

La Experiencia de la United States Geological Survey y la Información Geográfica Voluntaria con el Prototipo Colaborativo de OpenStreetMap

USGS y VGI con OSMCP

A long, long time ago, in a
galaxy far, far away...

A long, long time ago, in a
country far, far away...











1609 metros
1 milla



<http://www.flickr.com/photos/bobkare/6140629445/>





Glittery ArcGIS Editor for OpenStreetMap

Charming Create new Feature Class

Charming What

Charming What

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GFDRL



VGI at the USGS: The OpenStreetMap Collaborative Prototype

Erin Korris and Jennifer Walter



1864



Clarence King

Sierra Nevada



Clarence King

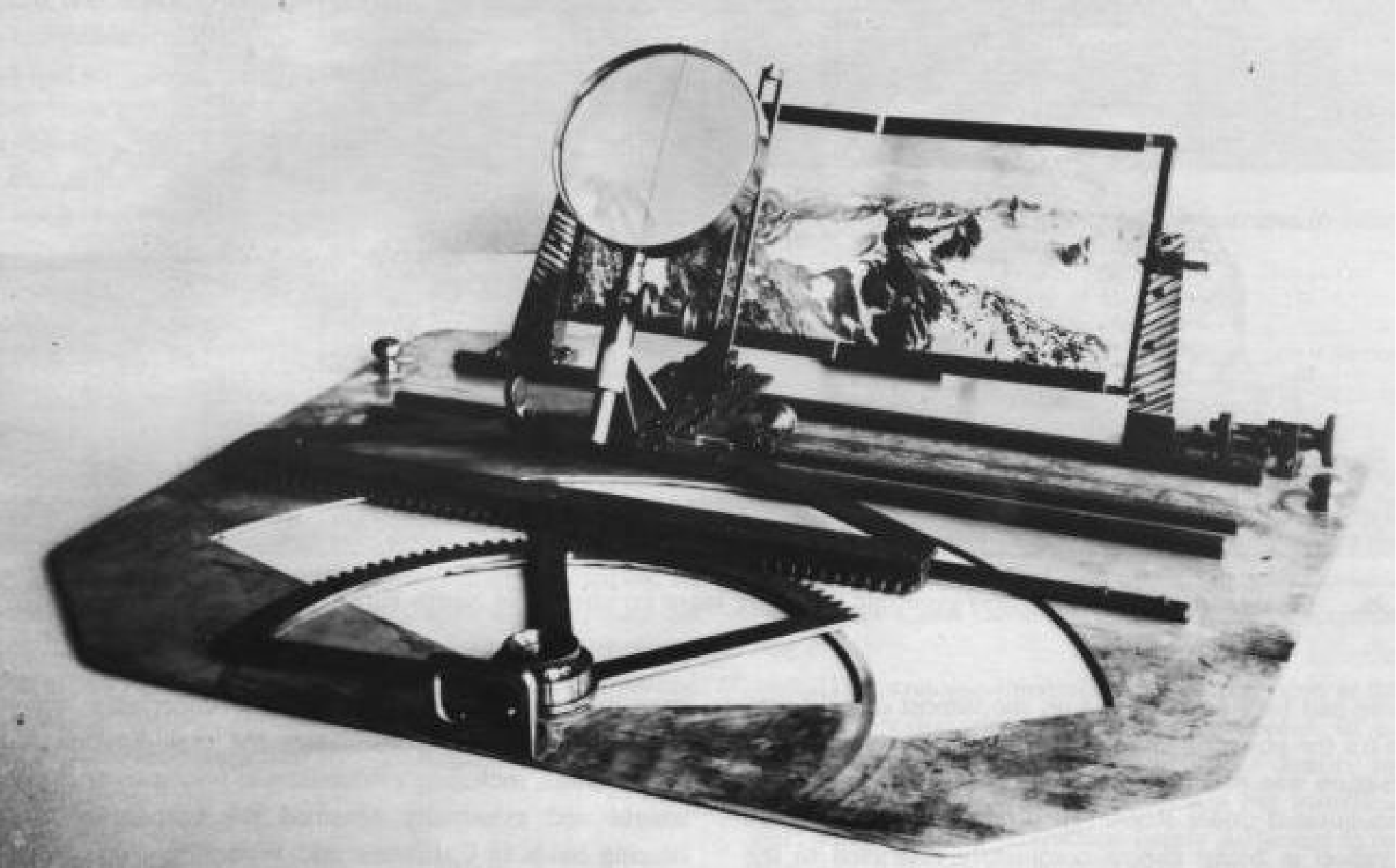
Sierra Nevada
California, EEUU

1869

Río Grande, Texas



1900



Cámara panorámica, 1900, con fotografía de Alaska

<http://pubs.usgs.gov/circ/c1050/second.htm>

1936



Equipo múltiplex para mapas topográficos

<http://pubs.usgs.gov/circ/c1050/depress.htm>

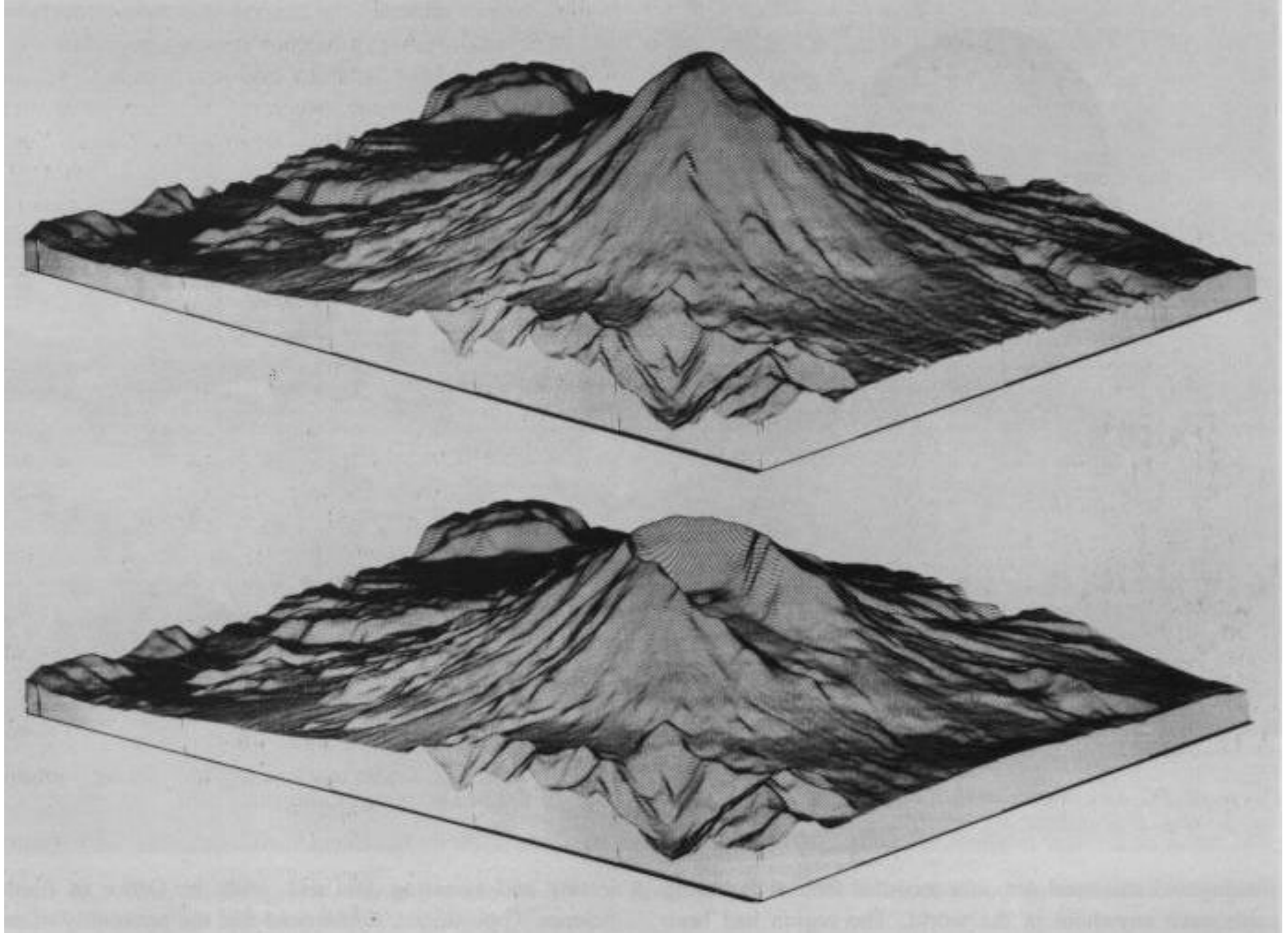
1963



Astronauta jugando a recoger piedras lunares

<http://pubs.usgs.gov/circ/c1050/age.htm>

1980



Modelos digitales del Monte de St. Helens antes y después de la erupción volcánica

