

Creating a Redistricting Plan in Maptitude 4.5.2 Using 2000 Census Data

Peter S. Wattson
Senate Counsel
Minnesota

1. Create an appropriate directory structure for your files, e.g.
 - a. C:\Maptitude
 - i. Data
 - (1) ccMNdata 3-29-01
 - (2) ccUSdata 1999
 - (3) LCC 2000
 - ii. Layouts
 - iii. Maps
 - iv. Plans
 - (1) Congressional
 - (2) House
 - (3) Senate
 - v. Settings
 - b. C:\Program Files\Caliper\MT45red\Redist\Reports
 - i. Maptitude 4.5.2 Reports (copy the standard reports currently in your Reports directory)
 - ii. (Your) Reports (for any customized reports you have created)
2. Copy the new geographic files to your LCC 2000 working directory
 - a. From: \\Maps\Geodata\Caliper\LCC 2000 (only the files in the root directory, not all the subdirectories)
 - b. To: C:\Maptitude\Data\LCC 2000
3. Copy the new reports to your working Reports directory
 - a. Copy the subdirectory "Peter's Reports" from the server directory \\Maps\Geodata\Caliper\LCC2000 to your directory C:\Program Files\Caliper\Redist\Reports
 - b. Copy the files from the directory \Redist\Reports\Peter's Reports into the directory \Redist\Reports
4. Create your partisan index fields
 - a. Open file ccblk.cdf
 - b. Dataview
 - i. Party index field - Fill - Formula (whatever races you want to use)
 - ii. Modify Table
 - (1) Highlight party field
 - (2) In the Description box, type in the names of the fields you included in your formula
 - (3) Check to index the field (if Index is not checked already)

- (4) OK (You may encounter number crunching time of a couple of hours here.)
 - iii. Close dataview
 - c. Join block level data to higher levels (see Peter Wattson paper dated 3/21/01)
- 5. Edit the definitions at the end of the Political Competitiveness report to agree with the fields you chose.
 - a. Open Seagate Crystal Reports
 - b. Open the Political Competitiveness report file: Competit.rpt
 - c. Double-click on each of the three boxes with a definition; type the new definition
 - d. Save the report file. If you get a message that the file could not be saved and that a temp file has been created, use Save As to overwrite the old report and delete the *.tmp file.
 - e. Close Crystal Reports
- 6. Open your base map
 - a. Pick your favorite map, e.g., the last plan you worked on
 - b. Open the map file in the plan directory
 - c. Save As, e.g. C:\Maptitude\Maps\Minnesota 2001
 - d. Delete the Districts layer and any other layers you don't want
 - e. Save
 - f. Leave the map open
- 7. Create a new plan
 - a. Redistricting - Plan Manager - New Plan (in the appropriate library, e.g. Congressional)
 - b. Create a New Plan Using a Map - Use the Current Map Window - OK
 - c. Save Plan File As
 - i. Directory for the type of plan, e.g. Congressional
 - (1) Create New Folder for each new plan, e.g. (caucus ID)C0001 (you may use this folder later to save any export files, reports, etc. relating to the plan)
 - (a) File Name: e.g. (caucus ID) C0001.rdp
 - d. Plan Settings
 - i. Control Field - Population
 - ii. Number of Districts - e.g. 8
 - iii. Compute Ideal
 - iv. Import Plan - e.g. C:\Maptitude\Data\LCC 2000\Cong00.dbf

If you have a House export file and want to create a Senate plan

 - (a) Open the *.dbf export file in Maptitude
 - (b) Modify Table
 - (i) Add Field
 - 1) Name - Senate
 - 2) Type - Character
 - 3) Width - 2
 - 4) OK - Yes to modify table
 - (ii) Select Senate Field

- 1) Fill - Formula - Function - left(House00,2)
- 2) OK, OK
- (c) Close dataview - Save Your Work? - No
- v. OK
- e. If the plan imports properly, continue with Plan Settings. Otherwise, try again after diagnosing and fixing the problem. Don't be surprised if you get a "program accessed memory illegally" crash the first time. It should work the second time.
- f. Redistricting - Settings - Plan Settings
 - i. Summary Fields
 - (1) Drop - (drop Population 1990, if you don't want it)
 - (2) Add
 - (a) Race data.
 - (i) To get the minority reports to run, you must add all the race population fields in the new database.
 - (ii) Drop the 8 fields that show race percentages. (Control, highlight the eight fields, Drop). Those are in the file to speed preparation of color themes, but they will duplicate the percentage fields the program creates automatically if you add them here.
 - (b) Election data.
 - (i) To get the Political Competitiveness Report to run, you must add the first four fields (Rep Index, Dem Index, Third Index, Index Votes).
 - (ii) Add any other fields you want to see on your screen
 - (3) % Denominator
 - (a) None
 - (i) 18+_Pop
 - (ii) Index Votes
 - (b) Population - all the total population fields
 - (c) 18+_Pop - all the voting age population fields
 - (d) Index Votes - the three party index fields
 - (4) Don't hit "OK" yet, or you'll just have to return to Redistricting - Settings - Plan Settings to finish the rest of your settings.
 - ii. Properties
 - (1) Plan Type
 - (2) Administrator
 - iii. Advanced - Incumbent Database
 - (1) Choose File: C:\Maptitude\Data\LCC 2000\ (e.g.) Congressional Incumbents2001
 - (2) Name (from pull-down menu)
 - (3) Party (from pull-down menu)
 - (4) District (from pull-down menu)
 - iv. OK

