UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Sony Interactive Entertainment LLC,

Petitioner

v.

Intellectual Pixels Limited,
Patent Owner

Case IPR2021-00237
U.S. Patent No. 10,681,109

DECLARATION OF SYLVIA HALL-ELLIS, PH.D. IN SUPPORT OF PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO. 10,681,109

SONY 1003

I, Sylvia D. Hall-Ellis, Ph.D., declare as follows:

I. INTRODUCTION

1. My name is Sylvia D. Hall-Ellis. I have been retained as an expert by Sony Interactive Entertainment LLC ("Petitioner") who I am informed is the Petitioner in this *inter partes* review (IPR) petition.

2. I have written this declaration at the request of the Petitioner to provide my expert opinion regarding the authenticity and public availability of publications, identified in Section V below. My declaration sets forth my opinions in detail and provides the basis for my opinions regarding the authenticity and public availability of these publications. If called to testify in the above-captioned matter, I will testify with regard to the opinions and bases set forth below.

3. I reserve the right to supplement or amend my opinions, and bases for them, in response to any additional evidence, testimony, discovery, argument, and/or other additional information that may be provided to me after the date of this declaration.

4. As of the preparation and signing of this declaration, certain libraries across the nation are closed to the public and may offer service online and via appointments to their primary clientele pursuant to an order of the federal and state governments due to the COVID-19 virus. However, were those libraries open, I would expect to be able to obtain paper copies of the documents from those

libraries for this declaration. Additionally, it is my typical practice to obtain a paper copy of each publication to further confirm my opinions, which I have done as described below to the extent possible. I reserve the right to supplement my declaration when additional libraries reopen to provide any further information.

5. I am being compensated for my time spent working on this matter at my normal consulting rate of $300 per hour, plus reimbursement for any additional reasonable expenses. My compensation is not in any way tied to the content of this report, the substance of my opinions, or the outcome of this proceeding. I have no other interests in this proceeding or with any of the parties.

6. All of the materials that I considered and relied upon are discussed explicitly in this declaration.

II. QUALIFICATIONS

7. I am currently an Adjunct Professor in the School of Information at San José State University in San José, California. I obtained a Master of Library Science from the University of North Texas in 1972 and a Ph.D. in Library Science from the University of Pittsburgh in 1985. Over the last fifty years, I have held various positions in the field of library and information resources. I was first employed as a librarian in 1966 and have been involved in the field of library sciences since, holding numerous positions.

8. I am a member of the American Library Association (ALA) and its

Association for Library Collections & Technical Services (ALCTS) Division, and I served on the Committee on Cataloging: Resource and Description (which wrote the new cataloging rules) and as the chair of the Committee for Education and Training of Catalogers and the Competencies and Education for a Career in Cataloging Interest Group. I also served as the Chair of the ALCTS Division's Task Force on Competencies and Education for a Career in Cataloging. Additionally, I have served as the Chair for the ALA Office of Diversity's Committee on Diversity, as a member of the REFORMA National Board of Directors, and as a member of the Editorial Board for the ALCTS premier cataloging journal, *Library Resources and Technical Services*. Currently I serve as a Co-Chair for the Library Research Round Table of the American Library Association.

9. I have also given over one hundred presentations in the field, including several on library cataloging systems and Machine-Readable Cataloging ("MARC") standards. My current research interests include library cataloging systems, metadata, and organization of electronic resources.

10. I have been deposed fifteen times: (1) *Symantec Corp. v. Finjan*, *Inc.,* Petition for *Inter Partes Review* of U.S. Patent No. 7,613,926, May 26, 2016, on behalf of Symantec Corp.; (2) *Symantec Corp. v. Finjan*, *Inc.,* 14-cv-299-HSG (N.D. Cal.), on behalf of Symantec Corp., September 14,

2017; (3) one deposition for ten matters: *Intellectual Ventures I LLC v. AT&T Mobility LLC*; AT&T Mobility II LLC, New Cingular Wireless Services, Inc., SBC Internet Services, Inc., Wayport, Inc., and Cricket Wireless LLC, C.A. No. 12-193 (LPS); *Intellectual Ventures II LLC v. AT&T Mobility LLC*; AT&T Mobility II LLC, New Cingular Wireless Services, Inc., SBC Internet Services, Inc., Wayport, Inc., and Cricket Wireless LLC, C.A. No. 13-1631 (LPS); *Intellectual Ventures I LLC v. T-Mobile USA, Inc. and T-Mobile US, Inc.,* C.A. No. 13-1632 (LPS); *Intellectual Ventures II LLC v. T-Mobile USA, Inc. and T-Mobile US, Inc.,* C.A. No. 13-1633 (LPS); *Intellectual Ventures I LLC, v. Nextel Operations, Inc., Sprint Spectrum L.P., Boost Mobile, LLC and Virgin Mobile USA, L.P.,* C.A. No. 13-1634 (LPS); *Intellectual Ventures II LLC v. Nextel Operations, Inc., Sprint Spectrum L.P., Boost Mobile, LLC and Virgin Mobile USA, L.P.,* C.A. No. 13-1635 (LPS); *Intellectual Ventures I LLC, v. United States Cellular Corporation*, C.A. No. 13-1636 (LPS); *Intellectual Ventures I LLC v. United States Cellular Corporation*, C.A. No. 13-1637 (LPS); *Intellectual Ventures II LLC v. AT&T Mobility LLC*, *AT&T Mobility II LLC, New Cingular Wireless Services, Inc.,* C.A. No. 15-799 (LPS); *Intellectual Ventures I LLC v. T-Mobile USA, Inc. and T-Mobile US, Inc.,* C.A. No. 15-800 (LPS), on behalf of AT&T Mobility LLC; AT&T Mobility II LLC, Boost Mobile, LLC Cricket Wireless LLC, Nextel Operations, Inc., New Cingular Wireless Services, Inc., SBC Internet Services, Inc., Sprint Spectrum

L.P., T-Mobile USA, Inc., T-Mobile US, Inc., United States Cellular Corporation Virgin Mobile USA, L.P., and Wayport, Inc., November 15, 2016; (4) *Hitachi Maxell, LTD., v. Top Victory Electronics (Taiwan) Co. Ltd., et al.,* 2:14-cv-1121 JRG-RSP (E.D. Texas), on behalf of Top Victory Electronics (Taiwan) Co. LTD, *et. al.,* January 20, 2016; (5) *Sprint Spectrum, L.P. v. General Access Solutions, Ltd*., Petition for *Inter Partes Review* of U.S. Patent No. 7,173,916, on behalf of Sprint Spectrum L.P., July 13, 2018; (6) *Nichia Corporation v. Vizio, Inc*., 8:16-cv-00545; on behalf of Vizio, Inc., October 12, 2018; (7) *Intellectual Ventures I LLC, v. T-Mobile USA, Inc., T-Mobile US, Inc., Ericsson Inc., and Telefonaktiebolaget LM Ericsson*, 2:17-cv-00557 (JRG), on behalf of T-Mobile USA, Inc., T-Mobile US, Inc., Ericsson Inc., and Telefonaktiebolaget LM Ericsson, October 19, 2018; (8) Pfizer, Inc. v. Biogen, Inc., Petition for *Inter Partes Review* of U.S. Patent No. 8,821,873, on behalf of Pfizer, November 3, 2018; (9) Finjan, Inc. v. ESET, LLC and ESET SPOL. S.R.O., 3:17-cv-00183-CAB-BGS, on behalf of ESET, January 15, 2019; (10) *Finjan, Inc. v. Cisco Systems, Inc.,* 5:17-cv-00072-BLF-SVK, on behalf of Cisco Systems, Inc., September 6, 2019; (11) *Facebook, Inc., Instagram, LLC and Whatsapp Inc. v. Blackberry Limited*, Petition for *Inter Partes Review* of U.S. Patent No. 9,349,120 B2, on behalf of Facebook, Inc., Instagram, LLC and Whatsapp Inc. December 20, 2019; (12) *3Shape A/S and 3Shape Inc. v. Align Technology, Inc.,* Petition for

Inter Partes Review of U.S. Patent No. 7,156,661, IPR 2020-00222 and IPR 2020-00223, August 10, 2020, on behalf of 3Shape A/S and 3Shape Inc.; (13) *Finjan Inc. v. Rapid7, Inc. and Rapid7 LLC*, Northern District of Delaware, 1:18-cv-01519-MN, September 15, 2020, on behalf of Rapid7 Inc. and Rapid7 LLC; (14) *VLSI Technology LLC v. Intel Corporation*, Western District of Texas, 6:19-cv-00254, 6:19-cv-00255, 6:19-cv-00256, on behalf of Intel Corporation, September 23, 2020; and, (15) *Finjan Inc. v. Sonicwall, Inc.,* Northern District of California, 5:17-cv-04467-BLF-HRL, on behalf of Sonicwall, Inc., October 27, 2020.

11. My full curriculum vitae is attached hereto as Appendix A.

III. PRELIMINARIES

A. Scope of Declaration and Legal Standards

12. I am not an attorney and will not offer opinions on the law. I am, however, rendering my expert opinion on the authenticity of the documents referenced herein and on when and how each of these documents was disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, could have located the documents before the dates discussed below with respect to the specific documents.

13. I am informed by counsel that a printed publication qualifies as

publicly accessible as of the date it was disseminated or otherwise made available such that a person interested in and ordinarily skilled in the relevant subject matter could locate it through the exercise of ordinary diligence.

14. While I understand that the determination of public accessibility under the foregoing standard rests on a case-by-case analysis of the facts particular to an individual publication, I also understand that a printed publication is rendered "publicly accessible" if it is cataloged and indexed by a library such that a person interested in the relevant subject matter could locate it (i.e., I understand that cataloging and indexing by a library is sufficient, though there are other ways that a printed publication may qualify as publicly accessible). One manner of sufficient indexing is indexing according to subject matter category. I understand that the cataloging and indexing by a single library of a single instance of a particular printed publication is sufficient, even if the single library is in a foreign country. I understand that, even if access to a library is restricted, a printed publication that has been cataloged and indexed therein is publicly accessible so long as a presumption is raised that the portion of the public concerned with the relevant subject matter would know of the printed publication. I also understand that the cataloging and indexing of information that would guide a person interested in the relevant subject matter to the printed publication, such as the cataloging and indexing of an abstract for the printed publication, is sufficient to render the

printed publication publicly accessible.

15. I understand that routine business practices, such as general library cataloging and indexing practices, can be used to establish an approximate date on which a printed publication became publicly accessible. I also understand that the indicia on the face of a reference, such as printed dates and stamps, are considered as part of the totality of the evidence.

B. Persons of Ordinary Skill in the Art

16. I have been informed by counsel that the subject matter of this proceeding generally relates to computer graphics on a computer system.

17. I have been informed by counsel that a "person of ordinary skill in the art at the time of the invention" ("POSA") is a hypothetical person who is presumed to be familiar with the relevant field and its literature at the time of the inventions. This hypothetical person is also a person of ordinary creativity, capable of understanding the scientific principles applicable to the pertinent field.

18. I am told by counsel that a person of ordinary skill in this subject matter or art would have at least (1) an undergraduate degree in computer science, electrical engineering, or an equivalent subject, together with two years of post-graduate experience in computer graphics; or (2) a master's degree in computer science, electrical engineering, or equivalent subject, together with one year of post-graduate experience in computer graphics. I have been further informed by

counsel that a person of ordinary skill in the art would have been familiar with and able to understand the information known in the art relating to these fields, including the publications discussed in this declaration.

C. Use of Authoritative Databases

19. In preparing this report, I used authoritative databases, such as the OCLC bibliographic database, the Library of Congress Online Catalog, the U.S. Patent and Trademark Office, U. S. Copyright Office, *IEEE Xplore, Semantic Scholar, Google Scholar,* and *Scopus*, to confirm citation details of the publication discussed. Unless I note otherwise below in reference to a specific serial publication, it is my expert opinion that this standard protocol was followed for the publications discussed in Section V below.

20. *Indexing*. A researcher may discover material relevant to his or her topic in a variety of ways. One common means of discovery is to search for relevant information in an index of periodical and other publications. Having found relevant material, the researcher will then normally obtain it online, look for it in libraries, or purchase it from the publisher, a bookstore, a document delivery service, or other provider. Sometimes, the date of a document's public accessibility will involve both indexing and library date information.

21. Indexing services use a wide variety of controlled vocabularies to provide subject access and other means of discovering the content of documents.

The formats in which these access terms are presented vary from service to service.

22. Online indexing services and digital repositories commonly provide bibliographic information, abstracts, and full-text copies of the indexed publications, along with a list of the documents cited in the indexed publication. These services also often provide lists of publications that cite a given document. A citation of a document is evidence that the document was publicly available and in use by researchers no later than the publication date of the citing document.

23. *Google Scholar*.[1] *Google Scholar* is a freely accessible web search engine that indexes the full text or metadata of scholarly literature across an array of publishing formats and disciplines. Released in beta in November 2004, the *Google Scholar* index includes a significant number of peer-reviewed online academic journals, books, conference papers, selected theses and dissertations, preprints, abstracts, technical reports, and other scholarly literature. While Google does not publish the size of *Google Scholar's* database, scientometric researchers estimated it to contain roughly 389 million documents including articles, citations and patents making it the world's largest academic search engine in January 2018.

24. Because many of *Google Scholar's* search results link to commercial journal articles, searchers will be able to access only an abstract and the citation

[1] https://scholar.google.com

details of an article and may have to pay a fee to access the entire article. The most relevant results for the searched keywords will be listed first, in order of the author's ranking, the number of references that are linked to it and their relevance to other scholarly literature, and the ranking of the publication that the journal appears in. Through its "cited by" feature, *Google Scholar* provides access to abstracts of articles that have cited the article being viewed. Through its "Related articles" feature, *Google Scholar* presents a list of closely related articles, ranked primarily by how similar these articles are to the original result, but also considering the relevance of each paper.

25. *IEEE Xplore*.[2] This scholarly research database includes indexes, abstracts, and full-text for articles and papers on computer science, electrical engineering, and electronics. The database mainly covers material from the Institute of Electrical and Electronics Engineers (IEEE) and the Institution of Engineering and Technology. The *IEEE Xplore* digital library provides Web access to more than 5.1-million full-text documents from some of the world's most highly cited publications. The content comprises over 180 journals, over 1,400 conference proceedings, more than 3,800 technical standards, over 1,800 eBooks and over 400 educational courses. Approximately 20,000 new documents are added to *IEEE Xplore* each month. Abstracts are free to access, but access to full

[2] https://ieeexplore.ieee.org/Xplore/home.jsp

text requires a subscription or institutional login.

26. *Semantic Scholar.*[3] *Semantic Scholar* is a project developed at the Allen Institute for Artificial Intelligence. Publicly released in November 2015, *Semantic Scholar* is designed to be an AI-backed search engine for scientific journal articles which uses a combination of machine learning, natural language processing, and machine vision to add a layer of semantic analysis to the traditional methods of citation analysis, and to extract relevant figures, entities, and venues from papers. *Semantic Scholar* is designed to highlight important, influential papers, and to identify the connections between them.

27. As of January 2018, following a 2017 project that added biomedical papers and topic summaries, the *Semantic Scholar* corpus included more than 40 million papers from computer science and biomedicine. As of August 2019, the number of included papers had grown to more than 173 million after the addition of the Microsoft Academic Graph records, already used by Lens.org.

28. *Scopus.*[4] *Scopus* is the largest abstract and citation database of peer-reviewed literature: scientific journals, books, and conference proceedings. Delivering a comprehensive overview of the world's research output (more than 69 million items) in the fields of science, technology, medicine, social sciences, and

[3] www.semanticscholar.org
[4] https://www.elsevier.com/solutions/scopus

arts and humanities, *Scopus* features smart tools to track, analyze and visualize research.

29. Researchers trust the information and data they discover with *Scopus* because the content comes from over 5,000 publishers that must be reviewed and selected by an independent Content Selection and Advisory Board (CSAB) to be, and continue to be, indexed on *Scopus*.

30. *Scopus* offers free features to non-subscribed users and is available through Scopus Preview. Researchers may use Scopus to assist with their research, such as searching authors, and learning more about *Scopus* content coverage and source metrics.

31. *U.S. Copyright Office*. Created by Congress in 1897, the Copyright Office is responsible for administering a complex and dynamic set of laws, which include registration, the recordation of title and licenses, a number of statutory licensing provisions, and other aspects of the *1976 Copyright Act* and the *1998 Digital Millennium Copyright Act*. The public catalog in the Copyright Office includes information filed since 1978.[5] Individuals can search by title, personal or corporate name, key word, registration number, and document number. Works filed before 1978 can be located through the Copyright Public Records Reading

[5] https://cocatalog.loc.gov/cgi-bin/Pwebrecon.cgi?DB=local&PAGE=First.

Room.[6] A researcher can find the date on which an item was published and deposited for copyright.

32. *U.S. Patent and Trademark Office.* Established by Congress to issue patents on behalf of the government, the United States Patent and Trademark Office provides public access to patent and trademark information in a variety of formats including online, microfilm, and print.[7] Updates are available weekly. The *7-Step U.S. Patent Search Strategy Guide 2015* provides an introduction for searching databases that contain full text patents issued since 1976 and PDF images of patents issued since 1790.[8] An individual can search one of three strategies to retrieve information about a specific patent. These three strategies include a quick search query into the Full Text Patents database using pre-defined fields (issue date, patent number, and current U.S. classification number);[9] an advanced search allowing the construction of a specific query;[10] and, a patent

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[6] https://www.copyright.gov/circs/circ23.pdf.
[7] https://www.uspto.gov/patents-getting-started/general-information-concerning-patents.
[8] https://www.uspto.gov/sites/default/files/documents/7_Step_US_Patent_Search_Strategy_Guide_2015_rev.pdf.
[5] http://patft.uspto.gov/netahtml/PTO/search-bool.html.
[6] http://patft.uspto.gov/netahtml/PTO/search-adv.htm.
[7] http://patft.uspto.gov/netahtml/PTO/srchnum.htm.
[8] http://patft.uspto.gov/netahtml/PTO/patimg.htm.
[9] https://www.epo.org/index.html.
[10] https://worldwide.espacenet.com/advancedSearch?locale=en_EP.

number search.[11] Pre-1976 patents can be searched by patent numbers and/or U.S. classification codes in the PDF Patent Image Database.[12]

IV. LIBRARY CATALOGING PRACTICES

A. MARC Records

33. I am fully familiar with the library cataloging standard known as the MARC standard, which is an industry-wide standard method of storing and organizing library catalog information. MARC was first developed in the 1960s by the Library of Congress. A MARC-compatible library is one that has a catalog consisting of individual MARC records for works made available at that library.

34. Since at least the early 1970s and continuing to the present day, MARC has been the primary communications protocol for the transfer and storage of bibliographic metadata in libraries.[13] As explained by the Library of Congress:

> You could devise your own method of organizing the bibliographic information, but you would be isolating your library, limiting its options, and creating much more work for yourself. Using the MARC standard prevents duplication of work and allows libraries to better share

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[13] A complete history of the development of MARC can be found in *MARC: Its History and Implications* by Henrietta D. Avram (Washington, DC: Library of Congress, 1975) and available online from the Hathi Trust (https://babel.hathitrust.org/cgi/pt?id=mdp.39015034388556;view=1up;seq=1; last visited October 27, 2020).

> bibliographic resources. Choosing to use MARC enables libraries to acquire cataloging data that is predictable and reliable. If a library were to develop a "home-grown" system that did not use MARC records, it would not be taking advantage of an industry-wide standard whose primary purpose is to foster communication of information.
>
> Using the MARC standard also enables libraries to make use of commercially available library automation systems to manage library operations. Many systems are available for libraries of all sizes and are designed to work with the MARC format. Systems are maintained and improved by the vendor so that libraries can benefit from the latest advances in computer technology. The MARC standard also allows libraries to replace one system with another with the assurance that their data will still be compatible.

Why Is a MARC Record Necessary? LIBRARY OF CONGRESS.[14]

35. Thus, almost every major library in the world is MARC-compatible. *See, e.g.*, *MARC Frequently Asked Questions (FAQ)*, LIBRARY OF CONGRESS.[15] ("MARC is the acronym for MAchine-Readable Cataloging. It defines a data format that emerged from a Library of Congress-led initiative that began nearly

[14] http://www.loc.gov/marc/umb/um01to06.html#part2
[15] https://www.loc.gov/marc/faq.html

[fifty] years ago. It provides the mechanism by which computers exchange, use, and interpret bibliographic information, and its data elements make up the foundation of most library catalogs used today."). MARC is the ANSI/NISO Z39.2-1994 standard (reaffirmed in 2016) for Information Interchange Format. The full text of the standard is available from the Library of Congress.[16]

36. A MARC record comprises several fields, each of which contains specific data about the work. Each field is identified by a standardized, unique, three-digit code corresponding to the type of data that follow.[17] For example, a work's title is recorded in field 245, the primary author of the work is recorded in field 100, a work's International Standard Book Number ("ISBN") is recorded in field 020, a work's International Standard Serial Number ("ISSN") is recorded in field 022, and the publication date is recorded in field 260 under the subfield "c."[18] In some MARC records, field 264 is used rather than field 260 to record publication information.[19] Information in field 264 is similar to information in field 260 (Publication, Distribution, etc. (Imprint)). Field 264 is useful for cases where the content standard or institutional policies make a distinction between functions. If a work is a periodical, then its publication frequency is recorded in field 310, and

[16] http://www.loc.gov/marc/bibliographic/
[17] http://www.loc.gov/marc/umb/um07to10.html; http://www.loc.gov/marc/bibliographic/
[18] http://www.loc.gov/marc/bibliographic/
[19] http://www.loc.gov/marc/bibliographic/bd264.html

the publication dates (e.g., the first and last publication) are recorded in field 362, which is also referred to as the enumeration/chronology field.[20, 21]

37. The library that initially created the MARC record is reflected in field 040 in subfield "a" with that library's unique library code.[22] Once a MARC record for a particular work is originally created by one library, other libraries can use that original MARC record to then create their own MARC records for their own copies of the same work. These other libraries may modify or add to the original MARC record as necessary to reflect data specific to their own copies of the work. However, the library that created the original MARC record would still be reflected in these modified MARC records (corresponding to other copies of the same work at other libraries) in field 040, subfield "a". The modifying library (or libraries) is reflected in field 040, subfield "d."[23]

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[20] http://www.loc.gov/marc/bibliographic/bd3xx.html

[21] Upwards of two-thirds to three-quarters of book sales to libraries come from a jobber or wholesaler for online and print resources. These resellers make it their business to provide books to their customers as fast as possible, often providing turnaround times of only a single day after publication. Libraries purchase a significant portion of the balance of their books directly from publishers themselves, which provide delivery on a similarly expedited schedule. In general, libraries make these purchases throughout the year as the books are published and shelve the books as soon thereafter as possible in order to make the books available to their patrons. Thus, books are generally available at libraries across the country within just a few days of publication.

[22] http://www.loc.gov/marc/umb/um07to10.html; http://www.loc.gov/marc/bibliographic/

[23] http://www.loc.gov/marc/bibliographic/bd040.html

38. I consulted the Directory of OCLC Libraries[24] in order to identify the institution that created or modified the MARC record. Moreover, when viewing the MARC record online via Online Computer Library Center's ("OCLC") bibliographic database, which I discuss further below, hovering over a library code in field 040 with the mouse reveals the full name of the library. I also used this method of "mousing over" the library codes in the OCLC database to identify the originating and modifying libraries for the MARC records discussed in this report.

39. MARC records also include one or more fields that show information regarding subject matter classification. For example, 6XX fields are termed "Subject Access Fields."[25] Among these, for example, is the 650 field; this is the "Subject Added Entry – Topical Term" field.[26] The 650 field is a "[s]ubject added entry in which the entry element is a topical term." *Id.* These entries "are assigned to a bibliographic record to provide access according to generally accepted thesaurus-building rules (e.g., *Library of Congress Subject Headings* (LCSH), *Medical Subject Headings* (MeSH))." *Id.*

40. Further, MARC records can include call numbers, which themselves contain a classification number. For example, a MARC record may identify a 050

[24] http://www.oclc.org/contacts/libraries.en.html
[25] http://www.loc.gov/marc/bibliographic/bd6xx.html
[26] http://www.loc.gov/marc/bibliographic/bd650.html

field, which is the "Library of Congress Call Number."[27] A defined portion of the Library of Congress Call Number is the classification number, and "source of the classification number is *Library of Congress Classification* and the *LC Classification-Additions and Changes*." *Id.* Thus, the 050 field may be used to show information regarding subject matter classification. Further, the 082 field is the "Dewey Decimal Call Number."[28] A defined portion of the Dewey Decimal Call (DDC) Number is the classification number, and "source of the classification number is the *Dewey Decimal Classification and Relative Index*. Thus, included in the 082 field is a subject matter classification.

41. Each item in a library has a single classification number. A library selects a classification scheme (e.g., the Library of Congress Classification scheme just described or a similar scheme such as the Dewey Decimal Classification scheme) and uses it consistently. When the Library of Congress assigns the classification number, it appears as part of the 050 field, as discussed above. For MARC records created by libraries other than the Library of Congress (e.g., a university library or a local public library), the classification number may appear in a 09X (e.g., 090) field.[29]

42. When a MARC-compatible library acquires a work, it creates a

[27] http://www.loc.gov/marc/bibliographic/bd050.html
[28] http://www.loc.gov/marc/bibliographic/bd082.html.
[29] http://www.loc.gov/marc/bibliographic/bd09x.html

MARC record for its copy of the work in its computer catalog system in the ordinary course of its business. This MARC record (for the copy of a work available at the particular library) may be later accessed by researchers in a number of ways. For example, many libraries, including the Library of Congress, make their MARC records available through their website. As an example, the MARC record for the copy of *The Unlikely Spy*, by Daniel Silva,[30] available at the Library of Congress can be viewed through the Library of Congress website, at https://catalog.loc.gov/vwebv/staffView?searchId=20265&recPointer=1&recCount=25&bibId=2579985 (last visited October 27, 2020). One could, of course, always physically visit the library at which the work is available, and request to see that library's MARC record for the work. Moreover, members of the Online Computer Library Center ("OCLC") can access the MARC records of other member institutions through OCLC's online bibliographic database, as I explain further below.

B. OCLC

43. The OCLC was created "to establish, maintain, and operate a computerized library network and to promote the evolution of library use, of libraries themselves, and of librarianship, and to provide processes and products

[30] *The Unlikely Spy* is a 1996 novel written by Daniel Silva, who happens to be one of my favorite authors.

for the benefit of library users and libraries, including such objectives as increasing availability of library resources to individual library patrons and reducing the rate of rise of library per-unit costs, all for the fundamental public purpose of furthering ease of access to and use of the ever-expanding body of worldwide scientific, literary, and educational knowledge and information."[31] Among other services, OCLC and its members are responsible for maintaining the WorldCat database,[32] used by independent and institutional libraries throughout the world. All libraries that are members of OCLC are MARC-compatible.[33] OCLC-MARC records describes records produced since November 1993.[34] Like the two superseded OCLC documents, this revised set of guidelines is intended to assist catalogers in creating records for electronic resources in WorldCat, the OCLC Online Union Catalog. These guidelines pertain to OCLC-MARC tagging (that is, content designation). Cataloging rules and manuals (such as AACR2) govern the content of records. You should implement these guidelines immediately.

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[31] Third Article, Amended Articles of Incorporation of OCLC Online Computer Library Center, Incorporated (available at https://www.oclc.org/content/dam/oclc/membership/articles-of-incorporation.pdf; last visited October 27, 2020).

[32] http://www.worldcat.org/

[33] https://help.oclc.org/Metadata_Services/OCLC-MARC_records/About_OCLC-MARC_records

[34] https://www.oclc.org/support/services/worldcat/documentation/cataloging/electronicresources.en.html

44. When an OCLC member institution acquires a publication, like the other MARC-compatible libraries discussed above, it creates a MARC record for this publication in its computer catalog system in the ordinary course of its business. MARC records created at the Library of Congress are tape-loaded into the OCLC database through a subscription to MARC Distribution Services daily or weekly. Once the MARC record is created by a cataloger at an OCLC member library or is tape-loaded from the Library of Congress, the MARC record is then made available to any other OCLC members online, and thereby made available to the public. Accordingly, once the MARC record is created by a cataloger at an OCLC member library or is tape-loaded from the Library of Congress, any publication corresponding to the MARC record has been cataloged and indexed according to its subject matter such that a person interested in that subject matter could, with reasonable diligence, locate and access the publication through any library with access to the OCLC bibliographic database or through the Library of Congress.