1994

Adopt-a-quad

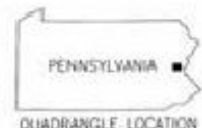
Adopt-a-quad
Adopta un 25000



UQA
1 NW
24000



VAL 20 FEET
TICAL DATUM OF 1929



ROAD CLASSIFICATION

Heavy-duty	—	Light-duty	—
Medium-duty	—	Unimproved dirt	-----
	○	State Route	

KUNKLETOWN, PA
40075-G4-TF-024
1992

NL MAP ACCURACY STANDARDS
OLOGICAL SURVEY
R RESTON, VIRGINIA 22092
AND SYMBOLS IS AVAILABLE ON REQUEST

Revisions shown in purple compiled in cooperation with
Commonwealth of Pennsylvania agencies from imagery
dated 1970. This information not field checked

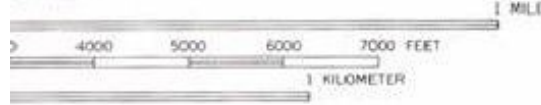
Started: 1-4-99
Completed: 9-9-00
Submitted: 9-16-00

DMA 5965 IV SW-SERIES V831

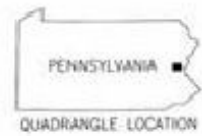




UQUA/
1 NW
24000



VAL 20 FEET
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Started: 1-4-99
Completed: 9-9-00
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2001

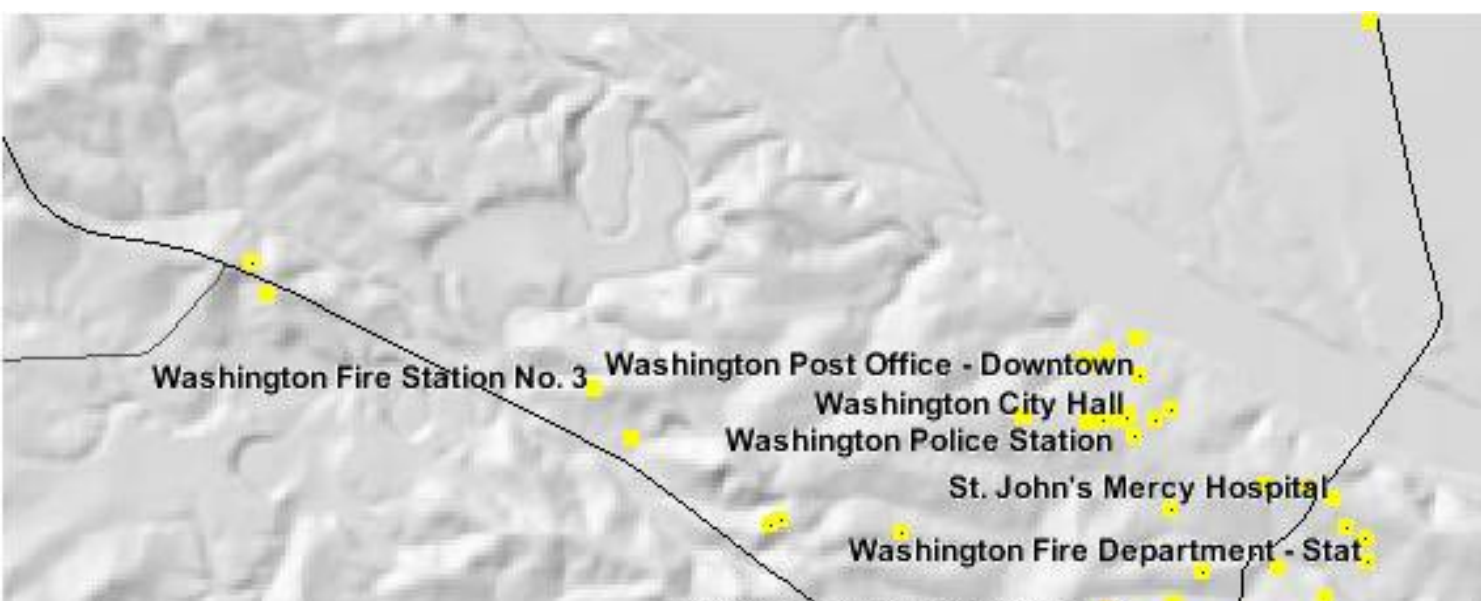
Adopt-a-quad

Adopt-a-quad
con GPS

Adopt-a-quad
con GPS
por el interné!

Adopt-a-quad
con GPS
por el internet!

<http://www.gis2gps.com/quad/quad.htm>



Collect Points



Navigation:

- ☐ Zoom In
- ☒ Zoom Out
- ☐ Recenter

Power:

Collection:

- ☐ New Point
- ☐ Edit Point
- ☐ Move Point
- ☐ Delete Point

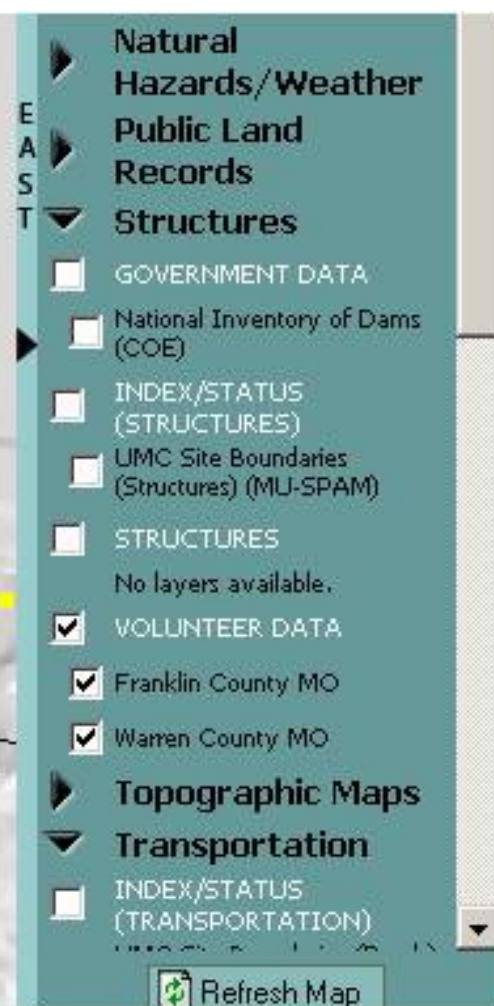
Imagery:

- ☒ Topographic Map
- ☐ Imagery
- ☐ Urban Area Imagery

Display:

- ☒ All Points
- ☒ Show Labels
- ☒ My Points
- ☒ Show Labels

Refresh Map



2008



2010







<http://nationalmap.gov/>
<http://viewer.nationalmap.gov/viewer/>



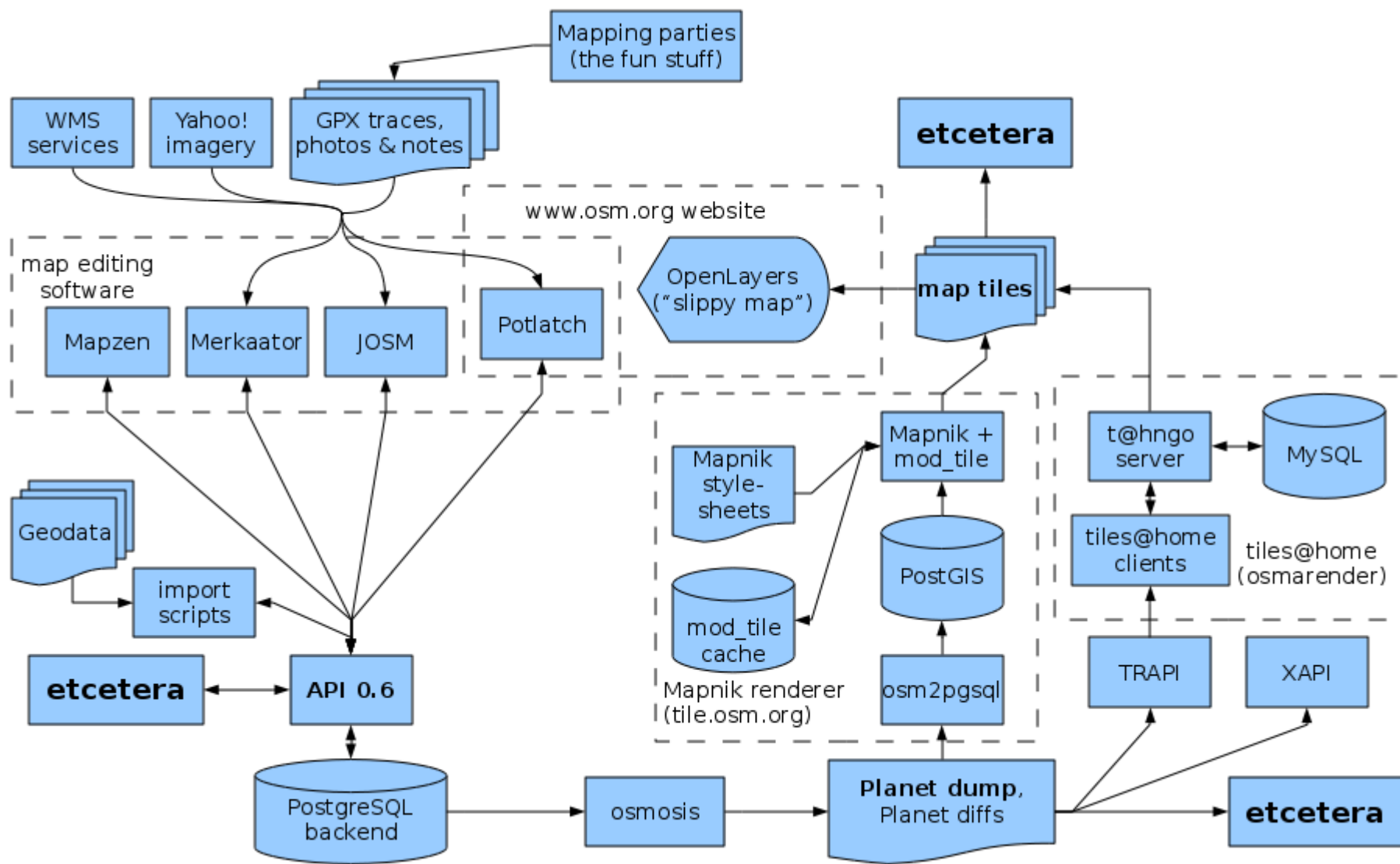
Volunteered Geographic Information Workshop

