

# COINAtlantic: Sharing Through Open Tools and Open Standards

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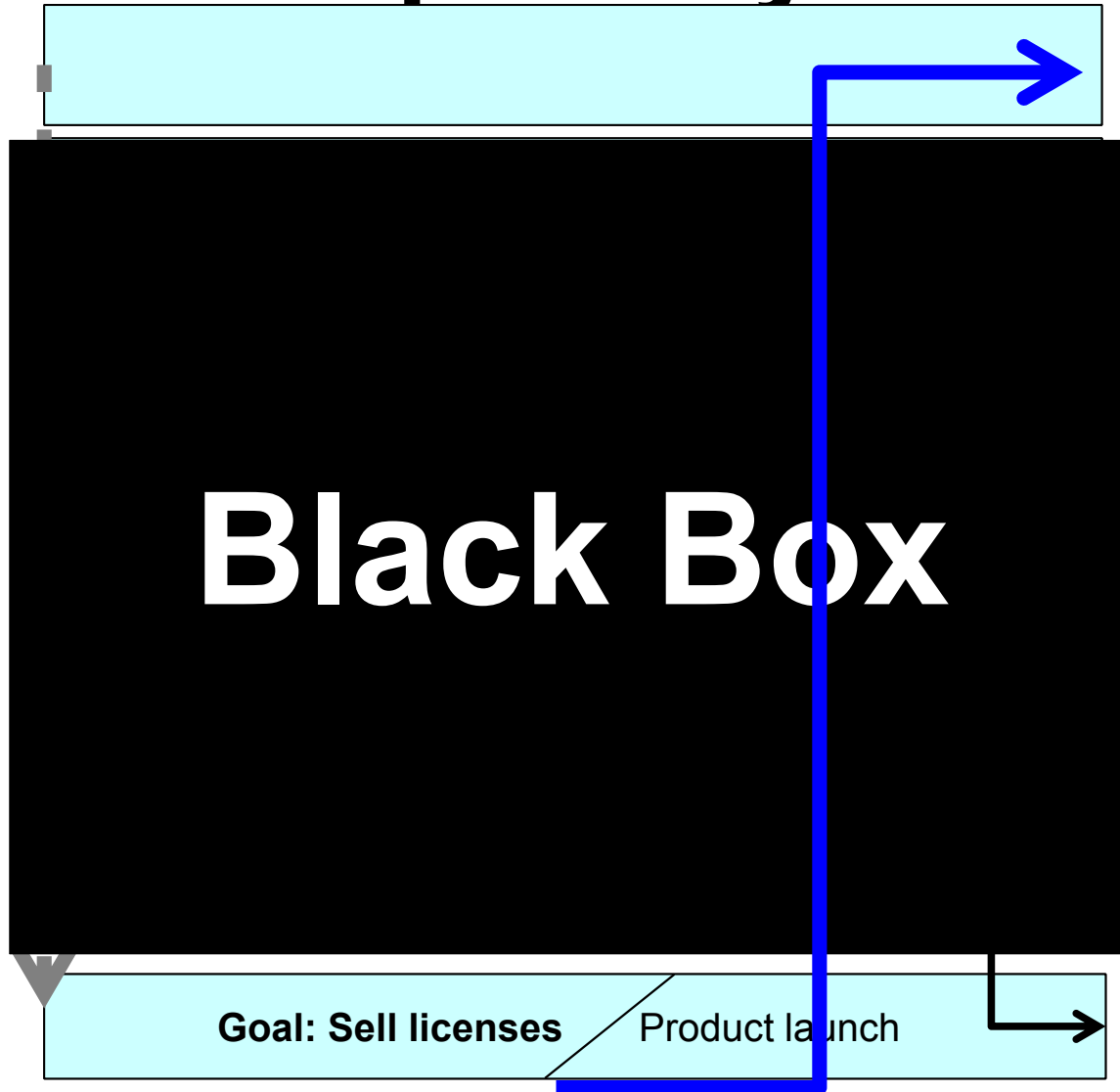
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# Today's Geospatial World

