UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE LLC,
Petitioner

v.

GEOSCOPE TECHNOLOGIES PTE. LTD.
Patent Owner

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Case No. IPR2023-01210
Patent 8,400,358

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**DECLARATION OF SYLVIA D. HALL-ELLIS, PH.D.**

GOOGLE EXHIBIT 1014
Google v. Geoscope

## I. INTRODUCTION

1. My name is Sylvia D. Hall-Ellis. I have been retained as an expert by Google LLC (referred to herein as "Google").

2. I have written this declaration at the request of Google to provide my expert opinion regarding the authenticity and public availability of several publications. My declaration sets forth my opinions in detail and provides the bases 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 declaration.

4. I am being compensated for my time spent working on this matter at my normal consulting rate of $350 per hour, plus reimbursement for any additional reasonable expenses. My compensation is not in any way tied to the content of this declaration, the substance of my opinions, or the outcome of this proceeding. I have no other interests in this proceeding or with any of the parties.

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 fifty years, I have held various positions in the field of library and information resources. I was first employed as a librarian in 1966 and have been involved in the field of library sciences since, holding numerous positions.

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 served as the Chair for the ALA Office of Diversity's Committee on Diversity, as a member of the REFORMA National Board of Directors, and as a member of the Editorial Board for the ALCTS premier cataloging journal, *Library Resources and Technical Services,* and as a Co-Chair of the Membership

Committee for the Library Research Round Table (LRRT) of the American Library Association. Currently I serve 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. I have been deposed twenty-eight times: (1) *Symantec Corp. vs. Finjan*, *Inc.,* Petition for *Inter Partes Review* of U.S. Patent No. 7,613,926, May 26, 2016, on behalf of Symantec Corp.; (2) *Symantec Corp. vs. Finjan*, *Inc.,* 14-cv-299-HSG (N.D. Cal.), on behalf of Symantec Corp., September 14, 2017; (3) one deposition for ten matters: *Intellectual Ventures I LLC vs. AT&T Mobility LLC*; AT&T Mobility II LLC, New Cingular Wireless Services, Inc., SBC Internet Services, Inc., Wayport, Inc., and Cricket Wireless LLC, C.A. No. 12-193 (LPS); *Intellectual Ventures II LLC vs. AT&T Mobility LLC*; AT&T Mobility II LLC, New Cingular Wireless Services, Inc., SBC Internet Services, Inc., Wayport, Inc., and Cricket Wireless LLC, C.A. No. 13-1631 (LPS); *Intellectual Ventures I LLC vs. T-Mobile USA, Inc. and T-Mobile US, Inc.,* C.A. No. 13-1632 (LPS); *Intellectual Ventures II LLC vs. T-Mobile USA, Inc. and T-Mobile US, Inc.,* C.A. No. 13-1633 (LPS); *Intellectual Ventures I LLC, vs. Nextel Operations, Inc., Sprint Spectrum L.P., Boost Mobile, LLC and Virgin Mobile USA, L.P.,* C.A. No. 13-1634

(LPS); *Intellectual Ventures II LLC vs. Nextel Operations, Inc., Sprint Spectrum L.P., Boost Mobile, LLC and Virgin Mobile USA, L.P.,* C.A. No. 13-1635 (LPS); *Intellectual Ventures I LLC, vs. United States Cellular Corporation*, C.A. No. 13-1636 (LPS); *Intellectual Ventures I LLC vs. United States Cellular Corporation*, C.A. No. 13-1637 (LPS); *Intellectual Ventures II LLC vs. AT&T Mobility LLC*, *AT&T Mobility II LLC, New Cingular Wireless Services, Inc.,* C.A. No. 15-799 (LPS); *Intellectual Ventures I LLC vs. T-Mobile USA, Inc. and T-Mobile US, Inc.,* C.A. No. 15-800 (LPS), on behalf of AT&T Mobility LLC; AT&T Mobility II LLC, Boost Mobile, LLC Cricket Wireless LLC, Nextel Operations, Inc., New Cingular Wireless Services, Inc., SBC Internet Services, Inc., Sprint Spectrum L.P., T-Mobile USA, Inc., T-Mobile US, Inc., United States Cellular Corporation Virgin Mobile USA, L.P., and Wayport, Inc., November 15, 2016; (4) *Hitachi Maxell, LTD., v. Top Victory Electronics (Taiwan) Co. Ltd., et al.,* 2:14-cv-1121 JRG-RSP (E.D. Texas), on behalf of Top Victory Electronics (Taiwan) Co. LTD, *et. al.,* January 20, 2016; (5) *Sprint Spectrum, L.P. vs. General Access Solutions, Ltd*., Petition for *Inter Partes Review* of U.S. Patent No. 7,173,916, on behalf of Sprint Spectrum L.P., July 13, 2018; (6) *Nichia Corporation vs. Vizio, Inc*., 8:16-cv-00545; on behalf of Vizio, Inc., October 12, 2018; (7) *Intellectual Ventures I LLC, vs. T-Mobile USA, Inc., T-Mobile US, Inc., Ericsson Inc., and Telefonaktiebolaget LM Ericsson*, 2:17-cv-00557 (JRG), on behalf of T-Mobile