45. When a MARC-compatible library creates an original MARC record for a work, the library records the date of creation of that MARC record in field 008, characters 00 through 05, in the ordinary course of its business.[35] For OCLC member institutions that use OCLC software to create original MARC records, the

[35] http://www.loc.gov/marc/bibliographic/bd008a.html

date of creation in field 008 is automatically supplied by the OCLC software. The MARC record creation date in field 008 thus reflects the date on which, or shortly after which, a work was first acquired and cataloged by the library that created the original MARC record.

46. When other MARC-compatible libraries subsequently acquire their own copies of the same work, as mentioned, they create MARC records in their own computer catalog systems for their copies in the ordinary course of business.[36] They may use a MARC record previously created for that work (by another MARC-compatible library) to create their own MARC records for their own copies of that same work.[37] The previously created MARC record used by subsequently-acquiring libraries to create MARC records for their own copies may be obtained through the OCLC bibliographic database, as described above. If, when creating a MARC record to represent its own copy of the work, the subsequently-acquiring library uses the master MARC record in its original form, the subsequently-acquiring library cannot reenter data into the 008 field; therefore, the date in the 008 field will continue to reflect the date the MARC record was initially created by the originating library. On the other hand, if the subsequently-acquiring library

[36] Initial contributions to the bibliographic database for a work are called "master records."

[37] When a local library uses a master record in OCLC and produces (or downloads) it to the in-house system, the three-character symbol for the subsequent library is added to the holdings for the work.

modifies the previously created MARC record when creating its own MARC record for its own copy of the work, the subsequently-acquiring library may enter into the 008 field of its own MARC record the date its own MARC record was created.[38] But the library that created the original MARC record used by the subsequently-acquiring library would still be reflected in the MARC record of the subsequently-acquiring library in field 040, subfield "a". Thus, the work identified by any MARC record possessed by any MARC-compatible library would have been accessible to the public at least as of the date shown in the 008 field, or shortly thereafter, either from the library that possesses the MARC record itself, or from the originating library indicated in field 040, subfield "a". As discussed, a MARC-compatible library in the ordinary course of its business creates a MARC record in its own catalog system for a work when it acquires a copy of that work.

47. Moreover, when a MARC record is created by a library for its own copy of a work, field 005 is automatically populated with the date that MARC record was created in year, month, day format (YYYYMMDD).[39] Thereafter, the library's computer system may automatically update the date in field 005 every

[38] This practice is not required by, but is nevertheless consistent with, the MARC standard. Many MARC records exist today whose 008 fields indicate when the first original MARC record for a work was created, rather than when a derivative record was created based on the original MARC record by a subsequently-acquiring library for its own computer catalog system.

[39] http://www.loc.gov/marc/bibliographic/bd005.html

time the library updates the MARC record (e.g., to reflect that an item has been moved to a different shelving location within the library). *Id.*[40] Thus, the work identified by any MARC record possessed by any MARC-compatible library would have been accessible to the public at least as of the date shown in the 005 field, or shortly thereafter, from the library that possesses the MARC record itself. As noted, because the 005 field may be updated each time the library updates its MARC record, the work identified by the MARC record may, in fact, have been accessible to the public from that library much earlier than the date indicated in the 005 field.

48. Moreover, MARC records for copies of works available at the Library of Congress can have a 955 field.[41] The 955 field in MARC records obtained from the Library of Congress provides Local Tracking Information, which is a record of internal steps in the cataloging process followed by the Library of Congress. *Id.* Entries in the 955 field for a particular work are generated by Library of Congress staff as the work progresses through the cataloging process. *Id.* One of the mandatory fields that library staff must enter for each step is the date (in the form of "yyyy-mm-dd" or "yy-mm-dd"). *Id.* Thus, the work identified by a MARC

[40] Field 005 is visible when viewing a MARC record via an appropriate computerized interface. But when a MARC record is printed directly to hardcopy from the OCLC database, the "005" label is not shown. The date in the 005 field instead appears next to the label "Replaced."

[41] http://www.loc.gov/cds/PDFdownloads/dcm/DCM_2007-03.pdf

record possessed by the Library of Congress would have been accessible to the public at least as of the earliest date shown in the 955 field, or shortly thereafter, from the Library of Congress.

49. Based on my personal experience as a professional librarian using the MARC and OCLC resources, it has been my experience that both of these resources were continuously operational and available since at least 1992. Indeed, in the course of my work, I have extensively used both of these resources over the past 30+ years, and I have consistently found the information contained within these resources to be complete and reliable. I have never found the date of accessibility as indicated in fields 008, 005, or 955 to be incorrect. And in only a minute number of cases have I found any errors at all in these records – none of which affected my ability to render an accurate opinion as to accessibility, indexing, or subject headings.

C. Serial Publications

50. In addition to creating records for books, OCLC also hosts records for serial publications. Serial publications have the same collective title but are intended to continue indefinitely with enumeration such as a volume or issue number (e.g., magazines, journals, etc.). In the OCLC bibliographic database, the first issue of the serial publication is typically cataloged, but the date is left open-ended with the use of a punctuation mark such as a dash. Individual issues are not

cataloged according to the current national cataloging rules outlined in *RDA: Resource and Access*.

51. MARC records for serial publication in OCLC represent the entire run of the serial title. With knowledge of the first issue published, future issues can be predicted. In my extensive professional experience, is it highly unusual for a library to stop collecting and shelving a serial publication prior to the end of its publication run. If a subscription to a serial publication ends its run or is cancelled before the end of its run, the library will denote that it has stopped receiving new volumes by filling in the end date in the local MARC record.

52. The handling of printed journal subscriptions is shown on the cover or the first few pages of individual issues. As was the best practice among libraries, issues arrived at a central facility and were immediately received, verified as part of a subscription, checked in, and stamped or labeled with the institution's name and date. Determining that the issue was part of the library subscription ensured that the entire set of publications for the year had been received so that they could be professionally bound and retained. This process also verified that all of the published issues arrived so that the library staff did not have to request or claim an issue that did not arrive as expected. In large public libraries with branches and multi-campus libraries within academic institutions, the journals were sorted and delivered to the subscribing unit. The new issue was placed in the public area; the

older issue was stored so that it remained available.

53. The foregoing process has been standard library practice longer than I have been working in the profession. I first learned the steps in the process in the late 1970s and later supervised it. Although the checking in process has become automated and now links electronically to holdings records for the MARC record for each serial title, the manual placement of a stamp or label and placing the issue in a public area has not changed for 50 years. Unless I note otherwise below in reference to a specific serial publication, it is my expert opinion that this standard protocol was followed for all of the serial publications discussed below.

V. PUBLICATIONS IN THIS PROCEEDING

A. Publication 1 – Exhibit 1008: "MPEG Overview" by Stan Baron and W. Robin Wilson ("Baron")

54. Attached hereto as Exhibit 1008 is a true and correct copy of the conference paper "MPEG Overview," by Stan Baron and W. Robin Wilson (hereafter "Baron"). This conference paper was published in the conference proceedings volume titled *ITU/SMPTE Tutorial: Digital Terrestrial Television Broadcasting* on pages 28-36. The ITU/SMPTE Tutorial on Digital Terrestrial Television Broadcasting was held on January 1, 1994, in White Plains, New York. Exhibit 1008 is a true and correct copy of the conference paper within the conference proceedings book I obtained from the Texas Christian University Library in Fort Worth, Texas. I was also able to find this book in the Library of

Congress. Specifically, the text is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. I was able to find the book within the custody of a library – a place where an authentic copy of this book would likely be. Exhibit 1008 is a true and correct copy in a condition that creates no suspicion about its authenticity.

55. Attached hereto as Attachment 1a is a true and correct copy of the MARC record for the conference proceedings volume titled *ITU/SMPTE Tutorial: Digital Terrestrial Television Broadcasting* in the Library of Congress. The library ownership is indicated by the presence of the library's code (DLC) in the 040 field. I personally identified and retrieved the MARC record that is Attachment 1a.

56. The MARC record for the conference proceedings volume titled *ITU/SMPTE Tutorial: Digital Terrestrial Television Broadcasting* shows that it was cataloged in the Library of Congress on March 4, 1994, as shown in field 955 ("940304") and was through the shelf-ready process on October 11, 1994 ("94-10-11"). The MARC record was contributed to the OCLC database. The most recent enhancement to Attachment 1a occurred on October 11, 1994, as shown in field 005 ("19941011"). Therefore, this conference proceedings volume would have been available to users in the Library of Congress on or shortly after October 11, 1994.

57. Attached hereto as Attachment 1b is a true and correct copy of the MARC record for the conference proceedings volume titled *ITU/SMPTE Tutorial: Digital Terrestrial Television Broadcasting* obtained from the OCLC bibliographic database. Attachment 1b indicates that a cataloger at the Library of Congress created OCLC record number 31374706 on March 4, 1994, as shown in the "Entered" field ("19940304"). The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 1b occurred on July 26, 2015, as shown in the "Replaced" field ("20150726"). I personally identified and retrieved the MARC record that is Attachment 1b.

58. Attachment 1b includes an entry in field 050 ("TK6778 $b .I88 1994")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("621.388")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 1b further includes an English language descriptor term reading "Digital television $v Congresses" (see Attachment 1c, Library of Congress subject heading sh2009123382) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 1b was indexed according to its subject matter by virtue of at least

three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entry. As of March 4, 1994, the MARC record attached hereto as Attachment 1b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that purchased this conference proceedings volume, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

59. Attachment 1b indicates that the conference proceedings volume titled *ITU/SMPTE Tutorial: Digital Terrestrial Television Broadcasting* as cataloged at the Library of Congress is currently available from 4 libraries (as shown in "4 other holdings"). In view of above, the conference proceedings volume titled *ITU/SMPTE Tutorial: Digital Terrestrial Television Broadcasting* was publicly available on or shortly after October 11, 1994, because by that date it had been received, cataloged, and indexed at the Library of Congress and made part of the OCLC bibliographic database.

60. For these reasons, Exhibit 1008 was published and accessible to the public on or shortly after October 11, 1994.

B. Publication 2 – Exhibit 1006: "The Development and Standardization of Asymmetrical Digital Subscriber Line" by Walter Y. Chen ("Chen")

61. Attached hereto as Exhibit 1006 is a copy of the journal article "The

Development and Standardization of Asymmetrical Digital Subscriber Line" by Walter Y. Chen (hereafter "Chen"). The Chen article was published in Volume 37, Issue 5 of the *IEEE Communications Magazine* and was found in the Linda Hall Library. The Chen article appears beginning on page 68 of this issue dated May 1999. Exhibit 1006 is a true and correct copy of the Chen article (pages 68-72). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Chen article is also available in the *IEEE Xplore* database.[42] Exhibit 1006 was found within the custody of a library – a place where and authentic copy of this journal would likely be. Exhibit 1006 is a true and correct copy in a condition that creates no suspicion about its authenticity.

62. Attached hereto as Attachment 2a is a true and correct copy of the MARC record for the *IEEE Communications Magazine* at the Linda Hall Library. The library ownership is indicated by the presence of the library's code (LHL) in field 049. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 2a occurred on October 30, 2019, as shown in field 005 ("20191030"). I personally identified and retrieved the MARC record that is Attachment 2a.

63. Attachment 2a also shows that Exhibit 1006 was catalogued with a

[42] https://ieeexplore.ieee.org/document/762858

descriptor term reading "Telecommunication $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008112739) in the 650 field.

64. As noted in the holdings information (362 field) of Attachment 2a, the Linda Hall Library has received the *IEEE Communications Magazine* since January 1979 and continues to regularly receive the publication, including the May 1999 issue, as confirmed by the fact that I was able to obtain a print copy of Exhibit 1006 from the Linda Hall Library, which includes a library date stamp of "May 18, 1999" on its front cover.

65. Thus, based on finding a print copy of Exhibit 1006 in the Linda Hall Library with a date stamp of May 18, 1999 and MARC record in its online library catalog attached as Attachment 2a, the article "The Development and Standardization of Asymmetrical Digital Subscriber Line" by Chen published in the *IEEE Communications Magazine* was available, cataloged, and indexed at the Linda Hall Library and made part of its online catalog database on or shortly after May 18, 1999.

66. The availability of Exhibit 1006 is not limited to the Linda Hall Library. Attached hereto as Attachment 2c is a true and correct copy of the MARC record for the *IEEE Communications Magazine* obtained from the OCLC bibliographic database. As previously noted in Section IV.A, the library that originally created the MARC record is recorded in field 040 with a unique library

code. For Attachment 2c, that library code is "NSD," which means that the MARC record for this serial was cataloged as part of the National Serials Data Program at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 4447692 on December 13, 1978, as shown in the "Entered" field ("19781213"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 2c occurred on October 4, 2020, as shown in the "Replaced" field ("20201004"). I personally identified and retrieved the MARC record that is Attachment 2c. The "BLvl" entry in Attachment 2c is "s," which indicates that the *IEEE Communications Magazine* is a serial publication. Field 310 of Attachment 1c reads "Monthly, $b Aug. 1983-" Accordingly, the MARC record for Exhibit 1006 corresponds to the *IEEE Communications Magazine* from the time the serial title adopted the current title and includes the date of the Chen article.

67. Attachment 2c includes an entry in field 050 ("TK5101.A1 $b I13a")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment 2c further includes an English language descriptor reading "Telecommunication $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008112739) in the 650 field. Thus, as of

its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 2c was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 050 entry and the field 650 entry.

68. Thus, as of December 13, 1978, the MARC record attached hereto as Attachment 2c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library. Further, Attachment 2c indicates that the *IEEE Communications Magazine* as cataloged at the Library of Congress is currently available from 469 libraries.

69. In view of the above, in addition to being received at the Linda Hall Library, this issue of the *IEEE Communications Magazine* had also been cataloged and indexed at the Library of Congress and made part of the OCLC bibliographic database on or shortly after May 18, 1999.

70. Further supporting my conclusion that Exhibit 1006 was publicly accessible to a POSA and interested researchers in the field is the fact that the journal *IEEE Communications Magazine* was included in several well-known indices, including *Engineering Index Annual, Engineering Index Monthly,*

Engineering Index Bioengineering Abstracts, Engineering Index Energy Abstracts, Index to IEEE Publications, International Aerospace Abstracts, Computer & Control Abstracts, Electrical & Electronics Abstracts, Physics Abstracts. Science Abstracts. Series A, Predicasts, Electronic Publishing Abstracts, and *Applied Science & Technology Index. See* field 510 entries in Attachment 2a from the Linda Hall Library. As noted above, this would have provided a POSA with keyword searching capabilities and other tools to locate this article. In my extensive experience, these indices would have been updated to include the issue of *IEEE Communications Magazine* shortly after the issue was published in May 1999.

71. Finally, not only was Exhibit 1006 accessible and available to others in the field on or shortly after May 1999, but researchers also obtained and cited this article in other works, which is still further confirmation of its availability and accessibility. For example, *Google Scholar* indicates that this article has been cited 437 times. Attachment 2d reports the number of citing references shown in *Google Scholar* for Exhibit 1006. Further, *Scopus* indicates that this article has been cited 10 times (see Attachment 2e).

72. For these reasons, Exhibit 1006 was published and accessible to the public on or shortly after May 18, 1999.

C. Publication 3 – Exhibit 1020: *PC Magazine*, April 23, 1996 ("PC Magazine 1996")

73. Attached hereto as Exhibit 1020 is a set of selected pages published in Volume 15, Number 8 of the *PC Magazine*, which was found in the University of Wisconsin – Madison Libraries. Exhibit 1020 is a true and correct copy of the *PC Magazine* pages 14, 32-33, 42, 58-59, and 64-65 of this issue dated April 23, 1996. Specifically, the text of the pages is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1020 was found within the custody of a library – a place where and authentic copy of this journal would likely be. Exhibit 1020 is a true and correct copy in a condition that creates no suspicion about its authenticity.

74. Attached hereto as Attachment 3a is a true and correct copy of the MARC record for the *PC Magazine* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of page 1. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 3a occurred on July 14, 2016, as shown in field 005 ("20160724"). I personally identified and retrieved the MARC record that is Attachment 3a.

75. Attachment 3a also shows that Exhibit 1020 was catalogued with two

descriptor terms reading "IBM microcomputers $v Periodicals" (see Attachment 3b, Library of Congress subject heading sh2008112739 and Attachment 3c, Library of Congress subject heading sh85099890) and "Microcomputers $v Periodicals" (see Attachment 3d, Library of Congress subject heading sh2008107746) the 650 fields.

76. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *PC Magazine* since January 1982 and continues to receive the publication,[43] including the April 23, 1996 issue, as confirmed by the fact that I was able to obtain a print copy of Exhibit 1020 from the University of Wisconsin – Madison Libraries. Based on my extensive experience, it would have typically taken a week for the issue to be delivered to the library, and thus would have been available on or shortly after April 30, 1996.

77. Thus, based on finding a print copy of Exhibit 1020 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 3a, the selected pages published in *PC Magazine* were available, cataloged, and indexed at the University of Wisconsin – Madison Libraries and made part of its online catalog database on or shortly after April 30, 1996.

[43] The publication began using the title *PC* (1982-1995) and adopted the current title, *PC Magazine* in January 1986. *PC Magazine* was available in print and digital formats until January 2009 when the print edition ceased publication.

78. The availability of Exhibit 1020 is not limited to the University of Wisconsin – Madison Libraries. Attached hereto as Attachment 3e is a true and correct copy of the MARC record for the *PC Magazine* obtained from the OCLC bibliographic database. As previously noted in Section V.A, the original library that created the record is recorded in field 040 with a unique library code. For Attachment 3e, that library code is "AGL," which means that the MARC record for this serial was cataloged at the National Agricultural Library (Beltsville, Maryland). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the National Agricultural Library created OCLC record number 13566002 on May 14, 1986, as shown in the "Entered" field ("19860514"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 3e occurred on June 16, 2020, as shown in the "Replaced" field ("20200616"). I personally identified and retrieved the MARC record that is Attachment 3e. The "BLvl" entry in Attachment 3e is "s," which indicates that the *PC Magazine* is a serial publication. Field 310 of Attachment 3e reads "Monthly, $b 2008-2009." Field 321 of Attachment 3e indicates that the frequency of publication had been biweekly (1986-2007). Accordingly, the MARC record for Exhibit 1020 corresponds to the *PC Magazine* from the time of the serial title adopted the current title and includes the date of the selected pages in the April 23,

1996 issue.

79. Attachment 3e includes an entry in field 050 ("QA76.8.I1015 $b P38")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("004.165")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 3e further includes two English language descriptors reading "IBM microcomputers $v Periodicals" (see Attachment 3b, Library of Congress subject heading sh2008112739 and Attachment 3c, Library of Congress subject heading sh85099890) and "Microcomputers $v Periodicals" (see Attachment 3d, Library of Congress subject heading sh2008107746) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 3e was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries.

80. Thus, as of May 14, 1986, the MARC record attached hereto as Attachment 3e was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic

database or through an individual library. Further, Attachment 3e indicates that the *PC Magazine* as cataloged at the National Agricultural Library is currently available from 2,199 libraries.

81. In view of the above, in addition to being received at the University of Wisconsin – Madison Libraries, this issue of the *PC Magazine* had been cataloged and indexed at the National Agricultural Library and made part of the OCLC bibliographic database on or shortly after April 30, 1996.

82. For these reasons, Exhibit 1020 was published and accessible to the public on or shortly after April 30, 1996.

D. Publication 4 – Exhibit 1016: "Polygon-Assisted JPEG and MPEG Compression of Synthetic Images," by Marc Levoy ("Levoy")

83. Attached hereto as Exhibit 1016 is a true and correct copy of the conference paper "Polygon-Assisted JPEG and MPEG Compression of Synthetic Images," by Marc Levoy (hereafter "Levoy"). This conference paper was published in the *Proceedings of the 22nd Annual Conference on Computer Graphics and Interactive Techniques* on pages 21-28. The 22nd Annual Conference on Computer Graphics and Interactive Techniques (SIGGRAPH '95) was held on August 6-11, 1995, in Los Angeles, California. Exhibit 1016 is a true and correct digital copy of the conference paper. I was able to find this conference paper in the King Library at San José State University. Specifically, the text is

complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. I was able to find the digital version of the book within the custody of a library – a place where an authentic copy of this digital book would likely be. Exhibit 1016 is a true and correct copy in a condition that creates no suspicion about its authenticity.

84. The digital version of the Levoy conference paper is also available through the *ACM Digital Library*,[44] *Semantic Scholar*,[45] and *CiteSeer*^{x}.[46] I obtained this digital copy of the conference paper from the *ACM Digital Library*.

85. Attached hereto as Attachment 4a is a true and correct copy of the MARC record for the print version of the *Proceedings of the 22nd Annual Conference on Computer Graphics and Interactive Techniques* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 4a. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 4a, that library code is "LRT," which means that the MARC record for these conference proceedings were cataloged in the Prescott Memorial Library at Louisiana

[44] https://dl.acm.org/doi/10.1145/218380.218392
[45] https://www.semanticscholar.org/paper/Polygon-assisted-JPEG-and-MPEG-compression-of-Levoy/2bef8f9338793bf332795bd300c27b8884ee5f7c
[46] http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.27.1387

Technical University (Ruston, Louisiana). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger in the Prescott Memorial Library at Louisiana Technical University created OCLC record number 33325977 on October 18, 1995. The library continues to update this MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on May 6, 2019, as shown in the "Replaced" field ("20190506").

86. Attachment 4a includes an entry in field 050 ("T385 $b .C584 1995")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system).[47] Further, Attachment 4a includes an entry in field 082 ("006.6")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system.[48] Attachment 4a also shows that Exhibit 1016 was catalogued with a descriptor term reading "Computer graphics $v Congresses" (see Attachment 4b, Library of Congress subject heading sh2008100018) in the 650 field. Further, as of October 18, 1995, the MARC record attached hereto as Attachment 4a was accessible through any library with access to the OCLC bibliographic database or the online

[47] T385 = Technology (General)—Mechanical drawing. Engineering graphics—Computer-assisted drafting. Computer graphics

[48] 006.6 = Computer science, information & general works – Special computer methods – Computer graphics

catalog at a library that acquired this conference proceedings volume, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

87. Attachment 4a indicates that the *Proceedings of the 22nd Annual Conference on Computer Graphics and Interactive Techniques* as cataloged in the Prescott Memorial Library at Louisiana Technical University is currently available from 52 libraries (as indicated by "52 other holdings"). In view of the above, the *Proceedings of the 22nd Annual Conference on Computer Graphics and Interactive Techniques* was publicly available on or shortly after October 18, 1995, because by that date it had been cataloged and indexed in the Prescott Memorial Library at Louisiana Technical University, made part of the OCLC bibliographic database, and received in the King Library at San José State University. For these reasons, Exhibit 1016 was published and accessible to the public on or shortly after October 18, 1995.

88. Not only was Exhibit 1016 accessible and available to others in the field as of October 18, 1995, researchers actually obtained and cited this conference paper in other works, which is still further confirmation of its availability and accessibility. For example, Google Scholar indicates that this conference paper has been cited 157 times (see Attachment 4c). Further, Scopus

indicates that this conference paper has been cited 60 times (see Attachment 4d).

89. For these reasons, Exhibit 1016 was published and accessible on or shortly after October 18, 1995.

E. Publication 5 – Exhibit 1009: Information Technology -- Generic Coding of Moving Pictures and Associated Audio Information: Video. Transmission of Non-telephone Signals, ITU-T Recommendation H.262 ("ITU-T 262")

90. Attached hereto as Exhibit 1009 is a true and correct copy of the technical paper titled *Information Technology -- Generic Coding of Moving Pictures and Associated Audio Information: Video. Transmission of Non-telephone Signals* and issued by the Telecommunication Standardization Sector of the International Telecommunication Union (ITU). Exhibit 1009 is known as ITU-T Recommendation H.262 (H.262/MPEG 2 Standard) and is dated July 1995 (see the document cover). I downloaded Exhibit 1009 from the ITU website.[49] The document is available in English, French, and Spanish and indicates a release date on the ITU website of July 5, 2000. Specifically, the text is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. I was able to find the digital version of the document within the custody of the issuing agency – a place where an authentic copy of this digital publication would likely be. Exhibit 1009 is

[49] https://www.itu.int/rec/T-REC-H.262-199507-S/en

a true and correct copy in a condition that creates no suspicion about its authenticity.

91. Attached hereto as Attachment 5a is a true and correct copy of the MARC record for the print version of the technical paper *Information Technology -- Generic Coding of Moving Pictures and Associated Audio Information: Video. Transmission of Non-telephone Signals* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 5a. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 5a, that library code is "SINTU," which means that the MARC record for this document was cataloged in the Nanyang Technological University Library (Singapore). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger in the Nanyang Technological University Library created OCLC record number 733063887 on June 27, 2011, as shown in the "Entered" field (20110627"). The library continues to update this MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on October 6, 2015, as shown in the "Replaced" field ("20151006").

92. Attachment 5a includes an entry in field 050 ("TK5101.I91 H262")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey

Decimal classification system).[50] Attachment 5a also shows that Exhibit 1009 was catalogued with three descriptor terms reading "Coding theory $x Standards" (see Attachment 5b, Library of Congress subject heading sh85027654 and Attachment 5c, Library of Congress subject heading sh85127314), "Image processing $x Digital techniques $x Standards" (see Attachment 5d, Library of Congress subject heading sh85064447 and Attachment 5c, Library of Congress subject heading sh85127314), and "Signal processing $x Digital techniques $x Standards" (see Attachment 5e, Library of Congress subject heading sh85122398 and Attachment 5c, Library of Congress subject heading sh85127314) in the 650 fields. Further, as of June 27, 2011, the MARC record attached hereto as Attachment 5a was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired this document, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

93. Attachment 5a indicates that the technical paper *Information Technology -- Generic Coding of Moving Pictures and Associated Audio Information: Video. Transmission of Non-telephone Signals* as cataloged in the

[50] TK5101 = Electrical engineering. Electronics. Nuclear engineering—Telecommunication

Nanyang Technological University Library is currently available in print from 1 library (as indicated by "1 other holding"). In view of the above, the technical paper *Information Technology -- Generic Coding of Moving Pictures and Associated Audio Information: Video. Transmission of Non-telephone Signals* was publicly available on or shortly after July 5, 2000, because by that date it had been made available digitally on the ITU website.

94. For these reasons, Exhibit 1009 was published and accessible to the public on or shortly after July 5, 2000.

F. Publication 6 – Exhibit 1007: *PC Magazine*, September 21, 1999 ("PC Magazine 1999")

95. Attached hereto as Exhibit 1007 is a set of selected pages published in Volume 18, Number 16 of the *PC Magazine*, which was found in the Linda Hall Library (Kansas City, Missouri). Exhibit 1007 is a true and correct copy of the *PC Magazine* pages 1-14, 35, 55, 76, 80, 97, 106 of this issue dated September 21, 1999. Specifically, the text of the pages is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1007 was found within the custody of a library – a place where and authentic copy of this journal would likely be. Exhibit 1007 is a true and correct copy in a condition that creates no suspicion about its authenticity.

96. Attached hereto as Attachment 6a is a true and correct copy of the

MARC record for the *PC Magazine* at the Linda Hall Library. The library ownership is indicated by the presence of the library's code (LHL) in the 049 field. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 6a occurred on October 28, 2019, as shown in field 005 ("20191028"). I personally identified and retrieved the MARC record that is Attachment 6a.

97. Attachment 6a also shows that Exhibit 1007 was catalogued with two descriptor terms reading "IBM microcomputers $v Periodicals" (see also Attachment 3b, Library of Congress subject heading sh2008112739 and Attachment 3c, Library of Congress subject heading sh85099890) and "Microcomputers $v Periodicals" (see also Attachment 3d, Library of Congress subject heading sh2008107746) the 650 fields.

