AEGIST

AGENDA

2024 MEETING OF THE STATES

Objective: Review AEGIST Guidelines that have been developed based on practices across States, and the enterprise geospatial technical services work activities done as part of AEGIST.

SESSION SNAPSHOT

Day, Time	Session	Topic
Tue, 8:00-10:00 AM	Session 1	Welcome and Recap of AEGIST Vision, Goals and Objectives Executive Summary Demonstrations: Routes-Intersection Model in ArcGIS, LRS updates using BIM-GIS (Chapter 1)
Tue, 10:00-10:15 AM		Break
Tue, 10:15-12:00 PM	Session 2	Road Network Data Modeling Requirements-Business Processes and Use Cases (Chapter 2)
Tue, 12:00-1:30 PM		Lunch
Tue, 1:30 PM-3:00 PM	Session 3	Routes Data Modeling-Route Geometry (Chapter 3)
Tue, 3:00 PM-3:15 PM		Break
Tue, 3:15 PM-4:45 PM	Session 4	Routes Data Modeling-Route Definition and Linear Referencing Methods (LRMs), Route Concurrency and Gaps, Connectivity-Nodes & Road Elements, Routability (Chapter 3)
Wed, 8:00 AM-10:00 AM	Session 5	Routes Data Modeling-Route Information: Topology, Road Properties, Temporality, Metadata (Chapter 3)
Wed, 10:00-10:15 AM		Break
Wed, 10:15-12:00 PM	Session 6	Intersection/Junction Data Modeling at different Intersection Types and at locations with different Intersection Geometries (Chapter 4)
Wed, 12:00-1:30 PM		Lunch
Wed, 1:30-3:00 PM	Session 7	Intersection Data Modeling- Intersection Relationships and Topology, Turns and Turn Restrictions, Conflict Points, Temporality and Metadata (Chapter 4)
Wed, 3:00-3:15 PM		Break
Wed, 3:15 PM-4:45 PM	Session 8	Asset Data Modeling (Chapter 5)
Thu, 8:00 AM-10:00 AM	Session 9	Project Data Modeling (Chapter 6)
Thu, 10:15-10:30 PM		Break
Thu, 10:30-12:30 PM	Session 10	Road network Data Management and Governance (Chapter 7)

DAY 1 Tuesday - August 6, 2024, 8:00am-3:45pm

Day 1: Session 1
8:00AM-10:00 AM

Welcome and Recap of AEGIST Vision, Goals and Objectives (Chapter 1)

Objective: Review Guidebook Chapter 1.

- AEGIST Vision, Goals and Objectives
- Guidebook Executive Summary and Organization
- Guidebook Source/References
  - US National and State DOT Practices
  - Open Standards and other References
  - AEGIST Technical Services for States
- Demonstrations
  - Route Network and Intersection Data Model
  - Connectivity and Topology in Road Network Data Model
  - BIM-GIS Integration: Updating LRS with Road Network Data
  - Data Management and Governance System
- Feedback and Open Discussion

Day 1: Session 2
10:15 AM-12:00 PM

Road Network Data Modeling Requirements-Business Processes and Use Cases (Chapter 2)

Objective: Review Guidebook Chapter 2-Business Process and Use Case Requirements Categorization.

- Categories for Road Network Data Modeling Requirements
- Asset Operations and Maintenance Business Process Requirements for Road Network Modeling
- Traffic Systems management and Mobility Operations Requirements for Road Network Modeling
- Highway Safety Analysis Requirements for Road Network Modeling
- Planning and Programming Requirements for Road Network Modeling
- Travel Demand Modeling Requirements for Road Network Modeling
- Digital Project Delivery Requirements for Road Network Modeling
- Federal Reporting Requirements for Road Network Modeling

Day 1: Session 3
1:30 PM-3:00 PM

Routes Data Modeling-Route Geometry (Chapter 3)

Objective: Review guidelines associated with modeling geometry of vehicle, pedestrian and bicycle travel spaces (routes) on the road.

