

# STEPHEN BANKSTON

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## EMPLOYMENT HISTORY

### U.S. Geological Survey (USGS)

#### ATA Services

Lakewood, CO

2012-Present

#### Geospatial Data Steward Administrator \ GIS Server Administrator Geospatial Data Steward Administrator

As GIS Server Administrator responsibilities included maintaining the ArcGIS Server and Mapping services required for The National Map (<http://nationalmap.gov>) and associated GIS application development. This involved creating the mapping document and cartographic design to publishing the map service. Administered over 40 instances of ArcGIS server. This ranged from installation and configuration, debugging applications, optimizing service performance. Implemented new automated replication and synchronization routines from ArcSDE to File Geodatabases to maintain the currency of the data and to take advantage of the performance gains of utilizing a File GDB with ArcGIS server. Maintain the mapping and web services, server-side code for a number of websites focused on crowd-sourcing data collection. Task includes workflow for checking out data, version maintenance, QA/QC, and integration back into existing datasets.

As Geospatial Data Steward Administrator managed all vector table and layer loads along with data conversion in support of internal and external stakeholders. These included the National Hydrography Dataset (NHD), Transportation, Structures, US Gazetteer, US Topo Mapping production. Worked with external federal stakeholders such as National Park Service, Forest Service, US Census Bureau. Work with key personnel to define requirements of the refresh schedules and future synchronization requirements

Maintained all ArcSDE enterprise databases and instances which were hosted on Oracle, SQLServer, and Postgresql RDBMS's. Developed custom scripts to automate image cache regeneration based on newly updated or "dirty" areas to eliminate the challenges of caching very large datasets and imagery. Worked with IT Team to standardize and implement cleanup scripts and procedures and define database user access permissions.

## QUALIFICATIONS

Twenty years of professional experience in IT and all aspects of the GIS industries with emphasis on data integration, utilities, geospatial applications development and database design.

#### Software:

ArcSDE 9.3-10.2.2  
ArcGIS Server 10.2  
ArcGIS Desktop 10.3  
ArcMap/ArcView  
ArcIMS  
ArcEngine  
ArcGIS Explorer  
AutoDesk AutoCAD,  
AutoDesk Map  
Autodesk Civil 3D 2012  
AutoDesk Mapguide 6.5  
MWH Soft H2O-Net, INFOWater  
EPA Net  
Maximo  
GRASS  
IDRISI  
MapInfo  
Maptitude  
GeoMedia  
Microsoft Office (All)  
Microsoft Visio 2012  
Visual Studio  
Oracle SQLPlus/SQLDeveloper/Toad  
Citrix  
VMWare  
Telcordia Network Engineer

#### Operating Systems

Windows 7  
Windows Server 2012  
Solaris / SunOS  
Unix / Linux / HP- UX  
Redhat  
Ubuntu

#### Database Systems:

Oracle 9i, 10gR2, 11g

**U.S.D.A. Forest Service**  
**IBM**

Boulder, CO

2009-2012

**GIS Architect**

This project fundamentally involved moving all Forest Service data and applications from the widely distributed legacy computer cells located on every Forest Service Business Unit into a consolidated data center located at Kansas City, Missouri

Prepared logical and physical design specifications and implementation plans including work estimates, dependencies on IT infrastructure and operational resources.

Applied experience in the use of ETL processes and tools for handling tabular and spatial data for the GIS applications.

Applied data base experience in data base management systems such as Oracle 10G suite in GIS application development.

Applied experience in Citrix solutions GIS application development.

Utilized GIS industry standards tools and practices recommend improvements in the GIS applications development

Documented system and data flow diagrams, hardware and system configurations.

Identified key areas for which architectural bricks were to be developed.

Worked in cooperation with the geospatial community to develop formal "bricks/patterns" per the Gartner technology architecture method.

Worked with GSTC/RSAC to identify their geospatial and other data holdings and technology stacks.

Provided recommendations and support for resolving data center services GIS architectural related issues, including issues with the Citrix environment.

