

LOUISIANA GIS CD VERSION 2 DEMONSTRATIONS

DeWitt H. Braud, Jr.
R. Hampton Peele
Department of Geography and Anthropology
Louisiana State University
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Louisiana GIS CD Version 2.0 Demonstrations

Abstract

OSRADP has previously funded a series of daylong short courses that explain how to use the Louisiana GIS CD data with an ArcView GIS. These courses have been well attended and have received high evaluations, although participants have consistently requested longer courses of two to three days in duration. Even though previous courses have been

successful, they have not fully reached the intended audience. In addition, attendees have participated in these courses more for the purpose of learning ArcView than for learning about the CD.

We therefore conducted a series of demonstrations that focused on exhibiting the features of the CD. The demonstrations presented the user interface, the program's basic operation, a review of critical data layers, and introductory functionality and application scenarios. Less time was devoted to details of operating the ArcView GIS and more time was spent explaining how to use and apply the CD. With this approach, we achieved the following benefits: controlled pace, no need for computer lab classrooms, larger audiences, more flexibility in venues, better opportunity to target selected groups, no need for roving instructors, shorter presentations, no need for participants to travel or stay overnight, and substantially reduced cost. An effort was made to target the oil and gas industry; oil spill response personnel; environmental, energy and planning professionals; and emergency response professionals.

We conducted a series of 13 free, real-time computer based demonstrations of the CD to variety of audiences in a wide range of venues. Some of these demonstrations were partially PowerPoint based due to time limitations.

1.0 Introduction

The Louisiana GIS CD is an innovative digital map of the state funded by the Louisiana Oil Spill Coordinator's Office and co-sponsored by numerous state and federal agencies. The CD is a two volume set with the following features:

- user Interface
- satellite image of Louisiana
- over 40 spatial data layers
- ArcView and GeoMedia GIS programs
- GIS tutorials
- instructions & help features
- metadata and documentation
- satellite tour of Louisiana

One of most important elements of the CD is the use of spatial data layers that are the *de facto* standard for public spatial data in Louisiana. These data are the best available for public distribution and thus will be commonly used and shared by public and private agencies. These data have also undergone extensive quality control and include Federal Geographic Data Committee (FGDC) compliant metadata.

Many spatial data layers are not included on Version 2 of the CD. However, these data are compatible with the CD and are available on the Internet via the Louisiana Geographic Information Center (LAGIC) at <http://lagic.lsu.edu> and via the On-line

Statewide GIS of Louisiana (ATLAS) at <http://atlas.lsu.edu>. These data include one meter high resolution Digital Orthophoto Quarter Quads (DOQQs) of Louisiana. In addition, the Louisiana Department of Environmental Quality has released a five meter high resolution satellite fusion of the Indian Remote Sensing satellite (IRS) and Landsat Thematic Mapper (TM) satellite on its website at <http://deq.state.la.us>. In the demonstrations, we showed participants how to download selected data layers from the Web and add them to the GIS database supplied with the CD.

The intent of the demonstrations was to focus less on the GIS software and more on the program's many potential applications. Accordingly, we dedicated most of the demonstration time to explaining basic operations, providing a review of fundamental data layers, and presenting scenarios. There were several benefits to using this approach: the pace was more controlled, we did not need sophisticated computer lab classrooms, larger audiences were possible, there was more flexibility in the choice of venues, we had an opportunity to go directly to target groups, there was no need for roving instructors to assist during class time, the contact time was reduced significantly and varied for each group, and the demonstrations' costs were substantially reduced.

2.0 Methods

During the 2000-2001 project time period, we conducted a series of 13 presentations demonstrating the features of the Louisiana GIS CD, the utility and interpretation of the data layers, and introductory GIS functionality with selected application scenarios. These sessions were customized for each demonstration depending on audience and location. The demonstrations covered functions of the user interface, a review of the tutorials, the satellite tour of Louisiana, installation of GIS software, initiation of the north and south Louisiana projects, manipulation of the project views and themes, and an introduction to the data layers on the CD and their potential applications. Application scenarios were presented that covered emergency response to hurricanes, oil spills, and toxic chemical releases. Other applications illustrated use of digital elevation models (DEMs); and flood zone, endangered species, and demographic data layers.

