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# **Brief Biographical Career Sketch**

Harlan Onsrud is Professor of Spatial Computing in the School of Computing and Information Science at the University of Maine in the United States and a research scientist with the National Center for Geographic Information and Analysis (NCGIA). Professor Onsrud's research focuses on the analysis of legal, ethical, and institutional issues affecting the creation and use of digital databases and the assessment of the societal impacts of spatial technologies. He previously served as Department Chair (SISE), School Director (SCIS), and graduate coordinator for the MS Information Systems, MS Data Science and Engineering, and the MS and PhD programs in Spatial Information Science and Engineering. In the past decade, he has regularly taught courses in Information Systems Law, Responsible Conduct of Research, and Computers, Ethics & Society. He served as PI or co-PI on external research grants funded by the National Science Foundation, the Institute of Museums and Libraries, the National Geospatial-Intelligence Agency, the Federal Geographic Data Committee, and the U.S. Department of Education as well as on internal university grants. He has served as chair of the advisory committees of over one hundred graduate students, including those pursuing both research and professional degrees. He is past-president and a fellow of the University Consortium for Geographic Information Science (UCGIS), past Chair of the U.S. National Committee (USNC) on Data for Science and Technology (CODATA) of the National Research Council (NRC) and past president and Executive Director/Secretary General of the Global Spatial Data Infrastructure Association (GSDI). He has participated in and chaired U.S. National Research Council studies addressing various spatial data policy and science issues and in 2003 was designated a lifetime National Associate of the U.S. National Academies of Sciences (NAS). He is a former chair of the Socioeconomic Data and Applications Center (SEDAC) Working Group, a Distributed Active Archive Center (DAAC) in the Earth Observing System Data and Information System (EOSDIS) located at CIESIN, Columbia University. His selection by the J. William Fulbright Foreign Scholarship Board for Fulbright Specialist teaching assignments in Law resulted in completion of such assignments at the University of Melbourne in 2009 and at the University of Muenster in 2012. He is also past president of the University of Maine Faculty Senate and recipient of the University of Maine Presidential Public Service Achievement Award. He has presented academic talks or organized conferences in over twenty nations across the globe. These nations have included Australia, Brazil, Canada, Chile, China, Colombia, Denmark, Egypt, England, Ethiopia, Finland, France, Germany, Greece, Hungary, Indonesia, Italy, Netherlands, United Arab Emirates, Singapore, South Africa, Switzerland, Taiwan, Trinidad, and Tunisia. Among domestic presentation forums have included several law schools, the World Bank, the United Nations, the Library of Congress, and the U.S. National Academies of Science. Acquired professional licenses in the U.S. include those as an engineer, attorney and land surveyor. A unifying theme in much of his teaching and research has involved the concept of "ethics driven design."

# Extended Curriculum Vitae (1987-2022)

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#### A. DOCUMENTATION OF SCHOLARSHIP AND PROFESSIONAL ACTIVITY

# 1. Publications and Creative Works

# a. JOURNAL ARTICLES (Refereed)

#### 1985

Onsrud, Harlan J., "Choosing and Evaluating Property Line Survey Methods", Surveying and Mapping, ACSM, June 1985, 45(2): 139-144

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Onsrud, Harlan J. and Anthony J. Moraco, "Adverse Possession in Boundary Disputes", Surveying and Mapping, ACSM, September 1986, 46(1): 209-217

- Onsrud, Harlan J., "Challenge to the Profession: A Formal Legal Education for Surveyors", Surveying and Mapping, ACSM, March 1987, 47(1): 31-36
- Onsrud, Harlan J., Matthew C. Swanson, and Steven D. Johnson, "Technical Standards for Boundary Surveys: Developing a Model Law", ASCE, Journal of Surveying Engineering, June 1987,
- Onsrud, Harlan J., "Approaches in Teaching Engineering Ethics", Civil Engineering Education, Fall 1987, IX(2):

#### 1989

- Onsrud, Harlan J. "The Land Tenure System of the United States," Forum: Zeitschrift des Bundes der Offentlich Bestellten Vermessungsingenieure, Jan. 1989,
- Onsrud, Harlan J. and Andrew Frank. "Surveying, Mapping, and Land Information System Education in the United States," Geo-Informations-Systeme, Karlsruhe, West Germany, Jan./Feb. 1989,
- Jeffress, Gary A. and Harlan J. Onsrud. "The Thailand Land Titling Project An Overview," Surveying and Mapping, ACSM, April 1989,

#### 1990

- Hintz, R. J. and H. J. Onsrud. "Upgrading Boundary Information in a GIS" Journal of Urban and Regional Information Systems, URISA, August 1990,
- Jeffress, G., R. Hintz and H. Onsrud, "An automated measurement management system: a useful tool for surveyors and digital cadastral data base managers", The Australian Surveyor, 1990, 35:19-28
  - (Awarded the R.D. Steele Prize for 1990 (cash award) by the Council of the Institution of Surveyors, Australia, Inc.)

#### 1991

- Onsrud, H.J. and R.J. Hintz, "Evidentiary Admissibility and Reliability of Automated Field Recorder Data", Surveying and Land Information Systems, ACSM, March 1991, (Awarded Thorpe Award by ACSM as most significant paper contribution to surveying discipline in 1991)
- Onsrud, Harlan J. "Diffusion of Geographic Information Innovations", International Journal of Geographic Information Systems, 1991, 5(4): 447-467

#### 1992

Onsrud, H.J., J.K. Pinto and B. Azad, "Case Study Research Methods for Geographic Information Systems", Journal of Urban and Regional Information Systems, 1992, (4)1: 32-44

# 1993

Onsrud, H.J. and J.K. Pinto, "Evaluating Correlates of GIS Adoption Success and the Decision Process of GIS Acquisition," Journal of Urban and Regional Information Systems, 1993, 5(1): 18-39

#### 1994

- Onsrud, H.J., J. Johnson, and X. Lopez, "Protecting Personal Privacy in Using Geographic Information Systems", Photogrammetric Engineering and Remote Sensing, 1994, LX(9), 1083-1095
  - (Awarded Best Scientific Paper in GIS ESRI Annual Award)

#### 1995

Onsrud, H.J. and R. Reis, Law and Information Policy for Spatial Databases: A Research

- Agenda, Jurimetrics Journal of Law, Science and Technology, 1995, 35(4), 377-393, https://www.jstor.org/stable/29762390
- Onsrud, H.J., Identifying Unethical Conduct in the Use of GIS, Cartography and Geographic Information Systems, 1995, 22(1), 90-97

- Onsrud, H.J., J.P. Johnson and J. Winnecki, GIS Dissemination Policy: Two Surveys and a Suggested Approach, Journal of Urban and Regional Information Systems, 1996, 8(2): 8-23
- Frank, Steven M., Michael F. Goodchild, Harlan J. Onsrud, and Jeffrey K. Pinto, User Requirements for Framework Geospatial Data, Journal of Urban and Regional Information Systems, 1996, 8(2): 38-50

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- Onsrud, H.J., T. Hodson and B. Gartrell, Integrated Cadastral Technologies Field System (ICTFS) for Documenting Title and Boundary Evidence, Geomatica, 1998, 52(1): 25-35 1999
- Sheppard, E., H. Couclelis, S. Graham, J.W. Harrington and H. Onsrud, 1999, Geographies of the Information Society. International Journal of Geographical Information Science, 13(8), 797-823.

#### 2001

Maurer, S., P.B. Hugenholtz, and H. Onsrud, 2001, Europe's Database Experiment, *Science*, 294: 789-790, 26 Oct 2001. Assesses the evidence to date of the impact of database legislation in European nations and suggests recommendations for other nations.

#### 2004

van Loenen Bastian and Harlan Onsrud, 2004. Geographic Data for Academic Research: Assessing Access Policies. *Cartography and Geographic Information Science* 31(1): 3-17.

#### 2005

Onsrud, Harlan, H.J. 2005. Web-casting of Geographic Information Science Graduate Courses. Journal of Geography in Higher Education 29(1):123-138

#### 2006

Câmara, Gilberto, Frederico Fonseca, Antonio Miguel Monteiro, and Harlan Onsrud, 2006, Networks of Innovation and the Establishment of a Spatial Data Infrastructure in Brazil, Information Technology for Development, http://itd.ist.unomaha.edu/

#### 2007

Onsrud, Harlan J. and James Campbell, 2007, Big Opportunities in Access to "Small Science" Data, CODATA Data Science Journal, http://dsj.codataweb.org/

#### 2010

Onsrud, H.J., James Campbell and Bastiaan van Loenen, Towards Voluntary Interoperable Open Access Licenses for the Global Earth Observation System of Systems (GEOSS), International Journal of Spatial Data Infrastructure Research, 2010, https://ijsdir.sadl.kuleuven.be/index.php/ijsdir/article/view/168

#### 2014

Campbell, James and Harlan Onsrud, 2014, Desirable Characteristics of an Online Data Commons for Locally Generated Spatial Data from Disparate Contributors, URISA Journal, Volume 26 Number 1: 35-43,

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Taro Ubukawa, Alex De Sherbinin, Harlan Onsrud, Andy Nelson, Karen Payne, Olivier Cottray,

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#### 2016

Doldirina, Catherine, Anita Eisenstadt, Harlan Onsrud and Paul Uhlir (2016) Legal Approaches for Open Access to Research Data, 8/12/2016, LawArXiv Papers, http://doi.org/10.17605/OSF.IO/N7GFA

#### 2020

Onsrud, Harlan and James Campbell (2020), Being Human in an Algorithmically Controlled World, International Journal of Humanities and Arts Computing, Feb 2020, vol. 14, No. 1-2, pp. 235-252, https://umaine.edu/scis/beinghumanonsrudcampbellpreprint/

#### b. BOOKS

(Refereed by discipline experts in acceptance process and edited by publisher)

#### 1985

Onsrud, Harlan J., James L. Clapp, and John D. McLaughlin, editors. Proceedings of the Workshop on Fundamental Research Needs in Surveying, Mapping, and Land Information Systems, (Blacksburg: VPI&SU) National Technical Information Service # PB87-148730/AO9, Nov. 1985

#### 1989

Onsrud, H.J., H.W. Calkins and N.J. Obermeyer, eds., Use and Value of Geographic Information: Initiative Four Specialist Meeting Report and Proceedings, NCGIA Technical Paper 89-7 (NCGIA: U.C.-Santa Barbara) August 1989.

# 1990

Onsrud, Harlan J. and David Cook, editors. GIS/LIS Compendium for Practicing Surveyors, American Congress on Surveying and Mapping, Bethesda, Md., July, 1990.

#### 1993

Masser, I. and H. Onsrud, Eds., Diffusion and Use of Geographic Information Technologies (Dordrecht, Netherlands: Kluwer Academic Publishers) 1993.

#### 1995

Onsrud, H.J. and G. Rushton, eds., Sharing Geographic Information (Rutgers: CUPR Press) 1995 Onsrud, H.J., ed., Proceedings of the Conference on Law and Information Policy for Spatial Databases (NCGIA, University of Maine) Fall 1995 (ISBN 0-9648267-0-4)

Onsrud, H.J., ed., Proceedings of the UCGIS Annual Assembly and Summer Retreat (Articles accepted based on national panel evalulation of abstracts) http://www.spatial.maine.edu/ucgis/assembly-schedule.html

# 1999

Craglia, M. and H.J. Onsrud, eds., 1999, Geographic Information Research: Trans-Atlantic Perspectives (Taylor and Francis, London)

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#### 2004

Committee on Licensing Geographic Data and Services, 2004, *Licensing Geographic Data and Services* (Washington D.C: National Academies Press) http://books.nap.edu/catalog/11079.html

Onsrud, H., Editor, 2007, Research and Theory in Advancing Spatial Data Infrastructure Concepts (Redlands CA: ESRI Press)

#### 2009

Onsrud, Harlan J. Bastiaan Van Loenen, Abbas Rajabifard, and Alan Stevens, Eds., *GSDI 11 World Conference Proceedings*, 15-19 June 2009, Rotterdam, The Netherlands (CD and web publication), http://gsdi.org/gsdi11

#### 2013

Onsrud, Harlan and Abbas Rajabifard, Eds, 2013, Spatial Enablement in Support of Economic Development and Poverty Reduction (GSDI Association Press), http://www.gsdi.org/openaccessbooks with open access version of book at gsdiassociation.org/images/publications/Spatial\_Enablement\_GSDI14\_2013.pdf

#### 2016

Onsrud, Harlan and Werner Kuhn, Eds, Geographic Information Science: The Past and Next Twenty Years (GSDI Association Press) 2016. Open access version of book at spatial.umaine.edu/files/2016/02/AdvancingGIScience.pdf

#### c. CHAPTERS IN BOOKS

(Refereed by discipline experts serving as book editors)

#### 1989

Williams, M. and H.J. Onsrud, "What Every Lawyer Should Know About Land Surveys" pp. 35-54, and J.R. White and H.J. Onsrud, "Survey Checklist: A Practical Guide to Review and Analysis of Land Survey" pp. 93-130 in American Bar Association, ed., Land Surveys: A Guide for Lawyers (Chicago: American Bar Association, Section of Real Property, Probate and Trust Law) 1989 (Previous writings selected for inclusion)

#### 1990

Onsrud, H.J. and A. Moraco, "Adverse Possesion in Boundary Disputes" pp.141-150, Onsrud, H.J. "Choosing and Evaluating Property Line Survey Methods" pp. 179-184, and Onsrud, H.J. "Legal Reasoning on Both Sides of the Center of Section Debate" pp. 241-250 in Lathrop, Wendy, editor. Legal Topics in Boundary Surveying (Bethesda, Md: American Congress on Surveying and Mapping) Fall 1990 (Previous writings selected for inclusion) 1993

# Pinto, Jeffrey K., and Harlan J. Onsrud, "Correlating Adoption Factors and Adopter Characteristics with Successful Use of Geographic Information Systems." Diffusion and Use of Geographic Information Technologies, Ed. Ian Masser and Harlan J. Onsrud. (Dordrecht: Kluwer Academic) 1993, 165-194.

Onsrud, Harlan J., and Ian Masser, "Extending the Research Agenda." Diffusion and Use of Geographic Information Technologies. Ed. Ian Masser and Harlan J. Onsrud. (Dordrecht: Kluwer Academic) 1993, 339-344.

- Onsrud, H.J. and G. Rushton, "Sharing Geographic Information: An Introduction" in Onsrud & Rushton, eds., Sharing Geographic Information (Rutgers: CURP Press) 1995, xiii-xvii.
- Pinto, J.K. and Harlan J. Onsrud, "Sharing Geographic Information Across Organizational Boundaries" in Onsrud and Rushton, eds. Sharing Geographic Information (Rutgers: CUPR Press) 1995, pp. 44-64.
- Onsrud, H.J., "The Role of Law in Impeding and Facilitating the Sharing of Geographic Information" in Onsrud & Rushton, eds. Sharing Geographic Information (Rutgers, CUPR

- Press) 1995, pp. 292-306.
- Onsrud, H. J., J.P. Johnson, and X. Lopez, "Protecting Personal Privacy in Using Geographic Information Systems" in Onsrud, H.J., (ed), Proceedings of the Conference on Law Information Policy and Spatial Databases (NCGIA, University of Maine) Fall 1995, pp.239-256.

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- Onsrud, H.J. and X. Lopez, "Intellectual Property Rights in Disseminating Digital Geographic Data, Products, and Services: Conflicts and Commonalities among European Union and United States Approaches", in Masser, Ian and Francois Salge, eds., *European Geographic Information Infrastructures: Opportunities and Pitfalls* (London: Taylor and Francis) 1998, pp. 153-167.
- Onsrud, H.J., 1998, The Tragedy of the Information Commons. In Taylor, F. (Ed.), *Policy Issues in Modern Cartography* (Oxford: Elsevier Science) 141-158.
- Onsrud, H.J., 1998, Access to Geographic Information in the United States. In *Free accessibility of geo-information in the Netherlands, the United States, and the European Community*, Proceedings, Oct 2., Delft, Netherlands, 33-41.

#### 1999

- Onsrud, H.J. (1999). "Liability in the Use of Geographic Systems and Geographic Data Sets" in Macquire, Goodchild, Rhind, and Longley, eds., Geographic Information Systems: Principles, Techniques, Management, and Applications (New York: Wiley), pp. 643-652.
- Onsrud, H.J. (1999) Information Ethics, Law, and Policy for Spatial Databases: Roles for the Research Community in Craglia, M. and H.J. Onsrud, eds., Geographic Information Research: Trans-Atlantic Perspectives (London: Taylor and Francis), pp. 25-30.

