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NCGIA Annual GIS Bibliography for 1991

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NCGIA Annual GIS Bibliography for 1991

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Chapter One

Introduction

The primary intent of this document and accompanying database is to provide electronic access to articles contained in GIS proceedings and book compendiums. At present, searching for such articles is typically done manually. If users find this 1991 edition worthwhile, new editions are likely to be provided on a yearly basis.

1.1 Electronic Access to GIS Articles in Journals

Finding GIS articles in journals through electronic searches is now relatively straight-forward in most university libraries in the United States. Private database vendors such as *STN, Dialog* , *BRS* and *Wilsonline* offer online access and searching capabilities (for a fee) to hundreds of bibliographic databases incorporating thousands of journal titles. Similarly, consortiums of universities and research groups have pooled their resources to offer bibliographic searching capabilities to their members. Examples of such databases include *CARL uncov*er (Colorado Alliance of Research Libraries) which any university may subscribe to and *MELVYL* (University of California System) which is available only to consortium members.

Chapter Two lists journal titles which may be of interest to GIS researchers. Databases through which the journals may be accessed and searched are indicated. If you need help in using the databases, consult your university reference librarian for a quick lesson.

1.2 Electronic Access to GIS Articles in Conference Proceedings

Proceedings articles are the "gray literature" of most academic disciplines. Although the quality of proceedings articles is seldom controlled, proceedings articles form an important literature base. Conferences provide opportunities to present and explore new ideas, unproven concepts, and practical experiences. This type of material is often unacceptable for inclusion in refereed journal articles. Conferences also allow investigators to report research progress and preliminary findings in order to receive feedback from peers as their work progresses.

Unfortunately, GIS conference proceeding articles are only sporatically covered by the current online database services. Similarly, GIS books which contain articles or chapters written by different authors are difficult to access by the titles and authors of those chapters. The primary purpose of this document and accompanying data base is to provide bibliographic citations for all articles contained in the major GIS conference proceedings and book compendiums of 1991.

The accompanying database may be used with desktop bibliographic software such as *EndNote Plus* , *Pro-Cite* or *BibIX/Refer(Unix)* to carry out various types of searches and to aid automatic generation of subject bibliographies. From a practical perspective, only authors, dates, and words in titles may be searched because neither key words nor abstracts have been entered into the database. As an alternative, the database may be printed and used as a straight-forward table of contents for the proceedings volumes listed. In that instance, the word search capabilities provided by many word processing programs may be of some value in searching for items of interest.

Conference proceedings included in the database for 1991 include the following:

ACSM/ASPRS Annual Convention (Baltimore - Volumes 2 and 4 only)
AM/FM International Conference XIV (San Diego)
AURISA '91 (Wellington, New Zealand)
Auto-Carto 10 (Baltimore - ACSM/ASPRS Annual Convention Proceedings V. 6)
Canadian Conference on GIS '91(Ottawa)
EGIS '91 (Brussels)
GIS '91 Symposium (Vancouver, B.C.)
GIS/LIS '91 (Atlanta)
SSD '91 Advances in Spatial Databases (Zurich)
Symposium on Spatial Database Accuracy (Melbourne)
URISA Annual Conference (San Francisco)

Compendiums included in the database for 1991 include the following:

Advances in Cartography
        Muller, Editor
Cognitive and Linguistic Aspects of Geographic Space
        Mark and Frank, Editors
Geographic Information Systems: The Microcomputer in Modern Cartography
        Taylor, Editor
Geographical Information Systems: Principles and Applications
        Maguire, Goodchild, & Rhind, Editors
Handling Geographical Information
        Masser and Blakemore, Editors
Map Generalization: Making Rules for Knowledge Representation
        Buttenfield and McMaster, Editors
Metadata in the Geosciences
        Medyckyj-Scott, Newman, Ruggles and Walker, Editors

Please let us know if there are 1991 proceedings and compendiums in addition to those listed that you would like to see included in any update of the database.

For those unable to acquire the database through anonymous ftp, a hardcopy titled "NCGIA Annual GIS Bibliography for 1991" may be obtained for a nominal price from NCGIA. A 3.5 inch disk containing the same files as available at the ftp site is supplied with each hardcopy.

