

**in030380**

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**Annual Report for Technical Committee L1,  
Geographic Information Systems (GIS)  
April, 2002 – March, 2003**

**Informal Description of Work**

Geographic Information Systems form a distinct class of information systems through their unique requirements for collecting, converting, storing, retrieving, processing, analyzing, creating, and displaying geographic data. The generic nature of GIS, organizing information by location, is interdisciplinary and not specific to any application.

The work of L1, Geographic Information Systems (GIS) consists of adopting or adapting information technology standards and developing digital geographic data standards. Digital geographic data standards are concerned with creating, defining, describing, and processing such data.

**Executive Summary**

INCITS holds the U.S. TAG to ISO/TC 211, Geographic Information/Geomatics, with technical responsibilities assigned to L1, GIS. The United States Delegation attended the 14th ISO/TC 211 Plenary and working group meetings in Bangkok, Thailand in May 2002 and the 15th ISO/TC 211 Plenary and working group meetings in Gyeongju, Republic of Korea in November 2002. The US Delegation will be attending the 16<sup>th</sup> ISO/TC 211 Plenary and working group meetings in Thun Switzerland May 2003 and the 17<sup>th</sup> ISO/TC 211 Plenary and working group meetings in Germany October/November 2003.

The U.S. has the project leaderships for fourteen of the forty-one ISO/TC 211 work items and provides 5 editors in support of them. As many of these ISO/TC 211 work items become International Standards, L1, GIS will be making recommendations for adoption by the US.

**Significant INCITS L1 Accomplishments**

**North American Profile(s)-**

Approach for cooperation between ANSI INCITS and CGSB-COG addressing the relationship between ANSI INCITS (International Committee on Information Technology and Standards) and the CGSB COG (Canadian General Standards Board – Committee on Geomatics) which is the equivalent national committee in Canada for the development of common geographic information standards bilaterally between Canada and the US. (Approved by INCITS Executive Board February 2003)

\* Operating under the procedures of The American National Standards Institute.  
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### **Geospatial One-Stop-**

Framework standards will comply with the ISO Geographic information series of standards being developed through ISO Technical Committee 211, Geographic Information/Geomatics, and ANSI standards, wherever applicable.

Additionally, other standardization activities have yielded feature catalogs, conceptual data models, and data content standards for Framework data themes. These activities include the Federal Geographic Data committee (FGDC), NATO's Digital Geographic Information Working Group (DGIWG), the International Hydrographic Organization (IHO), and U.S. Federal, State, local agencies, and other private and public sector organizations. These standards and data models will be considered as input into this project.

### **Draft INCITS TR-34**

INCITS TR-34 Geographic Feature Cataloguing Methodology, submitted 13 March 2003

### **Significant Meetings/Briefings**

See Attachment 1

## **Significant INCITS L1 Challenges**

### **INCITS Maintenance Program –**

- Maintenance Plan - for information systems-codes-Identification of hydrologic units (ANSI X3.145) (USGS Cir 878-A)
- Maintenance Plan - for information systems - codes - Structure for the identification of counties and county equivalents of the United States and its outlying and associated areas for Information interchange (ANSI X3.31) (FIPS 6)
- Maintenance Plan - for information systems - representation of the geographic point locations for information exchange (ANSI X3.61) (FIPS 70-10) (ISO 6709)
- Standard Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE), updates to NCITS 353
- Project 987-D: Spatial Data Transfer, ANSI INCITS 320:1998, Information Technology - Spatial Data Transfer, Standard is the official designation.

### **ISO Metadata Extension(s) -**

The purpose of this Technical Amendment is to provide a means by which a dataset compliant with Version 2.0 of the FGDC Content Standard for Digital Geospatial Metadata (CSDGM) can be compliant with the *ANSI adopted version of 19115*.