#### 2000

Onsrud, H.J., 2000, Loss of Legal Access to Geographic Information: Measuring Losses or Developing Responses? In Janelle, D.G. and D. Hodge (Eds.), *Information, Place and Cyberspace: Issues in Accessibility* (Berlin and Heidelberg: Springer-Verlag) Based on http://www.artsci.washington.edu/varenius/ 1998

#### 2003

- Onsrud, H.J., 2003, Access to Geographic Information: Openness versus Security. In Cutter, S., D. Richardson and T. Wilbanks (Eds.), *Geographic Dimensions of Terrorism* (Routledge). 207-213
- Onsrud, Harlan, 2003, Emerging Models for Maintaining Scientific Data in the Public Domain, In Esanu, J. and P. Uhlir, (Eds.), *The Role of Scientific and Technical Data and Information in the Public Domain* (Washington D.C: National Academies Press), 180-186 http://books.nap.edu/catalog/10785.html

#### 2004

Onsrud, H., B. Poore, R. Rugg, R. Taupier, and L. Wiggins, 2004, The Future of the Spatial Information Infrastructure. In McMaster, Robert B. and E. Lynn Usery, (Eds.), *A Research Agenda for Geographic Information Science* (Boca Raton: CRC Press), 225-255

- Onsrud, H.J., 2004, Geographic Information Legal Issues, *Encyclopedia of Life Support Systems* (*EOLSS*), Developed under the auspices of the UNESCO, EOLSS Publishers, Oxford, UK, [http://www.eolss.net]
- Onsrud, Harlan, 2004, Overview of Open-Access and Public-Commons Initiatives in the United States, In Esanu, J. and P. Uhlir, (Eds.), *Open Access and the Public Domain in Digital Data and Information for Science: Proceedings of an International Symposium* (Washington D.C: National Academies Press), 114-118 http://books.nap.edu/catalog/11030.html
- Camara, Gilberto and Harlan Onsrud, 2004, Open-Source Geographic Information Systems Software: Myths and Realities, In Esanu, J. and P. Uhlir, (Eds.), *Open Access and the Public Domain in Digital Data and Information for Science: Proceedings of an International Symposium* (Washington D.C: National Academies Press), 127-133 http://books.nap.edu/catalog/11030.html

Onsrud, Harlan J., 2009, Liability for Spatial Data Quality, In Devillers, Rodolphe and Helen Goodchild (Eds.), Spatial Data Quality: From Process to Decisions (New York: CRC Press) 187-196

# 2010

Onsrud, H.J., 2010, Legal Interoperability in Support of Spatially Enabling Society. In Abbas Rajabifard, Joep Crompvoets, Mohsen Kalantari, and Bas Kok, Spatially Enabling Society: Research, Emerging Trends and Critical Assessment, 163-172. (Leuven, Belgium: Leuven University Press) Entire Book at

 $http://gs diassociation.org/images/publications/Spatially\_Enabling\_Society\_2010.pdf$ 

#### 2012

Williams, Mitch and Harlan Onsrud, What Every Lawyer Should Know About Title Surveys, in Land Surveys: A Guide for Lawyers and Other Professionals, 3rd Ed. (American Bar Association) 2012 (Rewrite and New Edition)

#### 2019

Onsrud, Harlan, Legal and Policy Paths for Effective Sustainable Development in "Sustainable Development Goals Connectivity Dilemma: Land and Geospatial Information for Urban and Rural Resilience", CRC Press, Taylor & Francis, 2019

# d. ARTICLES IN CONFERENCE PROCEEDINGS

(Accepted based on abstract review)

#### 1985

Onsrud, Harlan J., "The Legal Education of Surveyors", Colloquium on Surveying and Mapping, University of New Brunswick, Fredericton, **Canada**, June 1985.

#### 1986

- Swanson, Matthew C., Harlan J. Onsrud, and Steven D. Johnson, "State Technical Standards for Field Surveys: A Time for Change and a Model for the Future", Technical Papers, ACSM-ASPRS Annual Convention, ACSM, Washington, D.C., March 1986.
- Onsrud, Harlan J., "Land Information System Research Needs", Papers of the 1986 Annual Conference of the Urban and Regional Information Systems Association, Denver, Colorado, August 1986.

#### 1987

Onsrud, Harlan J., "Research Needs in Surveying, Mapping, and Land Information Systems",

- Technical Papers of the Annual Meeting of the American Congress on Surveying and Mapping, ACSM, Falls Church, VA, March 1987.
- Onsrud, Harlan J., "The Education of Surveyors and Cartographers in an Information Age", Technical Papers of the XII Surveying Teachers Conference, July 1987.
- Onsrud, Harlan J., "Research for Validating Cadastral Data", Technical Papers of the International Geographic Information Systems Symposium: The Research Agenda, Crystal City, Virginia, November, 1987.

- Palmer, David, Fritz Petersohn, and Harlan J. Onsrud. "Impact of LIS/LIM on the Assessment Process: A Surveying Perspective", Technical Papers of the Annual Meeting of the American Congress on Surveying and Mapping, ACSM, St. Louis, April 1988.
- Onsrud, Harlan J. and R.J. Hintz. "An Automated Approach to Providing Measurement Based Cadastral Maps", World Congress III Proceedings, Harvard Law School and Lincoln Institute of Land Policy, August 1988.

#### 1989

- Onsrud, Harlan J. and R.J. Hintz. "Upgrading Boundary Information in a GIS Using an Automated Survey Measurement Management System," Technical Papers, ACSM Annual Convention, Baltimore, April 1989.
- Jeffress, Gary A. and Harlan J. Onsrud. "Does LIS/GIS Have a Role in Economic Growth?" Technical Papers, ACSM Annual Convention, Balitmore, April 1989.
- Onsrud, Harlan J. "Legal and Liability Issues in Publicly Accessible Land Information Systems", Technical Papers, GIS/LIS '89, Orlando, Florida, October 1989.
- Onsrud, Harlan J. "Understanding the Uses and Assessing the Value of Geographic Information", Technical Papers, GIS/LIS '89, Orlando, Florida, October 1989.

#### 1990

- Knott, D. and H.J. Onsrud, "The Definition of Dispute, Doubt, and Uncertainty in Parol Agreements", Technical Papers ACSM Annual Convention, Denver, Co. March 20, 1990.
- R. Moreno and H.J. Onsrud, "Legally Supportable Cadastral Information System", Technical Papers ACSM Annual Convention, Denver, Co. March 20, 1990.
- Onsrud, Harlan J., "The Cadastral Mapping Challenge for Surveyors in the U.S.A.", Proceedings of the International Federation of Surveyors (FIG), **Helsinki Finland**, June, 1990 **1991**
- Onsrud, Harlan J. "Evidentiary Admissibility and Reliability of Products Generated from GIS", Proceedings of the ACSM Annual Convention, Baltimore, MD., March 1991
- Onsrud, Harlan J. "Perspectives on Geoinformation Engineering Education for a Global Community", Proceedings of the Advanced Workshop On Surveying and Mapping Education in a Global Environment, May 22, 1991, 39-44
- Onsrud, H.J., "Legal Issues in the Creation and Use of Spatial Databases", 27th International Geographical Congress, 480-481

- Onsrud, H.J., ""Experiences in Acquisition, Implementation, and Use of GIS in U.S. Local Governments: A Sampler of Academic Studies and Findings," Position Paper: European GISDATA Conference on Diffusion of GIS in Local Government in Europe, October 1993, Knutsford, U.K.
- Onsrud, H.J., "Identifying Ethical Conduct in the Use of GIS," Position Paper: NCGIA Conference on Geographic Information and Society, November 1993, Friday Harbor, Wash

- Onsrud, H.J., "Privacy and GIS," GIS/LIS '93, Minneapolis, MN., November 1993, 2: 577-580 **1994**
- Onsrud, H.J., "Privacy and Land Information Systems," FIG XX Congress, **Melbourne Australia**, March 1994
- Frank, S. and H.J. Onsrud, User Requirements for Framework GIS Data, Proceedings of the Annual Conference of ACSM/ASPRS, 1994/1995

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- Johnson, J. P. and H. J. Onsrud, Cost Recovery Worthwhile?, Proceedings of the Annual Conference of the URISA., San Antonio, TX, 1, 126-136, July 1995
- Onsrud, H.J., et. al., Experiences in Acquisition, Implementation, and Use of GIS in U.S. Local Governments: A Sampler of Academic Studies and Findings, Proceedings of the Annual Conference of the URISA., San Antonio, TX, 1, 626-636, July 1995
- Frank, S.M., M.F. Goodchild, H.J. Onsrud, and J.K. Pinto, A Survey of User Requirements for Framework GIS Data, Proceedings of the Annual Conference of the URISA., San Antonio, TX, 1, 637-651, July 1995
- Pinto, J.K. and H.J. Onsrud, Sharing Geographic Information Across Organizational Boundaries: A Research Framework, Proceedings of the Annual Conference of the URISA., San Antonio, TX, 1, 688-694, July 1995
- Lopez, X. and H.J. Onsrud, Information Privacy and the Use of Geographic Information Systems, Proceedings of the 1995 Conference of the International Cartographic Association. September 3-9, 1995. **Barcelona, Spain**. ICA: 1602-1610, 1995
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- Onsrud, Harlan J., Jeff P. Johnson, and Xavier R. Lopez. Protecting Personal Privacy in Using Geographic Information Systems. Proceedings of the Conference on Law and Information Policy for Spatial Databases. Orono: National Center for Geographic Information and Analysis (NCGIA), 1995. 239-256.
- Onsrud, Harlan. Research Agenda. Proceedings of the Conference on Law and Information Policy for Spatial Databases. Orono: National Center for Geographic Information and Analysis (NCGIA), 1995. 320-327.

- Marth, N., K. Zeiner, H.J. Onsrud, M. Lutz and J. Robinson, Spatial Odyssey: The Wired World of GIS Conference Proceedings, Technical Papers, ASPRS/ACSM Annual Convention and Exhibition, Baltimore, MD, 3, 330-335, April 1996
- Onsrud, H.J., Spatial Information Science and Engineering Education: Adapting to Marketplace Demands, Technical Papers, ASPRS/ACSM Annual Convention and Exhibition, Baltimore, MD, 3, 337-342, April 1996
- Onsrud, H.J., U.S. and European Perspectives Across a Range of Spatial Data Legal Topics (Invited Speaker), Hotel Equatorial, **Jakarta**, **Indonesia**. Loose papers distributed at conference, 1996
- Onsrud, H.J. and P. Kirby, Land Tenure Record System Modernization in the United States, Oct. 12-14, 1996. Individual purchase of papers at conference.

Onsrud, H.J., Access to Spatial Data in Networked Environments, Feb. 28-March 1, 1996, Santa Barbara, Presentation incorporated into report of meeting and published on web.

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- Onsrud, H.J., Privacy Trends and GIS in the U.S., Proceedings of URISA, July 23, 1997.
- Onsrud, H.J., What could GIS be?, Proceedings of URISA, July 23, 1997.
- Onsrud, H.J., Data Integration Research: A Reaction, GISDATA Meeting Proceedings, September 16, 1997.
- Onsrud, H.J., Ethical Issues in the Use and Development of GIS, Proceedings of GIS/LIS '97.
- Onsrud, H.J., and Y. Pluijmers, Commercial Sector Perspectives Regarding Legal Methods For Protecting Spatial Datasets, Proceedings of GIS/LIS '97.

#### 1998

- Onsrud, H.J., Producer Rights and Public Rights in Spatial Data Sets in Geolibraries, Mapping Science Committee, National Research Council, June 15, 1998, Washington, DC (published on web at http://www.http://www2.nas.edu/).
- Onsrud, H.J., GIS Legal Issue Challenges, International Federation of Surveyors (FIG), **Brighton England**, July 22, 1998
- Onsrud, H.J., "Balancing Intellectual Property Rights and Public Goods Interests in Geolibraries", International Federation of Surveyors (FIG), **Brighton England**, July 25, 1998, Vol 3, pp. 222-226.
- Onsrud, H.J., "Access to Geographic Information in the United States", Free accessibility of geoinformation in the Netherlands, the United States, and the European Community, Proceedings, **Delft, Netherlands**, Oct 2, 1998, pp. 33-41
- Onsrud, H.J., "Legal Access as a Necessary Prerequisite to Participatory Processes," Empowerment, Marginalization, and Public Participation GIS, NCGIA Varenius Specialist Meeting, Santa Barbara, CA, Oct 14-18, 1998, www.ncgia.ucsb.edu/varenius/ppgis/papers/index.html
- Onsrud, H.J., "Loss of Legal Access to Geographic Information: Measuring Losses or Developing Responses?" Measuring and Representing Accessibility in the Information Age, NCGIA Varenius Specialist Meeting, Asilomar, Pacific Grove, CA, Nov 19-22, 1998, www.artsci.washington.edu/varenius

#### 1999

- Onsrud, H.J., " Economic, Institutional and Technical Impediments to Sharing Data ", Geodata Policy Forum, Washington, D.C., June 7, 1999, www.fgdc.gov/99Forum
- Onsrud, H.J., A Global Survey of National Spatial Data Infrastructure Activities, Proceedings of URISA '99, August 24 1999, CD.

#### 2000

- Onsrud, H., Legal and Policy Issues Affecting the Use of Geographic Data: A Global Comparison, URISA Annual Meeting, Aug 22, 2000,
- Onsrud, H, A Global Survey of National Spatial Data Infrastructure Activities, **Baveno, Italy**, Oct 15-22, 2000
- Onsrud, H., Tracking and Analysis of National Spatial Data Infrastructure Activities Across the Globe, Abstract, GIScience 2000, Oct 28 Nov 1, 2000, 298-299.

# 2003

Onsrud, H.J., Privacy in the Use of Spatial Technologies: Ethics as a Driver of Technological Research Priorities, NSF Confidentiality Workshop, May 12-13, 2003, Hilton Arlington Towers, Washington D.C., http://www.urban.org/nsfpresentations/index.html

Onsrud, H.J. and M. Craglia, editors, Access and Participatory Approaches in Using Geographic Information, URISA Journal Special Issue, Summer 2003, Vol 15, APA1

#### 2004

Onsrud, Harlan, Gilberto Camara, James Campbell, and Narindi Sharad Chakravarthy. "Public Commons of Geographic Data: Research and Development Challenges." In *Geographic Information Science*, edited by Max J. Egenhofer, Christian Freska, and Harvey J. Miller, 223–38. Berlin: Springer-Verlag, 2004. Lecture Notes in Computer Science #3234

#### 2005

- Delgado Fernández, Tatiana, Kate Lance, Margaret Buck and Harlan J. Onsrud, 2005, Assessing an SDI Readiness Index, Global Spatial Data Infrastructure 8 Conference, **Cairo**, **Egypt**, April 16-21, 2005, http://gsdi.org/gsdiconfproceedings/gsdi-8/gsdi-8.asp
- Onsrud, H.J., 2005, Global Spatial Data Infrastructure: Recent Developments and Future Challenges, Eighth United Nations Regional Cartographic Conference for the Americas, New York, 27 June 1 July, 2005, http://unstats.un.org/unsd/geoinfo/eighthunrccadocuments.htm
- Onsrud, Harlan J., Balancing Security, Access to Government Information and Privacy: Legal and Public Policy Issues Surrounding Access to Spatial Data for Disaster Planning and Emergency Response, White Paper, Workshop on Geospatial Information for Disaster Management, National Research Council Committee on Planning for Catastrophe: A Blueprint for Improving Geospatial Data, Tools, and Infrastructure, October 5-6, 2005, Washington, D.C.

#### 2006

Onsrud, H.J., 2006, Promoting Value-Added Services through the Public Commons, Conference on Promoting Value-Added Geographic Information Services, January 27, 2006, **The Hague, The Netherlands**, http://www.tudelft.nl/live/pagina.jsp?id=f413cd2b-04af-4ca1-a59c-47f0229218af&lang=nl

# 2010

- Onsrud, Harlan, Ubiquitous Tracking: Supporting Privacy and Free Speech, Taking Stock of Technology: Reflections on Law, Technology and Society, Centre for Law, Technology and Society Launch, University of Ottawa, **Canada**, March 5, 2010, http://www.techlaw.uottawa.ca/launch
- Onsrud, Harlan J., Open Access Licenses & Lessons for a Creating a Global Marketplace in Geographic Data, Workshop on Legal Aspects of Geographic, Data and Spatial Data Infrastructure, Interdisciplinary Centre for Law and ICT, **Leuven Belgium**, Friday 19 March 2010, http://www.spatialist.be/eng/act/20100319\_ICRI.htm
- Onsrud, Harlan, Ubiquitous Personal Location Tracking: Protecting Both Privacy and Free Speech, GSDI 12 World Conference Proceedings, 20 October 2010, **Singapore** (CD and web publication), http://www.gsdi.org/gsdiconf/gsdi12/prog\_details.html

#### 2011

Harlan J. Onsrud. "Building a Global Knowledge Network among Geospatial Specialists" Eye on Earth Summit. **Abu Dhabi, United Arab Emirates (UAE)**, Dec. 2011. Paper Proceedings (Repository Citation: Onsrud, Harlan J., "Growing a Global Knowledge Network among Geospatial Specialists" (2011). Spatial Informatics Faculty Scholarship. Paper 1. http://digitalcommons.library.umaine.edu/sie\_facpub/1)

#### 2012

Onsrud, Harlan, Legally Supportable Scientific and Technical Linked Data Sharing, Information Without Borders Conference, School of Information Management, Dalhousie University,

Halifax, N.S., Canada, 2 February 2012, Video: http://connect.maine.edu/p3nv2hdc7uo/2014

Taro Ubukawa, Alex De Sherbinin, Harlan Onsrud, Andy Nelson, Karen Payne, Olivier Cottray, and Mikel Maron, 2014, A Review of Roads Data Development Methodologies, Data Science Journal, Vol. 13: 45-66, https://www.jstage.jst.go.jp/article/dsj/13/0/13\_14-001/ article

#### 2016

Campbell, James and Harlan Onsrud, 2014, Desirable Characteristics of an Online Data Commons for Locally Generated Spatial Data from Disparate Contributors, URISA Journal, Volume 26 Number 1: 35-43,

http://www.urisa.org/clientuploads/directory/Documents/Journal/Vol26No1.pdf

#### e. MISCELLANEOUS PUBLICATIONS

i. Sample Early Articles in Trade Journals or Magazines (Reviewed, edited, and accepted by publisher editors)

#### 1988

Onsrud, Harlan J. and J. Richard White, "Survey Checklist: A Practical Guide to Review and Analysis of Land Surveys," The Bulletin, ACSM, February 1988, pp. 61-66.