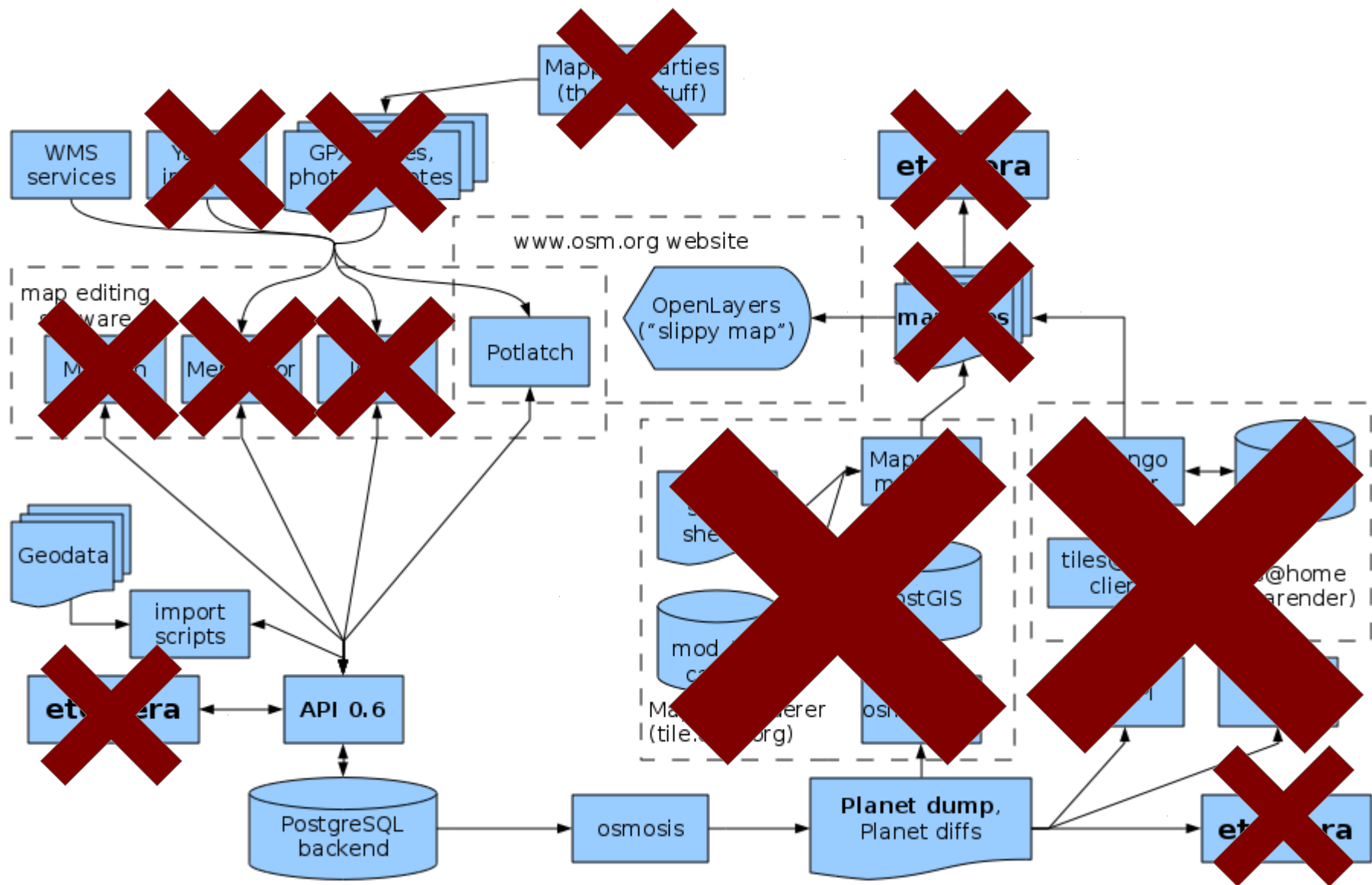
<http://cegis.usgs.gov/vgi/>

¿Qué opciones hay
para hacer VGI
en el USGS?

- Contribuciones directas de la USGS a OSM
- Descarga y uso de OSM como parte del National Map.
- Modificación de las herramientas de edición administrativa de los Datos Nacionales de Hidrografía (NHD) del USGS
- Modificación de la Herramienta de Edición Web del NHD de Alabama
- Desarrollar una nueva aplicación personalizada basada en ArcGIS Server, o GeoServer
- Usar la arquitectura software de OSM con una base de datos de dominio público

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Come to State of the Map,
September 9-11th, Denver
The 5th annual international
OpenStreetMap Conference



Search Where am I?

examples: 'Alkmaar', 'Regent Street, Cambridge', 'CB2 5AQ', or 'post offices near Lünen' more examples...

[Make a Donation](#)

Background Map Style GPS Data

Undo Redo Help Options Save

Loading data...

Add new points by dragging them onto the map

Shopping:



Food and Drink:



Amenity:



Tourism:



Accommodation:



Transport:

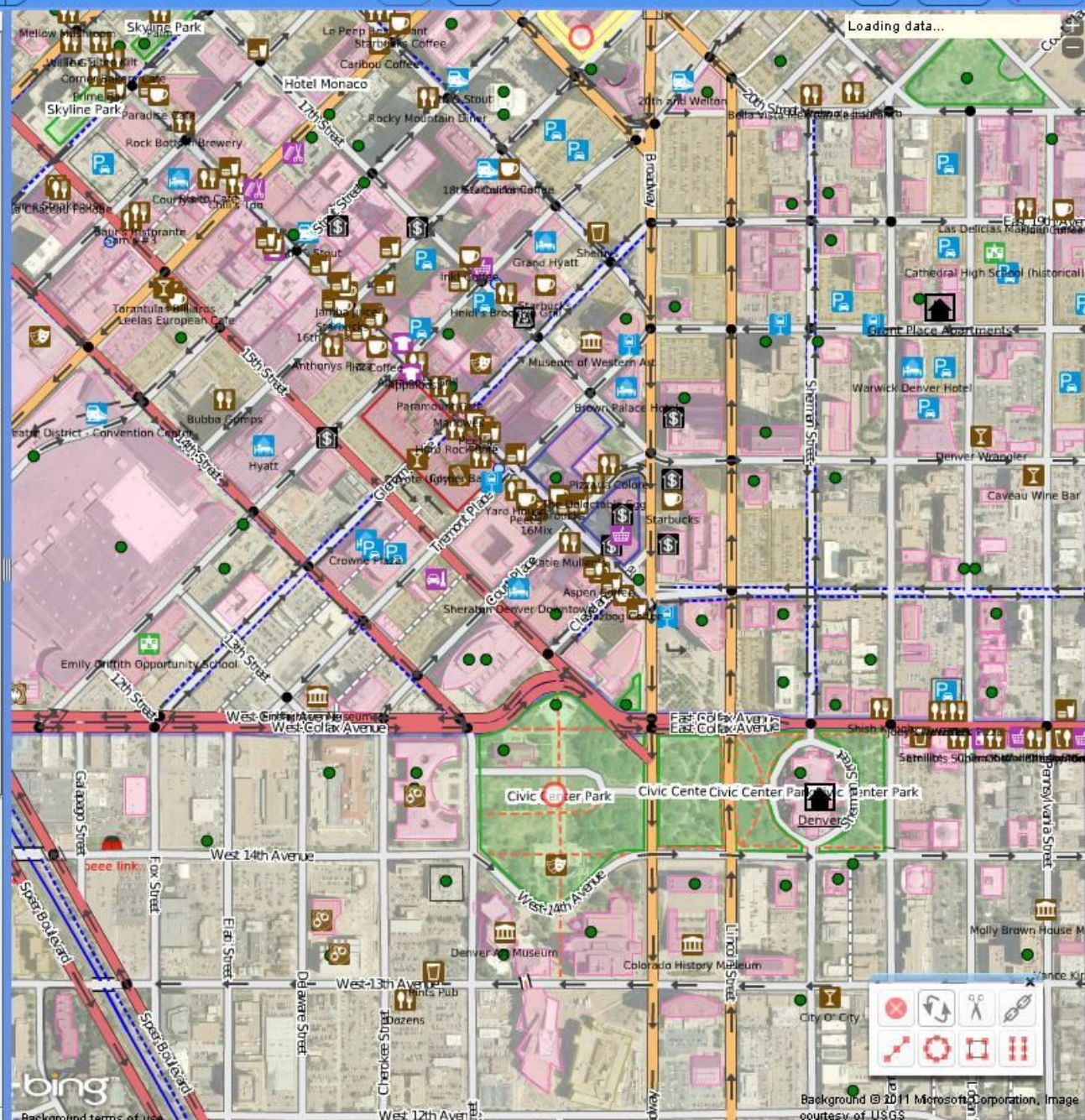


Water:



Barrier:





Background © 2011 Microsoft Corporation, Image courtesy of USGS

OpenStreetMap

www.openstreetmap.org/edit?lat=39.74414&lon=-104.98246&zoom=16

Yellow Pages, the ne... Sun God Lodge North-Central Region ... citymelt U.S. Board on Geogr

OpenStreetMap



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Community Blogs

Foundation

Come to State of the Map,
September 9-11th, Denver

The 5th annual international
OpenStreetMap Conference

SOTM

Search

Where am I?

Go

examples: 'Alkmaar', 'Regent Street,
Cambridge', 'CB2 5AQ', or 'post
offices near Lünen' more
examples...

Make a Donation

View

Edit

History

Export

GPS Traces

Use

Background

Map Style

GPS Data

Add new points by dragging them onto the map

Shopping:



Food and Drink:



Amenity:



Tourism:



Accommodation:



Transport:



Water:



Barrier:



bing

Background terms of use

USGS OSMCP Structures

navigator.er.usgs.gov/edit?lat=39.758&lon=-104.875&zoom=14

View Edit History Export GPS Traces User Diaries

VGI Structures



science for a changing world

OSM Collaborative Prototype

OSMCP Project
Editing Guidelines
Tips and Tricks
Discussion Group

Search

Where am I?

Go

examples: 'Denver', 'Blake
Street, Denver, Colorado' more
examples...

Background

Map Style

GPS data

Add new points by dragging them onto the map

Education:



Emergency Response and Law Enforcement:



Government and Military:



Health and Medical:



Mail and Shipping:



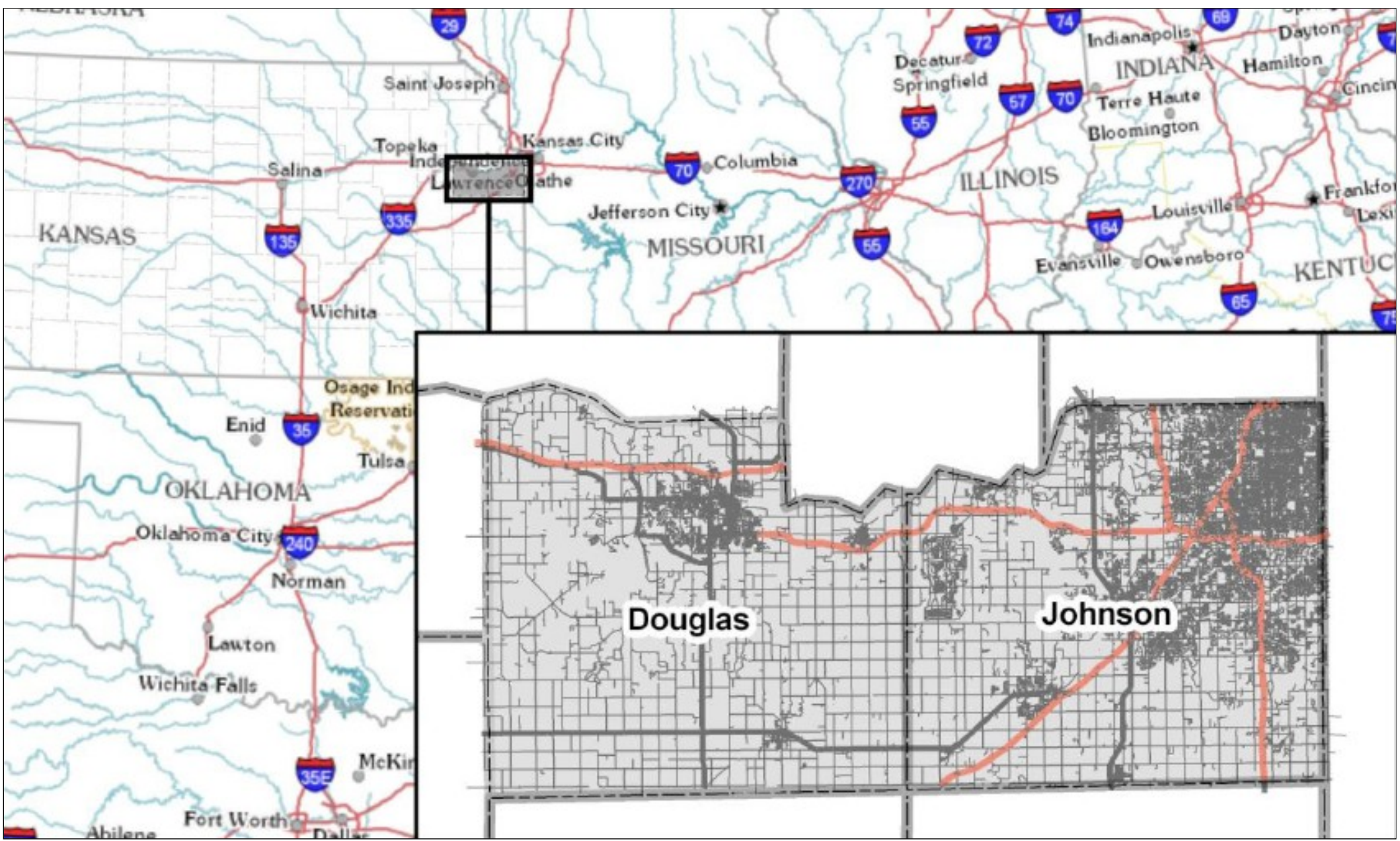
Public Attractions and Landmark Buildings:



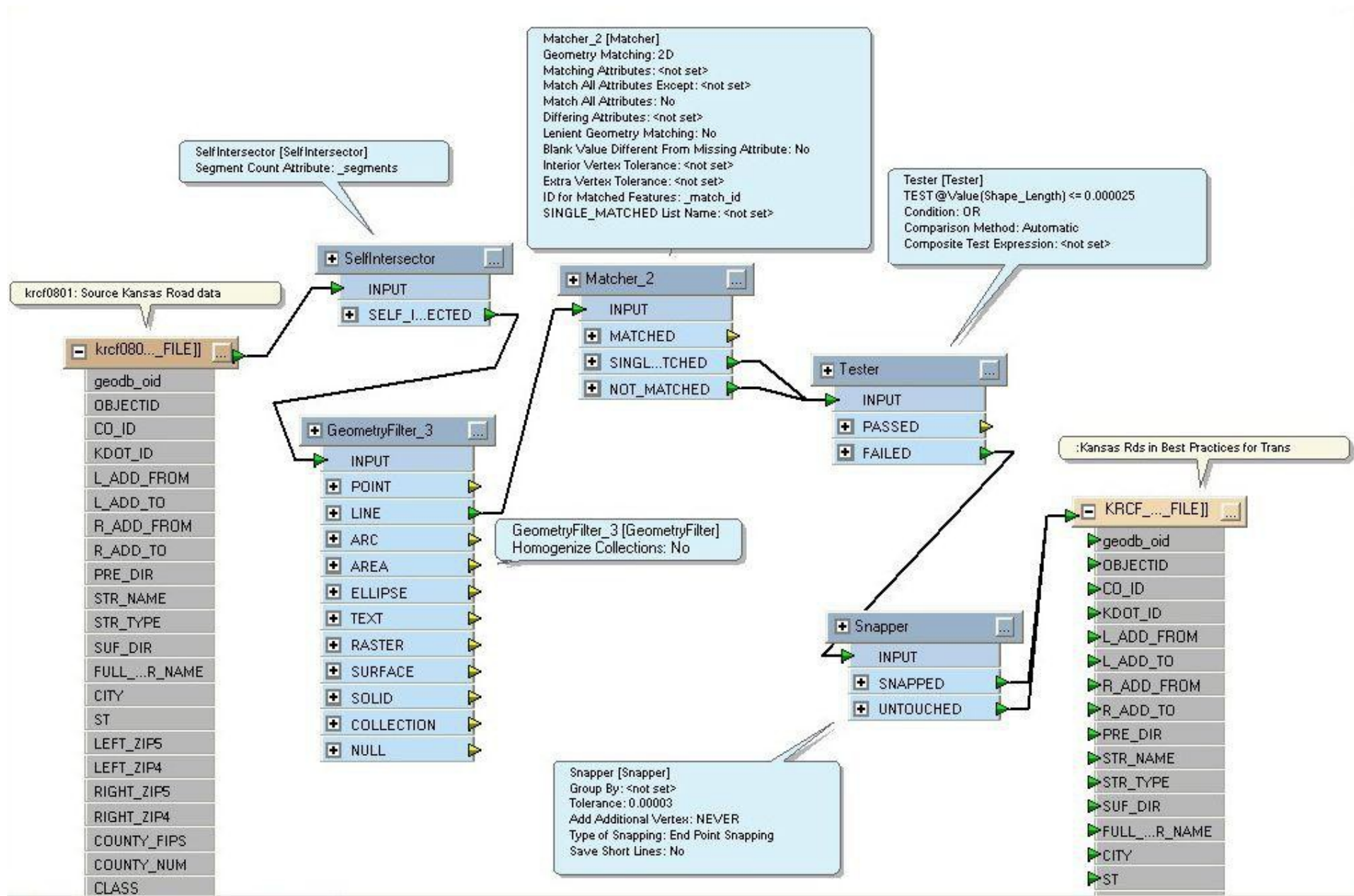


- Fase 1:
 - ¿Se pueden cargar datos del National Map?
 - ¿...con el esquema del National Map?
 - ¿Las herramientas funcionan para editar?
- Fase 2:
 - ¿Pueden voluntarios usar las herramientas?
 - ¿Coste-calidad?
- Fase 3:
 - ¿Se puede hacer a mayor escala?

Fase 1: Datos



Fase 1: Datos (FME)



Fase 1: Cambios

The screenshot displays the OSMCP (OpenStreetMap Community Platform) web interface. The browser address bar shows the URL: `navigator.er.usgs.gov/edit?lat=37.6467&lon=-97.2648&zoom=14`. The interface includes a sidebar with the USGS logo and a search bar. The main map area shows a satellite view with overlaid vector data (roads and paths) color-coded in blue, red, and yellow. A callout bubble points to the vector data, stating "Vector data color-coded". Another callout bubble points to the satellite imagery, stating "Orthoimagery from The National Map". A third callout bubble points to the sidebar, stating "USGS data schema". At the bottom, a table displays the data schema for the selected "Way" (1708965).

OSMCP

USGS science for a changing world

Help & Wiki

Search Where am I? Go

examples: 'Alkmaar', 'Regent Street, Cambridge', 'CB2 5AQ', or 'post offices near Lünen' more examples...

Vector data color-coded

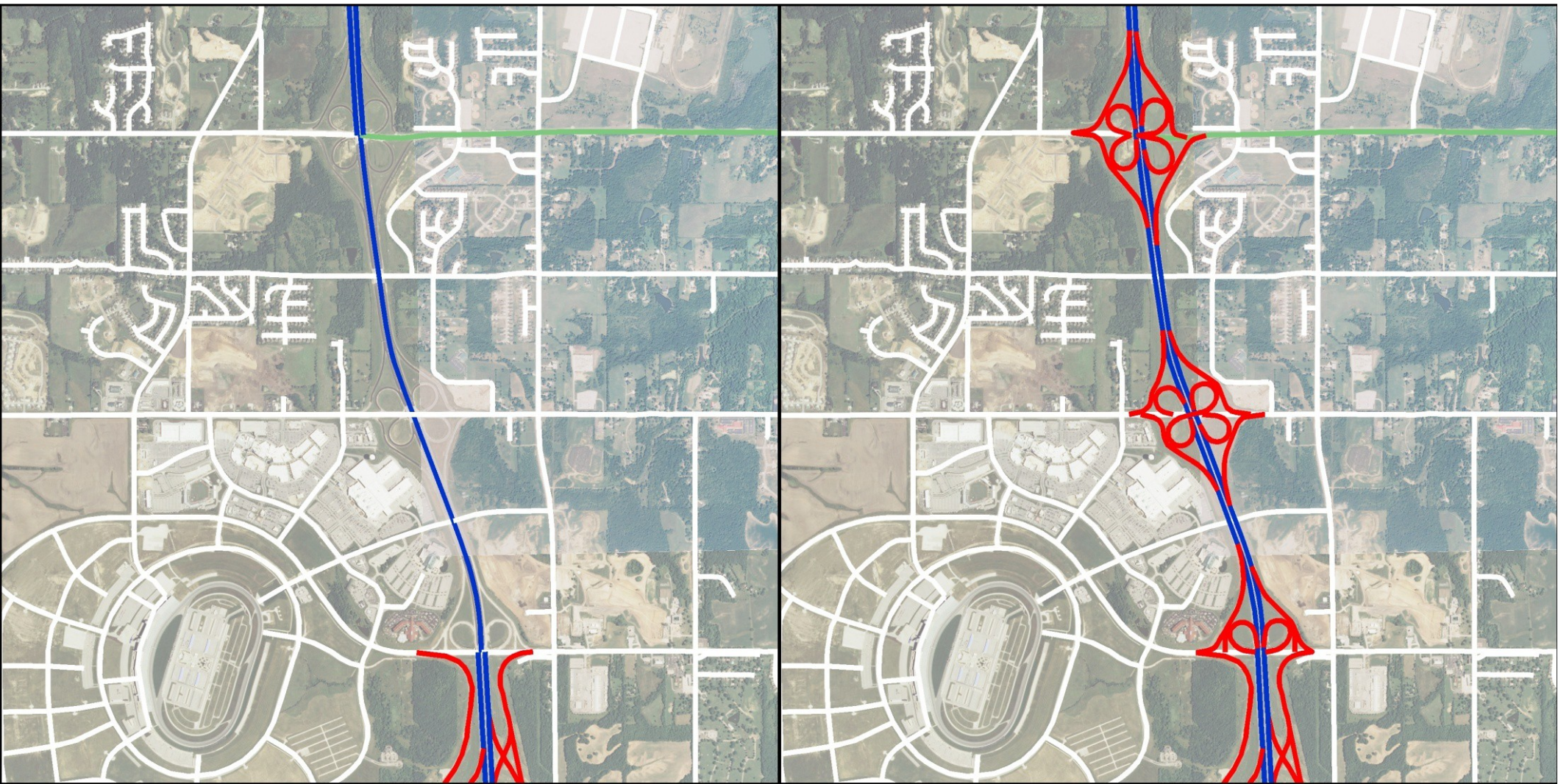
Orthoimagery from The National Map

USGS data schema

Way	1708965
County	173
Full_Street	S I-35 RAMP
Interstate1	I-35
OBJECTID	265662
Road_Class	10005
State	KS
State_Route	K-15
Street_Type	Ramp
Surface_Ty	99
geodb_oid	265662
highway	Ramp

Editing offline Save

Fase 1: Resultados



Fase 1: Resultados

The image consists of two side-by-side aerial photographs of a suburban area. A blue line represents a road corridor running vertically through the center. In the left image, the road is a simple straight line. In the right image, the road has been modified with red lines to show a more complex, multi-lane interchange or roundabout design at two points: one near the top and one near the bottom. A horizontal green line crosses the road in the upper half of both images.

