Overview of our Project – GEOM99 Group Delta

Geocortex Site: Delta_Water_Infrastructure

The aim of our project is to develop a web solution to query Water Main pipe materials. To do this we used the Geocortex Essentials 4 platform.

The first step was to create and upload a map service to an ArcGIS server. This involved acquiring municipal water infrastructure data which was sourced from an ESRI tutorial that focused on water infrastructure in Naperville, Illinois. We took this data and uploaded a customized map service to the Fleming College Luna server.

We then moved towards the Geocortex platform. This involved creating a new site and adding a map service using the Rest Service URL for our customized map service of water infrastructure in Naperville.

To create our query solution, we used Geocortex Workflow Designer and built upon a workflow previously designed by our instructor Shawn Morgan. The previous workflow was designed to search Collaborative Projects by Project Name.

We wanted our workflow to search water main pipes from our data set based on pipe material. The type of materials available for search are CAS (Concrete Asbestos), DIP (Ductile Iron Pipe) and UNK (Unknown). We set about reconfiguring the example workflow to be able to perform the material search on our own map service water mains layer.

There are 3 main components of the workflow: the DisplayForm, the QueryTask and an If statement.

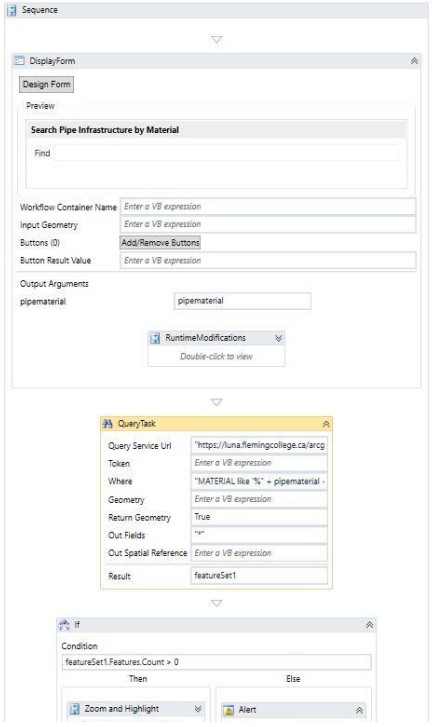

Figure 1. Geocortex Essential Workflow - Layout of the workflow solution showing the 3 main components.

We began by editing the DisplayForm section. This section sets up the search function and autocomplete functionality. We changed the search function to autocomplete results that are "Like" entries in the MATERIAL field by editing a where clause. We also set up the result of this search to be an output argument used in the QueryTask.

We then edited the "QueryTask" parameters. We changed the "Query Service URL" to point our map service and specifically our "Water Main" layer.

Next, we modified the "Where" clause parameter to create a statement that searches the "MATERIAL" field against the output argument "pipematerial" using a like operator. The outfields are set to "*" (ALL) all that match the Where clause.

The QueryTask generates a result named "featureSet1" which is the result of the query.

Finally, an IF statement is implemented that checks whether the result of search generated any results. If it didn't, an error message occurs.

The workflow was then saved and a ".xaml" file is created.

We then moved to Geocortex Essential Manager to upload and configure our workflow and design the layout of the Site.

We uploaded our workflow as a ".xaml" file into the Workflow section of the Site panel. We then set up the workflow in the "I Want to Menu" section of the Viewer panel. Here we gave the workflow a title, description and set the workflow to run by setting the "Command" to "RunWorkflowById" and the "Command parameter to "Pipe_Material_Search" which was set when initially loading the workflow to the Site.

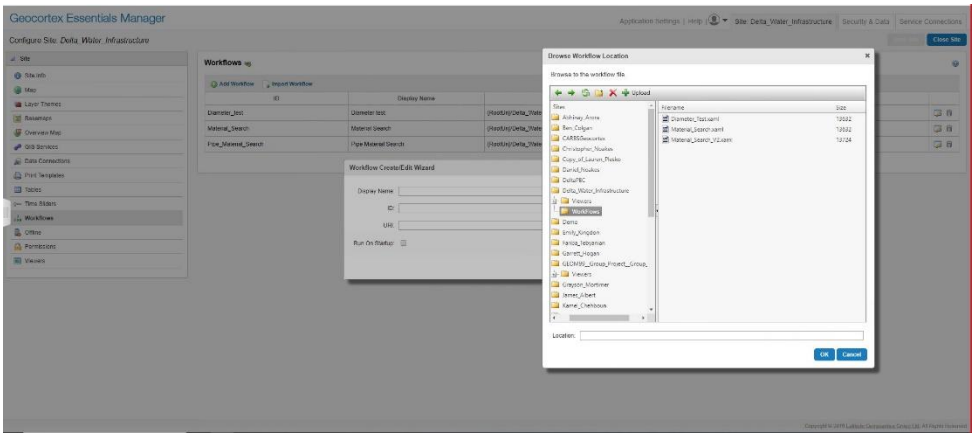

Figure 2. Loading a .xaml workflow file into the Site Manager.