USA, Inc., T-Mobile US, Inc., Ericsson Inc., and Telefonaktiebolaget LM Ericsson, October 19, 2018; (8) Pfizer, Inc. vs. Biogen, Inc., Petition for *Inter Partes Review* of U.S. Patent No. 8,821,873, on behalf of Pfizer, November 3, 2018; (9) *Finjan, Inc. vs. ESET, LLC and ESET SPOL. S.R.O.,* 3:17-cv-00183-CAB-BGS, on behalf of ESET, January 15, 2019; (10) *Finjan, Inc. vs. Cisco Systems, Inc.,* 5:17-cv-00072-BLF-SVK, on behalf of Cisco Systems, Inc., September 6, 2019; (11) *Facebook, Inc., Instagram, LLC and Whatsapp Inc. vs. Blackberry Limited*, Petition for *Inter Partes Review* of U.S. Patent No. 9,349,120 B2, on behalf of Facebook, Inc., Instagram, LLC and Whatsapp Inc. December 20, 2019; (12) *3Shape A/S and 3Shape Inc. v. Align Technology, Inc.,* Petition for *Inter Partes Review* of U.S. Patent No. 7,156,661, IPR 2020-00222 and IPR 2020-00223, August 10, 2020, on behalf of 3Shape A/S and 3Shape Inc.; (13) *Finjan Inc. v. Rapid7, Inc. and Rapid7 LLC*, Northern District of Delaware; 1:18-cv-01519-MN, September 15, 2020; (14) *VLSI Technology LLC v. Intel Corporation*, Western District of Texas, 6:19-cv-00254, 6:19-cv-00255, 6:19-cv-00256, on behalf of Intel Corporation, September 23, 2020; (15) *Finjan Inc. v. Sonicwall, Inc.,* Northern District of California, 5:17-cv-04467-BLF-HRL, on behalf of Sonicwall, Inc., October 27, 2020; (16) *VLSI Technology, LLC v. Intel Corporation*, District of Delaware, 1:18-cv-00966-CFC-CJB, February 5, 2021, on behalf of the Intel Corporation; (17) *Unified Patents, LLC v. Good Kaisha IP*

*Bridge 1*, Petition for *Inter Partes Review* of U. S. Patent 7,817,868, February 11, 2021, on behalf of Unified Patents; (18) *Finjan, Inc. v. Qualsys, Inc.,* Northern District of California, 4:18-cv-07229-YGR, March 1, 2021, on behalf of Qualsys, Inc.; (19) *Qualcomm, Inc. v. Monterey Research LLC*, Petition for *Inter Partes Review* of U. S. Patent 6,534,805, May 6, 2021, on behalf of Qualcomm, Inc.; (20) *Hulu, LLC v. Sound View Innovations, LLC*, Petition for *Inter Partes Review* of U. S. Patent 5,806,062, May 14, 2021, on behalf of Hulu, LLC; (21) *VLSI Technology LLC v. Intel Corporation*, Western District of Texas, 6:19-cv-00254, 6:19-cv-00255 and 6:19-cv-00256, August 3, 2021, on behalf of Intel Corporation; (22) *Liquidia Technologies, Inc. v. United Therapeutics Corporation*, Petition for *Inter Partes Review* of U. S. Patent 10,716,793 B2, October 20, 2021, on behalf of Liquidia Technologies, Inc.; (23) *EcoFactor, Inc. v. Google, Inc.,* Western District of Texas, 6:20-cv-00075 (ADA), 6:20-0078-ADA, and 6:20-cv-00080 ADA, October 27, 2021, on behalf of Google, Inc.; (24) *Liquidia Technologies, Inc. v. United Therapeutics Corporation*, Petition for *Inter Partes Review* of U. S. Patent 10,716,793 B2, March 11, 2022, on behalf of Liquidia Technologies, Inc.; (25) *Juniper Networks, Inc. v. Swarm Technology LLC*, Petition for *Inter Partes Review* of U. S. Patent 9,852,004, May 5, 2022, on behalf of Juniper Networks, Inc.; (26) *ParkerVision, Inc. v. Intel Corporation*, Western

District of Texas, 6:20-cv-108 (ADA), October 26, 2022, on behalf of the Intel Corporation; (27) *CommScope v. TQ Delta*, Petition for *Inter Partes Review* of U. S. Patents 9,094,348 and 10,833,809, February 16, 2023, on behalf of CommScope; and, (28) *WSOU Investments d/b/a Brazos v. Salesforce.com, Inc.* for Western District of Texas, 6:20-cv-01164-ADA and 6:20-cv-01170-ADA, April 18, 2023, on behalf of Salesforce. I have not testified at trial.

10. My full *curriculum vitae* is submitted herewith as Exhibit 1015.

## III. PRELIMINARIES

11. *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.

