aperture .js

Open Web 2.0 Visualization Toolkit

Innovative, Best Practice Web 2.0 Visualization

Aperture JS™ is a uniquely powerful, adaptable, and extensible visualization framework designed to produce innovative, best practice, clean visualizations for analysts and decision makers in any common web browser. Aperture is an open, standards based JavaScript library with supporting web services.

Highly Embeddable and Adaptable, with Rich Visual Forms

Aperture employs a unique and unified layer based approach to visualization assembly, enabling richer, more powerful combinations of visual forms than a standard widget based approach with many frames. Aperture's visual mapping and filter API provides adaptability to any data schema and transformation of data into succinct interactive visual forms with little effort.

Highly Interoperable using Web 2.0, SOA and GIS Standards

Aperture uses a non-proprietary Web 2.0, Service Oriented Architecture (SOA) approach for greatest interoperability with standards such as OpenSearch, OpenSocial, RSS/Atom/GeoRSS, OAuth, RDF, WS-I Basic Profile, REST, SOAP, XML Schema, WSDL, UDDI, WMS, WFS/ WFS-T, WCS, KML, GML, WPS, CSW, CTS, WMC, and SOS. Aperture **vizlets** (visualization forms) are easily embedded in web-based client frameworks such as the Ozone Widget Framework (**OWF**), or in any simple web page, where open JavaScript APIs provide full interoperability with other DOM elements.

Extensible and Open Source

The Aperture framework and API are designed for ease of extension, allowing a broad community to leverage and extend capabilities and even to invent new paradigms. Aperture is under ongoing development and is available at **no cost** under MIT open source licensing. Unlike GNU General Public License (GPL), MIT licensing freely permits distribution of derivative work under proprietary license, without requiring the release of source code.

Key Features

- **Unified Layer Based API** for richly layered maps, charts, timelines and network visualizations, using common Aperture classes and methods.
- **Simple, Powerful Data Mapping API** for adaptable transformation of data into visual form and subsequent state-based filtering of visual properties.
- **Flexible and Extensible Set of Layer Forms**, including extension of existing broad capabilities of OpenLayers maps to support rich, layered, dynamically interactive, geo-located visual entity representations. Chart, timeline and network forms are also supported.
- **Property Palettes**, and a graph **Layout Service**.
- **Icon Service API** designed to match entity requests to best available symbols, with support for dynamic scaling of vector source icons and common image types. A reference set of socio-cultural oriented icons and supporting service is provided.
- **Image Capture Service API** for preserving a snapshot of client visualization suitable for insertion into a report document. Implementations for both Windows and Linux servers are provided.
- **Application Support Service APIs** and industry reference implementations for authentication, CMS storage, io, logging, and a client message bus.
- **Modular, Extensible Architecture** providing options to include select subsets of Aperture only, and extend and adapt capabilities as necessary.

Aperture's Layered Visualization Approach Empowers Creative, Interactive, Effective Visual Forms in a Browser
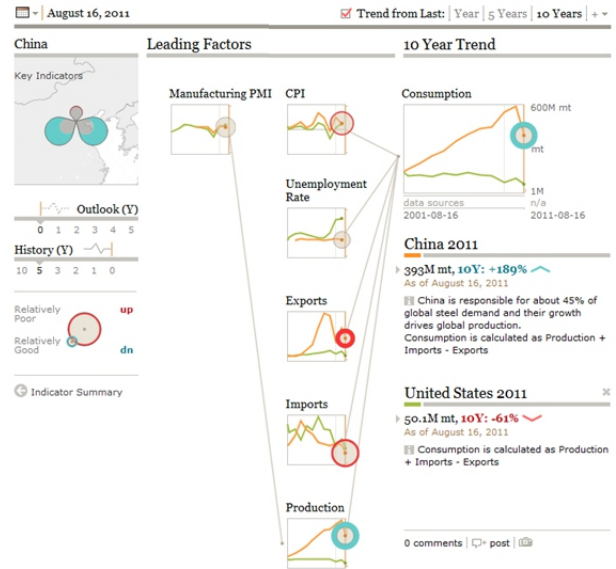
Modular and Open Architecture Enables Flexible Options for Rapid Integration and Cross-Leveraging of Capabilities
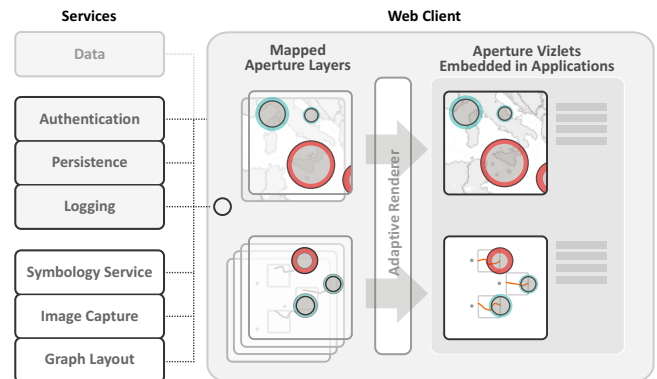
Any Number of Representational Layers can be Added to Parent Layers, including Maps and Charts