

COINAtlantic: Sharing Through Open Tools and Open Standards

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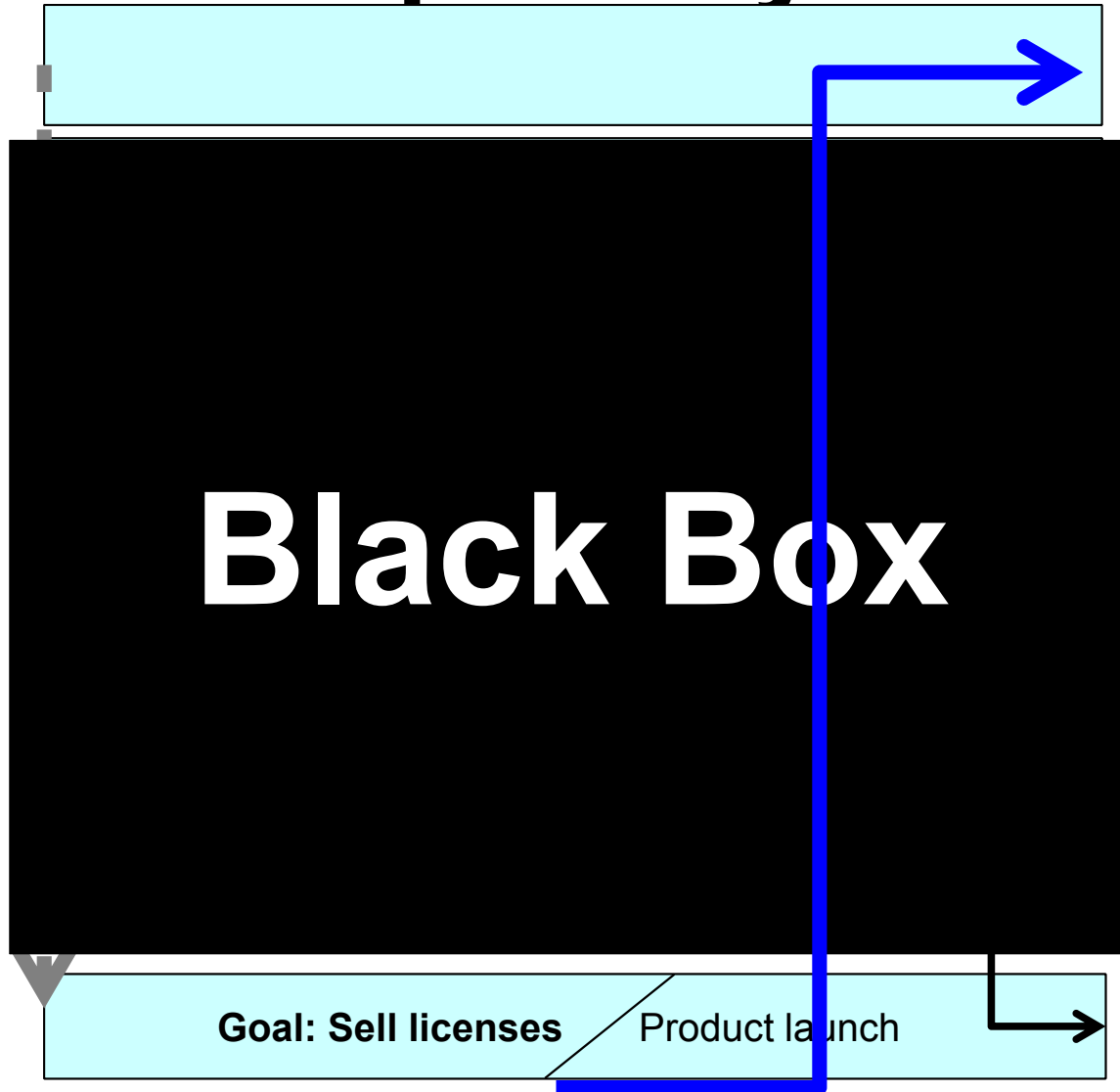
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Today's Geospatial World

A solution will contain many pieces, and they all must work together.

