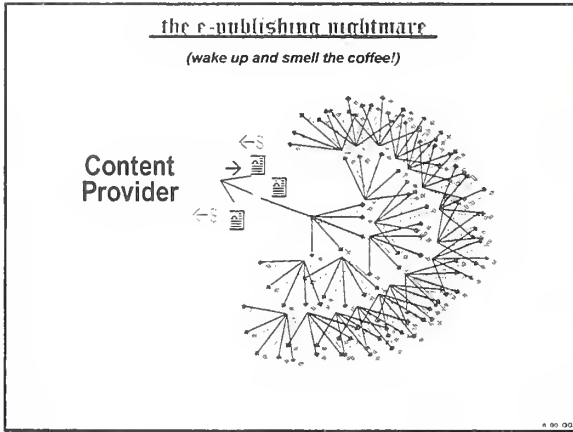
Like it? Buy This Now!   Buy   Send to   About   Help   SoFTLOCK

STANDARD & POORS   INDUSTRY SURVEYS

Healthcare: Products & Supplies

COMPARATIVE COMPANY ANALYSIS
REVENUES

How the Industry Operates
Key Industry Ratios and Statistics
How to Analyze a Medical Device Company

Company	Mo. End	1987	1992	1993	1994	1995	1996	1997
HEALTH CARE (MEDICAL PRODUCTS & SUPPLIES)								
ACUSON CORP	DEC	105.6	342.8	295.3	350.5	328.9	346.2	437.8
ADAC LABORATORIES	SEP	60.8	121.2	156.9	176.3	184.8 A	240.8	282.3 A
ATL ULTRASOUND INC	DEC	291.9	323.7	304.5	366.2 A	399.4	419.2	431.2
ALLEGIANCE CORP	DEC	NA	NA	NA	NA	4,922.0	4,387.2	4,350.8 A
BALLARD MEDICAL PRODUCTS	SEP	9.6	51.3 A	66.5 A	67.3	83.9	105.9 A	127.8 A
BARD (C.R.) INC	DEC	641.3	990.2	970.8	1,018.2	1,137.8 A	1,194.4	1,213.5
BAUSCH & LOMB INC	DEC	840.3	1,709.1	1,872.2	1,850.6	1,932.9	1,926.8	1,915.7

To the Investment Club,

John Sheldon (thejohn@dialogos.com) requested that SoftLock.com send you this valuable information. Feel free to examine this complimentary sample document and pass it along to others you think might be interested. If you would like to purchase the complete document, simply click the "buy this" button at the top of any page

To the Investment Club,

Check out the growth S&P is projecting ... I think everyone in our investment club should read this and make an investment today!

John

S&P Health Products

Slide 1:

Like It? **Buy The Rest!** | Buy | Send It | About | Help | **SoftLock**

STANDARD & POORS   INDUSTRY SURVEYS

Healthcare: Products & Supplies

CURRENT ENVIRONMENT

Slide 2:
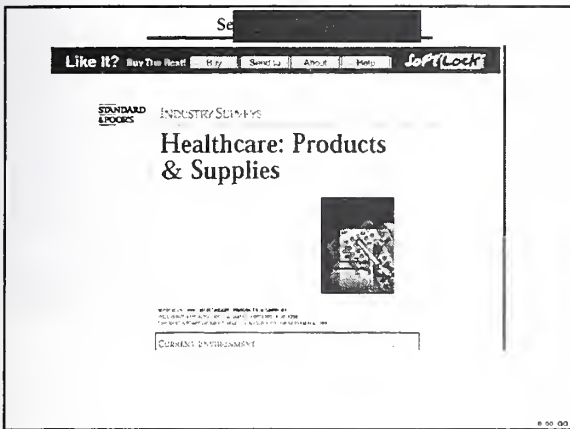
U.S. Patent # 5,509,070

filed 1992, Issued 1996
(other patents pending)

1. Lock a particular digital product to a particular context.

Content:
- Documents
- Music
- Video
- Software
- Multimedia
- Java

Context
- Computer
- Biometrics
  - Voice
  - Fingerprint
- Digital Certificates
- Smart Cards

2. Vend purchase keys for content in that particular context

Slide 3:

Business Model circa 1993 :

SoftLock.com

Content Provider

Content Provider

Slide 4:
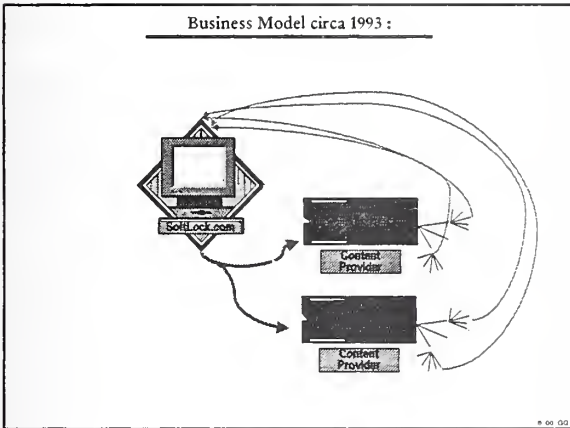
Lessons learned

People *will* pay good money for good info
Digital goods need digital markets
Digital publishers need help.

It's the economics, stupid!
  —without sales,
                    royalties and rights are irrelevant.

Slide 5:

Business Model circa 1999:

Slide 6:

We *encourage* redistribution!

SoftLock | Buy This | send to a friend | copyright info | help | STANDARD & POORS

STANDARD & POORS
INDUSTRY SURVEYS

Healthcare: Products & Supplies
SEPTEMBER 10, 1998

| buy this | send to a friend | copyright info | help |
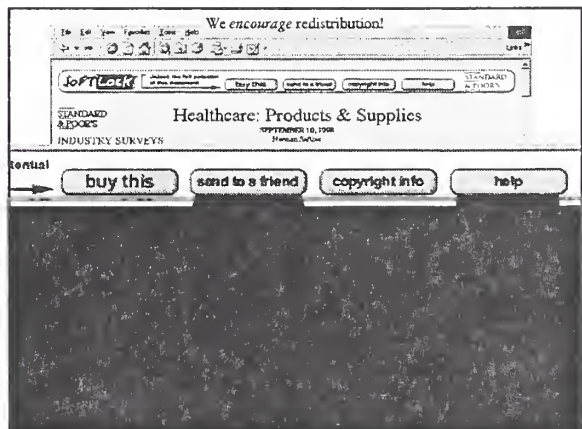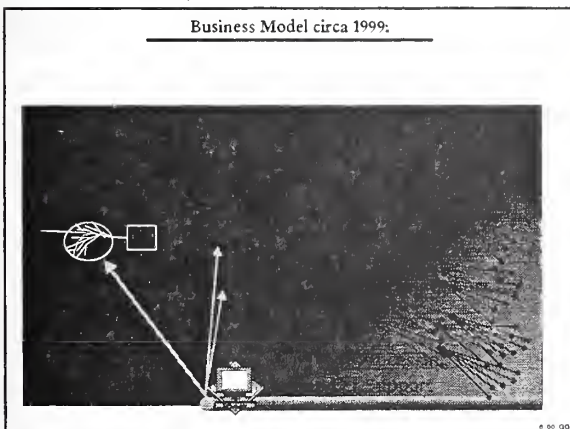
So what do people do?

Riding the Bullet

Time

Price
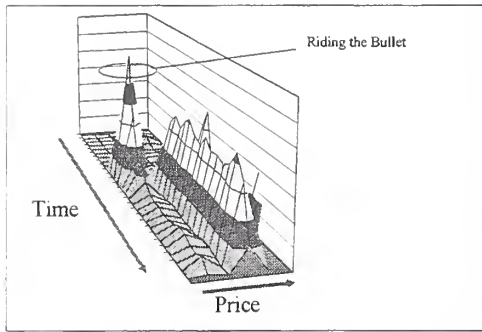
Passalongs are 3000 times as effective as banner ads

A minority of our customers do redistribute.

- *the conversion rate for Passalong is 25%*
In contrast, Banner ads yield 0.06%

- 1% Clickthrough, 1.8% Conversion, 65% Abandon

Conclusion: Passalongs breed sales...when they occur!

When *did* Passalong occur?

Rarely, for a silly reason

of those purchasers who did *not* pass along...
Most thought it was wrong!

"...what would encourage you to forward Riding the Bullet?"

