



VLRI

Vermont Local Road Information

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(VCGI)

VLRI

Vermont Local Road Information

An information solution was needed for

easy and efficient
updating,
monitoring,
disseminating,

closure statuses of local roads
(roads that are not maintained by VTrans)

511 for VTrans-maintained, <?> For local



Who Needs VLRI?

- Emergency Management / Homeland Security
- VTrans and Other State Agencies
- E911, PSAPs
- Police/Fire
- Regional Planning Commissions
- Towns, Cities, Villages
- Neighboring States
- General Public
- Etc.

Project Plan

- *What problem will be solved?*

An information solution is needed for

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Project Plan

- *How will the problem be solved?*

How will the problem be solved?

VCGI will leverage ESRI's ArcGIS Server technology to establish a geo-database, a web mapping editor, and standard web services (REST) that will compose a solution in which certain organizations can update local road closure information while various organizations and systems have access to that same information.

Project Plan

- *How will we know if the project is complete (deliverables)?*

How will we know if the project is complete (deliverables)?

VLRI Phase 1 will be considered complete when the following deliverables are met.

- A geo-database for collecting and serving the statuses of local road segments is configured and populated with current public E911 road segment data. The geo-database lives in the Virtual Vermont infrastructure and complies with EGC standards.
- The road segment dataset has the editor-tracking option enabled, which automatically tracks the user names, dates, and times to which edits are related.
- The road segment dataset has historical tracking enabled, which causes road segment status histories to be retained in the geo-database.

Project Plan

- *What is the detailed project plan (WBS)?*

Appendix A – Work Breakdown Structure

Category	Task	Owner	Status
geo-database	Identify fields of GDB_E911's road centerline dataset that should be included in this solution's geo-database.	Local Road Workgroup	complete
	Identify the road data field which will be the appropriate field for tracking closures.	VCGI, E911	complete
	Identify field of GDB_E911's road centerline dataset that distinguishes between local and state roads.	VCGI, E911	complete
	Create and configure the solution's	VCGI	complete

Project Plan

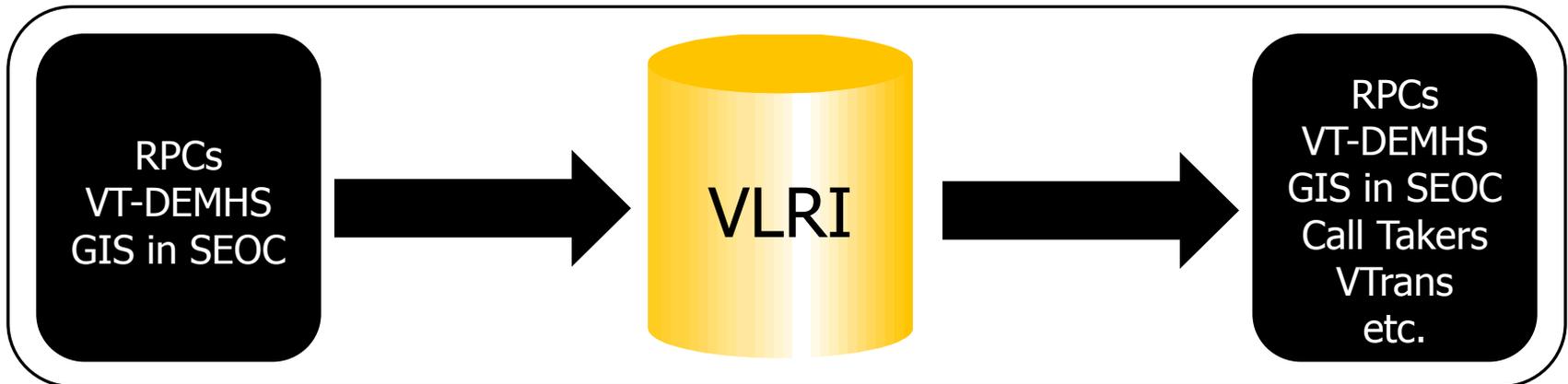
- Scope
 - In Scope
 - Out of Scope
- Assumptions and Risks
- Project Timeline w/ Milestones

Project Timeline

Milestone	Target Date
Geo-database configured, populated, and documented	11/22/2013
REST services running, tested, and documented	12/13/2013
Web map editing application running, debugged, and documented	01/31/2014

