

# Introduction

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It has been my privilege for sixteen years to work with colleagues through the Digital Mapping Techniques (DMT) workshop series. Within the Nation's geological surveys, and in private industry, academia, and agencies both within and beyond the U.S. border, these meetings have had a strong influence on the development of methods, guidelines, and standards for digital geologic mapping, production, and dissemination. Despite the increasing fiscal constraints and workloads in all agencies, colleagues continue to enthusiastically gather together at the DMT meetings, to share their knowledge and experience, and to improve the geoscience community's ability to reach our audiences with high-quality science. The meetings in 2011 and 2012 continued this tradition:

- The Digital Mapping Techniques '11 (DMT'11) workshop was hosted by Virginia Division of Geology and Mineral Resources and The College of William & Mary, and coordinated by the National Geologic Map Database project. Conducted May 22-25 on the campus of The College of William & Mary, in Williamsburg, Virginia, it was attended by 77 technical experts from 30 agencies, universities, and private companies, including representatives from 19 State geological surveys (see "DMT'11 Presentations and Attendees" in these Proceedings).
- The Digital Mapping Techniques '12 (DMT'12) workshop was hosted by the Illinois State Geological Survey and coordinated by the National Geologic Map Database project. Conducted May 20-23 on the campus of The University of Illinois, in Champaign, Illinois, it was attended by 73 technical experts from 34 agencies, universities, and private companies, including representatives from 25 State geological surveys (see "DMT'12 Presentations and Attendees" in these Proceedings).

At these meetings, oral and poster presentations and special discussion sessions emphasized: (1) methods for creating and publishing map products (here, "publishing" includes Web-based release); (2) field data capture software and techniques, including the use of LiDAR; (3) digital cartographic techniques; (4) migration of digital maps into ArcGIS Geodatabase formats; (5) analytical GIS techniques; and (6) continued development of the National Geologic Map Database.

Throughout the first decade of DMT workshops, the Proceedings (see Appendix) were published in a timely fashion. More recently, however, various factors combined to constrain each author's ability to prepare and publish their written contributions. Further, new (generally Web-based) venues for rapid sharing of information somewhat diminished the need for publication of these Proceedings. Despite this diminishing role for the Proceedings, there remains the enduring need to document our methods, challenges, and accomplishments. And so these Proceedings continue to be published, albeit in a more limited format. I sincerely thank those authors who were able to muster the time and energy to document their presentations herein. For more information and links to presentations and posters given at DMT'11 and '12, I refer you to the list of presentations presented elsewhere in the Proceedings, and to <http://ngmdb.usgs.gov/Info/dmt/DMT11presentations.html> and <http://ngmdb.usgs.gov/Info/dmt/DMT12presentations.html>. I anticipate that Proceedings will be published for subsequent DMT meetings, albeit with changes to the format.

## **Acknowledgments**

The success of these DMT workshops, throughout their sixteen years, has depended on the intellect and enthusiasm of the attendees. I thank them profusely, for without their collegial spirit, the DMT workshop series would have failed long ago. I also, of course, offer my sincere appreciation to

our gracious hosts: for DMT'11 – David Spears (Virginia Division of Geology and Mineral Resources) and Chuck Bailey (College of William & Mary), and for DMT'12 – Mark Yacucci and Don McKay (Illinois State Geological Survey). The meetings were expertly managed, conducive to discussion and interaction, and thoroughly enjoyable.

## Appendix. Previous Digital Mapping Techniques Workshops

1997:

Hosted by the Kansas Geological Survey, Lawrence, Kansas, June 2-5. 73 technical experts attended, from 30 State geological surveys, the USGS, and the Geological Survey of Canada.

Soller, D.R., ed., 1997, Proceedings of a workshop on digital mapping techniques: Methods for geologic map data capture, management, and publication: U.S. Geological Survey Open-File Report 97-269, 120 p., <http://pubs.usgs.gov/of/of97-269/>.

1998:

Hosted by the Illinois State Geological Survey in Champaign, Illinois, May 27-30. More than 80 technical experts attended, mostly from the State geological surveys and the USGS.

Soller, D.R., ed., 1998, Digital Mapping Techniques '98—Workshop Proceedings: U.S. Geological Survey Open-File Report 98-487, 134 p., <http://pubs.usgs.gov/of/of98-487/>.

1999:

Hosted by the Wisconsin Geological and Natural History Survey in Madison, Wisconsin, May 19-22. 91 selected technical experts from 42 agencies, universities, and private companies attended, including representatives from 30 State geological surveys.

Soller, D.R., ed., 1999, Digital Mapping Techniques '99—Workshop Proceedings: U.S. Geological Survey Open-File Report 99-386, 216 p., <http://pubs.usgs.gov/of/of99-386/front.html>.