If they paid, too If it could be printed.   If it could be printed   Didn't think it was allowed   didn't know I could Why would I forward it?   Why would you forward it to someone who didn't pay for it? Those who want to read it can download it themselves.   The people I know who would enjoy it don't have a computer. people can just buy it themselves   Only if Stephen King got his royalty   Let them buy their own damn copy   let them buy it themselves   It's not right to forward the book unless they pay for it.   It's in violation of the copyright agreement   It would be wrong to forward it.   If they paid for it   If they had to pay, too if the other person could print it If the author received a royalty   If it wasn't copyright infringement

---

Why Purchasers *Don't* pass along

If I could print it   If they paid, too   If it could be printrd.   If it could be printed   Didn't think it was allowrd   didn't know I could   Why would I forward it?   Why would you forward it to someone who didn't pay for it?   Those who want to read it can download it themselves. The people I know who would enjoy it don't have a computer.   people can just buy it themselves   Only if Stephen King got his royalty   Let them buy their own damn copy let them buy it themselves It's not right to forward the book unless they pay for it.   It's in violation of the copyright agreement It would be wrong to forward it.   If they paid for it   If they had to pay, too   if the other person could print it   If the author received a royalty   If it wasn't copyright infringement   If I paid, others should too. If I knew Stephen King would get the money   If I knew it was ok   If I could print   I wouldn't forward it, but I might buy it for someone else. I wouldn't forward it unless it's legal. I thought it was illegal   I wouldn't forward it unless it was ok to do.   I would not forward this for any reason – it's stealing other people's work   I was under the impression that I wasn't supposed to share the book with anyone else   I thought we were asked to not forward it to anyone else   I thought the idea was NOT to pass it on.   I thought I would be infringing on the copyright   I thought forwarding the document would be wrong   I never send attachments in case they have viruses I figured you wouldn't want it distributed all over the placeI don't think it was legal to forward it.   I don't forward things to people   I didn't want to violate any licensing or copyright laws.   I didn't think the copyright would allow this   I didn't think I was meant to forward it.   I didn't think I could   I didn't realize I could or should forward it.   I didn't know it was OK to forward   I didn't know I was allowed to forward it   I consider forwarding it a breach of the author's copyright   I paid for it and it would be dishonest to give it to someone who hadn't   Haven't gotten around to reading it yet   Forwarding would infringe on some copyright laws   Forwarding without paying is piracy.   forwarding it would be stealing   Forwardrd it to myself on another computer   Eveeyone should have to pay for their own.   Each person should have to buy their own.   Don't know if it's legal to forward   Didn't want to violate copyright laws   Didn't think it was legal Didn't think I could   Didn't know it was OK to forward.   Didn't know it was ok to do.

Main factors for those who do not pass along:

We should try to encourage rather than deter passalong

SOFTLOCK

Peer to Peer Copying;
Protecting Copyrights and Profitability

SoftLock.com, Inc.
Five Clock Tower Place
Suite 440
Maynard, MA 01754

Electronic Book 2000
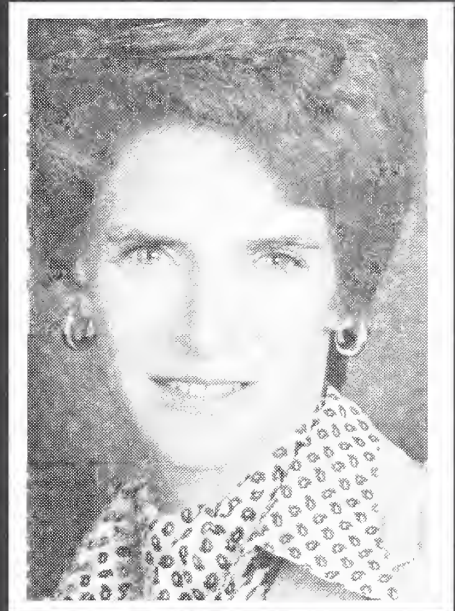
Changing the Fundamentals of Reading
September 25-27, 2000
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Risher works with publishers and other rights holders to help them find ways to achieve increased efficiencies by system integration both for existing work flows and to prepare for the evolving digital marketplace. For over 20 years, Carol was Vice President, Copyright and New Technology, for the Association of American Publishers (AAP) where she was involved in developing and implementing AAP positions on Copyright and New Technology both domestically and internationally.

Ms. Risher coordinated the publishing industry's strategic copyright litigation including both the successful cases against infringing photocopying (Gnomon, Kinko's, MDS, Texaco) and the establishment of the AAP's anti-piracy program where she managed litigation and enforcement efforts in more than a dozen countries from 1984-96. She was a co-founder of the International Intellectual Property Alliance and served as its first Executive Director from 1984-1993.

As Vice President New Technology, she was responsible for assisting AAP members in their efforts to move from print-based products to electronic products and for managing complex technology prototypes for the industry, which led to actual products or services ISO 12083, standard markup language for book publishers, the Digital Object Identifier (DOI), reference linking of journal articles (DOI-X), and ONline Information eXchange (ONIX)).

Carol Risher

Senior Vice President, Business Development

Savantech, Inc.

www.savantech.com

"Digital Rights Management: Connecting the Pieces"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Mr. Handlovsky, B. Comm., is Director of Business Development for RightsMarket Inc., a company specializing in persistent digital rights management.

Robert is focused on helping large international publishers with solutions for protecting their intellectual property and maximizing their return on investment. With an extensive background in tailoring software solutions to meet customer needs, Rob brings a unique perspective on digital rights management, specifically for the publishing industry. Rob is active in North America and Europe, guiding major clients through the challenges of implementing an effective electronic publishing strategy.

Robert Handlovsky

Director, Business Development

RightsMarket, Inc.

www.RightsMarket.com

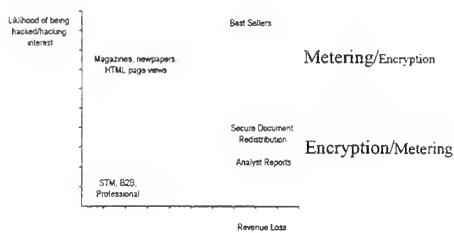**"DRM for the Scientific, Technical and Medical Market Place"**

(R)ightsMarket

DRM for the Scientific, Technical and Medical Market Place
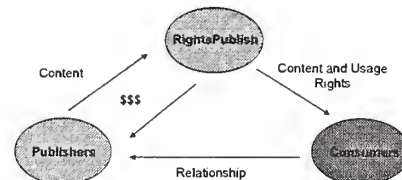

Unimpeded Digital Commerce

RightsMarket develops and markets Digital Rights Management software that our customers use to create new business models for the information economy

---

DRM Fit to STM Market

Liklihood of being hacked/hacking interest

Best Sellers

Magazines, newpapers HTML page views

Metering/Encryption

Secure Document Redistribution

Analyst Reports

Encryption/Metering

STM, B2B, Professional

Revenue Loss

Positioning

RightsPublish

Content

Content and Usage Rights

$$$

Publishers

Relationship

Consumers

Publisher and Channel Sell Content
RightsMarket – Fulfillment and Rights Management

DRM Options

- Standard license enforcement
  - Simple but not based on usage
  - No metering capabilities
  - Does not track composite products

- Cryptographic Containers & Superdistribution
  - Useright (perpetual and persistent license)
  - Supports online and disconnected usage
  - Meters usage (Compositions, Frequency)
    - Encrypted and unencrypted
  - Superdistribution/Metering Already implemented

Technology Components

RightsPublish

Wrapper
Repository/Catalog
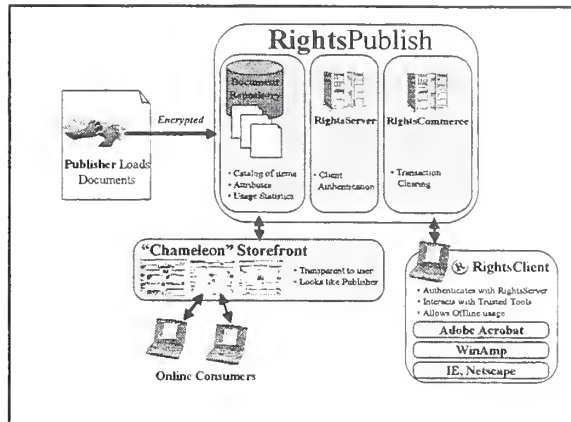RightsServer
RightsCommerce
RightsClient
Trusted Plugins
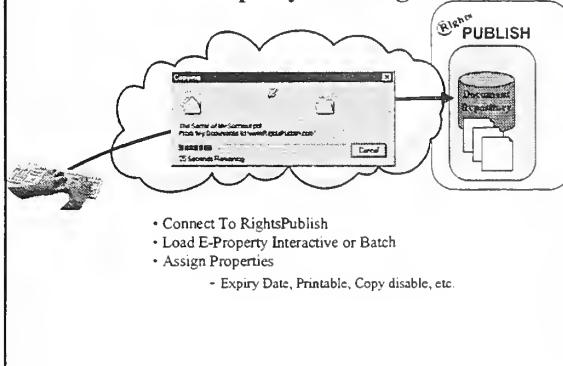RightsInstaller

Complete Electronic Publishing Website

- Encrypts and Assigns Usage Attributes
- Full Shopping, Acquisition, and Chameleon Facility
- Users, E-Properties,Attributes & Authentication
- Transaction Clearing and eCommerce
- Workstation DRM Enabler
- Viewer/Player Extensions
- Intelligent Installation Technology

RightsPublish

- Customizable website
- Digital property content management
  - upload of eProperties and information about them
  - encrypts
  - catalogs
  - downloads
  - RightsInstaller
- Chameleon Facility
  - provides back office support for rights management and optionally eCommerce to third party websites

---

RightsPublish

E-Property Loading

- Connect To RightsPublish
- Load E-Property Interactive or Batch
- Assign Properties
  - Expiry Date, Printable, Copy disable, etc.