Williams, Mitchell G. and Harlan J. Onsrud, "What Every Lawyer Should Know About Land Surveys", Probate and Property, Section of Real Property, Probate and Trust Law, American Bar Association, March/April 1988, pp. 12-17.

#### 1989

Dansby, Bishop and H.J. Onsrud. "The Geographic Information System - A Map for the Future," Probate and Property, Section of Real Property, Probate, and Trust Law, American Bar Association, Jan/Feb 1989, pp. 20-27.

Onsrud, Harlan J. and Bishop Dansby. "Geographic Information Systems and the Legal Community," The Bulletin, ACSM, Feb. 1989.

#### 1991

Onsrud, Harlan J. "Secondary Mortgage Market Requirements Relating to Mortgage Loan Surveys", Probate and Property, May/June, vol. 5, no. 3, 1991

Onsrud, H.J., "In Support of Open Access for Publicly Held Geographic Information", GIS Law, 1(1): 3-6

#### 1992

Onsrud, H.J., "Mortgage Loan Surveys", P.O.B., April/May 1992, (17)4: 54-64

Onsrud, H.J., "In Support of Cost Recovery for Publicly Held Geographic Information", GIS Law, 1(2): 1-7

Dansby, B., H.J. Onsrud, and L. Milrad, "GIS Legal Issues", ACSM Bulletin, Nov/Dec 1992, 40-43

Onsrud, H.J., "Evidence Generated from GIS", GIS Law, 1(3),

ii. Sample Early Research Reports and Technical Papers (Non-edited)

#### 1985

Onsrud, Harlan J., James L. Clapp, and John D. McLaughlin, editors. Report of the Workshop on Fundamental Research Needs in Surveying, Mapping, and Land Information Systems,

- VPI&SU, National Technical Information Service # PB87-148722/AO5, Nov. 1985 **1988**
- Onsrud, Harlan J., Maine Case Law Pertaining to the Practice of Land Surveying, Dept. of Surveying Engineering, University of Maine, September 1988.

- Onsrud, Harlan J., Kathryn Fessenden and Lori Phillips, Maine Statutes Pertaining to the Practice of Land Surveying, Dept. of Surveying Engineering, University of Maine, June 1988, Revised March 1989.
- Onsrud, H.J., H.W. Calkins and N.J. Obermeyer. Use and Value of Geographic Information: Initiative Four Specialist Meeting Summary Report, (Santa Barbara: NCGIA Technical Paper 89-6) August 1989.
- Onsrud, H.J., H.W. Calkins and N.J. Obermeyer. Use and Value of Geographic Information: Initiative Four Specialist Meeting Report and Proceedings (Santa Barbara: NCGIA Technical Paper 89-7) August 1989.

#### 1992

Onsrud, H.J. and G. Rushton, Report of the Specialist Meeting on NCGIA Research Initiative 9: Institutions Sharing Geographic Information, (Santa Barbara: NCGIA Technical Paper 92-5) June, 1992

#### 1993

- Onsrud, H.J, J.K. Pinto and B. Azad, Testing Technology Transfer Hypotheses in GIS Environments Using a Case Study Approach (Santa Barbara: NCGIA Technical Report 93-8) August 1993
- Onsrud, H.J and Hugh Calkins, Research Initiative 4: Use and Value of Geographic Information Closing Report (Santa Barbara: NCGIA Technical Report) Sept 1993

#### 1994

- Onsrud, H.J., J. Johnson, and X. Lopez, Selected Bibliography on Law, Information Policy, and Spatial Databases, Technical Report Series, NCGIA, Santa Barbara, Feb. 1994
- Onsrud, H.J., J. Johnson, P. Kirby, R. Moreno, and B. Ramlal, Selected Readings and Bibliography for Land Information Systems in Developing Countries (Santa Barbara: NCGIA Technical Report 94-3) June 1994

#### 1995

- Frank, S.M., M.F. Goodchild, H.J. Onsrud, and J.K. Pinto, Framework Data Sets for the NSDI (Santa Barbara: NCGIA Technical Report 95-1) 1995
- Ferrari, R. and H.J. Onsrud, Understanding Guidance on GIS Implementation. A Comprehensive Literature Review. (Santa Barbara: NCGIA Technical Report 95-13) 1995.
- Sample Additional Early Miscellaneous Publications
   1985
- Onsrud, Harlan J., "Land Surveys What the Lawyer Needs to Know", Real Estate Practice Seminar, Virginia State Bar, Charlottesville, Virginia, May 1985.
- Established web forum and prepared background documents for state wide discussion of InforME Legislation (http://www.spatial.edu/~harlan/informe/infmehom.htm) 1997

  1998
- NCGIA Annual Bibliography Project and Spatial Odyssey Projects, joint projects with Fogler Library, 1991 1998

Enhancing Web Access to State Government Information: A New Model and a Maine Experiment, Wisconsin Land Information Association Newsletter, 1998

<u>Note</u>: The above technical papers and miscellaneous publications are illustrative examples and thus the lists are not comprehensive. Numerous additional miscellaneous technical publications were prepared for initiatives affiliated with the eight-year NCGIA research program.

#### 2. Professional Presentations

(The following list typically does not include talks given at conferences in conjunction with the published conference proceedings articles listed above. I was the presenter of all talks listed below.)

#### 1985

Virginia Laws Relating to Land Surveying, January 1985; Annual Meeting of the VA Association of Surveyors, Williamsburg, VA.

#### 1987

- Survey Checklist: A Practical Guide to Review and Analysis of Land Surveys with Richard White, August 1987, Annual Meeting of the American Bar Association, Real Property Section, Land Surveys Committee, San Francisco, CA.
- What Every Lawyer Should Know About Title Surveys with Mitchell Williams, August 1987, Annual Meeting of the American Bar Association, Real Property Section, Land Surveys Committee, San Francisco, CA.
- Potential Roles of Universities and ILI in Cooperation with Federal Surveying Operations, Interagency Coordinating Committee Annual Meeting, Oct. 1987, Bureau of Land Management and Bureau of Indian Affairs, Greenbay, Wisconsin

#### 1988

- Recent Initiatives in Surveying Education, Sept. 30, 1988, Annual Convention of the Massachusetts Association of Land Surveyors and Civil Engineers, Boston, MA.
- The Land Tenure System of the United States, Nov. 4, 1988, Embassy of the United States, **Bonn, FRG**.
- Surveying, Mapping, and Land Information Systems Education in the United States, Nov. 4, 1988, Embassy of the United States, **Bonn, FRG**.

- Certifications and Checklists, Jan. 23, 1989, Surveyors Conference, Penn. State University, University Park, PA.
- Minimizing Liability Exposure, Jan. 23, 1989, Surveyors Conference, Penn. State University, University Park, PA.
- Requirements of the Secondary Mortgage Market for Mortgage Loan Surveys, April 1989, ACSM Annual Convention, Baltimore.
- Survey Measurement Management in Maintenance of a Temporal Coordinate Base for a GIS, August 1989, URISA Annual Convention, Boston.
- Land Tenure in the United States, International Seminar on Land Information Management, Land Tenure and Cadastral Systems, July 28, 1989, University of Maine, Orono, Maine.
- Survey Measurement Management in Maintenance of a Temporal Coordinate Base for a GIS, August 1989, URISA Annual Convention, Boston.

- New York State Society of Land Surveyors Three presentations: Deed Descriptions, NCGIA Activities, and Contracts and Survey Reports, Buffalo, N.Y. Jan. 18 and 19, 1990
- Super Session on Research NCGIA Research Agenda, URISA Annual Convention, **Edmonton**, **Alberta**, **Canada**, August 15, 1990
- Diffusion of Geographic Innovations Research, Atlantic Institute Annual Research Seminar, **Fredericton, N.B., Canada**, August 23, 1990
- Legal Issues in Sharing Information Through Distributed Databases, ISPRS Mid-term Symposium: Global and Environmental Monitoring Techniques and Impacts, September 19, 1990

# 1991

Perspectives on Geoinformatics Education for a Global Community, Advanced Workshop on Surveying and Mapping Education, **Berlin, Germany**, May 22, 1991

Legal Issues Pertaining to GIS, James Sewall Company, Old Town, Maine, July 30, 1991 Effects of New Technology on Boundary Surveys, University of Wisconsin Engineering Extension, October 16, 1991

#### 1992

Role of the Surveyor in an Information Society, Pennsylvania State University, Jan 20, 1992 Legal Aspects of GIS, Pennsylvania State University, Jan 23, 1992

Citizen Access and Duplication of Publicly Held Geographic Data Sets, URISA, Washington, D.C., July 15, 1992

Law, Public Policy and Spatial Databases, Society of American Archivists, **Montreal, Canada**, Sept 17, 1992.

Impact of Automation on Government Information Policy, GISDEX, Washington D.C., Oct 9, 1992

Spatial Data Cost Recovery; Policies Underlying the Approaches, GIS/LIS' 92, San Jose, CA, Nov. 11, 1992

#### 1993

Annual Conference of the Urban and Regional Systems Association, July 24, 1993, Atlanta, Georgia, "Privacy and GIS"

Science and Technology Law Student Seminar, Arizona State University Law School, Tempe, AZ, April, 1994, "Legal Aspects of Geographic Information Systems"

National Science Foundation Digital Libraries Initiative, Panel Site Visit, June 14, 1994, Investigator response team, Santa Barbara, CA

- "NCGIA Research on Law and Information Policy" First GISDATA Strategic Review, **Aalborg**, **Denmark**, Sept. 21-25, 1994
- "A Legal Framework for the National Spatial Data Infrastructure" State land Information Networking Conference, Nov. 4, 1994
- "Spatial Information Science and Engineering at the University of Maine" Penobscot Chapter, Maine Society of Land Surveyors, Lucerne Inn, Nov. 15, 1994
- "Charging for State Government Information in Maine" Conference on Public Access to State Government Information Services, Augusta, Maine, Dec. 2, 1994

- "Who Owns What? Legal Issues in Multimedia Development" Multimedia Summit for Education, University of Maine, Feb. 14, 1995
- "Unanswered Questions in Copyrighting Spatial Databases" ACSM/ASPRS Annual Conference,

- Charlottesville, North Carolina, Feb. 28, 1995
- "Expanding Teaching and Research in Spatial Information Engineering" Advisory Board, State Planning Office, Augusta, Maine, May 25, 1995
- "Intellectual Property in Electronic Data and Work Products" College of the Atlantic, Bar Harbor, May 22, 1995
- Onsrud, "Legal Issues in Sharing Databases," AM/FM International Executive Seminar, Lake Tahoe, Nevada August 14, 1995
- Onsrud, "Impact of Spatial Information Policy on the Development of a Spatial Data Infrastructure," Maine Government Technology Conference, Augusta, ME, September 20, 1995.
- Onsrud, "NCGIA Research at the University of Maine," Atlantic Institute Annual Graduate Student Research Conference, Laval University, **Quebec City, Canada**, Sept. 22, 1995
- Onsrud, H.J., "Legal Issues with Databases in Networked Environments," Corporate Affiliates Program, Univ of Maine, Nov. 17, 1995
- Onsrud, Lopez, Schroeder, "Freedom of Information, GIS Data: Fee or Free," Panel Discussion, Maine GIS Users Conference, Augusta, ME, December 13, 1995.

- Onsrud, H.J., "Geographies of the Information Society," Reverse Site Visit, National Science Foundation, Arlington, VI, February 1996.
- Onsrud, H.J., "Legal Issues on the Web," MultiMedia Conference, University of Maine, April 11, 1996
- Onsrud, H.J., "Government Data Dissemination Policy: Meeting Both Open Access and Cost Recovery Objectives," ASPRS/ACSM Conference, Baltimore, April 23, 1996
- Onsrud, H.J., "Legal Issues in Disseminating Digital Geographic Data, Products, and Services: Conflicts and Commonalties among European Union and United States Approaches," Specialist Meeting on Geographic Information: the European Dimension, **Bouox, France**, May 9, 1996
- Onsrud, H.J., Invited Speaker: U.S. and European Perspectives Across a Range of Spatial Data Legal Topics, Hotel Equatorial, **Jakarta, Indonesia**, Oct. 20-23, 1996
- Onsrud, H.J., Survey of Geodata Policies Used by Local Governments and a Suggested Approach (Published Abstract) Proceedings of GIS/LIS '96, Denver, Nov. 20, 1996 1997
- Onsrud, H.J., Geographic Information and Ethical Issues (Published Abstract and overheads distributed by participants at the conference) Socio-economic Impacts of New Geographic Information Technologies, Castelvecchio Pascoli, Italy, May 15-21, 1997
- Onsrud, H.J., Dissemination Policies and Liability for Government Spatial Data, University of Lausanne, **Lausanne**, **Switzerland**, May 22, 1997
- Onsrud, H.J., GISDATA Meeting, September 16, 1997 Invited Speaker (expenses paid)
- Onsrud, H.J., Measures of Progress for the National Spatial Data Infrastructure, Workshop, Kansas City, January 21-23, 1998, Invited Participant (expenses paid): 1998
- Onsrud, H.J., Measures of Progress for the National Spatial Data Infrastructure, Workshop, Kansas City, January 21-23, 1998. Invited Participant.
- Onsrud, H.J., The Public Commons in Land Information, Conference on Who Owns America?, Wisconsin Land Tenure Center, Madison, June 3-5, 1998 (Abstracts published).
- Onsrud, H.J., Enhancing Web Access to State Government Information: A New Model and a

- Maine Experiment, Wisconsin Land Information Association Meeting, June 5, 1998.
- Onsrud, H.J., Geolibraries, Mapping Science Committee, National Research Council, Featured Speaker, June 15, 1998, Washington, DC., (expenses paid):
- Onsrud, H.J., The Role of Research in Spatial Data Infrastructure Development, U.K. / U.S. Forum on National Spatial Data Infrastructures held at the FIG Meeting in **Brighton U.K.**, July 24, 1998

- Onsrud, H.J., The Purpose of Faculty Governance, University of Maine Campus Presentation Panel, April, 30, 1999
- Onsrud, H.J., Selected Recent Studies on Information Policy and Infrastructure Issues Germane to the Geographic Information Community, Driven by Data Conference, Los Angeles, Nov 10, 1999
- Onsrud, H.J., State and Local Government Geographic Databases: Citizen Access, Citizen and Commercial Uses, and Claims of Ownership Interests by Government, Driven by Data Conference, Los Angeles, Nov 11, 1999
- Onsrud, H.J., Liability for Geographic Data, Products and Systems, Driven by Data Conference, Los Angeles, Nov 12, 1999

#### 2000

- European Directive on the Legal Protection of Databases, Discussant, **Baveno, Italy**, Oct 14, 2000
- GIScience Journal Editors Panel, GIScience 2000, Oct 31, 2000
- "Access to Government Scientific and Technical Data in the United States", Dec 1-10, 2000, **Beijing China**

- "Ownership of Data by Municipalities", Maine GIS User Group Meeting, Southern Maine Technical College, Jan 4, 2001
- "U.S. Approaches to Intellectual Property, Access to Government Records, and Privacy", University at Buffalo, March 30, 2001
- "Copyright, Copyleft and Evolving Concepts for a Digital Earth Commons", University at Buffalo, March 30, 2001
- "Technical and Legal Issues Surrounding Digital Data: GIS-T", Transportation Research Board Annual Meeting, Washington DC, April 9, 2001
- "Intellectual Property for Digital Earth", Global Change Community Annual Meeting, Fort Collins, CO, May 2, 2001
- "Privacy and the Use of GIS", Guest Speaker, GIS & Society Class, University of Wisconsin, Madison, May 4, 2001
- "Ethical Issues in the Use and Development of GIS", Graduate Colloquium, University of Wisconsin, Madison, May 4, 2001
- "Copyright, Copyleft and Evolving Concepts for a Digital Earth Commons", University Speakers Forum, University of Wisconsin, Madison, May 7, 2001
- "Copyright, Copyleft and Evolving Concepts for a Digital Earth Commons", GSDI Meeting, Cartagena, Colombia, May 22-25, 2001
- "Copyright, Copyleft and Evolving Concepts for a Digital Earth Commons", Digital Earth Conference, **Fredericton**, **NB**, **Canada**, June 24-28, 2001
- "Database Protection and Academic Research" Presented at U.S. State Department Roundtable on "Database Protection and International Science and Technology Collaboration", July 11,

- 2001, Washington, D.C.
- "Establishing an Intellectual Property Regime in Academe" Presented at Society for Industrial Microbiology (SIM), August 2, 2001, St. Louis MO
- "Commoditization of the Public Domain: A Multidisciplinary Academic Community Perspective", Conference on the Public Domain, Duke University Law School, Nov 8-11, 2001, Video Archive at http://www.law.duke.edu/pd/realcast.htm
- "The Public Library of Geographic Information Science", Workshop on Access and Participatory Approaches in Using Geographic Information" in **Spoleto Italy**, December 5 9, 2001
- "A Contract Approach to Addressing Privacy in the Use of Location-Based Services", Specialist Meeting on Location-Based Services, Santa Barbara, CA, December 14 15, 2001.