2000:

Hosted by the Kentucky Geological Survey in Lexington, Kentucky, May 17-20. 99 technical experts from 42 agencies, universities, and private companies attended, including representatives from 28 State geological surveys.

Soller, D.R., ed., 2000, Digital Mapping Techniques '00—Workshop Proceedings: U.S. Geological Survey Open-File Report 00-325, 209 p., <http://pubs.usgs.gov/of/of00-325/>.

2001:

Hosted by the Geological Survey of Alabama, in Tuscaloosa, Alabama, May 20-23. 108 technical experts from 48 agencies, universities, and private companies attended, including representatives from 31 State geological surveys.

Soller, D.R., ed., 2001, Digital Mapping Techniques '01—Workshop Proceedings: U.S. Geological Survey Open-File Report 01-223, 248 p., <http://pubs.usgs.gov/of/2001/of01-223/>.

2002:

Hosted by the Utah Geological Survey, in Salt Lake City, Utah, May 19-22. More than 100 technical experts from 40 agencies, universities, and private companies attended, including representatives from 30 State geological surveys.

Soller, D.R., ed., 2002, Digital Mapping Techniques '02—Workshop Proceedings: U.S. Geological Survey Open-File Report 02-370, 214 p., <http://pubs.usgs.gov/of/2002/of02-370/>.

2003:

Hosted by the Pennsylvania Geological Survey, in Millersville, Pennsylvania, June 1-4. Nearly 90 technical experts from 36 agencies, universities, and private companies attended, including representatives from 22 State geological surveys.

Soller, D.R., ed., 2003, Digital Mapping Techniques '03—Workshop Proceedings: U.S. Geological Survey Open-File Report 03-471, 262 p., <http://pubs.usgs.gov/of/2003/of03-471/>.

2004:

Hosted by the Oregon Department of Geology and Mineral Industries, in Portland, Oregon, May 16-19. Nearly 100 technical experts from 40 agencies, universities, and private companies attended, including representatives from 22 State geological surveys.

Soller, D.R., ed., 2004, Digital Mapping Techniques '04—Workshop Proceedings: U.S. Geological Survey Open-File Report 2004-1451, 220 p., <http://pubs.usgs.gov/of/2004/1451/>.

## 4 Digital Mapping Techniques '11–12

2005:

Hosted by the Louisiana Geological Survey, in Baton Rouge, Louisiana, April 24-27. More than 100 technical experts from 47 agencies, universities, and private companies attended, including representatives from 25 State geological surveys.

Soller, D.R., ed., 2005, Digital Mapping Techniques '05—Workshop Proceedings: U.S. Geological Survey Open-File Report 2005-1428, 268 p., <http://pubs.usgs.gov/of/2005/1428/>.

2006:

Hosted by the Ohio Geological Survey, in Columbus, Ohio, June 11-14. More than 115 technical experts from 51 agencies, universities, and private companies attended, including representatives from 27 State geological surveys.

Soller, D.R., ed., 2007, Digital Mapping Techniques '06—Workshop Proceedings: U.S. Geological Survey Open-File Report 2007-1285, 217 p., <http://pubs.usgs.gov/of/2007/1285/>.

2007:

Hosted by the South Carolina Geological Survey, in Columbia, South Carolina, May 20-23. More than 85 technical experts from 49 agencies, universities, and private companies attended, including representatives from 27 State geological surveys.

Soller, D.R., ed., 2008, Digital Mapping Techniques '07—Workshop Proceedings: U.S. Geological Survey Open-File Report 2008-1385, 140 p., <http://pubs.usgs.gov/of/2008/1385/>.

2008:

Hosted by the Idaho Geological Survey, in Moscow, Idaho, May 18-21, 2008. More than 100 technical experts from 39 agencies, universities, and private companies attended, including representatives from 19 State geological surveys.

Soller, D.R., ed., 2009, Digital Mapping Techniques '08—Workshop Proceedings: U.S. Geological Survey Open-File Report 2009-1298, 217 p., <http://pubs.usgs.gov/of/2009/1298/>.

2009:

Hosted by the West Virginia Geological Survey, in Morgantown, West Virginia, May 10-13, 2009. Almost 90 technical experts from 42 agencies, universities, and private companies attended, including representatives from 24 State geological surveys.

Soller, D.R., ed., 2011, Digital Mapping Techniques '09—Workshop Proceedings: U.S. Geological Survey Open-File Report 2010-1335, 260 p., <http://pubs.usgs.gov/of/2010/1335/>.

2010:

Hosted by the California Geological Survey, in Sacramento, California, May 16-19, 2010. More than 110 technical experts from 40 agencies, universities, and private companies attended, including representatives from 19 state geological surveys.

Soller, D.R., ed., 2012, Digital Mapping Techniques '10—Workshop Proceedings: U.S. Geological Survey Open-File Report 2012-1171, 170 p., available only online at <http://pubs.usgs.gov/of/2012/1171/>.