

Web- Based Data Distribution

A Wealth of Opportunity



Kendis Scharenbroich
GIS Consultant

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

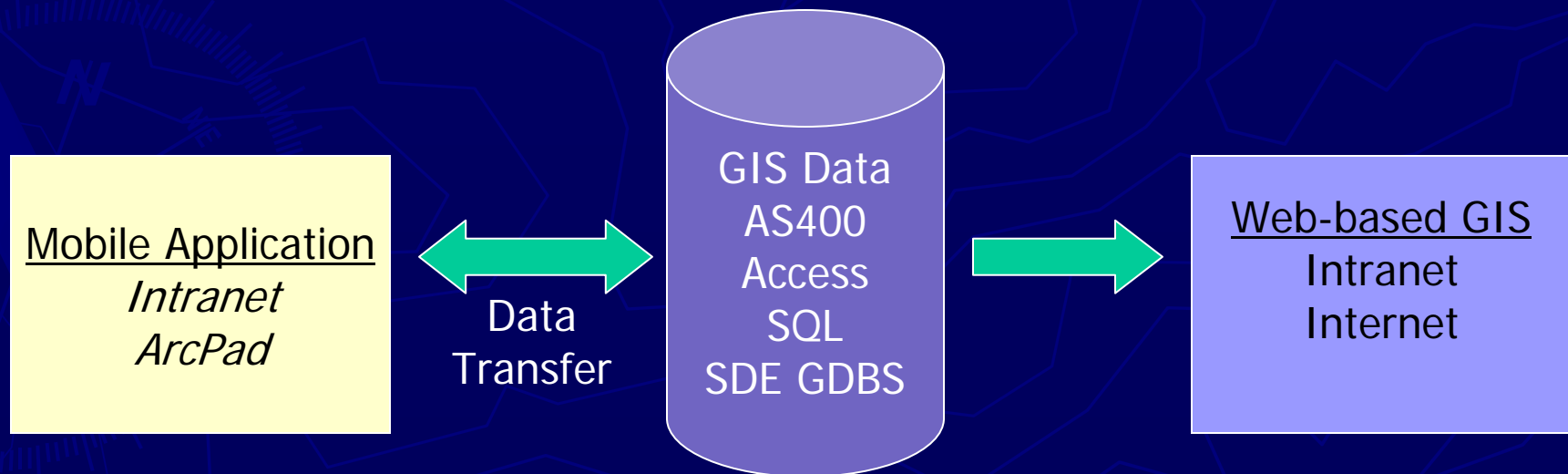


Cities & Counties Face....

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

You Have Options!

- ▶ Desktop GIS
- ▶ Web-based GIS
- ▶ Mobile GIS





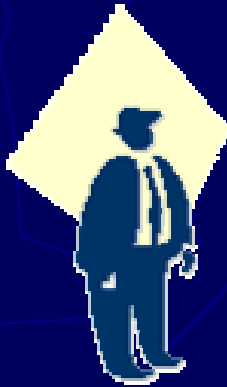
Have you heard this??

- ▶ 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!



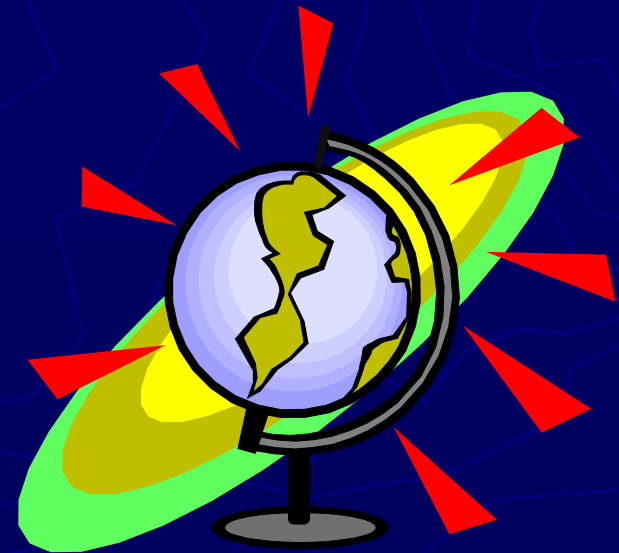
GIS is Changing...

