

UPDATE ON GEOSPATIAL
ONE-STOP ACTIVITIES FOR
TRANSPORTATION

Agenda

Geospatial One-Stop Overview – *Sharon Shin, FGDC*

Modeling Advisory Team (MAT) Activities –
Mark Bradford, BTS

Draft Models, *Paul Scarponcini, Bentley Transportation*

Prototype Transportation Portal, *Derald Dudley, BTS*



Air MAT Members

John Farley, Co-Chairman – Hartsfield
Atlanta International Airport

Matthew Freeman, Co-Chairman – FAA

Mike Kerr – Tulsa International Airport

Majed Khater – McCarran International
Airport

Cornell Stockton – Columbus Airport
Authority/AAAE GIS Subcommittee

Clifton Baldwin – FAA

Debra French – FAA

Bob Nedermair – FAA

Cliff Daniels – NIMA

Anne Perper – NIMA

Warren Bennett – USACE

Marc Beckel – Northrop Grumman
Corp/TASC

Dejan Damjanovic – Space Imaging

Steve Grise – ESRI

Ed Kramer – Calibre

Randy Murphy – Grafton Technologies

Mark Ricketson – Carter Burgess

Steve Lewis – BTS



Air MAT Purpose

- To create a core data model that facilitates the reliable exchange of information between airport authorities and the aviation industry



Existing Standards Considered

- Spatial Data Standards for Facilities, Infrastructure and Environment (SDSFIE) and Facilities Management Standards for Facilities, Infrastructure, and Environment (FMSFIE) - USACE
- DO-272, User Requirements for Aerodrome Mapping Information - RTCA
- DO-276, User Requirements for Terrain and Obstacle Data - RTCA
- Electronic Airport Layout Plan (eALP) – Hartsfield Atlanta International Airport
- United States Imagery and Geospatial Information Systems Architecture (USIGS), NIMA



Emphasis of Air MAT

- Exchanging information on airport facilities and characteristics.



Past, Present, and Future

- Team development February – August, 2002
- 2 MAT meetings Sep 16-18 & Dec 9-11, 2002
- Discovered concurrent effort at FAA
 - ◆ FAA developing eALP standards
 - ◆ Delayed release of Air MAT standard in order to merge the 2 efforts
- Draft Standard to Reviewers by 4/1/03
- Address and incorporate comments ASAP
- Final Standard to ANSI by Summer 2003



Road MAT Members

Paul Scarponcini, Chairman - Bentley Systems

Roger Ewers CALTRANS

David Miley - D. Appleton Company

Steve Grise - ESRI

James Poll - FHWA

Milan Trninic - Galdos Systems, Inc

Marina Melchiorre - HDM

Wei Du - HDM

Phil Hardy - Intergraph

Lisa Stuebing - Mason County, WA

Dennis Boutin - Natural Resources Canada

Amiy Varma - North Dakota State University

Zhongren Peng - U of Wisconsin, Milwaukee

Ron Cihon - Washington DOT

David Alvarez - Ohio State University

Ed Arabas - OR Geospatial Data Clearinghouse

Al Butler Orange County, Florida

Joe Borgione - State of Utah

Simon Lewis - Trans Decisions

Jack Huntley - USACE

Warren Bennett - USACE

Mark Bradford - BTS

Fred Broome - BOC

Doug Nebert - USGS



Road MAT Purpose

- To determine “essential” characteristics of the content standard to support data sharing



Existing Standards Considered

- UNETRANS Data Model - ESRI
- Spatial Data Standards for Facilities, Infrastructure and Environment (SDSFIE) and Facilities Management Standards for Facilities, Infrastructure, and Environment (FMSFIE) - USACE
- NCHRP 20-27(2) – NCHRP
- Transportation Multimodal, Multidimensional Location Referencing System (MDLRS) – NCHRP
- National Road Network (NRN) Product Specification (Draft)
- GDF – ISO/TC 204
- GIS-T Enterprise Data Model - K.J. Dueker, J.A. Butler
- NSDI Framework Transportation Identification Standard – FGDC
- Generalized Model for Linear Referencing in Transportation
- ITS Data Registration



Emphasis of Road MAT

- Exchanging information on roadway infrastructure and characteristics.



