Web- Based Data Distribution

A Wealth of Opportunity

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SE MN User Group, May 2005

About Pro-West

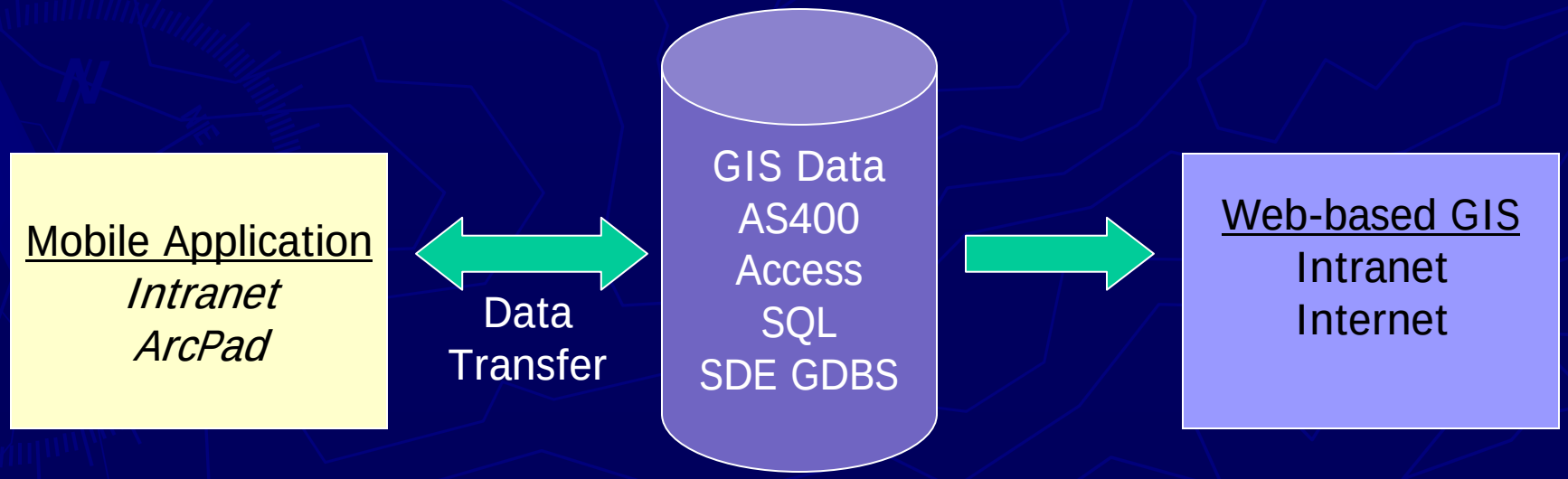
- Team of consultants, programmers and technicians
- Founded in 1987, Walker, MN
- Serves government, private and industrial clients
- Services
  - Data development
  - Custom applications
  - Web GIS
  - Aerial Photography
  - Training
  - Technical Advising

Cities & Counties Face....

- Growing demands with less staff
- The need to increase the level of public service
- The need to increase efficiency in-house
- Increasing amounts of data
- The need to integrate mobile, desktop and web applications, as well as databases

You Have Options!

- Desktop GIS
- Web-based GIS
- Mobile GIS

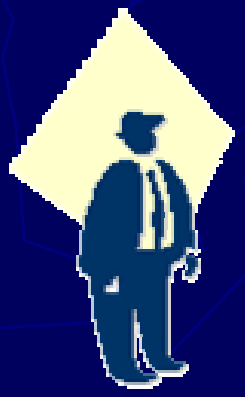


Have you heard this??

