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## EXPERIENCE

### **Koasys LLC**

Kansas City, Missouri, USA

- **Principal**

2015 - Present

Koasys LLC provides information system development and consulting services.

The company is specialized in GIS data services, Big Data analysis, and data solution development

Provided data analytics services and built data processing and visualization system developments for *Faith Comes By Hearing*.

### **4K Mapping, YWAM**

Kona, Hawaii, USA

- **Information System Project Manager**

2012 - Present

Developed IT strategies to make 4K movement viral.

Planned and architected 4K geospatial information systems to implement 4K concepts and its abstract framework.

Implemented a mobile application and its corresponding server to track field activities of outreach teams by using iOS and Python web application frameworks (Django, Flask) and MongoDB.

Formed a team of 4K development to support 4K activities with various applications and to develop and maintain 4K information systems.

*4K is a geospatial information framework to track world's physical and religious needs and to share with other non-profit organizations that have the same mission to work for a greater cause. This project is tracking information on people and societies by dividing whole world into 4 thousand geographical zones (4K).*

### **Call2all**

Kansas City, Missouri, USA

- **Project 360 Program Manager**

2014 – 2016

Measuring the progress of Christian movement activities by collecting data from different data sources and analyzing the collected data.

Networked and worked with different organizations that have their activity data and coordinated efforts to form a network of organizational collaboration.

As a pilot project of Project 360, Worked with 8 different Bible translation agencies and field mission agencies and developed a data integration and visualization system that integrating data sources from different organizations and provide information of how Bible translation in more than 1000 languages of Pacific islands is going on to users. Developed an activity monitoring system in parallel so that a group of organizations can monitor the distribution activities of the translated Bibles in Pacific islands.

### **Esri Inc.**

Redlands, California, USA

Consultant, Project Manager

2007 - 2012

- **Associate Product Manager of Esri Geoportal Server**

2009 - 2012

Esri Geoportal Server is an open source project for implementing spatial data and infrastructure portals to enable users to discover geospatial resources such as dataset, raster data, and web services. This project was originally a

proprietary product ArcGIS Server Geoportal Extension, and Esri Inc. converted the product into an open source project in 2010.

As a release manager, managed development processes and release processes of Geoportal Extension by developing and executing Q/A activities. Applied and implemented new Q/A processes to improve Q/A process efficiency and product quality.

Contributed to product system design with technology research and prototyping of potential features.

Worked on various SDI projects to implement geospatial portal systems and provided customers with technical supports by resolving issues and giving technical advice.

Supported to convert the proprietary ArcGIS Server Geoportal Extension to Esri Geoportal Server, and actively involved in defining release and governance policies of the open source project.

● **Release Manager, ArcGIS for INSPIRE** 2010 - 2012

Managed and executing release processes with geographically dispersed development teams in US and Germany, and worked to cater ArcGIS for INSPIRE product into a team by setting up development/QA environments and solving issues in inter-team problems.

ArcGIS for INSPIRE is the extension of ArGIS software to provide INSPIRE compliance supporting capabilities in data, services, and metadata.

INSPIRE is envisioned and chartered by an EU directive that binds EU Member States in a common SDI-building effort, and it is aiming to create an Internet-accessible infrastructure of technologies and permissions that will tie European geospatial information producers and users together in a single geospatial information-sharing community to improve decision making and operations in service of a productive and sustainable Europe.

● **Geodata.gov (Geospatial One-Stop Project) Release Manager** 2007 - 2011

Geodata.gov is a U.S. national level spatial data infrastructure to manage government-owned geospatial information collaborating with more than 200 government agencies and universities, and provide the information to general public.

As a release manager, managed Geodata.gov 2.2 & 2.3 development with ESRI technical staff and senior management, and executed Q/A activities. Advised to define system requirements and design system architecture of Geodata.gov. Provided continuous technical support and maintenance efforts on Geodata.gov portal operation since 2007.

As part of geodata.gov activity, supported to provide data to geospatial catalog of Data.gov ([www.data.gov](http://www.data.gov))

**THE UNIVERSITY OF ARIZONA** Tucson, Arizona, USA  
Digital Library of Information Science and Technology 2006 - 2007

● **Database / Web Application Developer**

Planned and designed an institutional repository system to host data for university communities.

Developed and maintained various library information systems that enable users to discover library resources.

**ARIZONA REMOTE SENSING CENTER** Tucson, Arizona, USA

● **Database / Web Application Developer** 2003 - 2006

Managed a development of web-based data object warehouse application (Rangelands West).

Developed an online multi-criteria spatial decision support system for strategic wildfire planning that integrates the human and climate dimensions of wildland fire.

Developed a middleware for spatial data analysis applications for spatial image data.

Developed projects using **SQLServer, MySQL, Oracle, and PostreSQL.**

Developed projects and managed and maintained SDI sites running on **Unix, Linux, and Windows.**

## ARMY LOGISTICS COMMAND

### • Assistant Project Manager, 1st Lieutenant

Planned and consulted for a remediation project of an oil-contaminated ex-military base.