Interestatales: 435km en 88h
Estatales: 115km en 40h

Fase 1: Informe

<http://pubs.usgs.gov/of/2011/1136/>

Fase 2: Voluntarios

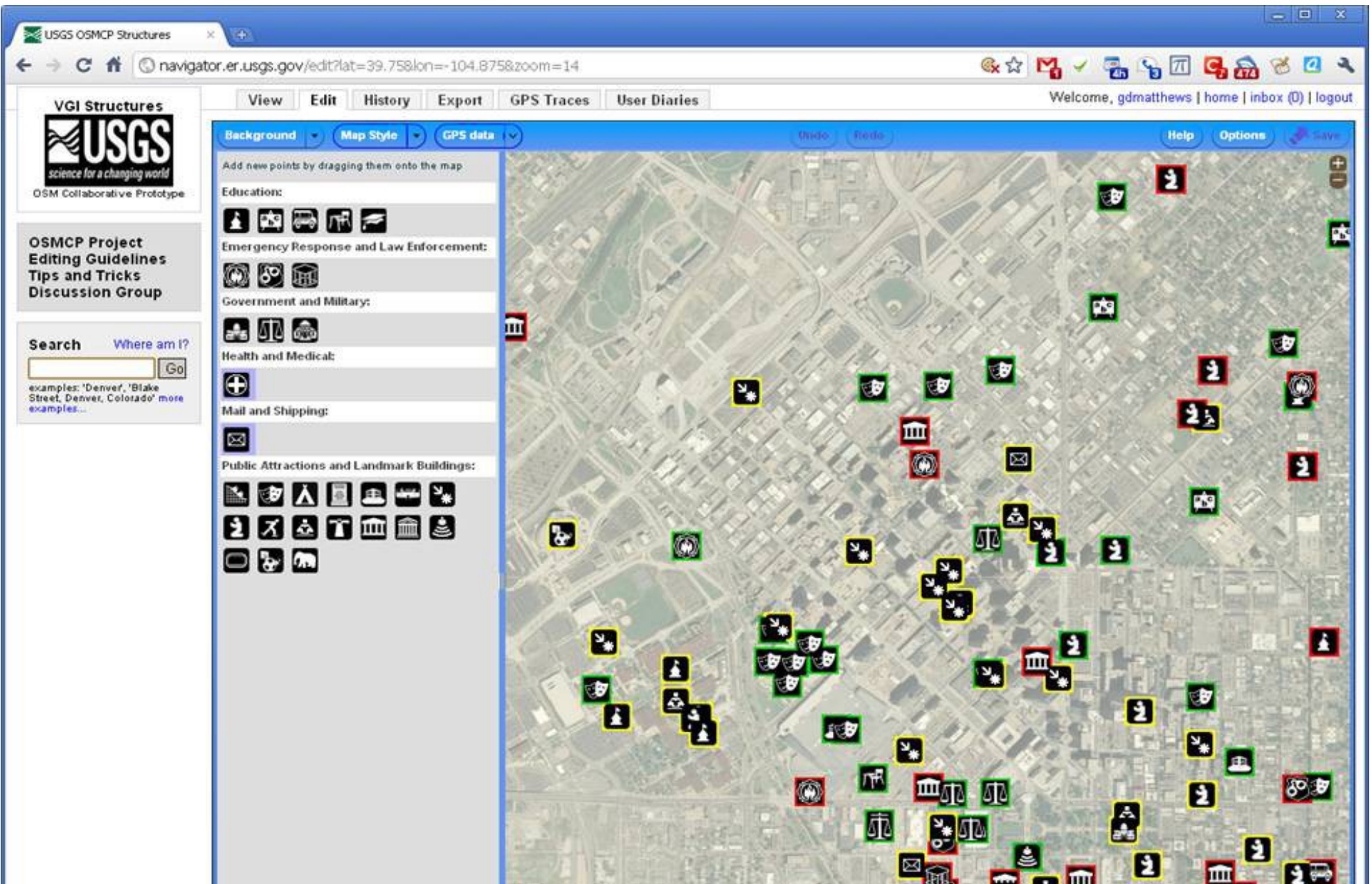
- Clubs de SIG en universidades

Fase 2: Datos

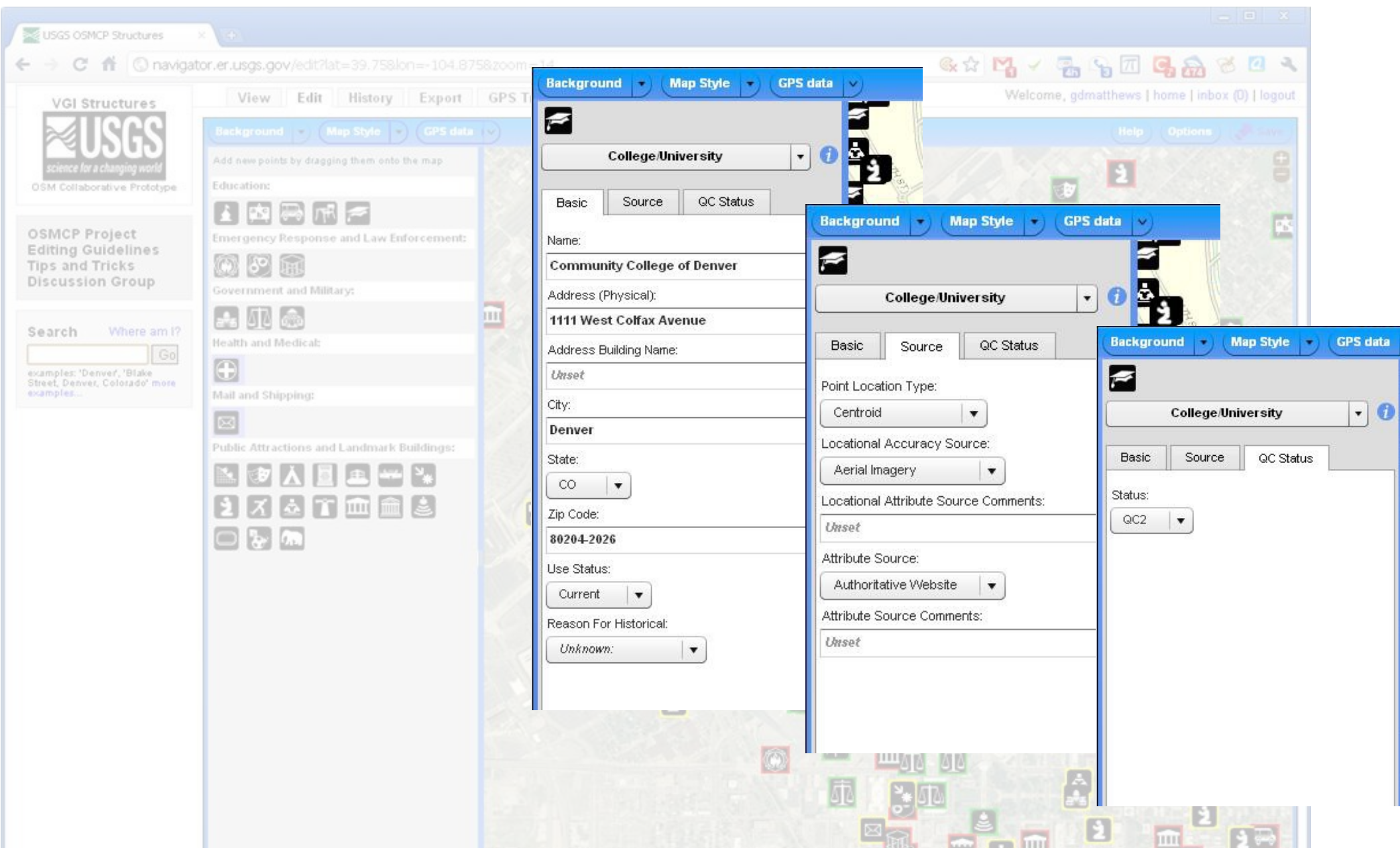
30 USGS PRIORITY STRUCTURES

Fcode Name	Fcode Description
 School	A building or group of buildings used primarily/exclusively as a learning center for children grades pre-kindergarten through high school.
 School: Elementary	A school for the first four to eight years of a child's formal education, often including kindergarten.
 School: Middle School	A school between elementary school and high school, usually having three or four grades, variously including grades 5 through 9.
 School: High School	A secondary school attended after middle school that usually includes grades 9 or 10 through 12.
 School: College / University	A building or group of buildings used exclusively as an institution of higher learning that grants a degree at the completion of an extensive course of studies.
 Fire Station / EMS Station	A facility housing fire-fighting equipment and/or personnel and a provider of emergency medical services.
 Law Enforcement	A facility housing law enforcement equipment and personnel.
 Prison / Correctional Facility	A facility for the confinement of persons convicted of crimes.

