

## Event-Based Data Collections with ArcGIS Online Data Processing

**Event-Driven Data Delivery (ED3)** is a framework that supports the execution of predefined data processes in response to events (alerts, warnings, etc). The loose coupling of ED3 with event handlers and executable data processes through a well-defined API allows users to easily extend the framework to support additional events and data processes.

**REACT (Rapid Event Album CollecTions)** is an application supporting user-defined subscriptions for data processes to be executed in response to event occurrences, with results packaged in Event Albums that are interoperable with end-use applications and tools. The albums are living virtual collections for a particular event, where additional data and information contents can be added or modified as needed.

**Data Processes** (step 3 on the diagram) are loosely coupled distributed services that only need to respond to a simple HTTP message structure that allows them to be driven based on a new event occurrence. UAH is investigating wrapping **ESRI ArcGIS Online Services** with ED3 to take advantage of the power of ESRI spatial analysis and visualization tools in generating new products in response to ongoing events, and returning links to the resulting Event Albums.

Resulting **Event Albums** (steps 4 and 5 in diagram) are reports of the contents of a virtual collection that can be formatted in whatever way is most compatible with end user applications or analysis tools. Examples of album formatting include GeoRSS, KML, etc.