- "Location Privacy", At the Crossroads of Technology and Privacy, Transportation Research Board Annual Conference, Jan 15, 2002, Washington DC
- "Database Protection and Academic Research," American Chemical Society Annual Conference, August 21, 2002, Boston, MA
- "Emerging Models for Maintaining Scientific Data in the Public Domain", Symposium on the Role of Scientific and Technical Data and Information in the Public Domain, National Academy of Sciences, Sept 6, 2002, Washington, DC, On-line Proceedings at <a href="http://www7.nationalacademies.org/biso">http://www7.nationalacademies.org/biso</a>
- Onsrud, Harlan J., "GSDI Legal and Economic Issues," Global Spatial Data Infrastructure Conference, Sept 17, 2002, **Budapest, Hungary**
- Bethel, Amber and Harlan J. Onsrud, "Exploring Conflicts in the Use of Geographic Information Technologies and Data," GIScience 2002, Sept 26, 2002, Boulder, CO
- Narnindi, Sharad and Harlan J. Onsrud, "Public Commons for Geographic Data: A Conceptual Model," GIScience 2002, Sept 26, 2002, Boulder, CO
- Bhaduri, Anuket and Harlan J. Onsrud, "User Controlled Privacy Protection in Location-Based Services," GIScience 2002, Sept 27, 2002, Boulder, CO
- Onsrud, Harlan J., "Closing Remarks," CODATA 2002: Frontiers of Scientific and Technical Data, Sept 29-Oct 30, **Montreal, Canada**

#### 2003

- "Overview of Open Access and Public Commons Initiatives in the United States", International Symposium on Open Access and the Public Domain in Digital Data and Information for Science, UNESCO Headquarters, **Paris, France**, 10-11 March 2003. Invitation Accepted.
- "Policies for Government Earth Observation and Spatial Data: Implications for Science and Business," Brazilian Symposium on Remote Sensing, April 9, 2003, **Belo Horizonte**, **Brazil**
- "A Public Commons for Geographic Information Science," National Institute for Space Research (INPE), April 11, 2003, **Sao Paulo, Brazil**
- "Open Access and Public Commons Approaches for Scientific Literature and Data," National Institute for Space Research (INPE), April 14, 2003, **Sao Paulo, Brazil**
- "Information Ownership: A Quandary in Science and Technology", (Featured Evening Speaker), Fourth Annual Law and Technology Conference: Information Technology Ownership It's Not Just Black and White, University of Maine School of Law, June 19, 2003

# 2004

Privacy in the Use of Handheld Spatial Location Devices: Autonomy as a Driver of Systems Design, Schoodic Peninsula, Maine, August 2004

- Global Spatial Data Infrastructure Overview, Global Spatial Data and Information User Workshop: Development, Dissemination, and Use, CIESIN, FAO, UNEP, WHO, and CGIAR, Lamont-Doherty Earth Observatory, Columbia University, Palisades, New York, USA, 21-23 September 2004
- Global Spatial Data infrastructure: Where We Go from Here, 8th International Earth Sciences Congress, **Santiago**, **Chile**, October 2004
- The Global Public Commons and Marketplace in Geographic Data: A Conceptual Model for Meeting the Needs of Government, Commercial, Scientific and Nonprofit Sectors, 8<sup>th</sup> International Earth Sciences Congress, **Santiago**, **Chile**, October 2004

- Licensing Geographic Data and Services: Balancing Commons and Marketplace Needs, American Association for the Advancement of Science (AAAS) Annual Meeting, February 20, 2005, Marriot: Washington D.C., http://www.aaas.org/meetings/
- Closing remarks and conference resolutions from GSDI 9, Prof. Harlan Onsrud, President of GSDI, Cairo Egypt, April 2005, http://gsdi.org/gsdiconfproceedings/gsdi-8/gsdi-8.asp
- Balancing Security, Access to Government Information and Privacy, Bentley Geospatial Research and Technology Seminar, May 8, 2005, Convention Center: Baltimore, MD.
- Licensing Geographic Data and Services: Vision for a Global Commons and Marketplace, Cartographic Users Advisory Council (CUAC), May 12-13, 2005, Library of Congress: Washington, D.C. http://cuac.wustl.edu/newAnnounce.htm
- Licensing Geographic Data and Services: Vision for a Global Commons, Public Lecture Series: University of Melbourne, June 8, 2005, **Melbourne Australia**
- Balancing Security, Access to Government Information, and Privacy: One U.S. Perspective, Victoria Lands Department, June 16, 2005, **Melbourne**, **Australia**
- Invited Guest/Participant, Senior Executive Leadership Seminar, 25th Annual ESRI International User Conference, July 24, 2005, San Diego, CA
- Global Public Commons and Marketplace in Technical and Scientific Data and Services, Guest Luncheon Speaker, 4<sup>th</sup> Earth Science Data System Working Group Meeting, October 25, 2005, Convention Center: Baltimore, MD.
- Global Commons of Geographic Data: Research and Development Challenges, World Summit on the Information Society, November 14, 2005, **Tunis, Tunisia**
- The Importance of Geographic Data and Technologies in Supporting Sustainable Social, Economic, and Environmental Systems, World Summit on the Information Society November 16, 2005, **Tunis, Tunisia**
- Global Commons of Geographic Data, World Summit on the Information Society, KRAM Center, November 17, 2005, **Tunis, Tunisia**
- Legal and Ethical Issues Panel Moderator, Workshop on Confidentiality Issues in Linking Geographically Explicit and Self-Identifying Data, December 9-10, 2005, Washington D.C. 2006
- Panelist/Participant, Outcomes-based Planning and Evaluation Workshop, Institute of Museums and Library Services, March 16-17, Washington, D.C.
- Onsrud, Harlan J., Space Law: Back to Basics, Divergences and Convergences: A Symposium Addressing Space Law and Intellectual Property Regimes, National Remote Sensing and Space Law Center, University of Mississippi School of Law, Moot Court Room I and Live Webcast, 19 September 2006.
- Onsrud, Harlan J., UNSDI Implementation Strategy: Ten Random Thoughts, United Nations

- Geographic Information Working Group (UNGIWG) Seventh International Meeting, **Santiago, Chile**, 3 Nov 2006
- Onsrud, Harlan J., Critical Issues in the Alleviation of Poverty and the Relevance of Geographic Data and Tools. GSDI 9 Conference, **Santiago Chile**, 6 Nov 2006
- Onsrud, Harlan, Role of the Public Domain and Commons Licensing in Supporting Scientific Research and Technological Innovation. Conference on Assignment of Intellectual Property Rights and the Open Licensing of Information Generated by Public Institutions and Universities for the Promotion of Access to Knowledge, **Santiago**, **Chile**, 14 Nov 2006 **2007**
- Onsrud, Harlan J., Visions for Ubiquitous Spatial Computing: A Privacy Protection Perspective. Ubiquitous Spatial Computing Specialist Meeting, 25 Jan 2007 Portland Maine, http://www.spatial.maine.edu/ubiquitousspatialcomputing/
- Onsrud, Harlan J., UNSDI Opportunities & Challenges: Ten Random Reflections. United Nations Spatial Data Infrastructure (UNSDI) Global Partners Meeting, ESA-ESRIN, Frascati, Italy, 1-2 March 2007
- Onsrud, Harlan J., The Global Spatial Data Infrastructure. Launch Meeting of UN Global Alliance for ICT and Development (UN GAID) Community of Expertise: Education and Global Alliance for Enhancing Access to and Application of Scientific Data in Developing Countries (e-SDDC), **Atibaia (Sao Paulo), Brazil**, 7 May 2007
- Onsrud, Harlan J., Legal Constraints and Opportunities in Providing Permanent Access to Scientific and Technical Data. Promoting Access to and Use of Digital Knowledge Resources in Countries with Developing and Transitional Economies: Focus on the Role of Science Academies in Latin America, **Atibaia** (Sao Paulo) Brazil, 8 May 2007
- Onsrud, Harlan J., Assessing SDI Initiatives: A Ten-Year Retrospective. Workshop on Multiview Framework to Assess National Spatial Data Infrastructures (NSDIs), Wageningen University, **The Netherlands** 25 May 2007, http://www.grs.wur.nl/UK/Workshops/Multiview+framework+NSDIs/
- Onsrud, Harlan J., GSDI Demand for Information about SDI's. Workshop on Multi-view Framework to Assess National Spatial Data Infrastructures (NSDIs), Wageningen University, **The Netherlands** 25 May 2007, http://www.grs.wur.nl/UK/Workshops/Multi-view+framework+NSDIs/
- Onsrud, Harlan J., Visions for Ubiquitous Spatial Computing: A Privacy Protection Perspective. GEOIDE Annual Research Conference, 7 June 2007, Halifax Nova Scotia, Canada
- Onsrud, Harlan J., Spatial Data Infrastructure: Past, Present and Future Opportunities & Challenges. ESRI, International Users Conference, 19 June 2007, San Diego, CA
- Onsrud, Harlan J., Creative Commons License Primer, Models for Rights Management Workshop, The Cambridge Conference, St. Johns College, Cambridge University, Cambridge, United Kingdom, July 17, 2007, http://www.cambridgeconference.com/2007 conference information/Conference%20procee
  - http://www.cambridgeconference.com/2007\_conference\_information/Conference%20procee dings/
- Onsrud, Harlan J., Geographic Information Knowledge Network, The Cambridge Conference, St. Johns College, Cambridge University, **Cambridge, United Kingdom**, July 19, 2007, http://www.cambridgeconference.com/2007\_conference\_information/Conference%20proceedings/
- Onsrud, Harlan J., Exploring a Taxonomy of Data Products for Common Use Licensing, Joint Workshop on Common Use Licensing of Scientific Data Products, The Sorbonne University,

- **Paris, France**, Sept 24-25, 2007
- Onsrud, Harlan J., Global Spatial Data Infrastructure (GSDI) and e-SDDC, Workshop on Enhancing Access to and Application of Scientific Data in Developing Countries (eSDDC) for the United Nations Global Alliance for ICT and Development (UN-G@ID), National Academy of Sciences, Washington, D.C., Oct 31, 2007, http://www.un-gaid.org/
- Onsrud, Harlan J., The GSDI Knowledge Network, SDI America's Symposium, Pan American Institute of Geography and History (PAIGH) and Instituto Geografico Agustin Codazzi (IGAC), **Bogota, Colombia**, Nov 6-7, 2007

- Onsrud, Harlan J., Thinking Locally and Acting Globally: Government Information Policy Choices in Responding to the Global Geographic Data and Services Phenomena, Map Middle East, **Dubai, United Arab Emirates,** April 6-7, 2008, http://www.mapmiddleeast.org/
- Onsrud, Harlan J., Overview of Spatial Data Infrastructure Concepts, Workshop on Spatial Data Infrastructure for Emerging Business Models, **New Dehli, India**, April 10-11, 2008
- Onsrud, Harlan J., The Future of the Spatial Information Infrastructure: A Dark Side, Workshop on Standards for Sensor Networks, Jawaharlal Nehru University, **New Dehli, India**, April 11, 2008
- Onsrud, Harlan J., Spatial Data Infrastructure: Local to Global, Census Summit, San Diego Convention Center, CA, August 3, 2008

- Onsrud, Harlan J., Creative Commons Licensing & Non-Creative Geographic Data, University of Melbourne, **Melbourne Australia**, March 4, 2009
- Onsrud, Harlan J., Visions for Ubiquitous Spatial Computing: A Privacy Protection Perspective (Tewkesbury Award Lecture), **Melbourne Australia**, March 17, 2009
- Onsrud, Harlan J., Access to Public Land Administration Records (Invited Guest Speaker for Course), University of Melbourne, **Melbourne Australia**, March 19, 2009
- Onsrud, Harlan J., Overcoming Barriers to Scientific Data Sharing, The Third China-US Roundtable on Scientific Data Cooperation, Institute of Oceanology, **Qingdao, China**, March 23-24, 2009
- Onsrud, Harlan J., Role of the Public Domain and Commons Licensing in Supporting Scientific Research and Technological Innovation, Symposium on Common Use Licensing, National Science Library, **Beijing, China**, March 25, 2009
- Onsrud, Harlan J., Role of the Public Domain and Commons Licensing in Supporting Scientific Research and Technological Innovation, Symposium on Common Use Licensing of Publicly Funded Scientific Data and Publications, Academia Sinica, **Taipei**, **Taiwan**, March 27, 2009
- Onsrud, Harlan J., Pervasive Location Tracking: Addressing Privacy Concerns (Invited Graduate Seminar Speaker), University of Muenster, **Muenster**, **Germany**, April 21, 2009
- Onsrud, Harlan J., Pervasive Location Tracking: A Privacy Protection Perspective (Invited Graduate Seminar Speaker), Delft University of Technology, **Delft, The Netherlands**, May 11, 2009
- Onsrud, Harlan J., A Primer on the Geographic Information Knowledge Network, GSDI 11 World Conference, World Trade Center, **Rotterdam**, The Netherlands, June 17, 2009
- Onsrud, Harlan J., Why the GEOSS Architecture Group has a Major Legal Problem, GSDI 11 World Conference, World Trade Center, **Rotterdam, The Netherlands**, June 18, 2009
- Onsrud, Harlan J., Complementary Activities of GEOSS, OGC and GSDI, GSDI 11 World

Conference, World Trade Center, Rotterdam, The Netherlands, June 19, 2009

Liability of Spatial Data Quality, 6th International Symposium on Spatial Data Quality, July 7, 2009, St Johns, **Newfoundland**, **Canada**, http://www.mun.ca/issdq2009/speakers.php#

#### 2010

State Enhancing Geographic Data Findability and Access: The Legal Interoperability Challenge, IGERT Seminar, SUNY Buffalo, Friday 23 April 2010

Legal Aspects of Geographic Information Systems, University of Southern Maine, Portland, ME, Guest Lecturer, GIS Graduate Class, Distance Delivery, 22 Nov 2010

#### 2011

International Global Network of Networks Panel Eye on Earth Summit, **Abu Dhabi, United Arab Emirates**, Dec 14, 2011

Building a Global Knowledge Network among Geospatial Specialists, Eye on Earth Summit, **Abu Dhabi, United Arab Emirates**, Dec 15, 2011, http://digitalcommons.library.umaine.edu/sie\_facpub/1

#### 2012

Legally Supportable Scientific and Technical Linked Data Sharing, Information Without Borders Conference, School of Information Management, Dalhousie University, **Halifax, N.S.,** Canada, Feb 2, 2012, http://connect.maine.edu/p3nv2hdc7uo/

Tracking Everyone Everywhere All the Time: Supporting Privacy and Free Speech University of Redlands, Redlands, CA, March 9, 2012

Legal Interoperability in a Global Context, Interoperability 360, Vespucci Institute, **Firenze**, **Italy**, June 4, 2012

Tracking Everyone Everywhere All the Time, Interoperability 360, Vespucci Institute, Firenze, **Italy**, June 5, 2012

Learning GIS: Courses and Programs to Give You a Leg Up in the Workforce Northeast Arc Users Conference, Samoset Resort, Maine, Nov 12, 2012

#### 2013

Protecting Individual Privacy within Pervasive Observation and Tracking Environments, Association of Photogrammetry, Mapping and Geospatial Firms (MAPPS) Summer Conference: 23 July 2013, http://www.mapps.org/

#### 2014

Tracking Everyone Everywhere All the Time: Protecting Individual Privacy within a Ubiquitous Observation Society, University Consortium for Geographic Information Science (UCGIS) Annual Symposium, Pasadena California:21 May 2014, https://www.youtube.com/watch?v=NwcxOweW5Zk&feature=youtu.be

#### 2016

Support of Individual Autonomy to Control Privacy Exposure within Increasingly Ubiquitous Tracking Societies, Proceedings of GSDI 15th World Conference - Spatial Enablement in Smart Homeland: Smart Disaster Prevention, Smart Transportation, Smart City, Taipei Nangang Exhibition Center, **Taipei, Taiwan**, Dec 1, 2016, http://gsdi15.org.tw/

# 2017

H. Onsrud, Legal and Policy Considerations in the Context of Smart Cities: Keeping an Eye on Basics United Nations-GGIM Academic Network Forum on Secure Land Rights and Smart Cities, Conference Room 11, **United Nations Headquarters**, New York, July 31, 2017, https://spatial.umaine.edu/wp-content/uploads/sites/271/2018/04/UNGGIM-Academic-Network-Forum-2017\_NY.pdf

Legal and Organisational Perspectives, The Sustainable Development Goals Connectivity Dilemma, Urban Settlements, Resilience and Sustainability, **United Nations Headquarters**, New York, July 23, 2018, https://maine.box.com/s/tlym99oen1cglspemjy981ndjx4rsyde **2020** 

Addressing the Negative Societal Ramifications of AI, Session on Social, Ethical, Policy and Legal Considerations, https://ai.umaine.edu/wp-content/uploads/sites/563/2020/05/13-Onsrud-Maine-AI-Webinar.pdf, Maine Artificial Intelligence Webinar, April 29, 2020, https://ai.umaine.edu/webinar/

# 3. Other Scholarly Activity

#### a. Professional Affiliations

Among the professional organizations of which I have been an active member over at least several years during my university teaching career have included the following:

American Bar Association (ABA)

Member, Science and Technology Section, 1991+

Member, Real Property Division, 1983+

Several committee officer positions held

American Congress on Surveying and Mapping (ACSM)

Chair of Editorial Review Board and several other past positions

American Society of Civil Engineering (ASCE)

Member, Publications Committee of Journal of Surveying Engineering

American Society of Photogrammetry and Remote Sensing (http://www.asprs.org/)

Association for Practical and Professional Ethics (http://www.indiana.edu/~appe/)

International Federation of Surveyors (FIG)

United States Representative to Commission 3: Land Information Systems, 1990+

Urban and Regional Information Systems Association

URISA Journal Editorial Board and then URISA Journal Editor in Chief

University Consortium for Geographic Information Science (UCGIS)

Member of Board of Directors

Chair of the Legislation and Policy Committee

President

Fellow

Global Spatial Data Infrastructure Association (GSDI)

Representative from the University of Maine

Director and/or Secretary General of the organization for nine years

Mapping Science Committee of the National Research Council

The National Research Council is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering to serve government and other organizations

Wisconsin Bar Association

#### b. Conferences, Symposia and Meetings Attended

Numerous professional and academic conferences were attended a forty year span, many of

which may be gleaned from the presentations and proceedings papers previously listed. Although early year documentation is unavailable currently, many attended conferences and organizational meetings are listed as follows:

#### 1995-1998

- 1. Organized the Conference on Law and Information Policy for Spatial Databases, National Center for Geographic Information and Analysis (NCGIA) Research Meeting, Law School, Arizona State University, 1995. 2-11. The conference brought together individuals with research interests and backgrounds in computer and information law, privacy law, intellectual property law, spatial data policy, information systems policy, and public policy.
- 2. Hosted the "1995 International Young Scholars Summer Institute in Geographic Information" (Wolfe's Neck, Maine) which was funded by NSF and ESF (European Science Foundation)
- 3. Chaired the U.S. Program Committee for the "1996 International Young Scholars Summer Institute in Geographic Information" (Berlin, Germany, 1996) and helped host the meeting in Berlin.
- 4. Helped organize the International Conference on Cadastre and Land Administration Reform (Florida, 1996)
- 5. Organized and hosted the "UCGIS Annual Assembly and Summer Retreat" (Bar Harbor, 1997)
- 6. Organized a national "Public Participation GIS Meeting" (Orono, 1997)
- 7. Organized a well-attended Congressional Breakfast in the U.S. Capitol Building (April 22, 1998) which was hosted by Senator Collins of Maine and Senator Domenici of Arizona to help raise the awareness of Congress on the importance of advancing geographic information science.