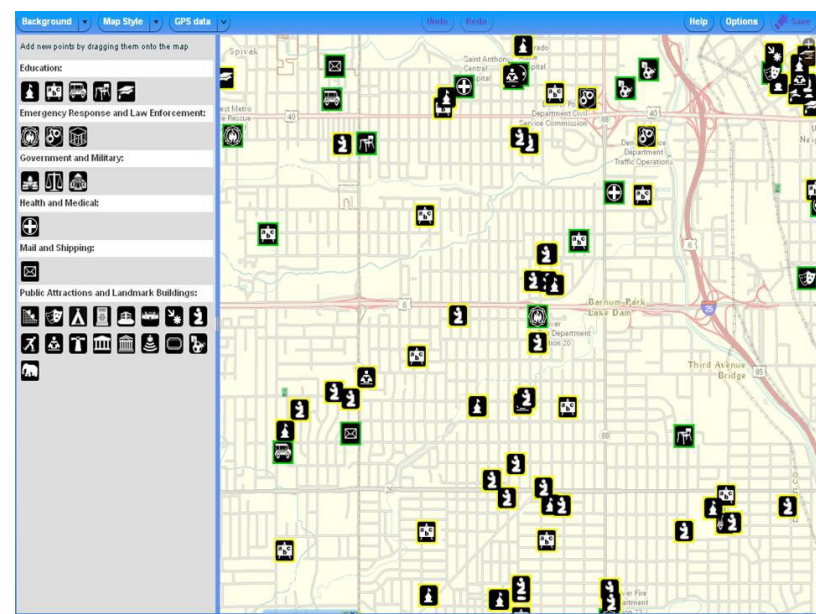
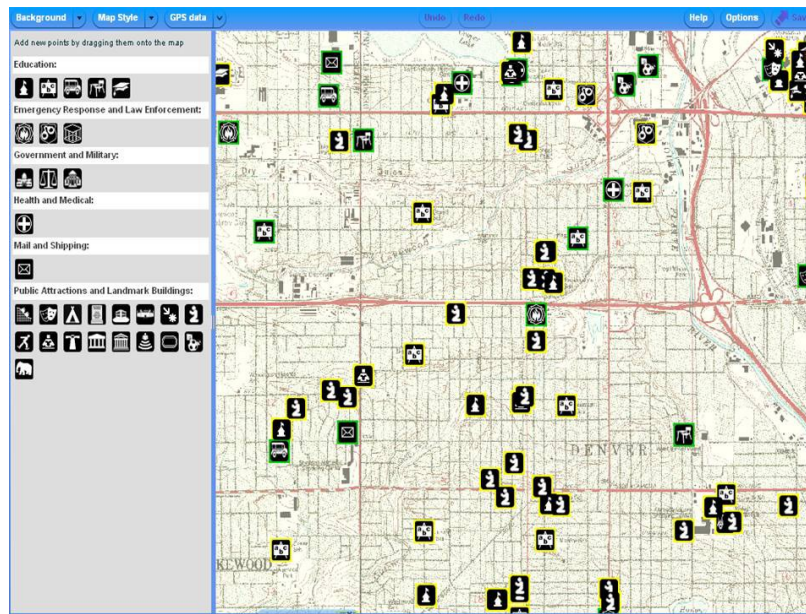
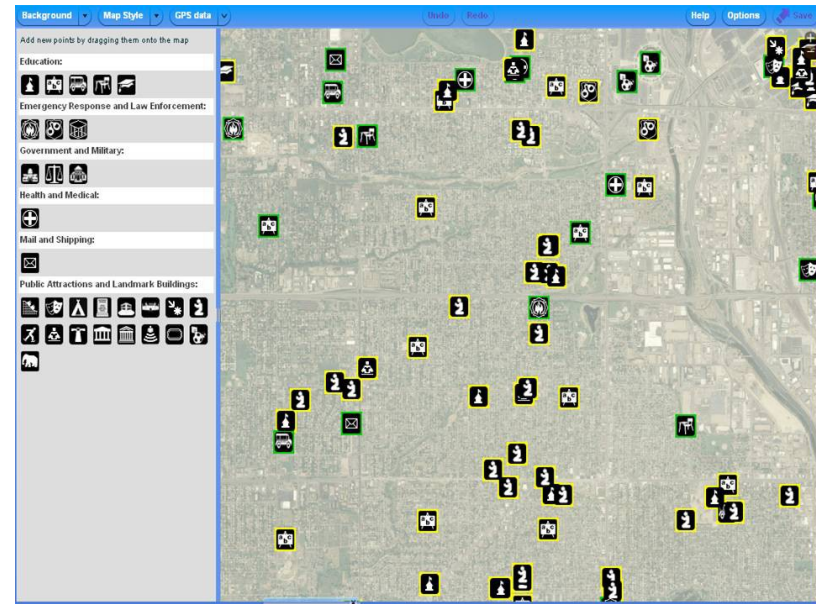
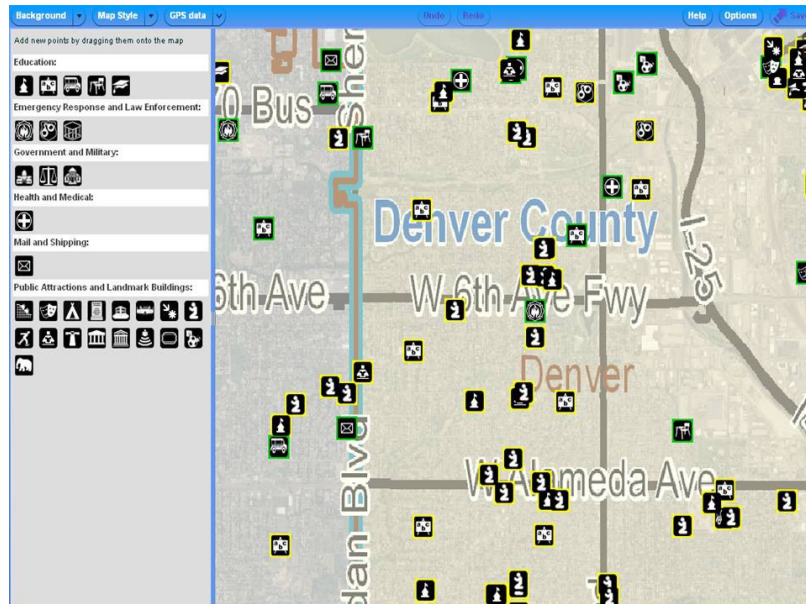
Fase 2: Cambios



Fase 2: Cambios



Fase 2: Cambios



Fase 2: Formación

USGS VGI

- OpenStreetMap Collaboration Prototype
- Project updates
- VGI Structures Outline
- ▼ Editing Guidelines
- OC1 Guidelines
- The Editor - Potlatch 2
- ▼ Tracking - Edit
- Mike Housh
- John Murray
- David Mowbray
- Van Peltz
- Tom de Bruijn
- Tracy Ferguson
- Michael Carlson
- Kevin Wilson
- Building Communities
- Adrian Winkler
- Patrick Sullivan
- Wesley Morrison
- Crashley Dorian
- Robert Black
- James Gifford
- Mark Green
- Andrew Perry
- Mike Thompson
- Michael Rowell
- Christina Marshall
- Chris Lindsay
- Amelia Black
- 23_EDITING_v1.xls
- James Gifford
- Kevin Gifford
- John Gifford
- David Peltz
- 28_EDITING_v1
- 29_EDITING_v1
- Michael Gifford
- James Gifford
- 33_EDITING_v1
- Patrick Sullivan
- 35_EDITING_v1
- 26_Edit_v1

OpenStreetMap Collaboration Prototype



Click for edit/view interface





VOI
GEC
INF
STR
PRO

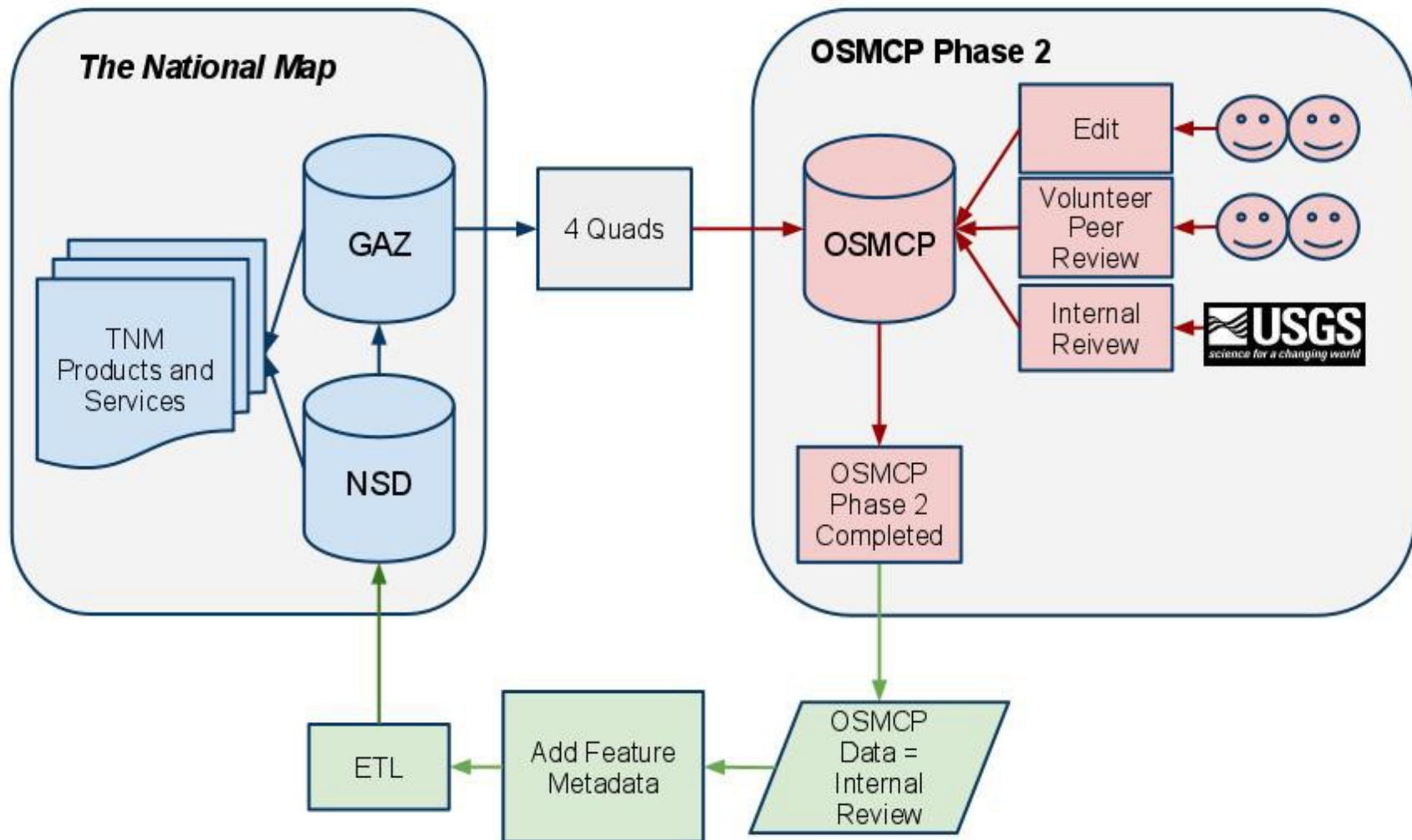
The
star
pro
stru
the

quads covering the City and County of Denver (see [Figure 1](#)). Initially, we are soliciting volunteers from GIS Clubs from UCD and Metro, for this project. The USGS will work to collect 30 Core USGS Structures (see [Figure 4](#)) Denver quads. This project will track benefits by comparing traditional collected to a Volunteer Geographic Information