98. As noted in the holdings information (008 field, characters 8 through 11), the Linda Hall Library has received the *PC Magazine* since January 1986 and continues to receive the publication,[51] including the September 21, 1999 issue, as confirmed by the fact that I was able to obtain a print copy of Exhibit 1007 from the Linda Hall Library, which includes a library date stamp of "August 27, 1999" on its front cover.

[51] The publication began using the title *PC* (1982-1995) and adopted the current title, *PC Magazine* in January 1986. *PC Magazine* was available in print and digital formats until January 2009 when the print edition ceased publication.

99. Thus, based on finding a print copy of Exhibit 1007 in the Linda Hall Library and MARC record in its online library catalog attached as Attachment 6a, the selected pages published in *PC Magazine* were available, cataloged, and indexed at the Linda Hall Library and made part of its online catalog database on or shortly after August 27, 1999, as shown by the ownership and receipt date on the cover.

100. The availability of Exhibit 1007 is not limited to the Linda Hall Library. Attached hereto as Attachment 6b is a true and correct copy of the MARC record for the *PC Magazine* obtained from the OCLC bibliographic database. As previously noted in Section V.A, the original library that created the record is recorded in field 040 with a unique library code. For Attachment 6b, that library code is "AGL," which means that the MARC record for this serial was cataloged at the National Agricultural Library (Beltsville, Maryland). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the National Agricultural Library created OCLC record number 13566002 on May 14, 1986, as shown in the "Entered" field ("19860514"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 6b occurred on June 16, 2020, as shown in the "Replaced" field ("20200616"). I personally identified and retrieved the MARC record that is Attachment 6b. The "BLvl" entry in

Attachment 6b is "s," which indicates that the *PC Magazine* is a serial publication. Field 310 of Attachment 6b reads "Monthly, $b 2008-2009." Field 321 of Attachment 6b indicates that the frequency of publication had been biweekly (1986-2007). Accordingly, the MARC record for Exhibit 1007 corresponds to the *PC Magazine* from the time of the serial title adopted the current title and includes the date of the selected pages in the September 21, 1999 issue.

101. Attachment 6b includes an entry in field 050 ("QA76.8.I1015 $b P38")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("004.165")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 6b further includes two English language descriptors reading "IBM microcomputers $v Periodicals" (see also Attachment 3b, Library of Congress subject heading sh2008112739 and Attachment 3c, Library of Congress subject heading sh85099890) and "Microcomputers $v Periodicals" (see also Attachment 3d, Library of Congress subject heading sh2008107746) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 6b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries.

102. Thus, as of May 14, 1986, the MARC record attached hereto as Attachment 6b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library. Further, Attachment 6b indicates that the *PC Magazine* as cataloged at the National Agricultural Library is currently available from 2,195 libraries.

103. In view of the above, in addition to being received at the Linda Hall Library, this issue of the *PC Magazine* had been cataloged and indexed at the National Agricultural Library and made part of the OCLC bibliographic database on or shortly after August 27, 1999.

104. For these reasons, Exhibit 1007 was published and accessible to the public on or shortly after August 27, 1999.

G. Publication 7 – Exhibit 1019: "A G3 PowerPC™ Superscalar Low-Power Microprocessor," by A. Richard Kennedy, Mike Alexander, Eric Fiene, José Lyon, Belli Kuttanna, Rajesh Patel, Mydung Pham, Mike Putrino, Cody Croxton, Suzanne Litch, and Brad Burgess ("Kennedy")

105. Attached hereto as Exhibit 1019 is a true and correct copy of the conference paper "A G3 PowerPC/sup TM/ Superscalar Low-Power Microprocessor," by A. Richard Kennedy, Mike Alexander, Eric Fiene, José Lyon,

Belli Kuttanna, Rajesh Patel, Mydung Pham, Mike Putrino, Cody Croxton, Suzanne Litch, and Brad Burgess Levoy (hereafter "Kennedy"). This conference paper was published in the *Proceedings: IEEE COMPCON 97* on pages 314-325. The 42nd IEEE International Computer Conference (IEEE COMPCON 97) was held on February 23-26, 1997, in San José, California. Exhibit 1019 is a true and correct digital copy of the conference paper. The conference program indicates that the Kennedy paper was delivered the afternoon of Wednesday, February 26, 1997 (see page 10 of Exhibit 1019).[52] Therefore, the Kennedy paper was publicly available to conference attendees on that date.

106. I was able to find a print version of this conference paper in the Linda Hall Library (Kansas City, Missouri). Specifically, the text is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. I was able to find the digital version of the book within the custody of a library – a place where an authentic copy of this digital book would likely be. Exhibit 1019 is a true and correct copy in a condition that creates no suspicion about its authenticity.

107. The digital version of the Kennedy conference paper is also available through the *IEEE Xplore* database,[53] the *ACM Digital Library*,[54] and *Semantic*

[52] https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=584660
[53] https://ieeexplore.ieee.org/document/584742
[54] https://dl.acm.org/doi/10.5555/792770.793682

Scholar.[55]

108. Attached hereto as Attachment 7a is a true and correct copy of the MARC record for the print version of the *Proceedings: IEEE COMPCON 97* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 7a. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 7a, that library code is "AKR," which means that the MARC record for these conference proceedings were cataloged in the University of Akron Libraries (Akron, Ohio). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger in the University of Akron Libraries created OCLC record number 36634334 on August 5, 2003. The library continues to update this MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on June 30, 2020, as shown in the "Replaced" field ("20200630").

109. Attachment 7a includes an entry in field 050 ("T58.5 $b .C655 1997")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the

[55] https://www.semanticscholar.org/paper/A-G3-PowerPC%2Fsup-TM%2F-superscalar-low-power-Kennedy-Alexander/9f88f50a59dc9e73e742d0687d2e0a8c2929bee1

Dewey Decimal classification system).[56] Further, Attachment 7a includes an entry in field 082 ("004")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system.[57] Attachment 7a also shows that Exhibit 1019 was catalogued with four descriptor terms reading "Information technology $v Congresses" (see Attachment 7b, Library of Congress subject heading sh2008104441), "Information superhighway $v Congresses" (see Attachment 7c, Library of Congress subject heading sh2009127208), "World Wide Web $v Congresses" (see Attachment 7d, Library of Congress subject heading sh2008114004), and "Internet $v Congresses" (see Attachment 7e, Library of Congress subject heading sh2008104632) in the 650 fields. Further, as of August 5, 2003, the MARC record attached hereto as Attachment 7a was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired this conference proceedings volume, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

110. Attachment 7a indicates that the *Proceedings: IEEE COMPCON 97* as cataloged in the University of Akron Libraries is currently available from 81

[56] T58.5 = Technology (General)—Industrial engineering—Information technology. Information systems (General)
[57] 006.6 = Computer science, information & general works – Computer science

libraries (as indicated by "81 other holdings"). In view of the above, the *Proceedings: IEEE COMPCON 97* was publicly available on or shortly after August 5, 2003, because by that date it had been cataloged and indexed in the University of Akron Libraries, made part of the OCLC bibliographic database, and received in the Linda Hall Library. For these reasons, Exhibit 1019 was published and accessible to the public at the Linda Hall Library on or shortly after August 5, 2003.

111. Not only was Exhibit 1019 accessible and available to others in the field as of August 5, 2003, researchers actually obtained and cited this conference paper in other works, which is still further confirmation of its availability and accessibility. For example, *Google Scholar* indicates that this conference paper has been cited 18 times (see Attachment 7f).

112. For these reasons, the content of Exhibit 1019 was publicly available at the IEEE COMPCON 97 conference on February 26, 1997, and was further accessible in print on or shortly after August 5, 2003.

VI. CONCLUSION

113. In signing this declaration, I recognize that the declaration will be filed as evidence in a case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

114. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: December 2, 2020

Respectfully submitted,

Sylvia D. Hall-Ellis, Ph.D.

APPENDIX A

CURRICULUM VITAE
SYLVIA D. HALL-ELLIS

EDUCATION

Ph.D., University of Pittsburgh, Pittsburgh, Pennsylvania, 1985
M.P.S., University of Denver, Denver, Colorado, 2014
Post Graduate Studies, University of Texas – San Antonio, Texas, 1975-1976
M.L.S., University of North Texas, Denton, Texas, 1972
B.A., Rockford University, Rockford, Illinois, 1971

PROFESSIONAL EXPERIENCE

1981- **Consultant for higher education, non-profit organizations, and corporations.**

2002- **Adjunct Professor, School of Information, San José State University, San José, California.** Serve as part-time faculty member teaching graduate students in technical services (cataloging, bibliographic control, classification), "core courses," and special topics.

2014-2016 **Director, Grants and Resource Development, Colorado Community College System.** Provided leadership and vision to foster the continued growth of rigorous scholarship, innovative projects, and creative work for statewide system, 13 campuses, and 50 teaching sites serving 155,000 students. Responsible for leadership and ensured efficient functioning of contract and grants in compliance with state & federal requirements and successful implementation and management. Served as a subject matter expert and liaison for college Grant Directors for all issues relating to grants and subcontracts.

2010-2014 **Senior Grant Administrator, Morgridge College of Education, University of Denver (Colorado).** Provided leadership and vision to foster continued growth of rigorous scholarship, innovative research, and creative work in the Morgridge College of Education. Ensure that contract and grants processes function effectively and efficiently for 60 faculty and researchers with a focus on the successful progression and efficient management of grants totaling $13M. Worked effectively and collegially with Department Chairs and Program Coordinators on operational grant-related management activities and with a broad range of internal and external constituencies. Supported the dissemination and promotion of faculty research and scholarship to outside constituents at conferences and through publications. Assisted Principal Investigators and grant project teams by coaching, mentoring, and financial management.

2011-2013 **Interim Director & Assistant Dean, Westminster Law Library, Sturm College of Law, University of Denver.** Planned, organized, and directed all administrative activities for the library serving students, faculty, and alumni; oversaw the employment, retention, promotion, transfer and termination of library personnel; represented the library at professional conferences and public meetings; created and promoted a climate and culture of acceptance for new programs and services, a positive high-quality image of the law library, and that reflect the organization's values, encourage excellent performance, and reward high productivity and innovation; provided leadership and set strategic direction of the organization; ensured that the library provided excellent customer service through solution-oriented staff response to patron needs and by responsiveness and continuous improvement of the organization; promoted, developed, and maintained positive working relationships with colleagues and customers including key stakeholders and groups, higher education institutions, the legal community, other regional libraries and districts statewide, and national library organizations.

2007-2014 **Associate Professor, Library & Information Science, Morgridge College of Education, University of Denver (Colorado).** Served in leadership role and worked collaboratively in program, college, campus and community environments. Advised and supervised students, taught core and specialized courses at the graduate level in an integrative, student-centered learning environment. Served on LIS, College, and University committees, and maintained

working relationships with colleagues in other academic units and information professionals in the Rocky Mountain region and beyond. Served on and chair doctoral student dissertation committees. Oversaw and facilitated the College and LIS graduate student association.

2002-2007 **Assistant Professor, Library & Information Science, College of Education, University of Denver (Colorado).** Served as tenure-track faculty member teaching graduate students in "core courses," resource description and access, service learning, and independent studies. Advised graduate students, participate on LIS and College committees, and serve on doctoral student dissertation committees. Oversaw and facilitated the LIS graduate student association and alumni association.

2000-2002 **Affiliate Faculty, Library & Information Science, College of Education, University of Denver (Colorado).** Served as part-time faculty member teaching graduate students in technical services (cataloging, bibliographic control, classification), "core courses," and special topics. Oversaw and facilitated the LIS graduate student association and alumni association.

2000-2001 **Special Assistant to the Secretary's Regional Representative, U.S. Department of Education, Region VIII, Denver, Colorado.** Served as the principal advisor and representative of the U. S. Secretary of Education's Regional Representative (SRR). Ensured the implementation of major goals of the SRR and the Secretary. Provided leadership on behalf of the SRR in contacts with high-level officials in Region VIII requiring sensitive policy interpretation in communication with senior Department officials to solve problems and resolve issues raised by State and local education officials. Served as the primary contact for School-to-Work/Career, Children's Health Insurance Program, and Safe and Drug-Free Schools. Delivered technical assistance to local education agencies and institutions of higher education in technology, professional development, and school construction.

1999-2000 **Catalog Librarian, Jefferson County Public Library, Lakewood, Colorado.** Performed original, copy cataloging and classification of library materials (English and Spanish) using standard library protocols; completed original descriptive cataloging and subject analysis; enhanced brief catalog and authority records in III.

1997-1999 **Development Officer, McREL International, Aurora, Colorado.** Served as senior member of corporate management team in strategic planning, development of proposals and contracts, implementation, and evaluation of new services, products, and programs for educational agencies. Provided creative leadership to corporate committees to solicit ideas, identify goals and objectives, plan, develop, present, and evaluate professional development opportunities.

1995-1997 **Education Specialist, Education Service Center, Region One, Edinburg, Texas.** Served as member of Administrative Cabinet team in strategic planning, development of proposals and contracts, implementation, and evaluation of telecommunications capabilities, services, products, and programs for 40 school districts serving 283,000 students in 7 counties. Provided creative leadership to regional and state committees to solicit ideas, identify strategic goals and objectives, plan, develop, present, and evaluate funding opportunities and professional development for 400 librarians.

1993-1996 **Assistant Professor of Library Science, Sam Houston State University, Huntsville, Texas.** Served a faculty member teaching 400 graduate students in technical services (cataloging, bibliographic control, classification), automation, and networking. Participated in distance education program and coordinated annual conference. Conducted university and Texas Library Association-funded field research focused on library collection development and academic achievement.

1992-1993 **Head Librarian, Rocky Mountain College of Art & Design, Denver, Colorado.** Responsible for the daily operation, selection and acquisition of materials, formulation of policies for library operations, media center, and photography/slides archives. Designed and implemented library automation and delivery of electronic resources to college community.

1981-1985 **Development Officer, PRLC, Inc., Pittsburgh, Pennsylvania.** Served as senior member of corporate management team in strategic planning, development of proposals and contracts, implementation, and evaluation of new services, products, and programs for 100 institutional member organizations. Coordinated the development of proposals and contracts totaling $4,000,000 annually. Provided creative leadership to corporate committees to solicit ideas, identify goals and objectives, plan, develop, present, and evaluate professional development opportunities.

1981 **Director of Library Development, Pennsylvania Department of Education, Harrisburg, Pennsylvania.** Responsible for statewide development, technical assistance, professional development, resource sharing, children's services, institutional library services, networking, and state aid program for all libraries throughout the Commonwealth. Functioned as liaison to Governor's Advisory Council, LSCA Advisory Council, District Administrators, private colleges, universities, consortia managers, and network directors. Supervised $14,000,000 formula-based state aid program and $3,000,000 grant awards to individual libraries, consortia, and networks.

1978-1981 **Assistant Director, Southern Tier Library System, Corning, New York.** Coordinated operation of system-wide programs (technical assistance, professional development, resource sharing, technical services, outreach) to 40 public libraries in 5 counties serving 500,000 residents. Solicited ideas, identified goals, sponsored, and evaluated professional development opportunities and technical assistance sessions.

1976-1978 **Division Librarian for Technical Services, Corpus Christi Public Libraries, Corpus Christi, Texas.** Provided leadership in acquisitions, cataloging, serials control, and processing for main library and 4 branches serving 250,000 residents. Participated as senior member of library management team. Compiled and prepared technical evaluations, reports, and statistical analyses of Division operations to measure the achievement and cost of annual goals, objectives, and staff performance.

1975-1976 **System Coordinator, San Antonio Major Resource Center, San Antonio, Texas.** Served as senior member of the management team for District X Office, charged to provide technical assistance, resource sharing, media services, and professional development to librarians and staff representing 30 public library jurisdictions in 21 counties serving 1,500,000 residents. Functioned as liaison to System Director, staff, and members of governing bodies with the System Board of Directors and the Texas State Library and Historical Commission. Prepared LSCA grant applications and monitored awards totaling $1,100,000 annually.

1973-1975 **Bilingual Branch Librarian, San Antonio Public Library, San Antonio, Texas.** Worked as librarian providing reference, information, and readers' advisory services in branch serving 50,000 Spanish-speaking residents in southwest San Antonio. Participated in collection development and resource acquisition activities, specializing in children's work, Spanish language resources, and multicultural studies.

1972-1973 **Librarian, Holding Institute, Laredo, Texas.** Worked as high school librarian serving 500 boarding students in Spanish-speaking environment of private school. Provided reference, research assistance, and library instruction to students and 35 faculty members.

1966-1971 **Rockford Public Library, Rockford, Illinois.** Worked in branches as part-time as a Library Assistant, Clerk, and Page in city library serving 150,000 residents.

PUBLICATIONS

Editor-reviewed Monographs (Completed and in Progress)

Hall-Ellis, Sylvia D., and Mary Beth Weber. *Contemporary Cataloging in an RDA Environment: A Handbook for Students and Practitioners.* Chicago, IL: American Library Association. Under contract & In development.

RDA Testing: Lessons Learned and Challenges Revealed. Sylvia D. Hall-Ellis and Robert O. Ellett, Jr., eds. Binghamton, N.Y.: Haworth, 2012. 128 p.

Hall-Ellis, Sylvia D., Stacey L. Bowers, Christopher D. Hudson, and M. Claire Williamson. *Librarian's Handbook for Seeking, Writing, and Managing Grants.* Santa Barbara, Calif.: Libraries Unlimited, 2011. 315 p.

Hall-Ellis, Sylvia D., with Ann Jerabek, and Merrie W. Valliant. *Contemporary Cataloging: A Handbook for Practitioners and Students.* Open access text. Athens, GA: University of Georgia System Regents, 2011. 767 p.

Grealy, Deborah S. and Sylvia D. Hall-Ellis. *From Research to Practice: The Scholarship of Teaching and Learning in LIS Education.* Westport, Conn.: Libraries Unlimited, 2009. 175 p.

Hall-Ellis, Sylvia D. with J. Ann Jerabek. *Grants for School Libraries.* Westport, Conn.: Libraries Unlimited, 2003. 197 p.

Hall-Ellis, Sylvia D., Doris Meyer, Frank W. Hoffmann, with J. Ann Jerabek. *Grant Writing for Small Libraries and School Library Media Centers.* Boulder, Colo.: NetLibrary, 2001. 173 p.

Hall-Ellis, Sylvia D., Doris Meyer, Frank W. Hoffmann, with J. Ann Jerabek. *Grant Writing for Small Libraries and School Library Media Centers.* Englewood, Colo: Libraries Unlimited, 2000. 173 p.

Editor-reviewed Chapters (Completed and In Progress)

Hall-Ellis, Sylvia D. "Prepared to Lead: Talent, Skills, and Competencies." In *Telling the Technical Services Story*. Chicago, IL: American Library Association, 2020. In development and review.

Hall-Ellis, Sylvia D. "Grant Writing and Sponsored Research Funding for Academic Librarians." In *The New Librarianship.* Vol. 4. Bradford Lee Eden, ed. New York: Scarecrow Press, 2015. (pp. 163-174)

Hall-Ellis, Sylvia D. "Organizing Information: Technical Services." In *Information Services Today: An Introduction.* Sandra Hirsch, ed. Lantham, Md.: Rowman and Littlefield, 2015. (pp. 139-148)

Hall-Ellis, Sylvia D. "Metadata, MARC, and More." In *Rethinking Technical Services, Considering Our Profession and Ourselves: What's the Future of Our Profession?* Mary Beth Weber, ed. Lantham, Md.: Rowman and Littlefield, 2015. (pp. 29-55)

Hall-Ellis, Sylvia D., ed. "Contingent Faculty: Non-Tenure Track Faculty Series." In the *Faculty Personnel Guidelines Relating to Appointment, Promotion, and Tenure.* November 2011. Denver, Colo.: University of Denver, 2011. 42 p.

Hall-Ellis, Sylvia D., ed. "Standard VII: Information Resources." In the *Sturm College of Law Self-Study Presentation for Accreditation by the American Bar Association.* Denver, Colo.: University of Denver, Sturm College of Law, 2011. 20 p.

Hall-Ellis, Sylvia D. "Applying for Grants from Foundations, Corporations, or Government." In *The Volunteers' Guide to Fundraising: Raise Money for Your School Team, Library or Community Group.* 1st ed. Ilona M. Bray, ed. Berkeley, Calif.: Nolo, 2011. (pp. 1-38 on accompanying disc)

Hall-Ellis, Sylvia D., ed. "Standard III: The Faculty." In the *Library and Information Science Program Self-Study Document for Accreditation by the American Library Association.* Denver, Colo.: University of Denver, Morgridge College of Education, 2010. 22 p.

Hall-Ellis, Sylvia D. "Library and Information Science Programs and Education for Catalogers and Metadata Specialists: Challenges for the Twenty-first Century." In *Conversations with Catalogers in the Twenty-First Century.* Elaine R. Sanchez, ed. Santa Barbara, Calif.: ABC-Clio, 2010. (pp. 226-254)

Hall-Ellis, Sylvia D., ed. "Standard III: The Faculty." In the *Library and Information Science Program Self-Study Document for Accreditation by the American Library Association.* Denver, Colo.: University of Denver, College of Education, 2003. 15 p.

Lesesne, Teri S. and Sylvia D. Hall-Ellis. "The Selection, Evaluation, and Integration of Culturally Authentic Texts: A Case for Making the Online Catalog Reflect Parallel Cultures." In *Literacy: Traditional, Cultural, Technological.* Pittsburgh, Pa.: International Association of School Librarianship, 1995. (pp. 110-113)

Lesesne, Teri S. and Sylvia D. Hall-Ellis. *The Selection, Evaluation, and Integration of Culturally Authentic Texts: A Case for Making the Online Catalog Reflect Parallel Cultures.* In *Conference Proceedings* of the 23rd Annual International Association of School Librarianship, Pittsburgh, Pennsylvania, July 17-22, 1994. ERIC Document ED374816. 17 p.

Hall-Ellis, Sylvia D. "Curriculum Folio for School Library Media Specialist Programs." In the *National Council for Accreditation of Teacher Education Self-Study for Sam Houston State University.* Huntsville, Tex.: Sam Houston State University, College of Education and Applied Science, 1994. 25 p.

Bruntjen, Scott and Sylvia D. Hall. "Attempting to Automate: Lessons Learned Over Five Years." In *Advances in Library Administration*. Volume 4. Weston, Conn.: JAI Press, 1985. (pp. 177-192)

Peer-Reviewed Journal Articles (Completed and In Progress)

Hall-Ellis-Sylvia D. "Job Design for Cataloging and Metadata Librarians." Submitted to *Journal of Library Administration.* In progress.

Hall-Ellis, Sylvia D. "The Relationship of Situational Leadership and the Dreyfus Model of Skill Acquisition for Supervisors in Cataloging and Metadata Services." To be submitted to *Library Resources and Technical Services.* In progress.

Hall-Ellis, Sylvia D. *The Relationship of Core Competencies on Learning Outcomes and Employers' Expectations for Catalog Librarians and Metadata Specialists.* To be submitted to the *Journal of Education for Library and Information Science.* In progress.

Hall-Ellis, Sylvia D. "Building Cataloger Competencies: The Dreyfus Model as a Prototype for the Education and Professional Development of Catalog Librarians and Metadata Specialists in Bibliographic Control." To be submitted to the *Cataloging & Classification Quarterly.* In progress.

Hall-Ellis, Sylvia D. "Descriptive Impressions of Entry-Level Cataloger and Metadata Specialists Positions, 2000-2016: Reflections and Trends." To be submitted to *Library Resources and Technical Services.* In progress.

Hall-Ellis, Sylvia D. "Competencies for Metadata and Cataloging Leaders: What Employers Expect as Reflected in Position Descriptions, 2000-2016." *Cataloging & Classification Quarterly.* In progress.

Hall-Ellis, Sylvia D. "Stackable Micro-credentials – A Framework for the Future." *The Bottom Line 29*, no. 4 (April 2016), http://www.emeraldinsight.com/doi/pdfplus/10.1108/BL-02-2016-0006

Hall-Ellis, Sylvia D. "Succession Planning and Staff Development – A Winning Combination." *The Bottom Line*, 28 no. 3 (May 2015): 95-98.

