**Developing a WMB Replacement Using ESRI API**

**Phase 1**

Introduction:

The following will highlight the first phase of the development of the ArcGIS API for JavaScript 4 update to the WMB. This is scheduled to be completed by March 31, 2021 as an Alpha.

**Items:**

The following is a list of objectives that we plan to complete by the end of the fiscal year:

* Create attribute query
* Create spatial query
* Integrate spatial/attribute selection tools and results panel
* Create legend
* Work on GUI
* Integrate the tool in the Zen framework
  + This will ensure that the tool is useable within the SGB framework
* Architecture testing
* Preliminary language integration
  + This is an exploratory step. No complete solutions are expected by the end of the fiscal year.
* Preliminary WCAG (Web Content Accessibility Guidelines) integration
  + This is an exploratory step. No complete solutions are expected by the end of the fiscal year.

**Potential Issues:**

* Merging the two search types (attribute/spatial) into the same output table was time intensive during the initial RAMP development. This may take some time to accomplish in the ArcGIS API for JavaScript 4 environment as well.

**Comments:**

* Architecture testing has already been carried out on the RAMP tool. The knowledge gained from this will reduce development time.
* Due to the RAMP implementation being written in TypeScript many of the solutions can be transferred with modification into a JavaScript environment.

**Time Frame:**

Span = February - March

|  |  |  |
| --- | --- | --- |
| Date | Item | Feasibility |
| February 2021 | Attribute Query | esri/layers/FeatureLayer  esri/tasks/support/Query |
| February 2021 | Spatial Query | esri/toolbars/draw  esri/tasks/support/Query |
| February 2021 | Create Results Panel | esri/widgets/FeatureTable |
| February 2021 | Create Legend | esri/widgets/Legend |
| March 2021 | GUI | N/A |
| March 2021 | Zen Integration | N/A |
| March 2021 | Architectural Testing | N/A |
| N/A | Preliminary Language Integration | This is an exploratory step. No complete solutions are expected by the end of the fiscal year. |
| N/A | Preliminary WCAG Integration | This is an exploratory step. No complete solutions are expected by the end of the fiscal year. |

**Conclusion:**

All the above elements are required to create an acceptable Alpha of the new WMB. These are very achievable goals due to the large number of already built modules available in the ArcGIS API for JavaScript 4. Completion of Stage 1 will create a basic tool that more advanced functionality will be built on. It will also act as a proof of concept that the use of the JavaScript API is a viable way to create the upgraded WMB.