UNITED STATES PATENT AND TRADEMARK OFFICE

_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD

_____

COMCAST CABLE COMMUNICATIONS, LLC,
Petitioner,

v.

ENTROPIC COMMUNICATIONS, LLC,
Patent Owner.

Patent No. 11,399,206

Inter Partes Review No.
IPR2024-00438

DECLARATION OF SYLVIA HALL-ELLIS, PH.D.

I. INTRODUCTION

1. My name is Sylvia D. Hall-Ellis. I have been retained as an expert on behalf of Comcast Cable Communications, LLC ("Comcast," Petitioner).

2. I have written this report on behalf of Petitioner to provide my expert opinion regarding the authenticity and public availability of several publications. My report sets forth my opinions in detail and provides the basis for my opinions regarding the public availability of these publications.

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

4. I am being compensated for my time spent working on this matter at my normal consulting rate of $400 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 litigation. I have no other interests in this proceeding or with any of the parties.

5. All of the materials that I considered are discussed explicitly in this declaration.

II. QUALIFICATIONS

6. I am currently an Adjunct Professor in the School of Information at San José State University. 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 50-plus 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.

7. 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, as a member of the Editorial Board for the ALCTS premier cataloging journal, *Library Resources and Technical Services,* as a Co-Chair of the Library

Research Round Table (LRRT) for the American Library Association, and as a member of the LRRT Nominating Committee.

8. 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.

9. My full curriculum vitae is attached hereto as Attachment 7.

III. PRELIMINARIES

10. *Scope of this declaration.* 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 on or around the listed dates of their respective publications below.

11. 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.

12. 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.

13. 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.

14. *Persons of ordinary skill in the art*. I am told by counsel that the subject matter of this proceeding generally relates to systems and methods of wideband radio receivers.

15. I have been informed by counsel that a person of ordinary skill in the art ("POSITA") at the time of the alleged invention is a hypothetical person who is presumed to be familiar with the relevant field and its literature at the time of the alleged invention of the patent (which in this case is assumed to be early 2009 to early 2010 before the earliest claimed priority date of the U.S. Patent No. 11,399,206). This hypothetical person is also a person of ordinary creativity, capable of understanding the scientific principles applicable to the pertinent field.

16. I am told by counsel that persons of ordinary skill in this subject matter or art would have had a degree in electrical engineering or a similar discipline, along with three-to-four years of experience with digital signal processing (DSP) and radio frequency (RF) tuning systems for satellite and/or cable digital communications.

17. It is my opinion that such a person would have been engaged in research and familiar with accessing print resources like those discussed in this

declaration. Indeed, over the course of my career including the years leading up to early 2010, I have assisted many similar engineers in acquiring such resources.

IV. LIBRARY CATALOGING PRACTICES

A. MARC RECORDS AND THE ONLINE LIBRARY CATALOG

18. 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.[1] 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 each of its items. Today, MARC is the primary communications protocol for the transfer and storage of bibliographic metadata in libraries.

19. MARC is a framework into which descriptive bibliographic data are transcribed to interact with the software in online library catalogs to provide access to books, journals, and other resources in the collection. Bibliographic data provide points of access and can be searched by a person of ordinary skill in the art at the time of the invention ("POSITA," see paragraphs 14-17 above) to identify and obtain resources in the library collection. An information seeker (or POSITA) can search a local online library catalog or the holdings of a group of libraries in a state

[1] The full text of the standard is available from the Library of Congress at http://www.loc.gov/marc/bibliographic/ (last visited January 10, 2024).

or region or in the global catalog WorldCat.

20. MARC records are not designed for public viewing. Although a significant number of libraries provide access to the MARC version of a bibliographic record, the public display is designed to show information in a succinct manner that is quickly understood and useful to the information seeker. Libraries determine the default search for the online catalog to make the entry of search terms efficient and result in a successful search. Information seekers can enter a keyword, title, author, or standard number for the item. Libraries may also provide a search capability called "Summon" that allows the information seeker to enter known information about the item to conduct a search.

21. 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.[2] 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,

---

[2] 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 January 10, 2024).

limiting its options, and creating much more work for yourself. Using the MARC standard prevents duplication of work and allows libraries to better share 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.[3]

22. Thus, almost every major library in the world is MARC-compatible. *See, e.g.*, *MARC Frequently Asked Questions (FAQ)*, LIBRARY OF CONGRESS.[4] ("MARC is the acronym for MAchine-Readable Cataloging. It defines a data format that emerged from a Library of Congress-led initiative that began fifty years

[3] http://www.loc.gov/marc/umb/um01to06.html#part2

[4] https://www.loc.gov/marc/faq.html

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.[5]

23. Examining the MARC records for a specific item reveals the comprehensive data transcribed about a particular item at the time that cataloging and classification occurred. In addition to the creator, title, subjects, and standard numbers, additional information may provide additional and relevant data depending on the type of resource. Understanding the full extent of bibliographic data for an item and the points of access associated with it provides essential information that can be used to determine the indexing and public availability for documents described in this declaration.

1. MARC RECORDS

24. 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. For example, a work's title is recorded in Field 245; the primary author of the work is transcribed in Field 100; an item's International Standard Book Number ("ISBN") consisting

[5] http://www.loc.gov/marc/bibliographic/

of ten or thirteen digits is transcribed in Field 020; an item's International Standard Serial Number ("ISSN") is transcribed in Field 022; the Library of Congress classification notation is recorded in Field 050; and the publication date is recorded in Field 260 under the subfield "c." If a work is a periodical, then its publication frequency is recorded in Field 310, and 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.[6]

25. The library that created the record is recorded in Field 040 in subfield "a" with a unique library code. When viewing the MARC record online via Online Computer Library Center's ("OCLC") bibliographic database, hovering over this code with the mouse reveals the full name of the library. I used this method of "mousing over" the library codes in the OCLC database to identify the originating library for the MARC records discussed in this Declaration. Where this "mouse over" option was not available, I consulted the Directory of OCLC Libraries to identify the institution that created the MARC record.[7]

26. MARC records also include several fields that include subject matter classification information. An overview of MARC record fields is available

---

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

[7] https://www.oclc.org/en/contacts/libraries.html

through the Library of Congress.[8] For example, 6XX fields are termed "Subject Access Fields."[9] Among these, for example, is the 650 field; this is the "Subject Added Entry – Topical Term" field.[10] The 650 field is a "[s]ubject added entry in which the entry element is a topical term." 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.* Further, MARC records include call numbers, which themselves include a classification number. For example, the 050 field is the "Library of Congress Call Number."[11] A defined portion of the Library of Congress Call (LCC) Number is the classification number, and "source of the classification number is *Library of Congress Classification* and the *LC Classification-Additions and Changes*." Thus, included in the 050 field is a subject matter classification. Further, the 082 field is the "Dewey Decimal Call Number."[12] A defined portion of the Dewey Decimal Call (DDC) Number is the classification number, and "source of the classification number is the *Dewey*

---

[8] http://www.loc.gov/marc/bibliographic/

[9] http://www.loc.gov/marc/bibliographic/bd6xx.html

[10] http://www.loc.gov/marc/bibliographic/bd650.html

[11] http://www.loc.gov/marc/bibliographic/bd050.html

[12] http://www.loc.gov/marc/bibliographic/bd082.html

Decimal Classification and Relative Index." Thus, included in the 082 field is a subject matter classification. 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 LCC classification number, it appears as part of the 050 field. When the Library of Congress assigns the DDC classification number, it appears as part of the 082 field. If a local library assigns the classification number, it appears in a 090 field. In either scenario, the MARC record includes a classification number that represents a subject matter classification.

2. OCLC

27. 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 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."[13] Among other services, OCLC and its members are responsible for maintaining the WorldCat database (http://www.worldcat.org/), used by independent and institutional libraries throughout the world.

28. OCLC also provides its members online access to MARC records through its OCLC bibliographic database. When an OCLC member institution acquires a work, it creates a MARC record for this work 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 institution or is tape-loaded from the Library of Congress, the MARC record is then made available to any other OCLC members online, and therefore made available to the public. Accordingly, once the MARC record is created by a cataloger at an OCLC member institution or is tape-loaded from the Library of Congress or another library anywhere in the world, 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

[13] 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).

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.

29. When an OCLC member institution creates a new MARC record, OCLC automatically supplies the date of creation for that record. The date of creation for the MARC record appears in the fixed Field (008), characters 00 through 05. The MARC record creation date reflects the date on which, or shortly after which, the item was first acquired or cataloged. Initially, Field 005 of the MARC record is automatically populated with the date the MARC record was created in year, month, day format (YYYYMMDD) (some of the newer library catalog systems also include hour, minute, second (HHMMSS)). Thereafter, the library's computer system may automatically update the date in Field 005 every 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). Field 005 is visible when viewing a MARC record via an appropriate computerized interface, but when a MARC record is printed to hardcopy, no "005" label appears. The initial Field 005 date (*i.e.*, the date the MARC record was created) does appear, however, next to the label "Entered."[14] The date upon which the most recent update to Field 005

[14] Field 005 is visible when viewing a MARC record via an appropriate computerized interface. But when a MARC record is printed directly to hardcopy

occurred also appears, next to the label "Replaced." Thus, when an item's MARC record has been printed to hardcopy—as is the case with the MARC attachments to this Declaration—the date reflected next to the label "Entered" is necessarily on or after the date the library first cataloged and indexed the underlying item.

30. Once one library has cataloged and indexed a publication by creating a MARC record for that publication, other libraries that receive the publication do not create additional MARC records—the other libraries instead rely on the original MARC record. They may update or revise the MARC record to ensure accuracy, but they do not replace or duplicate it. This practice does more than save libraries from duplicating labor. It also enhances the accuracy of MARC records. Further, it allows librarians around the world to know that a particular MARC record is authoritative (in contrast, a hypothetical system wherein duplicative records were created would result in confusion as to which record is authoritative).

31. Catalogers can create MARC records for all types of print, online, and digital resources. The date of creation of the MARC record by a cataloger at an OCLC member institution reflects when the underlying item is accessible to the public. Upwards of two-thirds to three-quarters of book sales and magazine subscriptions to libraries come from a jobber or wholesaler for online and print

---

from the OCLC database, the "005" label is not shown. The date in the 005 field instead appears next to the label "Replaced."

resources. These resellers make it their business to provide items 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 and journals directly from publishers themselves, which provide delivery on a similarly expedited schedule. In general, libraries make these purchases throughout the year and shelve the newly received items as soon thereafter as possible to make them available to their patrons.

32. *Journals.* MARC records cover serial publications, including both serially-published monographs and journals. OCLC hosts MARC records for more than 320 million serial publications. Serial publications are those publications that have the same collective title but are intended to be continued 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 (*i.e.*, a corresponding MARC record is created), but the date is left open-ended with the use of a punctuation mark such as a dash. OCLC serial publication MARC records represent the entire run of the serial title. With knowledge of the first issue published, future issues can be predicted based on the information provided in the MARC record, for example in field 362. 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 MARC record.

33. 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.

34. 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.

35. In preparing this report, I used authoritative databases, such as the OCLC bibliographic database and the Library of Congress Online Catalog, to confirm citation details of the various publications discussed.

36. *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 a 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. However, date information for indexing entries is often unavailable. This is especially true for online indices.

37. 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.

38. Online indexing services 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.

39. Before the widespread development of online databases to index articles in journals, magazines, conference papers, and technical reports, libraries purchased printed volumes of indices. Graduate library school education mandated that students learn about the bibliographic control of disciplines, the prominent indexing volumes, and searching strategies required to use them effectively and efficiently. Half of the courses that I studied in library school were focused on the bibliography and resources in academic disciplines.

40. Librarians consulted with information seekers to verify citations, check availability in union catalogs, printed books catalogs, the OCLC database, and make formal requests for materials (e.g., books, conference proceedings, journal articles). Requests were transmitted using Telex machines, rudimentary email systems, and the United States Postal Service. During my career, I have performed and supervised staff who handled these resource sharing tasks.

41. A major firm known for the breadth of subjects and comprehensive treatment in the preparation of index volumes, the H. W. Wilson Company offered these reference resources since the firm was founded in 1898. The *Reader's Guide*

to Periodical Literature is one of the best-known titles available from H. W. Wilson. Each volume includes a comprehensive index for 300 of the most popular and important periodicals published in the United States and Canada. Information seekers have subject access expressed in plain language terminology, author access, and cross references to find the desired results from their searches. The family of index titles included *Science & Technology Index*, *Business Periodicals*, *Applied Science & Technology Index, Humanities Index, Biological & Agricultural Index*, and *Industrial Arts Index*. These printed indices have been superseded by digital database offerings available to information seekers through Ebsco.

42. Online indexing services such as *Google Scholar*[15] or *ScienceDirect*[16] 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.

43. A citation of a document by another is evidence that the document was publicly available and in use no later than the publication date of the citing document.

44. *WayBack Machine*. The *WayBack Machine* is an application using a

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

[16] https://www.sciencedirect.com/

crawler created by the Internet Archive to search its archive of Web page URLs and to represent, graphically, the date of each crawler capture. The Internet Archive is a non-profit digital library founded in 1996 that maintains an archive of webpages collected from the Internet using software called a crawler. Crawlers automatically create a snapshot of webpages as they existed at a certain point in time. The Internet Archive captures data that is publicly available. Some sites are "not archived because they were password protected, blocked by robots.txt, or otherwise inaccessible to our automated systems. Site owners might have also requested that their sites be excluded from the WayBack Machine."

45. As of January 1, 2023, the Internet Archive holds more than 38 million print materials, 11.6 million pieces of audiovisual content, 2.6 million software programs, 15 million audio files, 4.7 million images, 251,000 concerts, and over 832 billion web pages in its *Wayback Machine.*[17]

46. Many Internet Archive captures made by the *WayBack Machine* have a banner at the top with the capture date prominently displayed. Other dates when captures of the same URL have been made are indicated to the right and left of the date provided in the banner. Some captures may lack this banner. In any case, the URL for the capture begins with the identification of the Internet Archive page (e.g., http://web.archive.org/web/) followed by information that dates and time

[17] https://en.wikipedia.org/wiki/Internet_Archive

stamps the capture as follows: year in yyyy, month in mm, day in dd, time code in hh:mm:ss (e.g., 20071120082013, or November 20, 2007 at 8:20:13 a.m.). These elements are then followed by the URL of the original capture site. When links are active, the *WayBack Machine* is programed to produce the archived file with the closest available date (not the closest available prior date) to the page upon which the link appeared and was clicked. I and other librarian professionals are familiar with the Internet Archive and the *Wayback Machine*.[18]

V. DOCUMENT 1: EXHIBIT 1016 ("RABAEY")

47. Attached hereto as Exhibit 1016 is an excerpt from a book titled *Digital Integrated Circuits: A Design Perspective*, 2nd edition, by Jan M. Rabaey (hereafter "Rabaey") and issued by Prentice Hall with a 2003 copyright date. I obtained Exhibit 1016 from the University of Colorado – Boulder Libraries. Exhibit 1016 is a true and correct copy of the title page, copyright page, table of contents, preface, Chapter 1, "Introduction" (pp. 3-34), and Chapter 6, "Designing Sequential Logic Circuits" (pp. 235-308), "Design Methodology Insert C: How to Simulate Complex Logic Circuits" (pp. 309-319), "Design Methodology Insert D: Layout Techniques for Complex Gates" (pp. 319-324) which I confirmed by comparing with a copy of the same book that I obtained from the University of

[18] For more information about the Internet Archive see the WayBack Machine FAQ, https://archive.org/about/faqs.php#The_Wayback_Machine.

Colorado at Colorado – Boulder Libraries. The text in Exhibit 1016 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 1016 is a true and correct copy in a condition that creates no suspicion about its authenticity.

48. Attached hereto as Attachment 1A is a true and correct copy of the MARC record for this monograph from the University of Colorado – Boulder Libraries online catalog. Library ownership is indicated by the presence of the library's code ("COD") in the 049 field. The Rabaey book was received and cataloged on January 15, 2003, as shown in field 008 ("030115"). I personally identified and retrieved the library catalog record which is Attachment 1A.

49. The International Standard Book Number (ISBN) on Exhibit 1016 (0-13-090996-3) matches the ISBN in field 020 of Attachment 1A. Therefore, Exhibit 1016 is the same book as the one that the cataloger at the Library of Congress used to create a MARC record (Attachment 1B) as part of the Cataloging in Publication (CIP) Program.[19] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes

[19] https://www.loc.gov/publish/cip/

the author (field 100), title and subtitle (field 245), edition (field 250), ISBN (field 020), suggested subject headings (field 650), and the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database. As can be seen in field 008 ("030731") of the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 13297594 on July 31, 2003. The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 1B occurred on November 26, 2003, as shown in the 005 field ("20031126"). I personally identified and retrieved the MARC record that is Attachment 1B.

50. Field 955 of Attachment 1B indicates that the Rabaey book was sent for subject analysis and classification assignment on October 22, 2003 ("2003-10-22"). Therefore, the book titled *Digital Integrated Circuits: A Design Perspective*, 2nd edition (Exhibit 1016) was present and cataloged in the Library of Congress as of November 26, 2003. It would have been able to be located by a person of ordinary skill in the art using the library catalog system and, thus, was publicly accessible as of this date.

51. Attached hereto as Attachment 1C is a true and correct copy of the MARC record for the Rabaey book titled *Digital Integrated Circuits: A Design*

Perspective, 2nd edition, obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 1C. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 1C, that library code is "DLC," which means that the MARC record for this book was created 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 51448791 on July 31, 2003 (see ¶ 49 above) as shown in the "Entered" field ("20030731). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 1C occurred on December 13, 2023, as shown in the "Replaced" field ("20231213"). I personally identified and retrieved the MARC record that is Attachment 1C.

52. Attachment 1C further includes an entry in field 050 ("TK7874.65 $b R33 2003")—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) and an entry in field 082 ("621.39/5"), a subject matter consistent with the Dewey Decimal classification system. Attachment 1C further includes a descriptor term reading "Digital integrated circuits $x Design and construction" (see Attachment 1D, Library of Congress subject heading sh87006329) in the 650 field. Thus, as of its cataloging, the

publication corresponding to the MARC record attached hereto as Attachment 1C 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. Further, as of July 31, 2003, the MARC record attached hereto as Attachment 1C was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, 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.

53. Further supporting my opinion that Exhibit 1016 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the book titled *Digital Integrated Circuits: A Design Perspective*, 2nd edition, was registered with the U. S. Copyright Office as item TX0005677564 on February 4, 2003, and indicated a publication date of December 24, 2002 (see Attachment 1E, U. S. Copyright Office Public Catalog). As noted above, this would have provided a POSITA with keyword searching capabilities and other tools to locate this book.

54. Attachment 1C indicates that the Rabaey book cataloged at the Library of Congress is currently available from 288 libraries. In view of above, the Rabaey book titled *Digital Integrated Circuits: A Design Perspective*, 2nd edition, was publicly available at least by October 22, 2003, because by that date it had

been received, cataloged and indexed at the Library of Congress, and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1016 is a true and correct copy of the Rabaey book that was published and accessible to the public at least by October 22, 2003.

VI. DOCUMENT 2: EXHIBIT 1034 ("CROLS")

55. Attached hereto as Exhibit 1034 is an excerpt from a book titled *CMOS Wireless Transceiver Design* by Jan Crols and Michiel Steyaert (hereafter "Crols") and issued by Kluwer Academic Publishers with a 1997 copyright date. I obtained Exhibit 1034 from the Ralph Brown Draughon Library at Auburn University (Auburn, Alabama). Exhibit 1034 is a true and correct copy of the cover, title page, copyright page, table of contents, front material (conventions and notations, bibliographic references, symbols, abbreviations, preface, Chapter 1, "Wireless Communications" (pp. 1-7), Chapter 2, "Transmitters and Receivers" (pp. 9-28), Chapter 3, "Transceivers in the Frequency Domain" (pp. 29-70), Chapter 5, "High-Level Synthesis" (pp. 105-133), Chapter 6, "Building Blocks for CMOS Transceivers" (pp. 135-204), and Chapter 8, "General Conclusions" (pp. 215-219), spine, and back cover. The text in Exhibit 1034 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 1034 is a true and correct copy in a condition that creates no suspicion about its authenticity.

56. Attached hereto as Attachment 2A is a true and correct copy of the MARC record for this monograph from the Ralph Brown Draughon Library at Auburn University online catalog.[20] The Crols book was received and cataloged on February 10, 1998, as shown in field 948 ("02-10-98"). I personally identified and retrieved the library catalog record which is Attachment 2A.

57. The International Standard Book Number (ISBN) on Exhibit 1034 (0-7923-9960-9) matches the ISBN in field 020 of Attachment 2A. Therefore, Exhibit 1034 is the same book as the one that the cataloger at the Library of Congress used to create a MARC record (Attachment 2B) as part of the Cataloging in Publication (CIP) Program.[21] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author (field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress

[20] https://eds.p.ebscohost.com/eds/detail/detail?vid=1&sid=35bff105-51a8-41ef-a7c7-9c01ca39ed52%40redis&bdata=JnNpdGU9ZWRzLWxpdmUmc2NvcGU9c2l0ZQ%3d%3d#AN=aul.1674179&db=cat07161a

[21] https://www.loc.gov/publish/cip/

classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

58. Field 955 indicates that the Crols book arrived in the Library of Congress by May 8, 1997 ("05-08-97"). Therefore, the book titled *CMOS Wireless Transceiver Design* (Exhibit 1034) was present and cataloged in the Library of Congress as of July 28, 1997. It would have been able to be located by a person of ordinary skill in the art using the library catalog system and, thus, was publicly accessible as of this date.