Hall-Ellis, Sylvia D. "Succession Planning and Staff Development – A Winning Combination." *The Informed Librarian Online* (September 2015), http://www.informedlibrarian.com/featuredArticle.cfm?FILE=succession_1509.pdf

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NATIONAL SERVICE & PROFESSIONAL AFFILIATIONS

American Library Association
Association for Library Collections & Technical Services
Cataloging, Classification, and Metadata Section
ALCTS Editorial Board, Member, 2015-2019
Committee on Cataloging: Description and Access, Member, 2008-2012
Test Site for RDA, Manager, 2009-2011
Nominating Committee, Member, 2007-2008
Committee for Education and Training of Catalogers, Chair, 2006-2007, Member, 2003-2007
Competencies & Education for a Career in Cataloging Interest Group, Chair, 2010-2012; Member, 2010-
President's Program Committee, 2015-2016
Education Committee, Member, 2005-2007
Task Force on Competencies and Education for a Career in Cataloging, Chair, 2007-2009
2007 Annual Meeting Pre-conference, "What They Don't Teach in Library School: Competencies, Education and Employer Expectations for a Career in Cataloging," Steering Committee Chair
Fundraising Committee, Member, 2004-2006
Office of Diversity
Committee on Diversity, Chair, 2010-2011
Diversity Research Advisory Committee, Member, 2009-2010
Spectrum Scholar Mentor, 2009
Diversity Grants Review Committee, Member, 2007, 2010, 2012
Office of Statistics and Research
Research and Statistics Committee, Member, 2005-2007; Intern, 2003-2005
Library Research Round Table
Membership Committee, 2019-2021
Board of Directors, Member At-Large, 2009-2012
Member, 2003-
Office of Accreditation
Accreditation Panel Member (training completed 2004)
Accreditation Review Panel Member (training completed 2004)

REFORMA
National Board of Directors, 2005-2013
National Fundraising Chair, 2005-2013
National Recruiting and Mentoring Committee, 2008-2010
Colorado Chapter, Secretary, 2004-2005
Colorado Chapter Liaison to National Board of Directors, 2004-2013

Online Audiovisual Catalogers Association (OLAC)
American Association of Law Libraries (AALL)
Colorado Association of Law Librarians (CoALL)

American Association of University Women
Association for Library and Information Science Education (ALISE)
University of Denver ALISE Representative, 2003-2008; 2010-2011
Membership Advisory Committee, 2007-2010
Technical Services Education Special Interest Group, 2003-
Garfield Doctoral Dissertation Award Reviewer, 2012
Garfield Doctoral Dissertation Scholarship Reviewer, 2014
American Association of University Professors (AAUP), 2006-

American Grant Writers Association, 2014-
Grant Professionals Institute, 2016-
National Grants Management Association, 2014-
Grant Reviewer (National and Regional Team Leader), U.S. Department of Education, 1998-
Grant Reviewer, Broadband Technologies Opportunity Program, U.S. Department of Commerce, 2009
Grant Reviewer, Institute of Museum and Library Services, 1998-2000
Grant Reviewer, Colorado Department of Education, 2014-
Grant Reviewer, Colorado State Library, 1998-
Grant Reviewer, American Association of Community Colleges *Working Connections* program, 1999
Peer Reviewer, *Journal for Library and Information Science Education,* 2005-
Peer Reviewer, *Journal of Library Metadata,* 2009
Peer Reviewer, *International Journal of Library and Information Science,* 2011
Regular Columnist, *The Bottom Line*, 2013-2016
Book Reviewer, *Library Journal*, 2001
Book Reviewer, *Críticas*, 2002-2009
Book Reviewer, *Colorado Libraries,* 2000-2012

REGIONAL SERVICE & PROFESSIONAL AFFILIATIONS

Mountain Plains Library Association
Professional Development Grants Committee, Member, 2005-2006
Professional Development Policy and Guidelines Sub-committee Chair, 2006

Colorado Association of Libraries
"Student Voices" Column Editor, *Colorado Libraries,* 2005-2006
Conference Planning Committee, Member, 2002
Technical Services and Automation Division, Chair, 2002-2003; Member, 2000-
Academic Libraries Division, Peer Review Conference Papers Committee, Member, 2007-2009
Education Committee, Member, 1988-1993
Diverse Populations Committee, Member, 2009-2013

SERVICE TO THE UNIVERSITY OF DENVER
Center for Teaching and Learning Faculty Advisory Board, 2007-2008; 2010-2012
Center for Community Engagement and Service Learning Advisory Board, 2007-2012
Faculty Senate
Executive Committee, 2008-2013
Nominations, Rules & Credentials Committee, Chair, 2008-2013; Member 2007-2013
Appointment, Promotion, and Tenure Revision Committee, 2010-2012
Grievance Policy Committee Member, 2007-2010
Law Library Director Search Committee Chair, 2012-2013
PROF Grant Review, College Representative to the University Review Team, 2006, 2008
Project Homeless Connect Evaluations, Principal Investigator, 2006-2009
University Technology Council, 2007-2009
University of Denver Hyde Interviews for Incoming Freshmen, 2003-2012

SERVICE TO THE MORGRIDGE COLLEGE OF EDUCATION
Appointment, Tenure & Review Committee
Member, voting, 2003-2005; 2007- 2009
Chair, Clinical Faculty Promotion & Tenure Policy Subcommittee, 2008-2009
Member, Community Engagement Subcommittee, 2007-2009
Member, Tenure Review Panel, 2003
Advancement and Alumni Relations Committee, Chair, 2003-2007; Member, 2002-2007
College Building Committee Member, 2004-2010
College of Education Student Association, Faculty Advisor, 2004-2007; 2009-2010
Faculty Senator, 2007-2013
Research and Scholarship Committee, Chair, 2008-2009; Member, 2002-2003, 2008-2009

Research and Grant Mentoring Committee, Chair, 2009-2010
Research Task Force Member, 2010-2012
Search Committee Member, Assistant Professor for Curriculum & Instruction, 2010-2011
Workload Task Force Member, 2010-2011

SERVICE TO THE LIBRARY & INFORMATION SCIENCE PROGRAM
Library and Information Science Student and Alumni Association, Faculty Advisor, 2002-2008
ALA Student Chapter, Faculty Advisor, 2005-2008
Beta Phi Mu Phi Chapter, Faculty Advisor, 2004-2014
Steering Committee Member, Accreditation by the American Library Association, 2001-2004
Search Committee Member, Associate Professor for LIS, 2006
Search Committee Chair, Assistant Professors for LIS, 2003, 2005, 2006, 2007
Search Committee Ex-Officio Member, Director for LIS, 2004

SERVICE TO SAM HOUSTON STATE UNIVERSITY
Rio Roundup: South Texas Literature Conference, Conference Coordinator, 1993
External Relations, Fund Raising, Grants Committee, Chair, 1993-1995
Advisory Council Committee, Chair, 1993-1995
Students, Admissions, and Advisement Committee, Chair, 1994
Institutional Effectiveness Committee, Member, 1993-1995

SERVICE TO THE COLLEGE OF EDUCATION AND APPLIED SCIENCE
Faculty Affairs Committee, Member, 1993-1995
Curriculum Committee, Member, 1993-1995
Continuing Education Committee, Member, 1993-1995

SERVICE TO THE COMMUNITY
French Teacher & Student Exchange with Laon, France, Monarch High School, Boulder Valley School District (Boulder, Colorado), 2017-
Denver/Boulder Games 2022, Board of Directors, Secretary-Treasurer, 2015-2018
United Way Campaign Committee, College of Education, 2006
Arapahoe County, Election Judge for the County Clerk and Recorder, 2000-2005
Arthritis Foundation, Rocky Mountain Chapter, Certified Educator & Trainer, 1999-2008
Bonfils Blood Center, Silver Level Donor, 2000-2016
Denver Museum of Natural History, Docent, 1992
Tech Prep of the Lower Rio Grande Valley, Inc. (Harlingen, Texas) Board of Directors, 1995-1997
Executive Committee, 1996-1997; Chair, Development Committee, 1995-1997; Chair, Fiscal Agency Committee, 1995-1996; Chair, Colleges and Universities Committee, 1996-1997
Gilpin County (Colorado) Public Library Board of Trustees, 1986-1989; Vice President, 1987-1989
City of Central (Colorado) Economic Development Committee, 1987-1989
Columbine Family Health Centers, Inc. (Nederland and Black Hawk, Colorado) Board of Directors, 1988-1989

CERTIFICATION
Permanent Public Librarian Certificate - Pennsylvania, New York, Texas
Westlaw Expert Witness, 2008-
Certified Grant Writer®, 2016-

AWARDS AND HONORS
Advanced Practitioner for Service Learning and Community Engagement, University of Denver, 2011
Platinum Star Alumnae, College of Information, Library Science & Technologies, University of North Texas, 2009
Commendation for Integration of Technologies in Teaching & Learning Environment, University of Denver, 2006
Outstanding Adjunct Faculty Member Award, College of Education, University of Denver, 2002
Beta Phi Mu, Pi, University of Pittsburgh, 1985
Alpha Lambda Sigma, University of North Texas, 1972

Albert Nelson Marquis Lifetime Achievement Award, Who's Who in America
Who's Who in American Women
Who's Who of Women Executives
Dictionary of International Biography
Who's Who in the East
Who's Who in the South and Southwest
Who's Who in the World
Who's Who of Online Professionals
Who's Who in Library and Information Science
2,000 Notable Women
Who's Who of Emerging Leaders
Who's Who in Professional and Executive Women
Who's Who in American Education
International Who's Who of Professional and Business Women
International Leaders in Achievement
International Educator of the Year
Who's Who in Finance and Industry
Who's Who in Finance and Business

Invited International and National Conference Presentations

Driscoll, Margaret, Christy Confetti Higgins, Scott Brown, and Sylvia D. Hall-Ellis. *A View from Within: Open House Tour of Three Canvas Core Courses*. Presentation to be delivered at the School of Information, San José State University Professional Development Seminar, San José, California, October 17, 2019.

Hall-Ellis, Sylvia D. *Invest in Me -- I'm Your Future: Succession Planning for Libraries*. Keynote presentation delivered at the ALCTS President's Symposium, Boston, Mass., January 8, 2016.

Seidel, Kent E. and Sylvia D. Hall-Ellis. *Making Grants Work for You: Strategies for Doctoral Students and Early Career Scholars.* Presentation delivered at the University Council for Educational Administration, Early Career Scholars Session, Indianapolis, Ind., November 9, 2013.

Hall-Ellis, Sylvia D. *So You Want to be a Manager; Leadership Skills and Competencies for Technical Services Managers and Administrators.* Presentation delivered at the 138th Annual Conference, American Library Association, Chicago, Ill., June 29, 2013.

Seidel, Kent E., Karen S. Riley, Lyndsay Agans, Susan Korach, and Sylvia D. Hall-Ellis. *Making Grants Work for You (Instead of Just Working for Grants).* A panel discussion delivered at the University Council for Educational Administration, Early Career Scholars Session, Denver, Colo., November 17, 2012.

Hall-Ellis, Sylvia D. *After the Great TS Reorganization: The Westminster Law Library.* Presentation delivered at the 137th Annual Conference, American Library Association, Anaheim, Calif., June 23, 2012.

Hall-Ellis, Sylvia D. *Conversations with Catalogers in the 21st Century.* A panel discussion sponsored by the ALCTS Competencies for a Career in Cataloging Interest Group, delivered at the 137th Annual Conference, American Library Association, Anaheim, Calif., June 22, 2012.

Hall-Ellis, Sylvia D., moderator. *Mid-Career Leaders Program.* A panel discussion sponsored by the ALA Committee on Diversity delivered at the 136th Annual Conference, American Library Association, New Orleans, La., June 26, 2011.

Hall-Ellis, Sylvia D., moderator. *Diversity Town Hall.* A community conversation sponsored by the ALA Committee on Diversity delivered at the 136th Annual Conference, American Library Association, New Orleans, La., June 24, 2011.

LaBarre, Kathryn, Sylvia D. Hall-Ellis, Karen Anderson, Rick Hasenyager, Christopher Cronin, and Penny Baker. *Briefings from RDA Test Participants.* A panel discussion delivered at the Midwinter Conference, American Library Association, San Diego, Calif., January 7, 2011.

Miksa, Shawne, Marjorie Bloss, and Sylvia D. Hall-Ellis. *Educating the Next Generation of Catalogers: Teaching RDA.* A panel discussion delivered at the 97th Annual Conference, Association for Library and Information Science Education, San Diego, Calif., January 7, 2011.

Hall-Ellis, Sylvia D., Robert Maxwell, John Hostage, and George Prager. *RDA Panel: What Cataloging Managers Need to Know.* Presentation delivered at the 103rd Annual Conference, American Association of Law Librarians, Denver, Colo., July 12, 2010.

Hall-Ellis, Sylvia D. and Stacey L. Bowers. *Catalogers in the RDA Environment: Skill Sets, Expectations and Challenges.* Presentation delivered at the 103rd Annual Conference, American Association of Law Librarians, Denver, Colo., July 11, 2010.

Hall-Ellis, Sylvia D. *Comfortable in Your Cataloging and Metadata Specialist Skin? Or, So You Want to Hire a Cataloger.* Presentation delivered to the ALCTS Research Group at the 134th Annual Conference, American Library Association, Chicago, Ill., July 11, 2009.

Perez, Megan, Sylvia D. Hall-Ellis, and Denise Anthony. *From Novice to Expert: Collaboration for Succession Planning.* A "hot topic" presentation delivered at the 14th ACRL Conference, Seattle, Wash., March 13, 2009.

Hall-Ellis, Sylvia D. *Cataloging in the RDA Environment: Skill Sets, Expectations and Challenges.* Presentation delivered to the ALCTS Research and Publications Committee at the Midwinter Conference, American Library Association, Denver, Colo., January 24, 2009.

Hall-Ellis, Sylvia D. *LIS Cataloging Education for the 21st Century: Expectations and Challenges.* A panel discussion held at the 95th Annual Conference, Association for Library and Information Science Education, Denver, Colo., January 23, 2009.

Chu, Clara, Sylvia D. Hall-Ellis, and Mark Winston. *The Doctoral Degree & Building a Career.* A panel discussion delivered at the ALA Office of Diversity Spectrum Doctoral Fellows E.J. Josey Leadership Institute, Midwinter Conference, American Library Association, Denver, Colo., January 20, 2009.

Hall-Ellis, Sylvia D. and Robert O. Ellett, Jr. *Fundamentals of Cataloging Course: An Overview of the ALCTS Online Course.* Presentation delivered to the ALCTS Big Heads Group, 133rd Annual Conference, American Library Association, Anaheim, Calif., June 30, 2008.

Hall-Ellis, Sylvia D. *Employers' Expectations for Technical Services Librarians: What We Don't Know.* Presentation delivered to the ALCTS Research and Publications Committee Program, 133rd Annual Conference, American Library Association, Anaheim, Calif., June 28, 2008.

Hall-Ellis, Sylvia D., Virginia R. Maloney, and Mary Stansbury. *Institutional Responses to Engaged Scholarship: The Carnegie Foundation Engaged University Classification at Two Universities.* Presentation delivered to the 94th Annual Conference, Association for Library and Information Science Education, Philadelphia, Pa., January 11, 2008.

Hall-Ellis, Sylvia D. *Puzzles, Problems, and Predicaments.* Presentation delivered to the ALCTS Research Discussion Group, 132nd Annual Conference, American Library Association, Washington, D.C., June 23, 2007.

Hall-Ellis, Sylvia D. *Cataloging Education: A New Emphasis for the Library and Information Science Curriculum.* Presentation delivered to the ALCTS Pre-conference, 132nd Annual Conference, American Library Association, Washington, D.C., June 22, 2007. http://www.loc.gov/catdir/cpso/careercat.html

Ellett, Jr., Robert O. and Sylvia D. Hall-Ellis. *Copy Cataloging Done Smarter.* Presentation delivered to the International Conference on Interdisciplinary Information Sciences and Technologies (InSciT2006), October 25-28, 2006.

Hall-Ellis, Sylvia D. and Robert O. Ellett, Jr. *Cooperative Cataloging: Challenges and Opportunities for Defense Libraries.* Presentation delivered to the 1st Annual Conference of Defense Libraries, Spanish Ministry of Defense, Madrid, Spain, July 7, 2006.

Hall-Ellis, Sylvia D. *Cataloger Competencies: Do the Employers Require What the Professors Teach?* Presentation delivered to the ALCTS CCS Heads of Cataloging Discussion Group, 131st Annual Conference, American Library Association, New Orleans, La., June 26, 2006.

Grealy, Deborah S. and Sylvia D. Hall-Ellis. *From Research to Practice: The Scholarship of Teaching and Learning in LIS Education.* Presentation delivered to the at the 92nd Annual Conference, Association for Library and Information Science Education, San Antonio, Tex., January 18, 2006.

Hall-Ellis, Sylvia D. *Employers' Expectations for Entry-Level Catalogers: What Position Announcement Data Indicate.* Research paper delivered to the Technical Services Special Interests Group, 91st Annual Conference, Association for Library and Information Science Education, Boston, Mass., January 12, 2005. http://dlist.sir.arizona.edu/

Hall-Ellis, Sylvia D. *Common Errors in MARC Records Prepared by LIS Students: What Does It Mean?* Research paper delivered to the ALCTS CCS Cataloging Norms Discussion Group, Mid-Winter Conference, 90th American Library Association, San Diego, Calif., January 10, 2004.

Hall-Ellis, Sylvia D. *Visual Arts as Foundation for Successful Library Automation: The Rocky Mountain College of Art & Design Experience.* Paper delivered at the 6th Annual Conference of Higher Education, Charleston, S. C., 1993.

Hall, Sylvia D. *Design Elements for Bibliographic Databases: An Overview.* Paper delivered at the 14th Online National Conference, New York, 1983.

Invited Regional Conference Presentations

Hall-Ellis, Sylvia D., Hudson, Christopher D., Brittany Cronin, and Kathryn Michaels. "The Colorado Law Project: Meeting the Public's Need for Legal Information." Panel discussion delivered at the Mountain Plains Library Association Conference, Billings, Mont., April 9, 2011.

Grealy, Deborah S. and Sylvia D. Hall-Ellis. *Education for Information Professionals in New Mexico: Library & Information Science Graduate Education at the University of Denver.* Presentation delivered at the New Mexico Library Education Summit, Las Vegas, N.M., September 26, 2005.

Hall-Ellis, Sylvia D. *Public Library-School Library Partnerships.* Presentation delivered at the 3rd Annual Colorado Association of Libraries Conference with the Mountain Plains Library Association, Denver, Colo., October 22, 2004.

Hall-Ellis, Sylvia D. *Learn All You Can – Educational Partnership Opportunities for the Lewis and Clark Bicentennial Commemoration.* Paper delivered at the 3rd Annual Lewis and Clark Bicentennial Council National Planning Conference, Bismarck, N.D., April 26, 1998.

Invited State Conference Presentations

Grealy, Deborah S. and Sylvia D. Hall-Ellis. *Academic Library Leadership Changes: Using Succession Planning and Mentoring*. Presentation delivered at the Minnesota Library Education Conference, St. Cloud, Minn., October 10, 2013.

Hall-Ellis, Sylvia D., Merrie Valliant, and Melissa Powell. *RDA: What Is It and What Do You Need To Do With It At Your Library?* Presentation delivered at the Colorado Library Consortium Spring Conference, Ft. Morgan, Colo., April 26, 2013.

Hall-Ellis, Sylvia D. *Service Learning and the Library & Information Science Graduate Education at the University of Denver.* Presentation delivered at the 4th LEADS Scholars Orientation, Denver, Colo., August 5, 2009.

Hall-Ellis, Sylvia D. *Service Learning: Enhancement to Library & Information Science Graduate Education at the University of Denver.* Presentation delivered at the 3rd LEADS Scholars Orientation, Denver, Colo., June 2008.

Hall-Ellis, Sylvia D. *Law Librarianship: A Community Conversation.* Sponsored by the Colorado Association of Law Libraries. Paper delivered at the Colorado Supreme Court Library, Denver, Colo., May 14, 2008.

Hall-Ellis, Sylvia D. *Opportunities and Challenges in Law Librarianship: A Community Conversation.* Presentation delivered at the Sturm College of Law, Denver, Colo., November 7, 2007.

Hall-Ellis, Sylvia D. *Grant Writing Resources for Nursing Professionals.* Presentation delivered at the Presbyterian / St. Luke's Health One Medical Center 1st Annual Research Symposium, Denver, Colo., October 17, 2007.

Hall-Ellis, Sylvia D. *Project Homeless Connect 4 Event Evaluation – Insights and Lessons Learned.* Presentation delivered at the Homelessness Research Symposium: What is DU Doing about Homelessness in Denver, Denver, Colo., September 14, 2007.

Hall-Ellis, Sylvia D. *Service Learning and the Library & Information Science Graduate Education at the University of Denver.* Presentation delivered at the 2nd LEADS Scholars Orientation, Denver, Colo., August 10, 2007.

Hall-Ellis, Sylvia D. *Education for Information Professionals in a Digital Environment: Library & Information Science Graduate Education at the University of Denver.* Presentation delivered at the 15th Spring Mountains and Plains Parapros Conference, Denver, Colo., February 24, 2007.

Hall-Ellis, Sylvia D. *Public Library Service to Spanish-Speaking and Latino Residents in Denver: A Case Study.* Presentation delivered at the 4th Annual Colorado Association of Libraries Conference, Denver, Colo., November 10, 2005.

Hall-Ellis, Sylvia D. *Education for Information Professionals in a Digital Environment: Library & Information Science Graduate Education at the University of Denver.* Presentation delivered at the 14th Annual Mountains and Plains Parapros Conference, Aurora, Colo., July 29, 2005.

Hall-Ellis, Sylvia D. *Educational Opportunities: Library & Information Science Graduate Education at the University of Denver.* Presentation delivered at the 13th Annual Mountains and Plains Parapros Conference, Centennial, Colo., August 6, 2004.

Hall-Ellis, Sylvia D. *Library Education & Training: Focus on the West: An LIS Faculty Member's Personal Response*. Presentation delivered at the 1st Annual Colorado Association of Libraries Conference, Keystone, Colo., October 18, 2002.

Hall-Ellis, Sylvia D. *Grant Writing for School Librarians.* Presentation delivered at the 2002 Annual Colorado Education Media Association Conference, Colorado Springs, Colo., February 15, 2002.

Hall-Ellis, Sylvia D. *Grants – Opportunities for the Future.* Paper delivered at the Southeast Regional Accountability Annual Conference, Lamar, Colo., November 12, 1998.

Hall-Ellis, Sylvia D. *The Texas Library Connection and Interlibrary Loan: An Experiment in Resource Sharing.* Paper delivered at the Texas Computer Educators' Association Annual Conference, Austin, Tex., February 6, 1997.

Hall-Ellis, Sylvia D. *Finding Grant Sources on the Internet: A Guide for Librarians.* Paper delivered at the 2nd Annual Institute for School Library Personnel, Pharr-San Juan-Alamo North High School, Pharr, Tex., July 29, 1996**.**

Hall-Ellis, Sylvia D. *Mathematical and Logical Thinking: A Critical Intelligence.* Paper delivered at the 3rd Annual Paraprofessional Conference at the University of Texas - Pan American, Edinburg, Tex., March 8, 1996.

Hall-Ellis, Sylvia D. *Cataloging Trends and Issues: Update Session.* Paper delivered at the 1st Annual Institute for School Library Personnel, South Texas Community College, McAllen, Tex., July 19, 1995.

Hall-Ellis, Sylvia D. *Grant Writing: Tips and Encouragement for School Librarians.* Paper delivered at the 1st Annual Institute for School Library Personnel, South Texas Community College, McAllen, Tex., July 18 and 19, 1995.

Hall-Ellis, Sylvia D. *How to Become an Expert Grant Writer.* Paper delivered at the 3rd Annual High School Principals' Academy, South Padre Island, Port Isabel, Tex., June 19, 1995.

Hall-Ellis, Sylvia D. *Texas Library Study: Results from Regions I and II.* Paper delivered at the 3rd Annual Technology Conference, Texas A&M University, College Station, Tex., November 18, 1994.

Hall-Ellis, Sylvia D. *Academic Achievement and Middle School Students.* Paper delivered at the 8th Annual Young Adult Conference, Sam Houston State University, Huntsville, Tex., November 5, 1994.

Hall-Ellis, Sylvia D. *Multimedia Resources for Library Leaders.* Paper delivered at the Institute for Librarians in A Multicultural Environment, Sam Houston State University, Huntsville, Tex., June 10, 1994.

Hall-Ellis, Sylvia D. *Finding the Resource: Empowering the User, or, the Case for Curriculum Based Subject Access to Learning Resource Center Collections.* Paper delivered at the 81st Annual Texas Library Association Conference, Corpus Christi, Tex., April 12-16, 1994.

Hall-Ellis, Sylvia D. and William H. Pichette. *Sam Houston State University Makes Use of OCLC/AMIGOS Collection Analysis CD.* Paper delivered at the 81st Annual Texas Library Association Conference, Corpus Christi, Tex., April 12-16, 1994.

Hall, Sylvia D. *Funding and Library Development in Pennsylvania: A Symbiotic Relationship.* Paper delivered at the Annual Graduate Student Colloquia, University of Pittsburgh, School of Library and Information Science, 1982.

Hall, Sylvia D. *Leadership for Public Library Trustees.* Paper delivered for the Trustees Division, Pennsylvania Library Association Annual Conference, Lancaster, Penn., 1981.

Seminar and Professional Development Presentations

Taylor, Meredith, and Sylvia D. Hall-Ellis. *Talent Management and Succession Planning.* ALCTS eForum, held March 22, 2017.

Hirsh, Sandra, Heather O'Brien, Michelle Holschuh Simmons, Michael Krasulski, and Sylvia D. Hall-Ellis. *Information Services Today: An Introduction. Part 3: Information Services: Roles in the Digital Age*. Rowan and Littlefield in partnership with Library Journal webinar, recorded February 5, 2015.

Hall-Ellis, Sylvia D. and Jennifer Sweda. *Copy Cataloging in an RDA Environment.* ALCTS eForum, held May 14 and 15, 2013.

Hall-Ellis, Sylvia D. *Law Librarianship: A Community Conversation.* Sponsored by the Colorado Association of Law Libraries, presented at the Colorado Supreme Court Library, Denver, Colo., May 14, 2008.

Hall-Ellis, Sylvia D. and Beatrice Z. Gerrish. *Reading and Libraries: Recent Research in Reading.* Presentation at the Ricks Center for Gifted Education, Denver, Colo., March 4, 2008.

Hall-Ellis, Sylvia D. *Cataloger Competencies: Do the Employers Require What the Professors Teach?* Presentation for the School of Library and Information Science, San José State University, February 12, 2008.

Hall-Ellis, Sylvia D. and Robert O. Ellett, Jr. *Cooperative Cataloging: Rules, Tools, and Conventions for Building a Multi-institutional Catalog.* Sponsored for the Spanish Ministry of Defense, Madrid, Spain, July 10, 2006.

Hall-Ellis, Sylvia D. *Cash for Kids: Grant Writing Opportunities for Youth Services Librarians.* Sponsored by the Colorado Young Adult Librarians; presented at Bemis Memorial Library, Littleton, Colo., November 13, 2002.

Hall-Ellis, Sylvia D. *MARC Records and Authority Control: Planning for Bibliographic Database Migration.* Sponsored and held at the Douglas County Public Library, Castle Rock, Colo., May 28, 2002.

Hall-Ellis, Sylvia D. *Grant Writing: A Refresher for Librarians.* Sponsored by Library and Information Science Program, College of Education, University of Denver; presented at University Center at Chaparral, August 12, 2000.

Hall-Ellis, Sylvia D. *Shaking the Money Tree – Basic Grant Writing for Colorado Educators.* Sponsored by the Office of Educational Telecommunications of the Colorado Department of Education.
Pikes Peak Community College, Colorado Springs, Colo., November 16, 1998.
Pueblo School District 60, Pueblo, Colo., November 12, 1998.
University of Northern Colorado, Greeley, Colo., November 10, 1998.
United Technology Educational Partnership, Grand Junction, Colo., November 9, 1998.

Hall-Ellis, Sylvia D. *Cataloging Multimedia, Kits, Globes and Map Materials in USMARC.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., April 24, 1997 and December 12, 1996.

Hall-Ellis, Sylvia D. *New Standards for School Library Media Centers.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., April 15, 1997.

Hall-Ellis, Sylvia D. *The School Library Media Specialist in the 21st Century: Visions for the Future.* Sponsored and hosted by Pharr-San Juan-Alamo Independent School District, Pharr, Tex., April 4, 1997.

Hall-Ellis, Sylvia D. *Cataloging Sound Recordings and Audio Materials in USMARC.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., March 20, 1997 and November 21, 1996.

Hall-Ellis, Sylvia D. *Evaluating and Selecting CD-ROMS for School Library Media Collections.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., March 18, 1997.

Hall-Ellis, Sylvia D. *Cataloging Audiovisual Materials in USMARC.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., February 27, 1997, November 7, 1996 and October 24, 1996.

Hall-Ellis, Sylvia D. *Introduction to Dialog: Basic Searching Strategies.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., February 14, 1997.

Hall-Ellis, Sylvia D. *Cataloging Books in USMARC.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., January 30, 1997, October 10, 1996, September 26, 1996 and August 8, 1996.

Hall-Ellis, Sylvia D. *Advanced Internet Searching Techniques for Librarians.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., January 21, 1997.

Hall-Ellis, Sylvia D. *Texas Library Connection Full-Text Searching.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., December 13, 1996 and October 25, 1996.

Hall-Ellis, Sylvia D. *Developing Evaluation Strategies for Grants and Proposals.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., December 10, 1996.

Hall-Ellis, Sylvia D. *Developing Needs Assessment for Grants and Proposals.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., November 12, 1996.

Hall-Ellis, Sylvia D. *Texas Library Connection Union Catalog Searching.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., November 8, 1996 and September 6, 1996.

Hall-Ellis, Sylvia D. *Grant Resources on the Internet.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., October 23, 1996.

Hall-Ellis, Sylvia D. *Preparing a Response to the Telecommunications Infrastructure Fund Board: Needs Assessment, Professional Development Framework, and Evaluation Strategies.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., October 16, 1996.

Hall-Ellis, Sylvia D. *Texas Library Connection: Building the Districtwide Bibliographic Database.* Sponsored and hosted by Mercedes Independent School District, Mercedes, Tex., September 13, 1996 and August 8, 1996. Sponsored and hosted by Los Fresnos Consolidated Independent School District, Los Fresnos, Tex., August 12, 1996.

Hall-Ellis, Sylvia D. *School-to-Work and Special Education: An Inclusive Partnership for Success.* Sponsored and hosted by the Office of Special Education, Region One Education Service Center, Edinburg, Tex., September 11, 1996.

Hall-Ellis, Sylvia D. *Telecommunications Infrastructure Fund Board: An Overview of Funding for Secondary Schools.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., August 31, 1996.

Hall-Ellis, Sylvia D. *Cataloging Books, Multimedia, and Realia in USMARC.* Sponsored and hosted by Edinburg Consolidated Independent School District, Edinburg, Tex., August 6, 1996.

Hall-Ellis, Sylvia D. *Internet Resources for Grant Writers.* Sponsored and hosted by Region One Education Service Center, Edinburg, Tex., April 20, 1996.

Hall-Ellis, Sylvia D. *Enhanced Grant Writing Skills for Mathematics Educators: Writing Skills for Campus Teams.* Sponsored and hosted by the Office of General Education, Region One Education Service Center, Edinburg, Tex., March 22, 1996.

Hall-Ellis, Sylvia D. *Internet Resources for Grant Writers.* Sponsored and hosted by the College of Education and Applied Science, Sam Houston State University, Huntsville, Tex., March 9, 1996.

Hall-Ellis, Sylvia D. *Grant Writing for Mathematics Educators: A Development Process for Campus Teams.* Sponsored and hosted by the Office of General Education, Region One Education Service Center, Edinburg, Tex., March 4, 1996.

Hall-Ellis, Sylvia D. *Shaking the Money Tree: Preparing Successful Technology Grant Applications.* Sponsored and hosted by the Office of Technology and Media Services, Region One Education Service Center, Edinburg, Tex., February 29, 1996 and April 29, 1996.