1.3   Acquiring Copies of the Database through Anonymous FTP

The GIS Bibliography for 1991 can be accessed through anonymous ftp at ncgia.ucsb.edu (128.111.254.105). For those unfamiliar with the use of ftp, a short set of instructions is provided at the end of this section which should work for most systems that support ftp.

The bibliography is contained in five different files for the convenience of different users.

GIS91.LIB
GIS91.PROCITE
GIS91.REFER
GIS91.PS
GIS91.TXT

The first three files are contained in the subdirectory **pubs / biblio / 1991**. The GIS91.LIB file is an *Endnote Plus* document and is in binary form. This file may be used directly using *Endnote* software on a MacIntosh. The "GIS91.PROCITE" file uses the *Pro-Cite* import/export format. The "GIS91.REFER" file uses the *Refer/BibIX* import/export format. These two files may be used on any platform (i.e DOS, MacIntosh, or UNIX) with *EndNote*, *EndNote Plus*, or any other bibliographic software packages that accept these formats.

For those who don't have desk top bibliography software, citations can also be accessed through postscript or ASCII formats. "GIS91.PS" and "GIS91.TXT" were created using the MLA bibliographic style and export function in *EndNote Plus*. These files are contained, respectively, in the following subdirectories: **pubs / biblio / postscript** and **pubs / biblio / text**. Whereas the first three files listed above contain only citations, these two files contain the accompanying written text (what you are now reading) and are therefore more appropriate for use if you want a finished hardcopy printout of the entire GIS Bibliography for 1991.

Sample entries for all formats are given below.

Sample Procite citation entry (GIS91.PROCITE):

@K   Acevedo, William First Assessment of U.S. Geological Survey 3O-Minute DEM's: A Great Improvement Over Existing l-Degree Data Technical Papers of the 1991 ACSM-ASPRS Annual Convention Baltimore ACSM-ASPRS 1991 2 1-12

Sample Refer/BibIX citation entry (GIS91.REFER):

%0   Conference Proceedings
%A   Acevedo, William
%D   1991
%T   First Assessment of U.S. Geological Survey 3O-Minute DEM's: A Great Improvement Over Existing l-Degree Data
%B   Technical Papers of the 1991 ACSM-ASPRS Annual Convention
%V   2
%P   1-12
%C   Baltimore
%I   ACSM-ASPRS

Sample postscript and ASCII citation entries (GIS91.PS and GIS91.TXT):

Acevedo, William. First Assessment of U.S. Geological Survey 3O-Minute DEM's: A Great Improvement Over Existing l-Degree Data. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 1-12.

Detailed Instructions for Accessing Anonymous FTP ncgia.ucsb.edu (128.111.254.105)

Get out of mail and type: ftp ncgia.ucsb.edu
        (If you are on VMS, an FTP prompt will appear. Type: user)
At the user name prompt, type: anonymous (must be lower case)
        (If you are on VMS, anonymous must be in quotes. You will then receive a USER ACCT prompt, just hit ENTER.)

At the password prompt enter your login id to let us know who you are (example: Smith@mecan1.maine.edu) but the system will accept anything.

At the FTP prompt, type: cd pub
(If on VMS, "pub" must be in quotes.)

To see current files in the on-line NCGIA publications directory, type: dir   In this directory you will see a subdirectory titled biblio as well as several others.

At the FTP prompt, type: cd biblio
(If on VMS, the sub directory name must be in quotes.)

Type again: dir   You will now see subdirectories listed such as: 1991, postscript, and text. If you want files suitable for manipulation with your bibliographic software, choose the "1991" subdirectory. If you want a copy of the bibliography suitable for hardcopy printout, choose either the "postscript" or "text" subdirectory depending on the format you desire.

At the FTP prompt, (presuming you want a copy suitable for hardcopy printout), type: cd text
(If on VMS, the sub directory name must be in quotes.)

Next, type: dir   Note that GIS91.txt may be one of several files currently in the subdirectory.

Presuming you wish to acquire this particular file, type: get GIS91.txt XXX.XXX (i.e. Name the file whatever you want to call it on your local system. For example, replace the Xs with: GIS.BIB)
(If on VMS, GIS91.txt must be in quotes.)

Type: quit
NOTE: If before typing quit you wish to return to a higher level directory, type: cd .. (If on VMS, it must be cd "..")

