

The MightyMoRiver Project

Curating 2011 Missouri River Flood Info

Knowledge Discovery / Modeling & Simulation (KDMS) Workshop
Knowledge Discovery and Data Mining (KDD) Conference
August 20th, 2011, San Diego, CA

Founder: Chris Augeri, PhD

Co-Founder: Bill Souzan, PhD

Core Team: Folks in MI, MO, NE, PA, & others

Extended Team: CO, VA, TX, Canada & elsewhere

Technical Support: Africa, Asia, Europe, & South America

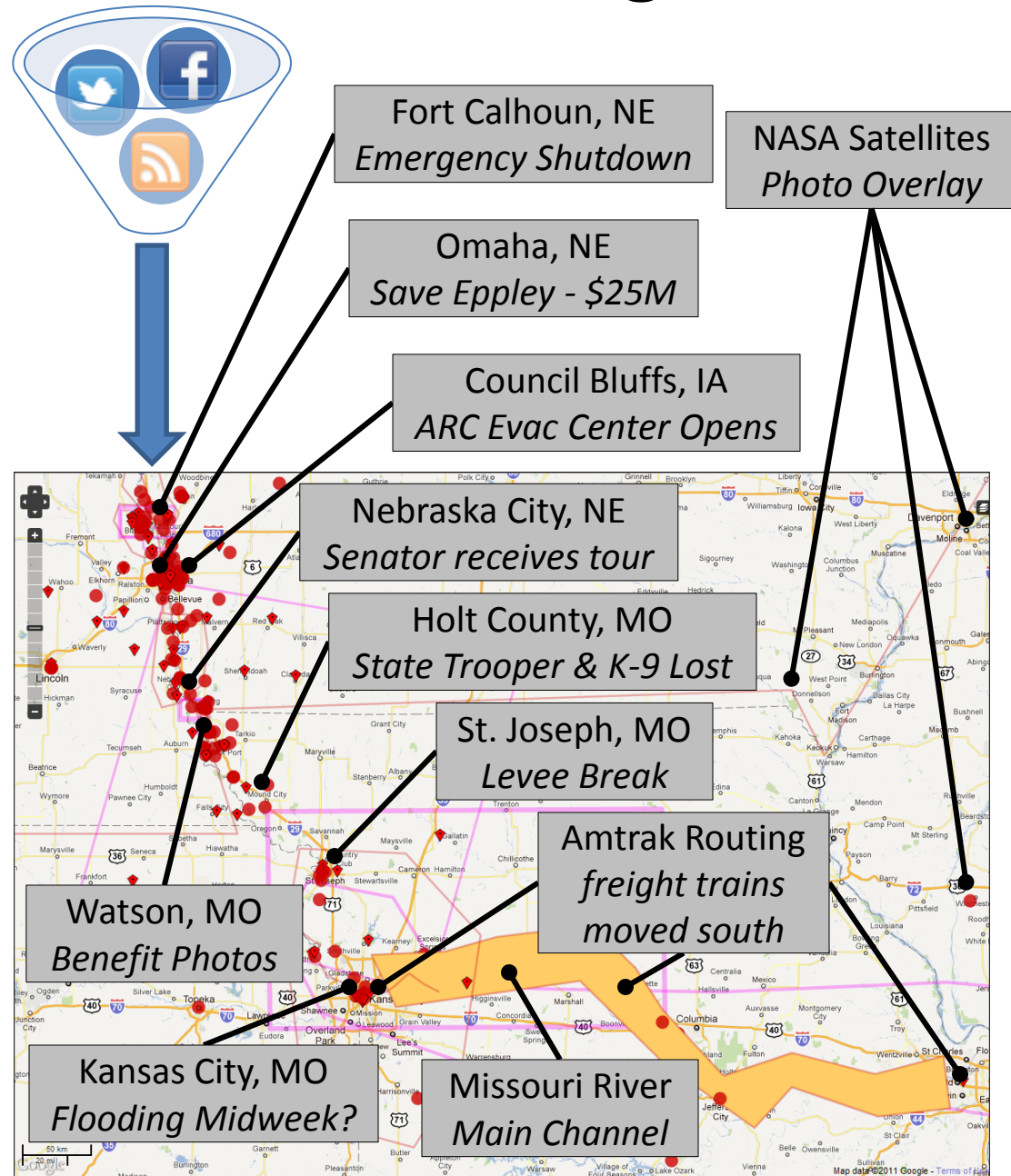
Challenge we were tackling

Data Sources

- Multiple sources
 - Mainstream Media
 - Social Media Venues
 - Non-Profit Initiatives
 - Government Agencies
- Plaintext – no context
- No temporal reference
- No geospatial reference
- Predictive searches