59. Attached hereto as Attachment 2C is a true and correct copy of the MARC record for the Crols book titled *CMOS Wireless Transceiver Design* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 2C. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 2C, that library code is "DLC," which means that the MARC record for this book was created at the Library of Congress.

60. 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 36900889 on May 8, 1997, as shown in the "Entered" field ("19970508"). The library continues to update and enhance this MARC record to meet current

cataloging rules. The most recent enhancement to Attachment 2C occurred on April 12, 2022, as shown in the "Replaced" field ("20220412"). The library continues to update and enhance this MARC record to meet current cataloging rules. I personally identified and retrieved the MARC record that is Attachment 2C.

61. Attachment 2C further includes an entry in field 050 ("TK6561 $b .C76 1997")—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) and an entry in field 082 ("621.384/131"), a subject matter consistent with the Dewey Decimal classification system. Attachment 2C further includes three descriptor terms reading "Radio $x Transmitter-receivers $x Design and construction" (see Attachment 2D, Library of Congress subject heading sh85110417 and Attachment 2E, Library of Congress ubject heading sh87005579), "Metal oxide semiconductors, Complementary" (see Attachment 2F, Library of Congress subject heading sh85084067), and "Signal processing $x Digital techniques" (see Attachment 2G, Library of Congress subject heading sh85122398) in the 650 fields. 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 three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries.

Further, as of May 8, 1997, 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 added this book to its collection, 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.

62. Attachment 2C indicates that the Crols book cataloged at the Library of Congress is currently available from 117 libraries. In view of above, the Crols book titled *CMOS Wireless Transceiver Design* was publicly available at least by February 10, 1998, because by that date it had been received, cataloged, and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received in the Ralph Brown Draughon Library at Auburn University. For these reasons, it is my opinion that Exhibit 1034 is a true and correct copy of the Crols book that was published and accessible to the public at least by February 10, 1998.

VII. DOCUMENT 3: EXHIBIT 1048 ("BUCHANAN")

63. Attached hereto as Exhibit 1048 is an excerpt from a book titled *Computer Busses* by William Buchanan (hereafter "Buchanan") and issued by CRC Press with a 2000 copyright date. I obtained Exhibit 1048 from counsel who procured the copy from the University of Maryland – STEM Library (College

Park, Maryland). Exhibit 1048 is a true and correct copy of the cover, title page, copyright page, table of contents, preface, Chapter 2, "Busses, Interrupts and PC Systems" (pp. 49-83), spine, and back cover. The text in Exhibit 1048 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 1048 is a true and correct copy in a condition that creates no suspicion about its authenticity.

64. Attached hereto as Attachment 3A is a true and correct copy of the MARC record for this monograph from the University System of Maryland and Affiliated Institutions online catalog. The Buchanan book was received and cataloged on November 16, 2000, as shown in field 998 ("00/11/16"). I personally identified and retrieved the library catalog record which is Attachment 3A.

65. The International Standard Book Number (ISBN) on Exhibit 1048 (0-8493-0825-9) matches the ISBN in field 020 of Attachment 3A. Therefore, Exhibit 1048 is the same book as the one that the cataloger at the Library of Congress used to create a MARC record (Attachment 3B) as part of the Cataloging in Publication (CIP) Program.[22] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the

[22] https://www.loc.gov/publish/cip/

cataloging process at the library after the book is purchased. The CIP data includes the author (field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

66. Field 955 indicates that the Buchanan book arrived in the Library of Congress by December 18, 2000 ("12-18-00"). Therefore, the book titled *Computer Busses* (Exhibit 1048) was present and cataloged in the Library of Congress as of February 5, 2002. It would have been able to be located by a person of ordinary skill in the art using the library catalog system and, thus, was publicly accessible as of this date.

67. Attached hereto as Attachment 3C is a true and correct copy of the MARC record for the Buchanan book titled *Computer Busses* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 3C. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 3C, that library code is "DLC," which means that the MARC record for this book was created at the Library of Congress.

68. 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 43864241 on April 7, 2000, as shown in the "Entered" field ("20000407"). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 3C occurred on June 29, 2022, as shown in the "Replaced" field ("20220629"). The library continues to update and enhance this MARC record to meet current cataloging rules. I personally identified and retrieved the MARC record that is Attachment 3C.

69. Attachment 3C further includes an entry in field 050 ("TK7895.B87 $b B83 2000")—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) and an entry in field 082 ("004.6/4"), a subject matter consistent with the Dewey Decimal classification system. Attachment 3C further includes two descriptor terms reading "Microcomputers $x Buses" (see Attachment 3D, Library of Congress subject heading sh85084805) and "Computer interfaces" (see Attachment 3E, Library of Congress subject heading sh85029507) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 3C 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.

Further, as of April 7, 2000, the MARC record attached hereto as Attachment 3C was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, 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.

70. Attachment 3C indicates that the Buchanan book cataloged at the Library of Congress is currently available from 133 libraries. In view of above, the Buchanan book titled *Computer Buses* was publicly available at least by December 18, 2000, because by that date it had been received, cataloged, and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received in the University of Maryland Baltimore Campus Libraries. For these reasons, it is my opinion that Exhibit 1048 is a true and correct copy of the Buchanan book that was published and accessible to the public at least by December 18, 2000.

VIII. DOCUMENT 4: EXHIBIT 1017 ("CHANDRAKASAN")

71. Exhibit 1017 is a copy of a conference paper published in the *9th International Conference on VLSI Design: Proceedings* found in the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). The conference paper titled "Ultra Low Power Digital Signal Processing" by Anantha P. Chandrakasan (hereafter "Chandrakasan") appears beginning on page 352. The

9th International Conference on VLSI Design was held on January 3-6, 1996, in Bangalore, India. Exhibit 1017 is a true and correct copy of the Chandrakasan conference paper (pages 352-357). I obtained this copy of the conference paper from the Linda Hall Library of Science, Engineering & Technology. Specifically, the text of the Chandrakasan conference paper 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 1017 was found within the custody of a library – a place where, if authentic, a copy of this conference proceedings volume would likely be. Exhibit 1017 is a true and correct copy in a condition that creates no suspicion about authenticity.

72. The Chandrakasan conference paper is also available in the *IEEE Xplore* database.[23]

73. Attached hereto as Attachment 4A is a true and correct copy of the MARC record for this conference proceedings volume from the Linda Hall Library of Science, Engineering & Technology online catalog. 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 the MARC record occurred on October 20, 2014, as shown in field 005 ("20141020"). I personally

[23] https://ieeexplore.ieee.org/abstract/document/489634

identified and retrieved the library catalog record which is Attachment 4A.

74. Based on finding a print copy of Exhibit 1017 in the Linda Hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 4A, it is my opinion that the book titled *9th International Conference on VLSI Design: Proceedings* was publicly available at the Linda Hall Library of Science, Engineering & Technology as of July 23, 1996, as shown by the hand-written date in the gutter on page v of Exhibit 1017.

75. Attached hereto as Attachment 4B is a true and correct copy of the MARC record for the volume titled *9th International Conference on VLSI Design: Proceedings* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 4B. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 4B, that library code is "PUL," which means that the MARC record for this conference proceedings volume was cataloged at the Princeton University Libraries (Princeton, New Jersey). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Princeton University Libraries created OCLC record number 34678748 on April 23, 1996, as shown in the "Entered" field ("19960423"). The library continues to update this MARC record the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on April 16, 2022, as shown in the

"Replaced" field ("20220416").

76. Attachment 4B further includes an entry in field 050 ("TK7874 $b .I5778 1996")—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 ("621.39/5")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 4B also shows that Exhibit 1017 was catalogued with three descriptor terms reading "Integrated circuits $x Very large scale integration $x Design and construction $v Congresses" (see Attachment 4C, Library of Congress subject heading sh2008104743), "Electronic digital computers $x Circuits $v Congresses" (Attachment 4D, Library of Congress subject heading sh2009124809), and "Mobile communication systems $v Congresses" (Attachment 4E, Library of Congress subject heading sh2008107882) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 4B 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. Further, as of April 23, 1996, the MARC record attached hereto as Attachment 4B was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired the 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.

77. Attachment 4B indicates that the volume titled *9th International Conference on VLSI Design: Proceedings* as cataloged at the Princeton University Libraries is currently available from 55 libraries. In view of the above, the volume titled *9th International Conference on VLSI Design: Proceedings* was publicly available on or shortly after April 23, 1996, because by that date it had been received, cataloged, and indexed at the Princeton University Libraries and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1017 was published and publicly accessible on or shortly after April 23, 1996.

IX. DOCUMENT 5: EXHIBIT 1018 ("MIRABBASI")

78. Attached hereto as Exhibit 1018 is a copy of the journal article titled "Classical and Modern Receiver Architectures" by Shahriar Mirabbasi and Ken Martin (hereafter "Mirabbasi"). The Mirabbasi article was published in Volume 38, Number 11 of the journal *IEEE Communications Magazine* and was found in the Karl F. Wendt Engineering Library at the University of Wisconsin – Madison. The Mirabbasi article appears beginning on page 132 of this issue dated November 2000. Exhibit 1018 is a true and correct copy of the Mirabbasi article (pages 132-

139) that I understand is being submitted as an exhibit in this proceeding. 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. Exhibit 1018 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1018 is a true and correct copy in a condition that creates no suspicion about its authenticity.

79. The Mirabbasi article is also available in the *IEEE Xplore* database[24] and the digital repositories *ResearchGate*[25] and *Semantic Scholar*.[26]

80. Attached hereto as Attachment 5A is a true and correct copy of the MARC record for the journal *IEEE Communications Magazine* in the Karl F. Wendt Engineering Library at the University of Wisconsin – Madison online catalog. Library ownership is indicated by the presence of the library's code ("GZM") in field 049. The library continues to update this MARC record and enhance the MARC record to meet current cataloging rules. The most recent

---

[24] https://ieeexplore.ieee.org/document/883502

[25] https://www.researchgate.net/publication/3196341_Classical_and_modern_receiver_architectures_IEEE_Commun_Mag_Nov_132-139

[26] https://www.semanticscholar.org/paper/Classical-and-modern-receiver-architectures-Mirabbasi-Martin/5af2b31b0d206739d8a92e6daf0067480b4fb6b7

enhancement to Attachment 5A occurred on April 9, 2015, as shown in field 005 ("20150409"). I personally identified and retrieved the MARC record that is Attachment 5A.

81. Based on finding a print copy of Exhibit 1018 in the Karl F. Wendt Engineering Library at the University of Wisconsin – Madison and MARC record in its online library catalog attached as Attachment 5A, it is my opinion that the Mirabbasi article published in the journal *IEEE Communications Magazine* was publicly available on or shortly after November 30, 2000.[27] In common practice these stamps are applied at or around the time the volume is entered into the library's collection and the volume is made available to library patrons within a short time thereafter. Attachment 5A also shows that Exhibit 1018 was catalogued with a descriptor term reading "Telecommunication $v Periodicals" (see Attachment 5B, Library of Congress subject heading sh2008112739) in the 650 field.

82. As noted in the holdings information (362 field), the Karl F. Wendt Engineering Library at the University of Wisconsin – Madison has received the

[27] The *IEEE Communications Magazine* was published monthly and, therefore, new issues were available approximately every 30 days. Based on the frequency of publication (see Attachment 5A, field 310) and my years of experience working with serials, it is my opinion that issues would be published by the end of the month. Therefore, a public availability date of November 30, 2000, is reasonable.

journal *IEEE Communications Magazine* since January 1979 and continues to receive the publication.[28] In view of the MARC record for Exhibit 1018, the Mirabbasi article was publicly on or shortly after November 30, 2000, because the serial title had been received, cataloged, and indexed in the Karl F. Wendt Engineering Library at the University of Wisconsin – Madison and made part of its online catalog database.

83. Attached hereto as Attachment 5C is a true and correct copy of the MARC record for the journal *IEEE Communications Magazine* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 5C, 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 5C occurred

[28] The publication was originally titled *Communications Society* (March 1973-November 1978), *IEEE Communications Society Magazine* (January 1977-November 1978) and adopted the current title in January 1979.

on August 10, 2022, as shown in the "Replaced" field ("20220810"). I personally identified and retrieved the MARC record that is Attachment 5C. The "BLvl" entry in Attachment 5C is "s," which indicates that the journal *IEEE Communications Magazine* is a serial publication. Field 310 of Attachment 5C reads "Monthly, $b <Aug. 1983->." Accordingly, the MARC record for Exhibit 1018 corresponds to the journal *IEEE Communications Magazine* from the time the serial title began using the current title and includes the date of the Mirabbasi article.

84. Attachment 5C 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) and an entry in field 082 ("621/.38/05"), a subject matter consistent with the Dewey Decimal classification system. Attachment 5C further includes a descriptor term reading "Telecommunication $v Periodicals" (see Attachment 5B, 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 5C 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 December 13, 1978, the MARC record attached hereto as Attachment 5C 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.

85. Attachment 5C indicates that the journal *IEEE Communications Magazine* as cataloged at the Library of Congress is currently available from 430 libraries. In view of the above, this issue of the journal *IEEE Communications Magazine* was publicly available on or shortly after November 30, 2000, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received in the Karl F. Wendt Engineering Library at the University of Wisconsin – Madison. For these reasons, it is my opinion that Exhibit 1018 was published and accessible to the public on or shortly after November 30, 2000.

X. DOCUMENT 6: EXHIBIT 1025 ("CROLS 1998")

86. Attached hereto as Exhibit 1025 is a copy of the journal article titled "Low-IF Topologies for High-Performance Analog Front Ends of Fully Integrated Receivers" by Jan Crols and Michiel S. J. Steyaert (hereafter "Crols 1998"). The Crols 1998 article was published in Volume 45, Number 3 of the journal *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing* and was found in the Engineering Library at the University of Washington (Seattle,

Washington). The Crols 1998 article appears beginning on page 269 of this issue dated March 1998. Exhibit 1025 is a true and correct copy of the Crols 1998 article (pages 269-282) that I understand is being submitted as an exhibit in this proceeding. 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. Exhibit 1025 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1025 is a true and correct copy in a condition that creates no suspicion about its authenticity.

87. The Crols 1998 article is also available in the *IEEE Xplore* database[29] and the digital repository *Semantic Scholar*.[30]

88. Attached hereto as Attachment 6A is a true and correct copy of the MARC record for the journal *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing* in the Engineering Library at the University of Washington online catalog.[31] The library continues to update this MARC record

---

[29] https://ieeexplore.ieee.org/document/664233

[30] https://www.semanticscholar.org/paper/Low-IF-topologies-for-high-performance-analog-front-Crols-Steyaert/bc38cf242e0c57b5b16f42ce0a2a47f9cadc64f6

[31] https://orbiscascade-washington.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991136477

and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 6A occurred on February 21, 2023, as shown in field 005 ("20230221"). I personally identified and retrieved the MARC record that is Attachment 6A.

89. Based on finding a print copy of Exhibit 1025 in the Engineering Library at the University of Washington and MARC record in its online library catalog attached as Attachment 6A, it is my opinion that the Crols 1998 article published in the journal *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing* was publicly available on or shortly after April 3, 1998, as shown by the library's stamp on the cover. In common practice these stamps are applied at or around the time the volume is entered into the library's collection and the volume is made available to library patrons within a short time thereafter. Attachment 6A also shows that Exhibit 1025 was catalogued with four descriptor terms reading "Electronic circuits $v Periodicals" (see Attachment 6B, Library of Congress subject heading sh2009124794), "Signal processing $v Periodicals" (see Attachment 6C, Library of Congress subject heading sh2010113087), "Analog electronic systems $v Periodicals" (see Attachment 6D, Library of Congress

---

60001452&context=L&vid=01ALLIANCE_UW:UW&lang=en&search_scope=UW_EVERYTHING&adaptor=Local%20Search%20Engine&tab=UW_default&query=any,contains,1057-7130

subject heading sh85004770 and Attachment 6E, Library of Congress subject heading sh85099890), and "Signal processing $x Digital techniques $v Periodicals" (see Attachment 6F, Library of Congress subject heading sh85122398 and Attachment 6E, Library of Congress subject heading sh8509990) in the 650 fields.

90. As noted in the holdings information (362 field), the Engineering Library at the University of Washington has received the journal *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing* since January 1992 and continues to receive the publication.[32] In view of the MARC record for Exhibit 1025, the Crols 1998 article was publicly on or shortly after April 3, 1998, because the serial title had been received, cataloged, and indexed in the Engineering Library at the University of Washington and made part of its online catalog database.

91. Attached hereto as Attachment 6G is a true and correct copy of the MARC record for the journal *IEEE Transactions on Circuits and Systems II:*

---

[32] The publication was originally titled Transactions of the *I.R.E. Professional Group on Circuit Theory* (December 1952-December 1954), changed to title to *I.R.E. Transactions on Circuit Theory* (March 1955-December 1962), adopted a new title, *IEEE Transactions on Circuit Theory* (March 1963-November 1973), followed by another title change to *IEEE Transactions on Circuits and Systems* (January 1974-December 1991) and adopted the current title in January 1992.

Analog and Digital Signal Processing obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 6G, 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 24103498 on July 19, 1991, as shown in the "Entered" field ("19910719"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 6G occurred on February 21, 2023, as shown in the "Replaced" field ("20230221"). I personally identified and retrieved the MARC record that is Attachment 6G. The "BLvl" entry in Attachment 6G is "s," which indicates that the journal *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing* is a serial publication. Field 310 of Attachment 6G reads "Monthly." Accordingly, the MARC record for Exhibit 1025 corresponds to the journal *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing* from the time the serial title began using the current title and includes the date of the Crols 1998 article.

92. Attachment 6G includes an entry in field 050 ("TK7867 $b .I374")—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 ("621.3815"), a subject matter consistent with the Dewey Decimal classification system. Attachment 6G further includes four descriptor terms reading "Electronic circuits $v Periodicals" (see Attachment 6B, Library of Congress subject heading sh2009124794), "Signal processing $v Periodicals" (see Attachment 6C, Library of Congress subject heading sh2010113087), "Analog electronic systems $v Periodicals" (see Attachment 6D, Library of Congress subject heading sh85004770 and Attachment 6E, Library of Congress subject heading sh85099890), and "Signal processing $x Digital techniques $v Periodicals" (see Attachment 6F, Library of Congress subject heading sh85122398 and Attachment 6E, Library of Congress subject heading sh8509990) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 6G 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. As of July 19, 1991, the MARC record attached hereto as Attachment 6G 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.

93. Attachment 6G indicates that the journal *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing* as cataloged at the Library of Congress is currently available from 340 libraries. In view of the above, this issue of the journal *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing* was publicly available on or shortly after April 3, 1998, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received in the Engineering Library at the University of Washington. For these reasons, it is my opinion that Exhibit 1025 was published and accessible to the public on or shortly after April 3, 1998.

XI. DOCUMENT 7: EXHIBIT 1021 ("DOCSIS")

94. Exhibit 1021 is a technical specification document titled *Data-Over-Cable Service Interface Specifications: DOCSIS 2.0* (hereafter "DOCSIS") prepared by the Cable Television Laboratories, Incorporated with a June 2, 2006, date (see page 2). Exhibit 1021 is a Radio Frequency Interface Specification identified as CM-SP-RFIv2.0-I11-060602. Exhibit 1021 is a true and accurate copy of the DOCSIS document that I received through counsel. Specifically, the text of the DOCSIS document 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.

95. A copy of Exhibit 1021 can be found in the Cable Labs Archives[33] and another copy was captured by the *WayBack Machine* on January 25, 2008.[34] The DOCSIS document was found within the custody of the issuing organization – a place where, if authentic, a copy of this technical specification document would likely be. Exhibit 1021 is a true and correct copy in a condition that creates no suspicion about its authenticity. In my experience, the publication date recorded on standards, such as the DOCSIS document in Exhibit 1021, is a reliable date of publication and one in which librarians rely on for searching and cataloging. Based on the date recorded in the document, it is my opinion that the *Data-Over-Cable Service Interface Specifications: DOCSIS 2.0* was available to the public on June 15, 2006, or shortly thereafter (e.g., within days).

