

Technology Report

June and July, 2023

Anna Remien Joins SCLS as Field Services Technician

We are pleased to announce that Anna Remian joined the SCLS Technology Team on Monday July 24th as a Field Services Technician. Anna will be splitting her time between help desk support and supporting PCs. You will soon hear her on the phone when calling in to report issues and meet her when she is on site to install PCs. She is already visiting two libraries this week! We are very excited for her to share her talents with us. You can read more about Anna in [Online Update](#).

SCLS Headquarters Move

SCLS staff completed the transition to the new building with the move of the Data Center which took place from Wednesday, 6/28 through Saturday, 7/1. As with every move, we ran into some unexpected developments (AC wasn't working right away! BadgerNet complications!), but overall the move went very smoothly. Our WiscNet connection and server infrastructure were back up by Thursday afternoon, with MUFN sites following on Friday and BadgerNet sites coming back up on Saturday. The Data Center move required a lot of planning and coordinating with outside service providers, and SCLS staff appreciate the patience, understanding, and words of encouragement provided by all the libraries. Thank you!

Drupal 9 Migration

Live Drupal 9 sites (June): [LAV](#), [WYO](#)

The remaining site of the original 48 is working hard on preparations to go live, and an additional library site is in the process of migrating to Drupal 9 from another platform.

SCLS staff have begun work on migrating the SCLS-related sites, and WI Trustee Training and the Drupal documentation sites' migrations are complete. Rose performed updates for 11 Drupal 9 modules on the evening of June 27.

PC Ordering and Repair Services Restored

The Ordering Moratorium has expired, and we are now accepting orders once again for PCs, laptops, and other items your library may need to check out materials to patrons. Thank you, everyone, for your patience during the transition to our new location!

Data Services

Dane County borrower mapping: I spent a lot of time in June working on finishing a data dashboard project requested by the Madison Public Library (MPL) Data Team. The dashboard includes two maps showing the distribution of registered library patrons across US Census geographies in Dane County: one map at the Census tract level and one at the smaller Block level. Interactive controls on the dashboard allow users to view the patron data by counts or as population percentages aggregated by geography.

The data is further broken down to the level of patron home library, including Dane County libraries and all MPL branch locations. An additional dashboard panel shows demographic data I gathered from the US Census in categories such as race, age, educational attainment, and housing status.

I did most of the data collection and cleaning using R scripts. R has libraries available to geocode addresses and match them to Census geographies. I used another R library to retrieve data from the US Census available through their API. Finally, I used multiple packages from the “tidyverse” library to aggregate and reshape the data into a form importable by Tableau, the dashboarding software.

2023 Peer library salary comparisons: Using a slightly edited Python script I wrote previously, I created an updated set of peer library salary comparison spreadsheets using the 2022 salary and service data from the Department of Public Instruction. The script uses data from 10 data fields as input to two algorithms designed to identify similar libraries within SCLS and across the state. The spreadsheets are available upon request to libraries looking to fill open staff positions; contact Public Library Administration Consultant Tracie Miller (traciemiller at scls.info) for more information.

Data dashboard updates: In July, the primary project I worked on was a series of updates to existing data dashboards published on the SCLS Tableau Public profile. The updates I’ve completed so far have involved refreshing the data to make it current and, in some cases, overhauling the dashboard design and functionality. Some examples include:

- [LINKcat Library circulation by PSTAT](#) – This new dashboard combines data and views from the [PSTAT Mapping](#) and the [Collection Usage](#) dashboards. Users can click to select an SCLS library or a PSTAT to view details of its respective circulation data. The dashboard also provides filters to limit the results by item collection type or audience. I also revised the data collection and cleaning process used to produce the underlying data to make timely updates easier.
- [Per Capita Comparison](#) – The data for this dashboard comes from DPI Annual Reports: I added 2021 and 2022 to bring the dashboard up to date. Eventually, I plan to refresh the dashboard design and enlarge the type and other elements to make them easier to view. I will also need to automate the back-end data collection process for annual service data, perhaps with a Python script. Doing so would make the data more consistent across the various dashboards and other projects that incorporate it.
- [Cardholders by Age Group, Items Borrowed by Age Group](#) – I am currently working on updates to these dashboards, which use similar data sets. In addition to adding current data and revamping the design, I am looking into whether I can combine the presentation layers of these dashboards in a meaningful way. That type of revision might also allow me to use a single data set for all the relevant views.

Map shapefiles: As part of the update procedures for the “LINKcat Library circulation by PSTAT” dashboard, I created a revised set of shapefile data for the SCLS Patron STATistical Classes (PSTATs). Tableau and other types of software use shapefiles to generate the outlines and locations of geographical entities on maps. In the case of PSTATs, the entities consist of municipalities in SCLS and

SCLS-adjacent counties, along with the other non-adjacent counties in Wisconsin. I used QGIS, a free software program, to combine data from the Wisconsin Department of Natural Resources, Wisconsin Legislative Technology Bureau, Wisconsin Department of Public Instruction, and the US Census Bureau into a single map. I included the resulting shapefile in the revised PSTAT dashboard, and SCLS has several other map-related dashboards that will require similar updates.

- Tim Drexler

Scripting and Reports Team

E-mail notifications and Multi-Factor Authentication (MFA): At our July meeting, the Scripting and Reports Team discussed how MFA would impact the delivery of status alert messages generated automatically by scheduled scripts. The Team brainstormed a preliminary list of scripts that currently use e-mail notifications, then reviewed the options for making them MFA-compliant. We decided on an app password that scripts can use to authenticate and log in to an automated e-mail sender account. This choice seemed the least disruptive to existing procedures, though it will require updates to all the affected programs. Our next steps include finalizing the draft list of scripts and developing a plan for switching them to MFA compatibility on a single day to ensure functional continuity.

-Tim Drexler