12. I am informed by counsel that an item is considered authentic if there is sufficient evidence to support a finding that the item is what it is claimed to be. I am also informed that authenticity can be established based on the contents of the documents themselves, such as the appearance, contents, substance, internal patterns, or other distinctive characteristics of the item, taken together with all of the circumstances. I am further informed that an item is considered authentic if it

is at least 20 years old, in a condition that creates no suspicion of its authenticity, and in a place where, if authentic, it would likely be. Lastly, I have been informed that a document's authenticity can be established by comparison with an authentic specimen.

13. I am informed by counsel that a printed publication qualifies as publicly accessible as of the date it was disseminated or otherwise made available such that a person interested in and ordinarily skilled in the relevant subject matter could locate it through the exercise of ordinary diligence.

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

presumption is raised that the portion of the public concerned with the relevant subject matter would know of the printed publication. I also understand that the cataloging and indexing of information that would guide a person interested in the relevant subject matter to the printed publication, such as the cataloging and indexing of an abstract for the printed publication, is sufficient to render the printed publication publicly accessible.

15. I understand that routine business practices, such as general library cataloging and indexing practices, can be used to establish an approximate date on which a printed publication became publicly accessible.

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

17. 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.

18. 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.

19. Librarians consulted with information seekers to verify citations, check availability in union catalogs, printed books catalogs, and 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.

20. 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.

21. 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 no later than the publication date of the citing document.

## IV. ONLINE CATALOGS AND MARC RECORDS

22. 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. The bibliographic data provide points of access and can be searched by a person of ordinary skill in the art

("POSITA") 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 or region or in the global catalog WorldCat.

23. 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.

24. Learning to use an online library catalog begins in elementary school and continues through high school and post-secondary studies. Undergraduate students further develop their skills to use the online catalog at the academic institution where they are studying through information literacy instruction which is provided by professional reference and user experience librarians. The skills required to search, identify, and obtain the resources identified in this Declaration/report are fundamental to using the online catalogs in libraries and

information centers. Therefore, a POSITA who has attained the undergraduate and/or graduate educational levels described above (see paragraph 17) possesses the searching and retrieval skills needed to search library catalogs.

25. Professional catalog and metadata librarians prepare and enhance MARC records to provide points of access for each item in the library collection. Using a set of internationally adopted guidelines, rules for the assignment of classification numbers, and the assignment of subject headings from standardized lists, taxonomies, folksonomies, locally developed lists. An information seeker (including POSITAs) can search the online library catalog in a number of ways to identify a specific item or resources on a defined topic.

26. The continued development of the software that supports integrated online library catalogs resulted in the potential to search by an individual creator or author, title proper or variant title, a series that contains the desired item, subjects, corporate bodies responsible in part for the creation of an item, or standard identification numbers associated with the item (e.g., International Standard Book Numbers (ISBN), International Standard Serial Numbers (ISSN), and Publisher's Numbers). Each of these data elements appears in a prescribed location within the MARC framework so that the software can parse, index, and display data elements resulting from a user-initiated search.

27. 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.

## V. LIBRARY CATALOGING PRACTICES

28. 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.[2]

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[1] The full text of the standard is available from the Library of Congress at http://www.loc.gov/marc/bibliographic/.

[2] Almost every major library in the world is MARC-compatible. *See, e.g.*, *MARC Frequently Asked Questions (FAQ)*, Library of Congress, https://www.loc.gov/marc/faq.html (last visited April 20, 2023) ("MARC is the acronym for MAchine-Readable Cataloging. It defines a data format that emerged

29. 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.[3] As explained by the Library of Congress:

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

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from a Library of Congress-led initiative that began nearly forty years ago. It provides the mechanism by which computers exchange, use, and interpret bibliographic information, and its data elements make up the foundation of most library catalogs used today."). MARC is the ANSI/NISO Z39.2-1994 (reaffirmed 2016) standard for Information Interchange Format.

[3] 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 April 20, 2023).

> 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, http://www.loc.gov/marc/umb/um01to06.html#part2 (last visited April 20, 2023).

30. Thus, almost every major library in the world is MARC-compatible. *See, e.g.*, *MARC Frequently Asked Questions (FAQ)*, LIBRARY OF CONGRESS, https://www.loc.gov/marc/faq.html (last visited April 20, 2023) ("MARC is the acronym for MAchine-Readable Cataloging. It defines a data format that emerged from a Library of Congress-led initiative that began nearly fifty years ago. It provides the mechanism by which computers exchange, use, and interpret bibliographic information, and its data elements make up the foundation of most

library catalogs used today."). MARC is the ANSI/NISO Z39.2-1994 standard (reaffirmed in 2016) for Information Interchange Format. The full text of the standard is available from the Library of Congress at http://www.loc.gov/marc/bibliographic/ (last visited April 20, 2023).