Key Objectives

- Crowd-sourced
- Text & faceted search
- Accessible to populace
- Geo-temporally referenced
- Illustrate “what’s possible”

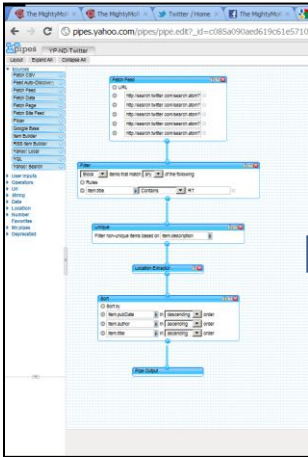


Behind the scenes @MightyMoRiver



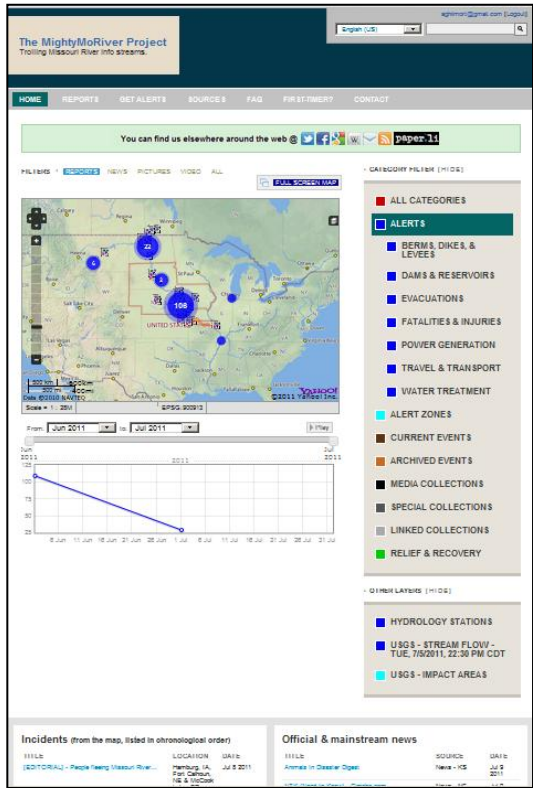
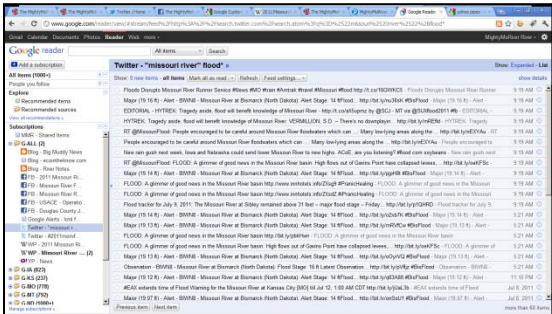
Per State!

Curated reports w/ map overlays



Yahoo! Pipes

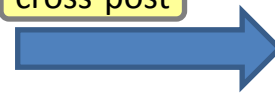
RSS Aggregator



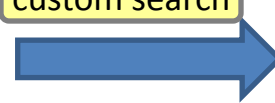
cross-post



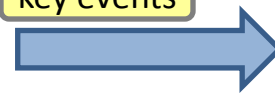
cross-post



custom search



key events



keep up w/ data flood



Mobile Site Viewer Plug-in

Crowdmap Capabilities

The screenshot displays the 'The MightyMoRiver Project' website. At the top, there is a search bar and navigation tabs for HOME, REPORTS, GET ALERTS, SOURCES, FAQ, and ABOUT. Below the navigation is a social media bar with icons for various platforms and a 'paper.li' link. The main content area features a map of the Missouri River basin with several red and blue markers. A 'FULL SCREEN MAP' button is visible. To the right of the map is a 'CATEGORY FILTER' panel with a list of categories and a 'MAP LAYERS MODE' option. Below the map is a 'Time Scroller' with a date range from Jun 2011 to Aug 2011 and a line graph showing data over time. At the bottom, there are two tables: 'Incidents (from the map, listed in chronological order)' and 'Official & mainstream news'. The incident table has columns for TITLE, LOCATION, and DATE. The news table has columns for TITLE, SOURCE, and DATE.

