Strand Map Service APIs

The Strand Map Service (SMS) APIs provide the ability to embed interactive strand map interfaces into Web sites and other applications - see the Science Literacy Maps for the reference implementation. The Javascript API lets developers insert interactive Strand Maps into Web pages and customize the maps in a number of ways, and the CSIP REST API lets developers search and navigate the Strand Map information space and access object's metadata and visualizations in a number of formats including XML, JSON, OWLLite, SVG, PDF, PNG, TIFF, and JPEG.

The APIs access a database based on the learning goals from the AAAS Benchmarks for Science Literacy and the visualizations from the AAAS Atlas of Science Literacy (AAAS Project 2061), which demonstrate the connectedness of ideas and skills that students should develop over time.

The SMS is produced by researchers from the University of Colorado at Boulder and Digital Learning Sciences, and is based on the strand maps developed by Project 2061 at the American Association for the Advancement of Science and published in the Atlas of Science Literacy, Volumes 1 and 2 (2001 and 2007, AAAS Project 2061 and the National Science Teachers Association). The Benchmarks for Science Literacy and all other AAAS content copyright American Association for the Advancement of Science, all rights reserved.

What's Happening

See it in Action

- Science Literacy Maps - UCARConnect implementation uses the SMS Javascript API to highlight UCARConnect resources.
- Middle School Portal Science Resource Guides - Interactive maps incorporated into individual science resource guides for a number of topics, for example Plate Tectonics.
- DLESE Earth Sciences Literacy Maps - DLESE implementation uses the SMS Javascript API to highlight DLESE resources.
- NASA Wavelength Strandmaps - Part of the NASA Wavelength portal.
- Climate and Energy Concept Maps - The CLEAN implementation uses the SMS Javascript API to highlight Climate and Energy resources
- Additional Javascript Examples - Shows interfaces using the SMS Javascript API starting from a simple 'out-of-the-box' implementation to more complex examples.

Latest Releases

SMS v1.2.9

Development Team

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Get Involved

- For suggestions, questions, and more information, please send your inquiry to UCARConnect via the contact form

Documentation

- Overview - Overview of the SMS technology including how to harvest the benchmarks using the Open Archives Initiative Protocol for Metadata Harvesting.
- Javascript API - The JavaScript API lets developers insert interactive Strand Maps into Web pages and place custom content into the maps.
- CSIP REST API - The Concept Space Interchange Protocol (CSIP) REpresentational State Transfer (REST) API lets developers search and navigate objects and visualizations in the the Strand Map information space. Developers can access objects in the concept map space in number of formats including XML, OWLLite, SVG, PDF, PNG, TIFF, and JPEG.
- Resource Alignment - How to align resources to benchmarks so they will be discoverable from the Science Literacy Maps.
- Technical Training - All available technical training documentation including an FAQ.

Prerequisites

End-user

- Javascript enabled browser

Developer

- Requirements are dependent on intent. Since the API is called from a central location on UCARConnect servers, it is possible to make a functional interface with a server to host the webpage, HTML, JavaScript, and CSS. More complex functionality may require a server-side web technologies and/or a database. For more information see the SMS JavaScript API implementation instructions and the example code.

Additional Information

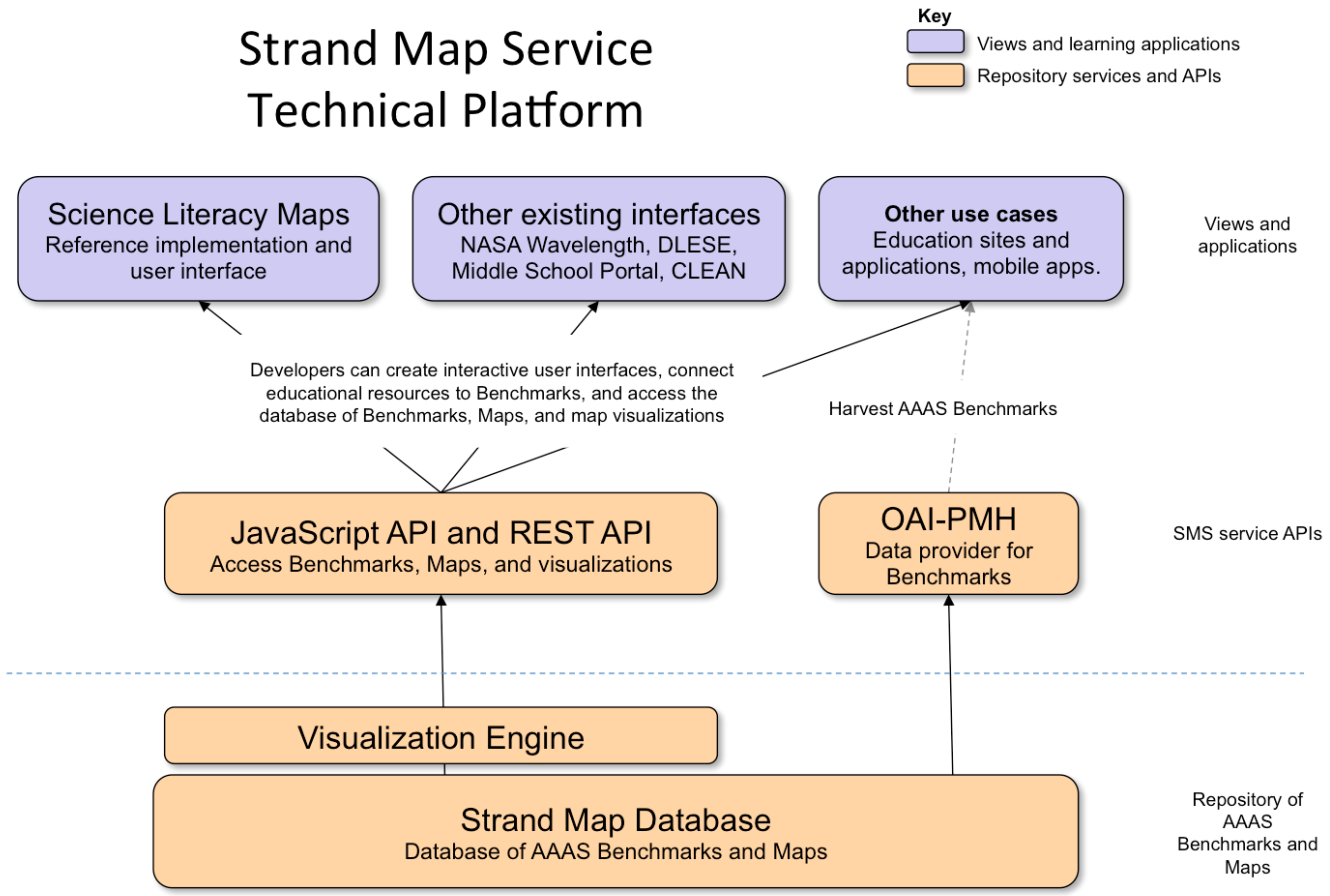
- How to Align Resources to Benchmarks
- How to Use Science Literacy Maps
- Strand Map Service Roadmap

Presentations

- 2007 Annual Meeting Presentation (NSDL)

Strand Map Service Technical Platform

Strand Maps based on the learning goals from the AAAS Benchmarks for Science Literacy and the visualizations from the AAAS Atlas of Science Literacy (AAAS Project 2061) are made available through the JavaScript and REST APIs. Developers can use the APIs to insert interactive Strand Maps in to Web pages, navigate the information space and access objects and visualizations. The diagram below shows an overview of the Strand Map Service technical platform.



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