**Multi-Scale Mapping with Large Production Output – Lessons Learned and Moving Forward**
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**ABSTRACT TEXT:** Researchers at U.S. Geological Survey’s, National Geospatial Technical Operation Center (NGTOC), are looking at methods to build maps on a multi-scale platform capable of high production throughput. The NGTOC is a center devoted to creating new innovative ways of mapping, especially for high quality and accuracy on a large production scale. In 2009, the NGTOC reestablished the US Topo 1:24,000 scale mapping program which now distributes updated maps for the entire United States every three years. The Center intends to build on lessons learned from the US Topo success to create a multi-scale, high throughput process. Though the idea of large production multi-scale mapping seems straightforward, publishing varied scaled maps utilizing a repetitive production line has presented many challenges. We will discuss this year’s approach to the project, what was accomplished and what will potentially be undertaken next year. Included will be examples of ArcMap templates, data and annotation, and a look at the first version of Workflow Manager used by the production line.

**Discovering Mid-Century Architecture in State College, Pennsylvania**
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**ABSTRACT TEXT:** Combining interests in architecture with GIS, and using all open source tools, this project improves the discoverability of mid-century modern architecture in State College, Pennsylvania. As these structures reach their seventh decade of existence, many are under pressure from developers and builders who carelessly modify or simply demolish these homes to be replaced by uninspired McMansions. Preserving this unique style of architecture is important for future architects and builders to observe, study, learn, and iterate from.

Utilizing open source software such as Open Street Map, Leaflet, QGIS, Docker, SQLite, TourML, Drush, and Drupal among others, I’ve created an interactive web map pinpointing building locations in town with popup windows for displaying specific building information. In addition, I’ve created a mobile tour package to allow individuals to physically visit buildings of their choice around town.

**Urbanizing Kitchener Waterloo: A Historical Geospatial Perspective**
*Eva Dodsworth, Geospatial Data Services Librarian and Markus Wieland, GIS Specialist, University of Waterloo, Waterloo, ON Canada*

**ABSTRACT TEXT:** Urbanizing Kitchener Waterloo: A Historical Geospatial Perspective aims at providing scholars, researchers, and the public with a one-hundred year visual directory, index and account of Kitchener-Waterloo’s residential, business and community development. This project takes digitized city directories (1900-2000), collates them, and offers the tens of thousands of individual entries as a single product in ArcGIS Online.

The searchable interactive online map organizes the advertisements, household and business entries by street address, enabling query and location specific searches, allowing researchers to conduct spatial analysis, gain new insights, ask new questions based on geographic proximities, and transform their research and teaching as it relates to urban structure and population geography. Methodology, workflow and assumptions will be shared and discussed.