Hall-Ellis, Sylvia D. *District-wide Technology Planning: Technical Assistance for the Texas Education Agency Initiative.* Sponsored and hosted by the Office of Technology and Media, Region One Education Service Center, Edinburg, Tex., February 2, 1996.

Hall-Ellis, Sylvia D. *Enhanced Grant Writing Skills.* Sponsored and hosted by Pharr-San Juan-Alamo Independent School District, Pharr, Tex., January 27, 1996.

Hall-Ellis, Sylvia D. *United States Copyright Act of 1976, Video Transmissions, Computer Software and the Internet.* Sponsored and hosted by the Office of Technology and Media, Region One Education Service Center, Edinburg, Tex., January 24, 1996.

Hall-Ellis, Sylvia D. *The Grant Writing Development Process.* Sponsored and hosted by Pharr-San Juan-Alamo Independent School District, Pharr, Tex., January 20, 1996.

Hall-Ellis, Sylvia D. *MARC Cataloging of Materials for Library Media Centers.* Sponsored and hosted by the Office of Media Services, Region One Education Service Center for the Donna Independent School District, Donna, Tex., August 17, 1995.

Hall-Ellis, Sylvia D. *Classification.* Sponsored by AJ Seminars, Rockville, Maryland; presented at University Hilton Hotel, Houston, Tex., May 10, 1995.

Hall-Ellis, Sylvia D. *Library Technical Services.* Sponsored by AJ Seminars, Rockville, Maryland; presented at University Hilton Hotel, Houston, Tex., April 26, 1995.

Hall-Ellis, Sylvia D. *Grant Writing: An Introduction for Public School Administrators.* Sponsored and hosted by the Office of Administrative Services, Region One Education Service Center, Edinburg, Tex., April 19, 1995.

Hall-Ellis, Sylvia D. *The School Library Media Specialist in the 21st Century: Visions for the Future.* Sponsored and hosted by the United Independent School District, Laredo, Tex., March 31, 1995.

Hall-Ellis, Sylvia D. *Using USMARC.* Sponsored by AJ Seminars, Rockville, Maryland; presented at University Hilton Hotel, Houston, Tex., March 29, 1995.

Hall-Ellis, Sylvia D. *Library Media Center Policies and Guidelines: How to Prepare for School Board Adoption.* Sponsored and hosted by the Office of Technology and Media Services, La Joya Independent School District, La Joya, Tex., March 10, 1995.

Hall-Ellis, Sylvia D. *Developing District-wide Policies and Guidelines for Library Media Centers.* Sponsored and hosted by the Office of Technology and Media Services, La Joya Independent School District, La Joya, Tex., January 10, 1995.

Hall-Ellis, Sylvia D. *MARC Cataloging of Audiovisual Materials for Library Media Centers.* Sponsored and hosted by the Office of Library Media and Technology Services, Cypress-Fairbanks Independent School District, Houston, Tex., December 1, 1994.

Hall-Ellis, Sylvia D. *The School Library Media Specialist in the 21st Century: Visions for the Future.* Sponsored and hosted by United Independent School District, Laredo, Tex., October 14, 1994.

Hall-Ellis, Sylvia D. *The School Library Media Specialist in the 21st Century: Visions for the Future.* Sponsored and hosted by the Laredo Independent School District, Laredo, Tex., October 7, 1994.

Hall-Ellis, Sylvia D. *MARC Cataloging for Library Media Centers.* Sponsored by the Office of Library Media and Technology Services, Cypress-Fairbanks Independent School District, Houston, Tex., October 5, 1994.

Hall-Ellis, Sylvia D. *Jump to the Head of the Class: Undergraduate Library Resources Available at Sam Houston State University.* Sponsored by the Office of the Associate Vice President for Student Services, Sam Houston State University, Huntsville, Tex., October 4, 1994.

Hall-Ellis, Sylvia D. *CD-ROMs - 1994's Newest and the Best for Secondary Level Media Centers.* Sponsored and hosted by Clear Lake Independent School District, Houston, Tex., June 3, 1994.

Hall-Ellis, Sylvia D. *Introduction to Classification.* Sponsored by AJ Seminars, Rockville, Maryland; presented at Holiday Inn, Market Center, Dallas, Tex., May 18, 1994.

Hall-Ellis, Sylvia D. *Basic Descriptive Cataloging.* Sponsored by AJ Seminars, Rockville, Maryland; presented at University Hilton Hotel, Houston, Tex., May 4, 1994.

Hall-Ellis, Sylvia D. *Shaking the Money Tree - Part II: Writing Successful Grant Applications.* Sponsored by Donna Independent School District, Donna, Texas, and Region One Education Service Center Edinburg, Texas; presented at South Texas Community College Library, McAllen, Tex., April 29, 1994.

Hall-Ellis, Sylvia D. *Using MARC.* Sponsored by AJ Seminars, Rockville, Maryland; presented at Holiday Inn, Market Center, Dallas, Tex., April 6, 1994.

Hall-Ellis, Sylvia D. *Automated Authority Control.* Sponsored by AJ Seminars, Rockville, Maryland; presented at University Hilton Hotel, Houston, Tex., March 23, 1994.

Hall-Ellis, Sylvia D. *Automating the District School Library Media Centers: Choices and Opportunities.* Sponsored and hosted by the Office of Technology and Library Media Services, Fort Bend Independent School District, Sugar Land, Tex., March 4, 1994.

Hall-Ellis, Sylvia D. *Shaking the Money Tree - Part I: Preparing Successful Grant Applications.* Sponsored and hosted by the Office of Library Media Services, Donna Independent School District, Donna, Tex., February 4, 1994.

GRADUATE COURSES TAUGHT

San José State University, School of Library and Information Science
INFO 249 – Advanced Cataloging and Classification (Fall 2015, 2016; Summer 2016)
INFO 287 – Special Topics in Cataloging and Classification (Spring 2017, 2018, 2019, 2020, 2021; Fall 2020)
LIBR 248 – Beginning Cataloging and Classification (Summer 2002, 2003, 2004, 2005, 2006)
LIBR 249 – Advanced Cataloging and Classification (Summer 2003; Fall 2014; Summer 2015)

University of Denver, University College
Grant Writing Certificate Seminar for Non-Profit Organizations (Fall 2020, Spring 2021)

University of Denver, Morgridge College of Education
HED 5991 – Grant Writing in Higher Education (Spring 2011)
LIS 4010 – Organization of Information (Fall 2002, 2003, 2004, 2005, 2006, 2009; Winter 2005; Spring 2004, 2005, 2006)
LIS 4020 – Professional Principles and Ethics (Summer 2000)
LIS 4040 – Management of Libraries and Information Centers (Fall 2010; Spring 2003, 2009 (DS); Winter 2005)
LIS 4070 – Cataloging and Classification (Winter 2008, 2009, 2010, 2011, 2012; Fall 2009 (DS))
LIS 4321 – Collection Management (Spring 2005)
LIS 4326 – LIS Research (Winter 2009 (DS); Spring 2009 (DS))
LIS 4350 – Adult Materials and Services (Summer 2006, 2009)
LIS 4379 – Social Sciences Resources (Spring 2009)
LIS 4400 – Cataloging and Classification (Spring 2000, 2001; Winter 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Summer 2005, 2006 – course renumbered LIS 4070, September 2007)
LIS 4401 – Descriptive Cataloging (Winter 2001; Spring 2002, 2003, 2006, 2007, 2008, 2009; Summer 2005)
LIS 4402 – Subject Cataloging (Spring 2001, 2009; Summer 2005, 2006, 2007, 2008)
LIS 4403 – Classification Schemes (Fall 2007, 2008, 2009 (DS))
LIS 4405 – Authority Control (Winter 2009)
LIS 4510 – Materials and Services for Children (Winter 2004; Summer 2005)
LIS 4620 – Grant Writing and Fundraising (Summer 2000, 2002, 2004, 2010; Winter 2006; Fall 2006, 2007, 2008, 2009)
LIS 4700 – Seminar in Technical Services (Fall 2001)
LIS 4700 – Seminar in Public Libraries (Summer 2002)
LIS 4804 – Management of Electronic Records (Spring 2004; Fall 2005)
LIS 4902 – Capstone Projects (Winter 2003, Spring 2008, 2009, 2011)
LIS 4910 – Independent Study (every quarter Winter 2000 through Spring 2011)
LIS 4920 – Service Learning (every quarter Summer 2004 through Spring 2011)
RMS 4954 – Grant Writing (Summer 2013, 2014)
RMS 4959 – Content Analysis Methodology (Spring 2015)
QRM 4978 – Grant Writing (Summer 2011, 2012)

Rutgers University, School of Communication and Information
SC&I 522 – Cataloging and Classification (Summer 2013)

University of Arizona, College of Behavioral and Social Sciences
LIS 602 – Cataloging and Classification (Summer 1995)
LIS 612 – Advanced Online Search and Retrieval (Summer 1995)

Sam Houston State University, College of Education & Applied Science
LIS 532 - Cataloging and Classification (Fall 1993, 1994, 1995)
LIS 563 - Advanced Cataloging and Classification (Summer 1994)
LIS 567 - Research Methods (Spring 1994, Spring 1995)
LIS 591 - Educational Technology (Spring 1994, 1995)
LIS 596 - Networking and Computer Technologies in Education (Fall 1993, Summer 1994, Fall 1995)

Dissertations at the University of Denver

Bowers, Stacey L. *Library Anxiety of Law School Students: A Study Utilizing the Multidimensional Library Anxiety Scale.* Chair, May 5, 2010.

Fattor, Melissa M. *Student Engagement Differences by Ethnicity and Scale for Ninth Grade Students.* Chair, November 1, 2010.

Fulton, Roseanne. *A Case Study of Culturally Responsive Teaching in Middle School Mathematics.* Kent Seidel, Chair, June 18, 2009, Outside Chair.

Grealy, Deborah S. *Tribes and Territories in Library and Information Studies Education.* Bruce Uhrmacher, Chair, June 10, 2008, Committee Member.

McCord, J. Michael. *Developing a Standard of Care for Educational Malpractice.* Chair, April 15, 2011.

Priebe, Sarah J. *Distinguishing Effects of Domain and General Knowledge on Passage Fluency and Comprehension.* Jan Keenan, Chair. July 21, 2011, Outside Chair.

Snyder-Mondragon, Sandra M. *Institutional Factors that Impact the Retention of Graduate Students of Color in Schools of Library and Information Science: A Metaregression of Accredited Library School Statistics on Student Retention and Graduation Rates.* Kathy Green, Chair, July 24, 2009, Committee Member.

Taylor, Karen Pickles. *Effective Teaching.* Elinor Katz, Chair, July 15, 2009, Outside Chair.

Thompson, Jennifer. *Distinguishing a Western Women's College: A History of the Curriculum and Student Experience at Colorado Women's College.* Edith W. King, Chair, July 16, 2010, Committee Member.

Walker, Emelda. *Influence of Organizational Factors on Job Satisfaction of Disability Service Providers at Postsecondary Institutions.* Chair, April 29, 2010.

Dissertation Proposals at the University of Denver

Bowers, Stacey L. *Library Anxiety of Law School Students: A Study Utilizing the Multidimensional Library Anxiety Scale.* Chair, November 5, 2009.

McCord, J. Michael. *Developing a Standard of Care for Educational Malpractice.* Edith W. King, Chair. April 23, 2010.

Thompson, Jennifer. *History of Colorado Women's College.* Edith W. King, Chair, October 30, 2008. Committee Member.

Walker, Emelda. *Influence of Organizational Factors on Job Satisfaction of Disability Service Providers at Postsecondary Institutions.* Chair, July 21, 2009.

Dissertations at Other Institutions

Rodríguez-Mori, Howard. *The Information Behavior of Puerto Rican Immigrants to Central Florida, 2003-2009: Grounded Analysis of Six Case Studies Use of Social Networks during the Migration Process.* Kathleen Burnett, Chair, April 10, 2009, Florida State University, Committee Member.

Schwartz, Brian *More than a Look-up Skill: Medical Information Literacy Education in Osteopathic Medical Schools.* D. Mirah Dow, Chair, July 18, 2017. Emporia State University, Committee Member.

Snow, Karen. *A Study of the Perception of Cataloging Quality among Catalogers.* Shawne D. Miksa, Chair, August 1, 2011. University of North Texas, Committee Member.

Dissertation Proposals at Other Institutions

Schwartz, Brian *More than a Look-up Skill: Medical Information Literacy Education in Osteopathic Medical Schools.* D. Mirah Dow, Chair, December 4, 2015. Emporia State University, Committee Member.

Snow, Karen. *A Study of the Perception of Cataloging Quality among Catalogers.* Shawne D. Miksa, Chair, May 11, 2010. University of North Texas, Committee Member.

Master's Thesis at the University of Denver

Hemingson, Jeff. *Recital Paper.* Lamont School of Music, February 2010, Outside Chair.

Capstones at the University of Denver

Anthony, Alisa. *Correlation of Library and Information Science Program outcomes and Vacant Position Qualifications Listed on the Colorado State Library Jobline by Employers During the Period September 1, 2000 through August 31, 2002.* Chair, Winter Quarter, 2003.

Borden, Donna M. *Improving Emergency Communications Systems: Is a Radio Communications Network the Answer?* Fall Quarter, 2014.

Bowden, Heather L.M. *Exploring Biological Models for Long-term Data Preservation.* Chair, Spring Quarter, 2008.

Casenada, Cassandra Y. *Challenges to the Recruitment, Education, and Retention of Librarians of Color*. Chair, Spring Quarter, 2008.

Chang, Jennifer C. *Legal Research Practice and Preference: A Law Firm Perspective.* Chair, Spring Quarter 2011.

Ellis, Megan S. Fitzgerald. *Design of a Public Library Adult Volunteer Recruitment Program and Training Curriculum.* Chair, Winter Quarter, 2003.

Kircher, Kathy. *Development of a Library Pathfinder for Exobiology and Posting it on the Internet.* Chair, Winter Quarter, 2003.

Melhado, Loretta. *Design of St. John's Episcopal Church Library.* Chair, Spring Quarter, 2008.

Radcliff, Kathy. *Original Cataloging of Archival materials in the HERS Collection in Penrose Library.* Chair, Winter Quarter, 2003.

Sass, Carol Ann. *ACT Periodical Index: Access to Catholic Thinking Periodical Index: Web Index to Select Catholic Periodicals.* Spring Quarter 2000.

Stone, Sergio D. *Conducting Community Analysis for the Bemis Public Library (Littleton, Colorado) Using 2002 U.S. Census Data and the Online Outcome-Based Evaluation Toolkit.* Chair, Winter Quarter, 2003.

Tureson, Tamara. *Design and Use of an Information Audit Tool for Use in a Law Library.* Chair, Winter Quarter, 2003.

Tweed, Beth. *Evaluation of Email Reference Service in a Consumer Health Library Environment.* Chair, Winter Quarter, 2003.

GRANTS AND CONTRACTS

Student Learning in Agriculture STEM through Teacher Professional Development. Research team: Stanton Gartin (PI) and Cyndi Hofmeister, Northeast Junior College; Jeff Cash, Cheryl Sánchez, Anne-Marie Crampton, Lamar Community College; Suzanna Spears, Morgan Community College; Jack Wiley, Kerry Gabrielson, Trinidad State Junior College; Michael J. Miller, Colorado State University; Michael Womochil (Co-PI), Casey Sacks, and Sylvia D. Hall-Ellis, Colorado Community College System. U.S. Department of Agriculture, Agriculture and Food Research Initiative, Food, Agriculture, Natural Resources and Human Sciences Education and Literacy Initiative, $404,460 (2017-2020)

Leading and Achieving: the Colorado Agriculture Regional Consortium. Research team: Jack Wiley (PI), Kerry Gabrielson, Trinidad State Junior College; Jeff Cash (PI), Cheryl Sánchez, Anne-Marie Crampton, Lamar Community College; Suzanna Spears, Morgan Community College; Cyndi Hofmeister, Northeast Junior College; Michael Womochil (Co-PI), Casey Sacks, and Sylvia D. Hall-Ellis, Colorado Community College System. U.S. Department of Agriculture, Hispanic Serving Institutions Education Grants Program, $504,414 (2017-2020)

Cyber Prep Program Planning Grant. Research team: Debbie Sagen (PI), Brenda Lauer, Pikes Peak Community College; Gretchen Martin, Koiosa Insights; and, Sylvia D. Hall-Ellis, Colorado Community College System. U.S. Department of Commerce, Regional Alliances and Multi-stakeholder Partnerships to Stimulate (RAMPS) Cybersecurity Education and Workforce Development, $199,681 (2016-2018)

Career and Technical Education in Colorado: Pathways to Education and Employment. Research team: Heather McKay (PI), Rutgers University; Sarah Heath, Casey Sacks, Sylvia D. Hall-Ellis, Colorado Community College System. U.S. Department of Education, Institute of Education Sciences, $1,400,000 (2017-2021)

Pre-Alliance Planning Grant Colorado Community College Alliance. Research team: Victor Vialpondo (PI) and Janel Highfill, Community College of Aurora; Heidi Loshbaugh (Co-PI), Community College of Denver; Rick Reeves, Bill McGreevy, Liz Cox, and Kristin Aslin, Red Rocks Community College; Cathy Pellish, Front Range Community College; Samuel DeVries, Arapahoe Community College; Sylvia D. Hall-Ellis, Colorado Community College System. National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP), $86,817 (2016-2017)

Towards Scalable Differentiated Instruction Using Technology-enabled, Competency-based, Dynamic Scaffolding. Research team: Karen Wilcox (PI) and Vijay Kumar, Center for Computational Engineering, Massachusetts Institute of Technology; Flora McMartin, Broad-based Knowledge; Quinsigamond Community College; and, Casey Sacks, and Sylvia D. Hall-Ellis, Colorado Community College System. U.S. Department of Education, First in the World Developmental Grant, $2,891,882 (2015-2019)

Colorado Strategic Partnerships Emergency Grant. Research team: Elise Lowe-Vaughn (PI), Amy Hodson, Celia Hardin, Barbara McBride, James Newby, Christopher Dewhurst, Nina Holland, Kate Anderson, MaryAnn Roe, Chrystalynn Chrystalynn, Elaine Edon, Mona Barnes, Tom Morgan, Rob Hanni, and Marie Valenzuela, Colorado Department of Labor and Employment; Steve Anton, Joelle Brouner, and, Katie Griego, Colorado Department of Human Services; Rebecca Holmes, Judith Martinez, and Jennifer Jirous, Colorado Department of Education; Emily Templin Lesh, Colorado Workforce Development Council; Cory Everett, Colorado Department of Regulatory Agencies; and, Casey Sacks and Sylvia D. Hall-Ellis, Colorado Community College System. U.S. Department of Labor, Strategic Partnerships Emergency Grant, $5,000,000 (2015-2017)

CAEL Jump Start Program: Competency-Based Education. Research team: Jerry Migler (PI), Casey Sacks, Debra Cohn, Thomas Hartman, and Sylvia D. Hall-Ellis, Colorado Community College System; Matt Jamison, Front Range Community College; Mike Coste, Red Rocks Community College; Amanda Corum, Pueblo Community College; Janet Colvin, Pikes Peak Community College; and, MaryAnn Matheny, Community College of Denver. Council for Adult and Experiential Learning, $15,000 (2015)

Summit on the Redesign of Developmental Education. Research team: Jerry Migler (PI), Casey Sacks, and Sylvia D. Hall-Ellis, Colorado Community College System; Chip Nava, Pueblo Community College; Kim Moultney,

Arapahoe Community College; Debbie Ulibarri, Trinidad State Junior College; and, Kris Bernard, Front Range Community College. American Association of Community Colleges, $15,000 (2015-2016)

Equity in Excellence at Colorado Community Colleges. Research team: Keith Howard (PI) and Sylvia D. Hall-Ellis, Colorado Community College System; Estela Mata Bensimon, Center for Urban Education, University of Southern California; and Kerry Gabrielson, Trinidad State Junior College. Colorado Department of Higher Education, Colorado Opportunity Scholarship Program, $150,000 (2015-2016)

MBA High School of Business in Colorado. Research team: Laurie Urich (PI) and Sylvia D. Hall-Ellis, Colorado Community College System; Rudolph Sumpter and Beatrice Gerrish, Boulder Valley Schools; Keith Curry Lance, RSL Research Group. Colorado Department of Higher Education, Colorado Opportunity Scholarship Program, $501,295 (2015-2016)

Fullbridge Program in Colorado. Research team: Keith Howard (PI) and Sylvia D. Hall-Ellis, Colorado Community College System; Suzanna Spears, Fort Morgan Community College; and, Cheryl Sánchez and Anne-Marie Compton, Lamar Community College. Colorado Department of Higher Education, Colorado Opportunity Scholarship Program, $300,000 (2015-2017)

Colorado Community College System Alternative Credit Program. Research team: Jerry Migler (PI), Keith Howard, and Sylvia D. Hall-Ellis, Colorado Community College System. American Council on Education, $13,000 (2015)

Internationalization in Higher Education. Researcher: Samuel D. Museus. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Internationalization, $8,000 (2014-2015)

International Perspectives on Bilingual Education. Researcher: Sharolyn Pollard-Durodola. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Internationalization, $3,700 (2014-2015)

Cultivating Culturally Relevant and Responsive Curriculum and Pedagogy in College. Researcher: Samuel Museus. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, iRise Grant, $5,000 (2014-2015)

Project EMERGE (Educational Model for Evaluation and Replicability in Gifted Environments). Research team: Norma Hafenstein (PI) and Bruce Uhrmacher. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Lynde and Harry Bradley Foundation, $235,000 (2014-2015)

Collecting Asian American Refugee Stories. Researcher: Samuel Museus. Technical reviewer for MCE: Sylvia D. Hall-Ellis. American Educational Research Association, Research Grant, $5,000 (2014-2015)

Developing Expertise in Teaching K-5 Mathematics. Research team: Julie Sarama (PI) and Douglas H. Clements (Co-PI), in partnership with the School of Education at the University of Michigan. Technical reviewer for MCE: Sylvia D. Hall-Ellis. National Science Foundation, $130,344 (2013-2015)

Investigation of the Long-Term Outcomes for Special Education Students. Researcher: Antonio Olmos-Gallos. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Jefferson County School District, Office of Assessment, $40,000 (2014)

Refugee Community Collaboration. Researcher: Vicki Tomlin (PI) in partnership with the African Community Center and Jewish Family Service. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Center for Community Engagement and Service Learning, $14,854 (2014-2015)

Access to Mathematics for All. Research team: Richard S. Kitchen (PI), Nicole M. Russell (Co-PI), and Terrence Blackman (Co-PI), Curriculum Studies and Teaching Program, Morgridge College of Education; Álvaro Árias (Co-PI, Department of Mathematics); and, James Gray (Co-PI), Department of Mathematics, Community

College of Aurora. Technical reviewer for MCE: Sylvia D. Hall-Ellis. National Science Foundation, The Robert Noyce Scholarship Program, Capacity Building Project, $349,926 (2014-2016)

Cognitive Test Battery for Intellectual Disabilities. Research team: Karen Riley (PI), Lyndsay Agans, Jessica Lerner, and Karin Dittrick-Nathan in partnership with David Hessl (PI), The MIND Institute at the University of California – Davis, and Elizabeth Berry-Kravis, Rush University Medical Center. Technical reviewer for MCE: Sylvia D. Hall-Ellis. National Institutes of Health, Outcome Measures for Use in Treatment Trials for Individuals with Intellectual and Developmental Disabilities (R01), $2,499,996 ($588,672 at DU) (2014-2019)

Broadening Participation in Engineering among Women and Latino/as: A Longitudinal, Multi-Site Study. Researcher: Patton Garriott (PI) in partnership with the University of North Dakota and the University of Missouri. Technical reviewer for MCE: Sylvia D. Hall-Ellis. National Science Foundation, HER Core Research, $677,390 ($69,992 at DU) (2014-2019)

Designing a Teacher Evaluation System to Improve Teacher Effectiveness for Culturally and Linguistically Diverse Learners. Research team: María del Carmen Sálazar (PI), Jessica Lerner, and Kathy Green. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Professional Research Opportunities for Faculty, $29,988 (2014-2016)

Developing a College-Going Culture in Latina/O Families: Exploring the Influence of Funds of Knowledge on Family Outreach Programs. Researcher: Judy Marquez Kiyama. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Professional Research Opportunities for Faculty, $18,720 (2014-2016)

Assessment of Quality of Life in Neutral Implantation Surgery for the Treatment of Parkinson's Disease. Researcher: Cynthia McRae. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Internationalization, $3,967 (2014-2015)

Pura Vida: Cloud Forest, Curriculum and Cross-Cultural Study. Research team: Norma Hafenstein (PI) and Bruce Uhrmacher (Co-PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Internationalization, $8,000 (2014-2015)

Online Course Development for Curriculum and Instruction. Researcher: Ruth Chao. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Teaching and Learning, $3,000 (2014)

Online Course Development for Curriculum and Instruction. Researcher: María del Carmen Sálazar. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Teaching and Learning, $3,000 (2014)

Online Course Development for Curriculum and Instruction. Researcher: Jessica Lerner. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Teaching and Learning, $3,000 (2014)

Online Course Development for Curriculum and Instruction. Researcher: Duan Zhang. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Teaching and Learning, $3,000 (2014)

The Mathematics Education of African Americans, 1866 – 1954. Researcher: Nicole M. Russell. Technical reviewer for MCE: Sylvia D. Hall-Ellis. National Academy of Education, Spencer Foundation Postdoctoral Fellowship, $55,000 (2014-2016)

Early Childhood Care and Education Study. Research team: Carrie Germeroth (PI), Melissa Mincic, and Douglas H. Clements. Technical reviewer for MCE: Sylvia D. Hall-Ellis. State of North Dakota, Department of Public Instruction, $73,500 (2013-2014)

Graduate Level Specialty in Addiction Counselor Training with Emphasis on Integration of Native American Specific Content. Research team: Ruth Chao (PI) and Michael J. Faragher (Co-PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. The Galena Foundation, $289,732 (2013-2016)

The Collecting Asian American and Pacific Islander Refugee Stories (CARS) Project. Researcher: Samuel Museus. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Center for Community Engagement and Service Learning, $15,000 (2014)

Parents in Transition: A Multiple Case Study of Parent and Family Orientation Programs. Researcher: Judy Marquéz Kiyama. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Faculty Research Fund, $1,500 (2014-2015)

The Sistah Network: Black Women Graduate Students Supporting and Retaining Each Other. Researcher; Nicole M. Russell. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Faculty Research Fund, $2,708 (2014-2015)

Evaluation of the Northeast Denver Babies Ready for College Program. Research team: Carrie Germeroth (PI), Melissa Mincic, and Douglas H. Clements. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Mile High Montessori, $9,922 (2013-2014)

Developing Teaching Expertise in K-5 Mathematics. Research team: Julie Sarama (PI) and Douglas Clements (University of Denver), in partnership with Timothy Boerst (PI), Meghan Shaughnessy, Deborah Ball, Hyman Bass (School of Education at the University of Michigan). Technical reviewer for MCE: Sylvia D. Hall-Ellis. National Science Foundation, $449,827 ($130,344 at the University of Denver (2013-2015)

Early Learning Care and Education Study Program Grant for the State of North Dakota. Research team: Carrie Germeroth (PI), Melissa Mincic, and Sheridan Green. Technical reviewer for MCE: Sylvia D. Hall-Ellis. State of North Dakota Department of Public Instruction, $73,500 (2013-2014)

Local Professional Learning Community for School Leaders. Research team: Susan Korach (PI), Kristina Hesbol, and Rebecca McClure. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Education Development Center, $10,950 (2013)

Healthy Eaters, Lifelong Movers 2: Implementing Evidence-Based School Environment, Policy, and Curricular Changes to Increase Opportunities for Healthy Eating and Physical Activity in Low Income, Rural Colorado. Research team: Elaine Berlansky, University of Colorado at Denver (PI), Nicholas Cutforth, University of Denver (Co-PI), and Allison Reeds. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Colorado Health Foundation, $3,103,108 (2013-2017)

