



Enterprise GIS Security Architecture

Esri International User Conference

July 9th, 2013



Port of Seattle GIS Security Challenges:

- ü The Port's GIS needs to host highly sensitive datasets related to physical security, cameras, alarms, sensors, access control system, etc.
- ü The Port of Seattle has multiple lines of business:
 - √ Airport
 - √ Seaport
 - √ Real Estate
 - √ Recreational Marinas
 - √ Cruise Terminals
- ü We operate the nations 6th busiest Seaport and the 16th busiest Airport.



Port of Seattle GIS Security Requirements:

- ü **Role Based Security.** Users should only have access to the GIS layers appropriate to their job.
- ü **Layer Filtering.** Control what map layers are visible to different users of the same application.
- ü **Attribute Filtering.** Determine what features are visible to different users viewing the same layer based on attribute.
- ü **Geospatial Filtering.** Limit visibility to only features within a specific geographic area. For example: allow access to security cameras at the Seaport but not at the Airport.



Typical GIS Architecture

Client Applications

Web Clients

- ü SharePoint
- ü Silverlight
- ü JavaScript

Desktop Clients

- ü ArcMap
- ü ArcCatalog

ArcGIS Server

SQL Server Database



Port of Seattle's Secured GIS Architecture

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Web Clients

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Security ArcGIS Manager Server

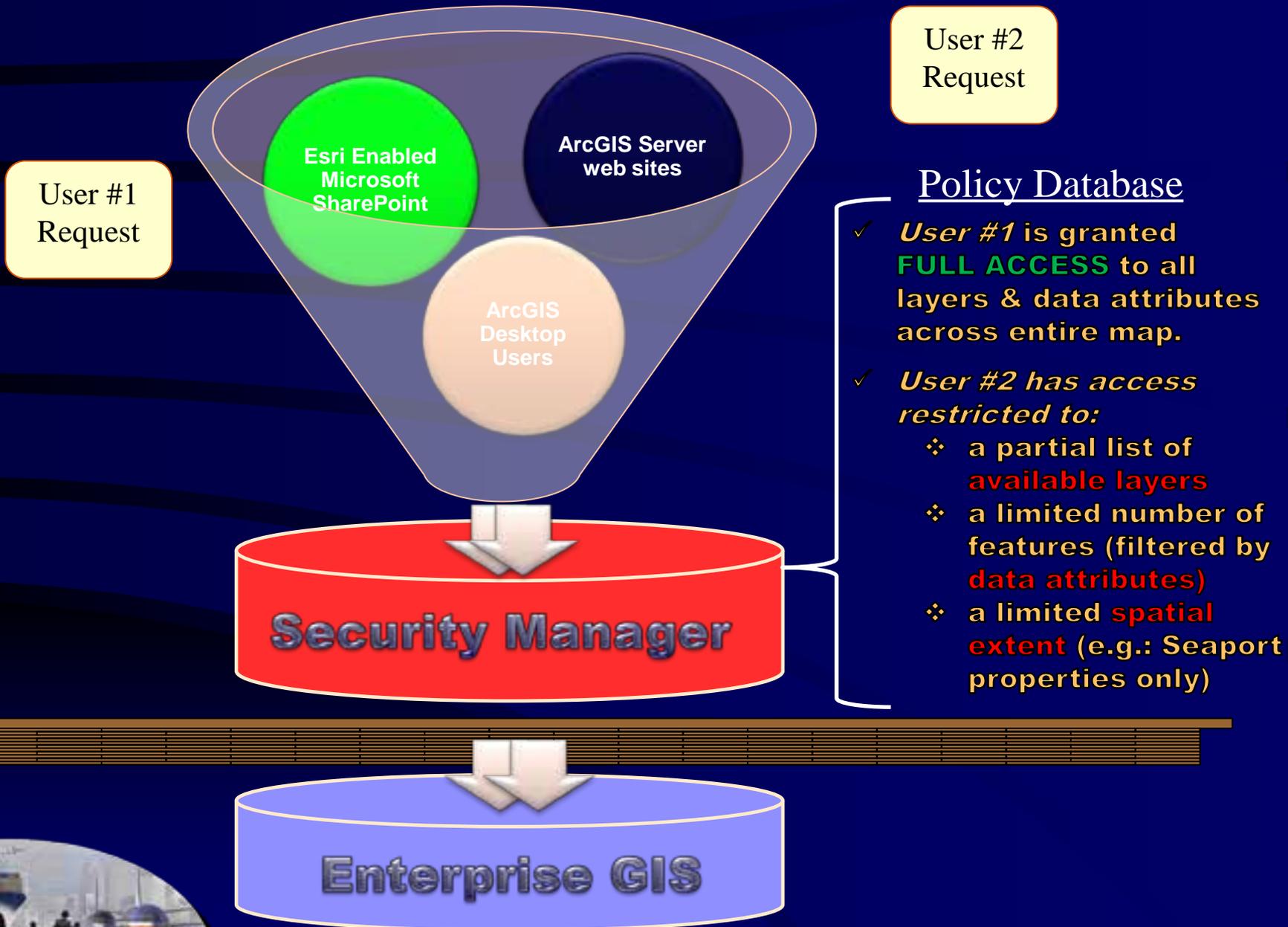
SQL Server Database



**ArcGIS Server
10.1 Web Services
Locked Down**



Security Manager by con terra



Airport Security GIS

- ✓ **Personnel have very limited access to the data in the application.**
- ✓ **Cameras owned by the TSA are not visible to most Port of Seattle users.**
- ✓ **Some personnel only can see the cameras in certain areas of the bldg.**



Questions?

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Note: The Port's GIS Architect, Ying Yang, and I will be answering questions at 2:30 pm today at the con terra booth (#2005 Hall B2)

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