Packaging Process

- Publisher Assigns Usage Attributes
- Price Points and options
- Granularity Depends on Viewer/Reader

Purchasing Content

1) Browse Catalog (Chameleon)

2) Acquire Content (Shopping Cart)

3) Clear Transaction (Rights Commerce)

4) Register Consumer (RightsServer)

5) Install Components (RightsInstaller)
  - RightsClient *
  - Plug-In *
  - Reader *
  - Content

* Once only

RightsInstaller

Viewing Content

New Retail Models Enabled

- Partial Consumption
  - View Only
  - View and Print
  - Limited Copy
- Expiration / Try Before You Buy
- Digital Returns
- Pay Per Use
- Subscription

RightsPublish Advantages

- Complete end to end solution
- Metering, Multiple formats, RightsInstaller, Composite products
- Get paid for all content
- Increased customer satisfaction
  - Digital returns, try and buy, better pricing, instant fulfillment
- Enables high value, high profit content

Summary

Early to market

Immense market

Proprietary investments

(R)ights Market

For further information, please contact
Lindsay Moir, President,
(403) 571-1191
MoirL@rightsmarket.com

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

David Goldstein is the CTO of Versaware, Inc., one of companies pioneering the electronic publication industry. Mr. Goldstein served on the authoring committee of the Open eBook Specification. He is also active in the EBX standard for Digital Rights Management and OEBF working groups.

Prior to his work at Versaware, he was Product Manager and the Technical Evangelist of Accent Software, Inc., which produced some of the first multi-lingual Unicode-based word processors and translation tools.

In his 20 years experience in the specification, design, and construction of computer and software systems, Mr. Goldstein has worked on a wide range of projects. Those projects include the design of the software for a satellite tracking station, control systems for a Nuclear Power Plant, Shop Floor Management and Material Handling Systems, the landing system for a robot controlled helicopter, and multilingual browsers, word processors and translation systems.

He is a regular speaker at seminars and professional conferences on a number of subjects.
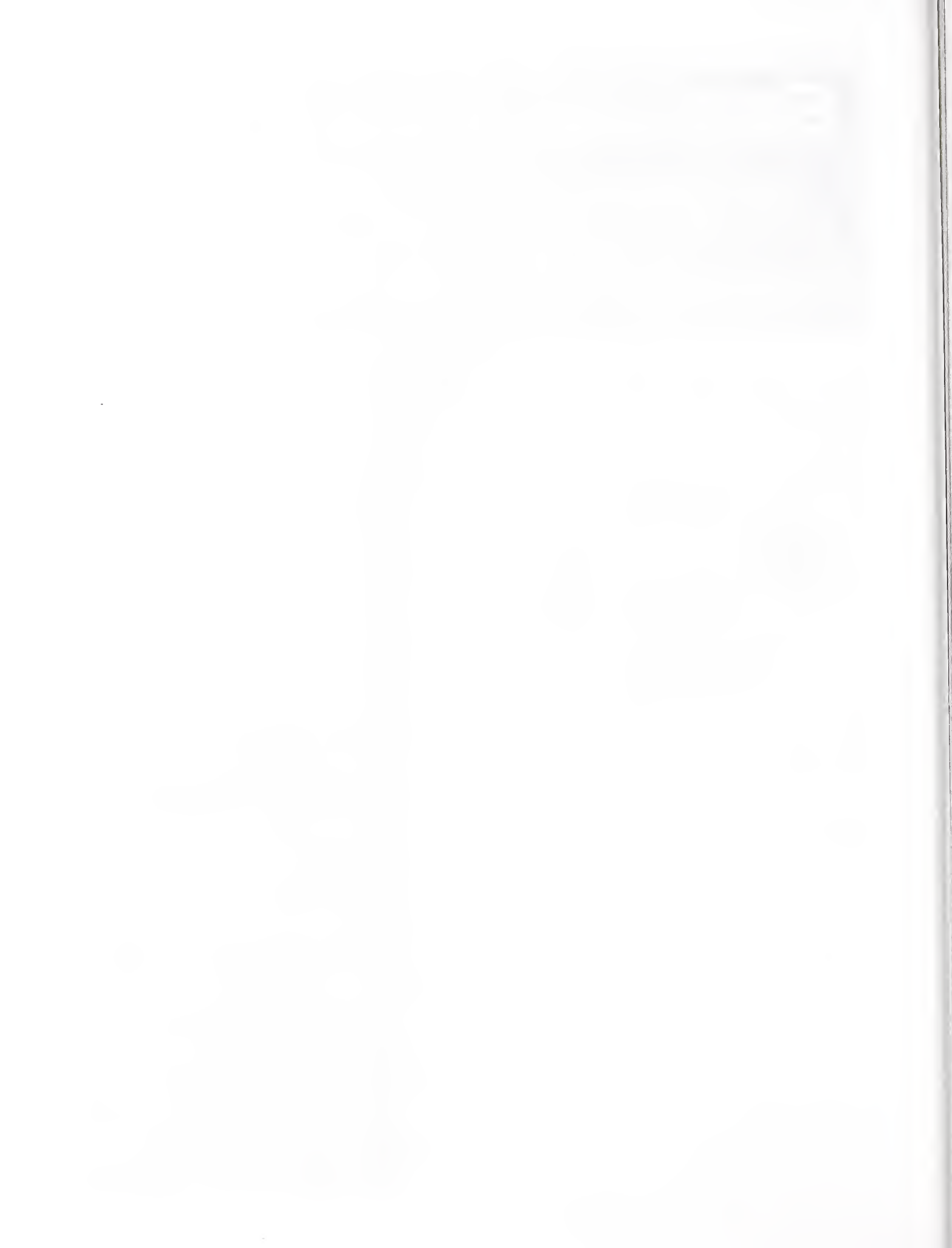
David Goldstein

Chief Technology Officer

Versaware, Inc.

www.versaware.com

Electronic Book 2000
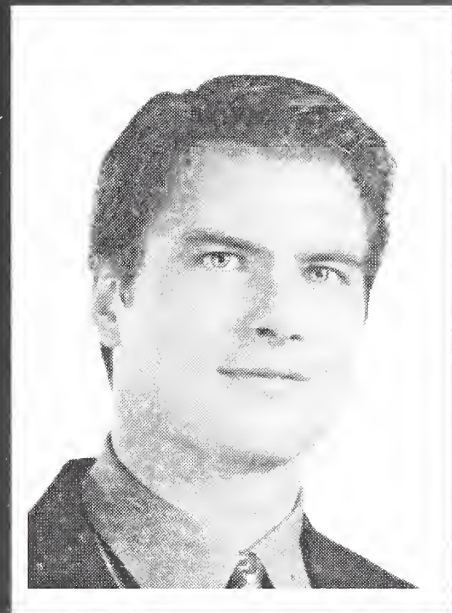
Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

As head of Reciprocal Publishing, Moynahan is responsible for managing sales, marketing, account management, business development, and technical strategy for Reciprocal's publishing division. Moynahan's leadership in bringing together publishers, distributors, college bookstores, and institutions of higher learning has made Reciprocal Publishing the first DRM solutions provider to implement "live" DRM-enabled digital distribution systems on the Internet.

Recognizing the importance of this trend in e-publishing, he conceived and hosted a seminar this past October on "The Coming Transformation of Higher Education in the Digital Age" which centered on the challenges and opportunities facing the academic community and its suppliers. Moynahan continues to focus his energies on forging strategic partnerships to enable successful DRM implementations, including partnerships with Xerox, ContentGuard, Adobe Systems, and Microsoft. Moynahan has a B.A. from Williams College and an M.B.A. from Harvard Business School.