Proprietary Software



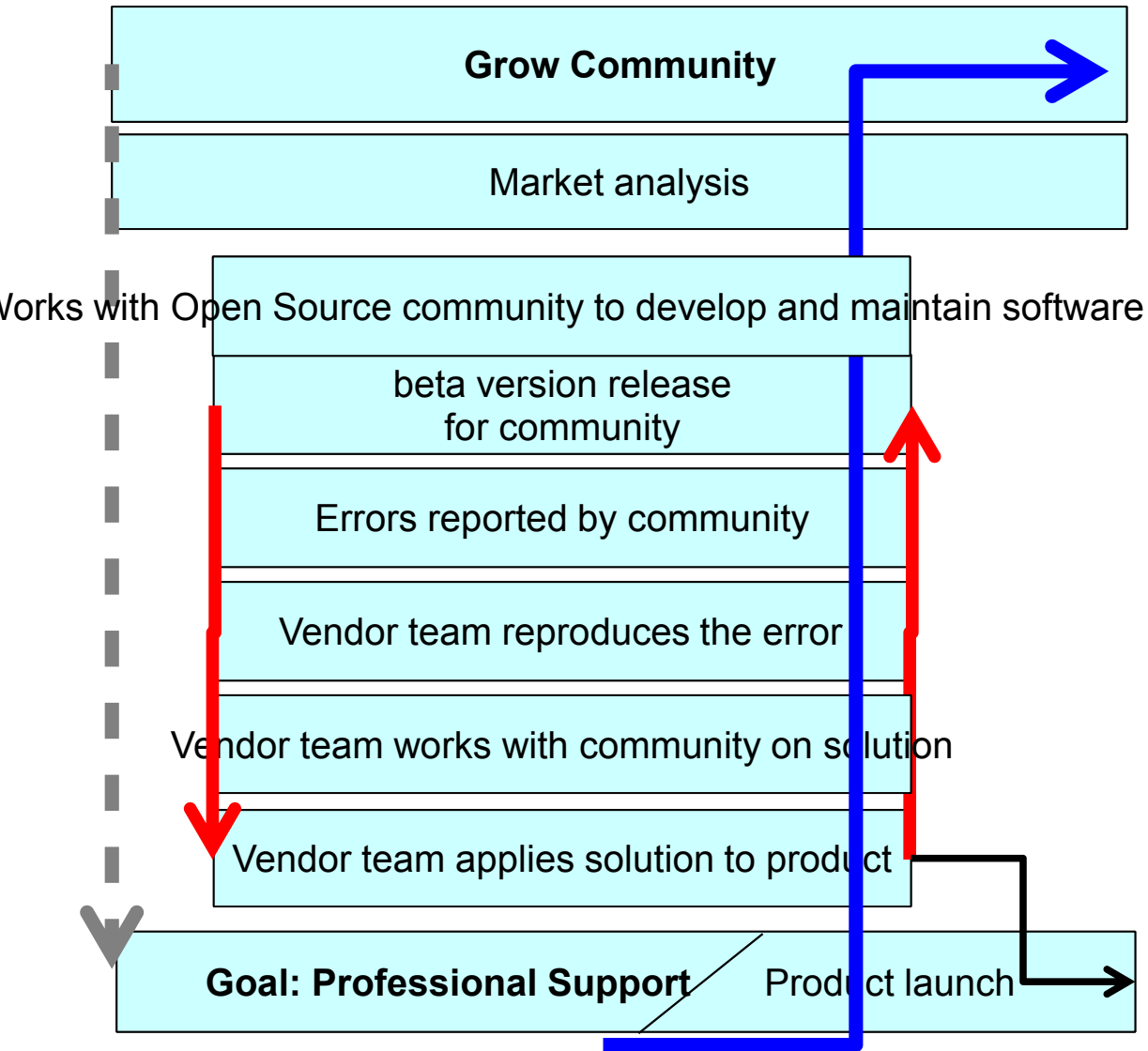
Connecting to other software is often after-thought