#### 1999

Nov. 4 - 5, 1999

**National** 

USNC/CODATA Meeting

Washington, D.C.

Dec 3 - 5, 1999

National

National Center for Geographic Information and Analysis, Research Meeting Santa Barbara, CA

#### 2000

Jan 6 - 7, 2000

National

National Research Council, Mapping Science Committee Meeting

Washington D.C.

Feb. 5 - 9, 2000

National

University Consortium for Geographic Information Science, Membership and Board Meeting Washington, D.C.

March 23-24, 2000

**National** 

USNC/CODATA Meeting

Washington, D.C.

June 7 - 9, 2000

National

National Research Council, Mapping Science Committee Meeting

Washington D.C.,

June 20 - 25, 2000

National

University Consortium for Geographic Information Science, Membership and Board Meetings

Mt. Hood, Oregon

Aug 26-29, 2000

National

Onsrud, H.J., Global Survey of NSDI Activities, Briefing to FGDC

Washington, DC

Sept 27-29, 2000

USNC/CODATA Meeting

Washington, D.C.,

November 17-18, 2000

National Research Council, Mapping Science Committee Meeting

Washington D.C.

#### 2001

Jan 9, 2001

National

UCGIS/Transportation Research Board Liaison Meeting

Washington DC,

Feb 7 and 12, 2001

National

UCGIS Annual Board Meetings, Chaired

Capitol Hill Club, Washington DC

Feb 8, 2001

National

UCGIS Congressional Breakfast, Moderator

U.S. Capitol Building, Washington DC

Feb 7-12, 2001

National

UCGIS Annual Assembly, Chaired

Capitol Hill Club, Washington DC

April 5, 2001

**National** 

GeoData Forum Core Planning Committee Meeting

Federal Geographic Data Committee

Washington DC

April 9, 2001

National

GIS and Transportation Research Specialist Meeting

Transportation Research Board

Washington DC

May 31, 2001

National

GeoData Forum Planning Committee Meeting

Federal Geographic Data Committee

Denver CO

July 18, 2001 (also August 22, Sept 26, Oct 10, Nov 21, Dec 19, Jan 2, 2002)

State

**GIS Steering Committee** 

Augusta, ME

July 27-29, 2001

National

National Research Council, Mapping Science Committee Meeting

Washington DC

#### 2002

Jan 15, 2002

National

Transportation Research Board, Spatial Data and Information Science Committee Meeting Washington DC

Jan 17-18, 2002

National

National Research Council, Mapping Science Committee Meeting,

Washington DC

April 21-23, 2002

International

U.S. Delegate to Commission 7, International Federation of Surveyors (FIG) Meeting Washington DC

June 25-29, 2002

National

University Consortium for Geographic Information Science Annual Meeting Athens, Georgia

#### 2006

9/19/06

National

Divergences and Convergences: A Symposium Addressing Space Law and Intellectual Property Regimes,

National Remote Sensing and Space Law Center

http://www.spacelaw.olemiss.edu/activitiesandevents/Originals/2006/divergences\_convergences\_agenda.pdf

University of Mississippi School of Law

#### 11/3/06

International

United Nations Geographic Information Working Group (UNGIWG) Seventh International Meeting

http://www.ungiwg.org/meeting2006.htm

IGM,

Santiago, Chile

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11/6/06
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International

**GSDI 9 Conference** 

http://www.gsdi.org/gsdiconf/gsdi9/

Historic and Military Museum,

Santiago, Chile

11/14/06

International

Conference on Assignment of Intellectual Property Rights and the Open Licensing of Information

Generated by Public Institutions and Universities for the Promotion of Access to Knowledge http://www.puc.cl/sibuc/html/derecho4.html

Catholic University

Santiago, Chile

#### 2007

1/25/07

International

Ubiquitous Spatial Computing Specialist Meeting

Portland, ME

3/1/07

International

United Nations Spatial Data Infrastructure (UNSDI) Global Partners Meeting

http://www.ungiwg.org/docs/unsdi/UGPM\_ESRIN/UNGIWG\_UGPM\_Meeting\_Report\_150 407.pdf

Frascati, Italy

5/7/07

International

Launch Meeting of UN Global Alliance for ICT and Development (UN GAID) Community of Expertise: Education and Global Alliance for Enhancing Access to and Application of Scientific Data in Developing Countries (e-SDDC)

Atibaia (Sao Paulo), Brazil

5/8/07

International

Promoting Access to and Use of Digital Knowledge Resources in Countries with Developing and

Transitional Economies: Focus on the Role of Science Academies in Latin America http://www7.nationalacademies.org/ usnc-codata/IAP\_Brazil\_Workshop\_Agenda.pdf Atibaia (Sao Paulo) Brazil

5/25/07

International

Workshop on Multi-view Framework to Assess National Spatial Data Infrastructures (NSDIs)

http://www.grs.wur.nl/UK/Workshops/Multi-view+framework+NSDIs/

Wageningen University,

The Netherlands

6/7/07

International

**GEOIDE** Annual Research Conference

http://www.geoide.ulaval.ca/halifaxProg\_EN.html

Halifax, Nova Scotia, Canada

6/13/07

International GIScience & Geomatics Graduate Research Seminar, The Atlantic Institute Annual Research Forum

http://www.spatial.maine.edu/AtlanticInstitute07/index.html

Schoodic Peninsula, Acadia National Park,

Maine

6/19/07

International

ESRI International Users Conference

http://www.esri.com/events/uc/index.html

San Diego, CA

7/14/07

International

The Cambridge Conference

http://www.cambridgeconference.com/2007\_conference\_information/about/

St. Johns College,

Cambridge University, England

7/15/07

International

Delegate Participant, International Steering Committee for Global Map

Cambridge University,

Cambridge, England

7/15/07

International

Delegate Participant, Joint Board of Geospatial Information Societies

Cambridge University,

Cambridge, England

9/24/07

International

Joint Workshop on Common Use Licensing of Scientific Data Products

The Sorbonne University,

Paris, France

10/1/07

International

Global Roads Workshop: Developing Useable Data for Tomorrow's Needs

Columbia University, Lamont Campus,

Palisades, New York

10/29/07

National

Chair, Socioeconomic Data and Applications Center (SEDAC) User Meeting, CIESIN

The World Bank,

Washington D.C.

#### 10/31/07

International

Workshop on Enhancing Access to and Application of Scientific Data in Developing Countries (eSDDC) for the United Nations Global Alliance for ICT and Development (UN-G@ID)

National Academy of Sciences

Washington, D.C

11/6/07

International

SDI America's Symposium, Pan American Institute of Geography and History (PAIGH) Bogota, Colombia

#### 2008

1/14/08

International

Chair, Planning Meeting for Joint GSDI, JRC, EUROGI and Geonovum Conference Joint Research Council, European Commission,

Ispra, Italy

2/23/08

International

Board of Directors Meeting, Global Spatial Data Infrastructure Association

University of the West Indies

St. Augustine, Trinidad

2/25/08

International

GSDI 10, Tenth International Conference for Spatial Data Infrastructure

http://gsdi.org/gsdi10

University of the West Indies

St. Augustine, Trinidad

4/6/08

International

Map Middle East

Dubai, United Arab Emirates

4/10/08

International Workshop on Spatial Data Infrastructure for Emerging Business Models New Dehli, India

4/11/08

International

Workshop on Standards for Sensor Networks Jawaharlal

Nehru University

New Dehli, India

8/2/08 - 8/8/08

International

**ESRI** User Conference

http://proceedings.esri.com/library/userconf/proc08/index.html

San Diego, CA

8/28/08 - 8/29/08

International

GEOIDE Project Workshop on Public Protection and Ethical Geospatial Data Dissemination: Social and Legal Aspects

Laval University,

Quebec City, Quebec

11/13/08 - 11/14/08

National

Chair, Socioeconomic Data and Applications Center (SEDAC) User Meeting, CIESIN Columbia University, Lamont Campus

Palisades, New York

12/12/08 - 12/15/08

International

Chair, Planning Meeting for Joint GSDI World Conference by GSDI, Joint Research Council of the European Commission, EUROGI and Geonovum

http://gsdi.org/gsdi11

Open Geospatial Consortium Office

Reston, Virginia

#### 2009

1/5/09 -1/9/09

International

Chair, Planning Meeting for Joint GSDI World Conference by GSDI, Joint Research Council of the

European Commission, EUROGI and Geonovum

http://gsdi.org/gsdi11

Amersfoort. The Netherlands

2/9/09

National

Metadata Workshop University of Melbourne

Melbourne, Australia

5/27/09 - 5/28/09

International

Global Earth Observation System of Systems (GEOSS) Data Sharing Task Force Meeting United Nations Building,

Geneva, Switzerland

6/15/09 - 6/19/09

International

**GSDI** World Conference

http://gsdi.org/gsdi11

Rotterdam, The Netherlands

8/25/09-8/27/09

**National** 

Chair, Socioeconomic Data and Applications Center (SEDAC) User Meeting, CIESIN

Columbia University, Lamont Campus

Palisades, New York

11/17/09 -11/18/09

International

Group on Earth Observations (GEO) - VI Washington, D.C. 12/07/09 National SHRP-2 Safety Technical Expert Task Group Meeting (T-ETG) on Data Access for the Naturalistic Driving Study Transportation Research Board Washington, D.C. 2011 July 14-15, 2011 National Strategic Highway Research Program 2 (SHRP 2) Meeting, Transportation Research Board National Academy of Science Washington, DC July 18-23, 2011 International Eye on Earth Technical Working Group Meeting Cairo, Egypt Aug 5, 2011, Dec 7, 2011, Feb 28, 2012 State UMS-Business Information Technology and Computer Science Partnership Portland, Maine Sept 10-17, 2011 International Eye on Earth Technical Working Group Meeting Ispra, Italy 2012 July 30-31, 2012 International Legal Interoperability Working Group, Group on Earth Observations (GEO) National Academy of Science Washington, DC August 13-15, 2012 International Committee of Experts on Global Geospatial Information Management (UN-GGIM) **United Nations** New York August 30, October 9, November 16, 2012

Co-Chair Meetings, UMS-Maine Business Information Technology and Computer Science Partnership Portland, Maine

September 10-11, 2012

National

Strategic Highway Research Program 2 (SHRP 2) Meeting, Transportation Research Board Keck Center, National Academy of Science

Washington, D.C.

April 11-12, 2013

National

Strategic Highway Research Program 2 (SHRP 2) Meeting, Transportation Research Board Beckman Center, National Academy of Science

Irvine, California

April 19, 2013

State

Credit Transfer Conference

University of Maine

Orono, Maine

#### 2014

May 19-23, 2014

National

University Consortium for Geographic Information Science (UCGIS) Annual Symposium http://ucgis.org/event-group/ucgis-2014-symposium

Pasadena, California

# 2015

9/10/2015

**National** 

Meeting of Advisory Board of the Safety Technical Coordinating Committee, Strategic Highway Research Program (SHRP 2 Safety), Transportation Research Board Washington, D.C.

12/11/2015

State

Educate Maine Education Symposium

Portland, Maine

#### 2016

6/26/2016-6/30/2016

National

Esri User Conference

San Diego, CA

6/28/2016

National

COGO Annual Meeting

San Diego, CA

11/16/2016

State

Maine 2016 STEM Summit

http://mainestem.org/2016-stem-summit/

Colby College, Waterville Maine

11/24/2016-12/2/2016

International

GSDI 15 Conference

http://gsdi15.org.tw/

Taipei, Taiwan

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12/21/2016
   State
   Maine Institute for Spatial Technologies (MIST)
   https://spatial.umaine.edu/mist/
   Freeport, Maine
2017
3/27/2017
   National
   COGO Winter/Spring Meeting
   Annapolis, MD
7/10/2017-7/14/2017
   National
   Esri User Conference
   http://www.esri.com/esri-news/releases/17-2qtr/2017-esri-user-conference-celebrates-
       applying-the-scienceof-where
   San Diego, CA
7/11/2017
   National
   COGO Annual Meeting
   http://cogo.pro/
   San Diego, CA
12/01/2017
   National
   COGO Winter/Spring Meeting
   http://cogo.pro/
   video conference
2018
7/18/2018-7/20/2018
   National
   National Annual ABET Meeting with Universities Baltimore,
   Maryland
2019
6/10/2019-6/13/2019/
   National
   University Consortium for Geographic Information Science (UCGIS)
   https://www.ucgis.org/symposium-2019
   Washington, DC
3/7/2019
   State
   Maine Computer Science Teachers Association Informal Gathering
   Bangor, ME
Numerous 2019 Dates
   State
   University STEM + Computing Bi-Weekly Meetings for Advisory Group and Research
       Group University of Maine
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# c. Arranged Functions and Sessions at Conferences and Research Meetings

Due to the inability to open old files, most meetings between 1987 and 1994 are unable to be listed currently. Functions I arranged in the years after 2007 are evident under the section below titled *Service to Profession and Public*.

#### 1994

Hosted a major international research conference at Arizona State University College of Law on "Law, Information Policy and Spatial Databases" in 1994 funded by NCGIA. The conference brought together individuals with research interests and backgrounds in computer and information law, privacy law, intellectual property law, spatial data policy, information systems policy, and public policy.

#### 1995

Hosted the "1995 International Young Scholars Summer Institute in Geographic Information" (Wolfe's Neck, Maine) which was funded by NSF and ESF (European Science Foundation) **1996** 

Chaired the U.S. Program Committee for the "1996 International Young Scholars Summer Institute in Geographic Information" (Berlin, Germany, 1996) and helped host the meeting in Berlin.

Helped organize the International Conference on Cadastre and Land Administration Reform (Florida, 1996)

#### 1997

Organized and hosted the "UCGIS Annual Assembly and Summer Retreat" (Bar Harbor, 1997) Organized a national "Public Participation GIS Meeting" (Orono, 1997)

#### 1998

Organized a well-attended Congressional Breakfast in the U.S. Capitol Building (April 22, 1998) which was hosted by Senator Collins of Maine and Senator Domenici of Arizona to help raise the awareness of Congress on the importance of advancing geographic information science.

Nov 8, 1998, Forum on Legislation and Policy Issues Affecting Geographic Information Science, University Consortium for Geographic Information Science, Fort Worth Texas, organizer **1999** 

Jan. 13-16, 1999, National Research Council, Workshop on Promoting Access to Scientific and Technical Data for the Public Interest, Commission on Physical Sciences, Mathematics and Applications, Washington D.C., Hosted two discussion sessions

June 8, 1999, UCGIS Congressional Reception, National Geographic Society, Washington D.C. (Senator Susan Collins was honorary co-host. Several hundred people attended including staff and members of Congress, other elected officials from state and local government, and representatives of many federal agencies.)