## **Expected INCITS L1 Challenges**

### **North American Profile(s)-**

Approach for cooperation between ANSI INCITS and CGSB-COG addressing the relationship between ANSI INCITS (International Committee on Information Technology and Standards) and the CGSB COG (Canadian General Standards Board – Committee on Geomatics) which is the equivalent national committee in Canada for the development of common geographic information standards bilaterally between Canada and the US. (Approved by INCITS Executive Board February 2003)

### **NIST FIPS Reduction Program (8) (FIPSPUBS that may be transferable to INCITS L1 for maintenance)**

- 5-2: Codes for the Identification of the States, the District of Columbia and the Outlying Areas of the United States, and Associated Areas
- 6-4: Counties and Equivalent Entities of the United States, Its Possessions, and Associated Areas
- 8-6: Metropolitan Areas (including MSAs, CMSAs, PMSAs, and NECMAs)
- 9-1: Congressional Districts of the United States
- 10-4: Countries, Dependencies, Areas of Special Sovereignty, and Their Principal Administrative Divisions

- 55-DC3: Guideline: Codes for Named Populated Places, Primary County Divisions, DC3 and Other Locational Entities of the United States, Puerto Rico, and the Outlying Areas
- 55-3: Guideline: Codes for Named Populated Places, Primary County Divisions, and Other Locational Entities of the United States, Puerto Rico, and the Outlying Areas, 1994 December 28. Same as FIPSPUB 55-DC3; (documentation only)
- 173-1: Spatial Data Transfer Standard (SDTS) (NOTE: INCITS L1 already maintains INCITS 320:1998, which is a modification of FIPSPUB 173-1. NIST may be able to withdraw FIPSPUB 173-1 in favor of the ANSI version.)

#### **Standards Outreach INCITS Project: 1574-D**

The purpose of a Standards Outreach Program is to provide information about current standards and the standards development process to users of geographic information. One goal of an outreach program would be to involve as many GIS professionals in the development process as possible. Another goal would be to offer information about standards to those who will be required to use the standards.

#### **ISO/TC 211 Working Groups/ Advisory Groups**

Working Group 4 Geospatial Services  
 Working Group 6 Imagery  
 Working Group 7 Information Communities  
 Working Group 8 Location Base Services  
 Working Group 9 Information Management  
 Advisory Group on strategy  
 Advisory Group on outreach  
 Advisory Group on web server interface  
 Terminology Maintenance Group  
 Harmonized Model Maintenance Group  
 ISO/TC 211/OGC co-ordination group (TOCG)  
 ISO/TC 204/TC 211 task group  
 ISO/TC 211 Liaisons Internal/External (see TC 211 Below)

#### **Geospatial One-Stop**

Framework standards will comply with the ISO Geographic information series of standards being developed through ISO Technical Committee 211, Geographic Information/Geomatics, and ANSI standards, wherever applicable.

Additionally, other standardization activities have yielded feature catalogs, conceptual data models, and data content standards for Framework data themes. These activities include the Federal Geographic Data committee (FGDC), NATO's Digital Geographic Information Working Group (DGIWG), the International Hydrographic Organization (IHO), and U.S. Federal, State, local agencies, and other private and public sector organizations. These standards and data models will be considered as input into this project.

#### **FGDC Standards (@40)**

The Federal Geographic Data Committee (FGDC) was established in 1990 to coordinate the production of geographic information among Federal agencies and to establish the National Spatial Data Infrastructure (NSDI). The FGDC began developing standards as a step towards accomplishing this goal. The FGDC has completed work on 19 standards, of which the most widely used is the Content Standard for Digital Geospatial Metadata, and has 18 standards in work. At the same time, Federal standardization policy has changed in favor of the use of non-government standards. As a result, the FGDC and several of its member agencies are actively involved in the work of INCITS/L1 (approximately 40 standards). The purpose of this activity is to evaluate those FGDC Standards, which lend themselves to elevation to either national or international Status.

## INCITS L1 Committee Activities

### Previous INCITS L1 Years Meetings

INCITS L1 Meeting Number	Date	Location
42 INCITS L1/US TAG	February 14, 2002	Lockheed Martin Corporation, Chantilly, VA
43 INCITS L1/US TAG	April 4-5, 2002	GST, Greenbelt Maryland
44 L1 Delegation Meeting	May 14, 2002	NOAA, Silver Spring, MD
45 INCITS L1/US TAG	June 6, 2002	Bureau of Census. Upper Marlboro, MD
46 INCITS L1/US TAG	August 15, 2002	Lockheed Martin Corporation, Chantilly, VA
47 INCITS L1/US TAG	September 24-25 2002	ESRI, Tysons Corner, VA
48 L1 Delegation Meeting	November 5, 2002	Oracle, Reston, VA
49 INCITS L1/US TAG	December 4, 2002	Lockheed Martin Corporation, Chantilly, VA