Do not leverage community in development process

Difficult to plug your solution in

Just now realizing benefits of being “open”

Open Source Vendors



Follow standards to make sure solution can plug into others

Leverage vibrant community for development

Promotes growth of community and product

Case Study: Danish Geodata Agency

<http://download.kortforsyningen.dk/>



- As of January 1st, 2013 all data is open
- 100+ datasets
- Mandated by government
- Entire infrastructure based on open standards and open source software
- ~5 million maps per day



COINAtlantic

“Chain for Information Access”

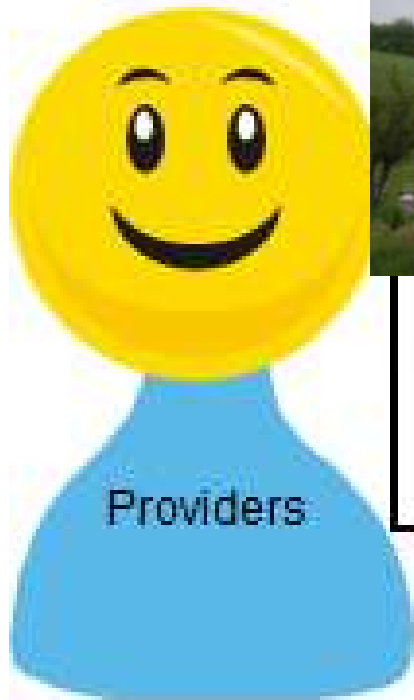
Well Managed Silos



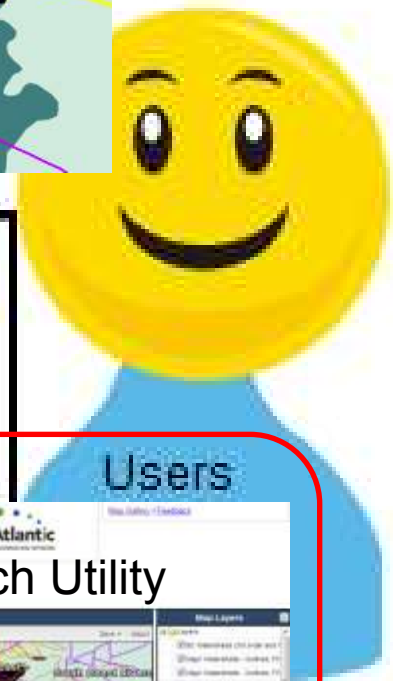
Your Map



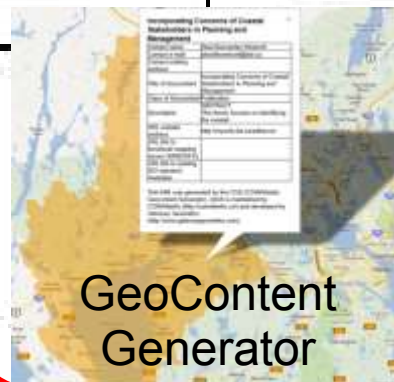
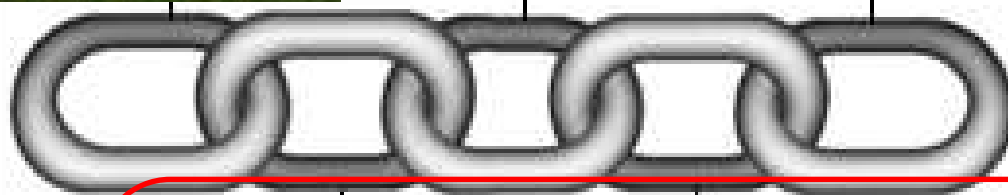
Indexed by



Providers



Users



GeoContent
Generator



Search Utility

COINAtlantic Tools

<http://coinatlantic.ca/>



- Focus on sharing ocean data
- Goal is to provide tools for users with little technical knowledge
- Tools leverage Open standards, data, software

COINAtlantic Geocontent Generator (CGG)