- I'm too old for GIS
- I have a copy of ArcView....on my bookshelf
- ArcView is too difficult
- GIS is too expensive
- The public needs access to our data

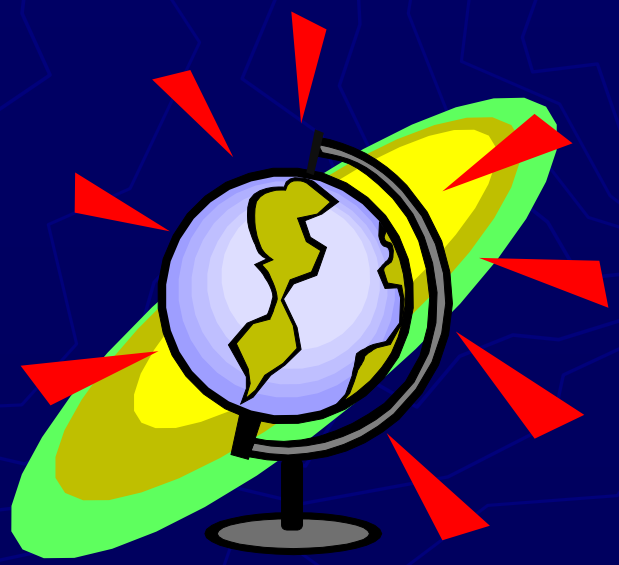
Web-based GIS

You CAN do it!



GIS is Changing…

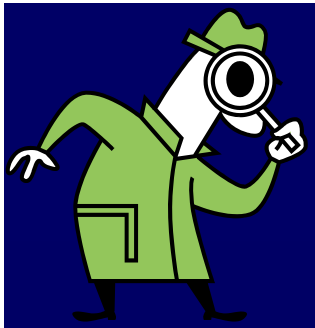
- ArcView/ArcInfo
  - ArcView isn't simple anymore…. (maybe you never thought it was!)
    - Power/daily users & editors
    - Advanced mapping/modeling
- Web GIS
  - One software – many applications
  - Casual user



Proving the Benefit of Web GIS

- Time Analysis
  - In-house staff
    - Time spent researching
    - Time spent updating desktop applications
  - Public
    - Time spent driving, calling
- Cost Analysis
  - Software
  - Time
- Other
  - Acreage comparisons - increase assessed value

Talk to your neighbors



Identify Site Requirements

- Determine audience
- What level of experience will the audience have?
- What data do you need on the website?
- What functionality must be utilized?

Start Simple & Plan

1. Intranet - Base Data
   Parcels, roads, etc.
2. Departmental Applications
3. Public Applications

Getting Started: *The Foundation*

Data

Web Server

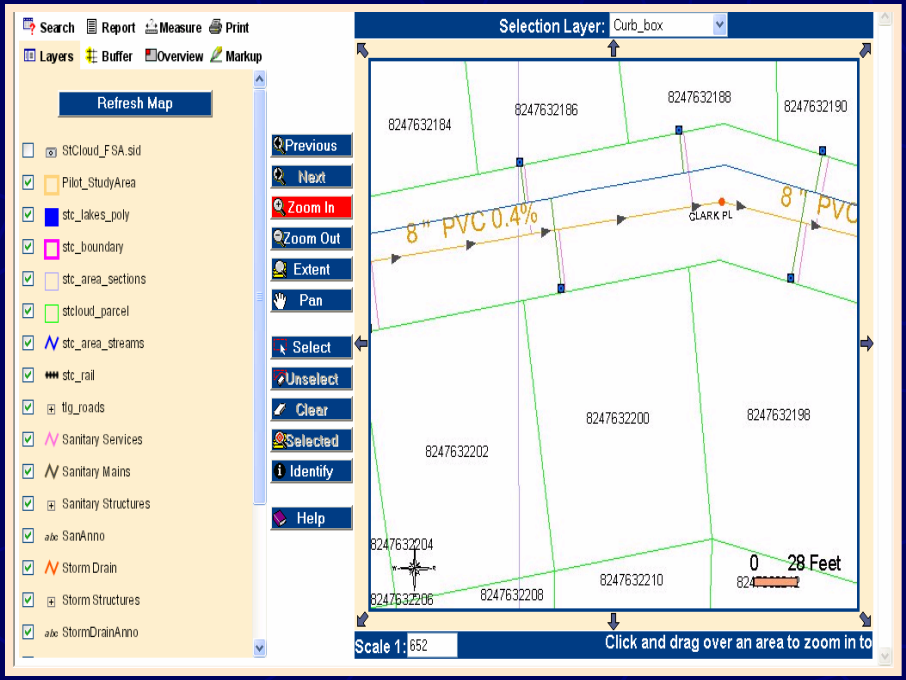
+

ArcIMS

What IS ArcIMS?