▶ 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*

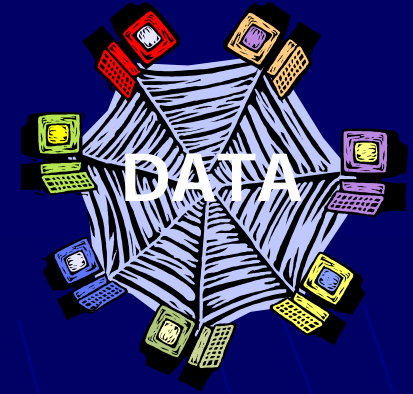
Data

Web Server

+

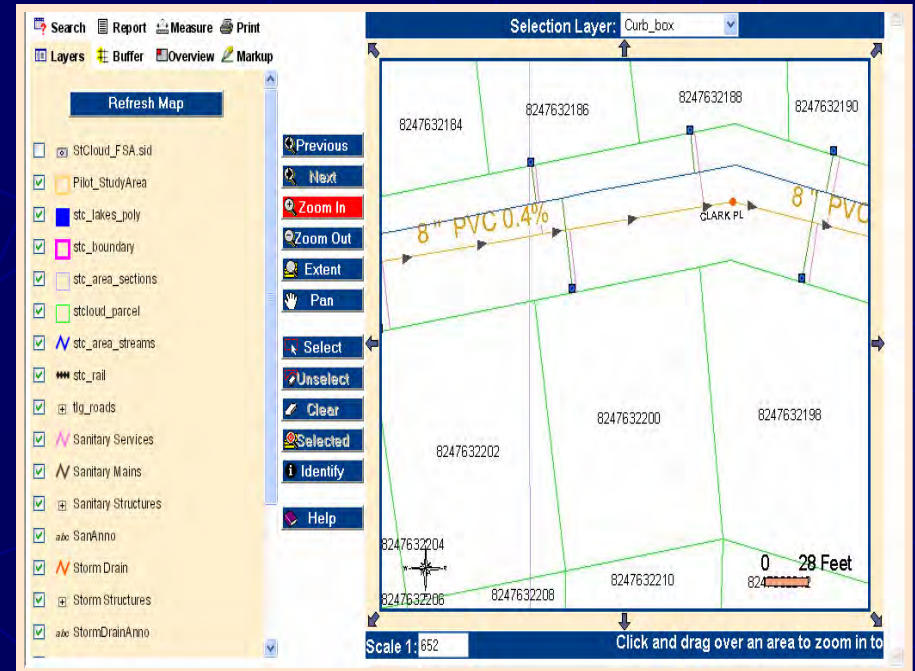


What IS ArcIMS?



❑ 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

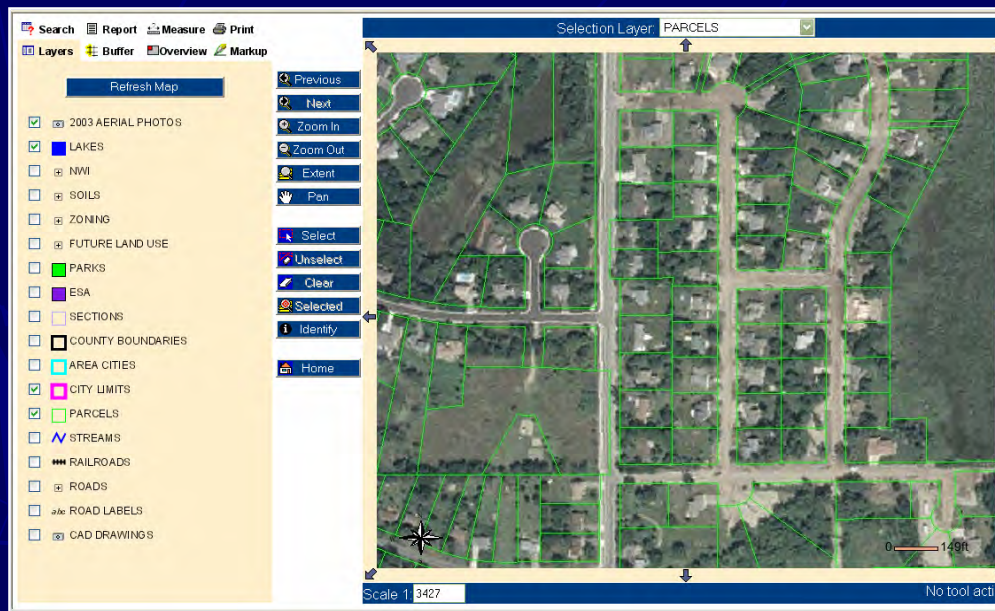
- ▶ Intranet GIS
- ▶ Internet GIS
- ▶ Sales searches
- ▶ Link plats, deeds, etc
- ▶ Sign inventories
- ▶ Pavement inventories
- ▶ Permitting
- ▶ Utility management
- ▶ Crime mapping
- ▶ And much more!