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

# Proprietary Software



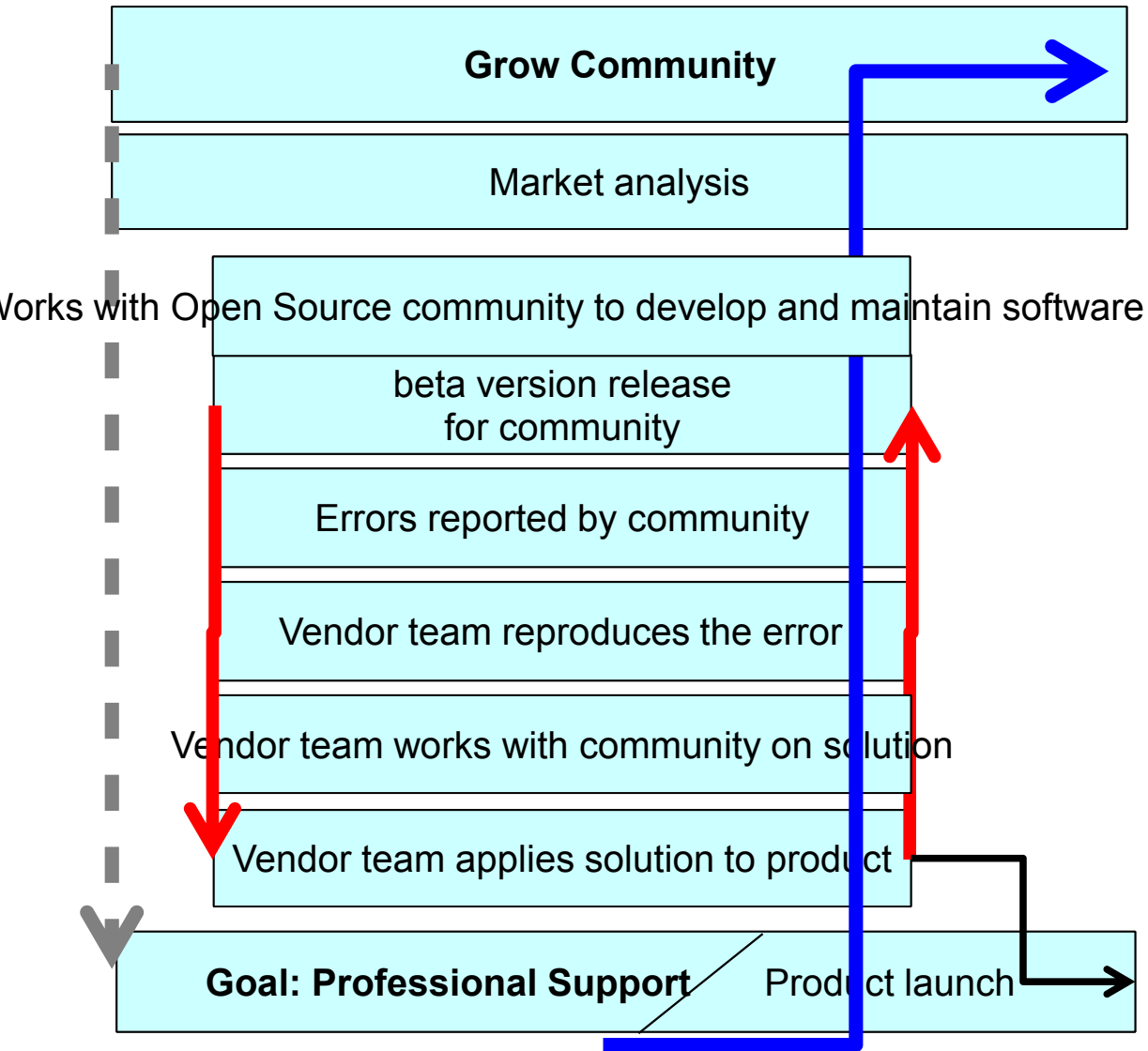
Connecting to other software is often after-thought

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 1<sup>st</sup>, 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”

