ArcGIS GeoEvent Processor
Esri Geotrigger

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## Geotriggers vs. GeoEvent Processor

<table>
<thead>
<tr>
<th>Geotriggers</th>
<th>GeoEvent Processor</th>
</tr>
</thead>
<tbody>
<tr>
<td>For smartphone or tablets iOS and Android now</td>
<td>ArcGIS for Server Extension</td>
</tr>
<tr>
<td>Saas based service</td>
<td>For real time info streams</td>
</tr>
<tr>
<td>Developer product</td>
<td>Typically not a consumer application</td>
</tr>
<tr>
<td>Optimizes Battery life</td>
<td></td>
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</tbody>
</table>
GeoEvent Processor
Real-time GIS
Sample questions users want to have answered:

• Where is my fleet?
• Where are my crews?
• Who is running late?
• Tell customer when driver is ten minutes away.
• Notify when equipment goes outside an area
• Alert the nearest five people when a panic button is pressed.
• Notify when a certain type of vehicle enters an area.
• Warn when a lightning strike occurs.
Live Traffic in California
Sensor Tracking
Alert when values exceed min. or max. thresholds
Lightning Alerting
Vessel Tracking – AIS data Worldwide
Work Order Management
Event-driven, real-time GIS

Challenges

• How do I get event data into my applications?
• How do I perform analysis on event data?
• How do I get event data to those who need it?
Esri’s multi-dimensional GIS
ArcGIS for Server - GeoEvent Processor Extension
GeoEvent Processor Extension

- **Receiving Streaming Data**
- Users can easily integrate streams with ArcGIS by using an **Input Connector** that meets their needs.
GeoEvent Processor
A Catalog of Inputs

- Receive NMEA
- Receive Sierra Wireless
- Receive Tweets
- Receive Instagram
- Receive Trimble
- Receive Sierras Wireless
- Receive NMEA
- Receive GPX
- Receive Air Traffic Control
- Receive Cursor-on-Target
- Receive VMF
- Receive Geomessages
- Receive Vessels

You can add your own connectors.
GeoEvent Processor Extension

- Continuous Processing and Analysis

- A GeoEvent Service configures
  - the Flow of GeoEvents,
  - the Filtering and GeoEvent Processing steps to perform,
  - what Input(s) to apply them to,
  - and where the resulting output should be sent.
GeoEvent Processor Extension

Processors

Field Manipulation
- Field Enricher
- Field Reducer
- Field Mapper
- Field Calculator
- Aggregator

Condition Detection
- Incident Detector
- GeoTagger
- Idle/Stop Detector

Route Integration
- ETA Calculator
- Auto Arrival/Departure
- Route Corridor
GeoEvent Processor
A Catalog of Outputs

You can add your own connectors.
GeoEvent Processor Extension

Outputs

GeoEvent Processor

All Monitoring

Inputs

Social Input

Flight Input

Vehicle Input

Worker Input

Continuous Processing

GeoTag exists

Altitude < 10,000

VehicleType in ('Van','Car')

Custom Processor

Name Field Enricher

Idle/Stop Detector

Outputs

Tweets Feature Out

Restricted Area Incident Detector

Instant Message Out

E-Mail Output

Log File Output
Demonstration

Designer
Route Monitoring Application

Vehicle Monitoring
Worker Monitoring
Idle/Stop Monitoring
Dangerous Area Monitoring
Territory Monitoring
Proximity Monitoring
Auto-Arrival / Auto-Departure
Continuous ETA
Route Adherence

GeoEvent Services

ArcGIS for Server

GeoEvent Processor Extension

Sample Application

Field Worker

Sample Application or 3rd Party

Route Planning

Dispatchers

Operation View

Route Monitoring

Fleet Managers
Esri Geotrigger™
What could your Device do if it knew where it was?
Location Context for Mobile Apps

• Persistent **location awareness**
• **Individual** and **broadcast** Geotriggered events and messages
• Individual **trigger history** by POI or user
• Intelligent **battery management**
Geotrigger™ events are Invisible Buttons
Geotrigger™ overview
Geotrigger SDK and API Use Cases

https://developers.arcgis.com/en/geotrigger-service

Unleash the Power of Mobile Location in Your Apps
Making Location Context Easy

- Device Agnostic
- Native SDKs - iOS/Android
- Location-source Agnostic
- Carrier Agnostic
- Turn Key, Hosted Solution
- Highly Scalable
- Optimized for Battery Performance
Push Notifications + URL Callbacks

Send notifications to:

- Each individual as they trigger a geofence
- All users within an area with radius
- People who have been in a certain area in the last X number of days
- Any person within a given city or neighborhood
- External services by URL callback
Geotrigger Management

Visual Trigger Editor

- Create circular or polygon-based geofences
- Easily enter points of interest by lat/long or address
- Manage and assign rules to individual triggers

Import Programmatically

- Manage large volumes of location data
- Import data through scripts
- Utilize your own location data, Esri’s or 3rd party data

Demonstration
Family Safety: uKnow

- uKnow is a independent software vendor that offers parents a suite of tools to help monitor their children’s activities and keep them safe.

- uKnow kids application uses Esri map tiles and Geotriggers to enable
  - last-known location of their child
  - Geotriggered messaging when their child arrives at or departs from a parent-defined place of importance (school, boyfriend’s house).

- uKnow powers the Xfinity Family Sense application from: 

[Comcast logo]
Localized Advertising & Loyalty: Taqtile Mobility

Through Esri Partner, Taqtile Mobility, AMP Energy Drink (PepsiCo) and 7-Eleven launched the Powerdash mobile application that grants weekly prizes to AMP consumers, based on cumulative points gained by use of the racing game and scans of AMP drink cans to gain game “power-ups”.

The AMP PowerDash app uses Esri’s Geotrigger engine to automatically notify app users of nearby 7-Eleven stores in which the user can find AMP Energy Drink cans to scan.
Understanding our world.