Real-Time Decisions with Tracking Server

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Agenda

Now…
- Tracking Concepts
- Tracking Products Overview
- Tracking Server
- Demos

At 4:00
- Tracking Analyst
- Demos
Concept: Temporal Data

- Temporal means “of or relating to time”

- What is “temporal” data in relation to GIS?
  - Temporal data is data which is related along the dimension of time
  - May be correlated by a unique attribute
  - Often ordered by how the feature’s events occurred chronologically

- Point, Line or Polygon data can be tracked:
  - Raster data and Metadata not supported for “tracking”

- Temporal data is typically not versioned nor used in a “transactional editing” way
  - The “version” is the combination of the ‘TrackID’ & the Timestamp
  - Each record is one “observation”
    - Multiple observations is not always equal to a new feature type
  - Often, data is only updated, not often deleted
Concept: Temporal Data

- **Dynamic**
  - something that moves

- **Discrete**
  - something that “just happens”

- **Stationary**
  - stands still but records changes

- **Change**
  - change or growth

- **Planes**
- **Vehicles**
- **Animals**
- **Satellites**
- **Storms**

- **Crimes**
- **Lightning**
- **Accidents**

- **Weather Stations**
- **Traffic Sensors**

- **Population**
- **Distribution**
Product Overview

- **Tracking Analyst**
  - Initially released for ArcView 3.3
  - ArcGIS Extension since 8.3

- **Tracking Server**
  - 1.0 released Summer 2004
  - Current release is version 1.1
    - Runs on ArcGIS Engine 9.1, 9.2 or 9.3
Tracking Server

- Acts as a Real-time message bus
- Performs real-time GIS processing on the server
- Publishes data to GIS clients
  - Tracking Analyst
  - Tracking Web Viewer
  - Custom Clients
- Built with an open architecture for customization
- Designed for Performance & Scalability
- 1.0 released Summer 2004
  - Current release is version 1.1
    - Runs on ArcGIS Engine 9.1, 9.2 or 9.3
Tracking Analyst

- Performs live and off-line GIS analysis of tracking data
- Provides many temporally aware renderers
- ArcGIS Extension since 8.3

- Much more information at the 4:00 session today
Dataflow - Complete

Data Links

Tracking Server

Tracking Analyst

ArcSDE Server

Tracking Services
Dataflow – Tracking Server

Tracking Server Process

Dataflow - Tracking Server

ArcSDE Server

Tracking Analyst & Clients

Message Queue

Feature Logger

Publishing of Tracking Services

Server-Based Actions

Datalink

Datalink

Datalink