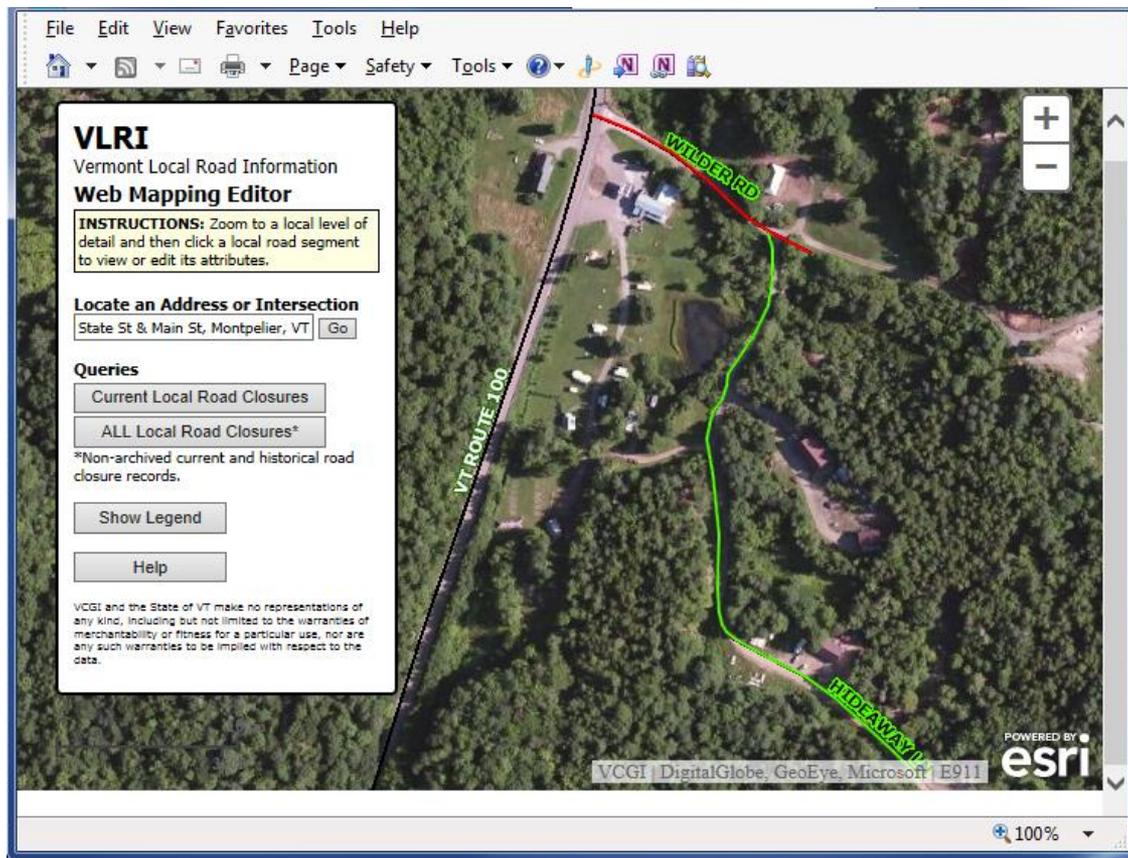
Technical Approach

- ArcSDE Geodatabase
- Web Services (REST, WMS)
 - Data Collection
 - Data Dissemination



Technical Approach

- Web Map Editing App - ArcGIS API for Javascript



Technical Approach

- Web Map Editing App - ArcGIS API for Javascript

The screenshot displays the VLRI Web Mapping Editor interface. The main map area shows an aerial view of a road network with a highlighted segment in red and green. The interface includes a menu bar (File, Edit, View, Favorites, Tools, Help) and a toolbar. On the left, there is a sidebar with the following sections:

- VLRI**
Vermont Local Road Information
Web Mapping Editor
- INSTRUCTIONS:** Zoom to a local level of detail and then click a local road segment to view or edit its attributes.
- Locate an Address or Intersection**
State St & Main St, Montpelier, VT
- Queries**

*Non-archived current and historical road closure records.
-
-

At the bottom of the sidebar, there is a disclaimer: "VCGI and the State of VT make no representations of any kind, including but not limited to the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the data."