Developed GIS technology roadmaps in cooperation and coordination with the geospatial community.

**OneGIS**

Atlanta, GA

2007-2009

**Senior GIS Consultant**

*OneGIS is a full service consulting, system integration and outsourcing firm specializing in the development and installation of turnkey GIS solutions for the electric, gas, water, wastewater, storm water, telecommunications, and municipal government markets.*

SQLServer 2012  
Postgresql 9.2  
MS Access 2012

**Languages:**

Python  
Perl/ActivePerl  
C#.NET  
Visual Basic  
VB.NET  
ArcObjects / ArcEngine  
HTML  
ASP  
CSS  
PHP  
VB Script (ArcPad)  
C+,C++  
AML  
Avenue  
Delphi  
AutoLISP  
JavaScript  
SQL Server  
Java

**Web Servers:**

Microsoft IIS  
Apache  
IBM Domino

**Systems Hardware:**

Intel  
IBM AS/400  
Sun SPARCstation  
Palm / PDA  
PRIME  
HP-UX

**GPS Units / Software:**

Trimble Geo XT / Geo XH  
Trimble Pathfinder  
Thales (Magellan) ProMark 3 & 4  
Magellan (Recreational Grade)  
TOPO!  
GPS Correct  
GPS Analyst

Provided ArcGIS and Telcordia's Network Engineer integration guidance and training to a major telecommunications company.

Implemented and administered ArcSDE services. This included maintenance of numerous servers in a 'sandbox, development, user testing, production' development environments.

Project guidance and coordination involving Data Migration, IT Environment, Software vendors, and Business entities.

Developed 'Use Cases' for a variety of data migration strategies. Including the integration of eight current independent utility organizations into an existing and in production utility company.

Designed and developed customized software solutions utilizing current best development practices for ESRI's ArcGIS, ArcServer/ArcSDE products.

Implemented ArcGIS's Linear Referencing system and Route creation Geocoding ArcSDE versioning components.

Created and tested scalable data migration strategies for very large datasets in excess of 20 million objects in a GIS/Oracle environment.

Developed a close working relationship with numerous international software vendors, service providers, and implementation teams.

Provided technical expertise and presentations in support of Sales and Marketing teams.

## DENVER WATER BOARD

Denver, CO

2005-2007

### **GIS Systems Analyst / Applications Developer / Data Manager**

*Denver Water serves everyone in the City and County of Denver and nearly 40% of those who live in the suburbs. A system of reservoirs networked by tunnels and canals provides water to more than a million people.*

Designed Enterprise Geodatabase to incorporate the business requirements of seven divisions including Operations & Management, Transmission & Distribution, Engineering, Survey, Planning, Property, and Hydraulics

Created Geometric Network and applications including Business and Connectivity requirements.

Incorporated, developed and documented all Geodatabase definitions using Visio UML modeling.

Technical resource responsible for defining requirements to integrate existing GIS system with other commercial products including JD Edwards, Maximo, INFOWater/H2O.net, Customer Information Systems, Emergency Services.

Developed and supported numerous GIS Applications that were developed utilizing ArcEngine C#.net, Autodesk Mapguide and ArcGIS Server 9.2.

## ADVANCED EDUCATION

### **University of Maryland 1992**

B.A. Geography

Minor: Information Systems Management

### **ESRI Certifications:**

MapObjects

MapObjects IMS

### **GeoAdvice**

Hydraulic Modeling of Water Distribution Systems using Infowater

### **URISA Certifications:**

Addressing: the Key to Successful GIS

## RECENT PRESENTATIONS

### **Internet Mapping - Leveraging ArcGIS**

GITA - Rocky Mountain Chapter

### **Geodatabase Design – IT Best Practices**

University of Colorado – Denver, CO

Front Range CC – Longmont, CO

Managed numerous GIS production datasets in an ArcSDE/Oracle 10GR2 environment.