Hughes Rare Books Library Room Renovation in the Sturm College of Law. Project team: Patti H. Marks, Sylvia D. Hall-Ellis, and Leigh Elliott. Mabel T. Hughes Charitable Trust, $34,000 (2013-2014)

The Promise Center Partnership with the Marsico Institute for Early Learning and Literacy and the City and County of Denver. Research team: Karen Riley (PI), Douglas H. Clements (Co-PI), and Sheridan Green. Technical reviewer for MCE: Sylvia D. Hall-Ellis. The Piton Foundation, $223,468 (2013-2014)

Center of Excellence for Problem Gambling. Research team: Ruth Chao (PI) and J. Mike Faragher. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Colorado Department of Behavioral Health, $68,021 (2012-2013)

United Way Implementation and Validation Review. Research team: Douglas H. Clements (PI), Amanda Moreno, and Sheridan Green. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Mile High United Way, $19,737 (2013)

Math/Science Partnership in Rural Districts. Research team: Kristen Bunn (PI, Eagle County Schools), Paul Michalec (Co-PI), and Alegra Reiber. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Colorado Department of Education, Colorado's Mathematics and Science Partnership Program, $750,000 (2013-2014)

Mathematics and Science Education of African Americans. Research team: Nicole Russell (PI), Sylvia D. Hall-Ellis, Steve Fisher (Penrose Library). Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Professional Research Opportunities for Faculty, $29,994 (2013-2015)

Online Course Development for Curriculum and Instruction. Researcher: Nicole Russell. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Teaching and Learning, $3,000 (2013)

Discourse and Opportunity: Undocumented Students and Higher Education Policy. Researcher: Ryan Gildersleeve. Technical reviewer for MCE: Sylvia D. Hall-Ellis. National Academy of Education, Spencer Foundation Postdoctoral Fellowship, $55,000 (2012-2014)

An Anthropological Study of the Latino Graduation Ceremony. Researcher: Ryan Gildersleeve. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Spencer Foundation, $39,900 (2012-2013)

Fragile-X and Pharmaceutical Company: Clinical Trial of AFQ056. University of California – Davis Children's Hospital MIND Institute (Sacramento), Children's Hospital Denver, and Rush Children's Hospital at Rush University Medical Center (Chicago). Karen Riley, PI. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Novartis Pharmaceuticals Corporation, $394,206 (2012-2014)

Project Engage, Phase 2, a DAPRA Grant in partnership with Total Immersion Systems, Inc., and Texas A&M University. Research team: Karen Riley (PI) and Lyndsay Agans (Co-PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. U.S. Department of Defense, $60,000 (2011-2013)

International School Psychology Practicum Exchange. Researcher: Gloria L. Miller. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Center for Community Engagement and Service Learning, $14,951 (2012-2013)

Online Course Development for Curriculum and Instruction. Research team: Bruce Uhrmacher (PI) and Norma Hafenstein (Co-PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Teaching and Learning, $18,193 (2012-2014)

Writers in the Schools. Research team: Karen Riley (PI) and Amanda Moreno (Co-PI).Technical reviewer for MCE: Sylvia D. Hall-Ellis. Colorado Humanities, $4,965 (2012-2013)

Learning Ecosystem Validation Grant. Research team: Karen Riley (PI), Lyndsay Agans, Kent Seidel, and Shimelis Assefa. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Bill & Melinda Gates Foundation, $315,000 (2012-2013)

Project Words of Oral Reading and Language Development (WORLD). Research team: Jorge E. Gonzalez (PI), Texas A&M University; Laura Saenz (Co-PI), University of Texas – Pan American; and, Sharolyn Pollard-Durodola (Co-PI), University of Denver. Technical reviewer for MCE: Sylvia D. Hall-Ellis. U.S. Department of Education, Institute of Education Sciences, $53,354 (2012-2015); award $640,718, transfer from Texas A&M University

Increasing the Efficacy of an Early Mathematics Curriculum with Scaffolding Designed to Promote Self-Regulation. Research team: Douglas H. Clements (PI) and Julie Sarama (Co-PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. U.S. Department of Education, Institute of Education Sciences, $1,445,315 (2008-2014); award $4,541,975, transfer from University at Buffalo, The State University of New York

Using Rule Space and Poset-based Adaptive Testing Methodologies to Identify Ability Patterns in Early Mathematics and Create a Comprehensive Mathematics Ability Test. Research team: Douglas H. Clements (PI) and Julie Sarama (Co-PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. National Science Foundation, $323,791 (2010-2014); award $1,194,944, transfer from University at Buffalo, The State University of New York

Comprehensive Postdoctoral Training in Scientific Education Research. Researcher: Julie Sarama (PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. U.S. Department of Education, Institute of Education Sciences, $133,458 (2010-2014); award $613,353, transfer from University at Buffalo, The State University of New York

Longitudinal Study of a Successful Scaling Up Project: Extending TRIAD. Research team: Douglas H. Clements (PI), Julie Sarama (Co-PI), and Abt Associates (Carolyn Layzer, Fatih Unlu, Laurie Bozzi, Lily Fesler, Alina Martinez, Cristofer Price, James van Orden). Technical reviewer for MCE: Sylvia D. Hall-Ellis. Institute of Education Sciences, $384,940 (2011-2015; award $1,250,286, transfer from University at Buffalo, The State University of New York

Early Childhood Education in the Context of Mathematics, Science, and Literacy. Research team: Julie Sarama (PI), Douglas H. Clements (Co-PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. National Science Foundation, $990,020 (2010-2014; award $2,285,228, transfer from University at Buffalo, The State University of New York

Early Childhood Clearinghouse Information Center Redesign. Research team: Karen Riley (PI) and Amanda Moreno (Co-PI).Technical reviewer for MCE: Sylvia D. Hall-Ellis. Office of the Lt. Governor of Colorado, $12,000 (2012-2013)

Morgridge Rural Educational Leadership Initiative. Research team: Lyndsay Agans (PI), Linda Brookhart (Co-PI), Susan Korach, and Rebecca McClure. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Morgridge Family Foundation, $100,000 (2012-2014)

Center of Excellence for Problem Gambling. Research team: Patrick Sherry (PI) and J. Mike Faragher. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Colorado Department of Behavioral Health, $55,000 (2012-2013)

Intermodal Transportation Institute Research Initiatives. Researcher: Patrick Sherry. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University Transportation Centers Program, Research and Innovative Technology Administration, U.S. Department of Transportation. $600,000 (2012-2014)

Mile High United Way Social Innovation Fund Early Literacy Initiative. Gloria L. Miller, PI, Amanda Moreano, Kim Hartnett-Edwards, and Sheridan Green. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Mile High United Way, $89,992 (2012-2013)

International School Psychology Practicum Exchange. Researcher: Gloria L. Miller. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Center for Community Engagement and Service Learning, $1,000 (2012-2013)

Refugee Student Art Outreach. Researcher: Karin Dittrick-Nathan. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Faculty Research Fund, $3,000 (2012-2013)

Resistance, Resilience, and Reciprocity: Centering the Voices of Black Doctoral Women with Faculty Aspirations. Researcher: Nicole M. Russell. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Faculty Research Fund, $2,965 (2012-2013)

Assessing Learning through Student Notebooks. Research team: Keith Miller, Nancy Sasaki, and Kathy Green. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Professional Research Opportunities for Faculty, $30,000 (2012-2014)

International School Psychology Practicum Exchange. Researcher: Gloria L. Miller. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Internationalization, $2,000 (2012-2013)

ELO in Colorado. Research team: Cynthia Hazel and Duan Zhang. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Colorado Legacy Foundation, $150,000 (2012-2013)

Creating Online LIS Courses. Research team: Mary C. Stansbury (PI), Shimelis Assefa, Denise Anthony, Xiao Hu, and Krystyna Matusiak. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Center for Teaching and Learning, $15,000 (2011-2013)

Maritime Piracy Seminar. Researcher: Ved Nanda, The Nanda Center, Sturm College of Law. Technical reviewer for Sturm College of Law: Sylvia D. Hall-Ellis. Arsenault Family Foundation, $15,000 (2012-2013).

Early Childhood Librarianship: An Interdisciplinary, Experiential Learning MLIS. Researcher: Mary C. Stansbury (PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. Laura Bush's 21st Century Librarians Program, Institute for Museums and Library Services, $249,066 (2012-2014)

Learning Ecosystem Planning Grant. Research team: Karen Riley (PI), Lyndsay Agans, Kent Seidel, and Shimelis Assefa. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Bill & Melinda Gates Foundation, $281,217 (2011-2012)

Advanced Service Learning Practitioner Faculty Grant, Sylvia D. Hall-Ellis, University of Denver, Center for Community Engagement and Service Learning, $400 (2011)

Evaluating and Enhancing the EspeciallyMe Program. Research team: Lori D. Patton and Nicole Russell. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Center for Community Engagement and Service Learning, Public Good Fellowship Grant, $24,780 (2012)

Choosing Excellence: Let Every Child Bloom. Research team: Shimelis Assefa (PI) and Mary C. Stansbury (Co-PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Center for Community Engagement and Service Learning, Public Good Grant, $7,657 (2012)

K-8 STEM Content Specific Professional Development to Improve Elementary Student Achievement. Research team: Kent Seidel (PI), Nicole Russell (Co-PI), Kimberly Hartnett-Edwards, Paul Michalec, Jeff Farmer, Keith Miller, Alegra Reiber, and Nancy Sasaki. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Colorado Department of Education, Improving Teacher Quality Grant, (Title II ESEA), $307,299 (2011-2012)

Building a Better Principal Pipeline to Boost Student Achievement. Researcher: Susan Korach. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Denver Public Schools; a subcontract from the Wallace Foundation Grant, $170,000 (2011-2017)

Center of Excellence for Problem Gambling. Research team: J. Mike Faragher (Co-PI) and Bobbie Vollmer (PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. Colorado Department of Behavioral Health, $79,999 (2011-2012)

An Exploration of Novice Teachers' Core Competencies: Impacts on Student Achievement, and Effectiveness of Preparation. Research team: Kent Seidel (PI), Kathy Green (Co-PI), Kimberly Hartnett-Edwards, and Duan Zhang. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Institute of Education Sciences, Effective Teachers and Effective Teaching, $990,987 (2012-2015)

Project Engage, a DAPRA Grant in partnership with Total Immersion Systems, Inc., and Texas A&M University. Research team: Karen Riley (PI) and Lyndsay Agans (Co-PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. U.S. Department of Defense, $49,964 (2011-2014)

User-centered Evaluation of Music Search Engines. Researcher: Xiao Hu. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Faculty Research Fund, $2,931 (2011-2012)

Educational Practicum in Vietnam and China to Promote the Inclusion of Young Children with Disabilities. Researcher: Gloria L. Miller. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Office of Internationalization, $5,000 (2011-2012)

Evaluation of Colorado's Enhancing Quality in Infant-Toddler (EQIT) Initiative. Research team: Virginia R. Maloney and Amanda Moreno. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Buell Foundation, $395,884 (2011-2013)

Creating Engaging Environments to Teach Pre-Algebra Mathematics to Elementary Students. Research team: Álvaro Arias, Mario López, María del Carmen Salazar, and Lyndsay Agans. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver Interdisciplinary Grant, $60,000 (2011-2012)

Morgridge Education Technology Accessible (META) Resource Project. Research team: Lyndsay Agans (PI) and Shimelis Assefa (Co-PI). Technical reviewer for MCE: Sylvia D. Hall-Ellis. Morgridge Family Foundation, $36,000 (2011)

MCE Connect: A 21st Century Framework for Faculty Development. Research team: Bruce Uhrmacher (PI), Shimelis Assefa (Co-PI), Lyndsay Agans (Co-PI), Kimberly Hartnett-Edwards, Norma Hafenstein, Xiao Hu, Paul Michalec (Co-PI), María del Carmen Salazar (Co-PI), and Sandra Snyder-Mondragon. Technical reviewer for MCE: Sylvia D. Hall-Ellis. University of Denver, Center for Teaching and Learning, $22,355 (2011-2012)

Parent Education and Parent Leadership and Advocacy. Research team: Virginia Maloney (PI) and Amanda Moreno, Marsico Institute for Early Learning and Literacy. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Colorado Health Foundation, $27,358 (2010-2011)

Intentional School Culture. Researcher: Cynthia Hazel. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Denver Public Schools, $38,040 (2010-2011)

Healthy Eaters, Lifelong Movers: Implementing Evidence-Based School Environment, Policy, and Curricular Changes to Increase Opportunities for Healthy Eating and Physical Activity in Low Income, Rural Colorado. Research team: Elaine Berlansky, University of Colorado at Denver (PI), Nicholas Cutforth, University of Denver (Co-PI), and Allison Reeds. Technical reviewer for MCE: Sylvia D. Hall-Ellis. Colorado Health Foundation, $1,683,277 (2011-2014)

Second Life Learning Community. Research team: Don McCubbrey (PI), Sylvia D. Hall-Ellis (Co-PI), Walter LaMendola, and Paul Novak. University of Denver, Center for Teaching and Learning, $13,000 (2010-2011)

Reintroducing the Value of Law Librarians to Academic and Public Librarians in Colorado through the Identification and Use of Emerging Technologies. Research team: Sylvia D. Hall-Ellis (Co-PI), Stacey L. Bowers (PI), and Christopher Hudson, in partnership with Denver Public Library, Arapahoe Library District, and the Colorado State Supreme Court Library. University of Denver, Center for Community Engagement and Service Learning, $5,773 (2010-11)

Reintroducing the Value of Law Librarians to Public Librarians through the Identification and Use of Emerging Technologies and Resources. Research team: Stacey Bowers (PI) and Sylvia D. Hall-Ellis (Co-PI). American Association of Libraries, Wolters Kluwer Law & Business Grant Program, $2,725 (2010-2011)

Faculty Service Learning Pod. Research team: María del Carmen Salazar and Nicholas Cutforth (Curriculum and Instruction Program), Frank Tuitt (Higher Education Program), Cynthia Hazel and Gloria Miller (Child, Family, and School Psychology Program), and Sylvia D. Hall-Ellis (Library and Information Science Program). University of Denver, Center for Community Engagement and Service Learning, $8,000 (2010-2011)

Lincoln Collaborative. Research team: Antonio Esquibel (Principal, Lincoln High School), María del Carmen Salazar (Curriculum and Instruction Program), and. Sylvia D. Hall-Ellis. School Improvement Grant, Denver Public Schools, $375,000 (2010-2012)

Future LEADers of America: Leaders III. Research team: Denver Public Library (Kristen Svendson, PI), the University of Denver (Sylvia D. Hall-Ellis), the Colorado Chapter of REFORMA (Orlando Archibeque), and the Colorado Association of Libraries (Martin Garnar). Laura Bush's Recruiting Librarians for the 21st Century Program, Institute for Museums and Library Services, $988,366 (2009-2012)

Teaching for Success in the Library Environment: LIS 4030 in Library 2.0. Research team: Deborah S. Grealy (PI) and Sylvia D. Hall-Ellis (Co-PI). University of Denver, Center for Teaching and Learning, $ 9,350 (2009-10)

Writing Group Faculty Grant, Sylvia D. Hall-Ellis, University of Denver, Center for Community Engagement and Service Learning, $750 (2008-2009)

Collaborative Learning Faculty Grant, Sylvia D. Hall-Ellis, University of Denver, Center for Teaching and Learning, $1,500 (2008)

Connecting Information Literacy to Learning. Research team: Lori Micho, Merrie Valliant, Amanda Samland, and Sylvia D. Hall-Ellis. Colorado State Library, LSTA Discretionary Grant Program, $19,548 (2008-2009)

Law Librarianship Fellows Program. Research team: Sylvia D. Hall-Ellis (PI), Stacey Bowers (Co-PI), and Christopher Hudson, Westminster Law Library. Laura Bush's 21st Century Librarians Program, Institute for Museums and Library Services, $999,370 (2008-2012)

Grant Writing in a Cooperative Learning Environment. Sylvia D. Hall-Ellis. University of Denver, Center for Teaching and Learning, $2,000 (2008-2009)

Project Homeless Connect 6 Event Evaluation. Research team: Sylvia D. Hall-Ellis and Duan Zhang. University of Denver Center for Community Engagement and Service Learning, $9,785 (2008)

Project Ecuador: International Learning Service Libraries – A Faculty Development Experience in Ecuador. Sylvia D. Hall-Ellis, Office of Internationalization, University of Denver, $600 (2007)

Project Ecuador: International Learning Service Libraries – A Faculty Development Experience in Ecuador. Sylvia D. Hall-Ellis, International Service Learning Office, University of Denver, $400 (2007)

Project Homeless Connect 5 Event Evaluation. Research team: Sylvia D. Hall-Ellis and Duan Zhang. University of Denver Center for Community Engagement and Service Learning, $1,000 (2007)

Project Homeless Connect 4 Event Evaluation. Research team: Sylvia D. Hall-Ellis and Duan Zhang. University of Denver Center for Community Engagement and Service Learning, $4,595 (2007)

Future LEADers of America: Leaders II. Research team: Denver Public Library (Kristen Svendson, PI), the University of Denver (Sylvia D. Hall-Ellis), and the Colorado Chapter of REFORMA (Orlando Archibeque). Laura Bush's Recruiting Librarians for the 21st Century Program, Institute for Museums and Library Services, $988,518 (2007-2010)

Strategic Planning Assistance for the Denver Medical Library. Sylvia D. Hall-Ellis. Denver Medical Library, Inc., $30,000 (2006-2007)

Destiny Software for JMAC Student Lab. Sylvia D. Hall-Ellis, gift from the Sagebrush Corporation, Minneapolis, Minnesota, $10,000 (2006)

Libraries: Tools for Education and Development Worldwide: A Faculty Development Experience in France. Sylvia D. Hall-Ellis, Office of Internationalization, University of Denver, $800 (2005)

Denver Public Library: Opportunities for Change. Sylvia D. Hall-Ellis, Colorado Community Based Research Network, $2,000 (2005)

Future LEADers of America. Research team: Denver Public Library (Letty Icolari and Steve Taylor, PIs), Emporia State University (Jim Agee), and the University of Denver (Sylvia D. Hall-Ellis). Recruiting Librarians for the 21st Century Program, Institute for Museums and Library Services, $670,315 (2005-2008)

American Association of University Professors Summer Institute Professional Development Grant. Sylvia D. Hall-Ellis, American Association of University Professors, $300 (2005)

Beta Phi Mu Alumni Tea. Sylvia D. Hall-Ellis, gift from the Office of Alumni and Parent and Relations, University of Denver, $2,000 (2005)

Spectrum Software for LIS Student Lab. Sylvia D. Hall-Ellis, gift from the Sagebrush Corporation, Minneapolis, Minnesota, $5,000 (2005)

Developing Research Capacity in Community Organizations and Residents through Training and Technical Assistance. Nicholas J. Cutforth (PI) and Sylvia D. Hall-Ellis. Piton Foundation, $25,000 (2005-2006)

Libraries: Tools for Education and Development Worldwide: A Faculty Development Experience in Argentina. Sylvia D. Hall-Ellis, Office of Internationalization, University of Denver, $500 (2004)

Developing Research Capacity in Community Organizations and Residents through Training and Technical Assistance. Research team: Nicholas J. Cutforth (PI), Gary Lichtenstein and Sylvia D. Hall-Ellis, Piton Foundation, $25,000 (2003-2004)

Increasing Spanish-Speaking and Hispanic Diversity among Library and Information Science Students at the University of Denver: Development of a Student Recruitment Model. Researcher: Sylvia D. Hall-Ellis (PI), Office of Multicultural Excellence, University of Denver, $2,750 (2003-2004)

Collection Development Enrichment to Support the Cataloging & Classification Specialization and School Librarianship within the Library & Information Science Program at the University of Denver. Research team: Sylvia D. Hall-Ellis (PI) and Deborah S. Grealy. Women's Library Association, University of Denver, $4,000 (2003)

Collection Development Enrichment to Support the Library & Information Science Program at the University of Denver. Research team: Deborah S. Grealy (PI) and Sylvia D. Hall-Ellis. Women's Library Association, University of Denver, $4,000 (2001)

Wireless LAN for Library Education. Research team: Deborah S. Grealy (PI) and Sylvia Hall-Ellis. University of Denver, Center for Teaching and Learning, $24,000 (2001-2002)

Upward Bound – A Program for South Texas Youth. Research team: Monte Churchill, Executive Director of Community Relations; Gary R. Sauceda, Outreach Coordinator; Raymond Hernandez, (PI) Associate Dean for Student Success; and Sylvia D. Hall-Ellis, South Texas Community College (McAllen, Texas). U.S. Department of Education, Office of Postsecondary Education, $2,672,003 (1999-2003)

Write Now! Improving Elementary Students' Writing Skills. Research team: Caryl G. Thomason, Assistant Superintendent (PI); Karen Tankersley, Principal; and, Hal Anderson, Director of Technology, Cheyenne Mountain School District 12 (Colorado Springs, Colorado); and Sylvia D. Hall-Ellis. Colorado Department of Education, Educational Telecommunications Unit, $189,453 (1999-2001)

Operation Quick Start -- Distance Learning in Rural Colorado. Research team: Randal Weigum, Technology Coordinator (PI); Bonnie Barns, Director of Federal Programs and Staff Development; and, Adam "Joe" Raskop, Executive Director, Southeastern Board of Cooperative Educational Services (Lamar, Colorado); and Sylvia D. Hall-Ellis. Colorado Department of Education, Educational Telecommunications Unit, $400,000 (1999-2001)

Advanced Technological Training for Information Professionals for the 21st Century. Research team: Mario Reyna, Division of Business Director (PI) and Sylvia D. Hall-Ellis, South Texas Community College (McAllen, Texas). Phi Delta Kappa and the National Science Foundation, $250,000 (1999-2001)

Working Connections – Training Information Technologies Professionals for the 21st Century. Research team: Mario Reyna, Division of Business Director (PI) and Sylvia D. Hall-Ellis, South Texas Community College

(McAllen, Texas). Microsoft Corporation and the American Association of Community Colleges, $1,147,775 (1999-2001)

The ROAD (Research Oriented Amplification of Development to Literacy) Program. Research team: Deborah J. Leong (PI), Metropolitan State University; Elena Bodrova, Metropolitan State University; Dmitri Semenov, Robert J. Marzano, and Sylvia D. Hall-Ellis, Mid-continent Regional Educational Laboratory (Aurora, Colorado). Hewlett-Packard Foundation, $25,000 (1998-1999)

Press to Literacy. Research team: Deborah J. Leong (PI), Metropolitan State University; Elena Bodrova, Metropolitan State University; Dmitri Semenov, Robert J. Marzano, and Sylvia D. Hall-Ellis, Mid-continent Regional Educational Laboratory (Aurora, Colorado). The Denver Post and the Robert S. McCormick Foundation, $49,818 (1998-1999)

International Telementor Center. Research team: David Neils, David B. Frost (PI), and Sylvia D. Hall-Ellis, Mid-continent Regional Educational Laboratory (Aurora, Colorado). Hewlett-Packard Philanthropy, $100,000 (1998-1999)

America Reads: Providing Tutor Training for the America Reads Challenge. Research team: Louis F. Cicchinelli (PI) and Sylvia D. Hall-Ellis, Mid-continent Regional Educational Laboratory (Aurora, Colorado). U.S. Department of Education, Office of Educational Research and Improvement, $306,000 (1998-1999)

Comprehensive School Reform. Research team: Louis F. Cicchinelli (PI), J. Timothy Waters, and Sylvia D. Hall-Ellis, Mid-continent Regional Educational Laboratory (Aurora, Colorado). U.S. Department of Education, Office of Educational Research and Improvement, $285,000 (1998-1999)

Sustainable Energy Education (SEE) Program for Grades 4-8: Preparing Today's Youth for Lifelong Learning and Responsible Actions in Energy Conservation. Research team: Mary Gromko, Colorado Department of Education; Gene McCarthy, Rocky Flats Field Office, U.S. Department of Energy; Gina Kissell, National Renewable Energy Laboratory; and Barbara L. McCombs (PI), Janet L. Bishop, and Sylvia D. Hall-Ellis, Mid-continent Regional Educational Laboratory (Aurora, Colorado). State of Colorado Governor's Office for Energy Conservation, $499,936 (1997-1999)

Review of Kansas Curriculum Standards in Mathematics and Language Arts. Research team: Robert J. Marzano (PI), John S. Kendall, David B. Frost, and Sylvia D. Hall-Ellis, Mid-continent Regional Educational Laboratory (Aurora, Colorado). Submitted to the Kansas State Department of Education, $25,903 (1998)

International Telementor Center. Research team: David Neils, John Kuglin, Chris Rapp, David B. Frost (PI), and Sylvia D. Hall-Ellis, Mid-continent Regional Educational Laboratory (Aurora, Colorado). Hewlett-Packard Company, $54,752 (1998)

Genesis Mission: Education Public Outreach. Developed in partnership by the Jet Propulsion Laboratory, California Institute of Technology, Los Alamos National Laboratory, Lockheed Martin Astronautics, and the Mid-continent Regional Educational Laboratory (Aurora, Colorado). Research team: John T. Sutton (PI), Alice Krueger, Martha Henry, Greg Rawls, Shae Isaacs, Jeff Johnson, Deb Jordan, Arlene Mitchell, David B. Frost, Jana Caldwell, J. Timothy Waters, and Sylvia D. Hall-Ellis. National Aeronautics and Space Administration, $139,700,000; subcontract award, $4,750,000 (1997-2007)

North Dakota Mathematics Assessment Project. Developed in partnership by the North Dakota Department of Education and Mid-continent Regional Educational Laboratory (Mid-continent Regional Educational Laboratory). Research team: Ann Clapper, Clarence Bina, Greg Gallagher, North Dakota Department of Education; Don Burger (PI), Hillary Michaels, and Sylvia D. Hall-Ellis, Mid-continent Regional Educational Laboratory (Aurora, Colorado). U.S. Office of Education, $1,618,214; subcontract award, $389,076 (1997-2001)

Pacific Resources for Education and Learning Distance Education: Project Evaluation. Developed in partnership by the Pacific Educational Community, the Pacific Resources for Education and Learning (PREL), and Mid-continent Regional Educational Laboratory (McREL). Research team: John W. Kofel (PI), Executive Director, PREL; J. Timothy Waters, Executive Director; Joan Buttram, Robert Keller, and Sylvia D. Hall-Ellis, Mid-continent Regional Educational Laboratory (Aurora, Colorado). U.S. Office of Education, Star Schools Program, $10,000,000; subcontract award, $500,000 (1997-2002)

Identification of Bilingual Gifted and Talented Children: A Comprehensive School Grants for Bilingual Education. Developed in partnership by Hidalgo (Texas) ISD, Los Fresnos (Texas) CISD, Progreso (Texas) ISD, University of Texas – Pan American (Edinburg, Texas), and Education Service Center, Region One (Edinburg, Texas). Research team: Hilda Medrano, Dean, College of Education, University of Texas – Pan American; Linda Phemister (PI), Janie Navarro, and Sylvia D. Hall-Ellis, Education Service Center, Region One. U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs, $1,670,633 (1997-2002)

Academics 2000: First Things First -- The Texas Goals 2000. Developed for Jim Hogg (Hebbronville, Texas) County ISD, Mirando City (Texas) ISD, and San Isidro (Texas) ISD. Research team: Hilda Medrano, Dean, College of Education, University of Texas - Pan American (Edinburg, Texas); Angie Lehmann, Amy Mares, Ellen Gonzalez (PI), and Sylvia D. Hall-Ellis, Education Service Center, Region One (Edinburg, Texas). Texas Education Agency, $339,987 (1997-2000)

Southwestern Bell's Learning Communities Initiative. Developed for Tech Prep of the Rio Grande Valley, Inc. (Harlingen, Texas); the Center for Professional Teacher Development, University of Texas – Brownsville; Teach for America – Rio Grande Valley (McAllen, Texas); and Education Service Center, Region One (Edinburg, Texas). Research team: Patricia G. Bubb, Executive Director (PI), Tech Prep of the Rio Grande Valley; Martin Winchester, Executive Director, Teach for America – Rio Grande Valley; Aileen Johnson, Director, School of Education, University of Texas – Brownsville; and Sylvia D. Hall-Ellis. Southwestern Bell Foundation, $100,000 (1997-1998)

Texas School to Work: Regional Implementation. Developed for Tech Prep of the Rio Grande Valley, Inc. (Harlingen), South Texas Community College (McAllen), Texas State Technical College (Harlingen), Texas Southmost College (Brownsville), Empowerment Zone of the Rio Grande Valley (Mercedes), Project VIDA (Weslaco), Youth Fair Chance (McAllen), and Education Service Center, Region One (Edinburg). Research team: Patricia G. Bubb (PI), Tech Prep of the Rio Grande Valley; Stephen Vassberg, Texas State Technical College; Ellen Trevino, Youth Fair Chance; Wanda Garza, Project VIDA; Leonardo Olivares, University of Texas – Pan American; Michael Bell, South Texas Community College; and Sylvia D. Hall-Ellis. Texas Workforce Commission, $4,250,000 (1997-2002).