Past, Present, and Future

- Team development Feb. - June
- 2 MAT meetings July 15-18 & Oct. 28-29
- Draft Standard to OMB Sept. 1
- First review Fall 2002
- Second review & address comments Spring 2003
- Harmonize with other mode standards early Summer.



Transit MAT Members

Brendan Ford, Co-Chairman - Fairfax County, VA

Gary Hufstedler, Co-Chairman - Dallas Area Rapid Transit

Al Butler - Orange County, FL

Sarah Clements - FTA

Teresa Adams - U of Wisconsin-Madison

Shirley Hsiao - Orange County Transportation Authority

Mike Berman - King County Metro Transit

Bibiana Kamler - Tri_Met

James McBride - Washington Metropolitan Area Transit Authority

Polly Okunieff - Systems & Solutions, Inc.

Jill Stanford - LYNX Planning Dept.

Brad Thompson - Regional Transportation Authority

Fred Williams - FTA

Matt Sheppard - BTS



Transit MAT Purpose

- To create a data content standard that promotes regional data exchange and supports regional planning efforts.

(note: regional exchange is critical here because often multiple agencies operate in a single region and lack a common basemap or protocols for sharing/exchanging data.)



Existing Standards Considered

- Transit Communications Interface Protocols – TCIP.

Bus stop inventory definitions



Past, Present, and Future

- 2 MAT meetings Nov. 18-20 & Apr. 1-2
- Conference call December
- Draft Standard by end of April



Rail MAT Members

Abby Clark, Co-Chairman - CSX Real Properties

John Stone, Co-Chairman - Canadian Pacific Railway

Rachel Arulraj - Parsons Brinckerhoff

Jim Boone - Operation Respond Emergency Information System

Carole Daoust-Martin - CNR

Ken Lee - KC Southern Railway

Bryan Davis - ENSCO

Kevin Neimond - ESRI

Mike Domoratz - USGS

Chris Powers - Long Island Rail Road

Derald Dudley - BTS

Ann Perper - NIMA/BAH

Ty Edwards - AMTRAK

Stan Rothe - Union Pacific Railroad

Carl Fischer - FRA

Gary Williams - AAR

Robert Fronczak - AAR

Paul Scarpancini - Bentley

John Griffin - NYC DOT

Willem Ebersohn - Amtrak

Peter Kerr - FRA

Steve Laffey - Illinois Commerce Commission



Rail MAT Purpose

- To develop a content standard that represents the North American rail network
- Use the standard to facilitate the exchange and management of core data asset
- Establish a “common language” through out the rail industry



Existing Standards Considered

- Union Pacific Rail Model
- NIMA Rail Model
- Amtrak's Shareable and Extendable Database (SED)
- Road MAT's Model



Past, Present, and Future

- Identified interested organizations and individuals to participate in the standards development process.
- First Meeting held in November 2002
 - ◆ Reached Consensus on purpose of the group
 - ◆ Adopted the linear referencing portion of the Road Model
 - ◆ Debated which features to include in the model
- Second Meeting held in January of 2003
 - ◆ Model Expanded to include more features, attributes and events
- First Draft of content standard completed 2/27/03
- Release Standard for Review
- Incorporate necessary changes into model
- Submit standard to ANSI for approval



Future of Geospatial One-Stop

- Successful Implementation Requires Participation From all Levels of Government
- Sharing Data through these Standards
- Share your data through the Portal



Portal

- NASA Leading the effort to Develop Portal to Serve all Geospatial Data Themes
- Scheduled Completion early May



Interested in Participating?

- Stop by the BTS Booth for more information
- Or contact us:
 - ◆ Steve Lewis (202) 309-0938
 - ◆ steve.lewis@bts.gov
 - ◆ Mark Bradford (202) 309-0934
 - ◆ mark.bradford@bts.gov