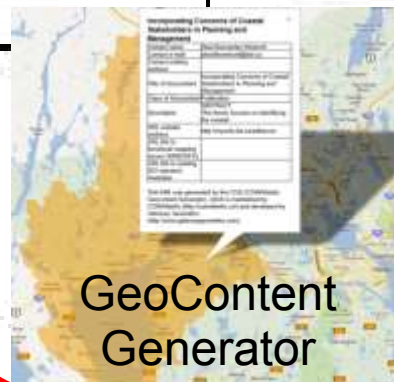
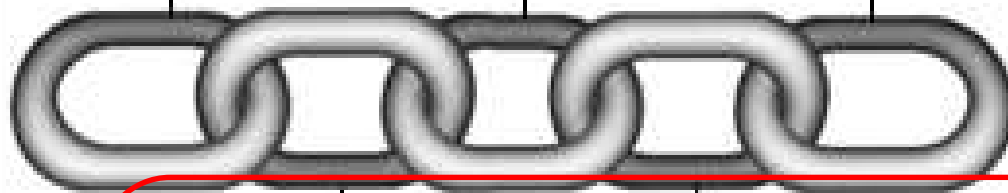
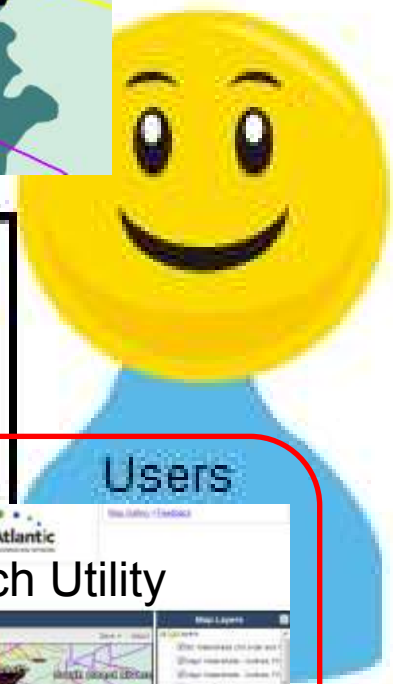
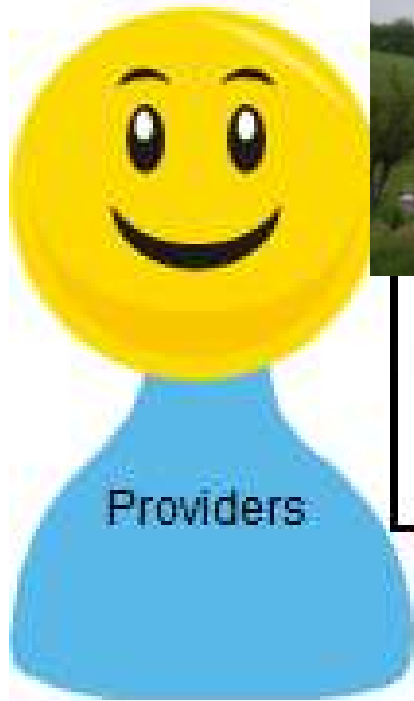
Well Managed Silos



Your Map



Indexed by



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 title "COINAtlantic Geocontent Generator (CGG)" and the current step: "Step 2: Generate Feature for Metadata". Below this, there is a "Option 1: Load existing KML template file from COINAtlantic directory" section. A map of a coastal area is displayed, with a yellow polygon highlighting a specific region. A "Select KML Templates" dialog box is open, showing a tree view of KML files organized into folders: Templates, COINAtlantic KML Template Library, Biophysical Units, Jurisdictional Units, Federal, New Brunswick, Newfoundland and Labrador, and Nova Scotia. Under Nova Scotia, several KML files are listed, including Annapolis\_Island.kml, Antigonish\_Island.kml, Antigonish\_Town.kml, Argyle\_Island.kml, and Barrington\_Island.kml.

On the left side of the interface, there is a "Step 1: Enter Attributes" section. It includes a radio button selection for "Organization", "Project", "Publication", or "Data/Information". Below this, there are several text input fields for attributes: "Contact name\*", "Contact e-mail\*", "Title of Geocontent\*", "Description\*", "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)