### Next Years Meetings

INCITS L1 Meeting Number	Date	Location
50 INCITS L1/US TAG	29 January 2003	Environmental Protection Agency, Washington D.C.
51 INCITS L1/US TAG	2 April 2003	GST, Greenbelt Maryland
52 L1 Delegation Meeting	14 May 2003	TBD
53 INCITS L1/US TAG	18 June 2003	TBD
54 INCITS L1/US TAG	20 August 2003	TBD
55 INCITS L1/US TAG	14 October 2003	TBD
56 L1 Delegation Meeting	19 November 2003	TBD
57 INCITS L1/US TAG	17 December 2003	TBD

### Liaison Activities

#### from L1

#### to L1

#### INCITS H2, Database

John R. Herring  
Oracle Corporation  
[jrherrin@us.oracle.com](mailto:jrherrin@us.oracle.com)

Paul Scarponcini  
Bentley Transportation  
[paul.scaponcini@bentley.com](mailto:paul.scaponcini@bentley.com)

#### INCITS H3, Computer Graphics and Imagery (to be established)

Laura Moore  
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[Moorela@nima.mil](mailto:Moorela@nima.mil)

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#### INCITS L8, Metadata

Norman Andersen  
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[Norman.c.andersen@lmco.com](mailto:Norman.c.andersen@lmco.com)

Dan Gillman  
Bureau of Labor Statistics  
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#### Standards Development Board (SDB)

Norman Andersen  
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Donald Deutsch

#### INCITS TC

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Ed Barrett

### Membership and Officers

Position	Training date	Name and Organization Represented
<b>Chair</b>	2002-12-12	Norman C. Andersen Lockheed Martin Corporation 15050 Conference Center Drive Chantilly, VA 20151 +1 703 460 3402 +1 703 460 3356 FAX norman.c.andersen@lmco.com
<b>Vice Chair</b>	2002-12-12	Ms. Julie Binder Maitra, Federal Geographic Data Committee (FGDC)
<b>Secretary</b>	2002-12-12	April Avnayim, National Geographic Partnerships Team, Geography Division, U.S. Census Bureau
<b>International Representative</b>	2000-10-10	Dr. Charles Roswell National Imagery and Mapping Agency (NIMA) NIMA Reston MS/P24 12310 Sunrise Valley Dr. Reston, VA 20191-3449 +1 703 262 4418 +1 703 262 4401 FAX

### INCITS L1 Membership

- American Association of Geographers (AAG)
- American Congress on Surveying and Mapping (ACSM)
- American Society for Photogrammetry and Remote Sensing (ASPRS)
- Environmental Protection Agency (EPA)
- ESRI
- Federal Geographic Data Committee (FGDC)
- George Mason University
- Intergraph Corporation
- Lockheed Martin
- MITRE
- National Aeronautics and Space Administration (NASA)
- National Imagery and Mapping Agency (NIMA)
- National Oceanic and Atmospheric Administration (NOAA)
- Northrop Grumman
- Oracle
- U.S. Army Corps of Engineers
- US Census Bureau
- U.S. Department of Agriculture
- U.S. Geological Survey
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\*\* Complete INCITS L1 Membership is presented in Attachment 2

### Future Trends

The trend of incorporating geoprocessing functionality into major software and database products continues the need for spatial data standards and compatibility with information technology standards. Growth in the mass market/consumer oriented proportion of the GIS industry will increase the demand for spatial data for location based services among wireless mobile users. Consortium developed specifications related to the GIS industries are emerging. Internationally, there has been considerable progress made in establishing spatial data infrastructures at the national, regional, and global levels. The majority of these spatial data infrastructures intend to use the ISO/TC 211 family of standards.

**Other Administrative Information**

- H3 INCITS – Computer Graphics and Imagery harmonization of ISO/IEC 18025, the Environmental Data Coding Specification (EDCS) and INCITS 353 - Spatial Data Standard for Facilities, Infrastructure & Environment
- T6 INCITS – Radio Frequency Identification (RFID) Technology harmonization with ISO/TC 211 work item in reference to Location Base Services

**INCITS L1 Projects -**

The projects assigned to the committee can be found at the following URL:

[http://www.incits.org/tc\\_home/11sd4.htm](http://www.incits.org/tc_home/11sd4.htm)

