

Joseph C. Dillard, GIS Architect/Developer

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PROFILE

Driven goal-oriented GIS Architect/Developer with over 23 years of GIS experience, 17 years Designing, Building, and Maintaining Enterprise GIS Systems, 9 years of experience in Java and GIS Web Development. Highly Skilled in most Esri ArcGIS Desktop and Server Products. U.S. Army Veteran.

EMPLOYMENT HISTORY

Aug 2021 — Present

Scientist, System Engineer - GIS Solutions Architect, L3Harris

Greenville, TX

Design and configure various commercial and open-source GIS server systems for internal research and development efforts.

Use case and requirements gathering for commercial and internal GIS systems under development.

Research, testing, and evaluation of commercial GIS Server Software to be used in Signal intelligence systems.

Coordinate the acquisition of GIS data sets from DOD Agencies for use in Enterprise GIS Systems. Develop pipelines using tools like NiFi and GeoPandas to convert data from GeoJSON to Oracle Spatial. Making the data acquisition and ingest into the system automated.

Jan 2013 — May 2021

GIS System Architect - GIS Developer, CACI International Inc.

U.S. Forces Korea

Architect and Lead Developer for an ArcGIS-based Situational Awareness System (Common Operating Picture) used by the Pacific Air Forces and U.S. Forces Korea. The ArcGIS-based system has over 50 custom applications built for different user communities. The system combines data into custom map views and dashboards from aggregated information reported by commanders at different echelons to help make more informed decisions. Users now spend more time analyzing data to make decisions and less time trying to track down information.

Designed the system architecture and lead development from inception through four major revisions of the system over 8 years. Lead the development of two major version releases to architecture and applications every year.

Selected all server and network hardware used for the system ensuring compatibility with the network and planning ahead for system growth.

Provided Technical Direction and Mentoring to members of the team, including System Administrators, Web Developers, and GIS Administrators maintaining the ArcGIS Services and GIS data stored in Oracle.

“Unique ability to help Product Owners create requirements for their application when they do not understand what they need in the application or what its workflow should be”. “Quote from my Manager Karen Munroe”

Worked with customers to communicate the advantages of an agile approach for the management of development projects using Minimum Viable Products, Development Sprints, and consistent engagement with the Product Owners to develop better applications.

The system had zero downtime due to technical failure during major use events with up to 2900 unique users. Previous similar systems outside of this project had a history of not performing well during these events due to the number of users. The system has been observed handling 20,000 ArcGIS Server requests per minute.

Feb 2004 — Jan 2013

Senior GIS Analyst - GIS System Administrator, CACI International Inc.

Osan Air Base, Korea

Served as Web Admin for ArcGIS ArcIMS/IMF and ArcGIS Servers on multiple networks.

Held primary responsibility for the administration of ArcSDE Oracle database servers on multiple networks.

Assisted and Lead Architecture changes to the system hardware and software configuration multiple times over the life of the system.

Deliver 24/7 technical support ensuring optimal system configuration and connectivity.

Perform geospatial data development in support of the Expeditionary (GeoReach) component of the Air Force GIS Enterprise System.

Maintain/disseminate geospatial data leveraging Air Force Enterprise GIS Architecture.

System Administration of Windows Servers and VMware vSphere virtual machines.

Delivered exercise and/or contingency support as required.

Apr 2000 — Feb 2004

Production Manager and GEOINT Analyst, U.S. Army

U.S. Army

Delivered managerial oversight for mission-critical design and development of GIS-driven solutions and map-based products.

Provided greater productivity, enhanced training capabilities, better collaboration, and improved access to critical information.

Supervised personnel and provided technical guidance in support of their duties.

Delivered high-level technical expertise and generated detailed end-user documentation for advanced imagery systems.

Authored new standard operating procedures for the production of GIS products.

Utilized multiple databases for managing aerial photographs, maps, digital databases, and collateral source materials.

Played a key role in the accurate development of more than 375 GIS and map-based documents.

Efficiently directed a wide range of cartographic and terrain analysis duties.

Ensured quality assurance during all stages of topographic operations.

Operated imagery equipment produced GIS maps and products and supported operational missions.

Trained personnel on the proper and effective use of imagery and GIS equipment.

Successfully increased department productivity and streamlined operations through intensive training efforts.

SKILLS	Agile Scrum Development	Experienced	Java	Experienced
	Amazon Web Services (AWS)	Novice	JavaScript	Experienced
	Angular 5+	Experienced	Lucidchart	Skillful
	Apache Kafka - ETL Tool	Skillful	Microsoft Azure	Beginner
	Apache Tomcat	Expert	Microsoft Hyper-V	Experienced
	ArcGIS Event Server	Experienced	Microsoft Windows Server	Experienced
	ArcGIS JSAPI	Experienced	MySQL	Expert
	ArcGIS Portal	Experienced	NodeJS	Skillful
	ArcGIS Server	Expert	Oracle Database 11g/12c	Expert
	ArcSDE	Expert	Postgres	Skillful
	Atlassian Jira/Confluence	Experienced	PrimeNG	Experienced
	C#	Beginner	Python	Experienced
	Docker	Skillful	Risk Management Framework (RMF)	Skillful
	Eclipse IDE	Experienced	SOA - REST and SOAP	Skillful
	Enterprise GIS Architecture	Expert	SQL - PL/SQL	Expert
	ERDAS IMAGINE	Skillful	Spring Boot	Skillful
	Git - Github	Experienced	Spring Security	Experienced
	Gradle - Maven	Experienced	UML	Skillful
	Grails	Expert	Unix - Linux Operating Systems	Skillful
	Hibernate - GORM	Experienced	Visual Studio Code	Expert
	HTML & CSS	Expert	VMware vSphere	Experienced
	IntelliJ IDEA	Expert		

SKILLS LEGENDLeast to Most: **Beginner - Novice - Skillful - Experienced - Expert****EDUCATION**

2012 — 2013

Web Development, Western Governors University

2000 — 2000

Geographic Information Sciences, National Geospatial Intelligence College

Aug 2020 — Aug 2023

Security+ CE

Current DOD 8570 cert

Mar 2018

Attended Esri Developers Conference March 2018 Palm Springs California

Jun 2018

Active Secret Security Clearance

LINKS

LinkedIn Profile

<https://www.linkedin.com/in/joe-dillard-gis-architect/>

Article GeoBase Mission Command System

Air Force Public
Affairs

Article describing the system I designed and built as the Architect and Lead Developer, This is an earlier version of the system, about three years into development in 2016. I am quoted in the 6th paragraph. Article as a whole describes part of the system and how it is used.

Main Article:

<https://www.dvidshub.net/news/195988/pacaf-utilizes-geobase-program>

Two Extra Images with Captions:

<https://www.dvidshub.net/image/2542634/pacaf-utilizes-geobase-program>

<https://www.dvidshub.net/image/2542636/pacaf-utilizes-geobase-program>

GitHub

<https://github.com/JosephDillard/JosephDillard>