XII. SUMMARY OF OPINIONS

96. In view of the foregoing, it is my opinion that the publication described above was publicly available no later than the corresponding date listed in the table below:

Exhibit	Publication	Publicly Available
1016	Rabaey, Jan M. *Digital Integrated Circuits: A Design Perspective.* 2nd ed. Upper Saddle River,	November 26, 2003

[33] http://www.cablelabs.com/specifications/archives/

[34] https://web.archive.org/web/20080125152153/http://www.cablelabs.com:80/specifications/archives/docsis.html

	NJ: Prentice Hall, 2002.	
1034	Crols, Jan, and Michiel Steyaert. *CMOS Wireless Transceiver Design.* New York: Springer US, 2003.	February 10, 1998
1048	Buchanan, William. *Computer Busses.* Boca Raton, FL: CRC Press, 2000.	December 18, 2000
1017	Chandrakasan, Anantha P. "Ultra Low-Power Digital Signal Processing." *9th International Conference on VLSI Design: Proceedings* (pp. 352-357). Los Alamitos, CA: IEEE Computer Society Press, 1996.	April 23, 1996
1018	Mirabbasi, Shahriar, and Ken Martin. "Classical and Modern Receiver Architectures." *IEEE Communications Magazine*, vol. 38, no. 11 (November 2000): 132-139.	November 30, 2000
1025	Crols, Jan, and Michiel S. J. Steyaert. "Low-IF Topologies for High-Performance Analog Front Ends of Fully Integrated Receivers." *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing*, vol. 45, no. 3 (March 1998): 269-282.	April 3, 1998
1021	*Data-Over-Cable Service Interface Specifications: DOCSIS 2.0*	On or shortly after June 15, 2006

97. 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.

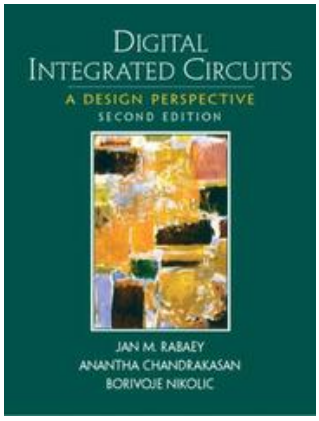
98. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or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

Dated: February 12, 2024

Respectfully submitted,

Sylvia D. Hall-Ellis, Ph.D.

Attachment 1A



Digital integrated circuits : a design perspective / Jan M. Rabaey, Anantha Chandrakasan, Borivoje Nikolić

Show other versions (1)

Main Author:	Rabaey, Jan M.
Other Authors:	Chandrakasan, Anantha P., Nikolić, Borivoje
Format:	Book
Language:	English
Published:	Upper Saddle River, N.J. : Pearson Education, ©2003.
Edition:	2nd ed.
Series:	Prentice Hall electronics and VLSI series.
Subjects:	Digital integrated circuits > Design and construction.

Holdings Description Other Versions (1) Staff View

LEADER	02057nam a2200421Ia 4500
001	b3533672
003	CoU
005	20030528160807.0
008	030115s2003 njua 001 0 eng d
020	**|a** 0130909963
035	**|a** (OCoLC)ocm51448791
040	**|a** ZLM **|c** ZLM
049	**|a** CODI
090	**|a** TK7874.65 **|b** .R33 2003

100	1		**|a** Rabaey, Jan M. **|0** http://id.loc.gov/authorities/names/n95050979 **|1** http://isni.org/isni/0000000081116865.
245	1	0	**|a** Digital integrated circuits : **|b** a design perspective / **|c** Jan M. Rabaey, Anantha Chandrakasan, Borivoje Nikolić
250			**|a** 2nd ed.
260			**|a** Upper Saddle River, N.J. : **|b** Pearson Education, **|c** ©2003.
300			**|a** xxii, 761 pages : **|b** illustrations (some color) ; **|c** 25 cm.
336			**|a** text **|b** txt **|2** rdacontent.
337			**|a** unmediated **|b** n **|2** rdamedia.
338			**|a** volume **|b** nc **|2** rdacarrier.
490	1		**|a** Prentice Hall electronics and VLSI series.
504			**|a** Includes bibliographical references and index.
583	1		**|a** committed to retain **|c** 20160101 **|d** 20410101 **|5** CoU **|f** Alliance Shared Trust **|u** https://www.coalliance.org/shared-print-archiving-policies.
650		0	**|a** Digital integrated circuits **|x** Design and construction. **|0** http://id.loc.gov/authorities/subjects/sh87006329.
700	1		**|a** Chandrakasan, Anantha P. **|0** http://id.loc.gov/authorities/names/n95035281 **|1** http://isni.org/isni/0000000384930282.
700	1		**|a** Nikolić, Borivoje.
830		0	**|a** Prentice Hall electronics and VLSI series. **|0** http://id.loc.gov/authorities/names/n96064289.
907			**|a** .b35336729 **|b** 03-19-20 **|c** 05-20-03
907			**|a** .b35336729 **|b** 05-11-16 **|c** 05-20-03
907			**|a** .b35336729 **|b** 10-11-12 **|c** 05-20-03
907			**|a** .b35336729 **|b** 06-05-08 **|c** 05-20-03
998			**|a** pas **|b** 06-30-03 **|c** m **|d** m **|e** - **|f** eng **|g** nju **|h** 0 **|i** 2
944			**|a** MARS - RDA ENRICHED
946			**|a** jf

999	f	f	**|i** 54139bb7-b6c7-5320-9026-ace3dc8e2b0a **|s** d9a6fd33-f8e2-5f74-92f3-43cf95d0ef4b
952	f	f	**|p** Can circulate **|a** University of Colorado Boulder **|b** Boulder Campus **|c** Offsite **|d** PASCAL Offsite **|e** TK7874.65 .R33 2003 **|h** Library of Congress classification **|i** book **|m** P101341403032 **|n** 1

Attachment 1B

LIBRARY | CATALOG

Search Navigation 1 of 8

BOOK

Digital integrated circuits : a design perspective

Full Record **MARC Tags**

000		01209cam a2200289 a 4500
001		13297594
005		20031126132647.0
008		030731s2003 njuaf b 001 0 eng
906	__	|**a** 7 |**b** cbc |**c** origcop |**d** 2 |**e** ncip |**f** 20 |**g** y-gencatlg
925	0_	|**a** acquire |**b** 1 shelf copy |**x** policy default
955	__	|**a** pv02 2003-07-31 Preprocessor to ASCD |**a** jf00 2003-08-06; |**c** jf17/jf03 2003-10-22 to Subj. |**d** jf07 2003-11-04 to SL |**e** jf12 2003-11-06 to Dewey; |**a** aa11 2003-11-26
010	__	|**a** 2003270283
020	__	|**a** 0130909963
020	__	|**z** 0135974445
040	__	|**a** DLC |**c** DLC |**d** DLC
050	00	|**a** TK7874.65 |**b** R33 2003
082	00	|**a** 621.39/5 |**2** 22
100	1_	|**a** Rabaey, Jan M.
245	10	|**a** Digital integrated circuits : |**b** a design perspective / |**c** Jan M. Rabaey, Anantha Chandrakasan, Borivoje Nikolić.
250	__	|**a** 2nd ed.
260	__	|**a** Upper Saddle River, N.J. : |**b** Pearson Education, |**c** c2003.
300	__	|**a** xxii, 761 p., [4] p. of plates : |**b** ill. (some col.) ; |**c** 24 cm.
440	_0	|**a** Prentice Hall electronics and VLSI series
504	__	|**a** Includes bibliographical references and index.
650	_0	|**a** Digital integrated circuits |**x** Design and construction.

700	1_	|**a** Chandrakasan, Anantha P.
700	1_	|**a** Nikolić, Borivoje, |**c** Assistant Professor.

Request this Item

LC Find It

Item Availability

CALL NUMBER	TK7874.65 R33 2003 CABIN BRANCH Copy 1
Request in	Jefferson or Adams Building Reading Rooms - STORED OFFSITE
Status	Not Charged

Attachment 1C

OCLC 51448791 **No holdings in XXX – 288 other holdings**

Books

								Rec Stat		**Entered**	20030731	**Replaced**	20231213210205.5
Type	a	**ELvl**		**Srce**		**Audn**		**Ctrl**		**Lang**	eng		
BLvl	m	**Form**		**Conf**	0	**Biog**		**MRec**		**Ctry**	mau		
		Cont	b	**GPub**		**LitF**	0	**Indx**	1				
Desc	a	**Ills**	af	**Fest**	0	**DtSt**	s	**Dates**	2003,				

010 2003270283
040 DLC $b eng $c DLC $d BAKER $d BTCTA $d YDXCP $d UQ1 $d OCLCG $d SULEY $d INTCL $d UKMGB $d LHU $d OCLCO $d OCLCF $d OCLCQ $d OCLCA $d DEBSZ $d OCLCQ $d CSJ $d OCLCQ $d CCH $d OCLCQ $d BGU $d OCLCQ $d NAG $d IL4J6 $d OCLCO $d VNVGU $d OCLCL
016 7 011092473 $2 Uk
019 298408187 $a 1225663093 $a 1407485087
020 0130909963
020 9780130909961
020 $z 0135974445
020 0131207644
020 9780131207646
024 3 9780131207646
050 00 TK7874.65 $b R33 2003
082 00 621.39/5 $2 22
090 $b
100 1 Rabaey, Jan M.
245 10 Digital integrated circuits : $b a design perspective / $c Jan M. Rabaey, Anantha Chandrakasan, Borivoje Nikolić.
250 2nd ed.
260 Upper Saddle River, N.J. : $b Pearson Education, $c ©2003.
300 xxii, 761 pages, 4 unnumbered pages of plates : $b illustrations (some color) ; $c 24 cm.
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
490 1 Prentice Hall electronics and VLSI series
504 Includes bibliographical references and index.
530 Also issued online.
505 00 $g pt. 1. $t Fabrics -- $g Ch. 1. $t Introduction -- $g Ch. 2. $t Manufacturing Process -- $t Design Methodology Insert A: IC LAYOUT -- $g Ch. 3. $t Devices -- $t Design Methodology Insert B: Circuit Simulation -- $g Ch. 4. $t Wire -- $g pt. 2. $t Circuit Perspective -- $g Ch. 5. $t CMOS Inverter -- $g Ch. 6. $t Designing Combinational Logic Gates in CMOS -- $t Design Methodology Insert C: How to Simulate Complex Logic Circuits -- $t Design Methodology Insert D: Layout Techniques for Complex Gates -- $g Ch. 7. $t Designing Sequential Logic Circuits -- $g pt. 3. $t System Perspective -- $g Ch. 8. $t Implementation Strategies for Digital ICS -- $t Design Methodology Insert E: Characterizing Logic and Sequential Cells -- $t Design Methodology Insert F: Design Synthesis -- $g Ch. 9. $t Coping with Interconnect -- $g Ch. 10. $t Timing Issues in Digital Circuits -- $t Design Methodology Insert G: Design Verification -- $g Ch. 11. $t

Designing Arithmetic Building Blocks -- $g Ch. 12. $t Designing Memory and Array Structures -- $t Design Methodology Insert H: Validation and Test of Manufactured Circuits.
520 "Progressive in content and form, this text successfully bridges the gap between the circuit perspective and system perspective of digital integrated circuit design. Beginning with solid discussions on the operation of electronic devices and in-depth analysis of the nucleus of digital design, the text maintains a consistent, logical flow of subject matter throughout. The revision addresses today's most significant and compelling industry topics, including: the impact of interconnect, design for low power, issues in timing and clocking, design methodologies, and the tremendous effect of design automation on the digital design perspective. The revision reflects the ongoing evolution in digital integrated circuit design, especially with respect to the impact of moving into the deep-submicron realm."--Pub. desc.
650 0 Digital integrated circuits $x Design and construction.
650 6 Circuits intégrés numériques $x Conception et construction. $0 (CaQQLa)201-0225997
650 7 Digital integrated circuits $x Design and construction. $2 fast $0 (OCoLC)fst00893696
650 7 DIGITAL INTEGRATORS. $2 nasat
650 7 CIRCUITS. $2 nasat
650 7 DESIGN ANALYSIS. $2 nasat
650 7 Digital integrated circuits $x Design and construction. $2 nli
650 17 Circuit intégré numérique. $2 rasuqam
650 7 Conception technique. $2 rasuqam
700 1 Chandrakasan, Anantha P.
700 1 Nikolić, Borivoje $c (Assistant Professor) $1
https://id.oclc.org/worldcat/entity/E39PCjCPGcjTvjtQJWCXHrfJtC
830 0 Prentice Hall electronics and VLSI series.

Attachment 1D

The Library of Congress

>> Go to Library of Congress Online Catalog

LIBRARY OF CONGRESS AUTHORITIES

Help | New Search | Search History | Headings List | Start Over

Previous Next

MARC Display | Labelled Display

LC control no.: sh 87006329

LCCN Permalink: https://lccn.loc.gov/sh87006329

HEADING: Digital integrated circuits Design and construction

000 00407cz a2200157n 450
001 4811395
005 20110729124831.0
008 871006|| anannbabn |n ana
010 __ |**a** sh 87006329
035 __ |**a** (DLC)sh 87006329
035 __ |**a** (DLC)158080
040 __ |**a** DLC |**c** DLC
150 __ |**a** Digital integrated circuits |**x** Design and construction
906 __ |**t** 8743 |**u** fk02 |**v** 1
952 __ |**a** Made for editorial purposes
953 __ |**a** fk03

Previous Next

Save, Print or Email Records (View Help)

Select Download Format: Text (Labelled Display) Press to SAVE or PRINT

Email Text (Labelled Display) to: Press to SEND EMAIL

Help - Search - Search History - Headings List - Start Over

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave, S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 1E

Copyright United States Copyright Office

Try the Copyright Public Records System (CPRS) pilot with enhanced search features and filters.

Help | Search | History | Titles | Start Over

Public Catalog

Copyright Catalog (1978 to present) at DC4
Search Request: Left Anchored Title = Digital Integrated Circuits: A Design Perspective
Search Results: Displaying 2 of 2 entries

previous next

Labeled View

Digital integrated circuits : a design perspective / Jan M. Rabaey, Anantha...

Type of Work: Text
Registration Number / Date: TX0005677564 / 2003-02-04
Title: Digital integrated circuits : a design perspective / Jan M. Rabaey, Anantha Chandrakasan, Borivoje Nikolic.
Edition: 2nd ed.
Imprint: Upper Saddle River, NJ : Prentice Hall, c2003.
Description: 761 p.
Copyright Claimant: Pearson Education, Inc.
Date of Creation: 2003
Date of Publication: 2002-12-24
Previous Registration: Prev. reg. 1996, TX 4-294-863.
Basis of Claim: New Matter: revision & updating.
Names: Rabaey, Jan M.
Chandrakasan, Anantha
Nikolic, Borivoje
Pearson Education, Inc.

previous next

Save, Print and Email (Help Page)		
Select Download Format	Full Record	Format for Print/Save
Enter your email address:		Email

Help Search History Titles Start Over

Contact Us | Request Copies | Get a Search Estimate | Frequently Asked Questions (FAQs) about Copyright | Copyright Office Home Page | Library of Congress Home Page

Attachment 2A

001	1674179		
005	20130704095924.0		
008	970728s1997 maua b 001 0 eng		
010			**|a** 97019895
020			**|a** 0792399609 **|c** $115.00
035			**|a** (OCoLC)36900889
040			**|a** DLC **|c** DLC **|d** DLC **|d** OrLoB-B
050	0	0	**|a** TK6561 **|b** .C76 1997
069			**|a** 00436742
082	0	0	**|a** 621.384/131 **|2** 21
100	1		**|a** Crols, J. **|q** (Jan)
245	1	0	**|a** CMOS wireless transceiver design / **|c** by Jan Crols and Michiel Steyaert.
260			**|a** Boston : **|b** Klwuer Academic Publishers, **|c** c1997.
300			**|a** xiv, 240 p. : **|b** ill. ; **|c** 25 cm.
336			**|a** text **|2** rdacontent

337			**|a** unmediated **|2** rdamedia
338			**|a** volume **|2** rdacarrier
490	1		**|a** The Kluwer international series in engineering and computer science ; **|a** Analog circuits and signal processing ; **|v** SECS 411.
504			**|a** Includes bibliographical references (p. 225-236) and index.
505	0		**|a** 1. Wireless Communications -- 2. Transmitters and Receivers – 3. Transceivers in the Frequency Domain -- 4. Performance of Transceivers – 5. High-Level Synthesis -- 6. Building Blocks for CMOS Transceivers – 7. Realizing a CMOS Transceiver -- 8. General Conclusions.
650		0	**|a** Radio **|x** Transmitter-receivers **|x** Design and construction.
650		0	**|a** Metal oxide semiconductors, Complementary.
650		0	**|a** Signal processing **|x** Digital techniques.
700	1		**|a** Steyaert, Michiel, **|d** 1959-
830		0	**|a** Kluwer international series in engineering and computer science ; **|v** SECS 411.
830		0	**|a** Kluwer international series in engineering and computer science. **|p** Analog circuits and signal processing.
948			**|a** cat, 02/10/98, pc
999			**|a** 1674179
852	0	0	**|b** 8main,4th **|h** TK 6561 .C76 1997

Attachment 2B

LIBRARY | CATALOG

Search Navigation 2 of 2

BOOK

CMOS wireless transceiver design

Full Record **MARC Tags**

000		01657pam a2200337 a 4500
001		1180614
005		20080310131308.0
008		970508s1997 maua b 001 0 eng
906	__	|**a** 7 |**b** cbc |**c** orignew |**d** 1 |**e** ocip |**f** 19 |**g** y-gencatlg
955	__	|**a** pc01 to JA00 05-08-97; jf06 to subj 05-08-97; jf08 05-09-97 to SL;jf12 05-09-97; CIP ver. pv07 07-28-97
010	__	|**a** 97019895
020	__	|**a** 0792399609 (hb : acid-free paper)
035	__	|**9** (DLC) 97019895
040	__	|**a** DLC |**c** DLC |**d** DLC
050	00	|**a** TK6561 |**b** .C76 1997
082	00	|**a** 621.384/131 |**2** 21
100	1_	|**a** Crols, J. |**q** (Jan)
245	10	|**a** CMOS wireless transceiver design / |**c** by Jan Crols and Michiel Steyaert.
260	__	|**a** Boston : |**b** Klwuer Academic Publishers, |**c** c1997.
300	__	|**a** xiv, 240 p. : |**b** ill. ; |**c** 25 cm.
490	1_	|**a** The Kluwer international series in engineering and computer science ; |**v** SECS 411. |**a** Analog circuits and signal processing
504	__	|**a** Includes bibliographical references (p. 225-236) and index.
650	_0	|**a** Radio |**x** Transmitter-receivers |**x** Design and construction.
650	_0	|**a** Metal oxide semiconductors, Complementary.
650	_0	|**a** Signal processing |**x** Digital techniques.

700	1_	|**a** Steyaert, Michiel, |**d** 1959-
830	_0	|**a** Kluwer international series in engineering and computer science ; |**v** SECS 411.
830	_0	|**a** Kluwer international series in engineering and computer science. |**p** Analog circuits and signal processing.
856	42	|**3** Publisher description |**u** http://www.loc.gov/catdir/enhancements/fy0821/97019895-d.html
856	41	|**3** Table of contents only |**u** http://www.loc.gov/catdir/enhancements/fy0821/97019895-t.html
991	__	|**b** c-GenColl |**h** TK6561 |**i** .C76 1997 |**t** Copy 1 |**w** BOOKS

Request this Item

LC Find It

Item Availability

CALL NUMBER	TK6561 .C76 1997 Copy 1
Request in	Jefferson or Adams Building Reading Rooms
Status	Not Charged

Attachment 2C

OCLC 36900889 **No holdings in XXX - 884 other holdings**

Books

								Rec Stat		**Entered**	19970508	**Replaced**	20220412052622.3
Type	a	**ELvl**		**Srce**		**Audn**		**Ctrl**				**Lang**	eng
BLvl	m	**Form**		**Conf**	0	**Biog**		**MRec**				**Ctry**	mau
		Cont	b	**GPub**		**LitF**	0	**Indx**	1				
Desc	a	**Ills**	a	**Fest**	0	**DtSt**	s	**Dates**	1997	,			

010 97019895
040 DLC $b eng $c DLC $d OHX $d BAKER $d NLGGC $d BTCTA $d YDXCP $d OCLCG $d DEBBG $d ILU $d OCLCO $d OCLCF $d OCLCQ $d ZWZ $d OCLCQ $d I8M $d OCLCO $d OCLCQ $d OCLCA $d UKMGB $d OCLCA $d OCLCO
015 GB9768698 $2 bnb
016 7 B9709424 $2 bccb
016 7 006398054 $2 Uk
016 7 011995040 $2 Uk
020 0792399609 $q (hb ; $q acid-free paper)
020 9780792399605 $q (hb ; $q acid-free paper)
050 00 TK6561 $b .C76 1997
072 7 TK $2 lcco
082 00 621.384/131 $2 21
084 53.77 $2 bcl
084 ELT 517f $2 stub
084 ELT 745f $2 stub
084 ZN 4960 $2 rvk
090 $b
100 1 Crols, J. $q (Jan)
245 10 CMOS wireless transceiver design / $c by Jan Crols and Michiel Steyaert.
260 Boston : $b Klwuer Academic Publishers, $c ©1997.
300 xiv, 240 pages : $b illustrations ; $c 25 cm.
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
490 1 The Kluwer international series in engineering and computer science ; $v SECS 411. $a Analog circuits and signal processing
504 Includes bibliographical references (pages 225-236) and index.
505 00 $t Wireless communications -- $t Transmitters and receivers -- $t Transceivers in the frequency domain -- $t Performance of transceivers -- $t High-level synthesis -- $t Building blocks for CMOS transceivers -- $t Realizing a CMOS transceiver.
520 CMOS Wireless Transceiver Design is the first book to give a comprehensive treatment of the design of transceivers for use in wireless communication systems. The book overviews existing transceiver design and goes on to introduce new multi-path receiver and transmitter topologies. It also presents a formal methodology for the high-level design of transceiver architectures and fully illustrates its use in the design of a low-IF/direct upconversion GSM transceiver front-end.