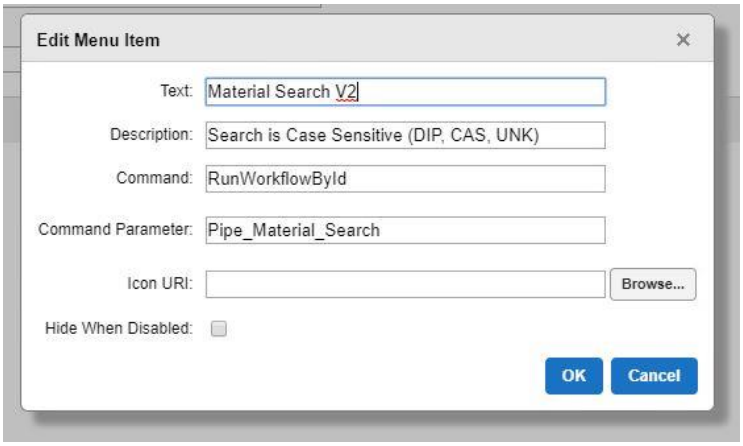

Figure 3. Configuring the workflow function in the "I Want To Menu" item editing menu.

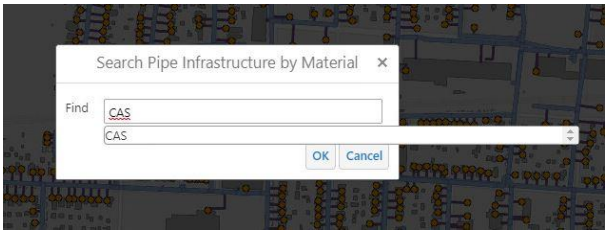

Figure 4. Properly configured auto-populate search function.

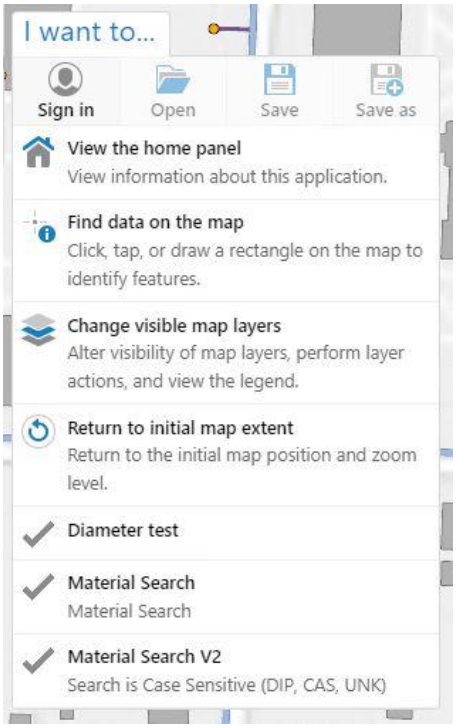

Figure 5. View of the "I Want To Menu" showing the different iterations of our tests with the workflow. "Material Search V2" was the final iteration.

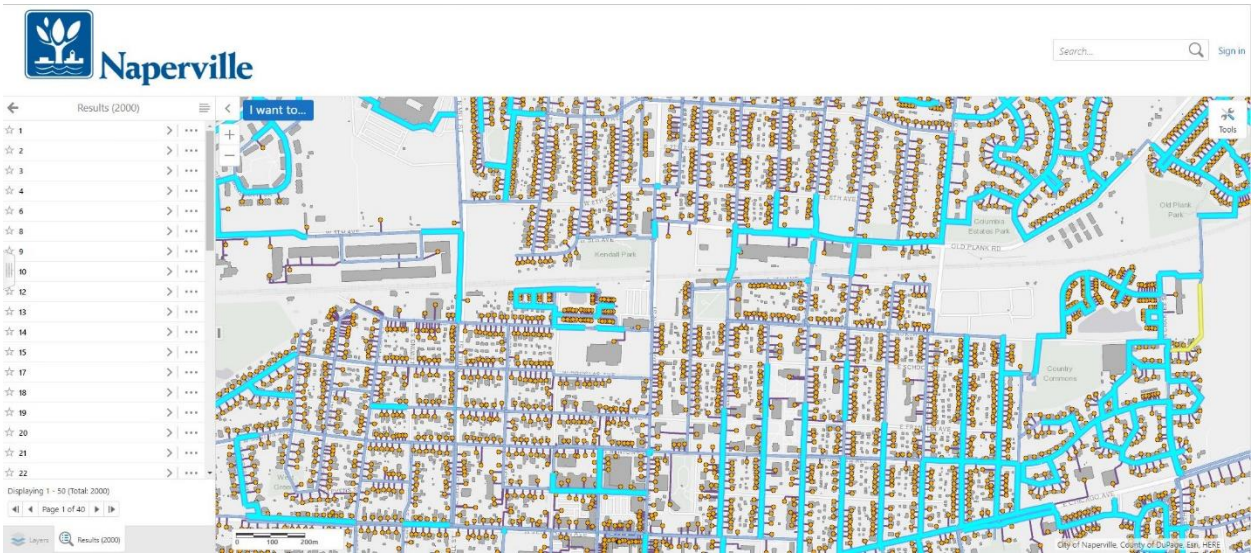

Figure 6. Final layout of the Geocortex Site showing search results for CAS pipes of our water infrastructure data.

Finally, after the workflow and “I Want to Menu” function was set up and running correctly, we adjusted the layout of the Site. This included adding the Naperville logo, adjusting the height of the banner, setting an initial extent, setting up Maptips (pop-ups) of our data and selecting what elements to display.