Supported data collection and acquisition, including GPS/Mobile applications involving ArcPad and Trimble Office. Managed GPS post processing, data "check-in" and synchronization with ArcSDE/ArcGIS Server.

Supported all GIS software and data aspects of Operations & Management, Transmission & Distribution, Engineering, Survey, Planning, and Hydraulics.

Responsible for integrating the GIS systems with to other proprietary databases including Maximo, JD Edwards, CIS, and Property.

Migrated numerous Desktop/Client databases to either Oracle or SQLServer environments.

Participated in the building of enterprise web services as well as building cross-agency data sharing and centralized mapping services.

Prepared database/application/infrastructure documentation, design reports, and process flow diagrams.

## MERRICK & COMPANY

Denver, Colorado

1998-2003

### GIS Applications Specialist

*Merrick's Geospatial Solutions business unit provides innovative and highly accurate geospatial data services and products including photogrammetric mapping, digital orthophotography processing, surveying, GIS application development, Web-based Internet hosting of mapping services to clients throughout North, Central, and South America. Technologies include aerial and satellite image acquisition, LiDAR and GIS database and planimetric design.*

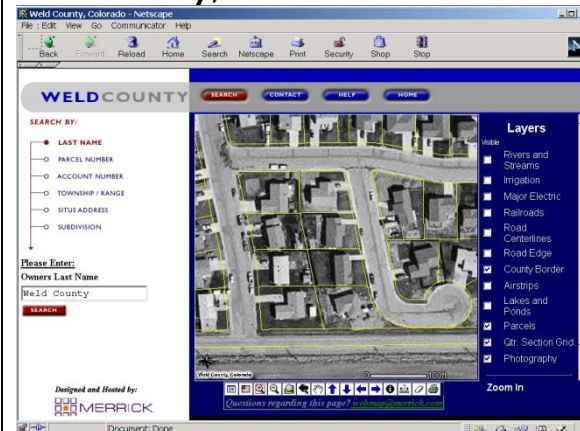
Served as Lead GIS Applications Developer for both external and internal clients. Assisted in the development of RFP responses and "short-list" interviews as the Technical Advisor. Worked closely with Business Development and Production Management personnel. Developed numerous customized software applications for clients, in-house production processes, and ArcIMS websites.

### Customized Software:

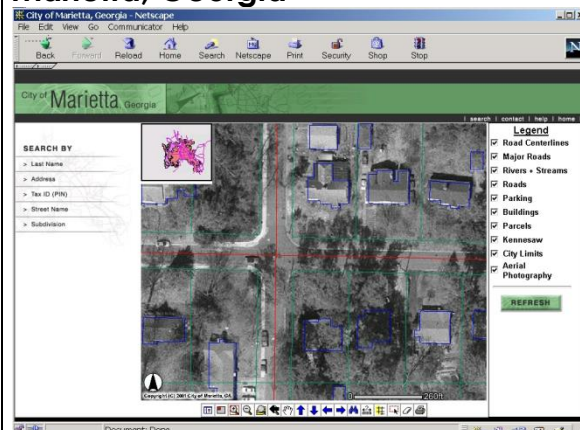
City of Boulder, Boulder, Colorado- Traffic division.  
 Developed a complete Traffic Sign work order application that worked with their existing planimetric data along with newly collected sign data. The mapping portion of the application was completed utilizing Arcview's Avenue language, and interacted via DDE to an MS Access application for the work order processing. I was solely responsible for the creation of both sides of the application along with the initial database design.

## ArcIMS Websites:

### Weld County, Colorado



### Marietta, Georgia



### Commerce City, Colorado

### In-House Production Software:

Cook County, Chicago, IL Planning Department. As part of a Merrick & Co. deliverable along with county-wide aerial imagery, I developed a Quality Control application with ArcMap, using VB and ArcObjects. This application suite allowed them to identify areas of concern on the delivered photography. As soon as a point was created, the data was sent to a web database (SQLServer) stored at Merrick. This was accomplished by using Microsoft's Internet ActiveX Control from within Visual Basic as an ArcMap Extension. All QC points were then immediately available to all employees at Cook County who were reviewing the photography, in addition to all of Merrick's Photogrammetric offices in the United States and Mexico.