520 8 CMOS Wireless Transceiver Design further demonstrates its practical nature by containing concluding chapters which study both the integration of RF building blocks in CMOS and the capabilities of deep submicron CMOS used in combination with the new transceiver topologies for the implementation of wireless transceiver front-ends in the 1 to 2 GHz range. CMOS Wireless Transceiver Design is essential reading for all researchers and practising engineers working in the design of wireless communication systems requiring highly integrated RF transceivers.
650 0 Radio $x Transmitter-receivers $x Design and construction.
650 0 Metal oxide semiconductors, Complementary.
650 0 Signal processing $x Digital techniques.
650 6 MOS complémentaires. $0 (CaQQLa)201-0047869
650 6 Traitement du signal $x Techniques numériques. $0 (CaQQLa)201-0087536
650 7 Metal oxide semiconductors, Complementary. $2 fast $0 (OCoLC)fst01017635
650 7 Radio $x Transmitter-receivers $x Design and construction. $2 fast $0 (OCoLC)fst01087152
650 7 Signal processing $x Digital techniques. $2 fast $0 (OCoLC)fst01118285
650 7 Schaltungsentwurf $2 gnd $0 (DE-588)4179389-4
650 7 Transceiver $2 gnd $0 (DE-588)4507910-9
650 7 CMOS $2 gnd $0 (DE-588)4010319-5
650 7 Traitement du signal $x Techniques numériques. $2 ram
650 7 MOS (électronique) $2 ram
650 7 Radio $x Émetteurs et transmission $x Fading $x Conception et construction. $2 ram
650 07 CMOS. $2 swd
700 1 Steyaert, Michiel, $d 1959-
830 0 Kluwer international series in engineering and computer science ; $v SECS 411.
830 0 Kluwer international series in engineering and computer science. $p Analog circuits and signal processing.
856 41 $3 Table of contents $u http://catdir.loc.gov/catdir/enhancements/fy0821/97019895-t.html
856 42 $3 Publisher description $u http://catdir.loc.gov/catdir/enhancements/fy0821/97019895-d.html
856 $3 1850-9999 $u http://www.springer.com/gb/ $x BLDSS

Attachment 2D

LC control no.: sh 85110417
LCCN Permalink: https://lccn.loc.gov/sh85110417
HEADING: Radio Transmitter-receivers

000 00531cz a2200205n 450
001 4759937
005 20120328074255.0
008 860211|| anannbabn |b ana
010 __ |**a** sh 85110417
035 __ |**a** (DLC)sh 85110417
035 __ |**a** (DLC)106622
040 __ |**a** DLC |**c** DLC |**d** DLC
053 _0 |**a** TK6564.3 |**b** TK6564.5
150 __ |**a** Radio |**x** Transmitter-receivers
450 __ |**a** Radio transceivers
450 __ |**a** Radio transmitter-receivers
450 __ |**a** Transceivers
450 __ |**a** Transmitter-receivers
906 __ |**t** 7813 |**u** fk07 |**v** 0
953 __ |**a** xx00 |**b** td04

Save, Print or Email Records (View Help)	
Select Download Format: Text (Labelled Display)	Press to SAVE or PRINT
Email Text (Labelled Display) to:	Press to SEND EMAIL

Library of Congress
URL: https://www.loc.gov/

Mailing Address:

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

101 Independence Ave, S.E.
Washington, DC 20540

Questions, comments, error reports: Contact Us

Attachment 2E

LC control no.: sh 87005579

LCCN Permalink: https://lccn.loc.gov/sh87005579

HEADING: Design and construction

000 00664cz a2200169n 450

001 4810729

005 20110729124740.0

008 870902n| bnannbbbn |n ann

010 __ |**a** sh 87005579

035 __ |**a** (DLC)sh 87005579

035 __ |**a** (DLC)157414

040 __ |**a** DLC |**c** DLC |**d** DLC

150 __ |**a** Design and construction

260 __ |**i** subdivision |**a** Design and construction |**i** under individual examinations and types of examinations and under types of structures, machines, equipment, etc., for works discussing their engineering, and/or construction, e.g. |**a** Automobiles--Design and construction

906 __ |**t** 8846 |**u** fk03 |**v** 0

952 __ |**a** 0 bib. record(s) to be changed

953 __ |**a** fj26 |**b** fj26

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave,

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

S.E.
Washington, DC 20540

Attachment 2F

LC control no.: sh 85084067
LCCN Permalink: https://lccn.loc.gov/sh85084067
HEADING: Metal oxide semiconductors, Complementary

000 00705cz a2200241n 450
001 4734548
005 20120327093711.0
008 860211|| anannbabn |b ana
010 __ |**a** sh 85084067
035 __ |**a** (DLC)sh 85084067
035 __ |**a** (DLC)81233
040 __ |**a** DLC |**c** DLC |**d** DLC
053 _0 |**a** TK7871.99.M44
150 __ |**a** Metal oxide semiconductors, Complementary
450 __ |**a** CMOS (Electronics)
450 __ |**a** Complementary metal oxide semiconductors
450 __ |**a** Semiconductors, Complementary metal oxide
550 __ |**w** g |**a** Digital electronics
550 __ |**w** g |**a** Logic circuits
550 __ |**a** Transistor-transistor logic circuits
670 __ |**a** Random House |**b** (CMOS)
906 __ |**t** 9040 |**u** fk03 |**v** 0
953 __ |**a** xx00 |**b** fj01

Save, Print or Email Records (View Help)

Select Download Format: Text (Labelled Display) | Press to SAVE or PRINT

Email Text (Labelled Display) to:

Press to SEND EMAIL

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave, S.E.
Washington, DC 20540

URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 2G

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

000 00468cz a2200181n 450
001 4771479
005 20120328080105.0
008 860211|| anannbabn |b ana
010 __ |**a** sh 85122398
035 __ |**a** (DLC)sh 85122398
035 __ |**a** (DLC)118164
040 __ |**a** DLC |**c** DLC
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

Save, Print or Email Records (View Help)

Select Download Format: Text (Labelled Display) Press to SAVE or PRINT

Email Text (Labelled Display) to: Press to SEND EMAIL

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave,
S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 3A

catalogusmai You are: Guest

You are here: Catalog - USMAI (all campuses) USMAI Website

Full View of Record

add to my saved items | save/email

Choose display: standard | named MARC tags | MARC tags

Record 1 out of 1 find it

No Previous | No Next

FMT	BK
LDR	pam 22002894a 45 0
TRA	x30
003	OCoLC
005	20040515095654.0
008	000407s2000 flua 001 0 eng
010	|a 00030415
020	|a 0849308259 (alk.)
0359	|a CP0043864241
035	|a ocm43864241
040	|a DLC |c DLC
042	|a pcc
049	|a UMCP
05000	|a TK7895.B87 |b B83 2000
08200	|a 004.6/4 |2 21
1001	|a Buchanan, William.
24510	|a Computer busses design and application / |c William Buchanan.
260	|a Boca Raton : |b CRC, |c c2000.
300	|a xiv, 608 p. : |b ill. ; |c 25 cm.
650 0	|a Microcomputers |x Buses.
650 0	|a Computer interfaces.
950	|a AUTH RELOAD |c 20060712 |h 0809
950	|a AUTH EXTRACT |c 20200722 |h 1751
994	|a 90 |b UMC
998 0	|a LDR504 OCLC 00/11/16 10:23:48 |b LDR504 OCLC02/02/13 13:01:19
CAT	|a CONV |b 20 |c 20021124 |l MAI01 |h 2013
CAT	|c 20021127 |l MAI01 |h 2214
CAT	|a UTILITY |b 20 |c 20040515 |l MAI01 |h 0956
CAT	|a UTILITY |b 20 |c 20060505 |l MAI01 |h 0803
OWN	|a SHARED
XPX	|a N |b UMC |d 20060131
CAT	|a UTILITY |b 20 |c 20060712 |l MAI01 |h 0809
CAT	|a AUTHCLEAN |b 20 |c 20200716 |l MAI01 |h 1833
CAT	|a AUTHEXT |b 20 |c 20200722 |l MAI01 |h 1751
SYS	002561204
Direct Url	https://catalog.umd.edu/docno=002561204

No Previous | No Next

back to top

Problems/Comments

Privacy Policy

© 2002 University System of Maryland and Affiliated Institutions.

Attachment 3B

LIBRARY | CATALOG

Search Navigation 1 of 7

BOOK

Computer busses design and application

Full Record **MARC Tags**

000		00983cam a22002534a 4500
001		11968006
005		20060728202905.0
008		000407s2000 flua 001 0 eng
906	__	|**a** 7 |**b** cbc |**c** orignew |**d** 1 |**e** ocip |**f** 20 |**g** y-gencatlg
925	0_	|**a** acquire |**b** 2 shelf copies |**x** policy default
955	__	|**a** to ASCD pv09 04-07-00; jf09 (desc) 4-10-2000; jf08 04-12-00 to SL; jf12 to Dewey 04-13-00; aa07 04-14-00; jg00 12-18-00 |**f** jg14 2001-11-13 |**g** jg07 2002-02-05 to BCCD, copy 1
010	__	|**a** 00030415
020	__	|**a** 0849308259 (alk.)
040	__	|**a** DLC |**c** DLC |**d** DLC
042	__	|**a** pcc
050	00	|**a** TK7895.B87 |**b** B83 2000
082	00	|**a** 004.6/4 |**2** 21
100	1_	|**a** Buchanan, William.
245	10	|**a** Computer busses design and application / |**c** William Buchanan.
260	__	|**a** Boca Raton : |**b** CRC, |**c** c2000.
300	__	|**a** xiv, 608 p. : |**b** ill. ; |**c** 25 cm.
650	_0	|**a** Microcomputers |**x** Buses.
650	_0	|**a** Computer interfaces.
856	42	|**3** Publisher description |**u** http://www.loc.gov/catdir/enhancements/fy0646/00030415-d.html

Request this Item | LC Find It

Item Availability

CALL NUMBER	TK7895.B87 B83 2000 Copy 1
Request in	Jefferson or Adams Building Reading Rooms
Status	Not Charged

Attachment 3C

OCLC 43864241 **No holdings in XXX – 133 other holdings**

Books

								Rec Stat		**Entered**	20000407	**Replaced**	20220629165257.9
Type	a	**ELvl**		**Srce**		**Audn**		**Ctrl**				**Lang**	eng
BLvl	m	**Form**		**Conf**	0	**Biog**		**MRec**				**Ctry**	enk
		Cont		**GPub**		**LitF**	0	**Indx**	1				
Desc	a	**Ills**	a	**Fest**	0	**DtSt**	s	**Dates**	2000	,			

010 00030415
040 DLC $b eng $c DLC $d BAKER $d BTCTA $d YDXCP $d STF $d IG# $d BDX $d OCLCF $d OCLCO $d OCLCQ $d CRCPR $d CUY $d UKM $d NLGGC $d UBY $d VA@ $d ILU $d UKUOY $d UKBTH $d OCLCO $d OCLCQ
015 GBA147469 $2 bnb
019 47824879 $a 989620195 $a 1022616261
020 0340740760
020 9780340740767
020 0849308259 $q (CRC Press)
020 9780849308253 $q (CRC Press)
042 pcc
050 00 TK7895.B87 $b B83 2000
080 518.712
082 00 004.6/4 $2 21
084 54.31 $2 bcl
090 $b
100 1 Buchanan, William, $e author.
245 10 Computer busses / $c William Buchanan.
246 14 Computer busses, design and application
264 1 London : $b Arnold ; $a Boca Raton : $b CRC, $c 2000.
300 xiv, 608 pages : $b illustrations ; $c 25 cm
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
500 Includes index.
505 00 $g 1.1 $t Pre-PC Development $g 1 -- $g 1.2 $t 8008/8080/8085 $g 6 -- $g 1.3 $t 8086/8088 $g 13 -- $g 1.4 $t 80186/80188 $g 19 -- $g 1.5 $t 80286 $g 20 -- $g 1.6 $t Post-PC development $g 21 -- $g 1.9 $t DEC $g 45 -- $g 1.10 $t Open .v. closed systems $g 47 -- $g 1.11 $t RIP, Sinclair Research $g 48 -- $g 1.12 $t How to miss a market $g 48 -- $g 2 $t Busses, Interrupts and PC Systems $g 49 -- $g 2.1 $t Busses $g 49 -- $g 2.2 $t Interrupts $g 61 -- $g 2.3 $t Interfacing $g 69 -- $g 2.4 $t PC Systems $g 76 -- $g 2.8 $t Practical PC system $g 77 -- $g 3 $t Interfacing Standards $g 85 -- $g 3.2 $t PC bus $g 85 -- $g 3.3 $t ISA bus $g 87 -- $g 3.4 $t Other legacy busses $g 91 -- $g 3.5 $t Comparison of different types $g 92 -- $g 3.7 $t Summary of interface bus types $g 95 -- $g 3.8 $t Fall of the MCA bus $g 97 -- $g 4 $t PCI Bus $g 103 -- $g 4.2 $t PCI operation $g 106 -- $g 4.3 $t Bus arbitration $g 109 -- $g 4.4 $t Other PCI pins $g 110 -- $g 4.5 $t Configuration address space $g 110 -- $g 4.6 $t I/O addressing $g 112 -- $g 4.8 $t Example manufacturer and plug-and-play IDs $g 118 -- $g 5 $t Motherboard Design $g 121 -- $g 5.2 $t TX motherboard $g 132 -- $g 6 $t IDE and Mass Storage $g 139 -- $g 6.2 $t Tracks and sectors $g 139 -- $g

6.3 $t Floppy disks $g 140 -- $g 6.4 $t Fixed disks $g 141 -- $g 6.5 $t Drive specifications $g 142 -- $g 6.6 $t Hard disk and CD-ROM interfaces $g 142 -- $g 6.7 $t IDE interface $g 143 -- $g 6.8 $t IDE communication $g 144 -- $g 6.9 $t Optical storage $g 150 -- $g 6.10 $t Magnetic tape $g 153 -- $g 7 $t SCSI $g 157 -- $g 7.2 $t SCSI types $g 157 -- $g 7.3 $t SCSI interface $g 159 -- $g 7.4 $t SCSI operation $g 162 -- $g 7.5 $t SCSI pointers $g 164 -- $g 7.6 $t Message system description $g 165 -- $g 7.7 $t SCSI commands $g 167 -- $g 7.8 $t Status $g 169 -- $g 8 $t PCMCIA $g 173 -- $g 8.2 $t PCMCIA signals $g 173 -- $g 8.3 $t PCMCIA registers $g 175 -- $g 9 $t USB and Firewire $g 181 -- $g 9.2 $t USB $g 182 -- $g 9.3 $t Firewire $g 186 -- $g 10 $t Games Port, Keyboard and Mouse $g 191 -- $g 10.2 $t Games port $g 191 -- $g 10.3 $t Keyboard $g 195 -- $g 10.4 $t Mouse and keyboard interface $g 198 -- $g 10.5 $t Mouse $g 199 -- $g 11 $t Agp $g 203 -- $g 11.2 $t PCI and AGP $g 204 -- $g 11.3 $t Bus transactions $g 205 -- $g 11.4 $t Pin description $g 205 -- $g 11.5 $t AGP master configuration $g 208 -- $g 11.6 $t Bus commands $g 209 -- $g 11.7 $t Addressing modes and bus operations $g 210 -- $g 11.8 $t Register description $g 210 -- $g 12 $t Fibre Channel $g 217 -- $g 12.2 $t Comparison $g 217 -- $g 12.3 $t Fibre channel standards $g 218 -- $g 12.4 $t Cables, hubs, adapters and connectors $g 219 -- $g 12.5 $t Storage Devices and storage area networks $g 221 -- $g 12.6 $t Networks $g 221 -- $g 13 $t RS-232 $g 223 -- $g 13.2 $t Electrical characteristics $g 223 -- $g 13.3 $t Communications between two nodes $g 228 -- $g 13.4 $t Programming RS-232 $g 233 -- $g 13.5 $t RS-232 programs $g 237 -- $g 14 $t RS-422, RS-423 and RS-485 $g 247 -- $g 14.2 $t RS-485 (ISO 8482) $g 247 -- $g 14.3 $t Line drivers $g 249 -- $g 14.4 $t RS-232/485 converter $g 250 -- $g 15 $t Modems $g 253 -- $g 15.2 $t RS-232 communications $g 254 -- $g 15.3 $t Modem standards $g 255 -- $g 15.4 $t Modem commands $g 256 -- $g 15.5 $t Modem set-ups $g 258 -- $g 15.6 $t Modem indicator $g 260 -- $g 15.7 $t Profile viewing $g 260 -- $g 15.8 $t Test modes $g 261 -- $g 15.9 $t Digital modulation $g 264 -- $g 15.10 $t Typical modems $g 265 -- $g 15.11 $t Fax transmission $g 267 -- $g 16 $t Parallel Port $g 271 -- $g 16.2 $t PC connections $g 271 -- $g 16.3 $t Data handshaking $g 272 -- $g 16.4 $t I/O addressing $g 275 -- $g 16.5 $t Interrupt-driven parallel port $g 279 -- $g 17 $t Enhanced Parallel Port $g 289 -- $g 17.2 $t Compatibility mode $g 289 -- $g 17.3 $t Nibble mode $g 290 -- $g 17.4 $t Byte mode $g 293 -- $g 17.5 $t EPP $g 294 -- $g 17.6 $t ECP $g 296 -- $g 18 $t Modbus $g 301 -- $g 18.1 $t Modbus protocol $g 301 -- $g 18.2 $t Function codes $g 307 -- $g 18.3 $t Modbus diagnostics $g 309 -- $g 19 $t Fieldbus $g 313 -- $g 19.2 $t Fieldbus types $g 313 -- $g 19.3 $t Foundation Fieldbus $g 316 -- $g 20 $t Worldfip $g 325 -- $g 20.2 $t Physical layer $g 325 -- $g 20.3 $t Data link layer $g 326 -- $g 21 $t Can Bus $g 333 -- $g 21.2 $t CAN physical $g 335 -- $g 21.3 $t CAN bus basics $g 336 -- $g 21.4 $t Message transfer $g 337 -- $g 21.5 $t Fault confinement $g 340 -- $g 21.6 $t Bit timing $g 341 -- $g 21.7 $t CAN open $g 342 -- $g 22 $t IEEE-488, VME and VXI $g 345 -- $g 22.2 $t IEEE-488 bus $g 345 -- $g 22.3 $t VME bus $g 348 -- $g 22.4 $t VXI bus $g 349 -- $g 23 $t TCP/IP $g 355 -- $g 23.2 $t TCP/IP gateways and hosts $g 356 -- $g 23.3 $t Function of the IP protocol $g 356 -- $g 23.4 $t Internet datagram6 $g 357 -- $g 23.5 $t ICMP $g 359 -- $g 23.6 $t TCP/IP internets $g 362 -- $g 23.7 $t Domain name system $g 366 -- $g 23.8 $t Internet naming structure $g 367 -- $g 23.9 $t Domain name server $g 368 -- $g 23.10 $t Bootp protocol $g 369 -- $g 23.11 $t Example network $g 371 -- $g 23.12 $t ARP $g 373 -- $g 23.13 $t IP multicasting $g 373 -- $g 23.16 $t Additional material $g 378 -- $g 24 $t TCP and UDP $g 385 -- $g 24.2 $t Transmission control protocol $g 385 -- $g 24.3 $t UDP $g 389 -- $g 24.4 $t TCP specification $g 390 -- $g 24.5 $t TCB parameters $g 392 -- $g 24.6 $t Connection states $g 392 -- $g 24.7 $t Opening and closing a connection $g 395 -- $g 24.8 $t TCP user commands $g 397 -- $g 24.9 $t WinSock $g 399 -- $g 24.10 $t Visual Basic socket implementation $g 408 -- $g 24.12 $t TCP/IP services reference $g 416 -- $g 25 $t Networks $g 419 -- $g 25.2 $t Network topologies $g 421 -- $g 25.3 $t OSI model $g 424 -- $g 25.4 $t Routers, bridges and repeaters $g 426 -- $g 25.5 $t Network cable types $g 429 -- $g 26 $t Ethernet $g 435 -- $g 26.2 $t IEEE standards $g 436 -- $g 26.3 $t Ethernet -- media access control (MAC) layer $g 437 -- $g 26.4 $t IEEE 802.2 and Ethernet SNAP $g 439 -- $g 26.5 $t OSI and the IEEE 802.3 standard $g 441 -- $g 26.6 $t Ethernet transceivers $g 442 -- $g 26.7 $t Ethernet types $g 443 -- $g 26.8 $t Twisted-pair hubs $g 445 -- $g 26.9 $t 100 Mbps Ethernet $g 445 -- $g 26.10 $t Comparison