The file containing the bibliography is now on your local system.

All NGCIA on-line publications and datasets are also automatically accessible through the WAIS system (Wide Area Information Servers).

1.4   Technical Issues, Disclaimers and Limitations

Citations were scanned from the original table of contents of proceedings and other volumes using a *MacIntosh* computer and scanner with *OMNI Page* software. They were then edited and spell checked using *MS Word 5*, formated in the Refer/BibIX format, and imported to *EndNote Plus*. A final editing was done in *EndNote Plus* and files were exported as noted above. Since the citations were scanned, they are in the same configuration as the orignal documents. That is, if the original citation was all capitals, so is the final citation. Likewise, citations to non-English articles are in the language of the article. All name spelling checks were done maually against the original documents. All citations were made using the "proceedings" or "book section" formats in *EndNote Plus*.

This document and accompanying database were prepared for the internal use of NCGIA researchers and may or may not be suitable for some purpose you intend. Although we have tried to list titles accurately, we make no guarantees, implied or otherwise, that the titles are accurate or comprehensive. We claim no rights in the factual list of article titles and encourage its free dissemination in digital form for academic purposes.

Mention of commercial product names in this document should not in any way be construed as endorsements of those products by NCGIA or the University of Maine.

Chapter Two

Electronic Access to GIS Articles in Journals

The following is a list of some of the journals which GIS researchers have found useful. The list is only illustrative, not comprehensive. Designators by each title indicate some of the electronic databases through which the journals may be accessed.

The second table provides a legend for the designators in the first table and indicates some of the vendors through which the databases may be accessed. When digital abstracts are available for a journal, Dialog, BRS and STN provide them. Wilsonline databases do not. The databases listed may be accessed from most major university libraries and perhaps from your own office.

Table 1.   Databases for Selected Journals of Interest to GIS Researchers

Journal Title	Indexed in:
ACM Computing Surveys	AST, EI, MAT, INS, SCI, SUP, COM, TRA, CU
ACM Transactions on Database Systems	AST, MAT, INS, SCI, SUP, COM
ACM Transactions on Graphics	INS, SUP, CU
AI Expert	SUP, COM, ASA (ASA inclds full text from 1989)
AI Magazine	EI, SUP, CUR, CU
Association of American Geographers. Annals.	BIO, HIS, SSC, SSI, AHL, ACA, CAB, GB, GR, CU
Canadian Geographer	BIO, CA, CUR, SSC, SSI, GB, GR, CAB, ENV, CU
Cartographic Journal	GB, GR
Cartographica	CUR, GB, GR,CU
Cartography & Geographic Information Systems	CUR, SSC, GB, GR,CU
CISM Journal/Journal ACSGC (formerly Canadian Surveyor)	EI, GB, GR
Communication	PSY, CU

Table 1.   (continued)

Journal Title	Indexed in:
Communications of the ACM	CUR, MAT, INS, SUP, ASA, CU (ASA includes full text from 1/88)
Computer Graphics	CUR, INS,GR, PRO, CU
Computer Journal	AST, CA, CUR, EI, MAT, INS, SCI, CU
Computer-Law Journal	INS, LRI
Computers & Geosciences	CA, INS, SCI, GB, GR, PET, CAB, CUR, CU
CVGIP: Graphical Models & Image Processing	CUR, INS, SUP, COM, GB, CU
CVGIP: Image Understanding	CU
Environment & Planning A	CUR, SSC, EPB, GB, TR, CAB, WAT, CU
Environment & Planning B	SSC, ENE, EPB, TR, CU
Geografiska Annaler Series A Physical Geography	CAB, GB, GR, SOC, CU
Geografiska Annaler Series B Human Geography	BIO, SSC, GB, CAB, CU
Geographical Analysis	CUR, SSI, GB, GR, CAB, SOC, CU
Geographical Journal	CUR, HIS, AHL, PAI, SSC, SCI, SSI, ACA, CAB, GB, GR, CU
Geographical Review	BIO, CA, CUR, EI, HIS, AHL, PAI, SSC, SSI, ACA, GB, GR, CAB,CU
IEEE Computer	AST, CUR, INS, SCI, SUP, COM,
IEEE Computer Graphics & Applictions	AST, INS, SCI, SUP, COM, CU
IEEE Expert	SUP, COM, CU
IEEE Software	INS, CU
IEEE Transactions of Geoscience & Remote Sensing	AST, CA, CUR, EI, MAT, POL, INS, SCI, CAB, SUP, GB, CU
IEEE Transactions on Knowledge & Data Engineering	CU

