Real-Time GIS
Applying Real-Time Analytics
Connecting with Data GeoEvent Perspective
Putting it out there
Analytics on the fly
Bringing it all together
#1 Begin at the end

Working Scenario
ArcGIS for Desktop 10.3.1
ArcGIS for Server 10.3.1
ArcGIS GeoEvent Extension for Server
Operations Dashboard
Inputs Receiving Real-Time Data

Out of the Box
- Poll an ArcGIS Server for Features
- Poll an external website for GeoJSON, JSON, or XML
- Receive Features, GeoJSON, JSON, or XML on a REST endpoint
- Receive GeoJSON or JSON on a WebSocket
- Receive RSS
- Receive Text from a TCP or UDP Socket
- Subscribe to an external WebSocket for GeoJSON or JSON
- Watch a Folder for New CSV or JSON Files

Esri Gallery
- ActiveMQ
- CAP
- CoT (Cursor-on-Target)
- GeoMessage
- Exploitation Support Data
- Instagram
- KML
- Kafka
- NMEA 0183
- RabbitMQ
- Sierra Wireless (RAP)
- Trimble (TAIP)
- Twitter

Partner Gallery
- CompassDE
- CompassLDE
- enviroCar
- exactEarth
- FAA (ASDI)
- GNIP
- Networkfleets
- OSIsoft
- Valarm
- ZONAR
- Zonar
#2 Connecting with Data

Simulator & Input Connectors
#3 GeoEvent Perspective

GeoEvent Definitions & tcp-console
Sending Real-Time Data

GeoEvent Extension

**GeoEvent Services**

Inputs Outputs

**You can create your own connectors.**

**Out of the Box**

- Add or Update a feature
- Publish Text to a UDP Socket
- Push GeoJSON or JSON to an external Website
- Push GeoJSON or JSON to an external WebSocket
- Push Text to an external TCP Socket
- Send a Text Message
- Send an Email
- Send an Instant Message
- Send Features to a Stream Service
- Write to a CSV, GeoJSON, or JSON File

**Esri Gallery**

- ActiveMQ
- CoT (Cursor-on-Target)
- Hadoop
- Kafka
- MongoDB
- MQTT
- RabbitMQ
- Twitter

**Partner**

agi CESIUM
#4 Putting it out there

Output connectors
Applying Real-Time Analytics

- You can perform continuous analytics on GeoEvents as they are received using a processor.
#5 Analytics on the fly

Processors & Filters
#6 Bringing it all together

Turning GeoEvents into an application
Think big – anything can become a GeoEvent.
WRAP UP

Don’t be constrained by the OTB connectors
The Simulator & Console apps are your friend
WRAP UP

Not Everything has to be persisted as a feature
WRAP UP

Consider scalability
When visualising data
WRAP UP

Use a scientific approach – be methodical

LIFE 9e, Figure 1.12
Questions?

Thank you
Stay Connected

• Lee Kum Cheong | kclee@esrisa.com
• Felicia Lin | flin@esrisa.com

Thank you