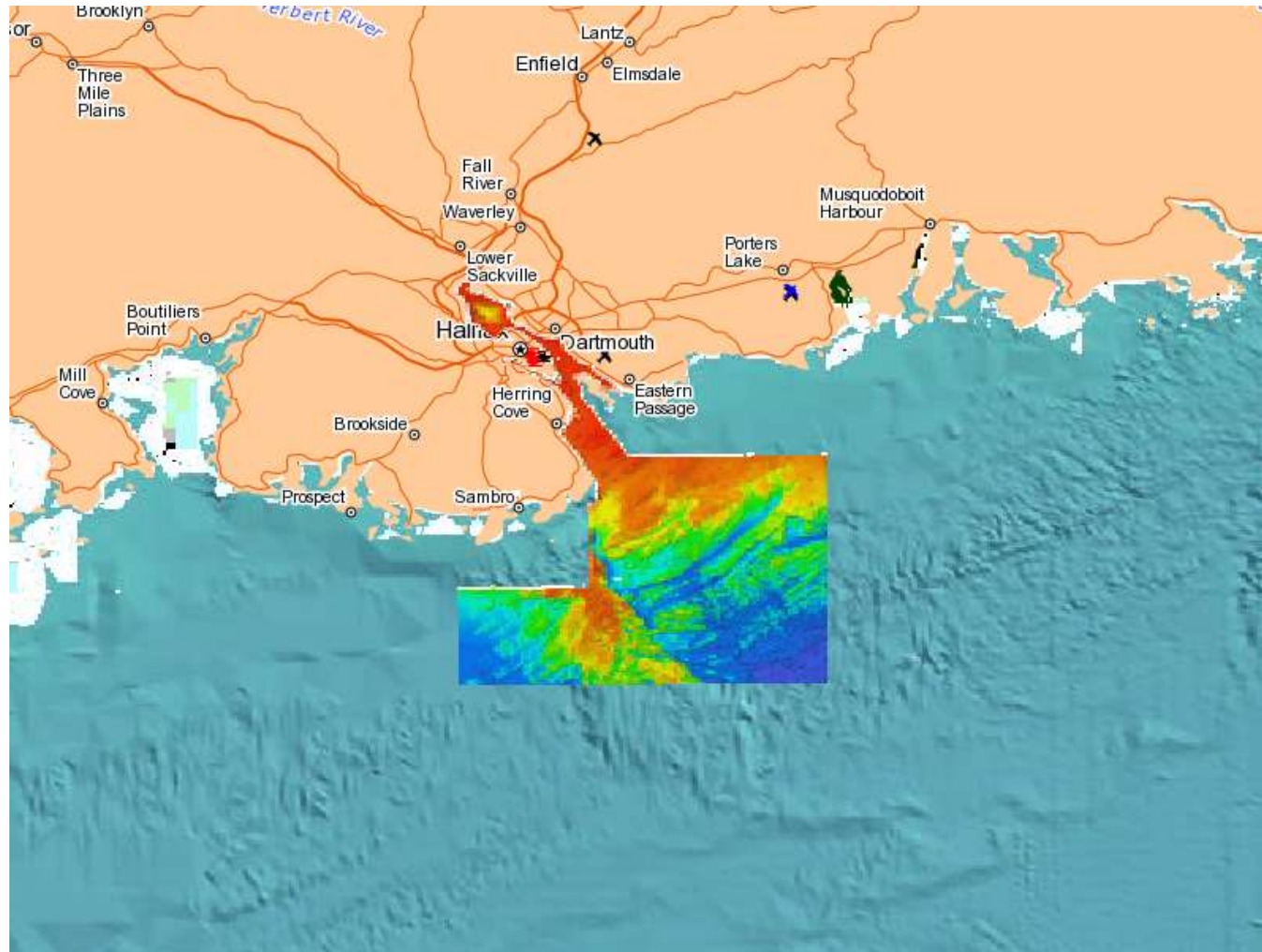
The screenshot displays the COINAtlantic Search Utility (CSU) web application. The browser address bar shows the URL `coinatlantic.ca/csu/`. The main heading reads "Welcome to the COINAtlantic Search Utility". The COINAtlantic logo, "COASTAL AND OCEAN INFORMATION NETWORK", is visible in the top right. 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...	<a href="http://coinatlantic.ca/cgg/templ...">http://coinatlantic.ca/cgg/templ...</a>
Schwehr et al. 2006, Santa Barbara ...	<a href="http://vislab-ccom.unh.edu/~s...">http://vislab-ccom.unh.edu/~s...</a>
WMS: gdr.ess.nrcan.gc.ca	<a href="http://gdr.ess.nrcan.gc.ca/w...">http://gdr.ess.nrcan.gc.ca/w...</a>
WMS: cmgds.marine.usgs.gov	<a href="http://cmgds.marine.usgs.gov/">http://cmgds.marine.usgs.gov/...</a>

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 Atlantic coast of Canada 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](http://www.coinatlantic.ca)

@mapsgiving