31. 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 or creator of the work is recorded in field 100, an item's International Standard Book Number ("ISBN") is recorded in field 020, an item's International Standard Serial Number ("ISSN") is recorded in field 022, an item's Library of Congress call number is recorded in field 050, and the publication date is recorded in field 260 under the subfield "c." *Id.*[4] If a work is a periodical, then its publication frequency is recorded in field 310, alternate publication frequency is recorded in field 321, and the publication dates (*e.g.*, the first and last publication) are recorded in field 362, which is also

[4] In some MARC records, field 264 is used rather than field 260 to record publication information. *See* http://www.loc.gov/marc/bibliographic/bd264.html (last visited April 20, 2023) ("Information in field 264 is similar to information in field 260 (Publication, Distribution, etc. (Imprint)). Field 264 is useful for cases where the content standard or institutional policies make a distinction between functions").

referred to as the enumeration/chronology field. *See* http://www.loc.gov/marc/bibliographic/bd3xx.html (last visited April 20, 2023).

32. MARC records also include several fields that include subject matter classification information. An overview of MARC record fields is available through the Library of Congress at http://www.loc.gov/marc/bibliographic/. For example, 6XX fields are termed "Subject Access Fields." *See* http://www.loc.gov/marc/bibliographic/bd6xx.html. Among these, for example, is the 650 field; this is the "Subject Added Entry – Topical Term" field. *See* http://www.loc.gov/marc/bibliographic/bd650.html. The 650 field is a "[s]ubject added entry in which the entry element is a topical term." *Id.* These authenticated subject 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.*

33. Further, MARC records include call numbers, which themselves indicate a subject and physical location within the library collections. For example, the 050 field is the "Library of Congress Call Number." *See* http://www.loc.gov/marc/bibliographic/bd050.html (last visited April 20, 2023). A defined portion of the Library of Congress Call Number is the classification number, and "source of the classification number is *Library of Congress Classification* and the *LC Classification-Additions and Changes*." *Id.* Thus,

included in the 050 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 or the National Library of Medicine Classification scheme) and uses it consistently. When the Library of Congress assigns the classification number, it appears as part of the 050 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.

34. Each item in a library has a single classification number. A library selects a classification scheme (*e.g.*, the Library of Congress Classification scheme just described or a similar scheme such as the Dewey Decimal Classification scheme) and uses it consistently. When the Library of Congress assigns the classification number, it appears as part of the 050 field, as discussed above. For MARC records created by libraries other than the Library of Congress (*e.g.*, a university library or a local public library), the classification number may appear in a 09X (*e.g.*, 090) field. *See* http://www.loc.gov/marc/bibliographic/bd09x.html (last visited April 20, 2023).

35. 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."[5] 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.

36. 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 were initially 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

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[5] 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).

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 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.

37. 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, 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."[6] The date upon which the most recent update to field 005 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 exhibits to this report—the date reflected next to the label "Entered" is necessarily on or after the date the library first cataloged and indexed the underlying item.

38. 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. It also 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.

39. 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.

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[6] In this report, I sometimes refer to the "Entered" entry as field 008, characters 00-05.

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

40. *Journals.* In addition to creating records for books, OCLC also hosts records for serial publications. Serial publications have the same collective title but are intended to continue indefinitely with enumeration such as a volume or issue number (*e.g.*, magazines, journals, etc.). In the OCLC bibliographic database, the first issue of the serial publication is typically cataloged, but the date is left open-ended with the use of a punctuation mark such as a dash. Individual issues are not cataloged according to the current national cataloging rules outlined in *RDA: Resource and Access*.

41. MARC records for serial publication in OCLC represent the entire run of the serial title. With knowledge of the first issue published, future issues can be

predicted. In my extensive professional experience, is it highly unusual for a library to stop collecting and shelving a serial publication prior to the end of its publication run. If a subscription to a serial publication ends its run or is cancelled before the end of its run, the library will denote that it has stopped receiving new volumes by filling in the end date in the local MARC record.

42. 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 the receipt of all published issues 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.

43. 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 the serial publications discussed below.

## VI. PUBLICATION

### A. PUBLICATION 1: "Indoor/Outdoor Location of Cellular Handsets Based on Received Signal Strength" by Jian Zhu and Gregory D. Durgin. ("Zhu")

44. Attached hereto as Exhibit 1010 is a copy of a conference paper published in the five-volume set titled *2005 IEEE 61st Vehicular Technology Conference: Path For A Wireless Future : Proceedings* found in the North Carolina State University at Raleigh Libraries. The conference paper titled "Indoor/Outdoor Location of Cellular Handsets Based on Received Signal Strength" by Jian Zhu and Gregory D. Durgin (hereafter "Zhu") appears beginning on page 92 in volume 1. The 2005 IEEE 61st Vehicular Technology Conference (VTC2005-Spring) was held on May 30-June 1, 2005, in Stockholm, Sweden. Exhibit 1010 is a true and correct copy of the Zhu conference paper (volume 1, pages 92-96). I obtained this copy of the conference paper from the North Carolina State University at Raleigh Libraries. Specifically, the text of the Zhu 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 1010 was found within the custody of a library—a place where, if authentic, a copy of this conference proceedings five-volume set would likely be. Exhibit 1010 is a true and correct copy in a condition that creates no suspicion about authenticity.