June 21, 1999, Forum on Legislation and Policy Initiatives for the University Consortium for Geographic Information Science, Washington D.C., organizer

Nov. 10-12, 1999, Sessions on Legal and policy Topics Arranged, Driven by Data Conference, Biltmore Hotel, Los Angeles CA

#### 2000

Feb. 8, 2000, UCGIS Exemplary Research Projects Session Arranged, Several researchers were introduced by their home state members of Congress and the sessions additionally were

- attended by UCGIS members, personnel from federal agencies, and personnel from related organizations.
- Feb 8, 2000, UCGIS Congressional and Agency Reception Arranged, , Washington D.C. (Reception attended by over a hundred people including staff members of Congress, and representatives of many federal agencies.)
- June 21, 2000, Forum on Legislation and Policy Initiatives for the University Consortium for Geographic Information Science, Mt. Hood, Oregon

- Moderator, UCGIS Congressional Breakfast, U.S. Capitol Building, Washington DC, Feb 8, 2001
- Chair, UCGIS Annual Membership and Board Meetings, Washington DC, Capitol Hill Club, Washington DC, Feb 7-12, 2001.
- U.S. National Committee to CODATA Meeting, National Research Council, Washington DC, June 13-14, 2001
- Chair, UCGIS Annual Assembly and Board Meetings, Buffalo, NY, June 21-24, 2001
- Chair, U.S. National Committee to CODATA Meeting, National Research Council, Washington DC, October 25-26, 2001
- Co-chaired a National Science Foundation / European Science Foundation funded research meeting on "Access and Participatory Approaches in Using Geographic Information" in Spoleto Italy, December 5 9, 2001

#### 2002

- President and organizer, University Consortium for Geographic Information Science Annual Meeting, Washington, DC, Feb 7-10, 2002
- Chair, U.S. National Committee to CODATA Meeting, National Research Council, Washington DC, May 9-10, 2002
- Chair for several meetings in Augusta throughout the year of the "Legal and Policy Sub-committee" of the Statewide GIS Steering Committee.
- Organized research meeting, Ethics in the Use of Geographic Information, Tampa, FL, May 18-22, 2002
- Organizer, Arranged a NASA/NOAA E-theater program at the 1500 seat Maine Center for the Arts. We offered three showings for middle school and high school students on June 5 and 6 2002 and an additional show for the general public the evening of June 6.
- Co-chair, CODATA 2002: Frontiers of Scientific and Technical Information, Sept 29 Oct 3, 2002, Montreal, Canada
- Chair, URISA Journal Editorial Board Meeting, URISA Conference, Chicago, IL, Oct 29, 2002 Chair, U.S. National Committee to CODATA Meeting, National Research Council, Washington DC, Nov 18-19, 2002

- Chaired, U.S. National Research Council study committee meeting on Licensing Geographic Data and Services, Washington, D.C., Feb 11–12, 2003
- Chaired, Licensing Workshop, U.S. National Research Council, Washington, D.C., May 28-30, 2003
- Chaired, U.S. National Committee to CODATA Meeting, National Research Council, Washington DC, June 16-17, 2003
- Organizer, GSDI Legal and Economic Working Group Full Day Workshop (Spatial Data Infrastructure Legal and Policy Issues, Access, Use and Ownership Issues Surrounding

Government Databases, Europe's Database Experiment: Should the Rest of the World Enact Similar Legislation?), Sept 16, 2003, Budapest, Hungary

#### 2004

Location Privacy Workshop: Individual Autonomy as a Driver of Design, August 2004, Schoodic Peninsula

Copyright, Scholarship, and the Case for Open Access: Conference on the Intellectual Commons. November, 2004, Orono, ME.

## 2005

Session Track Organizer, Emerging Approaches for Expanding Access to Scientific Data, 2005 Meeting of the American Association for the Advancement of Science (AAAS), February 20, 2005 http://www.aaas.org/meetings/

GSDI Association meetings of the Executive Committee, Board and Council, Cairo Egypt, April 15-21, 2005

Conference Co-chair, Embracing Cultural Differences in a Global Spatial Data Infrastructure: Atlantic Institute Think Tank 6, Massachusetts Institute of Technology, Cambridge, Massachusetts, August 17-19, 2005, http://www.spatial.maine.edu/ThinkTank6/

Meeting Chair, Socieconomic Data and Applications Center (SEDAC) Working Group, CIESIN, Columbia University, April 19-20, 2005

## 2006

GSDI Association meetings of the Executive Committee, Board and Council, Santiago Chile, November 2006

### 2007

GIScience and Geomatics Graduate Research Seminar: The Atlantic Institute Annual Research Forum, Schoodic Peninsula, Acadia National Park, June 13-15, 2007

# d. Journal Editorial Boards and Scholarly Reviewing

Editor in Chief, *URISA Journal* (stepped down as Chief Editor in early 2003) Editorial Board, *Journal of Surveying Engineering (ASCE)* 

# **Reviewer of Articles and Research Proposals**

Numerous reviews of articles in conjunction with the URISA Journal editorship Hundreds of articles reviewed for potential inclusion within NCGIA and related publications. Several reviews of proposals for NSF

I have also reviewed numerous articles for the following journals: AAG Annals, ASCE Journal of Surveying Engineering, CAGIS Journal, Geographical Systems, Geomatica, International Journal of Geographical Information Systems (IJGIS), Management Information Systems Quarterly, Transactions in GIS, and URISA Journal

### **B. RESEARCH/TRAINING GRANTS**

While at the University of Maine, he has been PI or co-PI on over 25 funded research grants from such funding agencies as the National Science Foundation, the National Imagery and Mapping Agency, and the U.S. Department of Education.

### 1987

Project Title: Infrastructure Management System

Date Funded: 6/30/87

Sponsor: National Science Foundation

Funded Amount: \$60,000 (\$32,200 while at VPI&SU and \$27,800 while at Maine)

Investigator(s): Onsrud, H.

Project Title: Research Experiences for Undergraduates Supplement

Funded: 7/31/87

Sponsor: National Science Foundation

Funded Amount: \$8,000 Investigator(s): Onsrud, H.

1988

Project Title: Total Stations and ERDAS

Date Funded: 11/1/88

Sponsor: National Science Foundation

Funded Amount: \$37,950

Investigator(s): Hintz, R., Onsrud, H.

1991

Project Title: National Center for Geographic Information - Year 3

Date Funded: 6/1/91

Sponsor: National Science Foundation

Funded Amount: \$307,970

Investigator(s): Tyler, D., Onsrud, H., Beard, K.

Project Title: Brochure on Surveying

Date Funded: 10/1/91

Sponsor: US DEPT INTER/Bureau of Land Management

Funded Amount: \$5,123 Investigator(s): Onsrud, H.

1992

Project Title: National Center for Geographic Information - Year 4

Date Funded: 6/1/92

Sponsor: National Science Foundation

Funded Amount: \$307,712

Investigator(s): Tyler D, Egenhofer M, Franzosa, Onsrud H, Beard K

1993

Project Title: National Center for Geographic Information - Year 5

Date Funded: 1/25/93

Sponsor: National Science Foundation

Funded Amount: \$307,712

Investigator(s): Tyler, D., Egenhofer, M., Beard, M., Onsrud, H., Smith.

Project Title: NATO Book Grant

Date Funded: 6/1/93

Sponsor: North Atlantic Treaty Organization (NATO)

Funded Amount: \$2,125 Investigator(s): Onsrud, H.

1994

Project Title: Topographic Framework for the National Spatial Data Infrastructure

Date Funded: 8/1/94

Sponsor: National Science Foundation

Funded Amount: \$34,154 Investigator(s): Onsrud, H.

Project Title: National Center for Geographic Information - Years 6

Date Funded: 8/1/94

Sponsor: National Science Foundation

Funded Amount: \$341,065

Investigator(s): Egenhofer, M., Onsrud, H., M. Beard

Project Title: Geographic Information Systems Research Literature Database

Date Funded: 10/1/94

Sponsor: US DEPT EDUCATION

Funded Amount: \$115,000

Investigator(s): Lutz, M., Onsrud, H.

1995

Project Title: National Center for Geographic Information and Analysis Yr 7

Date Funded: 3/1/95

Sponsor: National Science Foundation

Funded Amount: \$341,083

Investigator(s): Egenhofer, M, Onsrud, H, Beard, K.

Project Title: Support of Academic Access to GIS Data in Maine

Date Funded: 9/1/95

Sponsor: ME DEPT ADMIN & FINANCIAL SERV

Funded Amount: (Data sharing agreement with Maine State Office of GIS)

Investigator(s): Onsrud, H, Beard-Tisdale, K

Project Title: Impact of Law & Information Policy on the Dissemination of Scientific

Databases

Date Funded: 6/1/95

Sponsor: National Science Foundation

Funded Amount: \$9,975 Investigator(s): Onsrud, H.

1996

Project Title: National Center for Geographic Information and Analysis Yr 8

Date Funded: 5/1/96

Sponsor: National Science Foundation

Funded Amount: \$340,851

Investigator(s): Egenhofer, M, Onsrud, H, Beard-Tisdale, Agouris, P

1997

Project Title: UCGIS Summer Assembly and Retreat

Date Funded: 3/1/97

Sponsor: National Science Foundation

Funded Amount: \$10,000 Investigator(s): Onsrud, H.

Project Title: National Center for Geographic Information and Analysis Yr 9

Date Funded: 6/1/97

Sponsor: National Science Foundation

Funded Amount: \$225,023

Investigator(s): Egenhofer, M, Onsrud, H, Beard-Tisdale, Agouris, P

1998

Project Title: Collection of National Spatial Data Infrastructures Baseline Information

Date Funded: 9/1/98

Sponsor: US DEPT DEFENSE/NIMA

Funded Amount: \$13,675 Investigator(s): Onsrud, H.

Project Title: Spatial Data Institutions and Community Building in Coastal Maine

Date Funded: 8/1/98

Sponsor: US DEPT INTER/Geological Surv

Funded Amount: \$5,684 Investigator(s): Onsrud, H.

2000

Project Title: Global Survey and Analysis of National Spatial Data Infrastructure

Activities

Date Funded: 3/1/2000

Sponsor: US Dept of Defense [National GeoSpatial Intelligence Agency (NGA) /

Federal Geographic Data Committee (FGDC)]

Funded Amount: \$31,475

Investigators: Onsrud, H., 100%, Original, External

2001

Project Title: Global Survey & Analysis of National Spatial Data Infrastructure

Activities Yr 2

Date Funded: 4/1/2001

Sponsor: US Dept of Defense

Funded Amount: \$36,234,

Investigators: Onsrud, H., PI, 100 % responsibility, Continuation, External

2003

Project Title: Global Survey & Analysis of National Spatial Data Infrastructure

Activities Yr 3

Date Funded: 1/1/2003

Sponsor: US Dept of Defense

Funded Amount: \$37,416

Investigators: Onsrud, H., PI, 100 % responsibility, Continuation, External

2004

Project Title: Global Survey & Analysis of National Spatial Data Infrastructure

Activities Yr 4

Date Funded: 4/1/2004,

Sponsor: US Dept of Defense

Funded Amount: \$40,000

Investigators: Onsrud, H., PI, 100 % responsibility, Continuation, External

Project Title: Location Privacy Workshop: Individual Autonomy as a Driver of Design,

Schoodic Peninsula, Acadia National Park, Maine, USA, 5-7 August 2004,

http://www.spatial.maine.edu/LocationPrivacy/

Date Funded: 2003

Sponsor: The University of Maine Intelligent Spatial Technologies Institute (grant

NMA201-01-1-2003)

Investigators: Onsrud, H., External

2005

Project Title: Global Survey & Analysis of National Spatial Data Infrastructure

Activities Yr 5

Date Funded: 10/1/2004

Sponsor: US Dept of Defense

Funded Amount: \$25.000

Investigators: Onsrud, H., PI, 100 % responsibility, Continuation, External

2006

Project Title: Commons of Geographic Data

Date Funded: 9/30/2005

Sponsor: Institute of Museum & Library Services

Funded Amount: \$249,689

Investigators: Onsrud, H., Co-PI, 33% responsibility, External

Project Title: IGERT Fellowship Support: Protecting Privacy in the Use of Radio

Frequency Identification (RFID) Technology

Date Funded: 2006 (major advisor for 1 M.S. student)

Sponsor: National Science Foundation

Investigators: Onsrud, H.

2010

Project Title: 2009 Melbourne Fulbright Lectures on Cyberlaw and Spatial

**Technologies** 

Date Funded: 1/15/2010

Sponsor: Fulbright Foundation

Funded Amount: \$10,590

Investigators: Onsrud, H., PI, 100 % responsibility, External

2011

Project Title: Project Seven: Online Graduate Programs in Information Systems and

Geographic Information Systems

Date Funded: 5/1/2011

Sponsor: University of Maine

Funded Amount: \$40,000

Investigators: Onsrud, H., PI, 100% responsibility, Internal

2016

Project Title: Revolutionizing Computing Across the University of Maine System

Date Funded: 5/21/2016

Sponsor: UMS 2016 Research Investment Funds (RFF) Seed Grant Program

Funded Amount: \$99,279

Investigators: Onsrud, H., PI, 33% responsibility, External

2019

Project Title: Integrating Computation into Science Teaching and Learning in Grades 6-

8: A Diverse Partnership to Develop an Evidence-Guided Model to Serve

**Rural Communities** 

Date Funded: 9/20/2018

Sponsor: National Science Foundation

Funded Amount: \$1,250,000

Investigators: Onsrud, H., C0-PI, 15 % responsibility, Original, External

# C. SERVICE

# 1. Service to Department, University, and UMS

# **Service to Department**

Representative service contributions to the faculty unit in recent years include the following:

**2007:** Active participant in preparing initial and follow-up materials for the ABET review.

2010: Graduate Coordinator

Led the initiative to create a new department web site which was completed.

**2011:** Graduate Coordinator, Department of Spatial Information Science and Engineering Developed and implemented strategies to ensure creation of a School of Computing and Information Science (starting with grassroots meeting in September 2010 to and through Faculty Senate motion in April 2011)

Investigated and developed classroom distance education technology delivery mechanisms

2012: Graduate Coordinator, Department of Spatial Information Science and Engineering

Facilitator/Organizer, Fall Retreat for Graduate Students and Faculty of the School of Computing and Information Science

Developed Intent to Plan for MS in Spatial Informatics (to be offered exclusively by distance technologies)

Choreographed submission of course alterations and additions, many of which are proposed to be additionally offered through distance technologies

**2013:** Graduate Coordinator, Spatial Information Science and Engineering master's and PhD programs and Information Systems master's program

Revised and updated Graduate Handbook for School of Computing and Information Science Processed Intent to Plan for MS in Spatial Informatics (to be offered exclusively by distance technologies)

Member, Curriculum Reform Committee, School of Computing and Information Science

Member, Web Design Committee, School of Computing and Information Science

Arranged for Recruitment E-mailings to high school students with potential interest in Computer Science (with Jimmy Jung and Jubin Kwon)

**2014:** Graduate Coordinator, Spatial Information Science and Engineering master's and PhD programs and Information Systems master's program

Editor, Graduate Handbook finalized for School of Computing and Information Science Processed final Full Proposal for MS in Spatial Informatics (to be offered exclusively by distance technologies)

Member, Curriculum Reform Committee, School of Computing and Information Science Member, Web Design Committee, School of Computing and Information Science

**2015:** Primary author and coordinator in SCIS for the following three proposals:

I. Computing that Matters: Research-Directed Systemic Transformation in Computer ScienceNational Science Foundation, Submitted 11/26/2014

II. Designation of University of Maine as NGA/USGS National Center of Academic Excellence in Geospatial Sciences, National Geospatial Intelligence Agency and US Geological Survey \$0, Submitted 2/26/2015, https://spatial.umaine.edu/docs (successful)

III. EI: Maine Computing in STEM Partnership: An Exploratory Model to Prepare Teachers and Students to Use Computing that Matters in Multidisciplinary Science Domains National Science Foundation, \$1,250,000, 24 months, Submitted 4/13/2015

Chair, Spatial Informatics Faculty Peer Committee

Graduate Coordinator, Spatial Information Science and Engineering master's and PhD programs and Information Systems master's program

Continued processing of final Full Proposal for MS in Spatial Informatics (to be offered exclusively by distance technologies)

Member, Curriculum Reform Committee, School of Computing and Information Science

Chair, Web Maintenance and Support Committee, School of Computing and Information Science

2016: Chair, Spatial Informatics Faculty Peer Committee

Graduate Coordinator, Spatial Information Science and Engineering master's and PhD programs and Information Systems master's program

Processed and gained approval of MS in Spatial Informatics (distance only degree)

Developed marketing materials and initiated implementation of recruitment plan for MS Spatial Informatics and other grad programs

In addition to submitted proposals serving as a PI or Co-PI, was the primary author and coordinator for the following submitted research proposal: Computing That Matters: Research-Directed Systemic Transformation in Computer Science, NSF, \$1,999,998 (1/13/2016)

2017: Chair, Spatial Informatics Faculty Peer Committee

Graduate Coordinator, Spatial Information Science and Engineering master's and PhD programs and Information Systems master's program

Converted school web site to the recommended university-wide template, added new photos, expunged old pages and generally updated content. Added new features such as videos for senior capstone presentations.

Developed marketing materials and continued implementation of recruitment plan for MS Spatial Informatics and other grad programs

Co Chair, ABET Team

Member, Policy Advisory Committee

2018: Director, School of Computing and Information Science

Proposed, processed, and gained approval of Computer Science and New Media curriculum and course revision approvals.

Developed MOU between NM and IMFA concerning TA applications and selection

Trouble shooting concerning visa situations for new faculty

Ex Officio member of search Committees for Director and Cyber Security position

Instruction of Peer Committees as needed

Development of faculty assessment letters as needed

Manage ABET tasks with the faculty chair, Roy Turner, and hosted CS Advisory Board Meeting (Feb 13, 2018)

Organize NEASC response for New Media and Computer Science

Generally manage day-to-day operations and decision-making

**2019:** Initiated social media marketing plan for distance graduate programs and instituted with other faculty members

Managed lab monitors/tutors through weekly meetings

Served as client for a capstone course team

Served on Interdisciplinary Curriculum Committee

Drafted the full proposal for the MS Data Science

Served on multi-campus committee to create a computational thinking certificate that would meet Maine Department of Education endorsement requirements

Participant in SCIS faculty Retreat on May 3, 2019

**2020:** Served on multi-campus committee to create a computational thinking certificate that would meet Maine Department of Education endorsement requirements which was successfully instituted.

Led development in SCIS of Graduate Certificate in Computing for Educators which was successfully instituted.

Supported weekly meetings of Spatial Informatics faculty group throughout the academic year.

# **Service to the University**

# Early Years

A sampling of campus committees on which I served in the 1990's include the Academic Computing Advisory Committee (93-94), the Graduate Student Board (93-95), Women in the Curriculum Advisory Board (94-95), UMaine Web Advisory Group (96-97), UMaine Search Committee, Vice President for Research and Graduate Studies (96-97), Boardman Hall Space Committee (97-98), ABET 2000 Committee (97-98), Distance Education Awards Committee (97), University Accreditation Committee for Graduate Programs (97-98), New Department Chairs Advisory Committee (97-98), and Faculty Senate (starting about 1999).