Search

Faceted Search & Alerts

Interactive Map

Media Links

Dynamic Report Clusters

Category Filters

Report Timeline

Category Hacking

Report List (map alternative)

Time Scroller

Map Overlays

Twitter & News Feeds

Report UI (for user)

Geo-Temporal Reference

Category Pivots

Images & Videos

Report Text

Report Links

The screenshot shows a web interface for 'The MightyMoRiver Project'. At the top, there's a navigation bar with 'HOME', 'REPORTS', 'GET ALERTS', 'SOURCES', 'FAQ', and 'ABOUT'. The main content area features a report titled 'PHOTO - Rockport, MO - Benefit Project - #2011MoRivFlood - cc: @TifHolmesPhoto [Edit]'. It includes a timestamp '23:32 Jul 5 2011', a location 'Rockport, MO - Exit 110 looking west', and a 'VERIFIED' badge. A map on the right shows the location with a red field-of-view overlay. Below the map is a list of 'Additional Reports' with titles like 'Corps ratchets up water release' and 'Nebraska residents shrug off flood risk to nuclear plant'. The report text includes a description, background information, and news source links. At the bottom, there's a 'Features' section with 'Approximate field-of-view', 'Approximate camera location', and 'Approximate camera location'. A comment box is visible at the very bottom.

Image FOV

Map Features

User Comments

Validate & Verify Status

Report Overlays

Related Reports

Report UI (for admin)

Report Title
(*tweet format*)

Report Text
(HTML)

Temporal Reference

Category Selectors

Curator Info
(*optional*)

Overlay Info

Media Sources

Images

Video Links

Report Overlays

Location Set & Info

Start Over

Validate & Verify Status

The screenshot shows a web application interface for editing a report. At the top, there are navigation tabs: Dashboard, Reports, Messages, Stats, Addons, Settings, Manage, and User. Below the tabs are links: View Reports, Create Report, Comments, Download Reports, and Upload Reports. The main heading is 'Edit Report'. There are buttons for 'SAVE REPORT', 'SAVE & CLOSE', 'CANCEL', 'PREVIOUS', and 'NEXT'. The form is divided into several sections: 'Form' (with a dropdown for 'Default Form'), 'TITLE' (containing 'PHOTO - Rockport, MO - Be...'), 'Description' (with a rich text editor containing HTML tags like Rockport, MO and Background), 'Date' (07/05/2011) and 'time' (11:32:PW), 'Categories' (a list of checkboxes for Alert Zones, Alerts, Archived Events, Current Events, Linked Collections, Map Layers Mode, Media Collections, Relief & Recovery, and Special Collections), 'Personal Information' (First Name, Last Name, Email Address), 'Incident Location' (Latitude: 40.3943848, Longitude: -95.5871441), a map showing a red polygon overlay on a street map, 'Refine Location name' (Rockport, MO - Exit 110 looking west), 'News source link' (multiple text input fields with URLs), 'Video link' (text input field), 'Upload Photos' (Choose File button, No file chosen), and 'Information Evaluation' (Approve this Report?, Verify this Report?, Source Reliability: Yes, the source has direct access to information (witness or actor), Information Probability: Yes, the information is confirmed by several independent sources).

Crowdmap Facet Search

Query Results
List View

Temporal
Facet

Query Results
(Map View)

The screenshot displays the Crowdmap interface with two views: a list view at the top and a map view at the bottom. The top view shows two report entries with photos and text. The bottom view shows a map of the Rockport, MO area with green markers and bounding boxes. On the right side, there are several filter panels: 'Filter Reports By' (Category), 'Location' (a map), 'Type' (Media), 'Media' (Filter reports that contain...), and 'Verification' (Verified/Unverified). The interface includes navigation tabs (HOME, REPORTS, GET ALERTS, SOURCES, FAQ, ABOUT) and a date range selector (Showing Reports from Jun 09, 2011 through Aug 08, 2011).

Categories
Facet
(1 - k)

Location
Facet
(point
&
Range)

Source
Facet

Media
Facet

Validity
Facet

Crowdmap User Alerts

HOME REPORTS **GET ALERTS** SOURCES FAQ ABOUT

Get Alerts

Step 1: Select your city or location:

Or, place a spot on the map below, and we will alert you when a report is submitted within 20 kilometers.