45. The Zhu conference paper is also available in the *IEEE Xplore* database,[7] which indicated a publication date of December 5, 2005.

46. Attached hereto as Attachment 1A is a true and correct copy of the MARC record for this conference proceedings five-volume set from the North Carolina State University at Raleigh Libraries online catalog. The library ownership is indicated by the presence of the library's code (NRC) in field 856. 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 February 10, 2006, as shown in field 005 ("20060210"). I personally identified and retrieved the library catalog record which is Attachment 1A.

47. Based on finding a copy of Exhibit 1010 in the North Carolina State University at Raleigh Libraries and MARC record in its online library catalog attached as Attachment 1A, it is my opinion that the five-volume set titled *2005*

[7] https://ieeexplore.ieee.org/document/1543256.

*IEEE 61st Vehicular Technology Conference: Path For A Wireless Future : Proceedings* was publicly available at the North Carolina State University at Raleigh Libraries as of October 3, 2005, as indicated in field 008 ("051003").

48. Attached hereto as Attachment 1B is a true and correct copy of the MARC record for the five-volume set titled *2005 IEEE 61st Vehicular Technology Conference: Path For A Wireless Future : Proceedings* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 1B. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 1B, that library code is "IXA," which means that the MARC record for this conference proceedings five-volume set was cataloged at the University of Texas – Austin Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of Texas – Austin Libraries created OCLC record number 61764127 on October 3, 2005, as shown in the "Entered" field ("20051003"). 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 April 16, 2022, as shown in the "Replaced" field ("20220416").

49. Attachment 1B further includes an entry in field 050 ("TL272.5 $b .I18 2005")—as described above, a subject matter classification number consistent

with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment 1B also shows that Exhibit 1010 was catalogued with three descriptor terms reading "Electronics in transportation $v Congresses" (see Attachment 1C, Library of Congress subject heading sh2008119337), "Mobile communication systems $v Congresses" (see Attachment 1D, Library of Congress subject heading sh2008107882), and "Artificial satellites in telecommunication $v Congresses" (see Attachment 1E, Library of Congress subject heading sh2007101479) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 1B was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 050 entry and the field 650 entries. Further, as of October 3, 2005, the MARC record attached hereto as Attachment 1B was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired the five-volume conference proceedings set, 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.

50. Attachment 1B indicates that the five-volume set titled *2005 IEEE 61st Vehicular Technology Conference: Path For A Wireless Future : Proceedings* as cataloged at the University of Texas – Austin Libraries is currently available

from 8 libraries. In view of the above, the five-volume set titled *2005 IEEE 61st Vehicular Technology Conference: Path For A Wireless Future : Proceedings* was publicly available on October 3, 2005, because by that date it had been received, cataloged, and indexed at the University of Texas – Austin Libraries and was part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1010 was published and publicly accessible at least as early as October 3, 2005.

### B. PUBLICATION 2: "Database Correlation Method for GSM Location" by Heikki Laitinen, Jaakko Lahteenmaki, and Tero Nordstrom. ("Laitinen")

51. Attached hereto as Exhibit 1011 is a copy of a conference paper published in the four-volume set titled *IEEE VTS 53rd Vehicular Technology Conference: Proceedings: Connecting the Mobile World* found in the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). The conference paper titled "Database Correlation Method for GSM Location" by Heikki Laitinen, Jaakko Lahteenmaki, and Tero Nordstrom (hereafter "Laitinen") appears beginning on page 2504 in volume 4. The 2001 IEEE 53rd Vehicular Technology Conference (VTC2001-Spring) was held on May 6-9, 2001, in Rhodes, Greece. Exhibit 1011 is a true and correct copy of the Laitinen conference paper (volume 4, pages 2504-2508). I obtained this copy of the conference paper from the Linda Hall Library of Science, Engineering & Technology. Specifically,

the text of the Laitinen 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 1011 was found within the custody of a library—a place where, if authentic, a copy of this conference proceedings four-volume set would likely be. Exhibit 1011 is a true and correct copy in a condition that creates no suspicion about authenticity.

52. The Laitinen conference paper is also available in the *IEEE Xplore* database,[8] which indicated a publication date of August 7, 2002, and the digital repositories *ResearchGate*[9] and *Semantic Scholar*.[10]

53. Attached hereto as Attachment 2A is a true and correct copy of the MARC record for this conference proceedings four-volume set from the Linda Hall Library of Science, Engineering & Technology online catalog. The library ownership is indicated by the presence of the library's code (LHL) in field 049. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC

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[8] https://ieeexplore.ieee.org/document/1543256.

[9] https://www.researchgate.net/publication/3911264_Database_Correlation_Method_for_GSM_Location

[10] https://www.semanticscholar.org/paper/Database-correlation-method-for-GSM-location-Laitinen-Lahteenmaki/f219de697d814916883ef417986df957049278bf

record occurred on January 18, 2002, as shown in field 005 ("20020118"). I personally identified and retrieved the library catalog record which is Attachment 2A.