<http://coinatlantic.ca/cgg>



- Allows coastal data managers to generate metadata to describe their services
- Links attributes with spatial feature
- Published through Google search engine
- Open standards & software: OGC:KML, OpenLayers

COINAtlantic Geocontent Generator (CGG)

The screenshot displays the COINAtlantic Geocontent Generator (CGG) web application. The main window shows the 'Step 2: Generate Feature for Metadata' page. A 'Select KML Templates' dialog box is open, showing a tree view of KML files under 'Templates'. The tree includes 'COINAtlantic KML Template Library', 'Biophysical Units', 'Jurisdictional Units', 'Federal', 'New Brunswick', 'Newfoundland and Labrador', and 'Nova Scotia'. Under 'Nova Scotia', there are files for 'Annapolis_Mun.kml', 'Antigonish_Mun.kml', 'Antigonish_Town.kml', 'Argyle_Mun.kml', and 'Barrington_Mun.kml'. The main map area shows a satellite view of a coastal region with a yellow polygon drawn over a landmass. Below the map, there are instructions: 'Select one of the tools below and click on the map above to draw your feature (single left-click to create the feature, double-click to end creation for polygon and lines)'. The left sidebar contains a form for 'Step 1: Enter Attributes' with radio buttons for 'Organization', 'Project', 'Publication', and 'Data/Information'. Below the radio buttons, there are text input fields for 'Contact name*', 'Contact e-mail*', 'Title of Geocontent*', and 'Description*'. At the bottom of the sidebar, there are more text input fields for 'Contact mailing address', 'Geographic location', 'Dataset language', 'URL website address', 'URL link to functional mapping server (WMS/WFS)', and 'URL link to existing standard metadata'.

CGG: Future Enhancements

- Redesign interface
- Allow data authors to manage published metadata
- Expand KML template library

COINAtlantic Search Utility (CSU)

<http://coinatlantic.ca/csu>



- Allows coastal decision makers to search for geospatial data through Google and display in one interface
- Live Google search for CGG metadata, OGC:KML, OGC:WMS services
- Results stored locally in PostgreSQL database; map interface created with OpenLayers
- MapServer generates map output formats