of fast Ethernet other technologies $g 450 -- $g 26.11 $t Switches and switching hubs $g 451 -- $g 26.12 $t Network interface card design $g 453 -- $g 26.13 $t Gigabit Ethernet $g 457 -- $g 26.15 $t Ethernet crossover connections $g 464 -- $g 27 $t RS-232 Programming Using Visual Basic $g 467 -- $g 27.2 $t Properties $g 467 -- $g 27.3 $t Events $g 473 -- $g 27.5 $t Error messages $g 475 -- $g 27.6 $t RS-232 polling $g 476 -- $g 28 $t Interrupt-Driven RS-232 $g 479 -- $g 28.1 $t Interrupt-driven RS-232 $g 479 -- $g 28.2 $t DOS-based RS-232 program $g 479 -- $t A PC Processors $g 489 -- $g A.2 $t 8086/88 $g 490 -- $g A.3 $t 80386/80486 $g 495 -- $g A.4 $t Pentium/Pentium Pro $g 501 -- $g B $t Vesa VL-Local Bus $g 509 -- $g C $t Modem Codes $g 511 -- $g C.1 $t AT commands $g 511 -- $g C.2 $t Result codes $g 513 -- $g C.3 $t S-registers $g 514 -- $g D $t Redundancy Checking $g 519 -- $g D.1 $t Cyclic redundancy check (CRC) $g 519 -- $g D.2 $t Longitudinal/vertical redundancy checks (LRC/VRC) $g 523 -- $g E $t ASCII Character Code $g 525 -- $g E.1 $t Standard ASCII $g 525 -- $g E.2 $t Extended ASCII code $g 527 -- $g F $t Quick Reference $g 529 -- $g G $t ISDN $g 533 -- $g G.2 $t ISDN channels $g 534 -- $g G.3 $t ISDN physical layer interfacing $g 535 -- $g G.4 $t ISDN data link layer $g 538 -- $g G.5 $t ISDN network layer $g 541 -- $g G.6 $t Speech sampling $g 543 -- $g H $t Microsoft Windows $g 547 -- $g H.2 $t Windows registry $g 548 -- $g H.3 $t Device drivers $g 550 -- $g H.4 $t Configuration manager $g 551 -- $g H.5 $t Virtual machine manager (VMM) $g 552 -- $g H.6 $t Multiple file systems $g 555 -- $g H.7 $t Core system components $g 557 -- $g H.8 $t Multitasking and threading $g 559 -- $g H.9 $t Plug-and-play process $g 561 -- $g H.10 $t Windows NT architecture $g 561 -- $g H.11 $t Windows 95 and Windows 98 $g 564 -- $g H.12 $t Fundamentals of Operating Systems $g 565 -- $g I $t HDLC $g 569 -- $g I.2 $t HDLC protocol $g 570 -- $g I.3 $t Transparency $g 574 -- $g I.4 $t Flow control $g 574 -- $g I.5 $t Derivatives of HDLC $g 576 -- $g J $t Example Winsock Code for Visual Basic -- $g J.1 $t My client (MyClient.frm) $g 579 -- $g J.2 $t My server (myServer.frm) $g 583 -- $g J.3 $t Choice form (ChoiceSC.frm) $g 586 -- $g J.4 $t Error panel (ErrorPanel.frm) $g 587 -- $g J.5 $t Help form (help.frm) $g 589.
520 1 "As more and more equipment is interface driven, either by the use of controllers or directly from PCs, the question of which bus to use is increasingly important. Computer Busses has been designed to help choose the best type of bus for the particular application." "The text analyses busses from a top-down perspective and draws examples and applications from real busses with plenty of case studies: provides a complete guide to computer busses; contains application-specific programme examples; plenty of real-life case studies; covers local instrumentation and network busses as well as bus programming and protocols."
520 8 "This book is essential reading for students of software engineering and electronic design and for disciplines from production engineering to process control during project work. It will also be a handy reference book for professional engineers, system designers, consultants and technical support."--Jacket.
650 0 Microcomputers $x Buses.
650 0 Computer interfaces.
650 2 User-Computer Interface $0 (DNLM)D014584
650 6 Micro-ordinateurs $x Bus. $0 (CaQQLa)201-0085502
650 6 Interfaces (Informatique) $0 (CaQQLa)201-0070317
650 7 Computer interfaces. $2 fast $0 (OCoLC)fst00872238
650 7 Microcomputers $x Buses. $2 fast $0 (OCoLC)fst01019645
856 41 $3 CRCnetBASE $u http://www.crcnetbase.com/isbn/9781420041682
856 42 $3 Publisher description $u http://catdir.loc.gov/catdir/enhancements/fy0646/00030415-d.html

Attachment 3D

LC control no.: sh 85084805
LCCN Permalink: https://lccn.loc.gov/sh85084805
HEADING: Microcomputers Buses

000 00565cz a2200217n 450
001 4735255
005 20120327093812.0
008 860211|| anannbabn |b ana
010 __ |**a** sh 85084805
035 __ |**a** (DLC)sh 85084805
035 __ |**a** (DLC)81940
040 __ |**a** DLC |**c** DLC
053 _0 |**a** TK7895.B87
150 __ |**a** Microcomputers |**x** Buses
450 __ |**a** Buses (Microcomputers)
450 __ |**a** Microbuses (Computers)
450 __ |**a** Microcomputer buses
550 __ |**w** g |**a** Bus conductors (Electricity)
550 __ |**w** g |**a** Data transmission systems
906 __ |**t** 7918 |**u** fk05 |**v** 0
953 __ |**a** xx00

Mailing Address:
101 Independence Ave, S.E.
Washington, DC 20540

Questions, comments, error reports: Contact Us

Attachment 3E

LC control no.: sh 85029507

LCCN Permalink: https://lccn.loc.gov/sh85029507

HEADING: Computer interfaces

000 00881cz a2200217n 450

001 4681781

005 20120323071047.0

008 860211i| anannbabn |a ana

010 __ |**a** sh 85029507

035 __ |**a** (DLC)sh 85029507

035 __ |**a** (DLC)28466

040 __ |**a** DLC |**c** DLC |**d** DLC

053 _0 |**a** TK7887.5

150 __ |**a** Computer interfaces

450 __ |**a** Interfaces, Computer

550 __ |**w** g |**a** Computer input-output equipment

550 __ |**w** g |**a** Interface circuits

680 __ |**i** Here are entered works on the connections or links between two or more computer systems or devices. Works on the point at which a user interacts with a computer system, either directly through a terminal or indirectly through a data processing department, are entered under |**a** User interfaces (Computer systems).

681 __ |**i** Note under |**a** User interfaces (Computer systems)

906 __ |**t** 8815 |**u** fk07 |**v** 1

953 __ |**a** xx00 |**b** ta25

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave,
S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 4A

```
leader 01584cam a2200373Ma 4500
001    992497003405961
005    20141020193905.0
008    960423s1995    caua     b    101 0 eng d
010    ##$a   95081002
020    ##$a9780818672286
020    ##$a0818672285
035    ##$a(OCoLC)34678748
035    ##$9342719
035    ##$a(MoKL)249700-lhalldb
035    ##$a(lhalldb)249700-lhalldb
040    ##$aPUL $cPUL $dLHL
049    ##$aLHLA
050    #4$aTK7874 $b.I577 1996
090    ##$aTK7874 $b.C17 1996
111    2#$aInternational Conference on VLSI Design $n(9th : $d1996 :
$cBangalore, India)
245    10$aNinth International Conference on VLSI Design :
$bproceedings, January 3-6, 1996, Bangalore, India / $csponsored by
VLSI Society of India, Dept. of Electronics, Government of India ;
in cooperation with IEEE Computer Society ... [et al.].
246    14$aVLSI Design '96
246    3#$aVLSI mobile communication
260    ##$aLos Alamitos, Calif. : $bIEEE Computer Society Press,
$cc1995.
300    ##$axxxiv, 439 p. : $bill. ; $c28 cm.
500    ##$a"VLSI mobile communication"--Cover p. [1].
500    ##$a"IEEE Computer Society Press order number PR07228"--T.p.
verso.
500    ##$a"IEEE catalog number 95TB100010--T.p. verso.
504    ##$aIncludes bibliographical references and index.
650    #0$aIntegrated circuits $xVery large scale integration
$xDesign and construction $vCongresses.
650    #0$aElectronic digital computers $xCircuits $vCongresses.
650    #0$aMobile communication systems $vCongresses.
710    2#$aVLSI Society of India.
710    1#$aIndia. $bDepartment of Electronics.
710    2#$aIEEE Computer Society.
948    ##$aLTI 10/08/2013
```

Attachment 4B

OCLC 34678748	No holdings in XXX - 55 other holdings												
Books								Rec Stat		Entered	19960423	Replaced	20220416072356.5
Type	a	ELvl		Srce	d	Audn		Ctrl		Lang	eng		
BLvl	m	Form		Conf	1	Biog		MRec		Ctry	cau		
		Cont	b	GPub		LitF	0	Indx	1				
Desc	a	Ills	a	Fest	0	DtSt	s	Dates	1995 ,				

010 98149904
040 PUL $b eng $c DLC $d PUL $d E9X $d BAKER $d BTCTA $d YDXCP $d OCLCQ $d DEBBG $d OCLCQ $d OCLCF $d OCLCO $d OCLCQ $d OCL $d OCLCO $d OCLCQ $d DKU $d OCLCO
019 858551159 $a 977935428 $a 1139382579
020 0818672285
020 9780818672286
020 0818672307 $q (microfiche)
020 9780818672309 $q (microfiche)
042 lccopycat
050 04 TK7874 $b .I5778 1996
082 00 621.39/5 $2 21
084 ZN 4952 $2 rvk
084 ELT 272f $2 stub
090 $b
111 2 International Conference on VLSI Design $n (9th : $d 1996 : $c Bangalore, India)
245 10 Ninth International Conference on VLSI Design : $b proceedings, January 3-6, 1996, Bangalore, India / $c sponsored by VLSI Society of India, Department of Electronics, Government of India ; in cooperation with IEEE Computer Society [and others].
246 14 VLSI Design '96
260 Los Alamitos, Calif. : $b IEEE Computer Society Press, $c ©1995.
300 xxxiv, 439 pages : $b illustrations ; $c 28 cm
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
500 "VLSI mobile communication"--Cover.
504 Includes bibliographical references and index.
500 "IEEE catalog number 95TB100010--T.p. verso.
530 Also available via the World Wide Web with additional title: VLSI Design, 1996, proceedings, Ninth International Conference on.
505 00 $t 1995 IEEE Fellowship Awards -- $t 1995 Awards -- $t 1995 Fellowship Recipients -- $t List of Reviewers -- $t Low Power Design / $r K. Roy and R. K. Roy -- $t Register Transfer Level Synthesis: From Theory to Practice / $r K. Keutzer and S. Malik -- $t Mixed-Signal Design for Test / $r B. Vinnakota and R. Harjani -- $t VLSI Implementation of DSP Architectures / $r A. Ratan Gupta and V. Visvanathan -- $t Hardware Software Co-Design of Embedded Systems / $r R. Gupta -- $t Practical Test and DFT for Next Generation VLSI / $r J. Abraham and G. Ganapathy -- $t 1995 Keynote Address: Science, Technology, and the Indian Society / $r Vishwani D. Agrawal -- $t 1996 Keynote Address: The New Electronics Industry / $r Thomas J. Engibous -- $t VLSI in Mobile Communication / $r Rajeev Jain and Robert W. Brodersen -- $t

Medium Access Control and Air-Interface Subsystem for an Indoor Wireless ATM Network / $r M. B. Srivastava -- $t Behavioral Modeling of an ATM Switch Using SpecCharts /
505 80 $t Hierarchical Probabilistic Diagnosis of MCMs on Large-Area Substrates / $r K. Sasidhar and A. Chatterjee -- $t Novel VLSI Concurrent Dual Multiplier -- Dual Adder Architecture for Image and Video Coding Applications / $r D. V. Poornaiah and P. V. A. Mohan -- $t Instruction-Set Matching and GA-Based Selection for Embedded-Processor Code Generation / $r J. Shu, T. C. Wilson and D. K. Banerji -- $t Instruction-Set Modeling for ASIP Code Generation / $r R. Leupers and P. Marwedel -- $t Co-De-X: A Novel Two-Level Hardware/Software Co-Design Framework / $r R. W. Hartenstein, J. Becker, R. Kress and H. Reinig -- $t Micropower Analog Hearing Aid on Low-Voltage CMOS Digital Process / $r A. B. Bhattacharyya, R. S. Rana, S. K. Guha, R. Bahl, S. Anand, M. J. Zarabi, P. A. Govindacharyulu, V. Gupta, V. Mohan, J. Roy and A. Atri -- $t 20MHz CMOS Variable Gain Amplifier / $r C. Srinivasan and K. R. Rao -- $t Low-Power, Low-Voltage BiCMOS Comparators for Approximately 200MHz, 8bit Operation / $r A. Boni and C. Morandi -- $t Very High Gain Bandwidth Product Fully Differential Amplifier / $r J. Weiss, B. Majoux and G. Bouvier -- $t Fast Algorithms for Computing I[subscript DDQ] Tests for Combinational Circuits / $r P. Thadikaran and S. Chakravarty -- $t On More Efficient Combinational ATPG Using Functional Learning / $r R. Mukherjee, J. Jain, M. Fujita, J. A. Abraham and D. S. Fussell -- $t Sequential Circuits with Combinational Test Generation Complexity / $r A. Balakrishnan and S. T. Chakradhar -- $t Genetic Algorithms for Scan Path Design / $r C. P. Ravikumar and R. Rajarajan -- $t Allocation and Binding in Data Path Synthesis Using a Genetic Algorithm Approach / $r C. A. Mandal, P. P. Chakrabarti and S. Ghose -- $t Hierarchical Register Optimization Algorithm for Behavioral Synthesis / $r S. Katkoori, J. Roy and R. Vemuri -- $t Rule Based Approach for Improving Allocation of Filter Structures in HLS / $r J. Oberg, J. Isoaho, P. Ellervee, A. Jantsch and A. Hemani
505 80 $t Representation and Synthesis of Interface of a Circuit for its Reuse / $r S. Sarkar, A. Basu and A. K. Majumdar -- $t Clock Skew Constrained Cell Placement / $r V. Natesan and D. Bhatta -- $t On Moment Based Metrics for Optimal Termination of Transmission Line Interconnects / $r R. Gupta, B. Krauter and L. T. Pileggi -- $t Combined Effect of Grain Boundary Depletion and PolySi/Oxide Interface Depletion on Drain Characteristics of a p-MOSFET / $r P. R. Suresh, P. Venugopal, S. T. Selvam and S. Potla -- $t Analytical Delay Model Based on Boolean Process / $r Y. Min, Z. Zhao and Z. Li -- $t Methods for Dynamic Test Vector Compaction in Sequential Test Generation / $r T.-J. Lambert and K. K. Saluja -- $t Dynamic Test Sequence Compaction for Sequential Circuits / $r A. Raghunathan and S. T. Chakradhar -- $t Efficient Test Generation Technique for Sequential Circuits with Repetitive Sub-Circuits / $r D. R. Chakrabarti and A. Jain -- $t Synchronous Test Generation Model for Asynchronous Circuits /
505 80 $t Design of High-Performance Two-Stage CMOS Cascode Op-Amps with Stable Biasing / $r P. Mandal and V. Visvanathan -- $t Testing Analog Circuits by AC Power Supply Voltage / $r A. K. B. A'ain, A. H. Bratt and A. P. Dorey -- $t Test Generation for Mixed-Signal Devices Using Signal Flow Graphs / $r R. Ramadoss and M. L. Bushnell -- $t Study of Composition Schemes for Mixed Apply/Compose Based Construction of ROBDDs / $r A. Narayan, S. P. Khatri, J. Jain, M. Fujita, R. K. Brayton and A. Sangiovanni-Vincentelli -- $t On Finding Functionally Identical and Functionally Opposite Lines in Combinational Logic Circuits / $r I. Pomeranz and S. M. Reddy -- $t Does Retiming Affect Redundancy in Sequential Circuits? / $r D. K. Das and B. B. Bhattacharya -- $t Cubical CAMP for Minimization of Boolean Functions / $r N. N. Biswas, C. Srikanth and J. Jacob -- $t VLSI Architecture for Cellular Automata-Based Parallel Data Compression / $r S. Bhattacharjee, J. Bhattacharya, U. Raghavendra, D. Saha and P. P. Chaudhuri -- $t VLSI/WSI Designs for Folded Cube-Connected Cycles Architectures / $r M. P. Sebastian, P. S. N. Rao and L. Jenkins -- $t Tree Matching Chip / $r V. Krishna, A. Ejniotti and N. Ranganathan -- $t Systolic Architecture for LMS Adaptive Filtering with Minimal Adaptation Delay / $r S. Ramanathan and V. Visvanathan -- $t Statistical Path Delay Fault Coverage Estimation for Synchronous Sequential Circuits / $r L. Pappu, M. L. Bushnell, V. D. Agrawal and M. K. Srinivas -- $t Retiming with Logic Duplication Transformation: Theory and an Application to Partial Scan / $r A. Balakrishnan and S. T. Chakradhar -- $t Is Compiled Simulation

Really Faster than Interpreted Simulation? / $r P. M. Maurer -- $t Distributed Logic Simulation: Time-First Evaluation vs. Event-Driven Algorithms / $r S. Sundaram and L. M. Patnaik -- $t Designing Systems on Silicon: A Digital Spread Spectrum Pager / $r S. Samel, B. Gyselinckx, I. Bolsens and H. De Man
505 80 $t High-Speed 32-bit Parallel Correlator for Spread Spectrum Communication / $r S. Kulkarni, P. Mazumder and G. I. Haddad -- $t Architecture of a VLSI Chip for Modeling Amino Acid Sequence in Proteins / $r S. Mitra, S. Das, P. P. Chaudhuri and S. Nandi -- $t VLSI Implementation of Artificial Neural Network-Based Digital Multiplier and Adder / $r R. Ranade, S. Bhandari and A. N. Chandorkar -- $t Cellular Automata-Based Architecture of a Database Query Processor / $r S. Chattopadhyay, S. Mitra and P. P. Chaudhuri -- $t Multiplier Generator for Xilinx FPGA's / $r J. P. Singh, A. Kumar and S. Kumar -- $t Estimation of Power from Module-Level Netlists / $r C. P. Ravikumar, M. R. Prasad and L. S. Hora -- $t Instruction-Level Power Analysis and Optimization of Software / $r V. Tiwari, S. Malik, A. Wolfe and M. T.-C. Lee -- $t Challenges in Low-Power Microprocessor Design / $r S. Rajgopal -- $t Enhanced Macromodel for a CMOS Operational Amplifier for HDL Implementation / $r S. Aggarwal -- ^ $t KANSYS: A CAD Tool for Analog Circuit Synthesis / $r S. K. Gupta and M. M. Hasan -- $t Dual Rail Static CMOS Architecture for Wave Pipelining / $r G. E. Fernandez and R. Sridhar -- $t Syndrome Signature in Output Compaction for VLSI BIST / $r S. R. Das, N. Goel, W. B. Jone and A. R. Nayak -- $t Multilevel Factorization Technique for Pass Transistor Logic / $r A. Jaekel, G. A. Jullien and S. Bandyopadhyay -- $t Characteristic Polynomial Method for Verification and Test of Combinational Circuits / $r V. D. Agrawal and D. Lee -- $t SUBGEN: A Genetic Approach for Subcircuit Extraction / $r N. Vijaykrishnan and N. Ranganathan -- $t Wiresizing with Buffer Placement and Sizing for Power-Delay Tradeoffs / $r J. C. Shah and S. S. Sapatnekar -- $t Ultra Low-Power Digital Signal Processing / $r A. P. Chandrakasan -- $t Low-Power Video Encoder with Power, Memory and Bandwidth Scalability / $r N. Chaddha and M. Vishwanath -- ^ $t Maximum-Power Estimation for CMOS Circuits Using Deterministic and Statistic Approaches / $r C. Y. Wang and K. Roy
505 80 $t Low-Power Realization of FIR Filters Using Multirate Architectures / $r M. Mehendale, S. D. Sherlekar and G. Venkatesh -- $t Self-Timed Division and Square Root Extraction / $r A. Guyot, M. Renaudin, B. El Hassan and V. Levering -- $t Elimination of Dynamic Hazards from Signal Transition Graphs / $r R. Nagalla and G. Hellestrand -- $t Automatic Synthesis of Speed-Independent Circuits from Signal Transition Graph Specifications / $r S.-B. Park and T. Nanya -- $t Multi-Way Partitioning of VLSI Circuits / $r P. Agrawal, B. Narendran and N. Shivakumar -- $t Geometric Bipartitioning Problem and its Applications to VLSI / $r P. S. Dasgupta, S. C. Nandy, A. K. Sen and B. B. Bhattacharya -- $t Identifying Redundant Path Delay Faults in Sequential Circuits / $r R. Tekumalla and P. R. Menon -- $t Diagnosis of Parametric Path Delay Faults / $r M. Sivaraman and A. J. Strojwas -- $t On Test Coverage of Path-Delay Faults / $r A. K. Majhi, J. Jacob, L. M. Patnaik and V. D. Agrawal -- $t Improving Accuracy in Path Delay Fault Coverage Estimation / $r K. Heragu, J. H. Patel and V. D. Agrawal -- $t Parallel Concurrent Path-Delay Fault Simulation Using Single-Input Change Patterns / $r M. A. Gharaybeh, M. L. Bushnell and V. D. Agrawal -- $t Panel Discussion: Mobile Communications: Demands on VLSI Technology, Design and CAD / $r Srinivasan Rajam, A. Chandrakasan, K. Keutzer, A. Khandekar, S. L. Maskara, B. D. Pradhan and M. B. Srivastava -- $t 1997 Call for Papers -- $t 1997 Fellowship Form.
650 0 Integrated circuits $x Very large scale integration $x Design and construction $v Congresses.
650 0 Electronic digital computers $x Circuits $v Congresses.
650 0 Mobile communication systems $v Congresses.
650 6 Ordinateurs $0 (CaQQLa)201-0035980 $x Circuits $0 (CaQQLa)201-0035980 $v Congrès. $0 (CaQQLa)201-0378219
650 6 Radiocommunications mobiles $0 (CaQQLa)201-0023226 $v Congrès. $0 (CaQQLa)201-0378219
650 7 Electronic digital computers $x Circuits. $2 fast $0 (OCoLC)fst00907124
650 7 Integrated circuits $x Very large scale integration $x Design and construction. $2 fast $0 (OCoLC)fst00975610
650 7 Mobile communication systems. $2 fast $0 (OCoLC)fst01024207

650 7 Entwurfsautomation $2 gnd $0 (DE-588)4312536-0
650 7 VLSI $2 gnd $0 (DE-588)4117388-0
650 07 Kongreß. $2 swd
655 4 Kongreß $z Bangalore $y 1996.
655 7 Conference papers and proceedings. $2 fast $0 (OCoLC)fst01423772
655 7 Bangalore (1996) $2 swd
710 2 VLSI Society of India.
710 1 India. $b Department of Electronics.
710 2 IEEE Computer Society.
856 41 $3 IEEE Xplore $u http://ieeexplore.ieee.org/servlet/opac?punumber=3519

Attachment 4C

LC control no.: sh2008104743

LCCN Permalink: https://lccn.loc.gov/sh2008104743

HEADING: Integrated circuits Very large scale integration Design and construction Congresses

000 00543cz a2200169n 450

001 7450863

005 20110729160326.0

008 080211|| anannbabn |n ana

010 __ |**a** sh2008104743

035 __ |**a** (DLC)381546

035 __ |**a** (DLC)sh2008104743

040 __ |**a** DLC |**b** eng |**c** DLC

150 __ |**a** Integrated circuits |**x** Very large scale integration |**x** Design and construction |**v** Congresses

667 __ |**a** Record generated for validation purposes.