Table 1. (continued)

Journal Title	Indexed in:
IEEE Transactions on Pattern Analysis & Machine Intelligence	CUR, INS, SCI, SUP, COM, CU
Information & Management	AST,INS
Interfaces	BUS, CUR, PSY, SSC, INS, ABI, TRA, CU
International Journal of Geographical Information Systems	GB, CU
ITE Journal	AST, EI, CUR, PAI, SUP, ENE, EPB, GB, TR, PET, ENV, CU
Journal of Object Oriented Programming	CUR, CU
Journal of Surveying Engineering	AST, CUR, EI, FLU, TR, CU
Jurimetrics Journal	LEG, INS, CJP, LRI (Full text in Westlaw since 1987)
MIS Quarterly	BUS, ABI, COM
Photogrammetric Engineering & Remote Sensing	CA, CUR, EI, INS, AGR, RMR, EPB, CAB, PET, WAT, CU
Professional Geographer	CUR, SSC, SSI, ENE, CAB, GB, GR, CU
Rutgers Computer & Technology Journal	LEG, INS, LRI (Full text in Westlaw since 1987)
Sigart Bulletin	CU
SIGCHI Bulletin	INS, CU
SIGMOD Record	INS, CU
Software Law Journal	LEG, CU
Surveying & Land Information Systems	AST, GB, GR, TR,CU
Transactions on Computer Systems (TOCS)	INS, SUP, CU
Transactions on Information Systems	INS, SUP, COM, CU
URISA Journal	(no database containing this journal found)

Table 2.   Titles and Vendors for the Databases Listed in Table 1

Abbrev.	Database	Vendor(s)
ABI	ABI/Inform*	Dialog
ACA	Academic Index*	Dialog, BRS
AGR	Agricola*	Dialog, BRS
AHL	America: History & Life	Dialog
AST	Applied Science & Technology Index*	BRS, Wilsonline
BIO	Biosis*	Dialog, BRS, STN
BRI	Book Review Index	Dialog
BUS	Business Periodicals Index*	Dialog, BRS, STN
CA	CA Search	Dialog, STN
CAB	CAB Abstracts	Dialog, BRS
EI	Compendex*	Dialog, BRS, STN
ASA	Computer ASAP*	Dialog
COM	Computer Database	Dialog, BRS
CUR	Current Contents	Dialog, BRS
CJP	Criminal Justice Periodical Ind.	Dialog
ENE	Energyline	Dialog
ENV	Enviroline	Dialog
EPB	Environmental Bibliography*	Dialog
FLU	Fuidex	Dialog
GB	GEOBASE	Dialog
GR	GEOREF	Dialog, STN

Table 2. (continued)

Abbrev.	Database	Vendor(s)
HIS	Historical Abstracts	Dialog
LEG	Index to Legal Periodicals*	Wilsonline
INS	INSPEC*	Dialog, BRS, STN
LRI	Legal Resource Index*	Dialog, BRS
MAT	MATHSCI*	Dialog
PAI	PAIS*	Dialog, BRS
PET	Petroleum Exploration & Production	Dialog
POL	Pollution Abstracts	Dialog
PRO	PROMT	Dialog, BRS
PSY	PsycINFO*	Dialog, BRS
SCI	SCISEARCH*	Dialog
SSC	Social SCISEARCH*	Dialog, BRS
SSI	Social Sciences Index*	BRS, Wilsonline
SOC	Sociological Abstracts	Dialog, BRS
TR	TRIS	Dialog
SUP	Supertech	Dialog
TRA	Trade & Industry Index	Dialog
WAT	Water Resources Abstracts*	Dialog

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* - Database available also on CD ROM.

Additional Resources

The databases in the above two tables were drawn primarily from science and engineering collections. Additional databases exist and may contain many of the journal titles listed above (e.g. databases in history, psychology, medicine, law, etc.). Similarly, only four primary database vendors were listed. Several others exist (e.g. Westlaw, Mead-Lexis, etc.).