On the right side, there is a data entry form for the selected road segment:

- E911 Comments**
- Community - Left Side: DUXBURY
- Community - Right Side: DUXBURY
- Address Range - Left Side Low: 71
- Address Range -Right Side Low: 0
- Address Range - Left Side High: 71
- Address Range -Right Side High: 0
- AOTCLASS: Town Highway Class 3
- VLRI Closure Status: Closed
- VLRI Comment: culvert stood up on end then
- Edited by seocgis on 4/15/14 at 6:44 PM
-

The bottom of the interface shows the text "VCGI | DigitalGlobe, GeoEye, Microsoft | E911" and the Esri logo, along with a zoom level of 100%.

Technical Approach

- Web Map Editing App - ArcGIS API for Javascript

File Edit View Favorites Tools Help

Page Safety Tools

POWERED BY esri

VCGI | DigitalGlobe, GeoEye, Microsoft | E911

VLRI QUERY REPORT

Road Name	ALINAME	Alternative Name 1	Alternative Name 2	Alternative Name 3	Alternative Name 4	Alternative Name 5	Community - Left Side	Community - Right Side	Address Range - Left Side Low	Address Range - Right Side Low	Address Range - Left Side High	Address Range - Right Side High	VLRI Comment	Beginning Time of Record State	Ending Time of Record State	Record Edited By
FIELD RD	null	GREAT RD	null	null	null	null	BARNET	BARNET	0	0	0	0	It needs to dry out before it can be reopened. There is one residence accessing through Peacham.	2014-04-25T13:43:43.000Z	CURRENT CLOSURE	DEMHS
CROSSETT HL	CROSSETT HL	null	null	null	null	null	DUXBURY	DUXBURY	1267	1328	1605	1768	culvert compromised - undermined roadbed	2014-04-15T18:43:43.000Z	CURRENT CLOSURE	seocgis
WILDER RD	null	null	null	null	null	null	DUXBURY	DUXBURY	71	0	71	0	culvert stood up on end then down the brook	2014-04-15T18:44:47.000Z	CURRENT CLOSURE	seocgis
WILDER RD	null	null	null	null	null	null	DUXBURY	DUXBURY	89	0	89	0	null	2014-04-25T15:29:53.000Z	CURRENT CLOSURE	DEMHS
CADREACT RD	null	null	null	null	null	null	MILTON	MILTON	416	53	416	291	a "sea of mud"	2014-04-16T14:14:54.000Z	CURRENT CLOSURE	SEOCGIS
WILLOW BROOK LN	null	null	null	null	null	null	SAINT GEORGE	SAINT GEORGE	655	702	963	1058	null	2014-04-25T13:50:04.000Z	CURRENT CLOSURE	DEMHS

To copy this report to a spreadsheet:

100%

Technical Approach

- Automated Email Notifications
 - Python and arcpy

geodatabase



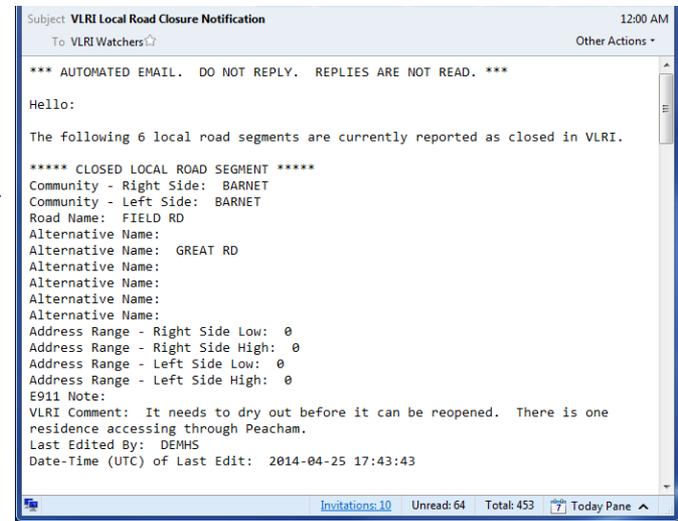
Python script

```
File Edit Format Run Options Windows Help
del the_cursor

#IF CLOSED LOCAL ROADS WERE FOUND, EMAIL
# (IF THE EMAIL WOULD BE A DUPLICATE OF
if the_count > 0:
    the_string = str(the_count) + " CLOSED
    make_note(the_string)
    print the_string
    #SORT THE PRESENTATIONAL LIST
    print "PREPARING CONTENT FOR EMAIL..."
    the_presentation.sort()
    #BUILD TEXT FOR THE EMAIL
    the_string = "Hello:\n\n"
    the_string += "The following " + str(t
    for a_segment in the_presentation:
        the_string += "***** CLOSED LOCAL F
```