Prior to joining Reciprocal, Moynahan worked for an Internet firm focusing on robust, high-performance e-commerce transactional systems, and at Goldman Sachs in its corporate finance and equity capital markets, specializing in technology strategy and finance. Moynahan is recognized as a leader in digital rights management and has been widely quoted on the subject in Publisher's Weekly, The Chronicle of Higher Education, The Seybold Report on Internet Publishing, Educational Marketer, Wired, and The New York Times.

Matthew P. Moynahan

Sr. VP/General Manager Reciprocal Publishing

Reciprocal, Inc

www.reciprocal.com

"DRM: Making $$$ and Sense of the Economics of E-books"

Electronic Book 2000

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September 25-27, 2000
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Michael Miron, chairman and CEO of ContentGuard, Inc., is responsible for business strategy and execution of ContentGuard's mission to make Internet Content Delivery a reality. Miron was previously president of Xerox' Internet Business Group.

Before joining Xerox in 1998 Miron held various leadership positions at AirTouch Communications, Salomon Brothers Inc., McKinsey & Company and IBM.

Miron holds a Bachelor's degree from Cornell College of Engineering and a Master's degree in Management from Northwestern University.
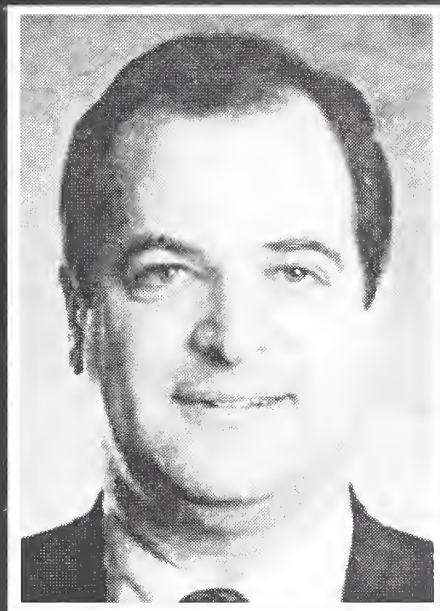
Mike Miron

CEO and President

ContentGuard, Inc.

www.text100.com

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Martin Eberhard was the CEO and co-founder of NuvoMedia, creators of the revolutionary Rocket eBook. The Rocket eBook has been available in the US since the end of 1998 in catalogs such as Levenger, online from sites including BarnesAndNoble.com and Amazon.com and in Barnes & Noble stores.

Mr. Eberhard was once a Silicon Valley engineer (with a Masters Degree in Electrical Engineering from the University of Illinois), starting his career at the pre-public Wyse Technology. He acquired a taste for startup companies with Wyse's IPO, and went on to co-found Network Computing Devices, which went public in 1991. After 14 years working in purely high-technology companies, Eberhard started NuvoMedia in 1997 to merge his technical expertise with his love of books.

Earlier this year, Gemstar International acquired NuvoMedia along with their competitor, SoftBook Press, and Mr. Eberhard became Senior Vice President of Gemstar. Mr. Eberhard left Gemstar/NuvoMedia in July of this year to pursue other activities. He remains, however, a passionate advocate of electronic books both because of the enormous benefits they bring to readers and because of the great opportunities they may bring to authors.

Martin F. Eberhard

"Copyrights in the Digital World: Facts and Fiction"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Dennis McNannay is well-versed in the current state of and the future direction of DRM in the e-books market. He will be able to convey the challenges the market faces today and the more profitable publishing models publisher can move towards in the future. He can highlight specific steps publishers can take as they make this transition. Dennis is able to answer questions about the current advances being made in eBook standards (OEB file format support, meta data tagging via ONIX, etc.) and DRM/Viewer technology.

InterTrust has the cross-media, cross-platform and persistent technology to make protection of e-books in the realm of Napster and email distribution possible. Capitalizing upon its success in the digital music space, InterTrust is currently demonstrating its trusted publishing suite consisting of two application products - Flying Media and Flying Media RP(tm), as well as an Adobe Acrobat(tm) plug-in technology for the purchase and download of content in .PDF format. The trusted suite of DRM products supports the broadest range of business and content models - from the simplest to the most sophisticated - and is consumer-friendly, convenient, and easy to use.

InterTrust has partnerships with the following companies:
- Digital World Services, the digital rights management company of Bertelsmann AG;
- Magex, a leading digital services company;
- NetLibrary, the leading provider of eBooks and Internet-based content/collection management services;
- PricewaterhouseCoopers' DigiHub(tm) digital rights management solution;
- PublishOne, a leading developer of online publishing and distribution services for business information publishers.

Dennis McNannay

Vice President of Publishing

InterTrust

www.intertrust.com

"DRM - The Trust Utility Model"

Electronic Book 2000
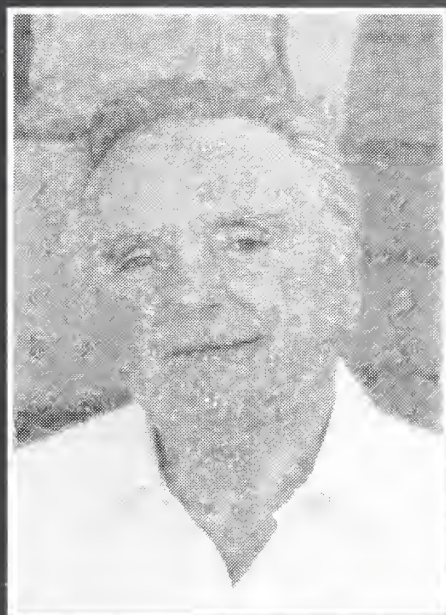
Changing the Fundamentals of Reading
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Warren Adler has published twenty-seven volumes of fiction, which have been translated into more than twenty languages. Mr. Adler's novel "The War of the Roses", a classic about divorce was made into a hit movie starring Michael Douglas and Kathleen Turner. "Random Hearts" was made into a movie starring Harrison Ford, directed by Sidney Pollack, and released in October 1999. His earlier collection of short stories "The Sunset Gang" was adapted and made into a acclaimed trilogy for PBS.

Adler's six volume mystery series based on the fictional adventures of Fiona FitzGerald, a detective in the nation's capitol has won a world-wide following and is currently being developed as a series for the Lifetime Television Network. His latest novel, "Mourning Glory" is scheduled to be released by Kensington Publishing in September 2001. He is creating an e-book virtual bookstore for all his published writing in text and audio in all languages and in all e-book and print-on-demand formats for availability throughout the world.