- A foundation for building and delivering GIS data, tools and maps over the internet or intranet.

- Allows internet users to easily display, query and analyze geographic data.



What ArcIMS Offers

- Data integration from multiple sources
  - Shapefiles, images, SDE layers, CADfiles, web, etc.
- Efficient and scalable environment
  - Use a single server or multiple servers as needs change
- Supports a wide variety of web platforms
- Out-of-the-box applications or a customizable environment

- Drawbacks of pre-built applications
  - Client side processing only
  - Not as user friendly to non-GIS users
  - Java application requires a one-time download of a java plug-in. Users may get frustrated.

- Benefits of pre-built applications
  - Fast setup through a wizard interface
  - No knowledge of web programming needed
  - Built on standard web languages.

- Drawbacks of customization
  - Programming knowledge needed
  - Need extra time and planning
- Benefits of customization
  - Client or server side processing based on your needs
  - Broader range of web programming languages to choose from.
  - Make your site look and function the way you want it.

What Can I do with Web GIS?

Potential Applications

- Intranet GIS
- Internet GIS
- Sales searches
- Link plats, deeds, etc
- Sign inventories
- Pavement inventories
- Permitting
- Utility management
- Crime mapping

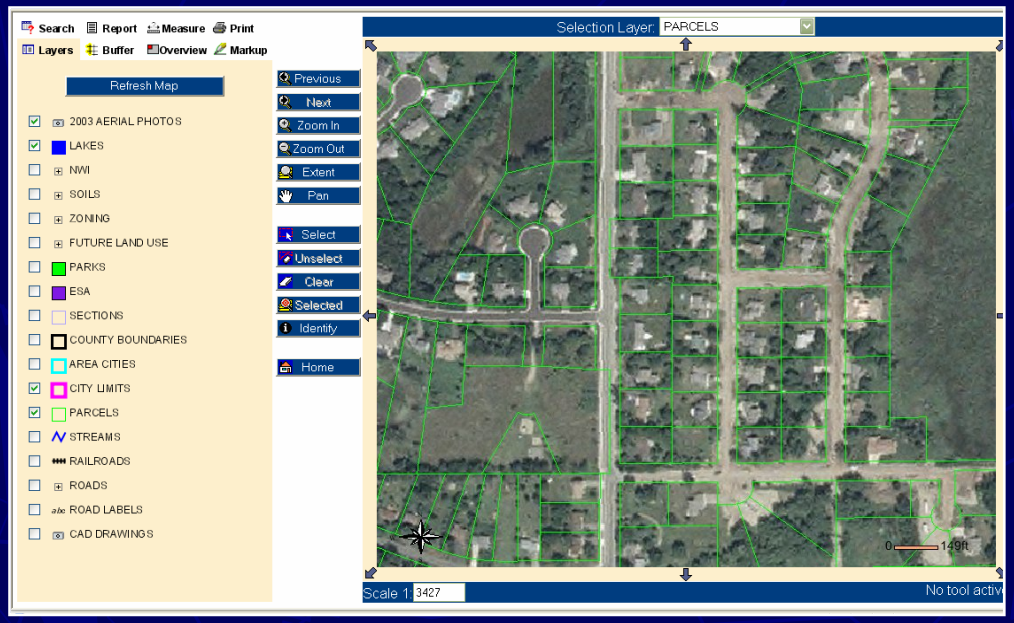
- And much more!

Why use the web?