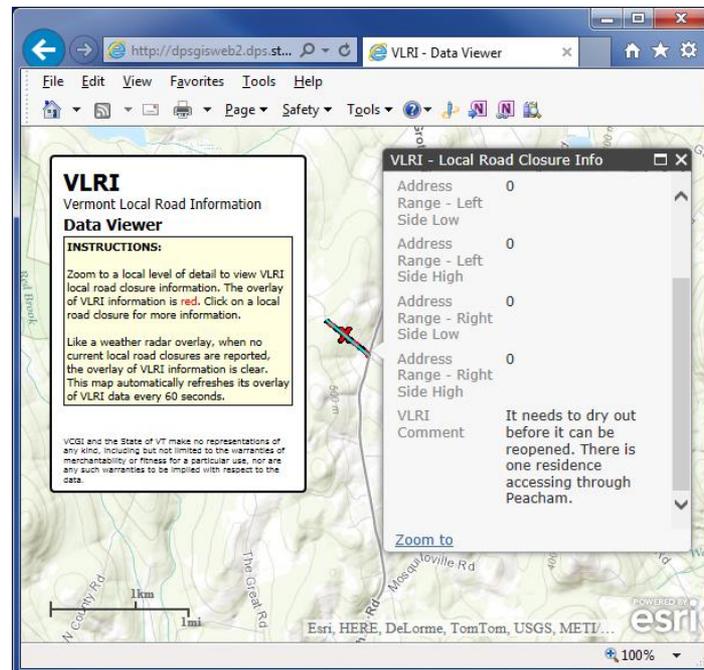


email



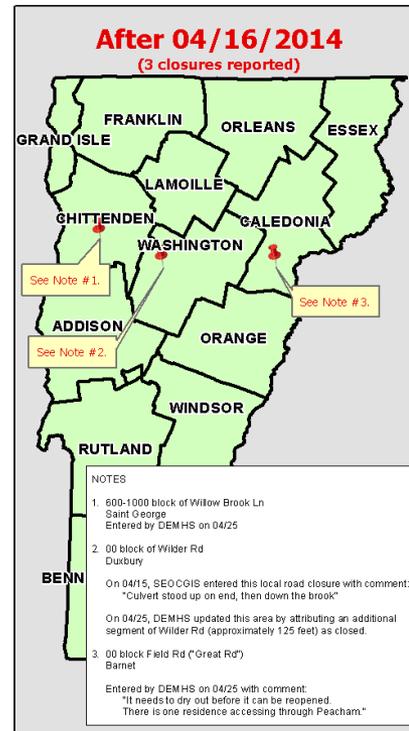
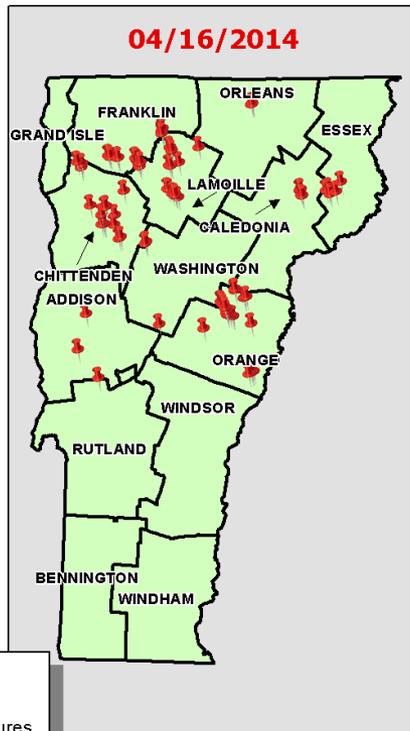
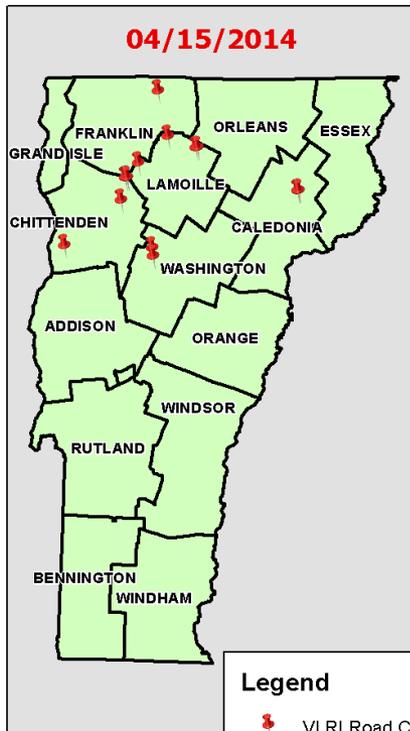
Technical Approach