### Attachment 1 Significant Meetings/Briefings

<b>Date</b>	<b>Name</b>	<b>Title</b>	<b>Subject</b>
16 – 25 May 2002	ISO TC 211 Geographic Information	14th ISO TC 211 Plenary Bangkok, Thailand	International Standards Meeting
6 – 9 August 2002	University of Illinois	GIS Workshop	International, National and Federal Standards
9 October 2002	Federal Geographic Data Committee	FGDC Steering Group Meeting	Geospatial OneStop
28 -30 October 2002	Urban and Regional Information Systems Association (URISA)	40 <sup>th</sup> URISA Annual Conference, Chicago, Illinois	International, National and Federal Standards
7 – 16 November 2002	ISO TC 211 Geographic Information	15 <sup>th</sup> ISO TC 211 Plenary Gyeongju, Korea	International Standards Meeting
19 December 2002	Lee Warren	National Geospatial Intelligence Center for Standards (NGICS)	International, National and Federal Standards
20 December 2002	Scott Cameron	DOI, Deputy Assistant Secretary for Performance & Management	Geospatial OneStop
30 December 2002	Fred Broome	Head Geography Department, CENSUS	International, National and Federal Standards
3 January 2003	Christina Clarke	Manager Module 1 Geospatial OneStop	Geospatial OneStop
6 January 2003	Sharon Shin	FGDC – Metadata Coordinator	Geospatial OneStop
10 January 2003	Chris Clarke	Geo OneStop Module 1 Leader	Processing Requirements
23 January 2003	Northrop Grumman	John Moeller Senior	INCITS L1 Membership
27 January 2003	Dr Belinda Collins Mary Saunders Michael Hogan	Deputy Director, Technology Services National Institute of Standards and Technology	International, National and Federal Standards
31 January 2003	Susan Kalweit	Chief, Geospatial Preparedness Team, Office of National Properness	International, National and Federal Standards
4 February 2003	FGDC Coordination Committee	Ivan Deloatch	FGDC/Geo OneStop
11 February 2003	FGDC	Al Stevens	GSDI/NSDI
11 February 2003	Geo OneStop Executive Director	Hank Garie	INCITS L1/ISO/Geo OneStop
12 February 2003	Intergraph Corporation	Richard Tate	INCITS L1 Membership
11 March 2003	National Imagery and Mapping Agency (NIMA	National Geospatial Intelligence Center for Standards (NGICS) Committee	International, National and Federal Standards

## Attachment 2 INCITS L1, GIS Membership

5 March 2003

### Voting Members (Principle / Alternate)

Member	Principle Representative	Alternative Representative
AAG	Robert D. Rugg AAG C/O Virginia Commonwealth Univ. Box 842008 812-14 West Franklin Street Richmond, VA 23284-2008 804-828-2489 804-828-6681 FAX <a href="mailto:rugg@vcu.edu">rugg@vcu.edu</a>	Frederick Broome Geography Division U.S. Census Bureau Washington, DC 20233-7400 301-763-1056 301-457-4710 FAX <a href="mailto:fbroome@geo.census.gov">fbroome@geo.census.gov</a>
ACSM	Harold Moellering ACSM c/o Dept. of Geography 1036 DB Ohio State University Columbus, OH 43210 614-292-2608 614-292-6213 FAX <a href="mailto:geohal+@osu.edu">geohal+@osu.edu</a>	Dave Danko ESRI 8620 Westwood Center Dr Vienna, VA 22182 703-506-9515 x8011 703-506-9514 FAX <a href="mailto:ddanko@esri.com">ddanko@esri.com</a>
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USACE	Jack E. Huntley U.S. Army Corps of Engineers USATEC Attn: CEERD – TS-G 7701 Telegraph Road Alexandria, VA 22315-3864 703-428-6703 703-428-6834 FAX <a href="mailto:jhuntley@tec.army.mil">jhuntley@tec.army.mil</a>	Bobby Carpenter U.S. Army Corps of Engineers Attn: CEERD-ID 3909 Halls Ferry Road Vicksburg, MS 39180-6199 601-634-4572 601-634-4584 FAX <a href="mailto:Bobby.g.carpenter@erdc.usace.army.mil">Bobby.g.carpenter@erdc.usace.army.mil</a>
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**Advisory Members (non-voters)**

Member	Representative
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OGC (A)	Kurt Buehler Open GIS Consortium 4899 N.Old st. Road 37 Bloomington, IN 47408-9239 812-334-0601 812-829-2245 FAX <a href="mailto:kurt@opengis.org">kurt@opengis.org</a>
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