54. Based on finding a copy of Exhibit 1011 in the Linda Hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 2A, it is my opinion that the four-volume set titled *IEEE VTS 53rd Vehicular Technology Conference: Proceedings: Connecting the Mobile World* was publicly available at the Linda Hall Library of Science, Engineering & Technology as of October 17, 2001, as indicated in field 008 ("011017").

55. Attached hereto as Attachment 2B is a true and correct copy of the MARC record for the four-volume set titled *IEEE VTS 53rd Vehicular Technology Conference: Proceedings: Connecting the Mobile World* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 2B. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 2B, that library code is "NAT," which means that the MARC record for this conference proceedings four-volume set was cataloged at the NASA Langley Research Center Library (Stennis Space Center, Mississippi). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the NASA Langley Research Center Library created OCLC record number 48163980 on October 17, 2001, as

shown in the "Entered" field ("20051003"). 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 January 10, 2023, as shown in the "Replaced" field ("20230110").

56. Attachment 2B further includes an entry in field 050 ("TL272.5 $b .N55 Spring 2001")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment 2B also shows that Exhibit 1011 was catalogued with three descriptor terms reading "Electronics in transportation $v Congresses" (see Attachment 1C, Library of Congress subject heading sh2008119337), "Mobile communication systems $v Congresses" (see Attachment 1D, Library of Congress subject heading sh2008107882), and "Artificial satellites in telecommunication $v Congresses" (see Attachment 1E, Library of Congress subject heading sh2007101479) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 2B was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 050 entry and the field 650 entries. Further, as of October 17, 2001, the MARC record attached hereto as Attachment 2B was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired the four-

volume conference proceedings set, 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.

57. Attachment 2B indicates that the four-volume set titled *IEEE VTS 53rd Vehicular Technology Conference: Proceedings: Connecting the Mobile World* as cataloged at the NASA Langley Research Center Library is currently available from 22 libraries. In view of the above, the four-volume set titled *IEEE VTS 53rd Vehicular Technology Conference: Proceedings: Connecting the Mobile World* was publicly available on October 17, 2001, because by that date it had been received, cataloged, and indexed at the Linda Hall Library of Science, Engineering & Technology and was part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1011 was published and publicly accessible at least as early as October 17, 2001.

## VII. SUMMARY OF OPINIONS

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

| Exhibit | Publication | Publicly Available On or After |
|---|---|---|
| 1010 | Zhu, Jian and Gregory D. Durgin. "Indoor/Outdoor Location of Cellular Handsets Based on Received Signal Strength." *2005 IEEE 61st Vehicular Technology Conference* (vol. 1, pp. 92-96). 5 vols. Piscataway, NJ: IEEE, 2005. | October 3, 2005 |
| 1011 | Laitinen, Heikki, Jaakko Lahteenmaki, and Tero Nordstrom. "Database Correlation Method for GSM Location." *IEEE VTS 53rd Vehicular Technology Conference: Proceedings: Connecting the Mobile World* (vol. 4, pp. 2504-2508). 4 vols. VTC2001 - Spring. Piscataway, NJ: IEEE, ©2001. | October 17, 2001 |

59. 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.

60. 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.

Date: July 12, 2023

Sylvia D. Hall-Ellis, Ph.D.

# ATTACHMENT 1A

001 ocm61764127
003 OCoLC
005 20060210095557.0
008 051003s2005 njua b 101 0 eng d
020 |a0780388879|qsoftbound
020 |a0780388887|qCD-ROM
035 |a(OCoLC)61764127
037 |bIEEE Xplore POP
040 |aIXA|beng|cIXA|dOCLCQ|dE9X
090 |aTL272.5|b.I18 2005
1112 |aIEEE Vehicular Technology Conference|n(61st :|d2005 :|cStockholm, Sweden)
24510|a2005 IEEE 61st Vehicular Technology Conference :|bVTC2005-Spring : Stockholm : Paving the path for a wireless future : proceedings : 30 May-1 June, 2005, Stockholm, Sweden /|cIEEE, IEEE VTS.
24630|aVehicular Technology Conference
24630|aVTC2005-Spring
24630|aPaving the path for a wireless future
264 1|aPiscataway, N.J. :|bIEEE,|c2005.
300 |a5 volumes :|billustrations ;|c28 cm
336 |atext|btxt|2rdacontent
337 |aunmediated|bn|2rdamedia
338 |avolume|bnc|2rdacarrier
500 |a"IEEE Catalog Number: 05CH37631 ; IEEE Catalog Number CD-ROM: 05CH37631C"--T.p. verso.
504 |aIncludes bibliographical references and author index.
596 |a14
650 0|aElectronics in transportation|vCongresses.|0http://id.loc.gov/authorities/subjects/sh2008119337
650 0|aMobile communication systems|vCongresses.|0http://id.loc.gov/authorities/subjects/sh2008107882
650 0|aArtificial satellites in telecommunication|vCongresses.|0http://id.loc.gov/authorities/subjects/sh2007101479
655 7|aConference papers and proceedings.|2lcgft
7102 |aInstitute of Electrical and Electronics Engineers.|0http://id.loc.gov/authorities/names/n79053217
7102 |aVehicular Technology Society.|0http://id.loc.gov/authorities/names/n78095843
85641|yView resource online (NCSU only)|uhttp://proxying.lib.ncsu.edu/index.php?url=http://ieeexplore.ieee.org/servlet/opac?punumber=10360
918 |a1869726