### ArcIMS Websites:

Developing ArcIMS sites was my one of my chief responsibilities. Originally, these sites were created using MapObjects and MapObjects IMS, and eventually migrated to ArcIMS 3.1 and 4.1. I was charged with Geographic data conversion,

## **INFORMATION SYSTEMS SUPPORT, INC (Terralogic Inc.)**

Waynesboro, Virginia

1994-1998

### **Chief Information Officer / Business Partner**

*Terralogic, Inc. (formerly Information Systems Support, inc.) is an applications development firm, specializing in full turn-key Geographic information Systems implementations, data conversion and customized software development. Terralogic, Inc. has received national recognition as a pioneer in Internet map server (IMS) development and hosting.*

### **Data Conversion Production Manager**

Managed all aspects of production workflow, scheduling, personnel and Quality Control. Implemented a TQM (iso9000) system to continually redefine and improve production.

### **Lead Applications Developer**

Developed a E-911 System for Henry County, Virginia utilizing AutoCAD Map (ADE). Created a Control Center for 911 operators which utilized AutoCAD DWG files connected to Motorola's Caller-ID and County Assessment databases which was utilized for Emergency dispatchers.

### **GIS Systems Integration**

ISSI implemented numerous complete GIS systems for counties, businesses, and for the national office of the Boy Scouts of America. My responsibilities included analyzing and in many instances, creating the network infrastructure. Configuration of spatial and database servers. These systems included ESRI, AutoDesk, Intergraph, and MapInfo technologies.

## **References**

Professional and personal references available upon request.

## **Business Development**

Participated in all aspects of marketing, proposal composition and presentations, and pricing. Defined scope definitions and performed GIS Need analysis.

## **LOUDOUN COUNTY GOVERNMENT**

Leesburg, Virginia

1992-1994

*Loudoun County is a dynamic county with an outstanding quality of life, located just 25 miles from Washington, D.C. The home of Dulles International Airport and America Online, Loudoun has established a reputation as an international center for technology, communications and transportation.*

## **Office of Mapping and GIS**

Loudoun County utilized COGO methodologies to create their Parcel base. After 5 years, they had completed approximately 40% of the conversion and were mandated to have it completed within the following year. I provided Technician level services to input the individual parcels. Redeveloped the production/Arc Librarian AML utilities to streamline the production process and were instrumental to the successful and timely completion of the project.

## **CLARKE COUNTY GOVERNMENT**

Berryville, Virginia

1991-1992

## **GIS Systems Manager**

Description: Provided both Technician Level work and Applications Development. Assisted with the migration from GRASS to ArcInfo including all hardware/network configurations. Developed numerous applications for Parcel and Landbase maintenance. Also created custom applications to calculate Landuse taxes of agricultural land based on numerous soil classifications Technician Level Duties Install and configure Sun SPARCstation's Migrated Geographic data and applications from GRASS to ArcInfo. Developed AML macros and applications: Real Property interface for Assessment, Soil Area Quality, and Viewshed analysis

## **SHENANDOAH NATIONAL PARK**

Luray, Virginia

1992

Supervisor: Pat Lynch

Description: Hired on a short-term contract after lightning had damaged their GIS hardware platforms. This involved rebuilding and upgrading the Sun operating system and all connected hardware. Many of the large number of devices were either outdated or unsupported and required the device drivers to be rewritten. This task involved kernel level C programming. Upgraded ArcInfo to the current version and verified data integrity.

## **ALTERNATIVE RESOURCES CORPORATION**

Washington, DC

1991-1999

Description: Provided First and Second level Help Desk support on a part time basis for a number of companies through ARC. Also provided UNIX consulting on numerous projects. These companies

included Booz-Allen Hamilton, SAIC, Perot Systems, MCI, Marriot, KPMG.

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