670 __ |**a** Work cat.: System-on-chip methodologies & design languages, c2001

906 __ |**t** 8888 |**u** te00 |**v** 0

953 __ |**a** te00

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave, S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 4D

The Library of Congress

>> Go to Library of Congress Online Catalog

LIBRARY OF CONGRESS AUTHORITIES

Help | New Search | Search History | Headings List | Start Over

Previous Next

MARC Display | Labelled Display

LC control no.: sh2009124809

LCCN Permalink: https://lccn.loc.gov/sh2009124809

HEADING: Electronic digital computers Circuits Congresses

000 00472cz a2200169n 450
001 8045006
005 20110729162632.0
008 091006|| anannbabn |n ana
010 __ |**a** sh2009124809
035 __ |**a** (DLC)440650
035 __ |**a** (DLC)sh2009124809
040 __ |**a** DLC |**b** eng |**c** DLC
150 __ |**a** Electronic digital computers |**x** Circuits |**v** Congresses
667 __ |**a** Record generated for validation purposes.
670 __ |**a** Work cat.: Proceedings, c2003-
906 __ |**t** 8888 |**u** tc00 |**v** 0
953 __ |**a** tc00

Previous Next

Save, Print or Email Records (View Help)

Select Download Format: Text (Labelled Display) Press to SAVE or PRINT

Email Text (Labelled Display) to: Press to SEND EMAIL

Help - Search - Search History - Headings List - Start Over

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave, S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 4E

LC control no.: sh2008107882

LCCN Permalink: https://lccn.loc.gov/sh2008107882

HEADING: Mobile communication systems Congresses

000 00570cz a2200169n 450

001 7458529

005 20110729160533.0

008 080304|| anannbabn |n ana

010 __ |**a** sh2008107882

035 __ |**a** (DLC)384057

035 __ |**a** (DLC)sh2008107882

040 __ |**a** DLC |**b** eng |**c** DLC

150 __ |**a** Mobile communication systems |**v** Congresses

667 __ |**a** Record generated for validation purposes.

670 __ |**a** Work cat.: Proceedings of the 3rd International Workshop on Discrete Algorithms and Methods for Mobile Computing and Communications, c1999

906 __ |**t** 8888 |**u** te00 |**v** 0

953 __ |**a** te00

Save, Print or Email Records (View Help)

Select Download Format: Text (Labelled Display) Press to SAVE or PRINT

Email Text (Labelled Display) to: Press to SEND EMAIL

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave, S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 5A

MARC Bibliographic Record

```
LEADER   02524cas a2200589 a 4500
   001   993701683602122
   005   20150409103531.0
   008   781213c19799999nyumr1p 0 a0eng d
   010         $a 80644037 $zsn 78006838
   012         $a3$b3$en$k1$l1$m1
   016   7_    $a9878326$2DNLM
   016   7_    $aI03481000$zSR0058097$2DNLM
   022   0_    $a0163-6804
   029   1_    $aNLM$b9878326
   030         $aICOMD9
   032         $a902400$bUSPS
   035         $a(OCoLC)ocm04447692
   035         $a(OCoLC)ocm44466257
   035         $9ABQ0228UW
   035         $a370168
   035         $a(WU)370168-uwmadisondb
   035         $a(EXLNZ-01UWI_NETWORK)999503090402121
   037         $bIEEE Service Center, 445 Hoes Lane, Piscataway, N.J., 08854-4150
   040         $aNSD$beng$cNSD$dDLC$dNSD$dDLC$dNST$dOCL$dNST$dNSD$dNST$dAIP$dNST$dAIP$dNST$dIUL$dNST$dMYG$dCUS$dOCL$dMYG$dL
   042         $ansdp$alc
   049         $aGZMA
   050   00    $aTK5101.A1$bI13a
   082         $a621/.38/05
   098   11    $aS$aIN5$aEL24$aCO35
   210   0_    $aIEEE commun. mag.$b(Print)
   222   _0    $aIEEE communications magazine$b(Print)
   245   00    $aIEEE communications magazine.
```

```
246    3_    $aInstitute of Electrical and Electronics Engineers communications magazine

260          $aNew York, NY :$bCommunications Society of Institute of Electrical and Electronics Engineers,$c1979-

300          $avolumes :$billustrations ;$c28 cm

310          $aMonthly,$bJuly 1983-

321          $aBimonthly,$bJan. 1979-May 1983

336          $atext$btxt$2rdacontent

337          $aunmediated$bn$2rdamedia

338          $avolume$bnc$2rdacarrier

362    0_    $aVol. 17, no. 1 (Jan. 1979)-

530          $aAlso issued online.

650    _0    $aTelecommunication$vPeriodicals.

710    2_    $aIEEE Communications Society.

710    2_    $aInstitute of Electrical and Electronics Engineers.

776    1_    $tIEEE communications magazine (Online)$x1558-1896$w(DLC) 2005215227$w(OCoLC)44466257

780    00    $tIEEE Communications Society magazine$x0148-9615$w(DLC) 78645258$w(OCoLC)03160000

850          $aAU$aAzTeS$aAzU$aCSt$aCU$aCU-A$aCU-I$aCU-SB$aCaAEU$aCaBVaS$aCaBVaU$aCaOTDT$aCaOTU$aCoFS$aCoU$aCtY-
             KS$aDLC$aDeU$aFMU$aFU$aIC$aICU$aICarbS$aIEN$aIEdS$aIU$aIaU$aInU$aLNT

850          $aMCM$aMChB$aMdBJ$aMdU$aMiD$aMiDW$aMiU$aMnU$aMoKU$aMsSM$aMsU$aN$aNIC$aNN$aNNC$aNRU$aNcD$aNcRS$aNcU$aNjP$aNmL
             S$aPPD$aPPiU$aPSt$aPU$aScCleU$aScU$aTxLT$aTxU$aUPB$aUU$aViU$aVtU$aWU-E$aWvU

891    20    $81$av.$bno.$u12$vr$i(year)$j(month)$wm$x01

891    41    $81.1$a<26>$b<1>$i<1988>$j<01>

994          $aC0$bGZM

997          $aMARCIVE

LEADER    01707nas 22004337a 4500

001       991021974033102122

005       20230814032423.0

006       m o d

007       cr#cn|||

008       000623c19799999nyumr pso 0 a0eng c

010             $a 2005215227

016       7_    $a2046782-5$2DE-600
```

```
022          $a1558-1896
035          $a(OCoLC)44466257
035          $a(CKB)954925479570
035          $a(CONSER) 2005215227
035          $a(DE-599)ZDB2046782-5
035          $a(EXLCZ)99954925479570
037          $bIEEE Service Center, 445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331
042          $ansdp$apcc
050    10    $aISSN RECORD
050    _4    $aTK5101.A1$bI35
082    10    $a621.3
130    0_    $aIEEE communications magazine (Online)
222    _0    $aIEEE communications magazine$b(Online)
245    10    $aIEEE communications magazine$h[electronic resource].
260          $a[New York :$bCommunications Society of Institute of Electrical and Electronics Engineers]
310          $aMonthly
362    1_    $aPrint began in 1979.
588          $aDescription based on: Vol. 17, issue 1 (Jan. 1979); title from IEEE Xplore journal homepage (viewed Se
588          $aLatest issue consulted: Vol. 43, issue 9 (Sept. 2005) (viewed IEEE Xplore website Sept. 20, 2005).
500          $aRefereed/Peer-reviewed
650    _0    $aTelecommunication$vPeriodicals.
650    _6    $aTélécommunications$xPériodiques.
710    2_    $aInstitute of Electrical and Electronics Engineers.
710    2_    $aIEEE Communications Society.
770    0_    $tEuropean Conference on Optical Communication (ECOC)$w(CKB)3400000000013765
780    00    $tIEEE Communications Society Magazine$w(CKB)958480202327$w(DLC)78645258
776    0_    $x0163-6804
906          $aJOURNAL
```

MMS IDs

Document ID:

999503090402121

Network Electronic IDs:

9911025469402121

Network Physical IDs:

999503090402121

mms_mad_ids:

993701683602122, 991021974033102122

mms_ml_ids:

991043123402124

mms_gb_ids:

991007109868102123

mms_lc_ids:

991016969519302125

mms_plt_ids:

991013479141702128

mms_rf_ids:

991013785240402129

Attachment 5B

LC control no.: sh2008112739
LCCN Permalink: https://lccn.loc.gov/sh2008112739
HEADING: Telecommunication Periodicals

000 00528cz a2200169n 450
001 7470976
005 20110729160851.0
008 080311|| anannbabn |n ana
010 __ |**a** sh2008112739
035 __ |**a** (DLC)389242
035 __ |**a** (DLC)sh2008112739
040 __ |**a** DLC |**b** eng |**c** DLC
150 __ |**a** Telecommunication |**v** Periodicals
667 __ |**a** Record generated for validation purposes.
670 __ |**a** Work cat.: Denshi Jōhō Tsūshin Gakkai ... Jōhō Shisutemu Sosaietī Taikai kōen ronbunshū =,
906 __ |**t** 8888 |**u** te00 |**v** 0
953 __ |**a** te00

Save, Print or Email Records (View Help)

Select Download Format: Text (Labelled Display) Press to SAVE or PRINT

Email Text (Labelled Display) to:
Press to SEND EMAIL

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave,
S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 5C

OCLC 4447692 **No holdings in XXX - 430 other holdings**

Continuing Resources

								Rec Stat		**Entered**	19781213	**Replaced**	20220810194910.0
Type	a	**ELvl**		**Srce**	c	**GPub**		**Ctrl**		**Lang**	eng		
BLvl	s	**Form**		**Conf**	0	**Freq**	m	**MRec**		**Ctry**	nyu		
S/L	0	**Orig**		**EntW**		**Regl**	r	**Alph**	a				
Desc		**SrTp**	p	**Cont**		**DtSt**	c	**Dates**	1979	,	9999		

010 80644037 $z sn 78006838
040 NSD $b eng $c NSD $d DLC $d NSD $d DLC $d NST $d OCL $d NST $d NSD $d NST $d AIP $d NST $d AIP $d NST $d IUL $d NST $d MYG $d CUS $d OCL $d MYG $d LYU $d IEEEX $d OCLCQ $d NLM $d OCLCQ $d HNK $d NSD $d NLGGC $d LVB $d OCLCQ $d OCLCF $d DLC $d OCLCO $d IUL $d APUMS $d OCLCQ $d OCLCO $d PUL
012 3 $b 3 $e n $k 1 $l 1 $m 1
016 7 9878326 $2 DNLM
016 7 I03481000 $z SR0058097 $2 DNLM
019 9706618 $a 185057734 $a 255610228 $a 606066334 $a 1011867306 $a 1013261101 $a 1027877852 $a 1082207060 $a 1198531506 $a 1201989981
022 0 0163-6804 $l 0163-6804 $2 1
030 ICOMD9
032 902400 $b USPS
037 $b IEEE Service Center, 445 Hoes Lane, Piscataway, N.J., 08854-4150
042 nsdp $a pcc
050 00 TK5101.A1 $b I13a
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 $0 (CaQQLa)201-0005415 $v Périodiques. $0 (CaQQLa)201-0378307
650 7 Telecommunication. $2 fast $0 (OCoLC)fst01145830
650 17 Telecommunicatietechniek. $2 gtt
655 7 Periodicals. $2 fast $0 (OCoLC)fst01411641

655 7 Periodicals. $2 lcgft $0 http://id.loc.gov/authorities/genreForms/gf2014026139 $0 (uri) http://id.loc.gov/authorities/genreForms/gf2014026139
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
777 0 $t Global communications newsletter $g 1977- $x 2374-1082 $w (DLC) 2014203291 $w (OCoLC)884724337
780 00 $t IEEE Communications Society magazine $x 0148-9615 $w (DLC) 78645258 $w (OCoLC)3160000
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
856 41 $u http://ieeexplore.ieee.org/servlet/opac?punumber=35

Attachment 6A

```
leader 05754cas a2200841 a 4500
001    99168888260001451
005    20230221213022.0
008    910719d19922003nyumr p       0   a0eng c
010    ##$a   92644086  $zsn 91002194
012    ##$a2 $i9210 $j1 $k1 $l1 $m1
016    7#$a9891328 $2DNLM
016    7#$aSR0090527 $2DNLM
016    7#$a008905044 $2Uk
019    ##$a187460948 $a243463725 $a255587635 $a472729323 $a505018067
$a606078099 $a865857295 $a963612825 $a980082289 $a1001892508
$a1012087685 $a1016223896 $a1031693824 $a1031820689 $a1034565005
$a1043254429 $a1059818452 $a1060559529 $a1080810731 $a1086638849
$a1113250329 $a1114926922 $a1148823875 $a1156755706 $a1236051788
$a1266833378 $a1273362157
022    0#$a1057-7130 $l1057-7130 $21
030    ##$aICSPE5
032    ##$a007689 $bUSPS
035    ##$a(OCoLC)24103498 $z(OCoLC)187460948 $z(OCoLC)243463725
$z(OCoLC)255587635 $z(OCoLC)472729323 $z(OCoLC)505018067
$z(OCoLC)606078099 $z(OCoLC)865857295 $z(OCoLC)963612825
$z(OCoLC)980082289 $z(OCoLC)1001892508 $z(OCoLC)1012087685
$z(OCoLC)1016223896 $z(OCoLC)1031693824 $z(OCoLC)1031820689
$z(OCoLC)1034565005 $z(OCoLC)1043254429 $z(OCoLC)1059818452
$z(OCoLC)1060559529 $z(OCoLC)1080810731 $z(OCoLC)1086638849
$z(OCoLC)1113250329 $z(OCoLC)1114926922 $z(OCoLC)1148823875
$z(OCoLC)1156755706 $z(OCoLC)1236051788 $z(OCoLC)1266833378
$z(OCoLC)1273362157
035    ##$a(OCoLC)ocm24103498
037    ##$bIEEE Service Center, 445 Hoes Ln., POB 1331, Piscataway,
NJ 08855-1331
040    ##$aNSD $beng $cNSD $dWAU $dNST $dNSD $dNST $dEYM $dHUL $dIUL
$dAGL $dNYG $dDLC $dNST $dMYG $dNSD $dNST $dDLC $dNST $dDLC $dOCL
$dMYG $dCUS $dOCL $dMYG $dSYS $dLYU $dIEEEX $dOCLCQ $dNLM $dOCLCQ
$dNSD $dCNU $dMYG $dNSD $dHNK $dOCL $dNSD $dLVB $dOCLCQ $dOCLCF
$dOCLCA $dCNS $dSFB $dUKMGB $dOCLCA $dOCLCQ $dOCLCO $dIUL $dOCLCO
$dPUL $dOCL
042    ##$ansdp $apcc
049    ##$aMAIN
050    00$aTK7867 $b.I374
070    0#$aTK7867.I382
072    #0$aX600
082    00$a621.3815 $220
210    0#$aIEEE trans. circuits syst., 2 Analog digit. signal
process. $b(Print)
222    #0$aIEEE transactions on circuits and systems. 2, Analog and
digital signal processing $b(Print)
```

245 00$aIEEE transactions on circuits and systems. $nII, $pAnalog and digital signal processing : $ba publication of the IEEE Circuits and Systems Society.
246 3#$aInstitute of Electrical and Electronics Engineers transactions on circuits and systems. $n2, $pAnalog and digital signal processing
246 30$aAnalog and digital signal processing
246 30$aTransactions on circuits and systems. $nII, $pAnalog and digital signal processing
246 30$aCircuits and systems. $nII, $pAnalog and digital signal processing
246 30$aCircuits and systems. $n2, $pAnalog and digital signal processing
260 ##$aNew York, NY : $bIEEE, $c©1992-©2003.
300 ##$a12 volumes : $billustrations ; $c28 cm
310 ##$aMonthly
336 ##$atext $btxt $2rdacontent
337 ##$aunmediated $bn $2rdamedia
338 ##$avolume $bnc $2rdacarrier
362 0#$aVol. 39, no. 1 (Jan. 1992)-v. 50, no. 12 (Dec. 2003).
530 ##$aAlso issued on microfiche and microfilm.
580 ##$aMerged with: IEEE transactions on circuits and systems. I, Fundamental theory and applications, to form: IEEE transactions on circuits and systems. I, Regular papers; simultaneously a new companion publication, continuing the numbering of this journal, was introduced: IEEE transactions on circuits and systems. II, Express briefs.
500 ##$aTitle from cover.
650 #0$aElectronic circuits $vPeriodicals.
650 #0$aSignal processing $vPeriodicals.
650 #0$aAnalog electronic systems $vPeriodicals.
650 #0$aSignal processing $xDigital techniques $vPeriodicals.
650 #6$aSystèmes analogiques $vPériodiques.
650 #6$aTraitement du signal $vPériodiques.
650 #6$aTraitement du signal $xTechniques numériques $vPériodiques.
650 #6$aCircuits électroniques $vPériodiques.
650 #7$aSignal processing $xDigital techniques. $2fast $0(OCoLC)fst01118285
650 #7$aAnalog electronic systems. $2fast $0(OCoLC)fst00808288
650 #7$aElectronic circuits. $2fast $0(OCoLC)fst00906874
650 #7$aSignal processing. $2fast $0(OCoLC)fst01118281
655 #7$aPeriodicals. $2fast $0(OCoLC)fst01411641
655 #7$aPeriodicals. $2lcgft $0http://id.loc.gov/authorities/genreForms/gf2014026139 $0(uri) http://id.loc.gov/authorities/genreForms/gf2014026139
710 2#$aInstitute of Electrical and Electronics Engineers, $eissuing body.
710 2#$aIEEE Circuits and Systems Society, $eissuing body.

```
776    08$iOnline version: $tIEEE transactions on circuits and
systems. II, Analog and digital signal processing (Online) $x1558-
125X $w(DLC)  2005215221 $w(OCoLC)44466195
776    08$iOnline version: $tIEEE transactions on circuits and
systems. II, Analog and digital signal processing
$w(OCoLC)631722825
780    01$tIEEE transactions on circuits and systems $x0098-4094
$w(DLC)   75645020 $w(OCoLC)1156950
785    17$tIEEE transactions on circuits and systems. I, Fundamental
theory and applications $x1057-7122 $w(DLC)   92644085
$w(OCoLC)24103431
785    17$tIEEE transactions on circuits and systems. I, Regular
papers $x1549-8328 $w(DLC)  2004242052 $w(OCoLC)54086917
787    1#$tIEEE transactions on circuits and systems. II, Express
briefs $x1549-7747 $w(DLC)  2004242053 $w(OCoLC)54412334
891    33$9853 $81 $av. $bno. $u12 $vr $i(year) $j(month) $wm
891    41$9863 $81 $a<39> $i<1992> $xprovisional
891    41$9863 $81.2 $a<48> $b<1> $i<2001> $j<01>
850    ##$aAAP $aAU $aCSt $aCU-RivP $aCoFS $aCoU $aDLC $aDNAL $aDeU
$aICU $aICarbS $aInLP $aInU $aMCM $aMH-GM $aMMeT $aMdBJ $aMiEM
$aMiU $aMoKL $aMoU $aN $aNIC $aNN $aNRU $aNSyU $aNcD $aNcRS $aNcU
$aNjP $aNjR $aOCU $aOrCS $aPU $aRPB-S $aTU $aTxHR
856    41$uhttp://ieeexplore.ieee.org/servlet/opac?punumber=82
970    ##$aSet 344 $9LOCAL
978    ##$a.b26292397 $9LOCAL
994    ##$a92 $bOCACL
```

