CADSWES Accomplishments: April 2017

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I New/Enhanced Software

A. Sponsored Tasks

**USACE ABQ 5.11** - Output Canvas - Combine Output Canvas information with Geospatial View

In April, CADSWES staff completed a large portion of the functionality for USACE ABQ task 5.11 to place Output Canvas teacups, charts, and text on the Geospatial Workspace. With this functionality, the user will create an output canvas device that contains template items such as teacups, charts, and text items. Configuration of those items takes place on the output canvas. Then, the user can choose to show the items on the workspace. The items can be moved graphically on the workspace to the desired location. Editing is from the canvas and placement is on the workspace.

Additional information can be found in the following document:

R:\doc\Output\OutputCanvas\2017\CanvasItemsOnWs-April2017.docx

**BOR-LC 3** – DIT Enhancements

In April, CADSWES staff met with the sponsor to discuss possible enhancements to the Demand Input Tool. In addition to the existing DIT functionality, the sponsor would like DIT data represented in relational database format for query and update purposes. The sponsor would benefit from the ability to query data by attribute. Ideally it would support using R to build baseline data that could be entered into the DIT using an “array-write” ability or something more flexible than the current DIT allows. Rather than entering one value at a time, they would prefer the ability to paste a number of items simultaneously. They would like the enhancements to include an efficient way to add sparse data as the new study data is delivered by state, sector, and decade in the form of sparse values.

A related tool called DB\_Processor had been developed in 2012 for a particular study. This tool added functionality to a DIT workbook for a particular study and provided the ability to export DIT data to CSV files. A custom Microsoft Access schema was also developed and included with this tool into which the CSV files would be imported. Queries were written and included with the schema to assist with data analysis.

CADSWES staff inspected the tool mentioned above for reference and conducted preliminary exploration of two possible approaches from a technology standpoint: 1) MySQL for Excel Add-In and 2) Excel as a Front-End for Access. MySQL for Excel is unique in that data can be exported from Excel directly into automatically-created MySQL database tables without writing code, assuming data is formatted cleanly-enough. Excel as a Front-End for Access on the other hand, does not provide a plug-in for automatic export and table-creation but is more integrated with Visual Basic. From Excel, one would write VBA code that uses ActiveX Data Objects (ADO) for exporting to Access. In addition, Microsoft Access is easily installed and maintained.