Adler was born in Brooklyn, New York. He graduated from New York University with a degree in English literature. After graduation, he worked for the New York Daily News and was the editor of The Queens Post. During his Army service in the Korean War he was the Washington Correspondent for Armed Forces Press Service. His by-line appeared in every service publication throughout the world. Adler founded an Advertising and Public Relations firm in Washington DC, Warren Adler Ltd., which he operated for eighteen years. He also owned and operated an NBC television station, three radio stations and a publishing business. In 1974, with his wife Sonia, then a photo journalist and their son David, they launched "The Washington Dossier" magazine. Mrs. Adler was Editor and David Adler publisher. The magazine was sold in 1985. The Adlers maintain their permanent residence in Jackson Hold, Wyoming and live in Manhattan six months of the year. They have three sons and four grandchildren.
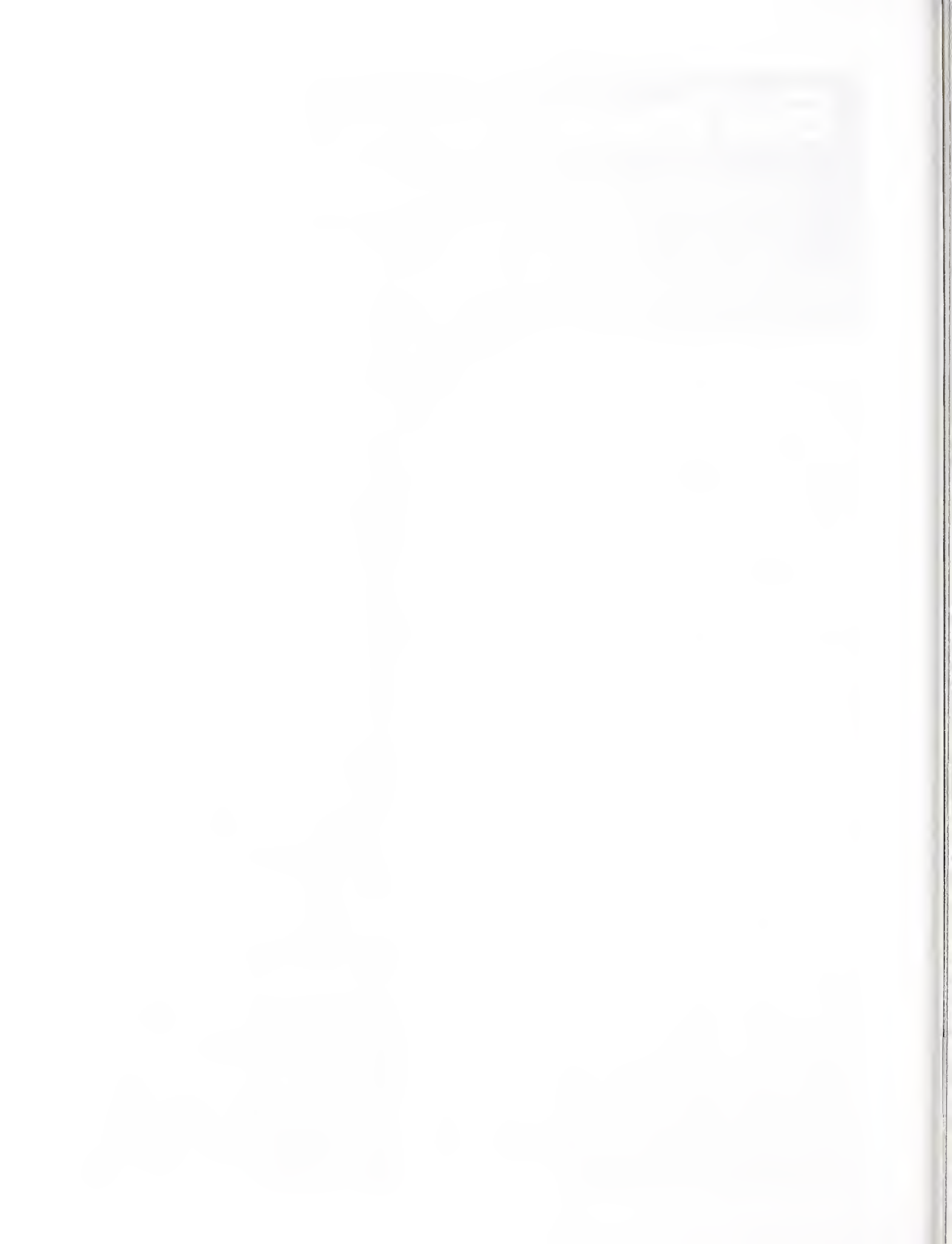
Warren Adler

Author of "War of the Roses"

www.warrenadler.com

"Power to the Author"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

In 1998, Richard Curtis announced the formation of E-Rights/E-Reads, Ltd., an online publisher, retailer, and electronic rights clearing house. This company assists authors, literary agents, and other content-providers to take advantage of fundamental changes in publishing and printing technology.

The E-Rights service helps authors to recover the rights to their out-of-print books. Using a number of databases, the company helps authors ascertain the in-print or out-of-print status of their books and to obtain reversions of rights. E-rights then converts, encrypts, and formats those books for re-release in electronic versions, and print bound hard copies for distribution through leading book wholesalers.The E-Reads division is a combination of online publisher and online retailer utilizing its web site to transmit original and reissued titles to customers' PCs or dedicated electronic readers. It has contracts with NuvoMedia, SoftBooks, and Peanut Press.

Curtis graduated from Syracuse University with a BA in American Studies and from the University of Wyoming with a Masters degree in American Studies. Curtis is a well-known author advocate and an author of numerous works of fiction and nonfiction. In the early 1970's, he began his own literary agency, and in 1979 incorporated. Richard Curtis Associates, Inc. currently represents close 150 authors. In the early 1980's, Curtis started writing an advice column for *Locus*, a science fiction newsletter and out of his articles several books have been published.

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

Richard Curtis

Founder and CEO

E-Reads

www.e-reads.com

"Here Comes Everybody! The Challenge of Branding a Million Self-Published Books"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

As Executive Vice President and General Manager, Ms. Kirkpatrick is responsible for day-to-day operations of the business and driving relationships with big-name authors and major publishing houses. Ms. Kirkpatrick joined Fatbrain.com in August of 1999 to lead the strategy and development of Fatbrain's eMatter digital publishing initiative, from which MightyWords grew.

Prior to joining Fatbrain.com, Ms. Kirkpatrick was Vice President of Marketing for ZOOM Marketing Corporation, a start-up marketing and public relations firm focused on launching early-stage Internet start-ups. Ms. Kirkpatrick spent 11 years with Adobe Systems, Inc., where she was primarily responsible for launching and establishing Adobe Acrobat and Adobe PDF as de-facto industry standards. While at Adobe, Ms. Kirkpatrick also held a number of senior-level sales management positions.

Prior to Adobe, she was one of the top sales executives at NBI, Inc. from 1982 to 1989. Ms. Kirkpatrick graduated in 1982 from the University of Wisconsin with a B.S. in Business Administration.

Judy Kirkpatrick

Executive Vice President and General Manager

Mighty Words

www.mightywords.com

"Readers, Writers, Everywhere: The New Markets and Expanded Opportunities in e-Publishing"

Slide 1

mightywords

Electronic Book 2000
September 27, 2000

Slide 2

mightywords

Readers, Writers Everywhere:

The New Markets and Expanding Opportunities in e-Publishing

Judy Kirkpatrick
Executive V.P. & General Manager
judyk@mightywords.com

Slide 3

New Business Models

- A New Content Marketplace
- The Consumer is King
- Content that Sells

Slide 4

A New Content Marketplace

People will pay for high quality, time sensitive, compelling content.

- Needs based information
- 10 - 100 pages focus
- Brand name value

1

Slide 5

10 - 100 page focus

90%

Likelihood laser-printed

eMatter
Essays
Short Stories
Condensed Books
Serialized Pieces
Updated Chapters
Movie Scripts
Speeches
White Papers
Research Reports

Magazine Article

Book

10   100
Number of pages

Slide 6

10 - 100 page focus
Expanding the Publishing Industry

eMatter

Market Value
(United States)

$20B
Magazine articles

$46B
Books

10   100
Number of Pages

10 - 100 page focus
Evolving business models

Market Value — $20B → eMatter ← $46B
(United States) — Magazine articles — Books

10   100
Number of Pages

7

Brand Name Value

Individuals	Content Providers
James Carville	*AMA*
Arthur C. Clark	*CMP*
Patricia Cornwell	*Conference Board*
Walter Cronkite	*Conolis*
Dianne Day	*Crisp Publications*
John Gray	*Harvard Business Press*
Gary Hamel	*IDG*
Dalai Lama	*John Wiley & Sons*
Peter Maas	*Macmillan*
Mark McCormack	*McGraw Hill*
Toni Morrison	*Nolo Press*
Peter Norton	*O'Reilly & Associates*
Pem O'Shaughnessey	*Peppers & Rogers*
Bill Prochnau	*Philips International*
Patricia Seybold	*St. Martins Press*
Alvin Toffler	*Sybex*
Leon Uris	*The Industry Standard*
	Ziff Davis

8

A Multi-faceted Approach to Content

Aggregated titles — Co-Branded/Co-Commissioned titles — Commissioned titles — Direct Publishing titles

9

The Consumer is King

- What will people pay for?
- How will they read it?
- Where will they find it?

2

10

Defining the MightyWords Proposition

mightywords™
Digital files for
screen & print

mighty words
Digital files for screen & print

11

User Benefits of PDF titles
Printability

- High Quality graphic PDF files
- Use of imagery, typography, colors and charts
- Brand consistency for content providers and readers

Toni Morrison — HBR

12

Slide 13 — Promoting MightyWords content

Promoting MightyWords content

mightywords
Digital files for screen & print
> Seth Godin's Permission Marketing Tips
> Why Ads Don't Work Better and How They Can
> Confessions of a VC
> Affiliate and Viral Marketing
> More

Multiple title promotion

mightywords
Digital files for screen & print
MAAS
> The Mafia in American Culture
Peter Maas' new 62 page insight into just how much we love the "Cosa Nostra"
Includes for free "The Valachi Papers" his bestselling book

Single title promotion

mightywords
Digital files for screen & print
> Get the latest Programming titles digitally from ... Sun/Java, Apple, Microsoft NT, and Linux.