Some government agencies also provide on-line bibliographic services for publications relevant to those agencies missions. Telnet addresses for some of these services which may be of interest to the GIS community include the following:

epaibm.rtpnc.epa.gov
    EPA National Library on-line database

nssdca.gsfc.nasa.gov
    National Space Science Data Center (NSSDC) On-Line Data and Information
    Service includes the NASA Master Directory (documents and images)
        login: nodis

stis.nsf.gov [128.150.195.40]
    National Science Foundation Science & Technolgy Information Service (STIS)
        login: public

tycho.usno.navy.mil [192.5.41.239]
    U.S. Naval Observatory Automated Data Service (GPS data)
        login: ads

In addition to the on-line services, many libraries have CD-ROMS that provide citations to some of the journals and other materials listed above.

Chapter Three

Contents of
GIS Proceedings for 1991
in
Bibliographic Form

ACSM-ASPRS ANNUAL CONVENTION
Article Citations
1991

(Listed in order of appearance in the proceedings)

Volume 2

Acevedo, William. First Assessment of U.S. Geological Survey 3O-Minute DEM's: A Great Improvement Over Existing l-Degree Data. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 1-12.

Alderman, Philip X. Automated Shaded Relief for Medium-Scale Aeronautical Charts. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 13-20.

Brassard, D. J. National Digital Topographic Data Base - The Canadian Approach. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 21-25.

Broscoe, David, and Steven Prashker. The Incorporation of the Fractal Dimension in Cartographic Line Simplification Algorithms. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 26-35.

Burtch, R. The Pilot Project: Getting the Bugs Out. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 36-42.

Chithambaram, Raju, Renato Barrera, and Kate Beard. Skeletonizing Polygons for Map Generalization. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 44-55.

Chou, Hsueh-cheng. Design of a Language for Spatial Analysis. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 56-64.

Cialek, Christopher J., Gary B. Chappell, and Kathryn C. Neff. Building a Feature-Based Digital Line Graph. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 65-72.

Clapham, Sarah B., and Kate Beard. The Development of an Initial Framework for the Visualization of Spatial Data Quality. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 73-82.

Danko, David M. The Digital Chart of the World Project. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 83-93.

Dixon, Donna, Ronald Keeler, and Brigitta Mathieux. The Generation of a Prototype USGS l:24,O0O-Scale Topographic Map from Digital Line Graph Data. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 94-103.

Fairbairn, D. J., and S. Peedell. Analytical GIS in Property Management and Development. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 104-110.

Fels, John E., and Hugh A. Devine. Interactive Viewshed Mapping Using Shaded Surface Displays: A Community Planning Application. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 111-121.

Hinckley, Thomas K. The Implications of Hal Shelton's Cartographic Techniques for Computer Mapping. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 124-129.

Jessip, Mark B. Systematic Horizontal Adjustment of Positional Error in Digital Line Graphs. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 130-139.

Kelmelis, John A., and Raymond D. Watts. Terrestrial Process Modeling - A Challenge for Cartographers. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 141-149.

Kilborn, R., H. S. Rifai, and P. B. Bedient. The Integration of Ground Water Models with Geographic Information Systems (GIS). Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 150-159.

Krakiwsky, Edward J., and Ivan I. Mueller. Toward World Surveying and Mapping Education: Report on the XIIIth North American surveying and Mapping Teachers Conference. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 160-169.

Kreiton, Kerry J., Joseph Boyd, and Brian E. Smith. An Algorithm for Symbol and Text Orientation to the Graticule. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 170-178.

Laskowski, Piotr. On a Mixed Local-Global Error Measure for a Minimum Distortion Projection. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 181-186.

Lauer, Bernard J. Mapping Information on CD-ROM. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 187-193.

Lee, Jay. Assessing the Existing Methods for TIN Extraction. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 194-203.

Lin, Hui, and Hugh W. Calkins. A Rationale for Spatiotemporal Intersection. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 204-213.

Massey, James W. Digital Mapping Using the Integrated Digital Photogrammetric Facility. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 215-221.

McDermott, Matthew H. The Spatial Data Transfer Standard. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 222-230.

McGranaghan, Matthew. Modeling Simultaneous Contrast on Choropleth Maps. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 231-240.

Mullen, Michael P. A GIS Technology for Ground-Water Assessments. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 243-252.