Why use the web?

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

Intranet GIS

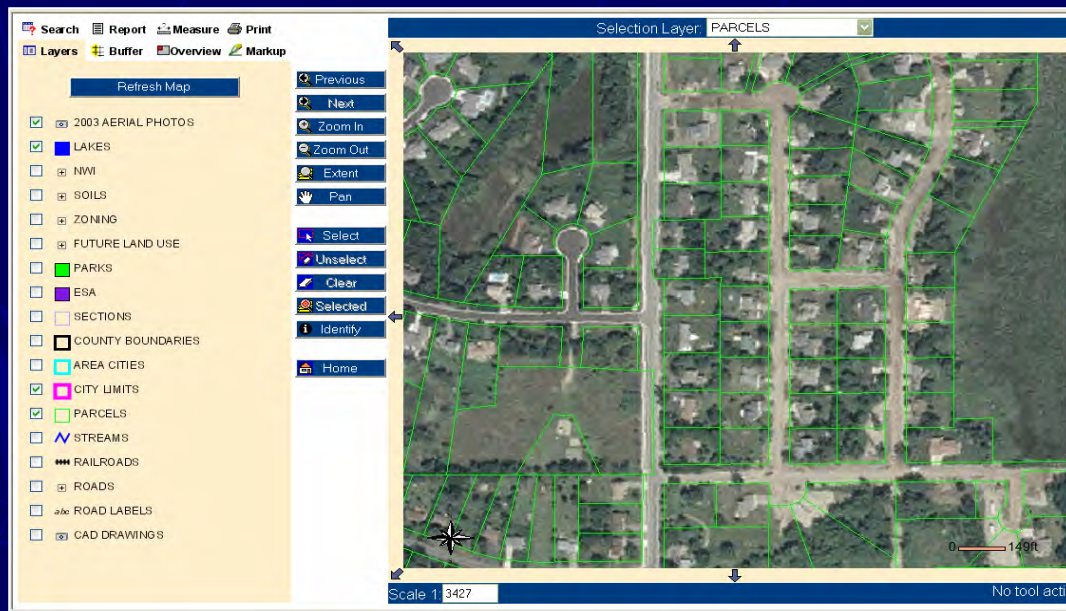
Serving in-house staff



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

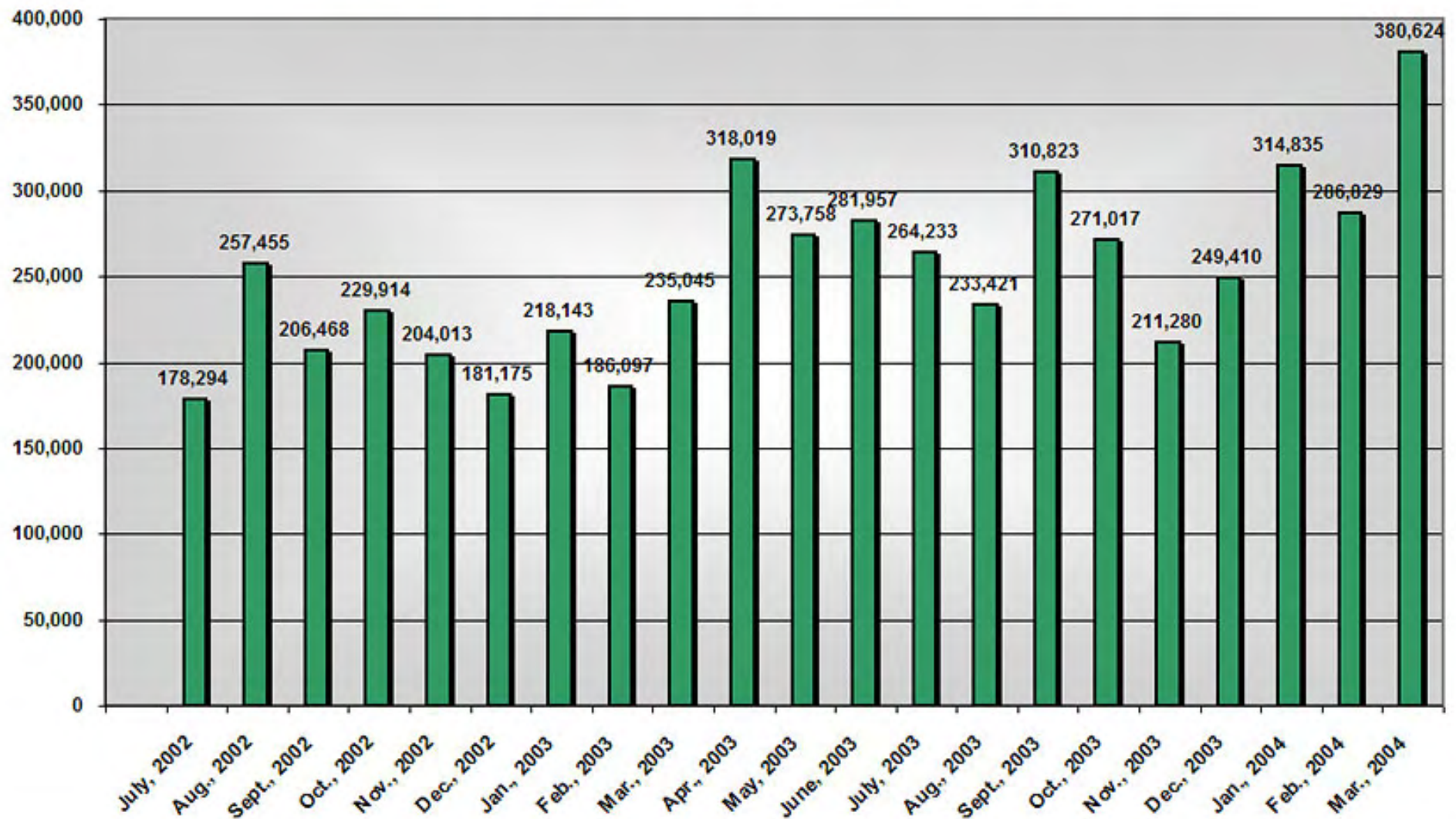
Internet GIS

Serving the public



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

Hits - Clay County GIS Web Site (07/02 - 03/04)