- Easy to use
- Easy to maintain
- Cost effective
- Consistent look
- Opens the door to future applications

Intranet GIS

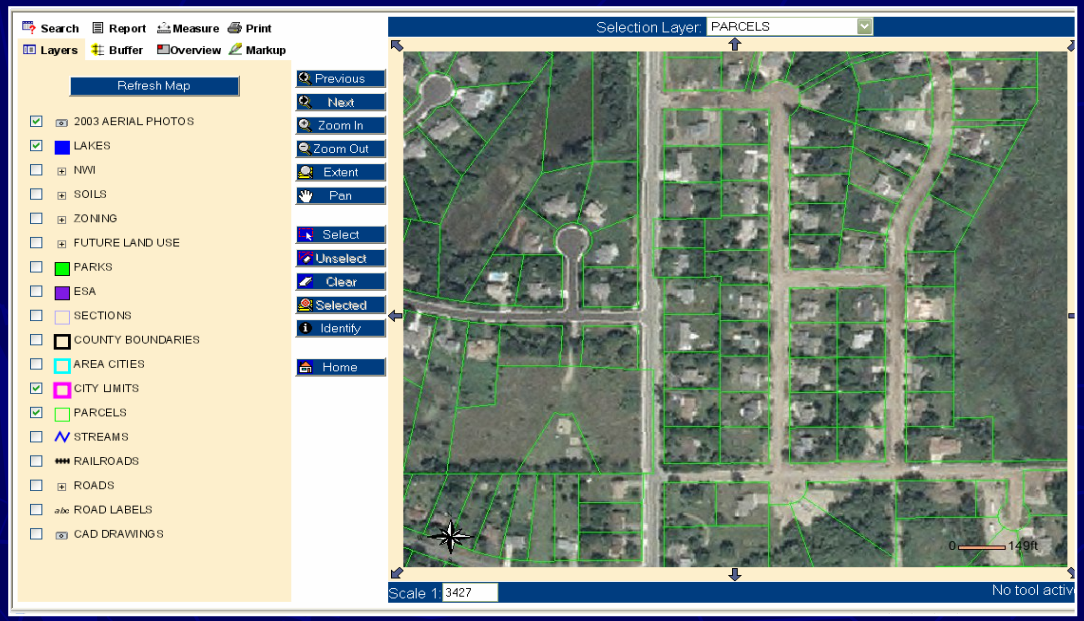
Serving in-house staff



- **Advanced functionality**
- **Provides consistency**
- **Data editing**
- **Minimal maintenance**
- **Username/passwords**
- **Admin tools**
- **One software, many applications**

Internet GIS

Serving the public



- **Limited functionality**
- **Provides consistency**
- **Decrease office traffic and phone calls**
- **Subscription services**