Representative service contributions to the university in recent years include the following:

2007: Member, Faculty Senate

Member, Faculty Senate, Program Creation and Reorganization Review Committee (PCRRC)

2008: Member, Faculty Senate

Member, Faculty Senate, Executive Committee

Member, Faculty Senate, Research Committee

Member, Faculty Senate, Library Committee

Member, Faculty Senate, Program Creation and Reorganization Review Committee (PCRRC)

2009: Member, Faculty Senate

Member, Faculty Senate, Executive Committee

Chair, Faculty Senate, Library Committee

Member, Faculty Senate, Program Creation and Reorganization Review Committee (PCRRC)

2010: Member, Graduate Board

Member, Faculty Senate

Member, Executive Committee, Faculty Senate

Member, Library Committee, Faculty Senate

Chair, Program Creation and Reorganization Review Committee (PCRRC), Faculty Senate

Member, Campus Advisory Committee on Responsible Conduct of Research

2011: Member, Search Committee, President for University of Maine

Vice-President, Faculty Senate

Developer and Manager, Electronic Feedback Forms for Presidential Search Candidates

Developer and Manager, Distance Education Survey of UMaine Alumni (14,000 electronic mailings)

Manager, Electronic Voting for Graduate Student Body on Raising Student Fees

Developer and Manager, Various electronic votes for Faculty Senate and a campus-wide Faculty Referendum

Chair, Program Creation and Reorganization Review Committee (PCRRC), Faculty Senate (administered numerous program suspensions through the PCRRC review process)

Member, Library Committee, Faculty Senate

Member, Executive Committee, Faculty Senate

Member, Ad Hoc Information Technology Committee, Faculty Senate

Member, Graduate Board, University of Maine

**2012:** Vice-President, Faculty Senate

Chair, Constitution and Bylaws Committee, Faculty Senate

Member, Library Committee, Faculty Senate

Member, Executive Committee, Faculty Senate

Member, Ad Hoc Information Technology Committee, Faculty Senate

Member, Graduate Board, University of Maine

Member, Digital Commons Committee, Fogler Library

Member, Presidential Inauguration Committee

Developed and administered campus-wide opinion surveys titled:

- Faculty Responses to the UMaine Information Technology Strategic Plan UMaine Strategic
- Faculty Responses to the Implementation Plan for Enhancement of Research, Scholarship, and Creative Activities

2013: President, University of Maine Faculty Senate

Chair, General Education Committee, Faculty Senate

Regular meetings with Cabinet of President Ferguson

Chair, Regular meetings with President Ferguson and Faculty Senate Executive Committee

Regular meetings with Provost Hunter

Member, Blue Sky Implementation Team Steering Committee

Member, Provost's Council

Member, Graduate Board, University of Maine

Member, Digital Commons Committee, Fogler Library

Member, Steve Gould Award Committee

Developed and administered campus-wide opinion surveys titled:

• Support for Faculty Senate Blue Sky Suggestions

This survey explored the level of support by elected members of the UMaine Faculty Senate in regard to detailed ideas developed by the Faculty Senate executive committee that respond to action items in the Blue Sky Plan that may be of substantial interest to the faculty.

• Potential Work to Rule Actions at UMaine

This poll explored the extent of support for specific Work to Rule actions by faculty members at the University of Maine.

• Veterans Day Poll of UMaine Faculty

This poll sought to determine the level of support for cancelling classes each year on Veteran's Day.

2014: President, University of Maine Faculty Senate

Chair, General Education Committee, Faculty Senate

Chair Committee on Committees, Faculty Senate

Chair, Regular meetings with President Ferguson and Faculty Senate Executive Committee

Regular meetings with Provost Hecker

Member, Blue Sky Implementation Team Steering Committee

Member, Provost's Council

Member, Graduate Board, University of Maine

Member, Digital Commons Committee, Fogler Library

2015: Member, Provost Search Committee

Member, Electronic Teaching Evaluation Committee

Member, Flagship Internship Committee

Member, University of Maine Faculty Senate

Chair, General Education Committee, Faculty Senate

Member, Graduate Board, University of Maine

2016: Member, Committee on Scientific Misconduct

(https://umaine.edu/research/faculty/research-compliance/committee-on-scientific-misconduct/)

Member, Instructional Designer Search Committee, Division of Lifelong Learning

Member, Electronic Teaching Evaluation Committee

2017: Member, Committee on Scientific Misconduct

(https://umaine.edu/research/faculty/research-compliance/committee-on-scientific-misconduct/)

**2019:** Served on two Faculty Disciplinary Hearing Committees

2021: Co-Chair, Faculty Senate Environment Committee

# **Service to the University of Maine System**

**2001:** I advocated for and sat on the Faculty Senate Committee for rewriting the Intellectual Property Policy of the UMS. It was adopted largely as submitted to the Board of Trustees.

Representative service contributions to the university system in recent years include the following:

**2011:** Member, Advisory Committee, University-Business Information Technology and Computer Science Partnership

**2012:** Member, Advisory Committee, University-Business Information Technology and Computer Science Partnership

Developed and administered state-wide opinion surveys titled:

- Survey of UMS Computing and Information Systems Professors
- Survey of Maine Students with Computer Science or Information Technology Interests
- Survey of Maine Information Technology Specialists or their Employers

**2013:** Member, Advisory Committee, University-Business Information Technology and Computer Science Partnership

Member, Student Internship Working Group, Project Login

Developed a web site (as detailed earlier) to support the UMS contribution to Project Login Developed and administered a University of Maine System survey titled:

• Summer Paid Internships for Maine CS and IT Students

This survey explored the opinions of Maine university students in selected computer science and information technology programs about their potential interest in participating in a 2013 summer internship program.

2014: Co-Chair, UMS General Education and Course Transfer Working Group

Member, UMS Major-to-Major Working Group for Computer Science and Information Technology Programs

2015: Co-Chair, UMS General Education and Course Transfer Working Group

Member, Project>Login Advisory Committee

2016: Member, Project>Login Advisory Committee

**2021:** Faculty Representative to the Board of Trustees

# 2. Service to the Profession and Public

Note: Documentation prior to 2000 is currently unavailable due to files contained in archived backups with file formats difficult to access.

### 1999

Program Organizer Sessions on Legal and Policy Topics, Driven by Data Conference, Nov. 10-12, 1999, Biltmore Hotel, Los Angeles CA

### 2000

Advisory Board Geographies of the Information Society, Varenius Project, NCGIA Program Organizer UCGIS Exemplary Research Projects Session Arranged, Feb. 8, 2000, Several researchers were introduced by their home state members of Congress and the sessions additionally were attended by UCGIS members, personnel from federal agencies, and personnel from related organizations.

Program Organizer UCGIS Congressional and Agency Reception Arranged, Feb 8, 2000, Washington D.C. (Reception attended by over a hundred people including staff members of Congress, and representatives of many federal agencies.)

Program Organizer Forum on Legislation and Policy Initiatives for the University Consortium for Geographic Information Science, Mt. Hood, Oregon, June 21, 2000

Professional Association Committee Chair, US National Committee (USNC) on Data for Science and Technology (CODATA), National Research Council (NRC).

CODATA is an interdisciplinary committee organized under the International Council of Science, a nongovernmental organization created in 1931 to promote international scientific activity in the different branches of science and their applications to humanity. CODATA's general objectives include the improvement of the quality and accessibility of data, as well as the methods by which data are acquired, managed, and analyzed; the facilitation of international cooperation among those collecting, organizing, and using data; and the promotion of an increased awareness in the scientific and technical community of the importance of these activities.

Professional Association Committee Member, Mapping Science Committee, National Research Council

Professional Association Officer President, University Consortium for Geographic Information Science (UCGIS)

Professional Association Committee Co-Chair, Legal and Policy Working Group, Global Spatial Data Infrastructure Association

Professional Association Committee Steering Committee, Global Spatial Data Infrastructure Association

Professional Association Committee United States Delegate, Commission 3 on Land Information Systems, International Federation of Surveyors (FIG)

Professional Association Committee United States Delegate, Commission 7 on Cadastral Systems, International Federation of Surveyors (FIG)

Professional Association Committee Working Group on LIS/GIS, International Union for Surveys and Mapping (IUSM)

Professional Association Committee Chair, Legislation and Policy Committee, University Consortium for Geographic Information Science

### 2001

Chair, US National Committee (USNC) on Data for Science and Technology (CODATA), National Research Council (NRC).

Co-chair, International CODATA Conference 2002

Advisory Board Member, Mapping Science Committee, National Research Council Board and Past-President, University Consortium for Geographic Information Science (UCGIS)

Co-Chair, Legal and Policy Working Group, Global Spatial Data Infrastructure Association Steering Committee, Global Spatial Data Infrastructure Association

United States Delegate, Commission 7 on Cadastral Systems, International Federation of Surveyors (FIG)

#### 2002

Workshop Chair/Instructor "GIS Law", Two half day workshops, Wisconsin Society of Land Surveyors, Jan 23-24, Stevens Point, WI

Workshop Chair/Instructor "Liability for Geographic Data and Services" and "GIS Law Overview", Half day workshop, New England GIS 2002, May 17, 2002, Boxboro, MA

Advisory Board Chair, U.S. National Committee (USNC) on Data for Science and Technology (CODATA) of the National Research Council

Advisory Board Member, Mapping Science Committee, National Research Council **2003** 

Advisory Board Chair, U.S. National Committee (USNC) on Data for Science and Technology (CODATA) of the National Research Council

Advisory Board Chair, U.S. National Research Council Study Committee on the Licensing of Spatial Data and Services

Advisory Board Member, Mapping Science Committee, National Research Council **2004** 

Advisory Board Chair, U.S. National Committee (USNC) on Data for Science and Technology (CODATA) of the National Research Council

Professional Association Officer Vice-President, Global Spatial Data Infrastructure Association (GSDI), Jan 04 – April 05

Advisory Board Chair, U.S. National Research Council Study Committee on the Licensing of Spatial Data and Services (study completed and published July 2004)

# 2005

Professional Association Officer Vice-President, Global Spatial Data Infrastructure Association (GSDI), Jan 04 – April 05

Professional Association Officer President, Global Spatial Data Infrastructure Association (GSDI), April 05 - November 06

Professional Association Officer Interim Executive Director, Global Spatial Data Infrastructure Association (GSDI), April 05+

Chair, Socieconomic Data and Applications Center (SEDAC) Working Group. SEDAC is a Distributed Active Archive Center (DAAC) in the Earth Observing System Data and Information System (EOSDIS) located at CIESIN, Columbia University.

Co-chair, Science Commons Congress planning Committee, Project of Creative Commons (05-06)

Committee Member U.S. National Research Council Study Committee on Confidentiality Issues Arising from the Integration of Remotely Sensed and Self-Identifying Data **2006** 

Professional Association Officer President, Global Spatial Data Infrastructure Association (GSDI), April 05 - November 06

Professional Association Officer Interim Executive Director, Global Spatial Data Infrastructure Association (GSDI), April 05+

Chair, Socieconomic Data and Applications Center (SEDAC) Working Group.

Co-chair, Science Commons Congress planning Committee, Project of Creative Commons (05-06)

Academic Association Officer President, Atlantic Institute. This institute is a collaborative research and educational affiliation among spatial programs at the University of Maine, University of New Brunswick, and Laval University (http://www.spatial.maine.edu/AtlanticInstitute/)

### 2007

College/University Program Review Chair, Socieconomic Data and Applications Center (SEDAC) Working Group. SEDAC is a Distributed Active Archive Center (DAAC) in the Earth Observing System Data and Information System (EOSDIS) of the U.S. National Aeronautics and Space Administration (NASA).

http://sedac.ciesin.columbia.edu/contact.html Chaired meetings at Columbia University Aug 16-18, 2006 and May 30-31, 2007.

Conference Chair/Co-Chair Commons of Science Conference: Creating a Vision for Making Scientific Data Available Across Disciplines, Oct. 3-4, 2007, National Academies of Science, Washington, D.C., http://www.spatial.maine.edu/icfs/

Professional Association Officer Global Spatial Data Infrastructure Association, Serve on Board of Directors, Past President and act as interim Executive Director, run regular board meetings by teleconference, led association arrangements for a major conference in Santiago Chile in 2006 and arranging another in Port of Spain Trinidad for February 2008

Academic Association Officer President, Atlantic Institute (http://www.spatial.maine.edu/AtlanticInstitute/)

## 2008

College/University Program Review Chair, Socieconomic Data and Applications Center (SEDAC) Working Group. SEDAC is a Distributed Active Archive Center (DAAC) in the Earth Observing System Data and Information System (EOSDIS) of the U.S. National Aeronautics and Space Administration (NASA).

http://sedac.ciesin.columbia.edu/contact.html Chaired two meetings during this academic year.

Professional Association Officer Global Spatial Data infrastructure Association, Serve on Board of Directors, Past President and act as interim Executive Director, run regular board meetings by teleconference, led association arrangements for a major conference in St. Augustine, Trinidad in 2007 and arranging another in Rotterdam, The Netherlands for June 2009

## 2009

College/University Program Review Chair, Socieconomic Data and Applications Center (SEDAC) Working Group. SEDAC is a Distributed Active Archive Center (DAAC) in the Earth Observing System Data and Information System (EOSDIS) of the U.S. National Aeronautics and Space Administration (NASA).

http://sedac.ciesin.columbia.edu/contact.html Chaired two meetings during this academic year.

Professional Association Officer Global Spatial Data Infrastructure Association, Serve on Board of Directors, Past President and serving as Executive Director, run regular board meetings by teleconference, led association arrangements for a major conference in Rotterdam, The Netherlands in 2009 and arranging another in Singapore in October 2010.

### 2010

Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne,

http://www.csdila.unimelb.edu.au/centre/managment.html

College/University Program Review Chair, Socieconomic Data and Applications Center (SEDAC) Working Group. SEDAC is a Distributed Active Archive Center (DAAC) in the Earth Observing System Data and Information System (EOSDIS) of the U.S. National Aeronautics and Space Administration (NASA).

http://sedac.ciesin.columbia.edu/contact.html Chaired two meetings during the academic year.

Professional Association Officer Global Spatial Data Infrastructure Association, Serve on Board of Directors, Past President and serving as Executive Director, run regular board meetings by teleconference, led association arrangements for a major conference in Rotterdam, The Netherlands in 2009 and arranging another in Singapore in October 201

Advisory Board SHRP 2 Safety Technical Expert Task Group (T-ETG) on Data Access for the Naturalistic Driving Study, FA009, Transportation Research Board, Washington, D.C., October 19, 2009, to October 18, 2011.

## 2011

Professional Association Officer Executive Director, Global Spatial Data Infrastructure Association, run regular board meetings by teleconference, manage standing committee work, led association arrangements for a major conference in Singapore in 2010 and arranging another in Canada in June 2012.

Conference Chair/Co-Chair GSDI 12 World Conference, 19-22 October 2010, Singapore (http://www.gsdi.org/gsdiconf/gsdi12/)

Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne,

http://www.csdila.unimelb.edu.au/centre/managment.html

Advisory Board SHRP 2 Safety Technical Expert Task Group (T-ETG) on Data Access for the Naturalistic Driving Study, FA009, Transportation Research Board, Washington, D.C.

Advisory Board Chair and Member, Socieconomic Data and Applications Center (SEDAC) Working Group. SEDAC is a Distributed Active Archive Center (DAAC) in the Earth Observing System Data and Information System (EOSDIS) of the U.S. National Aeronautics and Space Administration (NASA).

http://sedac.ciesin.columbia.edu/contact.html

Editorial Board Journal of Spatial Information Science, http://www.josis.or

Editorial Board URISA Journal, http://www.urisa.org/urisajournal

# 2012

Professional Association Officer Executive Director, Global Spatial Data Infrastructure Association: run regular board meetings by teleconference, manage standing committee work, lead association arrangements for major conferences (e.g Quebec City for May 2012)

Conference Chair/Co-Chair GSDI 13 World Conference, 14-17 May, Quebec City, Canada (http://www.gsdi.org/gsdiconf/gsdi13/)

Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne,

http://www.csdila.unimelb.edu.au/centre/managment.html

Advisory Board National Spatial Data Infrastructure Report Card, Coalition of Geospatial Organizations (United States)

Advisory Board Technical Expert Task Group (T-ETG) on Data Access for the Naturalistic Driving Study, FA009, Strategic Highway Research Program (SHRP 2 Safety), Transportation Research Board, Washington, D.C.

Advisory Board Safety Technical Coordinating Committee, Strategic Highway Research Program (SHRP 2) Strategic Highway Research Program (SHRP 2 Safety), Transportation Research Board, Washington, D.C.

Professional Association Committee Chair, Legal Liability Committee, Data Sharing Task Force, Global Earth Observation System of Systems (GEOSS), Group on Earth Observations, Geneva, Switzerland

Professional Association Committee Legal Interoperability Committee, Data Sharing Task Force, Global Earth Observation System of Systems (GEOSS), Group on Earth Observations, Geneva, Switzerland

Editorial Board Journal of Spatial Information Science, http://www.josis.or Editorial Board International Journal Of Spatial Data Infrastructure Research,

http://ijsdir.org

Editorial Board URISA Journal, http://www.urisa.org/urisajournal

2013

Professional Association Officer Executive Director, Global Spatial Data Infrastructure Association: run regular board meetings by teleconference, manage standing committee work, lead association arrangements for major conferences (e.g Quebec City for May 2012)

Conference Chair/Co-Chair AfricaGIS 2013 and GSDI 14 World Conference planned for 4-8 November 2013, UN Commission for Africa Conference Center, Addis Ababa, Ethiopia (http://www.gsdi.org/gsdiconf/gsdi14/)

Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne,

http://www.csdila.unimelb.edu.au/centre/managment.html

Advisory Board National Spatial Data Infrastructure Report Card, Coalition of Geospatial Organizations (United States)

Advisory Board Safety Technical Coordinating Committee, Strategic Highway Research Program (SHRP 2) Strategic Highway Research Program (SHRP 2 Safety), Transportation Research Board, Washington, D.C.

