Creating Transparency, Openness and Trust: Modern Approach to Redistricting

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NCSL Legislative Summit
Sunday, Aug. 6 | 11:15 am-12:15 pm
Insights
Exploratory Analysis and Visualization

A New App
• Visual, Intuitive, Responsive
• Dynamic Spatial Analytics and Visualizations
• Very Fast  Integrated Spatial and Tabular Analysis

Linked and Responsive Charts and Maps

On-the-Fly Visual Models
ArcGIS Online
ArcGIS Available as SaaS

New and Improved
- Smart Mapping and 3D
- Analysis Tools
- Vector Tiles
- Credit Allocation
- Enhanced OGC Support
- Administration
- Social Logins
- UI/UX

Coming
- Improved Search & Data Management
- Org-to-Org Collaboration
- Raster Analysis
- More Smart Mapping & 3D
- More Content
- Interactive Data Analysis

Complete Cloud-Based Mapping Platform with Apps and Content

3.8 MILLION
Users

ONE BILLION / Day
Map Views

7.9 MILLION
Items

18.8 MILLION
Open Data Downloads
ArcGIS Enterprise
ArcGIS In Your Own Infrastructure

Portal Abstracts and Organizes Any Data Type

Web Maps, Layers, and Scenes

Any Client

REST Based Access

Any Data Source

Distributed

Portal Abstracts and Organizes Any Data Type
GIS Provides the Platform
For Managing, Analyzing, and Applying Geographic Information

Integrating People, Processes, Things, and Data About Them

System of Engagement
Using the Power of Where to Integrate Everything
Web GIS Is the Modern GIS Architecture
Helping Everyone Do Their Work Better

Leveraging Web Services

Growing Exponentially

Organizations

Departments

Teams

Individuals

Sharing Knowledge
Collaboration

Improving Productivity and Efficiency
Product Vision

• Create a product line that solves **election management** and **redistricting** and **territory design** problems for the desktop, enterprise, and online users

• Establish an online community where users can **collaborate** and **share** their results

• Provide online access to standard **data content** used by this community (Census, Zip, Precincts, etc.)

• Provide online tools to **manage and disseminate** election data and results
Redistricting Online
Increasing the collaboration between government and citizens

- Create
- Edit
- Publish
- Review
- Collaborate
Redistricting Online - Key Functional Components

• Plan Creation and Editing
• Census and Custom Geography Data
• Map Navigation
• Mash-ups
• Redlining
• Feature Selection
• Plan Publication and Sharing
• Data Export
• Printing
• Plan Integrity and Management
• Thematic Mapping
Web GIS Enables a Whole New Scale of GIS
Interconnecting Systems and Expanding Collaboration
Web GIS Enables Community Engagement
Organizing and Managing Community Interactions

Providing Citizens Information . . .
. . . And Leaders Input

Community GIS Hub

Policy Initiative Based

Citizen Communication
Citizen Surveys (Crowdsourcing)
Status Reporting
Open Data
Storytelling
Demographic Information
“...the Legislature shall divide the state into congressional, legislative, and other districts...”

Utah Constitution – Article IX, Section 1
REDISTRIBUTE UTAH

Redistricting Committee

- 20 legislators appointed by President and Speaker
- Adopted principles and guidelines
- 28 meetings; including 17 public hearings across state
**PRINCIPLES ADOPTED BY 2011 REDISTRICTING COMMITTEE**

<table>
<thead>
<tr>
<th>Districts to be:</th>
<th>Acceptable Deviations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Member;</td>
<td>Congressional ± 0.1%</td>
</tr>
<tr>
<td>Contiguous; and</td>
<td>Legislative ± 3.5%</td>
</tr>
<tr>
<td>Compact</td>
<td>School Board ± 3.5%</td>
</tr>
</tbody>
</table>
PUBLIC PARTICIPATION ENCOURAGED: ONLINE TOOL DEVELOPED

• Contracted with ESRI to Create Online Tool
• Any Registered User May Submit a Plan
• Public Plans Required to Comply with Redistricting Principles
  - Single Member Districts
  - Compact and Contiguous
  - Meet Deviation Standards
  - Complete
REDISTRICT UTAH

• Staff used ArcGIS and autoBound

• Public used an ESRI web-based redistricting tool
ESRI Tool Permitted the Public to:

- Create Groups, Share, and Modify Plans prior to Submission; and

- Submit Public Plans to the Redistricting Committee for Discussion at Public Meetings
• 5 tabs assist users draw maps

• Each tab has a ribbon of tools and information
PUBLIC USE OF ESRI TOOL

- 323 Plans Submitted
- 271 Met Criteria
- 198 Congress Plans
- 1,000 Registered Users
PUBLIC PARTICIPATION BENEFICIAL

• Transparency Improved Public Relations
• Public Participation Reduced Criticism
• Public Participants Were Thoughtful and Knowledgeable

• A Universal Truth: Districts Drawn in Isolation are Easy, Complete Plans are Not
PUBLIC PARTICIPATION WAS SUCCESSFUL

• Citizen Plan Adopted!
• Headlines:
  - “Lawmakers endorse citizen map for new school board boundaries”
  - “Lawmakers endorse Logan resident’s map for school board boundaries”
We did not anticipate the public’s desire to:

• explain in writing the merits of their plans; and

• comment on other public plans.
In 2010, legislative leaders created a blog
- Posted all redistricting plans (public and legislative) on web
- Public comment and analysis was encouraged on all plans

In 2020, Utah Will Improve Online Public Comment Options
Legislative Enrolled Maps

After months of hard work, the redistricting process came to a close during the legislative special session, held in October. The Legislature approved the final maps, and Governor Herbert signed them into law. Each of the maps can be found below:
What do you get with the Redistricting Solution?

• **Software**
  - ArcGIS Server
  - ArcView w/ Free Redistricting Add-On

• **Data**
  - ArcGIS Online Basemaps
  - ESRI Demographic Data
  - U.S. Census Data (2000, 2010 TIGER, PL 94-171)
  - Optional Data Packs
    - ArcGIS Online Subscriber Content
    - ESRI Business & Demographic Data Nationwide
    - Custom Data (polling places, historical voting statistics, etc.)

• **Deployment Support**
  - ESRI Managed Services (24/7 infrastructure support and monitoring, high system availability, data management, etc.)
  - On Premise Deployment Consulting

• **Resources**
  - ArcGIS Online Resource Center (blogs, forums, downloads, etc.)
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Redistricting Online Deployment Options

• **Software as a Service (SaaS) subscription model**
  - Per user pricing
  - No custom features or data

• **Managed Services Offering**
  - Configured for organization
  - Custom data packs
  - All hosting components managed by ESRI

• **On Premise Offering**
  - Installed behind organizations firewall
  - Custom data packs
  - Hosting components managed by organization
Managed Services Deployment

- **Infrastructure (In-House, Amazon)**
  - Facilities
  - Network
  - Security
  - Hardware
  - Software

- **Deployment**
  - Staging
  - Production

- **Data Management**
  - Data Updates
  - Data Backup and Archive

- **Technical Support and Monitoring**
  - Tier 1 Helpdesk
  - Tier 2 Hosting Environment
  - Tier 3 Custom Application
Technology Stack
Technologies for the desktop and web

- ArcGIS Server 10
  - Map Services
  - Feature Services
  - Geometry Services

- ArcGIS Online
  - Online Base Maps
  - Geocoding Services
  - Sharing & Discovery

- ArcGIS Desktop 10
  - Layer Packages
  - Map Packages

- Other Technologies
  - Adobe Flex
  - Amazon Cloud