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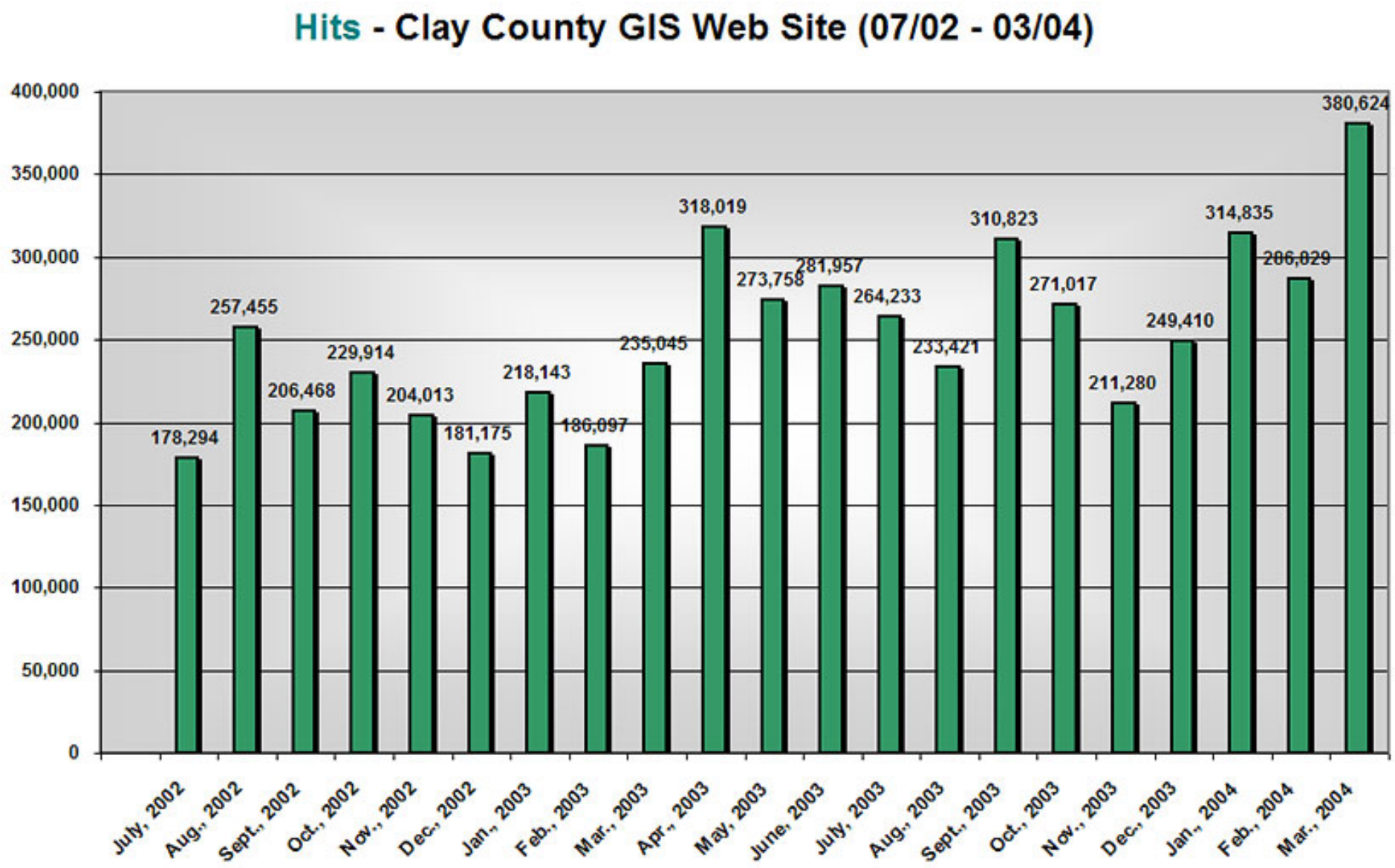

Hits - Clay County GIS Web Site (07/02 - 03/04)
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
178,294
257,455
206,468
229,914
204,013
181,175
218,143
186,097
235,045
318,019
273,758
281,957
264,233
233,421
310,823
271,017
211,280
249,410
314,835
286,029
380,624
July, 2002
Aug., 2002
Sept., 2002
Oct., 2002
Nov., 2002
Dec., 2002
Jan., 2003
Feb., 2003
Mar., 2003
Apr., 2003
May, 2003
June, 2003
July, 2003
Aug., 2003
Sept., 2003
Oct., 2003
Nov., 2003
Dec., 2003
Jan., 2004
Feb., 2004
Mar., 2004

Subscription Services

- Users pay for data
- Decisions, decisions
  - Data
  - Fees

Sorting through Fees

- Transaction
  - What is a transaction?
  - Management more difficult
- Flat fee (quarterly)
  - Easiest to manage
  - Favors high level users
- Time based fee
  - Easy to manage
  - Win-Win solution (Client-User)
  - Last transaction/download start time