# ATTACHMENT 1B

| OCLC | 61764127 | No holdings in XXX - 8 other holdings | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Books | | | | | | | | | Rec Stat | | Entered | 20051003 | Replaced | 20220416060947.7 | |
| Type | a | ELvl | l | Srce | d | Audn | | Ctrl | | | Lang | eng | | | |
| BLvl | m | Form | | Conf | 1 | Biog | | MRec | | | Ctry | nju | | | |
| | | Cont | b | GPub | | LitF | 0 | Indx | 1 | | | | | | |
| Desc | a | Ills | a | Fest | 0 | DtSt | s | Dates | 2005, | | | | | | |

040 IXA $b eng $c IXA $d OCLCQ $d E9X $d OCLCF $d OCLCQ $d OCL $d OCLCO $d OCLCA $d OCLCO
020 0780388879 $q (softbound)
020 9780780388871 $q (softbound)
020 0780388887 $q (CD-ROM)
020 9780780388888 $q (CD-ROM)
037 $b IEEE Xplore POP
050 4 TL272.5 $b .I18 2005
090 $b
111 2 IEEE Vehicular Technology Conference $n (61st : $d 2005 : $c Stockholm, Sweden)
245 10 2005 IEEE 61st Vehicular Technology Conference : $b VTC2005-Spring : Stockholm : Paving the path for a wireless future : proceedings : 30 May-1 June, 2005, Stockholm, Sweden / $c IEEE, IEEE VTS.
246 30 Vehicular Technology Conference
246 30 VTC2005-Spring
246 30 Paving the path for a wireless future
260 Piscataway, N.J. : $b IEEE, $c 2005.
300 5 volumes : $b illustrations ; $c 28 cm
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
500 "IEEE Catalog Number: 05CH37631 ; IEEE Catalog Number CD-ROM: 05CH37631C"--Title page verso.
504 Includes bibliographical references and author index.
530 Also issued online.
650 0 Electronics in transportation $v Congresses.
650 0 Mobile communication systems $v Congresses.
650 0 Artificial satellites in telecommunication $v Congresses.
650 6 Électronique dans le transport $0 (CaQQLa)201-0022000 $v Congrès. $0 (CaQQLa)201-0378219
650 6 Radiocommunications mobiles $0 (CaQQLa)201-0023226 $v Congrès. $0 (CaQQLa)201-0378219
650 6 Satellites artificiels dans les télécommunications $0 (CaQQLa)201-0036360 $v Congrès. $0 (CaQQLa)201-0378219
650 7 Artificial satellites in telecommunication. $2 fast $0 (OCoLC)fst00817444
650 7 Electronics in transportation. $2 fast $0 (OCoLC)fst00907632
650 7 Mobile communication systems. $2 fast $0 (OCoLC)fst01024207
655 7 Conference papers and proceedings. $2 fast $0 (OCoLC)fst01423772
710 2 Institute of Electrical and Electronics Engineers.
710 2 Vehicular Technology Society.
856 41 $3 IEEE Xplore $u http://ieeexplore.ieee.org/servlet/opac?punumber=10360

# ATTACHMENT 1C

**LC control no.:** sh2008119337

**LCCN Permalink:** https://lccn.loc.gov/sh2008119337

**HEADING:** Electronics in transportation Congresses

**000** 00523cz a2200169n 450

**001** 7521306

**005** 20110729161257.0

**008** 080424|| anannbabn |n ana

**010** __ |**a** sh2008119337

**035** __ |**a** (DLC)398056

**035** __ |**a** (DLC)sh2008119337

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

**150** __ |**a** Electronics in transportation |**v** Congresses

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

**670** __ |**a** Work cat.: Ninth International Conference on Road Transport Information and Control, c1998

**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 1D

**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



**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

**LC control no.:** sh2007101479

**LCCN Permalink:** https://lccn.loc.gov/sh2007101479

**HEADING:** Artificial satellites in telecommunication Congresses

**000** 00552cz a2200169n 450

**001** 7322326

**005** 20110729155807.0

**008** 070926|| anannbabn |n ana

**010** __ |**a** sh2007101479

**035** __ |**a** (DLC)367842

**035** __ |**a** (DLC)sh2007101479

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

**150** __ |**a** Artificial satellites in telecommunication |**v** Congresses

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

**670** __ |**a** Work cat.: Modeling and simulation environment for satellite and terrestrial communication networks, c2002

