Joint Special Operations University (JSOU) Geopolitical Mapping and Social Network Analytics Platform

Problem Statements and Assessment Criteria

Overarching Problem Statement – "Scope of Project"

The Joint Special Operations University (JSOU) is a polytechnical education institution that seeks an unclassified, universally accessible Geopolitical Atlas for research and teaching purposes. Initial Focus Area: United States Indo-Pacific Command (INDOPACOM). As JSOU is part of the greater U.S. Special Operations Command (USSOCOM) enterprise, this platform requires ease of access and the potential of seamless integration with current and potential future common operation picture (COP) and deployed mobile technology.

As such, JSOU seeks a platform that can serve as a visual teaching platform outlining prominent geopolitical theory. Yet, this platform is also an information platform for students to explore underlying data sets and information segments and conduct social network exploration via in-depth analytic capabilities and visualization of historical trends via time-sliders. Moreover, JSOU seeks a capability to interact with platform users via a messaging/comment capability. Thus, the platform is a hybrid, including the functions of a strategic, analytic, and interactive collaborative dashboard.

Assessment Criteria

Presentation of concept (beta platform) of U.S. INDOPACOM area of responsibility focused strategic Geopolitical Atlas with wiki, analytic and social networking tools, and collaboration capabilities.

- Several layers of background data from existing open data sources such as USAID (US Agency for International Development), World Bank, International Monetary Fund (IMF), Socioeconomic Data and Applications Center (SEDAC), United Nations (UN) etc. Data layers are up to vendor
- Minimum of two layers outlining geopolitical theorists
- Open standards to avoid vendor lock

Problem Statement One "Ease of access and seamless integration:" JSOU requires an unclassified/commercial platform that can be accessed universally and whose data, layers (static & dynamic), and background information can be easily, openly shared, commented on, and/or enhance discussion.

Assessment Criteria

- Ease of data and layer sharing/download and interoperability with other GIS platforms - uses standard data formats

- Access to comprehensive/detailed metadata, including link to the data source and date of information, among other pertinent background for users
- Ability to add static and dynamic layers as well as link in spreadsheets, websites, and other web-based media
- Print/PDF sharing capabilities for information, i.e., maps, map sequences annotated with other information
- Messaging board, with the ability to link/post
- Cloud-native. Interoperability with external tools

Problem Statement Two "Visualizing Political Theory:" Visually mapping theoretical thought allows learners to tie new knowledge into their prior cognitive structure. Yet, a GIS developer is not inherently a political scientist, nor is the visualization not without inherent pitfalls such as institutional bias. Ensure theory is presented that allows for comprehension by varied users (from Ph.D. to Operator) Moreover, the platform is to include a wiki function with further background on political theorists and other pertinent information.

Assessment Criteria

- Effective visualization of political theory
- Distilling main tenants of theory (partnering with subject matter experts)
- Theory underlined with pertinent data such as the six currents 1) imbalances of the economy, 2) dynamics of religion/sects and ethnicity, 3) changes in demography, 4) resources and environmental scarcities, 5) imbalances in governance and human security, 6) artificiality of borders and boundaries (see background slides)
- Include layers of global, regional, and local socio-economic/ecological factors
- Key global logistics hubs, terrestrial and maritime key transportation routes
- Identify social and geographic factors (i.e., population density & terrain features)
- Wiki/knowledge repository function (links, documents, multimedia)

Problem Statement Three "Explorative Analysis and Social Networking Function:" The JSOU platform is to include general analytic functions and time-sliders but also include a capability for social network analysis of relationships which are not necessarily standard features.

Assessment Criteria

- Ability to create maps and charts which simultaneously analyze spatial and non-spatial data
- Visualization of data via pop-up displays, diverse types of charts and diagrams, and time-sliders
- Ability to visualize relationship linkages