Peled, Ammatzia. Automated Completion of Missing Data for (DLG) Digital Line Graphs. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 253-260.

Petersen, Jesper K., and Werner Kuhn. Defining GIS Data Structures by Sketching Examples. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 261-269.

Prashker, Steven. Demonstration of the Zapper Software: A Collection of Line Simplification and Smoothing Algorithms for Maps. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 2: 270-278.

Rivas, Bernard T. Municipal GIS Applications Utilizing Vector and Raster Software on Personal Computers. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 279-285.

Roth, Keven S. Practical Problems in Developing Rules for Automated Mapping. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 287-292.

Singletary, Loretta A., et al. Spatial Economic Impact Analysis of Highway Investment in South Carolina: A Quasi-Experimental Approach Utilizing a Geographic Information System (ARCINFO). Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 294-303.

Sither, Mark A. Spatial Data Transformation: Feature Attribute Conversion Issues and Practical Experience. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 304-312.

Tucker, Dean F., and Hugh A. Devine. Integration of GIS in Natural Resource Education. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 314-323.

Weber, Christopher R. A Screen-Reflection Algorithm for Calculating Buffer Distances in Raster Images. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 325-332.

Winslett, Cari , and Robert J. Pearsall. GIS - The Visualization of Tomorrow. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 333-335.

Xia, Zong-Guo, Keith C. Clarke, and Reese W. Plews. The Uses and Limitations of Fractal Geometry in Terrain Modeling. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 2: 336-352.

Volume 4

Ball, Jr., William E., and Michael Hutt E. Determination of Three-dimensional Coordinates for Future Land Information Systems. Technical Papers of the 1991 ACSM-ASPRS Annual Convention. Baltimore: ACSM-ASPRS, 1991. 4: 1-10.

Bitters, Barry, Pedro J. Restrepo, and Mark R. Jourdan. Using GIS to predict effects of flooding on the Han River, South Korea. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 4: 11-20.

Christel-Rose, Lynne M., and Frank L. Scarpace. Monitoring the Spatial Distribution of Aquatic Macrophytes: A Look at Plant Associations in Allequash Lake, Wl. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 4: 21-30.

Cowen, David J., John R. Jensen, and Joanne Halls. Maintenance of TIGER files using remotely sensed data. Technical Papers of the 1991 ACSM-ASPRS Annual Convention.   Baltimore: ACSM-ASPRS, 1991. 4: 31-40.

Craven, David. Urban growth detection in Kathmandu. <u>Technical Papers of the 1991 ACSM-ASPRS Annual Convention</u>.   Baltimore: ACSM-ASPRS, 1991. 4: 41-50.

Devine, Hugh A., Charles R. Rafkind, and Jean M. McManus. A new approach to GIS design and implementation: Colonial National Historic Park. <u>Technical Papers of the 1991 ACSM-ASPRS Annual Convention</u>.   Baltimore: ACSM-ASPRS, 1991. 4: 51-60.

Durako, Kathleen. Research and development activities at the Defense Mapping Agency's new Warrior Support Center. <u>Technical Papers of the 1991 ACSM-ASPRS Annual Convention</u>.   Baltimore: ACSM-ASPRS, 1991. 4: 61-65.

Faust, Nickolas L. Display Technologies for Remote Sensing / GIS. <u>Technical Papers of the 1991 ACSM-ASPRS Annual Convention</u>.   Baltimore: ACSM-ASPRS, 1991. 4: 66-76.

Grifin, Carol, and Lee P. Herrington. Design of a testbed for GIS procedures. <u>Technical Papers of the 1991 ACSM-ASPRS Annual Convention</u>.   Baltimore: ACSM-ASPRS, 1991. 4: 77-86.

Herrington, Lee P., et al. A Spatial DSS for Forest and Wildlife Management. <u>Technical Papers of the 1991 ACSM-ASPRS Annual Convention</u>.   Baltimore: ACSM-ASPRS, 1991. 4: 87-92.

Liao, Ta neu, Tsang-Chi Hsu, and Mu-Lin Wu. Optimal flight planning in Taiwan using a 3-D GIS. <u>Technical Papers of the 1991 ACSM-ASPRS Annual Convention</u>.   Baltimore: ACSM-ASPRS, 1991. 4: 93-97.

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