South Korea

2000 - 2001

## The 6th ENGINEERING BRIGADE OF ARMY

### • Platoon Leader – Lieutenant, The Engineering Equipment Company

Led and managed an engineering platoon comprised of 40 soldiers and vehicles.

South Korea

1999 - 2000

## EDUCATION

The Eller College of Management - THE UNIVERSITY OF ARIZONA  
Master of Science in Management Information Systems

Tucson, Arizona, USA  
December 2006

THE UNIVERSITY OF ARIZONA  
Bachelor of Science in Computer Science

Tucson, Arizona, USA  
May 2005

HANYANG UNIVERSITY  
Master of Science in Environmental Engineering

Seoul, South Korea  
March 1998

HANYANG UNIVERSITY  
Bachelor of Science in Civil Engineering

Seoul, South Korea  
March 1996

## MAJOR PROJECTS INVOLVED

### Geodata.gov (Geospatial One-Stop)

geodata.gov, also known as the Geospatial One-Stop (GOS), is a geographic information system (GIS) portal that serves as a public gateway for improving access to geospatial information of United States. Geospatial One-Stop is one of 24 E-Government initiatives of US federal government. It is designed to facilitate communication and sharing of geographic data and resources so that all level of government and the public can access geographical information easier, faster, and a cost-effective way.

### Esri Geoportal Server (open source product)

<http://www.esri.com/software/arcgis/geoportal/index.html>

Esri Geoportal Server is a free open source product that enables discovery and use of geospatial resources including datasets, rasters, and Web services. It helps organizations manage and publish metadata for their geospatial resources to let users discover and connect to those resources. The Geoportal Server supports standards-based clearinghouse and metadata discovery applications. This open source product was originated from previously ArcGIS Server Geoportal Extension product that was a proprietary solution product of Esri Inc.

### Indonesia National Spatial Data Infrastructure (NSDI)

<http://www.esri.com/news/arcnews/spring12articles/indonesia-nsdi-one-map-for-the-nation.html>

The Indonesian Geospatial Information Agency (Badan Informasi Geospasial) acquired a loan from Japanese International Cooperation Agency and implemented a NSDI by using ArcGIS for Server and Esri Geoportal Server. The NSDI project was going to achieve good governance of Indonesian geospatial data that exist in national, provincial and local governments including non-governmental organizations.

### NATO Core GIS Solution (NCGS)

NATO Core GIS Solution is an integrated GIS Solution for NATO including authoring, publishing, searching and managing GIS information of NATO. The solution is deployed on geographically distributed military bases. To deliver the integrated solution, ESRI formed multi-teams collaboration of integrating ESRI COTS products and custom solutions with 3rd party software. As part of the solution, SDI team provided NATO metadata catalog system. I worked to manage custom development and managed release of the catalog system, and involved with solving metadata issues by advising feasible solutions.

### **Rangelands West**

Web-based data object warehouse application based on content management system design. It is the primary distributed archive and dissemination source for rangeland science and management information in the U.S. The community of practice, which regularly contributes content, is made up of range scientists and librarians from all 19 western states, Hawaii and Alaska.

### **Wildfire Alternatives (WALTER)**

Online multi-criteria spatial decision support system for strategic wildfire planning that integrates both the human and climate dimensions of wildland fire.

### **GeoDIVA**

GeoDiva, or Geographic Data & Information Visualization & Analysis, is the next generation of RangeView innovation. It is a middleware for spatially and temporally dynamic data sets that can be accessed visually and at the pixel or polygon level. GeoDiva is under development, and currently in beta version.

## **TECHNICAL EXPERTISE**

### **Software Design**

Geographical Information Systems, information system analysis and design, business process management, UML, database design, data standardization, scalable system

### **Web based GIS technologies**

arcgis.com(ArcGIS Online), ArcGIS Server, ArcGIS Desktop (ArcCatalog, ArcMap)

### **XML technology and Geospatial Data Interoperability and Standards**

Designed and developed solutions and client applications with XML, XSLT, XPath.

Security Standards: **OpenID, OAuth, SAML**

Geospatial Metadata standards: **KML, FGDC, ISO 19139, ISO19119, Dublin Core, ebRIM**

Geospatial Data interoperability and OGC Standards: **Catalog Service for Web (CS-W), Web Map Service (WMS), Web Feature Service (WFS), Web Coverage Service (WCS)**

### **Development**

Developed prototypes with **Python** and Python web frameworks such as **Django, Flask** and developed a web application in the in the **Google App Engine (Python)** platform.

Developed a mobile application by using **iOS**

Worked on projects by designing database and having proficient knowledge of **SQL**.

Worked on projects to build a scalable catalog systems by using an **index engine** (Apache Lucene) and **NoSQL** database (MongoDB).

Developed projects using **Java** in **J2EE** platform with web application frameworks.

Worked on projects using application servers such as **Tomcat, Glassfish, and Weblogic**.