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?



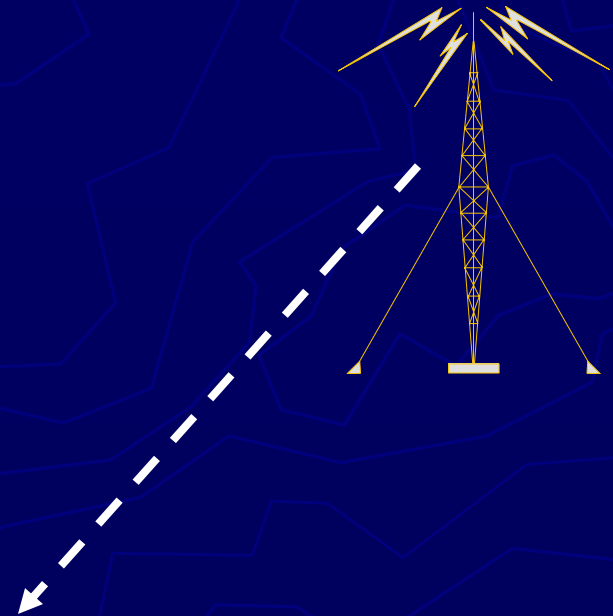
Wireless Applications

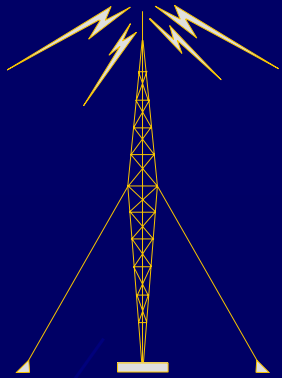
► Access Web-GIS in the field

- Emergency services
- Utilities
- Permitting/Inspections
- Inventorying



Live data
transfer





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