

## CUSIS Remote Sensing GIS Data Interoperability Prototype.

Coalition of Universities for Spatial Information Sciences  
(CUSIS) (E-Mail: [decoats@iupui.edu](mailto:decoats@iupui.edu))

**Introduction:** When a disaster occurs, State and Federal agencies must make a quick assessment of damage to determine if the severity of the event warrants the declaration of a disaster for which federal assistance is available. These agencies can quickly make an initial assessment of damage if they can access available satellite or aerial imagery and local government GIS parcel information.

The advent of the Web opened up vast banks of information, including mapping information to the public through an Internet connection. Programming tools exist that use data from public Web sites allow web developers to mix up, integrate, that information to suit someone's particular needs. These integrations are often termed "Mash-ups".

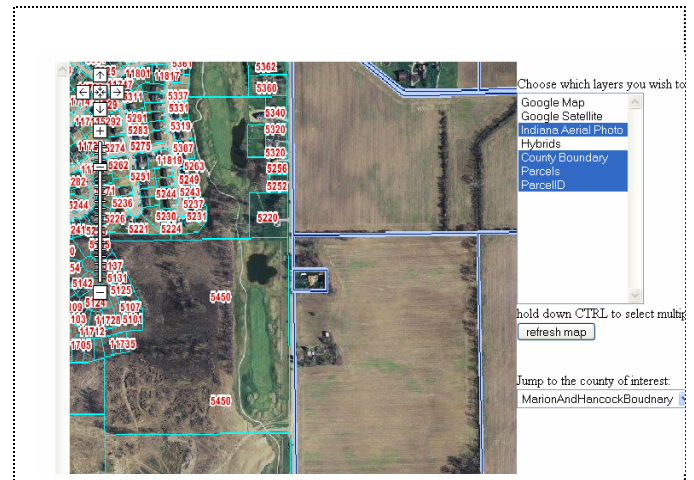
This prototype online portal integrates remote sensing image web map services with local government Geographic Information System (GIS) web map services. The parcel information from existing county government websites is integrated with remote sensing information from national and university servers. The prototype project integrates this information from multiple existing distributed web services and makes it available through a single viewer.

**Project Outcomes:** The prototype harvested Marion County and Hancock County parcel information from local county servers and integrated the data with statewide imagery hosted by Indiana University. The research also integrated other available web services including Google imagery.

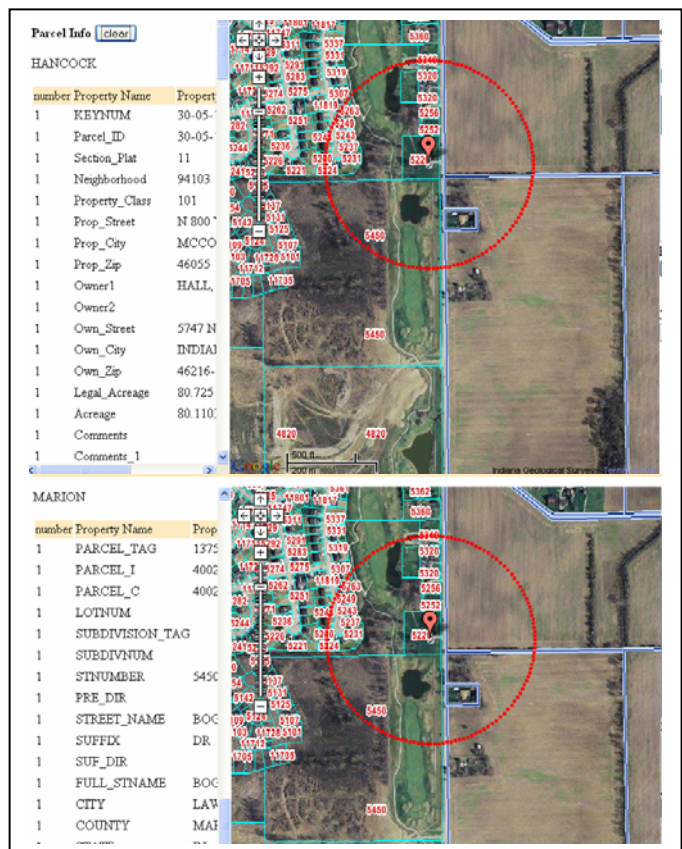
The prototype demonstrated the ability to view the combined information and draw a boundary representing an area of interest (i.e., a tornado path) across county boundaries and report information on the affected properties from the local GIS web services. The local government GIS parcel data includes property identification numbers which are the keys to a database which contains detailed building information as well as the replacement cost and assessed valuation of property

### FOR FURTHER READING:

Google map api <http://www.google.com/apis/maps/>  
Virtual earth api <http://dev.live.com/virtualearth/sdk/>  
OGC WMS standard  
<http://www.opengeospatial.org/standards/wms>



**Figure 1.** This image shows the parcel information from Marion and Hancock counties with the Indiana 2005 statewide imagery.



**Figure 2.** These images show the results of a single query across county boundaries. Property information is retrieved directly from multiple county servers using a single buffer