Comprehensive Bilingual Education Grant for Hidalgo ISD and Roma ISD. Developed for Hidalgo (Texas) ISD, Roma (Texas) ISD, College of Education, University of Texas – Pan American (Edinburg, Texas), and Education Service Center, Region One (Edinburg, Texas). Research team: Tomas Thomas (PI), Director, Office of Bilingual Education and Sylvia D. Hall-Ellis. U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs, $1,531,361 (1997-2002)

Lopez High School, Porter High School, Rivera High School, Central Middle School, and Perkins Middle School, Brownsville (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $1,473,611 (1997-1998)

Donna High School, Todd Middle School, and Solis Middle School, Donna (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $704,052 (1997-1998)

Memorial Middle School and Nellie Schunior Middle School, La Joya Independent School District (Texas). Telecommunications Infrastructure Fund Board, $293,641 (1997-1998)

Martin High School, Christen Middle School, Cigarroa Middle School, Lamar Middle School, Laredo (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $1,200,000 (1997-1998).

Lasara Middle School, Lasara (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $246,210 (1997-1998)

Los Fresnos High School and Resaca Middle School, Los Fresnos (Texas) Consolidated Independent School District. Telecommunications Infrastructure Fund Board, $500,000 (1997-1998)

Lyford Junior High School, Lyford (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $354,997 (1997-1998)

Travis Middle School, McAllen (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $269,139 (1997-1998)

Mission High School, Mission (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $297,010 (1997-1998)

Progreso High School, Progreso (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $300,000 (1997-1998)

San Perlita High School, San Perlita (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $293,490 (1997-1998)

Myra Green Junior High School, Raymondville (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $225,000 (1997-1998)

Rio Grande City High School, Ringgold Middle School, Gruella Middle School, Rio Grande City (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $809,934 (1997-1998)

Rio Hondo Junior High School, Rio Hondo (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $297,024 (1997-1998)

Roma High School, Roma (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $333,178 (1997-1998)

San Benito High School, Miller Jordan Junior High School, San Benito (Texas) Consolidated Independent School District. Telecommunications Infrastructure Fund Board, $547,000 (1997-1998)

Santa Maria High School and Santa Maria Middle School, Santa Maria (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $400,000 (1997-1998)

Salvador High School, United Independent School District (Laredo, Texas). Telecommunications Infrastructure Fund Board, $250,879 (1997-1998)

Weslaco High School, Cabaza Middle School, Cuellar Middle School, Weslaco (Texas) Independent School District. Telecommunications Infrastructure Fund Board, $874,242 (1997-1998)

Principals' Assessment and Training Center. Developed for Education Service Center, Region One (Edinburg, Texas). Research team: Roberto Zamora, Leonel Barrera, William H. Parry, and Sylvia D. Hall-Ellis. Texas Principals' Leadership Initiative, Texas Association of Secondary School Principals, Texas Association of Elementary School Principals, and the Sid Richardson Foundation. $461,439 (1996-1998)

The Texas Library Connection -- Integrating and Sharing Resources. Developed for Hidalgo County Library System (McAllen), Cameron County Library System (Brownsville), South Texas Community College (McAllen), the

University of Texas - Pan American (Edinburg), University of Texas – Brownsville, and Education Service Center, Region One (Edinburg). Research team: William R. McGee, Coordinator, Hidalgo County Library System; Joe Garcia, Director, Cameron County Library System; Michael D. Bell, Library Director, South Texas Community College; Eleanor Folger Foster, University Library, University of Texas - Pan American; Jaime Vela (PI), Director of Instructional Technology and Media Services, Ron Pontius, Instructional Technology, and Fabiola Fuentes, Media Services, Education Service Center, Region One; and Sylvia D. Hall-Ellis. Office of Library Media Services, Technology Services, Texas Education Agency. $8,000 (1996-1997)

Developing Leadership Communities for Improving Algebra I for All Students. Developed for a partnership of the Region One Statewide Systemic Initiative Team. Research team: Noel Villarreal (PI), Eduardo Cancino, and Sylvia D. Hall-Ellis, Education Service Center, Region One (Edinburg). Texas Statewide Systemic Initiative for Reform in Mathematics, Science and Technology Education to The Charles A. Dana Center for Mathematics and Science Education, The University of Texas at Austin. $25,000 (1996-1997)

Academics 2000: First Things First -- The Texas Goals 2000. Developed for Edinburg (Texas) CISD. Research team: Hilda Medrano, Dean, College of Education, University of Texas - Pan American (Edinburg); Helen Jones, Director (PI), Gifted and Talented Education, Edinburg CISD; and Sylvia D. Hall-Ellis, Education Service Center, Region One (Edinburg). Texas Education Agency, $750,000 (1996-2001)

Texas Teachers Empowered for Achievement in Mathematics (TEXTEAM) Institute for Algebra I. Developed for Hidalgo ISD, Jim Hogg (Hebbronville) County ISD, La Joya ISD, La Villa ISD, Lyford ISD, Mission CISD, Pharr-San Juan-Alamo ISD, Rio Hondo ISD, San Isidro ISD, San Perlita ISD, Santa Maria ISD, Santa Rosa, Sharyland ISD, Valley View ISD, Webb (Laredo) CISD, Weslaco ISD, and Zapata County (Zapata) ISD. Research team: Noel Villarreal (PI), Chuck McInteer, Ellen M. Gonzalez, Education Service Center, Region One (Edinburg); and Sylvia D. Hall-Ellis. Charles A. Dana Center for Mathematics and Science Education, University of Texas - Austin, $15,975 (1996)

Community Learning Center for La Villa, Texas. Developed for Edcouch-Elsa Independent School District. Research team: Noe Gonzalez (PI), Assistant Superintendent, Edcouch-Elsa Independent School District, and Sylvia D. Hall-Ellis. Delta Region Subzone, Rio Grande Valley (Texas) Rural Empowerment Zone, $325,000 (1996-1997)

Monte Alto (Texas) Community Learning Center. Developed for Monte Alto Independent School District. Research team: Homero A. Diaz (PI), Superintendent, Monte Alto Independent School District, and Sylvia D. Hall-Ellis. Delta Region Subzone, Rio Grande Valley (Texas) Rural Empowerment Zone, $300,000 (1996-1997)

Community Learning Center for La Villa, Texas. Developed for La Villa Independent School District. Research team: Sam Gonzalez (PI), Assistant Superintendent, La Villa Independent School District; and Sylvia D. Hall-Ellis. Delta Region Subzone, Rio Grande Valley (Texas) Rural Empowerment Zone, $325,000 (1996-1997)

Building Project for Taylor Elementary. Developed for Mercedes (Texas) Independent School District. Research team: Mrs. Denise Rivera, Librarian, and Eduardo Infante, Principal, Taylor Elementary School; Ismael S. Cantu (PI), Federal Programs Director, Mercedes Independent School District; and Sylvia D. Hall-Ellis. Delta Region Subzone, Rio Grande Valley (Texas) Rural Empowerment Zone, $375,000 (1996-1997)

Border Education Network (BEN) - Distance Education through Cable Television. Developed for Edinburg (Texas) Consolidated Independent School District. Research team: Noe Torres (PI), Library Media Specialist, Magdalena Rosas, Library Media and Technology Coordinator, Edinburg Consolidated Independent School District; and Sylvia D. Hall-Ellis, Education Service Center, Region One (Edinburg). Edinburg (Texas) Consolidated School District, $250,000 (1996-1997)

Multiservice One-Stop Open Enrollment Charter School. Developed for the Information Referral Resource Assistance, Inc. (McAllen, Texas). Research team: Pablo Perez and Aguie Pena (PI), Executive Director, Information Referral Resource Assistance, Inc.; Roberto Zamora and Sylvia D. Hall-Ellis, Education Service Center, Region One (Edinburg). Texas Education Agency, $3,066,000 (1996-2001)

Project OK: A Community Youth Opportunities Grant for Summer, 1996. Developed for McAllen (Texas) Independent School District, St. Joseph the Worker Catholic Church, and the Office of Adult Education, Education Service Center, Region One. Research team: Father Bart Flatt, St. Joseph the Worker Catholic Church; Noe Calvillo (PI), Office of Adult Education; Maria Louisa Garcia, McAllen Independent School District; and Sylvia D. Hall-Ellis, Education Service Center, Region One (Edinburg). Texas Protective and Regulatory Agency through the Office of the Mayor, City of McAllen, $350,000 (1996-2001).

Early Childhood: a Time of Discovery. Developed for a partnership of Lasara ISD, Rio Hondo ISD, San Perlita ISD, the School of Education, University of Texas - Brownsville, and Education Service Center, Region One (Edinburg). Research team: Hugo Rodriguez, Dean, School of Education, University of Texas - Pan American; Leonel Barrera and Jack Damron, Field Service Agents, Ellen M. Gonzalez (PI), Administrator for Student Instructional Services, Ruth Solis, Education Specialist in Special Education, and Sylvia D. Hall-Ellis, Education Service Center, Region One (Edinburg). Texas Education Agency, $722,090 (1996-2001)

Innovative Gifted and Talented Programs for Early Childhood and Elementary Education Students. Developed for a partnership of Edinburg (Texas) CISD, the School of Education, University of Texas - Pan American (Edinburg), and Education Service Center, Region One (Edinburg). Research team: Hilda Medrano, Dean, School of Education, University of Texas - Pan American; Helen de la Garza (PI), Director of Elementary Curriculum and Instruction, Edinburg CISD; and Sylvia D. Hall-Ellis. Texas Education Agency, $750,000 (1996-2001)

Reading Recovery in Early Elementary Grades. Developed for a partnership of La Villa (Texas) ISD the School of Education, University of Texas - Pan American (Edinburg), and Education Service Center, Region One (Edinburg). Research team: Hilda Medrano, Dean, School of Education, University of Texas - Pan American; Marcario Salinas (PI), Supervisor of Elementary Curriculum and Instruction, La Villa ISD; and Sylvia D. Hall-Ellis, Education Service Center, Region One. Texas Education Agency, $750,000 (1996-2001)

Connected Mathematics Project for Middle and Junior High Students. Developed for a partnership of Michigan State University, The Charles A. Dana Center for Mathematics and Science Education, The University of Texas at Austin and Region One Statewide Systemic Initiative Team. Research team: Jack Damron, Chuck McInteer, Noel Villarreal (PI), and Sylvia D. Hall-Ellis, Education Service Center, Region One (Edinburg). National Science Foundation through Michigan State University to the Charles A. Dana Center at the University of Texas - Austin, $539,610 (1996-1999)

Sharing Resources: Testing the Interlibrary Loan Potential of the Texas Library Connection -- Integrating Media Resources. Developed under the sponsorship of the Hidalgo County Library System (McAllen) and Education Service Center, Region One (Edinburg). Research team: William H. McGee, Hidalgo County System Coordinator; Fabiola Fuentes, Library Media; Ronald Pontius (PI), Instructional Technology, Education Service Center, Region One; and Sylvia D. Hall-Ellis. Library Media Services Program, Office of Technology Services, Texas Education Agency, $25,000 (1996-1997)

State and Federal Adult Education JOBS Program. Developed for Education Service Center, Region One (Edinburg). Research team: Noe Calvillo (PI), Director, Adult Education Program, and Sylvia D. Hall-Ellis. Adult Education Program, Texas Education Agency, $532,846 (1995-1996)

Creating Safe and Drug-Free Schools and Communities. Developed for a partnership of the Region One Consortium for Safe and Drug-Free Education Environments. Research team: Clara Contreras (PI), Health Specialist, and Sylvia D. Hall-Ellis, Education Service Center, Region One (Edinburg). Texas Education Agency, $150,000 (1995-1996)

Developing Leadership Communities for Improving Mathematics Performance for All Students on Title I Campuses. Developed for a partnership of the Region One Statewide Systemic Initiative Team. Research team: Jack Damron, Chuck McInteer, Noel Villarreal (PI), and Sylvia D. Hall-Ellis, Education Service Center, Region One (Edinburg). Texas Statewide Systemic Initiative for Reform in Mathematics, Science and Technology Education to The Charles A. Dana Center for Mathematics and Science Education, The University of Texas at Austin, $50,669 (1995-1996)

The Impact of Library Resource Centers on Academic Achievement in Selected Public Schools in South Texas. Sylvia D. Hall-Ellis (PI). Developed under the sponsorship of the Department of Library Science, College of Education and Applied Science, Sam Houston State University (Huntsville). Texas Association of School Librarians, Children's Services Round Table, and Young Adults Round Table (Austin, Texas), $2,500 (1995)

School Library Media Specialists Fellowship Program. Sylvia D. Hall-Ellis (PI). Developed under the sponsorship of the Department of Library Science, College of Education and Applied Science, Sam Houston State University (Huntsville, Texas). U.S. Department of Education, HEA Title II-B, Library Education and Human Resource Development Program, $44,000 (1995-1996)

Planning for Educational Technology. Research team: Ruth Ann Riggins (PI), Director of Library Media and Technology Services, Donna (Texas) Independent School District; Noe Torres, Education Service Center, Region One; Patricia G. Bubb, Tech Prep of the Rio Grande Calley, Inc; Michael D. Bell, South Texas Community College; and Sylvia D. Hall-Ellis, Sam Houston State University. Developed under the sponsorship of Donna (Texas) Independent School District, Education Service Center, Region One (Edinburg), Tech Prep of the Rio Grande Valley, Inc. (Harlingen), South Texas Community College (McAllen), and the Department of Library Science, Sam Houston State University (Huntsville). Funded through Infusion of Educational Technology Planning Grant Program (H.B. 18: Models). Texas Education Agency, $18,000 (1993-1994)

The Impact of Library Resource Centers on Academic Achievement in Selected Public Schools in South Texas. Sylvia D. Hall-Ellis (PI) and Mary Ann Berry. Developed under the sponsorship of the Department of Library Science, College of Education and Applied Science, Sam Houston State University (Huntsville). Sam Houston State University Research Enhancement Fund, $7,500 (1993-1994)

Electronic Mail Resource Sharing System: Management and Operation of the Iowa Computer-Assisted Network. State Library of Iowa, $294,000 (1986-1993)

The Iowa Locator: A CD-ROM Resource Sharing Tool. State Library of Iowa, $567,000 (1986-1992)

Statewide Database Development: An OCLC Tape Analysis To Determine Feasibility. State Library of South Dakota, $15,000 (1987)

The Iowa Locator: A Feasibility Study. State Library of Iowa, $50,000 (1986)

Electronic Mail Resource Sharing System: A Feasibility Study for Libraries in the State of Iowa. State Library of Iowa, $5,000 (1985)

Access Pennsylvania: A Feasibility Study. State Library of Pennsylvania, $50,000 (1984)

Automating Library Administrative and Management Tasks: Procurement and Distribution of Microcomputer Systems for District Library Centers in the Commonwealth of Pennsylvania. State Library of Pennsylvania, $495,000 (1982)

Sharing Serial Titles Resources: Procurement and Distribution of Microfiche Readers for 550 Libraries in the Commonwealth of Pennsylvania. State Library of Pennsylvania, $500,000 (1982)

Electronic Mail System: A Pilot Project for Libraries throughout the Commonwealth of Pennsylvania. State Library of Pennsylvania, $125,000 (1982)

Literacy Program for Adults in Rural Upstate New York State: Program Outreach and Evaluation - Phase 3. Appalachian Regional Commission, $50,000 (1981)

Database Building: A Cooperative Project of the Finger Lakes Library System (Ithaca), Four County Library System (Binghamton), and the Southern Tier Library System (Corning). New York State Library, $450,000 (1980-1985)

Faces of the Southern Tier: A Professional Photographer-in-Residence. New York State National Endowment for the Humanities, $25,000 (1980)

Literacy Program for Adults in Rural Upstate New York State: Program Implementation - Phase 2. Appalachian Regional Commission, $50,000 (1980)

Small Business Resources Center: A Pilot Project for Rural Public Libraries. New York State Library, $50,000 (1980)

Media Programming: A Professional Development Program for Public Librarians in Upstate New York: A Program in Allegheny, Chemung, Schuyler, Steuben, and Yates Counties. New York State Library, $35,000 (1979)

Information and Library Resources for Inmates and Prisoners in Selected Upstate New York Facilities: A Cooperative Program in Allegheny, Chemung, Schuyler, Steuben, and Yates Counties. New York State Library, $25,000 (1979)

Library Resources for Homebound Adults in Upstate New York: An Outreach Program in Allegheny, Chemung, Schuyler, Steuben, and Yates Counties. New York State Library, $40,000 (1979)

Literacy Program for Adults in Rural Upstate New York State: Program Initiation and Establishment - Phase 1. Funded by the Appalachian Regional Commission. Awarded to the Corning (New York) Public Library, $50,000 (1979)

Information Reference Services to Homebound Adults. New York State Library, $31,000 (1978)

Books-By-Mail Services to Homebound Adults. New York State Library, $31,000 (1978)

System Headquarters Services and Programs for Public Libraries in District 10. Funded through Library Services and Construction Act Title I. Texas State Library and Historical Commission, $880,000 (1976)

County Library Development Grant for Atascosita County. Funded through Library Services and Construction Act Title I. Texas State Library and Historical Commission, $15,000 (1976)

Spanish Language Materials Collection Development Program. Texas State Library and Historical Commission, $40,000 (1975)

Establishment of System Headquarters for Alamo Regional Library System (District 10) Headquartered at the San Antonio (Texas) Public Library. Texas State Library and Historical Commission, $800,000 (1975)

SELECTED CONSULTANTSHIPS

Project Strategic Planning & Funding Proposal Development

Walden University, 2015.

Pikes Peak Library District, 2014.

Douglas County Public Libraries, 2011-2012.

Denver School for Science and Technology, 2008-2011.

Johnson & Wales University, Denver Campus, 2007-2009.

Challenges, Choices, and Images K-12 Charter School, Denver Public Schools, 2007.

Denver Medical Library, Inc., 2006-2010.

Bemis Public Library (Littleton), Ergonomic Design and Facilities Enhancement Consultant, 2003.

Curtis Park Community Center (Denver), Community Technology Center Evaluation and Proposal Development Consultant, 2003.

Colorado Community Based Research Network (Denver), Funding Research Associate, 2002-

Our Lady of the Rosary Academy (Edgewater), Learning Resource Center Development Project Consultant, 2001-

University of Southern Colorado (Pueblo). Technology Integration and Curriculum Enhancement into Higher Education Learning Environment. Proposal Development Consultant, 2000.

Jefferson County Library System (Lakewood), 1999-2000.

Southeastern BOCES (Lamar, CO). Distance Learning Curriculum Content Development Project. Proposal Development Consultant, 1998-2004.

Cheyenne Mountain School District 12 (Colorado Springs, CO). Technology Integration into Elementary Writing Curriculum Project. Proposal Development Consultant, 1998.

Telecommunications Infrastructure Fund Board Round #2 Application, 1997. Technical assistance to the following: La Villa (Texas) Independent School District; Mirando City (Texas) Independent School District; Monte Alto (Texas) Independent School District; San Isidro (Texas) Independent School District.

Telecommunications Infrastructure Fund Board Round #1, 1996. Technical assistance to the following: Brownsville (Texas) Independent School District; Donna (Texas) Independent School District; Edinburg (Texas) Consolidated Independent School District; Harlingen (Texas) Consolidated Independent School District; Jim Hogg County Independent School District (Hebbronville, Texas); La Feria (Texas) Independent School District; La Joya (Texas) Independent School District; La Villa (Texas) Independent School District; Los Fresnos (Texas) Consolidated Independent School District; Progreso (Texas) Independent School District; Raymondville (Texas) Independent School District; Rio Hondo (Texas) Independent School District; San Benito (Texas) Independent School District; Sharyland Independent School District (Mission, Texas); Weslaco (Texas) Independent School District; Zapata (Texas) County Independent School District.

South Texas Community College (McAllen). Strategy Development to Meet the Technology Instructional Needs for Vocational, School-To-Work and Academic Programs, 1994-2000. Development Consultant.

Donna (Texas) Independent School District. Planning for the Infusion of Technology in Middle Schools Serving High At-Risk Students, 1994-1995. Research Associate.

Pettus (Texas) Independent School District. Planning for District-wide Automation in School Library Media Centers: Preparation of Data, and CD-ROM Hardware/Software Configuration Evaluation, 1994. Principal Investigator.

Fort Bend Independent School District (Sugar Land, TX). Planning for District-wide Automation in School Library Media Centers, Preparation of Data, and CD-ROM Hardware/Software Configuration Evaluation, 1994-1995. Principal Investigator.

Northern Waters Library Services (Ashland, WI). Professional Consulting Services to Make Recommendations on the Development of System-Wide Efforts of the Northern Waters Library Service, 1988-1989. Research Associate.

State Library of Iowa (Des Moines). The Iowa Locator Compact Disc to Support Multi-Type Libraries Resource Sharing including Database Design, Building, Production, and Distribution, 1986-1991. Project Director.

State Library of Iowa (Des Moines). Iowa Computer-Assisted Network Development, Enhancement, and Operation, 1985-1992. Technical Director.

State Library of South Dakota (Pierre). Statistical Sampling and Analysis of Multi-Institutional OCLC Archive Tape for Statewide Online Database Building, 1985-1986. Research Associate.

District of Columbia Public Library (Washington, DC). Planning Document for the Retrospective Conversion of Bibliographic Records and Automation Issues in the 1990's, 1984-1985. Research Associate.

State Library of Pennsylvania (Harrisburg). Database Development for High School Libraries, 1984-1985. Research Associate.

MINITEX (Minneapolis, MN). Workshops for Retrospective Conversion, Bar Coding, Library Statistics, and OCLC Serials Format, 1985. Presenter and Research Associate.

ABC Film Consortium (Altoona, Bellefonte, Johnstown, PA). Database Building, System Design, and Implementation of Online Film Booking System, 1983-1985. Database Manager.

Library Automation -- System Design & Implementation

Douglas County Library District (Castle Rock, CO). Library Automation Technical and System Performance Specifications, 2001.

Pharr-San Juan-Alamo Independent School District (Pharr, TX). Library Automation Technical and System Performance Specifications, 1997. Project Development Consultant.

Harlingen (Texas) Independent School District. Planning for District-wide Automation in Junior High School Library Media Centers: Preparation of Data, and CD-ROM Hardware/Software Configuration Evaluation, 1996. Principal Investigator.

Sharyland (Texas) Independent School District. Design and Construction of New Elementary School Library and Technology Resources Center, 1995-1996. Principal Investigator.

South Texas Independent School District (Mercedes, TX). Design and Construction of a New High School Library and Technology Resources Center, 1995-1996. Principal Investigator.

Citizens' Library (Washington, PA). Online Community Resources Files: Design and Implementation, 1984. Research Associate.

Altoona (Pennsylvania) Hospital. Integrated Online System Upgrade Study, 1984. Research Associate.

State Library of South Dakota (Pierre). Automation Plan and State Database Development, 1982-1983. Principal Investigator.

State Library of Pennsylvania (Harrisburg). COM Production and Preparation of the Technical Specifications Document, Procurement, and Distribution of Microcomputers in the Commonwealth of Pennsylvania, 1983-1984. Research Associate.

Altoona (Pennsylvania) Area Public Library. Integrated System (Circulation/Online Catalog) Study, 1982-1983. Principal Investigator.

COPSCAULD (Council of Pennsylvania State College and University Library Directors, Edinboro, PA). Design of Online Media Catalog, 1982. Principal Investigator.

Erie (Pennsylvania) County Library System. Operations Research and Design for Automated Circulation, Hardware Upgrade and Re-Retrospective Conversion, 1982. Research Associate.

Michigan Library Consortium (Lansing, MI). Tape Management System Design and Implementation, 1982-1984. Research Associate.

State Library of Pennsylvania (Harrisburg). Preparation of the Technical Specifications Document, Procurement and Distribution of Microfiche Readers in the Commonwealth of Pennsylvania, 1982. Research Associate.

Community College of Allegheny County, Allegheny Campus (Pittsburgh, PA). Integrated Systems Study, 1981. Principal Investigator.

Community College of Allegheny County, South Campus (West Mifflin, PA). Retrospective Conversion Training Program for Handicapped Students, 1981. Technical Director.

Southern Tier Library System (Corning, NY). OCLC Acquisitions Subsystem Evaluation, 1981. Principal Investigator.

South Central Reference and Research Council (Ithaca, NY). South Central Regional Delivery System, 1980. Principal Investigator.

Southern Tier Library System (Corning, NY). Newspapers on Microfilm in the Chemung-Southern Tier Library System, 1979-1981. Principal Investigator.

Cataloging & Bibliographic Database Building

Challenges, Choices, and Images K-12 Charter School, Denver Public Schools, 2007.

Denver Medical Library, Inc., 2006-2010.

Ricks Gifted and Talented School Library, 2005-

American Humane Society (Englewood), 2004-2006.

Fisher Early Learning Center Library, 2004-

Colorado Community Based Research Network (Denver), 2004-

Boulder Valley School District (Boulder), 2002-2003.

Douglas Public Library District (Castle Rock), 2001-2002.

Bibliographic Center for Research, Inc. (Denver). Original Cataloging, 2001-2003 & 1992-1993. Professional Cataloger. Libraries include Arapahoe Library District (Centennial); Clarke College (Clarke, IA); Kaiser Permanente Center for Health Research (Portland, KS); Douglas County Library System (Carson City, NV); Grinnell College (Grinnell, IA); Kansas State University (Manhattan, KS); Kansas State Library (Topeka, KS); McPherson College (McPherson, KS); Newman University (Wichita, KS); Montana Technical University (Helena, MT); Montana State Library (Helena, MT); University of Texas Southwest Medical Center Library (Dallas, TX); Community College of Southern Nevada (Las Vegas, NV); Pikes Peak Library District (Colorado Springs); Mesa Community College (Grand Junction); Coe College (Cedar Rapids, IA); Briar Cliff College (Sioux City, IA); Tri-Care Health Systems (Aurora); The Penrose-St. Francis Healthcare System (Colorado Springs); Westminster Public Library (Westminster); Lutheran Medical Center Medical Library (Wheat Ridge); American Heritage Center, University of Wyoming (Laramie, WY); National Wildlife Research Center Library (Lakewood); University of Colorado Health Sciences Center, Denison Memorial Library (Denver); Water Resources Library, Denver District Office, Bureau of Land Management (Lakewood); Mesa State Community College Learning Resources Center (Pueblo); Front Range Community College Learning Resources Center (Westminster).

Colorado Historical Society Library (Denver). Original Cataloging of Serials for Multi-Institutional Union Listing Project, 1993. Technical Services Associate. Institutional partners: Denver Art Museum, Denver Museum of Natural History Library, and Denver Botanical Gardens Library.

Arapahoe Library District (Centennial). Original Cataloging of Major Media, 1991.

Original Cataloging Projects: Davis and Elkins College (Elkins, WV), 1989-1990; Waldorf College (Forest City, IA), 1989-1990; Kennametal Corporation (Latrobe, PA), 1984-1985; Pennsylvania Public Libraries Film Center (Harrisburg), 1982-1985.

