# Enhancing CSPro Using Reports and Maps for Data Quality Evaluation and Dissemination

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## Problem Statement

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- Software that anyone can use to run a census for free
- Developed since the mid 90s
- Limited systems for quick data visualization

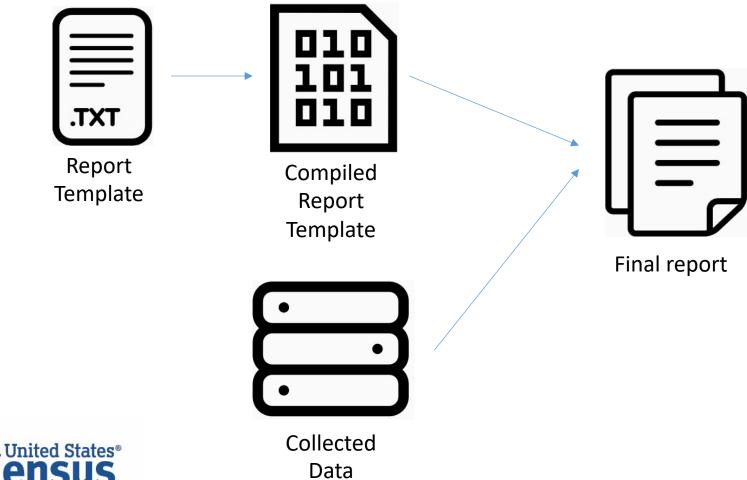
```
SPro 7.6 - [Windows Mapping.ord]
                                                                                                                File Edit View Options Tools Window Help
PROC GLOBAL
 ■ WINDOWS_MAPPING_FF
  WINDOWS_MAPPING_LEVEL
                                  map mymap;
                                  numeric markerId;

    ₩INDOWS_MAPPING_REC_ED*

                                  numeric buttonId;
                                  numeric geometryId;
                                  function removeButton()
                                      mymap.removeButton(buttonId);
                                 end;
                              10
                              11
                                  function addGeo()
                                      errmsg("tf");
                                      geometry geo;
                                      geo.load("malawi.geojson");
                                     geometryId = mymap.addGeometry(geo);
                             16 end;
                             17
                                      numeric result = accept("Close Map?", "Yes", "No", "Add", "Clear", "Remove", "move"
                                      if result = 1 then
                             21
                                          mymap.hide();
                             22
                                      elseif result = 3 then
                             23
                                          mymap.addMarker(50, 40);
                             24
                                      elseif result = 4 then
                                           Files Dicts Files Edits
                            H ← ► H \ Compiler Output ( Messages )
                                                               1
For Help, press F1
```

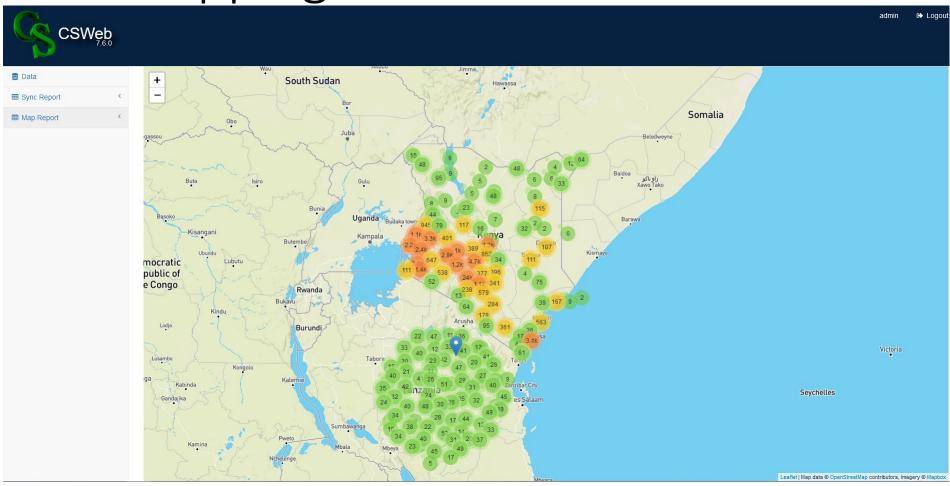


## Reporting System





## CSPro Mapping





#### Benefits

- Improves options for representing data within CSPro
  - Reports can be generated quickly while in the field
- More efficient census design
- Improved data visualization and enumeration area coverage
  - Much of the data collected through a census has a location component
- Improves application programmer efficiency



### Conclusion

- Features will be included in CSPro version 7.7
- Features will eventually improve data quality for censuses from developing countries
- More maintainable and extendable code
  - Leaflet can use any basemap

