This choropleth map presents the distribution of housing units constructed in St. Louis City from 1980 to 1985. The map's annotation includes 1980 census tract labels, city label, county outline, and major streets. The Urban Information Center disseminates data for the St. Louis Metropolitan Area and the nation with a concentration on census data and data from local governments. In response to this challenge, we have developed a number of macros to aid in the presentation of demographic data using the SAS/GRAPH GMAP procedure. The generation of annotation for this map is made possible by the use of three macros developed at the Urban Information Center: ANNOGEN, GENLABS, and GOUTLINE.

The ANNOGEN macro, used here to produce the major street line segments, street labels, and city label, converts annotation data stored in varying length sequential format to SAS/GRAPH annotate datasets. Storing annotation in the form of annotate datasets can be expensive in terms of storage because the SAS dataset must contain all variables relevant to any observation in the entire dataset. In addition, it is often easier (particularly for student assistants) to work with sequential data. ANNOGEN parameters include: textin (input), annoset (output dataset), x & y factors, offsets and limits, default values for standard annotate variables as they apply to text or lines, and a "userexit macro" for subsetting or final modification of the data.

The GENLABS macro creates annotate observations for plotting polygon labels, in this case tract, at the centroids of polygons. The label here is the census tract label. Other options would be to plot the value being mapped, or the label and the value.

The outline for the City of St. Louis is created by the GOUTLINE macro which inputs a GMAP dataset and converts it to a series of draws for the boundary of each polygon. Although a simple procedure, this capability is valuable when producing maps which show multiple levels of geography by various line colors, sizes, or types.

The goal of this map as well as many others produced by the Urban Information Center is to give sufficient annotation to orient the user who is unfamiliar with the geographic units often used by the Census Bureau and local governments.
ST. LOUIS CITY HOUSING CONSTRUCTION 1980 TO 1985
NEW HOUSING UNITS BY 1980 CENSUS TRACT

URBAN INFORMATION CENTER, U. OF MISSOURI ST LOUIS

1485
DATA SET WORK.STLTRS HAS 1600 OBSERVATIONS AND 1 VARIABLES. 1466 DBS/TRK.
DATA SET WORK.STLCNTY HAS 170 OBSERVATIONS AND 4 VARIABLES. 2234 OBSERVATIONS AND 2 VARIABLES. 2346 OBS/TRK.
NOTE: DATA SET WORK.CONNECT2 HAS 4 OBSERVATIONS AND 6 VARIABLES. 1234 OBS/TRK.
NOTE: THE DATA STATEMENT USED 0.45 SECONDS.
*---CREATE PORTION OF COUNTY BOUNDARY FOR ALL TRACTS EXCEPT 1084---*
PROC GREMOVE DATA=TRACTS OUT=STLCTY; BY COUNTY;
KEEP FUNCT ION L1 NE X Y XSYS YSYS;
RUN;
DATA SET WORK.STLCNTY HAS 170 OBSERVATIONS AND 4 VARIABLES.
NOTE: PROCEDURE GREMOVE USED 0.45 SECONDS.
*---GENERATE TRACT LABELS AT TRACT---*
%INCLUOE MACLIB(CENLABS)/NOSOURCE; SEGMENT=SEGMENT, MAXSEG=1, STYLE=TRIPLE>, COLOR=BLUE; PATTERN2 C=BLACK V::M1N045;
PATTERN3 C=BLACK V::M3N135;
PATTERN4 C=BLACK V::M5X90;
GOPTIONS ROTATE HSIZE::11 VSIZE=17;
PROC GMAP MAP=STLTRS OATA=W60VALS;
OUTPUT OUT=MINX MIN=X;
TITLE .C=BLUE .F=XSWISS 'ST. LOUIS CITY HOUSING CONSTRUCTION 1980 TO 1985' ;
PROC MEANS DATA=TRACTS NOPRINT MIN;
VAR X;
NOTE: THE PROCEDURE MEANS USED 0.20 SECONDS.
PROC MEANS DATA=TRACTS NOPRINT MAX;
VAR X;
NOTE: THE PROCEDURE MEANS USED 0.20 SECONDS.
DATA CONNECT2;*--MOVE TO POSITION TRACT 1084 CAME FROM---*
LENGTH function $8: NE'W='NEW UNITS t ;
FORMAT NEW LEVELS.;
NOTE: THE PROCEDURE FORMAT USED 0.22 SECONDS.
1070 *---1980-85 NEW UNITS BY TRACT FOR ST LOUIS CITY---*
1071 PROC PRINT; TITLE2 'NEW HOUSING UNITS BY 1980 CENSUS TRACT';
NOTE: THE DATA STATEMENT USED 0.60 SECONDS.
1072 LENGTH function $8:
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NOTE: THE DATA STATEMENT USED 0.41 SECONDS.
1073 PROC PRINT; TITLE 'CONNECT';
NOTE: THE PROCEDURE PRINT USED 0.18 SECONDS AND PRINTED PAGE 7.
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1980 TO 1985 CONSTRUCTION STATISTICS IN ASCENDING ORDER