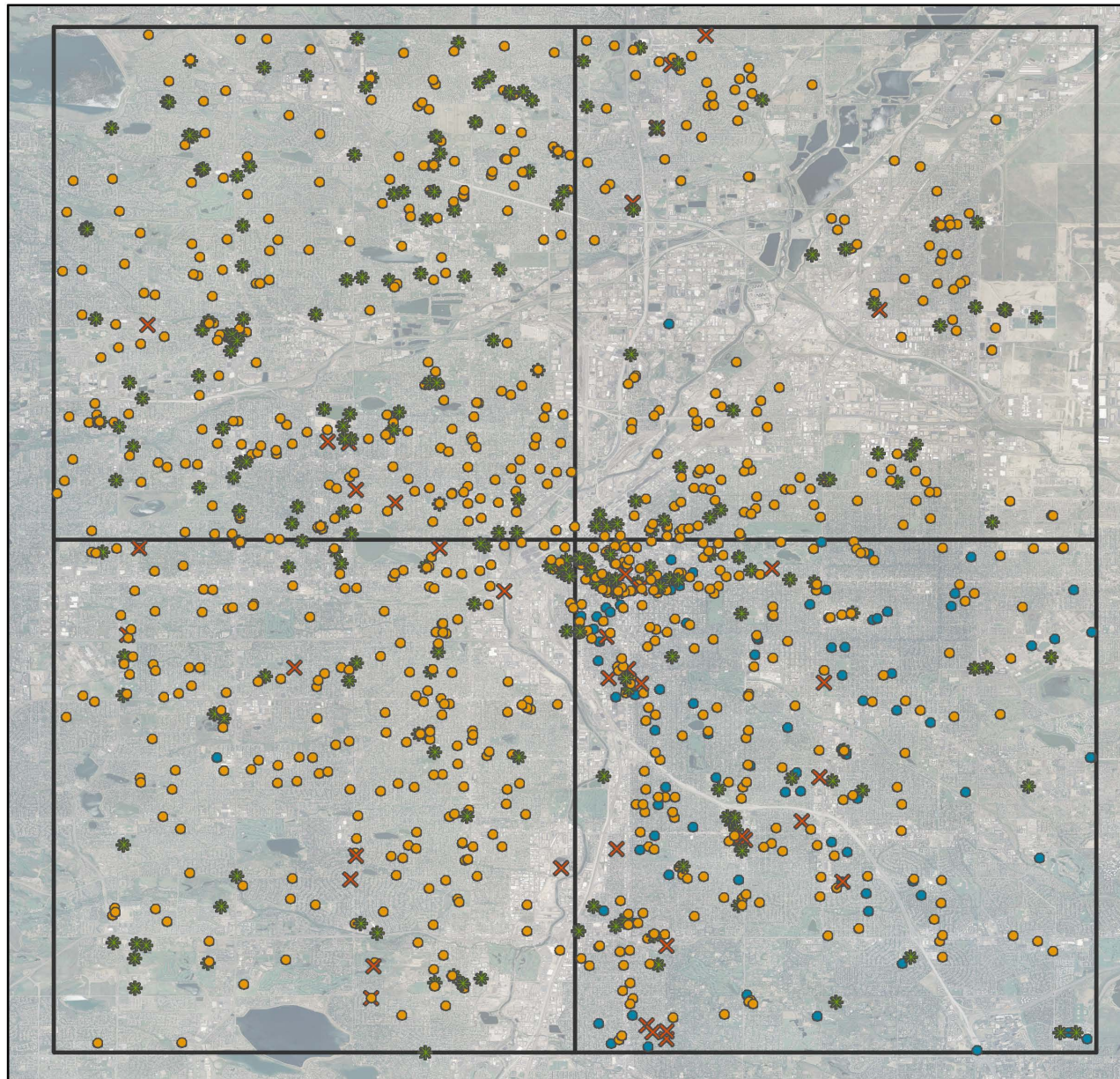


Fase 2: Flujo de datos

Data Process Flow: Incorporating OSMCP Phase 2 Data Into TNM



Fase 2: Resultados



**Volunteer Changes
to Points
Edit and Volunteer
Peer Review Phases**

Point Changes

-  Added
-  Modified
-  Unchanged
-  Proposed for Historical
-  Quad Boundaries

0 1.5 3 6 Miles

Fase 2: Informe

Lo están escribiendo:

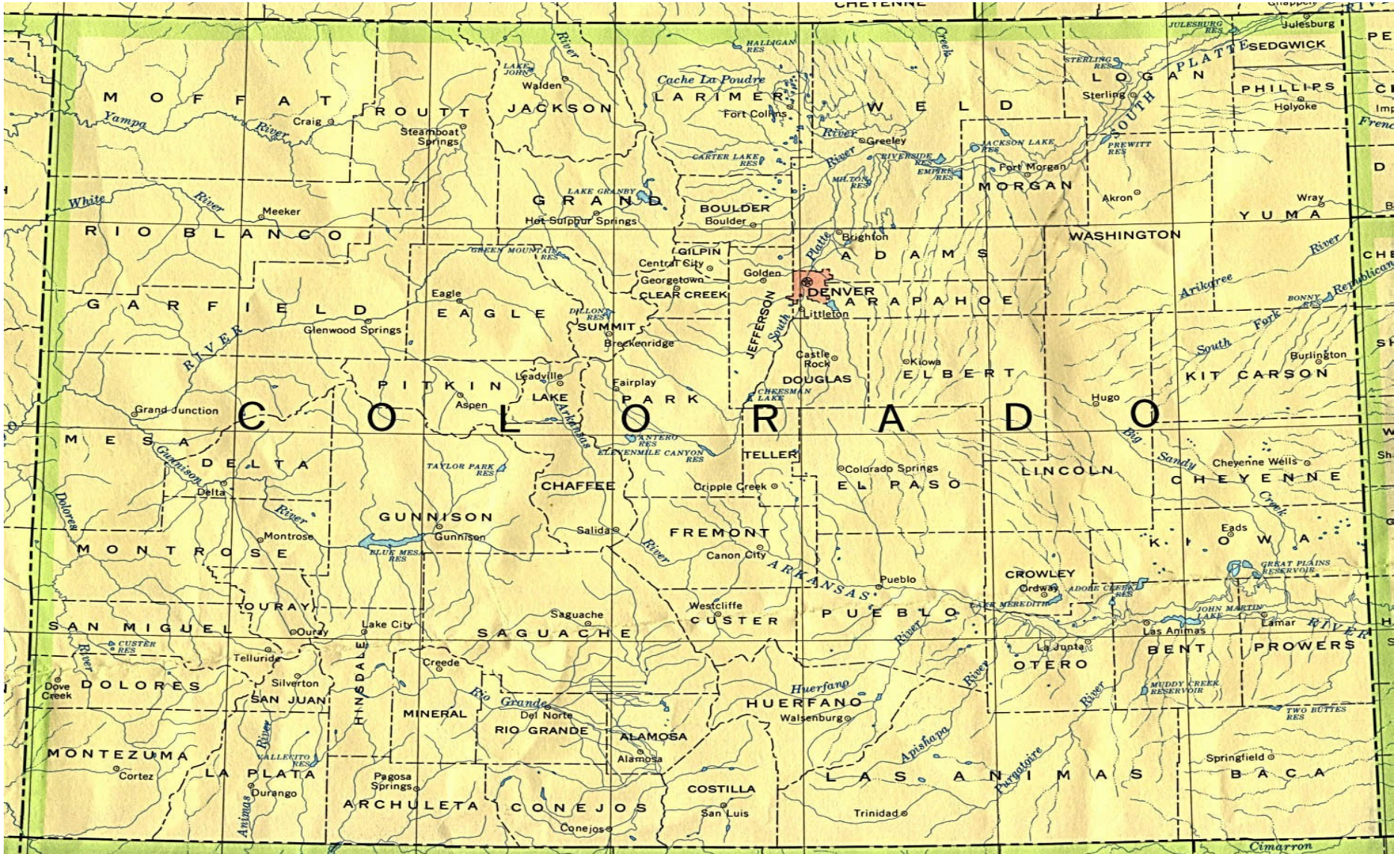
Erin M. Korris <ekorris@usgs.gov>

Eric B. Wolf <ebwolf@usgs.gov>

Fase 3: Voluntarios

- Clubs de SIG en universidades
- *National Map Corps* (usuarios 1994-2008)
- Usuarios de OSM
- Alumnos de topografía
- Bomberos, agentes forestales
- Clubs juveniles
- Escuelas de primaria

Fase 3: Datos



Conclusiones

- Tecnología de OSM integrable con datos y estándares de calidad oficiales
- La calidad de VGI es medible
- Leer <http://pubs.usgs.gov/of/2011/1136/>
- Escribid a

Erin M. Korris <ekorris@usgs.gov>

Eric B. Wolf <ebwolf@usgs.gov>

i?