O'REILLY

Category promotion

13

Slide 14 — MightyWords Content

MightyWords Content
Building our strategy on the needs of the marketplace

- Content strategy
- Authors and experts
- The 80/20 rule

3

14

Slide 15 — Content Strategy

Content Strategy
Building the marketplace

Focus on aggregating titles from branded content providers, appealing to early adopters and fastest growing "Need to have" sections

1: Business

2: Technical / Computer

3: Health

80 20

80% Aggregated
20% Commissioned

15

Slide 16 — Content Strategy (80%)

Content Strategy (80%)
Aggregated content

- Over 10,000 titles

- Over 1,500 brand name titles

- Branded content / authors sell well

- Understanding what DOES NOT sell well

- 10-100 is a new category

16

Slide 17 — Content Strategy (20%)

Content Strategy (20%)
For example - Business / Technical Authors

- Seth Godin
  - *Permission Marketing* (Update, 11 pages, $3)

- Bob Nelson
  - *1001 Ways to Reward Employees*
    (6 part series on employee motivation,10-30 pages, $2-5)

- Geoffrey Moore
  - *Crossing the Chasm* (Why Companies fail, 4 pages, $3)

- Peter Norton
  - *Anti-Virus books*
    (12 part series on Enterprise issues, 30-50 pages, $5)

Danny Goodman
  - *Java Script Bible* (12 part series on programming, 30-50 pages,
    $5-10 & O'Reilly Book on Dynamic HTML, 200 pages, $31.95)

17

Slide 18 — Content Strategy (20%)

Content Strategy (20%)
For example - Business / Technical experts

- Verne Harnish (Not an author)
  - *Mastering a One Page Strategic Plan* (Series,10 -30 pages, $2-5)

- Charles Burke (Author)
  - *How to Build an Internet Service Company*, 270 pages, $38

- Bill Roche (Not an author)
  - *21 Ways to Boost Employee Morale*, 53 pages, $9.95

Fredrik Lundh (Not an author)
  - *The Standard Python Library*, 256 pages, $12

- Subodh Atal (Not an author)
  - *Concise Guide to Java Application Servers*, 22 pages, $30

- Ira Pohl (Author)
  - *Object Orientated Programming Using C++*, 543 pages, $18

18

Content Strategy (20%)
Other areas

- Arthur C. Clarke
  - *TV's Time Travel Future*, Speech, 6 pages, $2
- Toni Morrison
  - *The Nobel Lecture in Literature*, Speech, 10 pages, $2.50
- Dianne Day
  - *Anna and the Mirror*, Short Story, 15 pages, $2
- Perri O'Shaughnessy
  - *Success Without College*, Short Story, 22 pages, $2.50
- Peter Maas
  - *Amencas Fascination with the Mob*, Essay & eBook attached, 30 pages, $5.95
- Dalai Lama
  - *Global Ethics*, Speech (including Q&A), 10 pages, $2
- Walter Cronkite
  - *Curing World Hunger*, Essay, 20 pages, $5

19

New Business Models

- A New Content Marketplace
- The Consumer is King
- Content that Sells

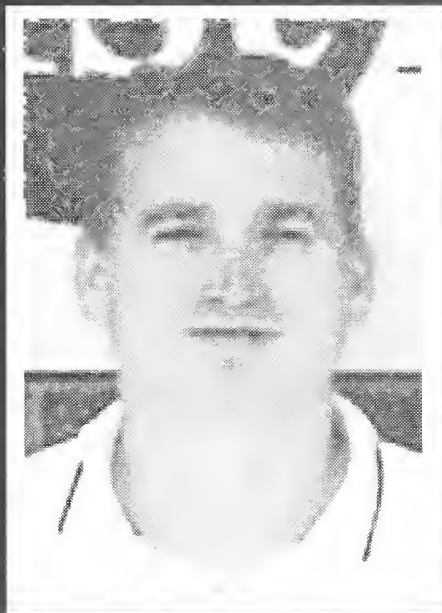20

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Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Robert McCormack is the Chief Operating Officer for 1stBooks Library.

1stBooks is an industry leader in e-Book publishing, with over 4,500 original full-length e- Book titles in its catalog and acquiring an additional 200+ titles each month. In addition to managing the day-to-day operations of 1stBooks, Mr. McCormack is responsible for setting strategy and developing new lines of business for the Company.

Robert McCormack

Chief Operating Officer

1st Books Library

www.1stbooks.com

"How Authors Can Successfully Publish eBooks"

Electronic Book 2000

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Dave Howell is CEO and Founder of Alexandria Digital Literature (AlexLit), a four-year old e-book publisher based in Seattle, WA. His vision led to development of the Company's proprietary technologies and signed contracts with authors for titles a full two years before the first ebook was commercially available. A highly active and successful community has provided input to the Company's evolving website (www.alexlit.com) and business model.

Mr. Howell was founder and former director of the Book Publishing division of game maven, Wizards of the Coast. As the seventh full-time employee at Wizard (www.wizards.com), he also developed the online customer service department, and recruited several talented editors. This division developed best-selling printed titles based on the wildly successful card game, "Magic: The Gathering."

Meanwhile, he continued developing an idea conceived years earlier, for a personalized reading recommendation service — the heart and soul of AlexLit's e-book enterprise. Howell founded AlexLit in 1996, when emergence of the Internet made such service a logistical possibility.

Today, he represents AlexLit on the Electronic Book Exchange (EBX) Working Group, a coalition of content providers and distributors. This group includes Amazon.com, Houghton-Mifflin, and Harper Collins. EBX is developing an industry standard for electronic book commerce. Howell is also involved with the Open eBook Standards Committee, formed by Microsoft, NuvoMedia, Inc. and SoftBook Press, Inc.
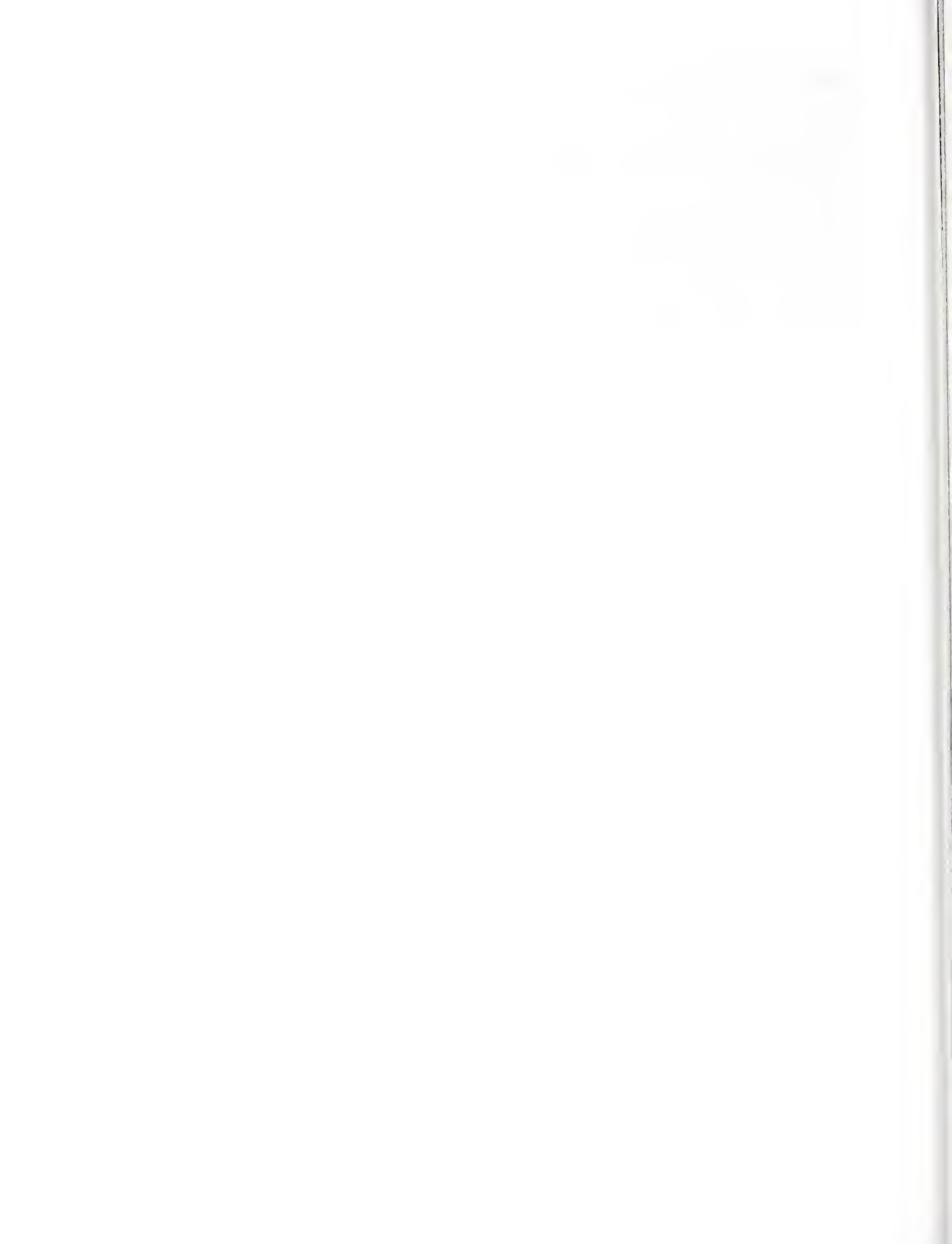
Dave Howell

CEO & Founder

Alexandria Digital Literature

www.alexlit.com

Electronic Book 2000

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Versaware Inc. is the world leader in e-publishing and the creation of eBooks. With 900 employees around the globe, Versaware is the only company that provides the full suite of e-publishing services, from digitizing books through the enhancement and secure delivery of intelligent content in multiple eBook and digital forms; whether online, offline, printed-on-demand, or via new technologies such as Wireless Access Protocol (WAP).