Attachment 6B

LC control no.: sh2009124794
LCCN Permalink: https://lccn.loc.gov/sh2009124794
HEADING: Electronic circuits Periodicals

000 00486cz a2200169n 450
001 8044991
005 20110729162631.0
008 091006|| anannbabn |n ana
010 __ |**a** sh2009124794
035 __ |**a** (DLC)440635
035 __ |**a** (DLC)sh2009124794
040 __ |**a** DLC |**b** eng |**c** DLC
150 __ |**a** Electronic circuits |**v** Periodicals
667 __ |**a** Record generated for validation purposes.
670 __ |**a** Work cat.: Journal of circuits, systems, and computers, c1991-
906 __ |**t** 8888 |**u** tc00 |**v** 0
953 __ |**a** tc00

Previous Next

Save, Print or Email Records (View Help)

Select Download Format: Text (Labelled Display) Press to SAVE or PRINT

Email Text (Labelled Display) to: Press to SEND EMAIL

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave,
S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 6C

The Library of Congress

>> Go to Library of Congress Online Catalog

LIBRARY OF CONGRESS AUTHORITIES

Help | New Search | Search History | Headings List | Start Over

Previous Next

MARC Display | Labelled Display

LC control no.: sh2010113087
LCCN Permalink: https://lccn.loc.gov/sh2010113087
HEADING: Signal processing Periodicals

000 00451cz a2200169n 450
001 8366007
005 20110729164255.0
008 100803|| anannbabn |n ana
010 __ |**a** sh2010113087
035 __ |**a** (DLC)478976
035 __ |**a** (DLC)sh2010113087
040 __ |**a** DLC |**b** eng |**c** DLC
150 __ |**a** Signal processing |**v** Periodicals
667 __ |**a** Record generated for validation purposes.
670 __ |**a** Work cat.: Signal processing,
906 __ |**t** 8888 |**u** tc00 |**v** 0
953 __ |**a** tc00

Previous Next

Save, Print or Email Records (View Help)

Select Download Format: Text (Labelled Display) Press to SAVE or PRINT

Email Text (Labelled Display) to: Press to SEND EMAIL

Help - Search - Search History - Headings List - Start Over

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave,
S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 6D

LC control no.: sh 85004770
LCCN Permalink: https://lccn.loc.gov/sh85004770
HEADING: Analog electronic systems

000 00784cz a2200229n 450
001 4657876
005 20120321073001.0
008 860211|| anannbabn |b ana
010 __ |**a** sh 85004770
035 __ |**a** (DLC)sh 85004770
035 __ |**a** (DLC)4561
040 __ |**a** DLC |**c** DLC |**d** DLC
150 __ |**a** Analog electronic systems
450 __ |**a** Analog electronic devices
550 __ |**w** g |**a** Electronic systems
670 __ |**a** Work cat.: Klassen, K.B. Reliability of analogue electronic systems, 1984 |**b** (Analog electronic systems)
670 __ |**a** Engr. index |**b** (Analog systems)
670 __ |**a** IEEE dict. electrical/electronics |**b** (Analog device)
670 __ |**a** McGraw-Hill dict. sci. tech. terms |**b** (Analog device)
670 __ |**a** Fink. Electronic engineers hbk. |**b** (Analog device)
906 __ |**t** 8427 |**u** fk07 |**v** 0
953 __ |**a** fg03

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave, S.E.
Washington, DC 20540

URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 6E

The Library of Congress

>> Go to Library of Congress Online Catalog

LIBRARY OF CONGRESS AUTHORITIES

Help | New Search | Search History | Headings List | Start Over

Previous Next

MARC Display | Labelled Display

LC control no.: sh 85099890

LCCN Permalink: https://lccn.loc.gov/sh85099890

HEADING: Periodicals

000 01324cz a2200337n 450

001 4749694

005 20120717060125.0

008 860211 | anannbabn |b ana

010 __ |**a** sh 85099890

035 __ |**a** (DLC)sh 85099890

035 __ |**a** (DLC)6226910

035 __ |**a** (DLC)sp 85099890

035 __ |**a** (DLC)314952

040 __ |**a** DLC |**c** DLC |**d** DLC

053 _0 |**a** AP |**c** General periodicals

053 _0 |**a** PN4700 |**b** PN5650 |**c** History

150 __ |**a** Periodicals

360 __ |**i** subdivision |**a** Periodicals |**i** under specific subjects, e.g. |**a** Engineering--Periodicals; United States--History--Periodicals

450 __ |**a** Journals (Periodicals)

450 __ |**a** Magazines

550 __ |**w** g |**a** Library materials

550 __ |**w** g |**a** Mass media

550 __ |**w** g |**a** Serial publications

550 __ |**a** Newspapers

550 __ |**a** Press

670 __ |**a** UMI business vocab. |**b** (Journals)

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.

906 __ |**t** 0420 |**u** te03 |**v** 0

910 __ |**a** Proposal saved by tc03 on 05/14/2012 at 17:15:30

953 __ |**a** xx00 |**b** td14

906 __ |**t** 1206 |**v** 0

Previous Next

Save, Print or Email Records (View Help)	
Select Download Format: Text (Labelled Display)	Press to SAVE or PRINT
Email Text (Labelled Display) to:	Press to SEND EMAIL

Help - Search - Search History - Headings List - Start Over

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave,
S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 6F

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

000 00468cz a2200181n 450
001 4771479
005 20120328080105.0
008 860211|| anannbabn |b ana
010 __ |**a** sh 85122398
035 __ |**a** (DLC)sh 85122398
035 __ |**a** (DLC)118164
040 __ |**a** DLC |**c** DLC
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

Save, Print or Email Records (View Help)

Select Download Format: Text (Labelled Display) Press to SAVE or PRINT

Email Text (Labelled Display) to: Press to SEND EMAIL

Library of Congress
URL: https://www.loc.gov/

Mailing Address:
101 Independence Ave,
S.E.
Washington, DC 20540

Library of Congress Authorities
URL: http://authorities.loc.gov/
Library of Congress Online Catalog
URL: https://catalog.loc.gov/

Questions, comments, error reports: Contact Us

Attachment 6G

OCLC 24103498 **No holdings in XXX - 340 other holdings**

Continuing Resources

						Rec Stat		**Entered**	19910719	**Replaced**	20230221080222.8
Type	a	**ELvl**		**Srce**		**GPub**		**Ctrl**		**Lang**	eng
BLvl	s	**Form**		**Conf**	0	**Freq**	m	**MRec**		**Ctry**	nyu
S/L	0	**Orig**		**EntW**		**Regl**	r	**Alph**	a		
Desc	a	**SrTp**	p	**Cont**		**DtSt**	d	**Dates**	1992, 2003		

010 92644086 $z sn 91002194
040 NSD $b eng $c NSD $d WAU $d NST $d NSD $d NST $d EYM $d HUL $d IUL $d AGL $d NYG $d DLC $d NST $d MYG $d NSD $d NST $d DLC $d NST $d DLC $d OCL $d MYG $d CUS $d OCL $d MYG $d SYS $d LYU $d IEEEX $d OCLCQ $d NLM $d OCLCQ $d NSD $d CNU $d MYG $d NSD $d HNK $d OCL $d NSD $d LVB $d OCLCQ $d OCLCF $d OCLCA $d CNS $d SFB $d UKMGB $d OCLCA $d OCLCQ $d OCLCO $d IUL $d OCLCO $d PUL $d OCL
012 2 $i 9210 $j 1 $k 1 $l 1 $m 1
016 7 9891328 $2 DNLM
016 7 SR0090527 $2 DNLM
016 7 008905044 $2 Uk
019 187460948 $a 243463725 $a 255587635 $a 472729323 $a 505018067 $a 606078099 $a 865857295 $a 963612825 $a 980082289 $a 1001892508 $a 1012087685 $a 1016223896 $a 1031693824 $a 1031820689 $a 1034565005 $a 1043254429 $a 1059818452 $a 1060559529 $a 1080810731 $a 1086638849 $a 1113250329 $a 1114926922 $a 1148823875 $a 1156755706 $a 1236051788 $a 1266833378 $a 1273362157
022 0 1057-7130 $l 1057-7130 $2 1
030 ICSPE5
032 007689 $b USPS
037 $b IEEE Service Center, 445 Hoes Ln., POB 1331, Piscataway, NJ 08855-1331
042 nsdp $a pcc
050 00 TK7867 $b .I374
070 0 TK7867.I382
072 0 X600
082 00 621.3815 $2 20
090 $b
210 0 IEEE trans. circuits syst., 2 Analog digit. signal process. $b (Print)
222 0 IEEE transactions on circuits and systems. 2, Analog and digital signal processing $b (Print)
245 00 IEEE transactions on circuits and systems. $n II, $p Analog and digital signal processing : $b a publication of the IEEE Circuits and Systems Society.
246 3 Institute of Electrical and Electronics Engineers transactions on circuits and systems. $n 2, $p Analog and digital signal processing
246 30 Analog and digital signal processing
246 30 Transactions on circuits and systems. $n II, $p Analog and digital signal processing
246 30 Circuits and systems. $n II, $p Analog and digital signal processing
246 30 Circuits and systems. $n 2, $p Analog and digital signal processing
260 New York, NY : $b IEEE, $c ©1992-©2003.
300 12 volumes : $b illustrations ; $c 28 cm

310 Monthly
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
362 0 Vol. 39, no. 1 (Jan. 1992)-v. 50, no. 12 (Dec. 2003).
500 Title from cover.
530 Also issued on microfiche and microfilm.
580 Merged with: IEEE transactions on circuits and systems. I, Fundamental theory and applications, to form: IEEE transactions on circuits and systems. I, Regular papers; simultaneously a new companion publication, continuing the numbering of this journal, was introduced: IEEE transactions on circuits and systems. II, Express briefs.
650 0 Electronic circuits $v Periodicals.
650 0 Signal processing $v Periodicals.
650 0 Analog electronic systems $v Periodicals.
650 0 Signal processing $x Digital techniques $v Periodicals.
650 6 Systèmes analogiques $0 (CaQQLa)201-0003685 $v Périodiques. $0 (CaQQLa)201-0378307
650 6 Traitement du signal $0 (CaQQLa)201-0032324 $v Périodiques. $0 (CaQQLa)201-0378307
650 6 Traitement du signal $0 (CaQQLa)201-0087536 $x Techniques numériques $0 (CaQQLa)201-0087536 $v Périodiques. $0 (CaQQLa)201-0378307
650 6 Circuits électroniques $0 (CaQQLa)201-0028164 $v Périodiques. $0 (CaQQLa)201-0378307
650 7 Signal processing $x Digital techniques. $2 fast $0 (OCoLC)fst01118285
650 7 Analog electronic systems. $2 fast $0 (OCoLC)fst00808288
650 7 Electronic circuits. $2 fast $0 (OCoLC)fst00906874
650 7 Signal processing. $2 fast $0 (OCoLC)fst01118281
655 7 Periodicals. $2 fast $0 (OCoLC)fst01411641
655 7 Periodicals. $2 lcgft $0 http://id.loc.gov/authorities/genreForms/gf2014026139 $0 (uri) http://id.loc.gov/authorities/genreForms/gf2014026139
710 2 Institute of Electrical and Electronics Engineers, $e issuing body.
710 2 IEEE Circuits and Systems Society, $e issuing body.
776 08 $i Online version: $t IEEE transactions on circuits and systems. II, Analog and digital signal processing (Online) $x 1558-125X $w (DLC) 2005215221 $w (OCoLC)44466195
776 08 $i Online version: $t IEEE transactions on circuits and systems. II, Analog and digital signal processing $w (OCoLC)631722825
780 01 $t IEEE transactions on circuits and systems $x 0098-4094 $w (DLC) 75645020 $w (OCoLC)1156950
785 17 $t IEEE transactions on circuits and systems. I, Fundamental theory and applications $x 1057-7122 $w (DLC) 92644085 $w (OCoLC)24103431
785 17 $t IEEE transactions on circuits and systems. I, Regular papers $x 1549-8328 $w (DLC) 2004242052 $w (OCoLC)54086917
787 1 $t IEEE transactions on circuits and systems. II, Express briefs $x 1549-7747 $w (DLC) 2004242053 $w (OCoLC)54412334
850 AAP $a AU $a CSt $a CU-RivP $a CoFS $a CoU $a DLC $a DNAL $a DeU $a ICU $a ICarbS $a InLP $a InU $a MCM $a MH-GM $a MMeT $a MdBJ $a MiEM $a MiU $a MoKL $a MoU $a N $a NIC $a NN $a NRU $a NSyU $a NcD $a NcRS $a NcU $a NjP $a NjR $a OCU $a OrCS $a PU $a RPB-S $a TU $a TxHR
856 41 $u http://ieeexplore.ieee.org/servlet/opac?punumber=82

Attachment 7

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. Program Presentation for Re-Accreditation by the American Library Association, School of Information, San Jose State University, 2022.

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
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

Hall-Ellis, Sylvia D. "Nudges and Decision Making: A Winning Combination." *The Bottom Line 28*, no. 4 (July 2015): 133-136.

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. "Metadata Competencies for Entry-Level Positions: What Employers Expect as Reflected in Position Descriptions, 2000-2013." *Journal of Library Metadata 15*, no. 2 (June 2015): 102-134.

Hall-Ellis, Sylvia D. "Onboarding to Improve Library Retention and Productivity." *The Bottom Line 27*, no. 4 (October 2014).

Hall-Ellis, Sylvia D. "Accept, Coach, and Inspire: A Formula for Success." *The Bottom Line 27*, no. 3 (July 2014): 103-106.

Hall-Ellis, Sylvia D. *Reward Systems for Staff in Higher Education Institutions: Case Studies of 15 Higher Education Institutions in Colorado.* Capstone Thesis. Denver, Colo.: University of Denver, University College, 2014.

Hall-Ellis, Sylvia D. "Reward Systems Promote High-Performance Work Teams Achieving Library Mission." *The Bottom Line 27*, no. 2 (April 2014): 66-69.

Hall-Ellis, Sylvia D. "Investment in Staff Development for Seeking External Grant Funds." *The Bottom Line 27*, no. 1 (January 2014): 22-25.

Hall-Ellis, Sylvia D. "Staff Investments for High Performance Teams." *The Bottom Line 26*, no. 4 (October 2013): 149-152.

Hall-Ellis, Sylvia D. and Deborah S. Grealy. "Service Learning in LIS Education: A Case for Holistic Assessment." *Catholic Library World* 82, no. 3 (March 2012): 178-187.

Hall-Ellis, Sylvia D., and Deborah S. Grealy. "The Dreyfus Model of Skill Acquisition: A Career Development Framework for Succession Planning and Management in Academic Libraries." *College and Research Libraries* (June 2012). http://crl.acrl.org/content/early/2012/06/19/crl12-349.full.pdf+html

Hall-Ellis, Sylvia D. "Cataloger Competencies…What Do Employers Require?" *Cataloging & Classification Quarterly* 46, no. 3 (2008): 305-330. http://ccq.haworthpress.com/doi:10.1080/01639370802034565

Hall-Ellis, Sylvia D. "Subject Access for Readers' Advisory Services: Their Impact on Contemporary Spanish Fiction in Selected Public Library Collections." *Public Library Quarterly* 27, no.1 (2007): 1-18. http://plq.haworthpress.com/doi:10.1080/01616840802122377

Hall-Ellis, Sylvia D. "Language Proficiencies among Catalogers and Technical Services Librarians." *Technical Services Quarterly* 25, no. 2 (2007) 31-47. http://tsq.haworthpress.com/doi:10.1300/J124v25n02_03

Hall-Ellis, Sylvia D. "Cataloging Electronic Resources & Metadata: Employers' Expectations as Reflected in *American Libraries and AutoCAT,* 2000-2005." *Journal of Education for Library and Information Science* 47, no. 1 (2006): 38-51.

Hall-Ellis, Sylvia D. "Descriptive Impressions of Managerial & Supervisory Cataloger Positions as Reflected in *American Libraries, AutoCAT,* and the *Colorado State Library Jobline,* 2000-2004: A Content Analysis of Education, Competencies, and Experience." *Cataloging & Classification Quarterly* 42, no. 1 (2006): 55-88.

Hall-Ellis, Sylvia D. "Descriptive Cataloging Proficiencies among Beginning Students: A Comparison among Traditional and Virtual Class Students." *Journal of Library & Information Services in Distance Education* 2, no. 2 (2005): 13-44.

Hall-Ellis, Sylvia D. "Descriptive Impressions of Entry-Level Cataloger Positions as Reflected in *American Libraries, AutoCAT,* and the *Colorado State Library Jobline,* 2000-2003." *Cataloging & Classification Quarterly* 40, no. 2 (2005): 33-72.

Hall-Ellis, Sylvia D. and Mary Ann Berry. "The Impact of Library Resource Centers on Academic Achievement in Selected Public Schools in South Texas: Preliminary Findings." *Texas Library Journal* 71, no. 2 (Summer 1995): 94-97.

Hall-Ellis, Sylvia D. "Visual Arts as Foundation for Successful Library Automation: The Rocky Mountain College of Art & Design Experience." *Art Reference Serials Quarterly* 4 (1994): 43-54.

Hall, Sylvia D. *High School Databases: An Examination of Bibliographic Data Elements*. Dissertation. Pittsburgh, Pa.: University of Pittsburgh, School of Library and Information Science, 1985.

Technical Reports

Hall-Ellis, Sylvia D. *Preparing Catalogers and Metadata Specialists Through Competency-Based Education: The San José State University iSchool Experience.* Report for the 2021 Re-Accreditation Program Presentation to the American Library Association. San José, Calif.: San José State University iSchool, 2020.

Hall-Ellis, Sylvia D. *Colorado Community College System Grant Handbook.* Denver, Colo.: Colorado Community College System, 2015.

.

Faculty Voices: Testimonials from the Frontiers of a Development Education Redesign. Elaine DeLott Baker, Marilyn Smith, and Sylvia D. Hall-Ellis, eds. Denver, Colo.: Colorado Community College System, 2014.

Lewis, Melanie, Jamie M. Van Leeuwen, and Sylvia D. Hall-Ellis. *Project Homeless Connect 7 Event Evaluation.* Denver, Colo.: University of Colorado Denver, 2009.

Hall-Ellis, Sylvia D. *Grant Writing Tips and Resources.* Denver, Colo.: University of Denver, 2008-2014. http://portfolio.du.edu/grants

Hall-Ellis, Sylvia D. and Duan Zhang. *Project Homeless Connect 6 Event Evaluation.* Denver, Colo.: Center for Community Engagement and Service Learning, 2008.

Hall-Ellis, Sylvia D. *Strategic Plan for Denver Medical Library System: Final Report.* Denver, Colo.: HealthONE and Denver Medical Library, 2008.

Hall-Ellis, Sylvia D. and Duan Zhang. *Project Homeless Connect 5 Event Evaluation.* Denver, Colo.: Center for Community Engagement and Service Learning, 2008.

Hall-Ellis, Sylvia D. *Strategic Plan for Denver Medical Library System: Phase Two Report.* Denver, Colo.: HealthONE and Denver Medical Library, 2007.

Hall-Ellis, Sylvia D. and Duan Zhang. *Project Homeless Connect 4 Event Evaluation.* Denver, Colo.: Center for Community Engagement and Service Learning, 2007.

Hall-Ellis, Sylvia D. *Strategic Plan for Denver Medical Library System: Phase One Report.* Denver, Colo.: HealthONE and Denver Medical Library, 2007.

Hall-Ellis, Sylvia D. *Denver Public Library: Opportunities for Change.* Denver, Colo.: University of Denver, Colorado Community-Based Research Network & Metropolitan Organization of People, 2005.

Hall-Ellis, Sylvia D. *Resources in Grant Writing for Colorado Schools and Libraries.* Sponsored by the Colorado Department of Education, Educational Telecommunications Unit, 1999. Revised September 2000.

Hall-Ellis, Sylvia D. *Lewis & Clark Fellows Concept Paper for the Bicentennial Commemoration.* Vancouver, Wash.: Lewis and Clark Bicentennial Council, 1998.