Step 2: Send alerts to my:

Email address:
enter email address

Step 3 (Optional): Select Categories

- Alert Zones
 - Populated Areas
 - Infrastructure
- Alerts
- Archived Events
- Current Events
- Linked Collections

- Map Layers Mode
- Media Collections
 - Videos
 - Photos
 - Audio
- Relief & Recovery
 - Flood Control
 - Humanitarian Aid
 - Cleanup
 - Info & Training Meetings
 - Coordination & Telecom
 - Our Team
 - Donations
- Special Collections

Save My Alert

[Confirm A Previous Alert Request](#)

RSS Feeds (copy the url below)

<http://mightymoriver.crowdmap.com/feed/>

Select Location

Select Range

Or...
Obtain report alerts via feed

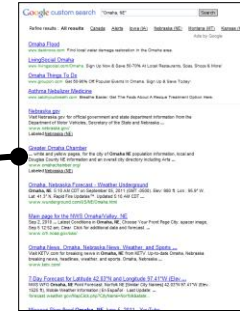
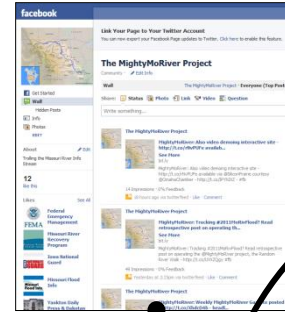
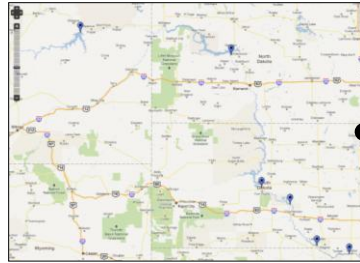
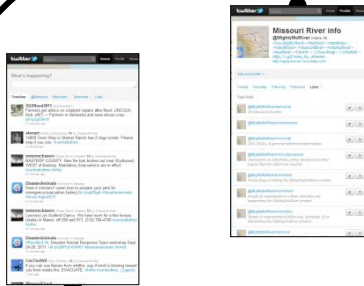
Enter Email







Select Categories

Register Alert

Check Registered Alerts

Additional Resources



-  Twitter (reports & tweets)
-  Twitter Lists (external sources)
-  Map Layers (external & searches)
-  Facebook Wall (cross-post)
-  Google CSE (for search)
-  Wikipedia (reference)
-  Mobile View (plug-in)
-  RSS Feed (reports)
-  Daily paper
-  Demo video



What didn't we cover?

- Most of back-end, especially feed generation
- Tech glitches – multiple overlays, outages, pages
- Yahoo! Pipes – translation, aggregation & filtering
- Dynamic Ontology – 3+ cat iterations / changing ops
- Operations Processes – feeds, reports, cross-checking
- KML – upload as KMZ, no folders, HTML → description
- Crowd-Sourcing – geography segments, virtual teaming
- Tech hacks – ghost images & categories, date categories

Use cases other than disaster response...

...for example...