Versaware's enabling technologies 'bridges the gap' between the printed word to delivering that information in the most compelling presentation and to maximize the commerce opportunities for every electronic delivery format. This includes forging partnerships with the leading Internet portals to create new channels for delivering content. Versaware's Internet Portal Clients include, Lycos, Zdnet, Xoom/NBCi, Freeserve, Looksmart and others.

At the forefront of electronic publishing revolution for much of the last decade, Sol Rosenberg 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.
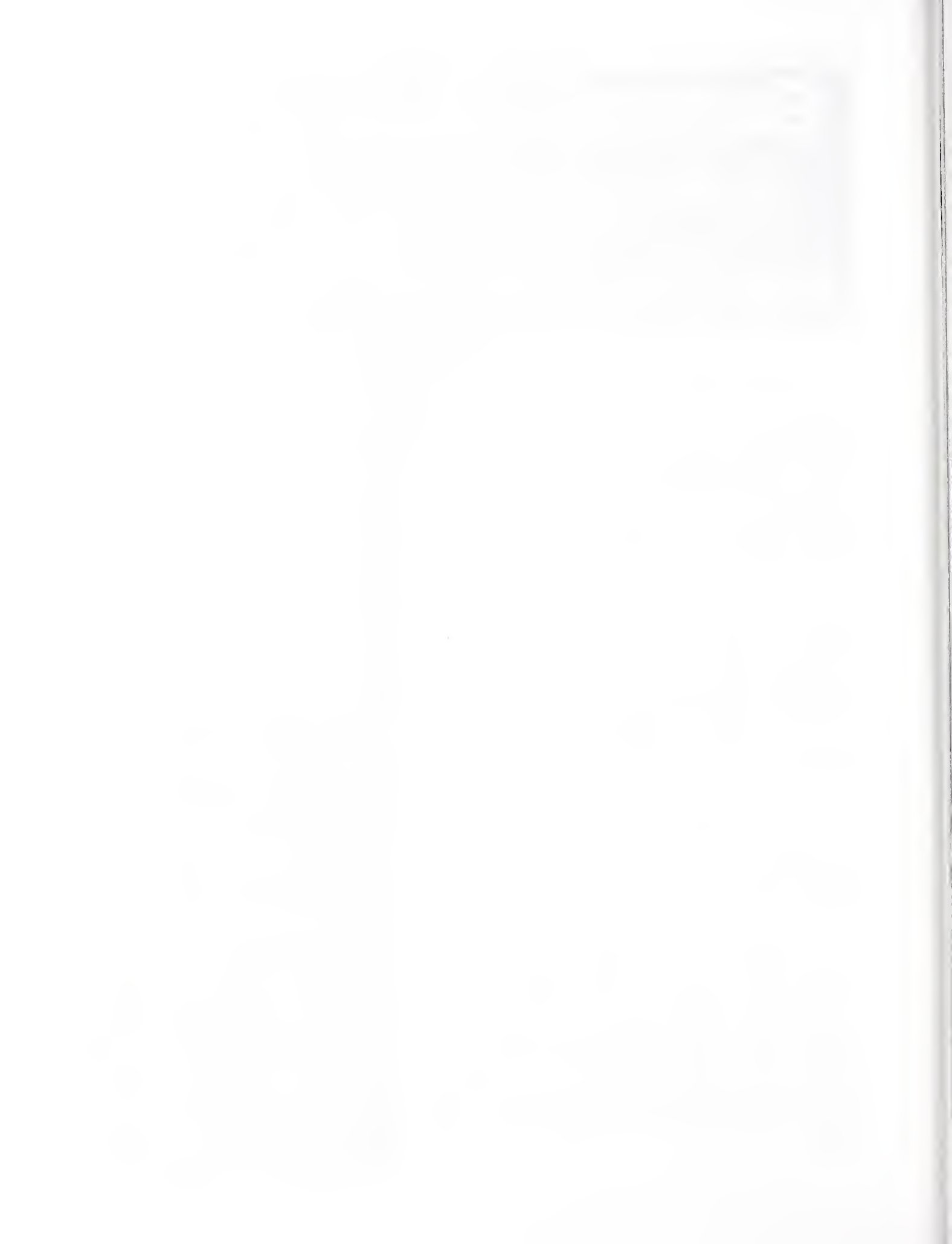
Sol Rosenberg

Senior Vice President & Co-Founder

Versaware, Inc.

www.versaware.com

"Solutions for Publishers or It's the 'Content' Stupid"

Electronic Book 2000

Changing the Fundamentals of Reading
September 25-27, 2000
Reagan Building and International Trade Center

Alison M. Pendergast is Vice President, Director of Technology for Pearson Education's Addison Wesley Higher Education Group that includes the publishing imprints of Addison Wesley, Longman, Benjamin Cummings, and Allyn & Bacon.

She began her publishing career with Prentice Hall as a Humanities & Social Sciences sales representative in New York City. From there, she went on to manage the marketing and promotion of the Prentice Hall Humanities lists where she launched important new and revised titles such as Art History (Marilyn Stokstad), Out of Many, A History of the American People (John Faragher, et. al.), A World of Art (Henry Sayre) The Heritage of Western Civilization, 5/E (Don Kagan, et. al.), Public Speaking, (Beebe/Beebe) and Understanding Music (Jeremy Yudkin).

In 1996 she started the Humanities & Social Sciences Media Technology Group dedicated to the production and development of educational multimedia products. She produced or executive produced Arts & Humanities on the World Wide Web portal site, Mosaicos, Interactive Edition, Writer's Helper, V 2.0, Masterworks, A Musical Discovery, Simon & Schuster Handbook for Writers, Interactive Edition and over 18 other educational multimedia CD-ROM products and numerous interactive textbook companion websites.

In August, 1999 she was appointed Vice President, Director of Media Technology for the Addison Wesley Higher Education Group and is presently working on developing and implementing a corporate digital textbook strategy. She is a 1986 Distinguished Military Graduate from the University of Connecticut Army ROTC program.