Hall-Ellis, Sylvia D. and Mary Ann Berry. *The Impact of Library Resource Centers on Academic Achievement in Public Schools in Texas: The Final Report.* Prepared under the sponsorship of the Research Enhancement Fund award from Sam Houston State University, the Texas Association of School Librarians, the Children's Services Round Table, and the Young Adults' Services Round Table. Huntsville, Tex.: Sam Houston State University, College of Education and Applied Science, 1997.

Hall-Ellis, Sylvia D. *The Impact of Library Resource Centers on Academic Achievement in Selected Public Schools in Texas.* Huntsville, Tex.: Sam Houston State University, College of Education and Applied Science, 1997.

Hall-Ellis, Sylvia D. *Planning for Educational Technology: the Distance Education Implementation Phase: An Investigation of Technology and Telecommunication Needs for Region One Education Service Center, South Texas Community College, TCI Cablevision of South Texas, Inc., Tech Prep of the Rio Grande Valley, Inc., Texas State Technical College, Centro Cultural en el Valle de Texas, McAllen Independent School District, Harlingen Consolidated Independent School District, Donna Independent School District, Edinburg Consolidated Independent School District, La Joya Independent School District, Mercedes Independent School District, Pharr-San Juan-Alamo Independent School District, Sharyland Independent School District, Easter Seal Society of the Rio Grande Valley, Inc., and McAllen Memorial Library.* Harlingen, Tex.: Tech Prep of the Rio Grande Valley, 1996.

Hall-Ellis, Sylvia D. "Barcodes for the Texas Library Connection." Prepared under the sponsorship of the Office of Technology Services, Texas Education Agency. Austin, Tex.: TENET News and Conferences, March 1995.

Hall-Ellis, Sylvia D. *[et. al.] Planning for Educational Technology: A Study of Future Technology Needs for the Donna Independent School District, Region One Education Region Service Center, Tech Prep of the Rio Grande Valley, Inc. South Texas Community College, and the Department of Library Science, Sam Houston State University.* Research team: Sylvia D. Hall-Ellis, Ruth Ann Riggins, Noe Torres, Patricia G. Bubb, and Michael D. Bell. Harlingen, Tex.: Tech Prep of the Rio Grande Valley, 1994. Funded through a grant award from the Texas Education Agency.

Hall-Ellis, Sylvia D. and Mary Ann Berry. *The Impact of Library Resource Centers on Academic Achievement in Selected Public Schools in South Texas.* Huntsville, Tex.: Sam Houston State University, College of Education and Applied Science, 1993. Funded through a grant award from the Sam Houston State University Research Enhancement Fund.

Hall-Ellis, Sylvia D., Alice Krueger, and Linda Brannan. *Thesaurus Development for National Curriculum Materials Database at the Eisenhower National Clearinghouse for Mathematics and Science Education, Columbus, Ohio.* Developed under the sponsorship of Mid-Continent Regional Educational Laboratory Corporate Library, Aurora, Colo. Washington, D.C.: National Science Foundation; Columbus, Ohio: ERIC Clearinghouse for Mathematics and Science Education, 1993.

Hall-Ellis, Sylvia D. and Clarence L. Coffindaffer. *Partners in Progress: The 1992 Montana Library Federation Study Final Report*. Helena, Mont: Montana State Library and The Blue Bear Group, Inc., 1992.

Hall-Ellis, Sylvia D. and Clarence L. Coffindaffer. *Montana Federation Study Identification Paper*. Denver, Colo.: The Blue Bear Group, Inc., 1992.

Bruntjen, Scott and Sylvia D. Hall. *Recommendations on the Development of System-Wide Efforts of the Northern Waters Library Service.* Ashland, Wisc.: Northern Waters Library Service and The Blue Bear Group, Inc., 1989.

Hall, Sylvia D. *The Iowa Union List of Serials as A Part of The Iowa Locator: Planning Document*. Des Moines, Ia.: State Library of Iowa, 1988.

Hall, Sylvia D. *Iowa Computer-Assisted Network (ICAN Users' Manual. IBM Compatible Edition: Version 7.0.* Des Moines, Ia.: State Library of Iowa, 1988.

Hall, Sylvia D. *Iowa Computer-Assisted Network (ICAN Users' Manual. IBM Compatible Edition: Version 5.0.* Des Moines, Ia.: State Library of Iowa, 1986.

Hall, Sylvia D. *Iowa Computer-Assisted Network (ICAN Users' Manual. Apple MacIntosh Edition: Version 5.0.* Des Moines, Ia.: State Library of Iowa, 1986.

Bruntjen, Scott and Sylvia D. Hall. *The District of Columbia Public Library Planning for Retrospective Conversion of Bibliographic Records and Automation Issues for the 1990's: Final Report*. Central City, Colo.: The Blue Bear Group, Inc., 1986.

Bruntjen, Scott and Sylvia D. Hall. *The Iowa Locator: Final Report.* Central City, Colo.: The Blue Bear Group, Inc., 1986.

Bruntjen, Scott and Sylvia D. Hall. *Discovering Resource Sharing Treasures: Accessing Pennsylvania's High School Library Collections*. Harrisburg, Pa.: State Library of Pennsylvania, Bureau of School Library Media Resources, 1985.

Hall, Sylvia D. *Retrospective Conversion and the Completeness of Cataloging in Pennsylvania High School Libraries.* Pittsburgh, Pa.: PRLC, Inc., 1985.

Bruntjen, Scott and Sylvia D. Hall. *The Iowa Locator.* Des Moines, Ia.: State Library of Iowa, 1985- http://www.statelibraryofiowa.org/ld/silo/locator

Bruntjen, Scott and Sylvia D. Hall. *ICAN Analysis*. Des Moines, Ia.: State Library of Iowa, 1985.

Bruntjen, Scott and Sylvia D. Hall. *Zebras: Bar Codes, Standards, and Library Automation*. Central City, Colo.: The Blue Bear Group, Inc., 1985.

Hall, Sylvia D. and Scott Bruntjen. *Access Pennsylvania.* Harrisburg, Pa.: State Library of Pennsylvania, 1984- http://www.accesspa.org

Hall, Sylvia D. *Reconfiguration of the ITAC Cataloging Data Base to Machine Readable (MARC) Format*. Classified Document. Arlington, Va.: U. S. Army Intelligence and Threat Analysis Center, 1984.

Bruntjen, Scott and Sylvia D. Hall. *South Dakota Library Automation Plan: Final Report*. Pittsburgh, Pa.: PRLC, Inc., 1982. Reprinted by the South Dakota State Library, 1983.

Bruntjen, Scott and Sylvia D. Hall. *Altoona Automation Plan: Final Report prepared for the Altoona Area Public Library and the Altoona District Library Center*. Pittsburgh, Pa.: PRLC, 1983.

Bruntjen, Scott, Sylvia D. Hall and Paul J. Pugliese. *College Space Utilization Study*. Pittsburgh, Pa.: PRLC, Inc., 1983.

Hall, Sylvia D. *Pennsylvania Public Library Film Center Union Catalog Cataloging and Technical Services Procedures Manual*. Pittsburgh, Pa.: PRLC, Inc., 1982.

Hall, Sylvia D. *History of Library Development in Pennsylvania: A Review and Content Analysis of the Plans, 1955-1980*. Pittsburgh, Pa.: PRLC, Inc., 1982.

Hall, Sylvia D. *Newspapers on Microfilm: A Listing of Newspapers in Allegheny, Chemung, Schuyler, Steuben, and Yates Counties*. Ithaca, N.Y.: South Central Reference and Research Council, 1981.

Hall, Sylvia D. *OCLC/ILL Subsystem at Southern Tier Library System.* Albany, N.Y.: SUNY/OCLC Network, 1980.

Hall, Sylvia D. *Retrospective Conversion for Major Public Libraries in South Central New York State: A Technical Report*. 2 vols. Corning, N.Y.: Southern Tier Library System, 1979-1980.

Hall, Sylvia D. *The Librarian and the Mexican-American Patron in Texas.* Austin, Tex.: Texas State Library, 1978.

Other Publications

Hall-Ellis, Sylvia D., ed. *Library and Information Science Program Self-Study Document for Accreditation by the American Library Association.* St. Paul, MN: St. Catherine University, 2017. 255 p.

Hall-Ellis, Sylvia D., and Robert O. Ellett, Jr., guest editors. *RDA Testing: Lessons Learned and Challenges Revealed: A Special Issue of Cataloging & Classification Quarterly* 49, no. 7-8 (November 2011).

Hall-Ellis, Sylvia D. and Robert O. Ellett, Jr. *Fundamentals of Cataloging I: An Online ALCTS Course.* Chicago, Ill.: American Library Association, 2009.

Hall-Ellis, Sylvia D., Angela J. Kinney and Martha Ann Bace, editors. *Best Practices in Cataloging Education Identified at the 2007 ALCTS Pre-conference: A Special Issue of the Journal for Library and Information Science Education* 49, no. 2 (Spring 2008).

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/aba/professional/

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, Louisiana, June 26, 2006. http://dlist.sir.arizona.edu/

Hall-Ellis, Sylvia D., guest editor, with Deborah S. Grealy, Clara L. Sitter, and Tassos Petrou. *Library Students' Voices in Colorado: An Issue of Colorado Libraries* 31:1 (Spring 2005).

Hall-Ellis, Sylvia D., ed. *Library and Information Science Program Self-Study Document for Accreditation by the American Library Association.* Denver, Colo.: University of Denver, College of Education, 2003. 125 p. with CD-ROM.

Hall-Ellis, Sylvia D. and Deborah S. Grealy, guest editors. *Library Education in Colorado: An Issue of Colorado Libraries* 29, no. 2 (Summer 2003).

Hall-Ellis, Sylvia D., ed. *Library and Information Science Program Self-Study Document for Accreditation by the American Library Association.* Denver, Colo.: University of Denver, College of Education, 2003.

Hall-Ellis, Sylvia D. "Adaptive Furniture for the ADA-Qualified: An Investigative Study." 2001. Unpublished manuscript.

Hall-Ellis, Sylvia D. "Cataloging Electronic Serials: A Study in User Access and Article Delivery." 2001. Unpublished manuscript.

Hall-Ellis, Sylvia D. "E-books: Acquisition and Circulation Issues in Public Libraries." 2001. Unpublished manuscript.

Hall-Ellis, Sylvia D. "Authority Control and Its Importance in School Library Media Online Catalogs." 1999. Unpublished manuscript.

Hall, Sylvia D. "Cooperation Improving Service in San Antonio System." *Texas Libraries* XXXVII (Spring 1976): 27-29.

Hall, Sylvia D. "Summer is Sea Monstrously Fun!" *Texas Library Journal* L (December 1974): 224-226.

Hall, Sylvia D. "A Brief Annotated Bibliography of Non-book Materials on the Mexican American." *Texas Library Journal* XLVIII (October 1972): 213-232.

Book Reviews

ALA Book of Library Grant Money. Ann Kepler, ed. 8th ed. Chicago, IL: American Library Association, 2011. 978-0-8389-1058-0, $175.00 [*Colorado Libraries,* June 2012]

Developing a Compensation Plan for Your Library. Paula M. Singer and Laura L. Francisco, comps. 2nd ed. Chicago, IL: American Library Association, 2009. 978-0-8389-0985-0, $57.00 [*Colorado Libraries,* March 2012]

Frugal Librarian. Carol Smallwood, ed. Chicago, IL: American Library Association, 2011. 978-0-83891-075-7, $42.00 [*Colorado Libraries,* February 2012]

Dowlin, Ken. *Getting the Money: How to Succeed in Fundraising for Public and Nonprofit Libraries.* Westport, Conn.: Libraries Unlimited, 2008. 978-1-59158-597-X, $50.00 [*Colorado Libraries,* February 2009]

Lundahl, Mats. *Bebo de Cuba; Bebo Valdés y Su Mundo*, by Mats Lundahl. Traducción de Linda Oakeshott Dragó. Barcelona: RBA Libros, 2008. 978-849-86-7259-6, $33.99 [*Críticas*, November 2008]

Bonelli, Florencia. *Marlene*, by Florencia Bonelli. Buenos Aires: Aguilar, Altea, Taurus, Alfaguara, 2008. 978-987-04-0995-3, $24.95 [*Críticas*, October 2008]

Keret, Etgar. Traducción de Ana María Bejarano. *Pizzería Kamikaze y Otras Relatos.* México, D.F.: Editorial Sexto Piso, 2008. 968-5679-29-0, no price given [*Críticas*, September 2008]

Littauer, Marita, and Florence Littauer. *Enriquece tu Comunicación. Miami, Fla.: Editorial Unilit, 2008.* 978-0-7899-1521-4, $11.99 [*Críticas*, August 2008]

Martínez, Guillermo. *La Muerte Lenta de Luciana B.* New York: Rayo Planeta, 2008. 978-0-06-156551-9, $14.95 [*Críticas*, May 2008]

Matthews, Joseph R. *The Evaluation and Measurement of Library Services.* Westport, Conn.: Libraries Unlimited, 2007. 978-1-59158-532-9, $50.00 [*Colorado Libraries,* April 2008]

Gómez-Jurado, Juan. *A Masacre de Virginia Tech: Anatomía de una Mente Torturada.* Barcelona: Ediciones El Andén, 2007. 978-84-935789-4-7, €16.50 [*Críticas*, February, 2008]

Matthews, Joseph R. *Library Assessment in Higher Education.* Westport, Conn.: Libraries Unlimited, 2007. 978-1-59158-531-2, $45.00 [*Colorado Libraries,* February 2008]

Chacón, Inma. *La Princesa India: Cuando el Viento Azul.* México: Alfaguara, 2006. 970-770398-9, $19.95 [*Críticas*, June 2006]

Vargas Llosa, Mario. *Israel/Palestina: Paz o Guerra Santa.* fotogs. by Morgana Vargas Llosa. Spain/U.S.: Aguilar: Santillana, 2006. 84-03-09691-7, paper, $19.95 [*Críticas*, May 2006]

Findlay, Diane. *Digging into Dewey.* Fort Atkinson, Wisc.: Upstart Books, 2005. 978-1-932146-18-9, $16.95 [*Colorado Libraries,* May 2006]

Pequeñas Resistencias 4: Antología del Nuevo Cuento Norteamericano y Caribeño. Menéndez, Ronaldo, Ignacio Padilla & Enrique del Risco, eds. Madrid**:** Páginas de Espuma, 2005. 84-95642-59-X, paper, $36.95 [*Críticas*, April 2006]

Rueda, André. *Vengo a Salvar a España: Biografía de Un Franco Desconocido.* Madrid**:** Nowtilus (Investigación Abierta), 2005. photogs., bibliog. 84-9763-202-8, paper, $23.95 [*Críticas*, March 2006]

Becerra, Ángela. *El Penúltimo Sueño.* 1st ed. Barcelona: Planeta, 2005. 84-08-05795-2, $25.95. [*Críticas*, January 2006]

Aguilar Camín, Héctor. *La Conspiración de la Fortuna.* 1st ed. México: Planeta, 2005. 970-37-0368-2, $19.95 [*Críticas*, October 2005]

México en Sus Libros. Enrique Florescano with Pablo Mijangos, editors & compilers. 1st ed. México, D.F.: Taurus Aguilar, 2004. 968-19-0783-3, $16.95 [*Críticas*, September 2005]

Historia Económica de México. Coordinator, Enrique Semo. México: Universidad Nacional Autónoma de México, Editorial Oceano de México, 2004. 13 vols. 970-32-0805+3 (obra completa), $9.25 each [*Críticas*, August 2005]

Czarnowsky, Christyne A. and Michael H. Williams. *Managing Your Wired Workforce: A Practical Guide.* Denver, Colo.: Bradford Pub., 2003. 1-883726-79-4, $24.95 [*Colorado Libraries,* 2004]

Abraham Lincoln. Colección Grandes Biografías. Madrid: Edimat Libros, 2003. 84-8403-858-0, €4.95 [*Críticas*, 2004]

Alponte, Juan María. *Colón: el Hombre, el Navegante, la Leyenda.* México, D.F.: Aguilar, 2003. 968-19-1260-8, $16.95 [*Críticas*, 2004]

Olcese Salvatecci, Alfieri. *Cómo Estudiar con Ėxito: Téchnicas yHhábitos Para Aprender Major.* México, D.F.: Alfaomega Grupo Editor, 2002. 970-15-0764-9 [*Críticas*, 2003]

Mujeres Como Islas: Antología de Narradoras Cubanas, Dominicanas, Puertoriqueñas. Edición: Olga Marta Pérez, Thelma Jiménez, Andrés Blanco D., eds. Santo Domingo, República Dominicana: Ediciones Ferilibro, 2002. 959-209-419-5 [*Críticas*, 2003]

Tibol, Raquel. *Los Murales de Diego Rivera: Universidad Autónoma Chapingo.* México, D.F.: Editorial RM, Universidad Autónoma Chapingo, 2002. 968-5208-08-5 [*Críticas*, 2003]

Lindsay-Poland, John. *Emperors in the Jungle: the Hidden History of the U.S. in Panama.* Durham, N.C.: Duke University Press, 2003. 0-8223-3098-9, $18.95 [*Críticas*, 2003]

Kaplan, Allison G. and Ann Marlowe Riedling. *Catalog It! A Guide to Cataloging School Library Materials.* Worthington, Ohio: Linworth Pub., 2002. 1-58683-014-7, $44.95 [*Colorado Libraries,* 2002]

Bardach, Ann Louise. *Cuba Confidential: Love and Vengeance in Miami and Havana.* New York: Random, 2002. 0-375-50489-3, $25.95 [*Library Journal*, 2002]

Swan, James. *Fundraising for Libraries: 25 Proven Ways to Get More Money for Your Library.* New York: Neal Schuman, 2002. 1-55570-433-6, $69.95 [*Colorado Libraries,* 2002]

Puíg de Lange, Victoria. *Sol Con Agua.* Nashville, Tenn.: Editorial Vistazo/Ediciones Reio Negro, 2002. 0-9724506-0-2, $17.75 [*Críticas*, 2002]

The Encyclopedia of Latin American Politics. Edited by Diana Kapiszewski; assistant editor, Alexander Kazan. Westport, Conn.: Oryx Press, 2002. 1-57356-306-4, $74.95 [*Library Journal*, 2002]

Vargas Lizano, Isabel. *Y Si Quieres Saber de Mi Pasado.* Con la colaboración de J.C. Vales. Madrid: Santillana Ediciones Generales, S.L., 2002. 84-03-09278-4, $18.95 [*Críticas*, 2002]

Ruy Sánchez, Alberto. *Los Jardines Secretos de Mogador: Voces de Tierra.* México, D.F.: Alfaguara, S.A., 2001. 968-19-0879-1, $16.95 [*Críticas*, 2002]

Chávez, Ricardo and Celso Santajuliana. *El Final de las Nubes.* Barcelona: RBA Libros, S.A., 2001. 84-7901-760-0, $11.95 [*Críticas*, 2002]

The Power of Language / El Poder de la Palabra: Selected Papers from the Second REFORMA National Conference. Edited by Lillian Castillo-Speed and the REFORMA National Conference Publications Committee. Englewood, Colo.: Libraries Unlimited, 2001. 1-563089459, $35.00 [*Colorado Libraries,* 2001]

Martínez, Rubén. *Crossing Over: A Mexican Family on the Migrant Trail.* Metropolitan: Holt, 2001. 0-8050-4908-8, $26.00 [*Library Journal*, 2001]

Guevara, Ernesto "Che." *The African Dream: the Diaries of the Revolutionary War in the Congo.* Translated from the Spanish by Patrick Camiller. With an introduction by Richard Gott and a foreword by Aleida Guevara March. New York: Grove Press, 2001. 0-8021-3834-9, $13.00 [*Library Journal*, 2001]

Cooper, Gail and Garry Cooper. *New Virtual Field Trips.* Englewood, Colo.: Libraries Unlimited, 2001. 1-56308-887-8, $27.50 [*Colorado Libraries,* 2001]

NATIONAL SERVICE & PROFESSIONAL AFFILIATIONS

American Library Association, Life Member
Association for Library Collections & Technical Services (now CORE)
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
Nominating Committee, 2022-2023
Membership Committee, 2019-2021
Board of Directors, Member At-Large, 2009-2012
Office of Accreditation
Accreditation Panel Member (training completed 2004)
Accreditation Review Panel Member (training completed 2004)

REFORMA, Life Member
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

American Association of Law Libraries (AALL), Life Member Online Audiovisual Catalogers Association (OLAC) 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.

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.

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.
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, 2022, 2023; Fall 2020, 2021, 2022, 2023)
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, 2021; Spring 2021)

University of Denver, Morgridge College of Education HED
5991 – Grant Writing in Higher Education (Spring 2011)
LIS 4010 – Organization of Information (Fall 2002-2009; Winter 2005; Spring 2004-2006)
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 2002-2009; Summer 2005, 2006 – course renumbered LIS 4070, September 2007)
LIS 4401 – Descriptive Cataloging (Winter 2001; Spring 2002, 2003, 2006-2009; Summer 2005)
LIS 4402 – Subject Cataloging (Spring 2001, 2009; Summer 2005, 2006, 2007, 2008)
LIS 4403 – Classification Schemes (Fall 2007, 2008, 2009 (DS)) LIS
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 2006-2009)
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, 2001-2003
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.

Updated June 2023