Professional Association Committee Chair, Legal Liability Committee, Data Sharing Task Force, Global Earth Observation System of Systems (GEOSS), Group on Earth Observations, Geneva, Switzerland

Professional Association Committee Legal Interoperability Committee, Data Sharing Task Force, Global Earth Observation System of Systems (GEOSS), Group on Earth Observations, Geneva, Switzerland

Editorial Board Journal of Spatial Information Science, http://www.josis.org/ Editorial Board International Journal Of Spatial Data Infrastructure Research,

http://ijsdir.org

Editorial Board URISA Journal, http://www.urisa.org/urisajournal

2014

Professional Association Officer Executive Director, Global Spatial Data Infrastructure Association: run regular board meetings by teleconference, manage standing committee work, lead association arrangements for major conferences (e.g Addis Ababa in Nov 2013)

- Conference Chair/Co-Chair AfricaGIS 2013 and GSDI 14 World Conference held 4-8 November 2013, UN Commission for Africa Conference Center, Addis Ababa, Ethiopia (http://www.gsdi.org/gsdiconf/gsdi14/)
- Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne, http://www.csdila.unimelb.edu.au/centre/managment.html
- Advisory Board Safety Technical Coordinating Committee, Strategic Highway Research Program (SHRP 2) Strategic Highway Research Program (SHRP 2 Safety), Transportation Research Board, Washington, D.C.
- Professional Association Committee Chair, Legal Liability Committee, Data Sharing Task Force, Global Earth Observation System of Systems (GEOSS), Group on Earth Observations, Geneva, Switzerland
- Professional Association Committee Legal Interoperability Committee, Data Sharing Task Force, Global Earth Observation System of Systems (GEOSS), Group on Earth Observations, Geneva, Switzerland

Editorial Board Journal of Spatial Information Science, http://www.josis.or Editorial Board International Journal Of Spatial Data Infrastructure Research,

http://ijsdir.org

Editorial Board URISA Journal, http://www.urisa.org/urisajournal

2015

- Professional Association Officer Executive Director, Global Spatial Data Infrastructure Association: run regular board meetings by teleconference, manage standing committee work, lead association arrangements for major conferences (resigned in 2014)
- Conference Chair/Co-Chair Advancing Geographic Information Science: The Past and Next Twenty Years, Bar Harbor, Maine, International conference scheduled for 29 June thru July 3, 2015 http://giscienceconferences.org/vespucci2015week2/
- Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne, http://www.csdila.unimelb.edu.au/centre/managment.html
- Advisory Board Safety Technical Coordinating Committee, Strategic Highway Research Program (SHRP 2) Strategic Highway Research Program (SHRP 2 Safety), Transportation Research Board, Washington, D.C.

Professional Association Committee Data Sharing Task Force, Global Earth Observation System of Systems (GEOSS), Group on Earth Observations, Geneva, Switzerland

Editorial Board Journal of Spatial Information Science, http://www.josis.org/ Editorial Board International Journal Of Spatial Data Infrastructure Research,

http://ijsdir.org

Editorial Board URISA Journal, http://www.urisa.org/urisajournal Selection Jury Chair, UCGIS Fellows Selection Committee

General/Other Developed website at http://giscienceconferences.org/ to provide more efficient access to past proceedings articles of the primary scholarly conference series that are offered in the field of Geographic Information Science

## 2016

Conference Chair/Co-Chair Advancing Geographic Information Science: The Past and Next Twenty Years, Bar Harbor, Maine, International conference scheduled for 29 June thru July 3, 2015 http://giscienceconferences.org/vespucci2015week2/

Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne, http://www.csdila.unimelb.edu.au/centre/managment.html

Advisory Board Safety Technical Coordinating Committee, Strategic Highway Research Program (SHRP 2) Strategic Highway Research Program (SHRP 2 Safety), Transportation Research Board, Washington, D.C.

Advisory Board UN-GGIM Academic Network, Lead author of the initial terms of reference (i.e., charter) and service on initial advisory committee, The Academic Network supports the aims and objectives of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) by providing scholarly expertise and educational support for the UN-GGIM national representatives, http://unggim.academicnetwork.org/

Professional Association Committee Data Sharing Task Force, Global Earth Observation System of Systems (GEOSS), Group on Earth Observations, Geneva, Switzerland

Professional Association Officer Vice-Chair/Chair-Elect of Coalition of Geospatial Organizations (COGO) (http://cogo.pro/)

Selection Jury Chair, UCGIS Fellows Selection Committee

Editorial Board Journal of Spatial Information Science, http://www.josis.org/ Editorial Board International Journal Of Spatial Data Infrastructure Research,

http://ijsdir.org

Editorial Board URISA Journal, http://www.urisa.org/urisajournal

2017

Advisory Board United Nations - GGIM Academic Network. Co-author of Terms of Reference for creation of the new organization (http://unggim.academicnetwork.org/wp-content/uploads/2017/03/UNGGIM\_AcademicNetwork\_TOR.pdf) and conducted the online voting for election of new university members. See http://ggim.un.org/UN-GGIM Thematic Groups.html and http://unggim.academicnetwork.org/

Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne, http://www.csdila.unimelb.edu.au/centre/managment.html

Professional Association Officer Chair, Coalition of Geospatial Organizations (COGO) (http://cogo.pro/)

Selection Jury Chair, UCGIS Fellows Selection Committee. Also run the online election process annually.

Editorial Board Journal of Spatial Information Science, http://www.josis.org/ Editorial Board International Journal of Spatial Data Infrastructure Research,

http://ijsdir.org

Editorial Board URISA Journal, http://www.urisa.org/urisajournal

2018

Advisory Board United Nations - GGIM Academic Network http://unggim.academicnetwork.org

Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne http://www.csdila.unimelb.edu.au/people/advisory-committee.html

Editorial Board Journal of Spatial Information Science http://www.josis.or

Professional Association Officer Chair, Coalition of Geospatial Organizations (COGO) (http://cogo.pro/)

### 2019

Advisory Board United Nations - GGIM Academic Network,

http://unggim.academicnetwork.org

Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne, http://www.csdila.unimelb.edu.au/people/advisory-committee.html

### 2020

Advisory Board United Nations - GGIM Academic Network,

http://unggim.academicnetwork.org

Advisory Board Centre for Spatial Data Infrastructures and Land Administration (CSDI&LA), University of Melbourne, http://www.csdila.unimelb.edu.au/people/advisory-committee.html

### **Additional Service to the Public**

The following are illustrative examples of services provided directly to or engaging the public.

A major campus and public service we provided for several years on a regular basis in the early years of our program was the offering of GIS training courses to the campus and public. These offerings began when I developed and organized a series of "Spatial Horizons" workshops. These workshops were intended primarily for high school students and teachers and they focused on introducing attendees to the world wide web, building web pages, accomplishing a GIS exercise, processing remotely sensed images and running a global positioning system (GPS) exercise in the field. This initiative expanded into offering ArcView workshops and the income from these workshops went towards upgrading our computer cluster in Boardman Hall as well as supporting student instructors. The short-course offerings were offered on several Saturdays each year over the years from 1995 through 1998.

June 5 and 6 of 2000, we arranged a NASA/NOAA E-theater program at the 1500 seat Maine Center for the Arts. We offered three showings for middle school and high school students on June 5 and 6 2002 and an additional show for the general public the evening of June 6.

Also spearheaded the education and engagement of high school students in increasing their knowledge of surveying, spatial computing, and computer science. This involved visiting high schools (e.g., hosting engineering and computing college bowls) and bringing students to campus to attend workshops. Some of the funding for workshops is evident from previously listed training grants

# D. DOCUMENTATION OF TEACHING

# **Primary Field of Teaching Responsibility:**

My primary field of responsibility has been teaching law and information policy courses to engineering and computing undergraduate and graduate students and teaching responsible conduct of research to graduate students from diverse disciplines. Among graduate courses taught in the first decade on campus included SIE 522 Environmental Law, SIE 525 Information Systems Law, and SIE 526 Cadastral and Land Information Systems. At the undergraduate level I regularly taught SIE 225 Land Development Design and coordinated the teaching of SIE 101 Introduction to Spatial Information Engineering. In later years, my teaching migrated primarily to regularly teaching COS 490 Computers, Ethics and Society, INT 601 Responsible Conduct of Research, and SIE 525 Information Systems Law. I also advised most graduate students pursuing SIE 590 Information Systems Internship. While serving as department chair, I further coordinated the graduate seminar for all graduate students.

Through much of my first decade at the University of Maine I was on 25% release time as a commitment to match external research funding. Later I had release time from teaching due to service as department chair, school director, and/or due to additional administrative burdens in support of the faculty unit.

# **Teaching Philosophy:**

One of my primary teaching goals has been to challenge and motivate students to think for themselves and to initiate independent learning. Upper-level engineering, computing, and science students have become accustomed to seeking "correct" or "optimal" answers from their respective academic disciplines and are often uncomfortable with law and policy courses such as taught by myself where explicit "true" answers fail to exist. My class sessions have often consisted of brief overviews of material presented by myself or students followed by open discussions. We often do small group exercises in which groups of students must discuss an issue among themselves and then report back to the class their suggested resolution of a problem or their approach for resolving the problem. I have used participatory class sessions as much as possible because I feel students learn as much or more from each other and through expressing their own reflections about the reading materials than they learn from a traditional lecture format.

It should be noted that in the past several years all of my graduate courses have been taught simultaneously on-campus as well as by distance. I have advocated this approach for all others in the graduate faculty unit. Students participating online may attend the on-campus sessions when live streamed or view the recordings at a time of their choosing. All assignments and exams are identical for both on-campus and online students. This approach as deployed through the faculty unit has raised the typical graduate student semester enrollments from about 20 to around 150 students. Most of the online students are mature professionals supported financially by their employers and add significant insights and maturity to the class experience for all.

# **Typical Courses Taught**

Although names and designators have changed over the years, among the undergraduate courses most regularly taught at the University of Maine included:

SIE 101 Introduction to Spatial Information Engineering

**ISE 213 Information Ethics** 

SIE 225 Land Development Design

COS 490 Computers, Ethics, and Society

Courses regularly taught at the graduate level included primarily:

SIE 522 Environmental Law

SIE 525 Information Systems Law

SIE 526 Cadastral and Land Information Systems

SIE 590 Information Systems Internship

INT 601 Responsible Conduct of Research

## E. DOCUMENTATION OF RECOGNITION AND AWARDS

## 1990

Awarded R.D. Steele Prize for 1990 (cash award) by the Council of the Institution of Surveyors, Australia, Inc. Jeffress, G., R. Hintz and H. Onsrud, "An automated measurement management system: a useful tool for surveyors and digital cadastral data base managers", The Australian Surveyor, 1990, 35:19-28

## 1991

Awarded Thorpe Award by ACSM as most significant paper contribution to surveying discipline in 1991. Onsrud, H.J. and R.J. Hintz, "Evidentiary Admissibility and Reliability of Automated Field Recorder Data", Surveying and Land Information Systems, ACSM, March 1991,

## 1994

Awarded Best Scientific Paper in GIS - ESRI Annual Award for Onsrud, H.J., J. Johnson, and X. Lopez, "Protecting Personal Privacy in Using Geographic Information Systems", Photogrammetric Engineering and Remote Sensing, 1994, LX(9), 1083-1095

### 1999

Selected as **Editor in Chief of URISA Journal** from among numerous candidates. Implemented substantial policy changes prior to stepping down in 2003.

Appointment to two **National Research Council Study Groups** and appointed as a reviewer of the report produced by another study group

Invited Speaker for GeoData Policy Forum, Denver (1999)

Invited Speaker at two Varenius research specialist meetings (1999)

## 2000

Invited to serve for three-year term (2000-2003) and appointed as Member, **Mapping Science**Committee, National Research Council

Presented keynote address titled *Global Survey of National Spatial Data Infrastructure Activities: 2000 Update and Status Report*. Presented at the 4th Global Spatial Data Infrastructure Conference, Cape Town, South Africa, March 13, 2000

Elected **vice-president** and subsequently **president** of the **University Consortium for Geographic Information Science (UCGIS)**. UCGIS is a non-profit organization of over 50 universities and other research institutions dedicated to advancing our understanding of geographic processes and spatial relationships through improved theory, methods, technology, and data. (Functions and regular global meetings largely replaced in approximately 2018 by the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) https://ggim.un.org/)

Appointed, Member of the **US National Committee (USNC) on Data for Science and Technology (CODATA)**. USNC/CODATA, a National Research Council Committee, serves as a bridge between the scientific and technical community in the United States and the international CODATA regarding scientific and technical data issues. CODATA is an interdisciplinary committee of the International Council of Scientific Unions, a nongovernmental organization promoting international scientific activity in the different branches of science and their applications to humanity.

Appointed, Co-chair of the **Legal and Economics Task Group of the Global Spatial Data Infrastructure Initiative (GSDI)**. GSDI is a global effort in coordinating the organization, management, and use of spatial data and related activities.

Appointed, Member of the GSDI Steering Committee.

## 2001

Appointed Chair, US National Committee (USNC) on Data for Science and Technology (CODATA). Served as Chair through 2003.

### 2002

On 20 December 2002, he was appointed by the **National Research Council Division on Earth and Life Studies to chair a twenty-month national study** on "Licensing Geographic Data and Services." Among the study objectives includes the development of recommendations to government agencies, policy-makers and law-makers on actions that will balance the interests of all parties affected by licensing of spatial data and services to and from government.

### 2003

Recipient of University of Maine **Presidential Public Service Achievement Award**Designated by NAS President Bruce Alberts as a lifetime **National Associate of the National Academies of Sciences**. One of only 400 in the nation and the only one in Maine.

2007

Four conference opening **keynote talks** at UNGIWG Seventh International Meeting (Nov 3 - Chile), Global Spatial Data Infrastructure Conference (GSDI-9) (Nov 6 - Chile), United Nations Spatial Data Infrastructure Global Partners Meeting (March 1 - Italy), and GEOIDE Annual Research Conference (June 7 - Canada). Also did several featured invited talks at additional international and domestic conferences.

Appointed chair of the **Socioeconomic Data and Applications Center (SEDAC) Working Group**, a Distributed Active Archive Center (DAAC) in the Earth Observing System Data and Information System (EOSDIS) located at CIESIN, Columbia University

## 2008

Invited featured speaker at **keynote speaker** at Map Middle East, Dubai, United Arab Emirates (April 6), featured speaker at Workshop on Spatial Data Infrastructure for Emerging Business Models, New Dehli, India (April 10) and at Workshop on Standards for Sensor Networks, Jawaharlal Nehru University, New Dehli (April 11). Master of ceremonies for large international GSDI 10 conference in St. Augustine, Trinidad (Feb 25-29).

Recipient of **Ashley S. Campbell Award**, November 2, 2007, which is the College of Engineering's highest annual award providing recognition to a faculty member who has, by his or her activities, achievements, and scholarship brought distinction to the education of engineering students.

#### 2009

Selected for a funded Fulbright Specialist project in Law in Australia at The University of

Melbourne during February and March 2009 to develop and present five major lectures, known collectively as the 2009 Melbourne Fulbright Lectures on Cyberlaw and Spatial Technologies, focusing on key legal and policy issues with which the global spatial technology and mobile computing communities have been struggling.

Appointed as a member of SHRP 2 Safety Technical Expert Task Group (T-ETG) on Data Access for the Naturalistic Driving Study, FA009, Transportation Research Board, Washington, D.C. to serve from October 19, 2009 to October 18, 2011.

Invited featured speaker at International Symposium on Spatial Data Quality in St. John's Newfoundland, July 7, 2009.

## 2010

Invited featured speaker at the launch of the Centre for Law, Technology and Society, University of Ottawa School of Law, March 5, 2010

Invited featured speaker at Workshop on Legal Aspects of Geographic Data and Spatial Data Infrastructure, Interdisciplinary Centre for Law and ICT, Leuven Belgium, Friday 19 March 2010.

### 2011

From a nationwide call for nominations, Professor Harlan Onsrud was among six individuals to be honored as a **Fellow** by the University Consortium for Geographic Information Science (UCGIS) at its Spring 2011 meeting. UCGIS is a non-profit organization of seventy universities and other research institutions dedicated to expanding and strengthening geographic information science. See http://ucgis.org/FellowsProgram/Onsrud.htm

### 2012

Recipient of **Service and Outreach Award**, College of Liberal Arts and Sciences Selected for Fulbright Senior Scientist teaching assignment in Law at University of Muenster Germany.

Featured invited speaker at Information without Borders Conference, Feb 9, Halifax Nova Scotia Elected and served as Vice President of UMaine Faculty Senate

### 2013

Elected and served as **President of UMaine Faculty Senate** 

### 2014

Elected and served as President of UMaine Faculty Senate

Invited featured speaker at the 2014 annual meeting of the University Consortium for Geographic Information Science

### 2016

Nominated and selected as Vice-Chair/Chair-Elect of the **Coalition of Geospatial Organizations** (COGO) (http://cogo.pro/) which is a coalition of 13 national professional societies, trade associations, and membership organizations in the geospatial field, representing more than 170,000 individual producers and users of geospatial data and technology.

#### 2020

Elected by Faculty Senate to serve as University of Maine Faculty Representative to the UMS Board of Trustees