



# MSDIS ANNUAL UPDATE

MAGIC Clearinghouse 2018 Report  
July 23-25  
Lincoln, NE

# PERSONNEL CHANGES

- Dr Mike Urban (Dept of Geography chair) remains MSDIS Program Director
- Lynn Summers (Dept of Geography Fiscal Officer) remains MSDIS Fiscal Officer
- Martin Wills (Technical Support, Database and Web Administrator) has retired from the University of Missouri as of December 2017

# FACILITY CHANGES

- The Stewart Hall renovations have been completed and the Mizzou Dept of Geography has moved into its permanent space
- MSDIS remains at the Mizzou North facility
  - The university has officially begun the process of placing Mizzou North up for sale, but has stated that it will not complete the processes until on-campus space is secured for the Art & Archaeology Museum
  - The prevailing theory is that, should Mizzou North ever be sold, MSDIS will be relocated back to the main campus, likely housed in Schurz Hall

# MSDIS REBUILD

- Cloud Storage
  - In light of the university's budget shortcomings MSDIS was tasked with reducing its overall storage and maintenance costs
  - The decision was made to transfer all MSDIS data from the existing physical servers in Kansas City to the Mizzou Arts & Sciences computing cloud. Data were cloned during December 2017 and January 2018, map and image services were rebuilt during January, February, and March 2018, and MSDIS was formally transferred from the old servers to the cloud storage on 30 March 2018
  - Because the A&S computing cloud storage is incompatible with ftp services, the MSDIS ftp has been rebuilt as a generic, download-enabled file directory officially referred to as the MSDIS Data Archive

# MSDIS REBUILD

- Data Distribution
  - With reduction in staff, continued use of the GeoPortal as the primary means of data distribution was unsustainable (the time necessary for metadata edits and uploads was simply no longer available)
  - On careful consideration, MSDIS opted to test the ESRI Open Data platform as a replacement for GeoPortal due to the lack of credit costs thanks to the MSDIS ArcGIS Servers, ease of metadata uploads, compatibility with ArcGIS Online, and desire to push more interactive mapping applications
  - Since the formal migration to the A&S computing cloud, the MSDIS Open Data page has primarily been used to advertise and distribute new(er) datasets since the Data Archive includes all MSDIS data

The screenshot shows the homepage of the Missouri Spatial Data Information Service (MSDIS) Open Data Site. At the top, there is a navigation bar with the MSDIS logo on the left and the text "Missouri Spatial Data Information Service Open Data Site" in the center. On the right side of the navigation bar, there is a dropdown menu icon and the text "MSDIS". Below the navigation bar is a large banner image featuring the dome of the Missouri State Capitol building. Overlaid on the banner is the text "Missouri Spatial Data Information Service". Below the banner is a yellow text box containing a description of MSDIS: "MSDIS is the Missouri Spatial Data Information Service, a spatial data retrieval and archival system. GIS technology is emerging worldwide as the standard tool for integrated management of geographic information. Geographic information, often referred to as spatial information, can be defined as any piece of information that can be referenced by an x, y location. GIS technology enables managers and users of geographic information to achieve higher levels of information integration and to perform more complex analyses than are practically feasible in manual environments. MSDIS is responsible for data storage and access, standardization of both digital and tabular data, creation of the data dictionary, compilation of metadata, and statewide GIS user information networks." Below the yellow text box is a white section with the heading "Find Data" and a search input field with the placeholder text "Search for Data" and a magnifying glass icon. Below the search field is a white section with the heading "Explore Missouri's GIS Data by Category" and four icons representing different categories: a house, a heart, a map, and a plant.

Missouri Spatial Data Information Service Open Data Site

MSDIS

## Missouri Spatial Data Information Service

MSDIS is the Missouri Spatial Data Information Service, a spatial data retrieval and archival system. GIS technology is emerging worldwide as the standard tool for integrated management of geographic information. Geographic information, often referred to as spatial information, can be defined as any piece of information that can be referenced by an x, y location. GIS technology enables managers and users of geographic information to achieve higher levels of information integration and to perform more complex analyses than are practically feasible in manual environments. MSDIS is responsible for data storage and access, standardization of both digital and tabular data, creation of the data dictionary, compilation of metadata, and statewide GIS user information networks.

## Find Data

Search for Data

Explore Missouri's GIS Data by Category

# MSDIS REBUILD

- Website
  - The primary MSDIS website has been redesigned to rely on fewer hard-coded links since, during the transition from the physical servers to the A&S computing cloud, all data download links were broken because they were specifically coded to the absolute MSDIS ftp paths
  - The MSDIS website now directs users to either the Open Data page, the category-level folders of the Data Archive, or a series of ArcGIS Online-designed interactive maps
  - We continue to assess the best way to re-introduce a search function for the website and the Data Archive

# CONTINUED CHALLENGES

- Funding
  - MSDIS is wholly funded by the Mizzou College of Arts & Sciences and, though the university believes that the worst of its budget problems are behind them, it is clearly in the best interest of the clearinghouse to establish some form of financial independence
  - We have begun reaching out to our partners across the state in order to assess the viability of paid workshops
  - As an arm of the university, we have also begun approaching the possibility of offering an independent study course for higher-level GIS students (seniors and/or graduate students) to work as interns at MSDIS

# CONTINUED CHALLENGES

- Processing and Storage
  - Offering so many new map services to power the Open Data page has been a strain to the currently available (virtual) hardware
  - While the state does not expect any new statewide image flights in the near future, we do anticipate a LiDAR flight that will fill in the gaps of our existing coverage which will likely add another 2-4 TB of data to our catalog
  - Solving these problems would probably not introduce unreasonable new costs, but asking for anything more at this time seems particularly unwise



# CONTINUED CHALLENGES

- ESRI Open Data
  - The Open Data platform does many things very well, but is questionably reliable for other tasks
  - We have, on multiple instances, had to completely clear the part of our catalog that we serve out via Open Data and reload datasets one at a time
  - There is an upper limit to the complexity that Open Data can handle, which has prevented us from distributing layers such as Census Blocks through the platform

# GUARDED OPTIMISM

- Since reaching out to state partners and promoting the use of online map services, MSDIS has been collecting data at an unexpectedly high rate from agencies that had been considering setting up their own internal clearinghouses as well as from agencies which had never shared data with us before
- Owing to requests for “specific numbers”, we are now tracking our monthly usage rates across both the map and imagery servers, the Data Archive, and the Open Data page, which has allowed us to be able to pinpoint specific agencies and entities connected to our services and assign usage statistics to them
- The move to the A&S computing cloud HAS reduced the MSDIS fiscal footprint and removing the Geoportal in favor of simpler distribution platforms has greatly reduced the amount of effort required to manage the clearinghouse
- Numerous partner agencies and entities across the state have shown interest in working with MSDIS towards shared goals