The demonstrations' target audience was personnel in the oil and gas industry-a sector that was under-represented in the training sessions conducted in the previous two funding periods. We made presentations in relaxed and informal settings, and more importantly, brought the demonstrations to the audience rather than requiring them to travel to a classroom and stay overnight. We were not restricted to computer classroom environments, and were able to serve target audiences more directly by providing the demonstrations on site in familiar surroundings.

The outline below identifies the elements of a typical demonstration. These were customized to the venue and audience.

2.1 Application Scenarios

Oil Spill Scenario

Part A

- Zoom To Selected Place Name To Illustrate Capability To Associate Name With Spatial Location
- Identify Features In Vicinity To Illustrate Spatial Link To Database Attributes

Part B

- Illustrate Latitude/Longitude Button
- Enter Coordinates Of Hypothetical Spill: -90.191179, 29.110632
 - Notice No Boat In Vicinity
- Check Proximity To Spill Location
 - Pipeline Crossings
 - Notice Pipeline Crossing Near Spill
 - Oil Wells
 - Abandoned Barges
 - Waste Pits
- ID Pipeline Crossing
- ID Water Body Of Spill (Major Rivers & Lakes)

Part C

- Identify Features In Vicinity Of The Event
 - Hightide Line To Indicate Tidal Encroachment Potential
 - Habitat Type: Define From Layout
 - Facilities - Heliports: Select With 3 Mile Proximity Circle
 - Isolate Airports With Query, Select From Set
 - Oyster Leases
 - Seabird Colonies
 - Primary And Local Roads

Part D

- Identify Digital Orthophoto Quarter Quad At Spill Location
- Add Identified DOQQ, Zoom In
- Print View

Part E

- From DOQQ, Measure Distance Across Channels To Estimate Boom
- Measure Area Of Spill For Dispersant [Draw Polygon]
- Draw Line(S) To Indicate Boom Placement And Management

- Show Boom Table To Record Information
- Hotlink To Boat Ramps

Part F

- Illustrate Ability To Identify Features In Vicinity Of Proposed Pipeline Route

Toxic Release Scenario

- Relocate to Town of Norco and Norco Refinery using Selection Zoom
- Show Populated Places in Vicinity
- Use DOQQ Of Area
- Show:
 - Source of Toxic Release Plume
 - Plume 1
 - Plume 2
 - Plume Table
- View St. Charles Census Block Group Population Distribution
- Select Plume 1
- Activate Block Group Population
- Select By Theme Using "Have Their Center In"
- Activate Streets
- Select By Theme Using "Intersect"
- Show All Selected Block Groups and Streets
- Show Block Group Table, Promote
- Select Population Field (Persons) and Calculate Statistics to Identify Number of People
- Show Street Table, Promote Selected Streets and Identify
- Notice Water Intake Valve in Mississippi River Downstream from Toxic Release
- Select Community Features in Vicinity of Plume Using Proximity Circle
- Show Schools, Parks, Hospitals in Area

Hurricane Scenario

- Show Historical Hurricanes Over Louisiana and Orleans Parish
- Display Download Image of Hurricane in Gulf Approaching Louisiana
- View Projected Path
- Identify Cities in Projected Path and Calculate Population Affected
- Identify Possible Evacuation Routes

Flood Zone Scenario

- Show Flood Zones in East Baton Rouge Parish with Census Blocks
- Calculate Number of Houses and People in Flood Zone A

Download Additional Data

- Illustrate Additional Data Available for Download and Note Compatibility with Louisiana GIS CD from <http://lagic.lsu.edu> and <http://atlas.lsu.edu>

3.0 Schedule of Demonstrations and Venues

U.S. Coast Guard Marine Safety Office, Morgan City

Morgan City, LA

June 27, 2000

Morgan City Area Committee Meeting

Approximate Attendance: 20

U.S. Coast Guard Marine Safety Office, Port Arthur

Lake Charles, LA

July 11, 2000

Southeast Texas / Southwest Louisiana Area Committee Meeting

Conoco, Inc. Building

Approximate Attendance: 30

Louisiana Federal/State Geographic Information Workgroup and Louisiana GIS Council:

Joint Meeting

Baton Rouge, LA

July 26, 2000

Louisiana Wildlife & Fisheries Building

Approximate Attendance: 35

Louisiana Arts & Sciences Center

Baton Rouge, LA

August 1, 2000

Challenger Learning Center

Educator In-Service Workshop

Approximate Attendance: 20

Shell Oil Company

New Orleans, LA

September 26, 2000

Shell Building

Approximate Attendance: 10

Atchafalaya Trace Commission

Baton Rouge, LA

October 20, 2000

Cultural Charrette

Burden Research Plantation Conference Center

Approximate Attendance: 30

Clean Gulf 2000 Conference

New Orleans, LA

November 14-15, 2000

Pontchartrain Center

Nov. 14th: 1 Demonstration

Nov. 15th: 2 Demonstrations

Approximate Total Attendance: 40

Louisiana Environmental Education Commission and Association

Baton Rouge, LA

March 9-10, 2001

2 Demonstrations

Environmental Education Symposium: "Sharing Our Vision"

LSU Student Union

Approximate Attendance: 100

Symposium on Applied Geography

March 23, 2001

Baton Rouge, LA

"The Applications of Geographical Techniques at Regional Scales"

Department of Geography and Anthropology

Louisiana State University

Approximate Attendance: 75

Louisiana Applied and Educational Oil Spill Research and Development Symposium

May 17, 2001

Baton Rouge, LA

Pennington Conference Center

Approximate Attendance: 100

4.0 Relevance

Version 2.0 of the Louisiana GIS CD provides easily available, commonly used, high quality, digital spatial data for managers, decision makers, and application personnel in state and federal agencies, industry, and local government. The CD-ROM and the accompanying free software, along with the widespread availability of connections to the Internet, facilitate enhanced communication and coordination in a wide range of activities from resource management to emergency planning and response. The demonstration of the CD, its features, and scenario-based applications, introduced a large number of people to the program's use. These demonstrations illustrated how easy and valuable it is to use the CD. Since the CD comes with tutorials, users can acquire additional skills and develop applications on their own, or sign up for in-depth training from a vendor. As more people become acquainted with ArcView and/or GeoMedia, they will find the CD extremely beneficial for a wide range of applications.

Recipients of the CD must become familiar with both the spatial data and the software. Very few state educators or industry personnel have been exposed to either the type of spatial data on this CD or the techniques required to use it. Only a small number of government agencies have a remote sensing or GIS specialist or have trained their personnel to use these data. More professionals in Louisiana should become familiar with these kinds of spatial data sets, not only so they can use the CD, but also so they can tap into the broad range of related techniques and data available. Our demonstrations emphasized the use of the CD, but also clearly illustrated the value of the spatial data for many applications.

The demonstrations introduced the Louisiana GIS CD and many of its potential applications to well over 400 people in management, supervisory, technical, and specialist capacities. Feedback from the demonstrations revealed that many organizations possessed the CD but did not know how to use it. Some participants began using the CD the day after attending a demonstration. From the comments we received, it was clear that some organizations were pleasantly surprised to discover the capabilities the CD offered. We anticipate that continuing feedback will provide valuable information on data sets for future release, improve subsequent versions of the product, and build valuable relationships with groups most likely to use the CD for its intended applications.

5.0 Deliverables

Most demonstrations were conducted "live" using the Louisiana GIS CD. Since instruction time was limited in a few cases, we developed a streamlined PowerPoint version of the demonstration using ArcView. The PowerPoint version faithfully mimics many of the ArcView functions and allowed us to cover the material within the time allotted. The PowerPoint version of the demonstration is provided as a deliverable with the report.

6.0 Problems Encountered

We encountered few problems. Occasionally the pace of the live demonstrations was slow and awkward. We were unable to be included in the program for the Louisiana Assessors Association meeting. In addition, we were unsuccessful, even after many attempts, to schedule a demonstration with the Louisiana Office of Emergency Preparedness.

7.0 Results

Thirteen demonstrations of the Louisiana GIS CD were conducted at ten different locations in Baton Rouge, New Orleans, Lake Charles, and Morgan City. Over 400 people attended the demonstrations, and their responses have been overwhelmingly favorable. Several attendees began using the CD immediately after the demonstrations. On many other occasions, participants told us that they were surprised and delighted at what they could accomplish with the CD.