- Various Read-Only Clients/Systems (via REST/WMS)
 - web mapping application mash-ups
 - ArcGIS Desktop
 - Google Earth
 - etc.



Data Mining

Local Road Closures Reported in VLRI* Geo-Database During the Period of 04/15/2014 - 04/29/2014

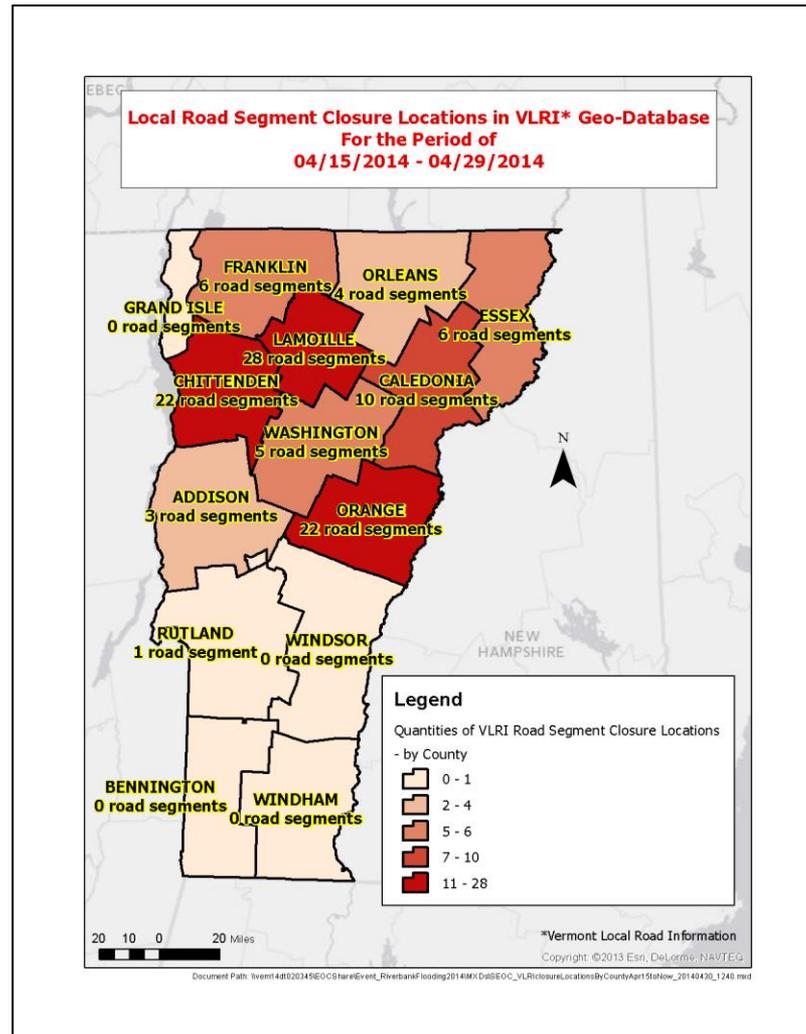


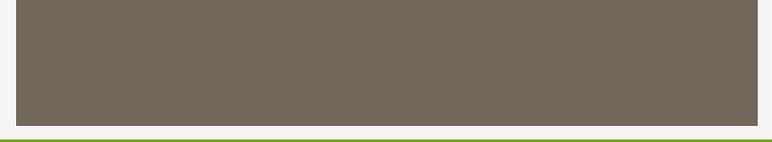
Legend

- VLRI Road Closures
- Vermont Counties



Data Mining





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