- Centerline Source/Accuracy
- Centerlines for Travel Spaces
- Single vs. Dual Centerline Geometry based on Travel Direction
- Centerline Quality: Geometry Integrity
- Connecting Centerlines: Match Points

Day 1: Session 4
3:15 PM-3:45 PM

Routes Data Modeling-Route Definition and Linear Referencing Methods (LRMs), Route Concurrency and Gaps, Connectivity-Nodes and Road Elements (Chapter 3)

Objective: Review LRM configuration guidelines. Discuss route concurrency and gaps.

- Route Definition and Linear Referencing Methods (LRM) Modeling
    - Referent Types and LRM Relationships
    - Route Identifiers
    - Measure Methods
    - Mileage Accumulation and Direction
- Route Concurrency and Gaps
- Route Information & Functionality
    - Connectivity: Nodes and Road Elements
    - Routability/Intelligent Routing

DAY 2 Wednesday - August 7, 2024, 8:00am-4:45pm

Day 2: Session 5
8:00 AM-10:00 AM

Routes Data Modeling-Route Information: Properties, Temporality, and Metadata (Chapter 3)

Objective: Review how route properties are modeled, how route network connectivity is establishing using nodes and road elements, how routable networks are developed, temporality and metadata modeling.

- Route Information & Functionality (continued)
  - Road Attributes/Characteristics (Structured and Unstructured)
  - Temporality
  - Metadata
  - Data Owner: Route Centerlines, Attributes Data Collaboration
  - Topology

Day 2: Session 6
10:15 AM-12:00 PM

Intersection Data Modeling at different Intersection Types and at locations with different Intersection Geometries (Chapter 4)

Objective: Review the intersection geospatial features and discuss how geometry is modeled for each of these features. Discuss various intersection types to establish how these intersection features are modeled at these intersection locations. Intersection geometries discussed will include: full-hashtag, partial hashtag, interchange/ramps, median-cut/restricted crossing, roundabouts, traffic circles.

- Intersection Geometry
- Intersection Legs
- Road Segments: Ramp Segments, Mainline Segments
- Topological Connectors
- Turn Segments/Lanes

Day 2: Session 7
1:30 PM-3:00 PM

Intersection Data Modeling-Intersection Relationships and Topology, Turns and Turn Restrictions, Conflict Points, Temporality and Metadata (Chapter 4)

Objective: Continue the review of intersection modeling from Session 6 with focus on:

- Intersection Relationships and Topology
- Multi-modal Features
- Turns and Turn Restrictions Modeling
- Intersection Conflict Points
- Intersection Information: Attributes, Temporality, Metadata, Documents, Videos, Images

Day 2: Session 83:15 AM-4:45 PM	Asset Data Modeling (Chapter 5)

Objective: Review approaches for geospatial modeling of highway infrastructure assets.

- ISO-19650: Asset Information Modeling and Information Management
- Asset Types modeled for Road Network Modeling (Planning Level Road network model vs. Intelligent routable road network model vs. Multimodal Digital Twin Road Network Model)
- Asset Data modeling for the various types of road network models: Geospatial and Non-geospatial attributes, Unstructured data (documents, videos, images, lidar etc.)
    - Asset Modeling for Planning level Road Network Model
    - Asset Modeling for Intelligent Routable Road Model
    - Asset Modeling for Multimodal Digital twin Road Model.

DAY 3 Thursday - August 8, 2024, 8:00am-12:30pm

Day 3: Session 9 8:00 AM-10:00 AM	Project Data Modeling (Chapter 6)

Objective: Review approaches for geospatial modeling of highway infrastructure projects.

- ISO-19650: Project Information Modeling and Information Management
- Associating assets from geospatial information systems with projects
- Project Modeling for Planning level Road Network Model: Asset Operations and Maintenance, Safety Analysis, Project Planning
- Project Modeling for Intelligent/Smart Routable Road Model
- Project Modeling for Multimodal Digital Twin Road Model.

Day 3: Session 10 10:15 AM-12:30 PM	Road Network Data Management and Governance (Chapter 7)

Objective: Review geospatial data management systems-of-record and systems for data sharing.

- Enterprise geospatial data management
- Enterprise geospatial application management
- Road network data integration and engineering
- Road network data shoring/provisioning and publication
- Enterprise geospatial data governance