Allison Pendergast

Vice President, Director of Technology

Pearson Education's Addison Wesley Higher Education Group
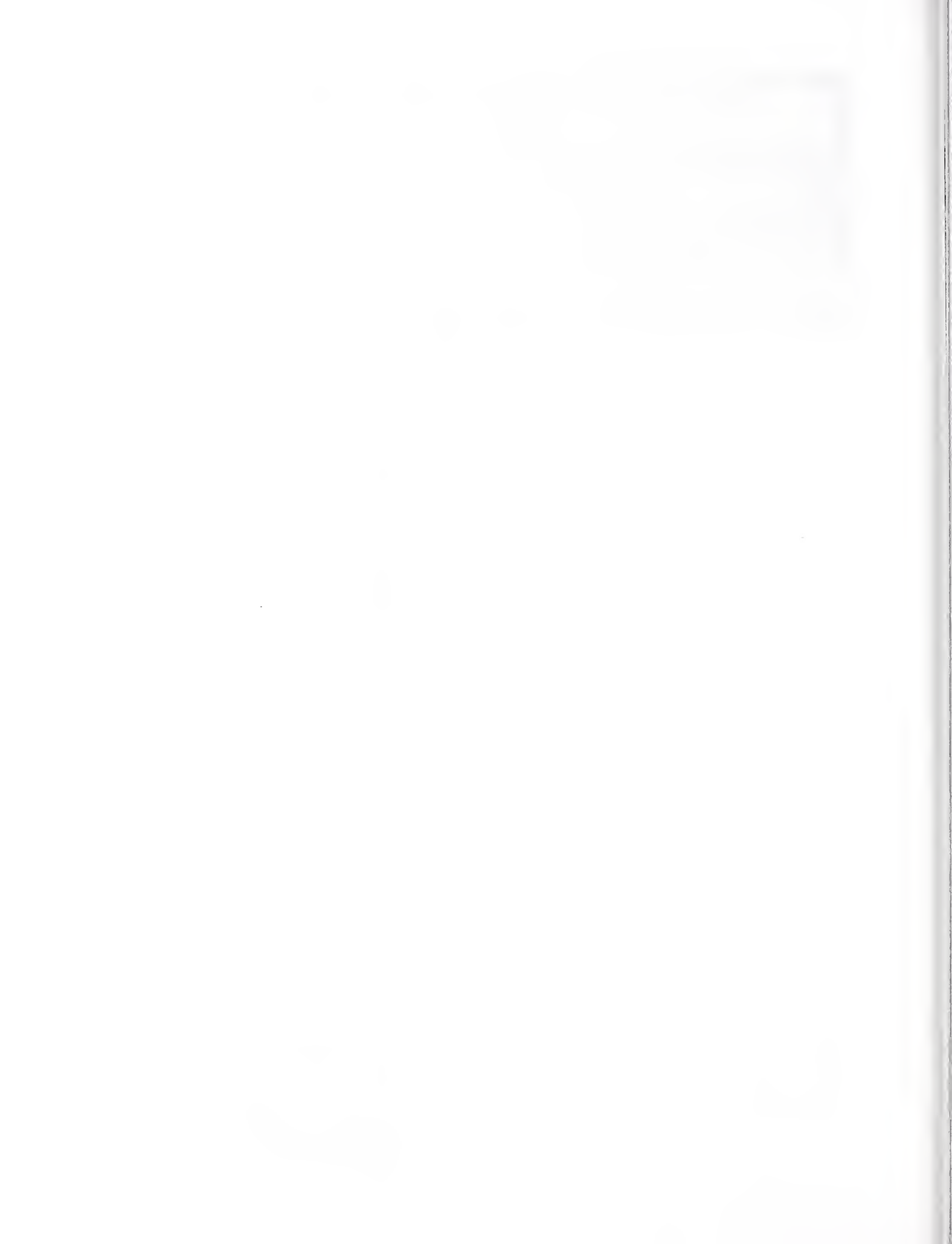
Electronic Book 2000

Changing the Fundamentals of Reading
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Michael Cader is the President of Cader Books, a leading book packager of high-profile commercial non-fiction (including books with such leading organizations and institutions as People Magazine, the Smithsonian's Anacostia Museum, Saturday Night Live, CNBC, Who Wants to be a Millionaire, Major League Baseball, and many others). Cader Books recently created "Publisher's Lunch," a web site and daily e-mail newsletter for book trade professionals that has quickly become the industry's "essential daily read," hailed by Publishing Trends, Pat Holt, and many others. Publisher's Lunch also helps to familiarize industry colleagues with the rapidly changing e-publishing landscape and to air issues related to these changes.
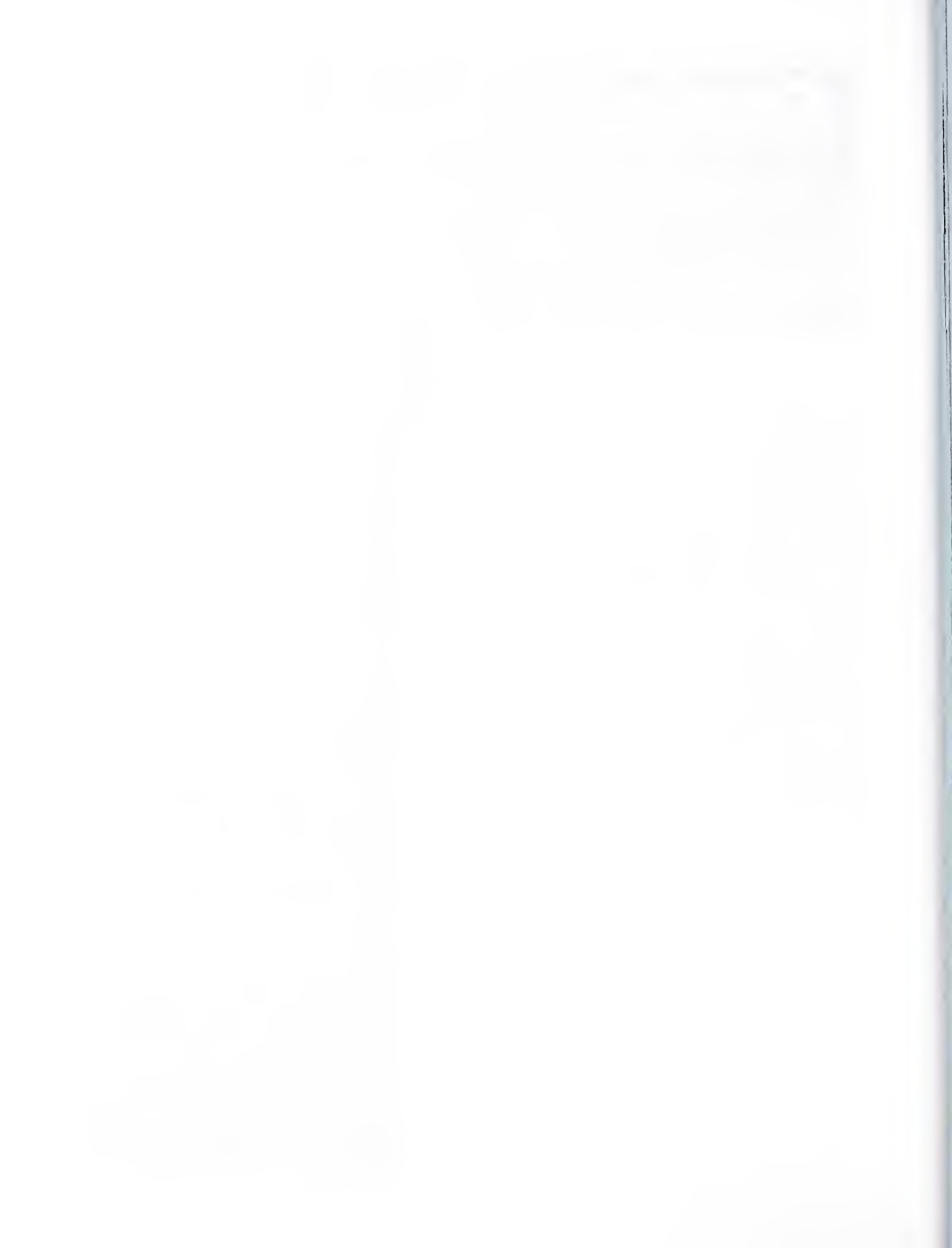
Michael Cader

President, Cader Books

Editor & Chief eBook Columnst, Publisher's Lunch

www.caderbooks.com

NIST Digital Cinema Conference

Preliminary Announcement

January 11 and 12, 2001
NIST Conference Center, Red Auditorium
Gaithersburg, Maryland, USA

Purpose of the D-cinema Conference:
- articulate a vision for digital cinema.
- identify technological barriers to achieving that vision,
- identify business models for digital cinema, and
- develop strategies for breaching the barriers, including needed standards, technology development, and research.

Who should attend this Workshop?
The NIST D-cinema Conference is an introduction to Digital Cinema aimed at users from:
- Post-production.
- Mapping and motion imagery
- Theater owners and producers,
- Technology providers, and
- Others with an interest in the development of measurements and standards for digital cinema.

Tentative Program
- Overview of Digital Cinema and Theater Systems (SMPTE and National Association of Theater Owners)
- Human Vision and Digital Cinema
- Image Resolution and Color Space for D-Cinema
- Digital Cinema Presentations
- Measurements for displays, storage, etc.: NIST/NIDL/ETC.
- Compression - maintaining the integrity of the image
- Survey of Standards Efforts - SMPTE DC28, MPEG, Pro-MPEG, Advanced Authoring Format, etc.
- DRM - digital rights management (DRM) in the age of electronic delivery.
- New directions and needs: follow-up conferences, image resolution, compression, DRM, etc., metrics, studies, solutions.

Web site and Registration
The Web site for D-Cinema Conference at NIST is http://digitalcinema.nist.gov/
Registration information and the complete conference program will be available through the site by November 1, 2000.

Information
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