Tracking dynamic events, competition, enterprise info

Suggested Best Practices

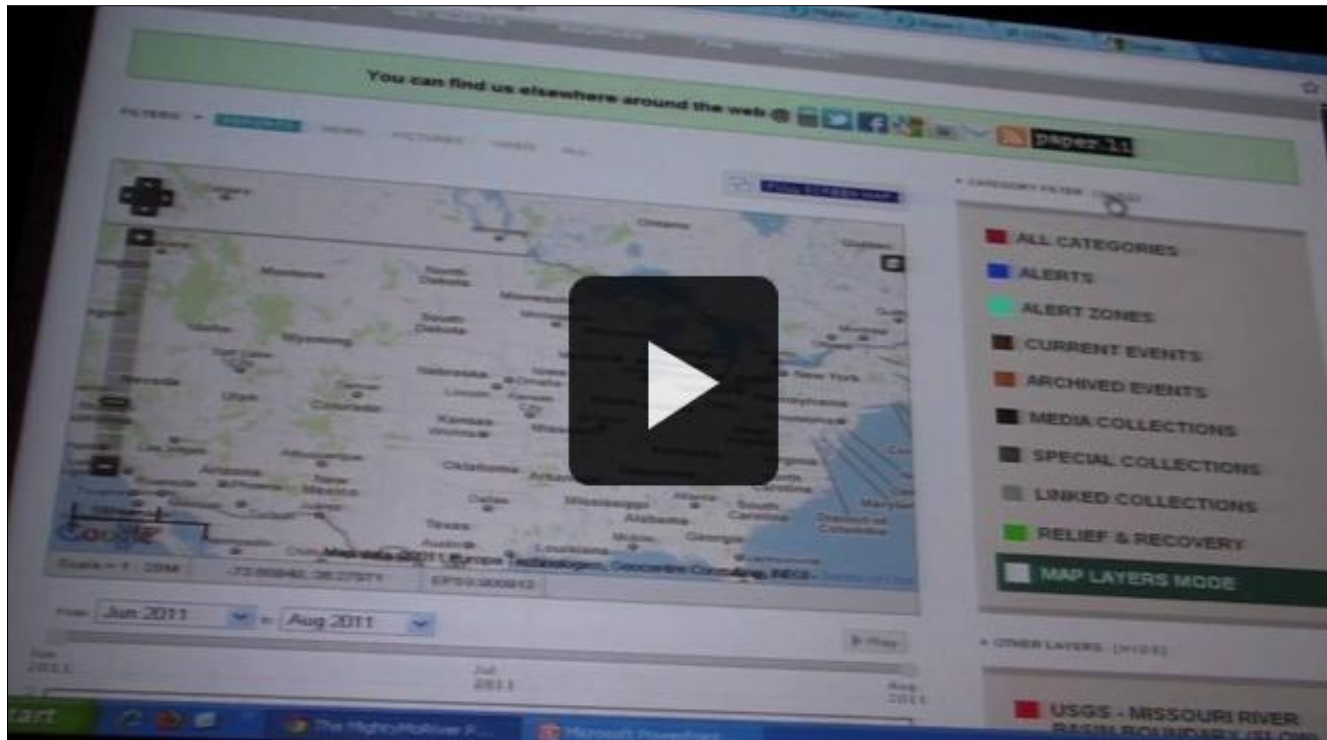
- Use Faceted Filter View (use as default view?)
- Pick one {Twitter, G+, FB} & cross-post to others
- Use Twitter lists & searches (RSS) – makes it easy
- Consider Paper.li &/or Summify –when gets “too busy”
- Use social media to build traction, check via Google Analytics
- Construct overlay searches of key areas – can’t keep up
- Create orthogonal ontology (can we make standard)
- Use RSS reader / aggregator &/or Yahoo! Pipes
- Create demo video – makes easy for new users
- Engage directly on social media – get tips & aids keeping up
- Enable mobile view (links → description) & full-screen view
- Segment reporters by geography – easy to agree on
- Only ingest feeds that lead directly too reports, else too much
- Do use report overlays if time permits – increases quality
- Engage community manager & use forums for bug reports
- Do use public overlays – river basin, county outlines, etc.

What would we do differently?

- Start social media engagement earlier
- Fix orthogonal category ontology at start
- Use map overlays earlier – increases quality
- Do better at balancing reports & social media use
- Prep “new curator guide” → more & higher-quality info
- Engage community manager & use forums for bug reports

Want more info? Watch our video demo!

Click image –article w/video will open in browser



<http://www.siliconprairienews.com/2011/08/cornstalks-demo-night-the-mightymoriver-project-by-chris-augeri-video>

Want yet more info? Surf to these links!

- **MightyMoRiver Project** – <http://mightymoriver.crowdmap.com/>
 - **Project Feed** – <http://mightymoriver.crowdmap.com/feed/>
 - **About Tab (tech info)** – <http://mightymoriver.crowdmap.com/page/index/14>
- **MightyMoRiver Gazette** – <http://paper.li/MightyMoRiver/1310136752>
- **Twitter**
 - **MightyMoRiver account** – <http://twitter.com/#!/MightyMoRiver>
 - **Geographic Lists** – <http://twitter.com/#!/MightyMoRiver/lists>
- **Google Custom Search Engine (CSE)** – <http://google.com/cse/home?cx=006208124472531338309:6w8w6tuiz1e>
- **Facebook (cross-post)** – <https://www.facebook.com/pages/The-MightyMoRiver-Project/226261607402028?sk=wall>
- **Wikipedia** – http://en.wikipedia.org/wiki/2011_Missouri_River_floods
- **Crowdmap** – <http://crowdmap.com/>
- **Ushahidi** – <http://www.ushahidi.com/>

& our Omaha Chamber of Commerce Demo Night Video

<http://www.siliconprairienews.com/2011/08/cornstalks-demo-night-the-mightymoriver-project-by-chris-augeri-video>

Still to come?

Resource permitting...in appropriate venues...

- Full Tutorial – “the back-end”
- Alternate Tools (e.g., Sahana)
- Interactive Training Sessions
- Best Practices Guide

Stay in touch

- Twitter – [@aghilmort](#)
- Blog – [social media channel](#)
- Email – aghilmort@gmail.com