- g. Layers
 - i. Counties00
 - (1) Style
 - (a) Border Width - 4.5
 - (b) Border Color - gray
 - (2) Labels
 - (a) Field - Multiple Labels - Name & Population
 - (b) To save multiple field labels
 - (i) Apply
 - (ii) Save as - C:\Maptitude\Settings\Your Name).stg\County Name & Population
 - (c) Size - 10
 - (d) Color - gray
 - ii. Citytown00
 - (1) Autoscale - Clear
 - (2) Style
 - (a) Border Width - hairline
 - (b) Border Color - black
 - (3) Labels
 - (a) Field - Multiple Labels - MCD_Name & Population
 - (b) Size - 8
 - (c) Color - black
 - (d) Overlaps - Autoscale - 1:1,000,000
 - iii. Multicounty Cities
 - iv. Census Blocks
 - (1) Border Style - None
 - (2) Labels - Population
 - v. Tiger/Line Segments
 - vi. Precincts00 - Labels - Population
 - vii. DOT State Hwy
 - viii. DOT US Hwy
 - ix. DOT Interstate
 - x. Hide any layers you won't be using, e.g. House & Senate incumbents in a Cong plan
 - xi. Add layers to compare other plans, e.g. companion Senate or House plan
 - (1) Border Style - dashes (so you can see other borders underneath)
 - (2) Border Width - 2
 - (3) Border Color - intense (to contrast with pastel district colors)
 - xii. Districts
 - (1) Style - Border Style - None
 - (2) Labels - Field - Multiple Labels - District and Deviation
 - (3) Move Up District layer to the top of the list.
 - xiii. Close layers

- h. District Colors
 - i. Map - Coloring - Create New Coloring - OK
 - ii. To remove coloring
 - (1) Color Theme Map Wizard
 - (2) Remove
- 8. Verify selection setting styles
 - a. Set selection layer in working layer window, e.g. census blocks
 - b. Tools - Selection - Selection Settings
 - i. Verify that Ready to Move (not Ready to Move:1 or any higher number) is crosshatched. If not, either:
 - (1) Select “Ready to Move” and set style to crosshatched; or
 - (2) Drop Ready to Move and rename one of the Ready to Move:* selection sets that already is crosshatched to “Ready to Move”
 - ii. Set Style of crosshatching to Transparent (so you can see the geography you’ve selected before finishing the move)
 - iii. Verify that Ready to Move Prev is crosshatched and transparent
 - iv. Drop the “Ready to Move:*” and “Ready to Move Prev:*” sets
 - v. Close Selection Sets and Selection menu
- 9. Draw some districts (if you didn’t import a plan)
- 10. Set up reports
 - a. Plan Manager - Reports
 - i. Set to “Yes” each of the reports you want to run
 - ii. Set Print Order (so reports print in the order their pages are numbered)
 - (1) Population Summary
 - (2) User Reports
 - (3) Contiguity
 - (4) Measures of Compactness
 - (5) Political Subdivision Splits
 - (6) Communities of Interest
 - (7) Incumbents
 - (8) Components
 - b. Repeat in each plan library, e.g. Congressional, Senate, House
 - c. User Reports
 - i. Drop
 - (1) If there are reports on the list you no longer want, drop them.
 - (2) Also, note that reports appear on the User Reports list in the order you add them. If you want to re-order your list, drop reports until the remaining ones are in the order you prefer.
 - ii. Add (in the following order, so they will print in the order the report pages are numbered)
 - (1) Minority 18+.rpt
 - (2) Minority.rpt
 - (3) Competit.rpt

11. Run reports
 - a. Population Summary (should be no problems here, but it's a good one to check out first to make sure the plan imported correctly)
 - b. User Reports
 - i. If the reports generate properly, you are done with user reports.
 - ii. If you get the xBase warning "File needs to be verified," click on "OK."
(Your summary fields are not correct.)
 - (1) Check your summary fields to make sure you added all the right race and partisan index fields, and in the same order they appear in the cblk.cdf file.
 - (a) Review the summary fields by using Redistricting - Settings- Plan Settings- Summary Fields
 - (b) Add (look for fields you missed)
 - (2) If you see no differences, call Lee Meilleur for help.
 - c. Other reports
 - i. Use Shift-Select to run all the reports in sequence
 - ii. Use Control-Select to skip one or more reports