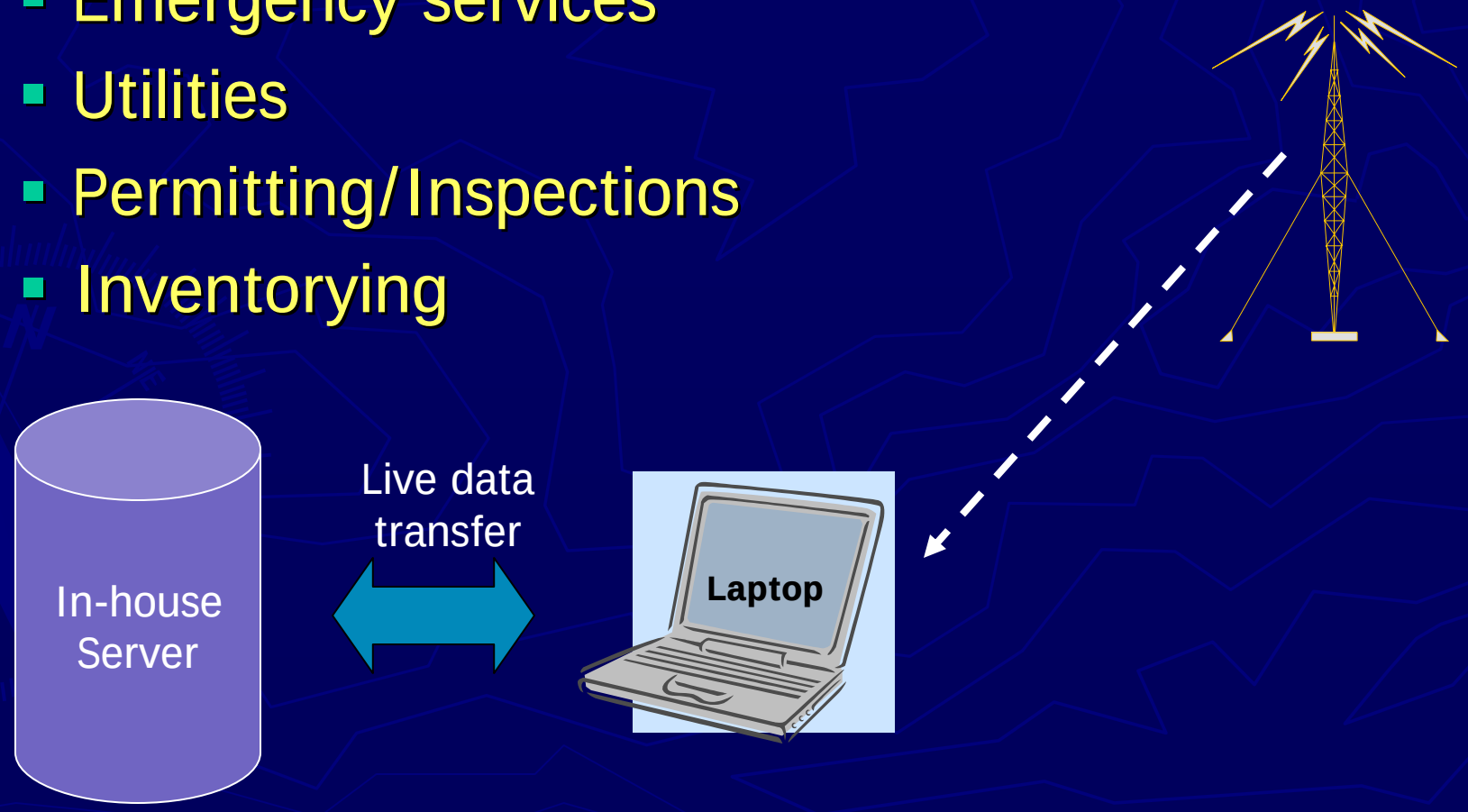
PWA Administration Tools

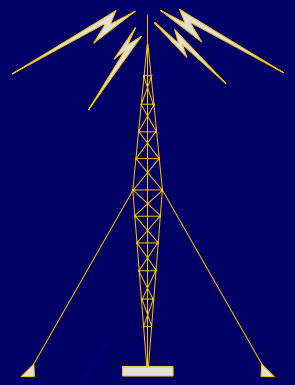
- Setup for Subscription Services
  - Username/password setup
  - Access constraints
  - Transaction history
    - Login/out time
    - Time per session
  - Statistics for all users and single user
  - Financial management (optional)

Where is Web GIS Going?

Wireless Applications

- Access Web-GIS in the field
  - Emergency services
  - Utilities
  - Permitting/Inspections
  - Inventorying





Wireless Applications

- Wireless is a reality
  - Sprint wireless “data only” service
  - Custom built wireless infrastructure
- Eliminates data transfer processes
- Real-time data entry and viewing

Demonstration

Access other Pro-West websites and literature at:
www.prowestgis.com