Retrospective Conversion Projects: North Central Regional Library Service (Mason City, IA), 1987-1988; Southeastern Library Services (Davenport, IA), 1986-1987; Virginia Theological Seminary (Alexandria), 1984-1985; California University of Pennsylvania (California, PA), 1984-1985; Kennametal Corporation (Latrobe, PA), 1984-1985;West Virginia University (Morgantown), 1983-1985; Altoona Area Public Library (Altoona, PA), 1983-1984; George Washington University (Washington, DC), 1983-1984; Indiana University of Pennsylvania (Indiana, PA), 1983-1985; Health Education Center (Pittsburgh), 1983-1984; Central Pennsylvania District Library Center (Bellefonte, PA), 1982-1985; Duquesne University Law School Library (Pittsburgh), 1982-1983; Allegheny County Law Library (Pittsburgh), 1982-1984;Calgon Technical Information Center (Pittsburgh), 1982; Dow Corning Corporation, Technical Information Center (Midland, MI), 1982-1983; Tri-System Public Library Retrospective Conversion Project (Binghamton, Corning, and Ithaca, NY), 1978-1981, Technical Project Director.

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ATTACHMENT 1a

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1 of 1

BOOK

ITU/SMPTE tutorial : Digital Terrestrial Television Broadcasting (DTTB)

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245	00	|**a** ITU/SMPTE tutorial : |**b** Digital Terrestrial Television Broadcasting (DTTB) / |**c** edited by Stanley N. Baron.
260	__	|**a** White Plains, NY : |**b** Society of Motion Picture and Television Engineers, |**c** c1994.
300	__	|**a** x, 175 p. : |**b** ill. ; |**c** 29 cm.
504	__	|**a** Includes bibliographical references (p. 175).
650	_0	|**a** Digital television |**x** Congresses.
700	1_	|**a** Baron, Stanley N.
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710	2_	|**a** Society of Motion Picture and Television Engineers.

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245 00 ITU/SMPTE tutorial : $b Digital Terrestrial Television Broadcasting (DTTB) / $c edited by Stanley N. Baron.
260 White Plains, NY : $b Society of Motion Picture and Television Engineers, $c ©1994.
300 x, 175 pages : $b illustrations ; $c 29 cm
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337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
504 Includes bibliographical references (page 175).
650 0 Digital television $v Congresses.
650 7 Digital television. $2 fast $0 (OCoLC)fst00893733
655 7 Conference papers and proceedings. $2 fast $0 (OCoLC)fst01423772
700 1 Baron, Stanley N.
710 2 International Telecommunication Union.
710 2 Society of Motion Picture and Television Engineers.

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246    23$aInstitute of Electrical and Electronics Engineers
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Electrical and Electronics Engineers]
300    ##$av. $bill. $c28 cm.
310    ##$aMonthly $b<, Aug. 1983- >
321    ##$aBimonthly
362    0#$av. 17- Jan. 1979-
510    2#$aEngineering index annual (1968) $x0360-8557
510    2#$aEngineering index monthly (1984) $x0742-1974
510    2#$aEngineering index bioengineering abstracts $x0736-6213
510    2#$aEngineering index energy abstracts $x0093-8408
510    1#$aIndex to IEEE publications $x0099-1368
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510    2#$aPhysics abstracts. Science abstracts. Series A $x0036-
8091 $bJan. 1979-
510    2#$aPredicasts
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510    1#$aApplied science & technology index $x0003-6986
525    ##$a2002 includes a separate "50th Anniversary Commemorative
Issue"
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525    ##$aVol.41, no.9(Sept. 2003)- , include IEEE optical
communications design, technologies, and applications, v.1,
no.1(Sept. 2003)- .
525    ##$aVol.42, no.3(March 2004)- , include IEEE radio
communications components, systems and networks, v.1, no.1(March
2004)- .
555    ##$aVol. 17-18(1979-80) in vol.18, no. 6 (incl. earlier
titles).
562    ##$aTitle received on deposit; do not claim as of 9.10.2010.
650    #0$aTelecommunication $vPeriodicals.
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$aTxLT $aTxU $aUPB $aUU $aViU $aVtU $aWU-E $aWvU
901    ##$cSer
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948    ##$aLTI 02/15/2018
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030 ICOMD9
032 902400 $b USPS
037 $b IEEE Service Center, 445 Hoes Lane, Piscataway, N.J., 08854-4150
042 nsdp $a pcc
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082 04 621/.38/05
090 $b
210 0 IEEE commun. mag. $b (Print)
222 0 IEEE communications magazine $b (Print)
245 00 IEEE communications magazine.
246 1 Institute of Electrical and Electronics Engineers communications magazine
260 [New York], $b [Communications Society of Institute of Electrical and Electronics Engineers]
300 volumes $b illustrations $c 28 cm
310 Monthly, $b <Aug. 1983-
321 Bimonthly
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
362 0 v. 17- Jan. 1979-
580 Includes: Global communications newsletter, 1997-
650 0 Telecommunication $v Periodicals.
650 6 Télécommunications $v Périodiques.
650 7 Telecommunication. $2 fast $0 (OCoLC)fst01145830
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658 SKTM.
710 2 IEEE Communications Society.

776 08 $i Online version: $t IEEE communications magazine (Online) $x 1558-1896 $w (DLC) 2005215227 $w (OCoLC)44466257
776 08 $i Online version: $a IEEE Communications Society. $t IEEE communications magazine $w (OCoLC)623580530
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850 AU $a AzTeS $a AzU $a CSt $a CU $a CU-A $a CU-I $a CU-SB $a CaAEU $a CaBVaS $a CaBVaU $a CaOTDT $a CaOTU $a CoFS $a CoU $a CtY-KS $a DLC $a DeU $a FMU $a FU $a IC $a ICU $a ICarbS $a IEN $a IEdS $a IU $a IaU $a InU $a LNT
850 MCM $a MChB $a MdBJ $a MdU $a MiD $a MiDW $a MiU $a MnU $a MoKU $a MsSM $a MsU $a N $a NIC $a NN $a NNC $a NRU $a NcD $a NcRS $a NcU $a NjP $a NmU $a OCU $a OkU $a OrU-S $a PPD $a PPiU $a PSt $a PU $a ScCleU $a ScU $a TxLT $a TxU $a UPB $a UU $a ViU $a VtU $a WU-E $a WvU
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ATTACHMENT 2d

The **development** and **standardization** of **asymmetrical digital subscriber line**

WY Chen - IEEE Communications Magazine, 1999 - ieeexplore.ieee.org

It has been almost a decade since the original proposal of ADSL was brought to the attention of a telecommunication standards body. During that time, the idea of ADSL has been modified and refined to fit market demand, many generations of ADSL chip set have been developed, and numerous trials have been conducted to prove its viability. In this article, the early development and standardization efforts of ADSL are reviewed. This is followed by a discussion of practical issues such as central office network interface and …

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IEEE Communications Magazine
Volume 37, Issue 5, May 1999, Pages 68-72

Development and standardization of asymmetrical digital subscriber line (Article)

Chen, W.Y.

Abstract

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It has been almost a decade since the original proposal of ADSL was brought to the attention of a telecommunication standards body. During that time, the idea of ADSL has been modified and refined to fit market demand, many generations of ADSL chip set have been developed, and numerous trials have been conducted to prove its viability. In this article, the early development and standardization efforts of ADSL are reviewed. This is followed by a discussion of practical issues such as central office network interface and customer premises configuration options. These issues have not been addressed extensively but implied by standards documents. The effect of in-house wiring and recent industry-wide standardization activities are then briefly addressed.

SciVal Topic Prominence

Topic: Subcarrier Allocation | Orthogonal Frequency Division Multiplexing (OFDM) | Multiuser

Prominence percentile: 74.019

Indexed keywords

Engineering controlled terms: Interfaces (computer) | Standardization | Telecommunication networks

Engineering uncontrolled terms: Asymmetrical digital subscriber lines (ADSL)

Engineering main heading: Telephone lines

ISSN: 01636804
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Cited by 10 documents

DSL (Digital Subscriber Line)

Milosevic, M.
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VoDSL information management for broadband communication network access

Musa, S.M. , Akujuobi, C.M. , Mir, N.F.
(2007) Journal of Computing and Information Technology

Introduction to Multimedia Communications: Applications, Middleware, Networking

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(1998) *DSL: Simulation Techniques and Standard Development for Digital Subscriber Lines*. Cited 148 times.
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(1991) *IEEE Global Telecommunications Conference and Exhibition*, 3, pp. 1979-1986. Cited 15 times.
ISBN: 0879426977

Find It View at Publisher

9 (1996) *Personal Computer/Data Network Access (PC/DNA) Request for Proposal*
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Gowri, T. , Prasad, H. , Komiya, R.
(1998) 5th Asia-Pacific Conference Communications and 4th Optoloelectronics Communications Conference: The Conference-Vitality to New Century, APCC/OECC 1999

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10 (1996) *IEEE Standard for a High Performance Serial Bus*. Cited 214 times.
IEEE Std 1394-1995, Aug. 30

Chen, Walter Y.; Motorola,

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310           $aMonthly,$b2008-
321           $aBiweekly (except July and Aug.),$b1986-
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362    1_    $aPrint began with vol. 5, no. 2 (Jan. 28, 1986).

500          $aNews items are updated daily.

520          $aContains full text articles related to computers and
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             as material issued exclusively for the online version.

538          $aMode of access: World Wide Web.

588          $aDescription based on: Vol. 19, no. 14 (Aug. 1, 2000); title
             from table of contents HTML header (publisher's Web site,
             viewed Mar. 19, 2009).

588          $aLatest issue consulted: Vol. 28, no. 2 (Feb. 1, 2009)
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650    _0    $aIBM microcomputers$vPeriodicals.

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650    _2    $aMicrocomputers$vPeriodicals.

650    _6    $aIBM (Micro-ordinateurs)$vPériodiques.

650    _6    $aMicro-ordinateurs$vPériodiques.

655    _0    $aElectronic journals.

906          $aNEWSPAPER
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953 __ |**a** td14

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680 __ |**i** Here are entered works on the periodicals of the world and, with appropriate subdivisions, works on special aspects or sections of periodicals. Works on periodicals in a specific language, or in a specific country or larger area, are entered under the adjectival form of the language or area, e.g. |**a** Arabic periodicals; Canadian periodicals.

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130 0 PC magazine (New York, N.Y.)
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222 0 PC magazine $b (New York, N.Y.)
245 10 PC magazine : $b the independent guide to IBM-standard personal computing.
246 3 Personal computer magazine
246 30 PC
260 [New York, N.Y.] : $b [PC Communications Corp.], $c [1986-2009]
300 volumes : $b illustrations (some color) ; $c 28 cm
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321 Biweekly (except July and Aug.)
321 Biweekly (except one issue in Jan. and July, 3 issues in Oct.), $b <2003-
321 Semimonthly (with occasional exceptions), $b <2005-2007
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
362 0 Vol. 5, no. 2 (Jan. 28, 1986)-v. 28, no. 1 (Jan. 2009).
500 Title from cover.

500 Subtitle varies.
500 Published: New York, N.Y. : Ziff Davis Media, Inc., <2008-2009.
515 Volumes for <2003- have an extra issue in Oct., called special fall issue.
650 0 IBM microcomputers $v Periodicals.
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776 08 $i Online version; beginning Feb. 2009 published only in online format: $t PC magazine $x 2373-2830 $w (DLC) 2014202275 $w (OCoLC)34196174
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111 2 SIGGRAPH (Conference) $n (22nd : $d 1995 : $c Los Angeles, Calif.)
245 10 Computer graphics : $b proceedings : SIGGRAPH 95 Conference proceedings, August 6-11, 1995 / $c edited by Robert Cook ; panels chair Leo Hourvitz.
246 18 SIGGRAPH 95 Conference proceedings
260 New York, NY : $b ACM SIGGRAPH, $c ©1995.
300 518 pages : $b illustrations (some color) ; $c 28 cm
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500 "Sponsored by the Association for Computing Machinery's Special Interest Group on Computer Graphics."
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504 Includes bibliographical references and index.
530 Also available on the World Wide Web via ACM Digital Library with title: Proceedings of the 22nd Annual ACM Conference on Computer Graphics.
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700 1 Hourvitz, Leo.
710 2 SIGGRAPH.
740 0 Proceedings of the 22nd Annual ACM Conference on Computer Graphics.

776 08 $i Online version: $a SIGGRAPH (Conference) (22nd : 1995 : Los Angeles, Calif.). $t Computer graphics. $d New York, NY : ACM SIGGRAPH, ©1995 $w (OCoLC)698053792
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856 41 $z Full text of the Conference proceedings (1995) $u
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ATTACHMENT 4b

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LC control no.: sh2008100018
LCCN Permalink: https://lccn.loc.gov/sh2008100018
HEADING: Computer graphics Congresses

000 00458cz a2200169n 450
001 7424750
005 20110729160012.0
008 080206|| anannbabn |n ana
010 __ |**a** sh2008100018
035 __ |**a** (DLC)374290
035 __ |**a** (DLC)sh2008100018
040 __ |**a** DLC |**b** eng |**c** DLC
150 __ |**a** Computer graphics |**v** Congresses
667 __ |**a** Record generated for validation purposes.
670 __ |**a** Work cat.: Geometric modelling, c2001
906 __ |**t** 8888 |**u** te00 |**v** 0
953 __ |**a** te00

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URL: https://catalog.loc.gov/

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ATTACHMENT 4c

Polygon-assisted JPEG and MPEG compression of synthetic images

M Levoy - Proceedings of the 22nd annual conference on …, 1995 - dl.acm.org

Recent advances in realtime image compression and decompression hardware make it possible for a high-performance graphics engine to operate as a rendering server in a networked environment. If the client is a low-end workstation or set-top box, then the rendering task can be split across the two devices. In this paper, we explore one strategy for doing this. For each frame, the server generates a high-quality rendering and a low-quality rendering, subtracts the two, and sends the difference in compressed form. The client …

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	Document title	Authors	Year	Source	Cited by
1	Polygon-assisted JPEG and MPEG compression of synthetic images	Levoy, Marc	1995	Proceedings of the ACM SIGGRAPH Conference on Computer Graphics pp. 21-25	60

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- Other (1)

Year
- 1995 (1)

Author name
- Levoy, M. (1)

Subject area
- Computer Science (1)

Document type
Publication stage
Source title
Keyword
Affiliation
Funding sponsor
Country/territory
Source type
Language

Limit to Exclude

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ATTACHMENT 5a

OCLC	733063887	**No holdings in XXX - 1 other holding**

Books	**Rec Stat**	c	**Entered**	20110627	**Replaced**	20151006173606.9					
Type	a	**ELvl**	M	**Srce**	d	**Audn**		**Ctrl**		**Lang**	eng
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		Cont		**GPub**		**LitF**	0	**Indx**	0		
Desc	a	**Ills**		**Fest**	0	**DtSt**	s	**Dates**	1996,		

040		SINTU ‡b eng ‡c SINTU ‡d OCLCF ‡d OCLCO ‡d OCLCQ
050	14	TK5101.I91 H.262
110	2_	International Telecommunication Union. ‡b Telecommunication Standardization Sector.
245	10	Information technology - generic coding of moving pictures and associated audio information : ‡b video. ‡p Transmission of non-telephone signals.
246	10	Transmission of non-telephone signals
246	10	ITU-T recommendation H.262
260		Geneva : ‡b ITU-T, ‡c 1996.
300		201 pages ; ‡c 30 cm
336		text ‡b txt ‡2 rdacontent
337		unmediated ‡b n ‡2 rdamedia
338		volume ‡b nc ‡2 rdacarrier
500		"Previously 'CCITT recommendation'."
500		Cover title.
500		"07/95."
500		Amendment 1: Registration of copyright identifiers -- Amendment 2: 4:2:2 profile.
500		Amendment has subtitle: Series H. Audiovisual and multimedia systems. Infrastructure of audiovisual services - coding of moving video.
650	_0	Coding theory ‡x Standards.
650	_0	Image processing ‡x Digital techniques ‡x Standards.
650	_0	Signal processing ‡x Digital techniques ‡x Standards.
650	_7	Coding theory ‡x Standards. ‡2 fast ‡0 (OCoLC)fst00866240
650	_7	Image processing ‡x Digital techniques ‡x Standards. ‡2 fast ‡0 (OCoLC)fst00967519
650	_7	Signal processing ‡x Digital techniques ‡x Standards. ‡2 fast ‡0 (OCoLC)fst01118296

ATTACHMENT 5b

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MARC Display | Labelled Display

LC control no.: sh 85027654
LCCN Permalink: https://lccn.loc.gov/sh85027654
HEADING: Coding theory

000 00685cz a2200241n 450
001 4679979
005 20120323070734.0
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010 __ |**a** sh 85027654
035 __ |**a** (DLC)sh 85027654
035 __ |**a** (DLC)26664
040 __ |**a** DLC |**c** DLC |**d** DLC
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053 _0 |**a** TK5102.92 |**b** TK5102.98 |**c** Telecommunication
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550 __ |**w** g |**a** Data compression (Telecommunication)
550 __ |**w** g |**a** Digital electronics
550 __ |**w** g |**a** Information theory
550 __ |**w** g |**a** Machine theory
550 __ |**w** g |**a** Signal theory (Telecommunication)
550 __ |**a** Computer programming
906 __ |**t** 9831 |**u** te07 |**v** 1
953 __ |**a** xx00 |**b** ta25

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LC control no.: sh 85127314
LCCN Permalink: https://lccn.loc.gov/sh85127314
HEADING: Standards

000 00599cz a2200157n 450
001 4776205
005 20110729121251.0
008 860211n| bnannbbbn |n ann
010 __ |**a** sh 85127314
035 __ |**a** (DLC)sh 85127314
035 __ |**a** (DLC)122890
040 __ |**a** DLC |**c** DLC |**d** DLC
150 __ |**a** Standards
260 __ |**i** subdivision |**a** Standards |**i** under topical headings for descriptions of the example or model set up and established by authority as the measure of quantity, quality, value, extent, weight, etc., to be followed, e.g. |**a** Automobiles--Standards; Corn--Standards
906 __ |**t** 8738 |**u** fk07 |**v** 0
953 __ |**a** xx00 |**b** fj25

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LC control no.: sh 85064447
LCCN Permalink: https://lccn.loc.gov/sh85064447
HEADING: Image processing Digital techniques

000 00426cz a2200169n 450
001 4715615
005 20120326100147.0
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040 __ |**a** DLC |**c** DLC
150 __ |**a** Image processing |**x** Digital techniques
450 __ |**a** Digital image processing
550 __ |**w** g |**a** Digital electronics
906 __ |**t** 8040 |**u** fk07 |**v** 0
953 __ |**a** xx00

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LC control no.: sh 85122398
LCCN Permalink: https://lccn.loc.gov/sh85122398
HEADING: Signal processing Digital techniques

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035 __ |**a** (DLC)118164
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150 __ |**a** Signal processing |**x** Digital techniques
450 __ |**a** Digital signal processing
550 __ |**a** Digital communications
550 __ |**w** g |**a** Digital electronics
906 __ |**t** 7825 |**u** fk03 |**v** 0
953 __ |**a** xx00

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ATTACHMENT 6a

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012    ##$a3 $i8610 $j2 $my
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049    ##$aLHLA
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210    0#$aPC mag. $b(N. Y. N. Y.)
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245    10$aPC magazine : $bthe independent guide to IBM-standard
personal computing.
246    10$aPC
246    23$aPersonal computer magazine
260    ##$a[New York, N.Y. : $bPC Communications Corp., $c1986-
525    ##$aInclude supplements.
650    #0$aIBM microcomputers $vPeriodicals.
650    #0$aMicrocomputers $vPeriodicals
775    1#$tPC magazine en español $x1069-9953 $w(DLC)sn 93002726
$w(OCoLC)28210102
776    1#$tPC magazine CD $x1078-8085 $w(DLC) 94646727
780    00$tPC (San Francisco, Calif.) $x0745-2500 $w(DLC) 84644391
$w(OCoLC)8853934
850    ##$aAAP $aAMAU $aAU $aArU $aC $aCSt $aCU $aCU-A $aCU-RivP
$aCU-S $aCaBViPA $aCaOLU $aCaOOEC $aCaOONL $aCaOONM $aCaOPAL $aCoFS
$aCtY $aCtY-D $aDGW $aDLC $aDNAL $aDeU $aGASU $aIC $aICarbS $aIEN
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$aMCM $aMH-BA $aMH-CS $aMH-KG $aMH-L $aMH-SD $aMMeT $aMiD $aMiDW
$aMiEM $aMiU $aMoSW $aMoSW-M $aMsU $aN $aNBC $aNIC $aNN $aNNC
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$aNjR $aNmU $aOCU $aOU $aOrU $aPBL $aPPD $aPPT $aPPiD $aPU $aTU
$aTxCM $aTxDaM $aTxHMC $aULA $aUPB $aUU $aViU $aViBlbV $aViW $aVtU
$aWM $aWa $aWaU $aWvU
890    ##$aPC magazine.
901    ##$cSer
936    ##$aApr. 29, 1986
945    ##$aP.C.
948    ##$aLTI 09/01/2008
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ATTACHMENT 6b

OCLC 13566002 **No holdings in XXX - 2195 other holdings**

Continuing Resources

Rec Stat		**Entered**	19860514	**Replaced**	20201122053551.7								
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016 7 9884024 $2 DNLM
016 7 SR0064977 $2 DNLM
016 7 007190922 $2 Uk
019 1000694467 $a 1012057400 $a 1054978642 $a 1063322079 $a 1081063124
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032 685110 $b USPS
042 pcc $a nsdp
050 00 QA76.8.I1015 $b P38
070 0 QA76.8.I126P35
072 0 X200
082 00 004.165 $2 19
090 $b
130 0 PC magazine (New York, N.Y.)
210 0 PC mag. $b (N.Y.N.Y.)
222 0 PC magazine $b (New York, N.Y.)
245 10 PC magazine : $b the independent guide to IBM-standard personal computing.
246 3 Personal computer magazine
246 30 PC
260 [New York, N.Y.] : $b [PC Communications Corp.], $c [1986-2009]
300 volumes : $b illustrations (some color) ; $c 28 cm
310 Monthly, $b 2008-2009
321 Biweekly (except July and Aug.)
321 Biweekly (except one issue in Jan. and July, 3 issues in Oct.), $b <2003-
321 Semimonthly (with occasional exceptions), $b <2005-2007
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
362 0 Vol. 5, no. 2 (Jan. 28, 1986)-v. 28, no. 1 (Jan. 2009).

500 Title from cover.
500 Subtitle varies.
500 Published: New York, N.Y. : Ziff Davis Media, Inc., <2008-2009.
515 Volumes for <2003- have an extra issue in Oct., called special fall issue.
650 0 IBM microcomputers $v Periodicals.
650 0 Microcomputers $v Periodicals.
650 2 Microcomputers. $0 (DNLM)D008838
650 3 IBM microcomputers $v Periodicals.
650 3 Microcomputers $v Periodicals.
650 4 Magazines $z United States.
650 6 IBM (Micro-ordinateurs) $v Périodiques.
650 6 Micro-ordinateurs $v Périodiques.
650 7 IBM microcomputers. $2 fast $0 (OCoLC)fst00966309
650 7 Microcomputers. $2 fast $0 (OCoLC)fst01019642
650 17 Microcomputers. $2 gtt
650 7 Microcomputers $v Periodicals. $2 nli
650 07 MICROCOMPUTERS. $2 unbist
650 07 DATA PROCESSING. $2 unbist
655 2 Periodical. $0 (DNLM)D020492
655 7 Periodicals. $2 fast $0 (OCoLC)fst01411641
655 7 Periodicals. $2 lcgft
775 08 $i Also issued in Spanish: $t PC magazine en español $x 1069-9953 $w (DLC)sn 93002726 $w (OCoLC)28210102
776 08 $i Also issued in CD-ROM format: $t PC magazine CD $x 1078-8085 $w (DLC) 94646727
776 08 $i Online version; beginning Feb. 2009 published only in online format: $t PC magazine $x 2373-2830 $w (DLC) 2014202275 $w (OCoLC)34196174
780 00 $t PC (San Francisco, Calif.) $x 0745-2500 $w (DLC) 84644391 $w (OCoLC)8853934
850 AAP $a AMAU $a AU $a ArU $a C $a CSt $a CU $a CU-A $a CU-RivP $a CU-S $a CaBViPA $a CaOLU $a CaOOEC $a CaOONL $a CaOONM $a CaOPAL $a CoFS $a CtY $a CtY-D $a DGW $a DLC $a DNAL $a DeU $a GASU $a IC $a ICarbS $a IEN $a INS $a IaAS $a IaU $a InLP $a InU $a KMK $a KPT $a KyU $a LU $a MBU-M $a MCM $a MH-BA $a MH-CS $a MH-KG $a MH-L $a MH-SD $a MMeT $a MiD $a MiDW $a MiEM $a MiU $a MoSW $a MoSW-M $a MsU $a N $a NBC $a NIC $a NN $a NNC $a NNStJ $a NRU $a NSyU $a NcD $a NcD-L $a NcRS $a NcU $a NcWsW $a NhD $a NjP $a NjR $a NmU $a OCU $a OU $a OrU $a PBL $a PPD $a PPT $a PPiD $a PU $a TU $a TxCM $a TxDaM $a TxHMC $a ULA $a UPB $a UU $a ViU $a ViBlbV $a ViW $a VtU $a WM $a Wa $a WaU $a WvU
856 41 $u http://www.pcmag.com/previous_issues/

ATTACHMENT 7a

OCLC 36634334 **No holdings in XXX - 81 other holdings**

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Desc	a	**Ills**	a	**Fest**	0	**DtSt**	s	**Dates**	1997 ,						

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020 0818678046
020 9780818678042
020 0818678054 $q (case)
020 9780818678059 $q (case)
020 0818678062
020 9780818678066
042 lccopycat
050 00 T58.5 $b .C655 1997
082 00 004 $2 22
090 $b
111 2 COMPCON $n (42nd : $d 1997 : $c San Jose, Calif.)
245 10 Proceedings, IEEE COMPCON 97 : $b San Jose, California, February 23-26, 1997 / $c sponsored by IEEE Computer Society.
246 10 IEEE Compcon 97
246 10 Proceedings, IEEE COMPCON 1997
246 14 1997 IEEE COMPCON spring
260 Los Alamitos, Calif. : $b IEEE Computer Society Press, $c ©1997.
300 xvi, 342 pages : $b illustrations ; $c 29 cm
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
500 "IEEE catalog number 97CB36028"--Title page verso.
504 Includes bibliographical references and index.
530 Also available via the World Wide Web with additional title: Compcon '97, proceedings, IEEE.
505 00 $t Universal Data Access with OLE DB / $r J. Blakeley -- $t Windows NT Clusters for Availability and Scalability / $r R. Short, R. Gamache and J. Vert -- $t Microsoft Transaction Server / $r R. Limprecht -- $t The Alpha 21164PC Microprocessor / $r P. Bannon and Y. Saito -- $t The Alpha 21264: A 500 MHz Out-of-Order Execution Microprocessor / $r D. Leibholz and R. Razdan -- $t DIGITAL FX!32: Running 32-Bit x86 Applications on Alpha NT / $r R. Hookway -- $t Color Image Quality Metric S-CIELAB and its Application on Halftone Texture Visibility / $r X. Zhang, D. Silverstein and J. Farrell -- $t An Evaluation of Video Fidelity Metrics / $r A. Yu, R. Lee and M. Flynn -- $t Image Quality Metrics Based on Single and Multi-Channel Models of Visual Processing / $r J. Farrell, X. Zhang and C. van den Branden Lambrecht --

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001 7450561
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040 __ |**a** DLC |**b** eng |**c** DLC
150 __ |**a** World Wide Web |**v** Congresses
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667 __ |**a** Record generated for validation purposes.
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ATTACHMENT 7f

A G3 PowerPC/sup TM/superscalar low-power microprocessor

AR Kennedy, M Alexander, E Fiene… - … IEEE COMPCON 97 …, 1997 - ieeexplore.ieee.org

This microprocessor is a third-generation PowerPC microprocessor and is a member of the the G3 family of PowerPC processor products. Although its high performance (estimated at 10.0 SPECint95) makes it suited for high-end desktop systems, its low typical power dissipation of 5W and size of 66.5 mm/sup 2/make it very attractive for portable systems as well. This microprocessor is a dual-issue superscalar machine with a four-stage pipeline, separate instruction-and data-side L1 caches (32 kBytes each), and full tags and support for …

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