**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 2A

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008    011017s2001    njua     b    101 0 eng d
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020    ##$a0780367286
020    ##$a9780780367296 microfiche ed.)
020    ##$a0780367294 microfiche ed.)
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035    ##$9490851
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035    ##$a(lhalldb)358273-lhalldb
040    ##$aNAT $cNAT $dLHL
049    ##$aLHLA
090    ##$aTL6570.M6 $b.I23 2001
111    2#$aIEEE Vehicular Technology Conference $n(53rd : $d2001
$cRhodes, Greece)
245    10$aIEEE VTS 53rd Vehicular Technology Conference, Spring,
2001 : $bVTC 2001 Spring : proceedings : Connecting the mobile
world : May 6-9, 2001, Rhodes, Greece / $cIEEE [Vehicular
Technology Society].
246    31$a2001 IEEE VTS 53rd Vehicular Technology Conference
proceedings
246    31$a53rd Vehicular Technology Conference
246    31$aConnecting the mobile world
246    31$aIEEE VTS 53rd Vehicular Technology Conference
260    ##$aPiscataway, New Jersey : $bIEEE, $cc2001.
300    ##$a4 v. : $bill. ; $c30 cm.
500    ##$a"IEEE Catalog Number: 01CH37202"--verso of T.p.
504    ##$aIncludes bibliographic references and author index.
650    #0$aElectronics in transportation $vCongresses
650    #0$aMobile communication systems $vCongresses
650    #0$aArtificial satellites in telecommunication $vCongresses
710    2#$aVehicular Technology Society
948    ##$aLTI 09/01/2008
```

# ATTACHMENT 2B

**OCLC** 48163980 **No holdings in XXX - 22 other holdings**

Books

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | **Rec Stat** | | **Entered** | 20011017 | **Replaced** | 20230110154013.1 |
| **Type** | a | **ELvl** | | **Srce** | d | **Audn** | | **Ctrl** | | | | **Lang** | eng |
| **BLvl** | m | **Form** | | **Conf** | 1 | **Biog** | | **MRec** | | | | **Ctry** | nju |
| | | **Cont** | b | **GPub** | | **LitF** | 0 | **Indx** | 1 | | | | |
| **Desc** | a | **Ills** | a | **Fest** | 0 | **DtSt** | s | **Dates** | 2001, | | | | |

040 NAT $b eng $c NAT $d OCLCQ $d E9X $d BAKER $d CEF $d OCLCF $d OCLCQ $d OCLCO $d OCL $d OCLCO $d OCLCQ $d OCLCO $d OCLCQ
019 48710264 $a 1044041798 $a 1056265530 $a 1060794551 $a 1073043862 $a 1139370227
020 0780367286
020 9780780367289
020 0780367294 microfiche ed.)
020 9780780367296 microfiche ed.)
050 4 TL27.5 $b .N55 Spring 2001
090 $b
111 2 IEEE Vehicular Technology Conference $n (53rd : $d 2001 : $c Rhodes, Greece)
245 10 IEEE VTS 53rd Vehicular Technology Conference, spring, 2001 : $b VTC 2001 spring : proceedings : connecting the mobile world, May 6-9, 2001, Rhodes, Greece / $c IEEE.
246 3 2001 IEEE VTS 53rd Vehicular Technology Conference proceedings
246 30 53rd Vehicular Technology Conference
246 30 Connecting the mobile world
246 30 VTC 2001 spring
260 Piscataway, NJ : $b IEEE, $c ©2001.
300 3 volumes : $b illustrations ; $c 30 cm
336 text $b txt $2 rdacontent
337 unmediated $b n $2 rdamedia
338 volume $b nc $2 rdacarrier
500 "IEEE Catalog Number: 01CH37202"--Title page verso
504 Includes bibliographical references and author index.
530 Also available via the World Wide Web with additional title: Vehicular Technology Conference, 2001, VTC 2001 Spring, IEEE VTS 53rd.
650 0 Electronics in transportation $v Congresses.
650 0 Mobile communication systems $v Congresses.
650 0 Artificial satellites in telecommunication $v Congresses.
650 6 Électronique dans le transport $0 (CaQQLa)201-0022000 $v Congrès. $0 (CaQQLa)201-0378219
650 6 Radiocommunications mobiles $0 (CaQQLa)201-0023226 $v Congrès. $0 (CaQQLa)201-0378219
650 6 Satellites artificiels dans les télécommunications $0 (CaQQLa)201-0036360 $v Congrès. $0 (CaQQLa)201-0378219
650 7 Artificial satellites in telecommunication. $2 fast $0 (OCoLC)fst00817444
650 7 Electronics in transportation. $2 fast $0 (OCoLC)fst00907632
650 7 Mobile communication systems. $2 fast $0 (OCoLC)fst01024207
655 7 Conference papers and proceedings. $2 fast $0 (OCoLC)fst01423772
710 2 Vehicular Technology Society.

740 0  Vehicular Technology Conference, 2001, VTC 2001 Spring, IEEE VTS 53rd.
856 41 $3 IEEE Xplore $u http://ieeexplore.ieee.org/servlet/opac?punumber=7508
856 41 $3 IEEE Xplore $u http://www.ieeexplore.ieee.org/servlet/opac?punumber=7508