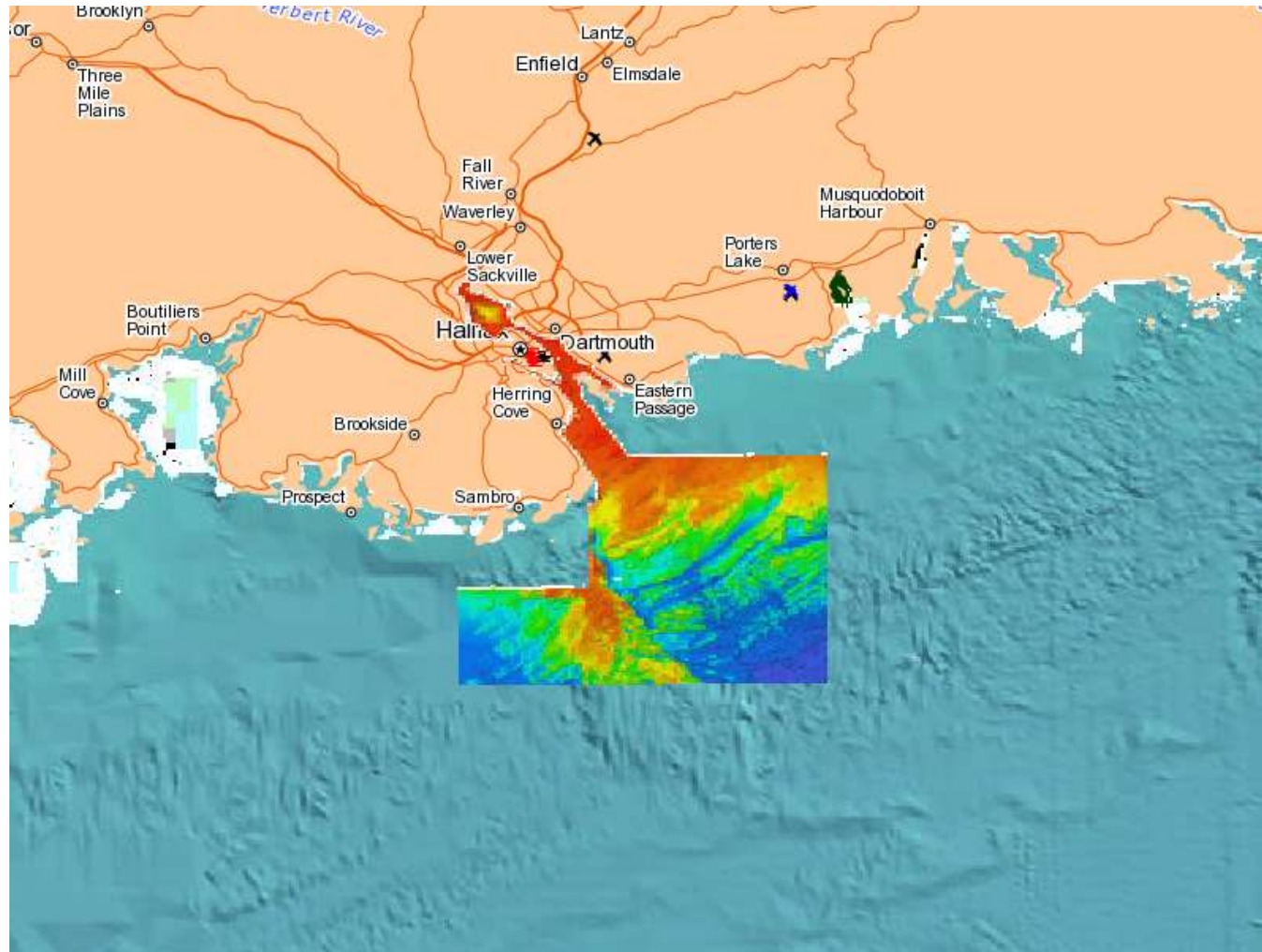
COINAtlantic Search Utility (CSU)

The screenshot displays the COINAtlantic Search Utility (CSU) web application. The browser address bar shows the URL `coinatlantic.ca/csu/`. The main heading reads "Welcome to the COINAtlantic Search Utility". The COINAtlantic logo, "COASTAL AND OCEAN INFORMATION NETWORK", is visible in the top right. A search bar labeled "Search for Map Layers" contains the text "multibeam bathymetry". Below it, the "Search Results" section shows a table of search results:

Title	Link
Massachusetts Ocean Resource Info...	http://coinatlantic.ca/cgg/templ...
Schwehr et al. 2006, Santa Barbara ...	http://vislab-ccom.unh.edu/~s...
WMS: gdr.ess.nrcan.gc.ca	http://gdr.ess.nrcan.gc.ca/w...
WMS: cmgds.marine.usgs.gov	http://cmgds.marine.usgs.gov/...

An "Add Remote WMS Layers" dialog box is open, showing a list of WMS services. The selected service is "Halifax Harbour and Inner Shelf 1990 - 2002, Scotian Shelf". A "Map preview" window shows a bathymetric map of the region. The main map area displays a map of the Gulf of St. Lawrence and surrounding areas, with labels for "Quebec", "Ottawa", and "Fre". The map coordinates are `-49.93652, 49.39453`. The bottom of the interface includes "Additional Search Information" and a footer with the ACZISC logo and text: "ATLANTIC COASTAL ZONE INFORMATION STEERING COMMITTEE".

COINAtlantic Search Utility (CSU)



CSU: Future Enhancements

- Perform live spatial search (filter)
- Add analytical spatial functions (possibly through WPS)
- Tune search term queries
- Leverage CSW catalogs (possible aggregate search?)

Challenges

- Not all software follow the same standards
- Google controls all services
- Free live API search is limited to 100 queries per day
- Complex KML files difficult to display over Internet
- Services are created by data managers, but often are not visible to Google search engine

Thank you!

www.coinatlantic.ca

@mapsgiving