City of New York Department of City Planning
Information Technology Division
Geographic Systems Section

GEOSUPPORT SYSTEM TECHNICAL BULLETIN 08-01

SUBJECT: Version 10.4 Enhancements

Date: 8 April 2008

Target audience: All Geosupport users

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Introduction

The principal enhancements to Geosupport for Version 10.4 include:

I. Enhancement of ZIP Code Processing[1] for Duplicate Address Pseudo-Streets (DAPSs)
II. Browse Flag[2] Enhanced for use with Functions 1, 1A, 1E, 1N, 2, 3 and 3C[3]
III. Similar Names Enhancements
IV. Enhanced Partial Street Name Search
V. Enhanced Fuzzy Search for Function 2
VI. Processing Duplicate Address Pseudo-Streets (DAPSs) in Function 2, 3, 3C and 3S
VII. "No Cross Street" and Coincident Segment Processing
VIII. Cross Street Names Flag (Review Item)

In addition, various minor reported bugs have been fixed.

User Programming Considerations

I. Enhancement of ZIP Code Processing for Duplicate Address Pseudo-Streets (DAPSs) (COW[4] and MSW[5])

With Version 10.4, if you provide ZIP Code input, Geosupport will recognize which duplicate street name should be used. For example, if 27 Martin Luther King Jr Blvd in Manhattan with the ZIP Code set to 10027 is provided as input to Function 1, 1A or 1E, Geosupport will determine that East 125 Street should be used. If the ZIP Code provided had been 10036, Geosupport would determine that West 125 Street should be used.

[1] ZIP Code Processing was introduced with Version 10.2 and was described in Technical Bulletin 07-1
[2] The Browse Flag was introduced in Version 10.3 for use with the Browse Functions (BB and BF). Its usage was described in Technical Bulletin 07-2.
[3] See last page of this document for a Table of Geosupport Functions
[4] COW: Character-Only Work Area
[5] MSW: Mainframe-Specific Work Area

Similar processing applies to Hillside Avenue and Center Drive in Queens. This processing will occur even if the borough code has been provided as well.

II. Browse Flag Enhanced for use with Functions 1, 1A, 1E, 1N, 2, 3 and 3C (COW Only)

In Version 10.3 of Geosupport, the Browse Flag was introduced for use with the Browse Function. It enables a user to limit browse output to primary names by setting the flag to **P** or to limit output to principal names by setting the flag to **F**. Leaving the flag blank will produce all the output that had been produced in the past.

With Version 10.4 of Geosupport, the functionality of the Browse Flag is being enhanced. It now may be used with Functions 1, 1A, 1E, 1N, 2, 3 and 3C.

Setting the flag to **P** will cause the output street name(s) and code(s) that are returned to the user to be the primary name of the input street names or codes.

Setting the flag to **F** will cause the principal name of the input street name to be returned to the user.

For Functions 1, 1E, 2, 3 and 3C when the Geosupport call involves two work areas, the Browse Flag may also be set to **R**. For all of these functions except 1E, the principal Department of City Planning (DCP) preferred street name and code will be returned in the output section of Work Area 1. For Function 1E, the principal Board of Elections (BOE) preferred street name and code will be returned to the user. If the user supplies a value of **R** for Function 1A or 1N, it is rejected with a GRC of 79.

Please note that this functionality is available only with the Character-Only Work Areas.

The following table shows the name of the field in Work Area 1 for the Browse Flag as a function of the language.

Language	**Field Name in COW COPYLIB**
BAL	P1IBRFLG
C	browse_flag
COBOL	PIWA1-IN-BROWSE-FLAG
PL/1	PIWA1_IN_BROWSE_FLAG
NATURAL	PIWA1-IN-BROWSE-FLAG

With Version 10.4, the Browse Flag is available in the CICS version of GOAT for Functions 1, 1A, 1E, 1N, 2, 3, and 3C. For the Desktop Edition of GOAT it is available for Functions 1, 1A, 2, and 3.

This functionality will also be available in GBAT provided that Character-Only Work Areas are being used. A new keyword, BROWSEFLAG, is being introduced. This flag may be set to P if you want the primary name of the input street names returned, F if you

want the principal names of the input street named returned or R if you want the DCP or BOE preferred street names returned. The value of R is only valid for 'GEOCODE=YES' or 'GEOCODE=ALL'.

If the input street name is changed owing to the setting of the Browse Flag, the warning message, 'OUTPUT STREET NAME/CODE DIFFER FROM INPUT', will be displayed. The reason code will be either 6 or 7.

III. Similar Names Enhancements (COW and MSW)

With the expansion of the Street Name Dictionary (SND) to include roadbed names and highway entrances and exits, there are many more similar names in the SND. Since Geosupport may return a maximum of only ten names, frequently the names returned may not be particularly helpful.

Geosupport will no longer return in the list of similar names any names that could not be used in the specified function call. For example, Non-Addressable Place Names and Addressable Place Names will not be included in the similar names list for Functions 2, 3, 3C and 3S.

The similar names list will include only one spelling variation per 7 digit street code. The spelling variation selected is the first one encountered based upon sort sequence, which means it may or may not be the principal street name.

IV. Enhanced Partial Street Name Search (COW and MSW)

Since the addition of roadbed names to Geosupport, fewer input street names were accepted as partial street names. For example, if the user entered 'A C P'[6] as the street name in Manhattan as part of a generic Function 1 or 1E call, as opposed to a roadbed Function 1 or 1E call, the request would be rejected, because there are many possible similar names. Comparable results would occur with Function 1A, since Function 1A does not currently support roadbed calls. With Version 10.4, 'A C P' will be considered a partial street name of 'A C P Boulevard' for generic calls. The reason is that the other street names beginning with 'A C P' are roadbeds and would not be accepted with a generic call.

For Function 2, 3, 3C or 3S calls, Non-Addressable Place Names (NAPs) and Addressable Place Names (APs) will no longer be considered when attempting to resolve an input partial street name. NAPs and APs are not valid for these functions.

V. Enhanced Fuzzy Search for Function 2 (COW and MSW)

Prior to Version 10.4, if, for example, a user supplied 33 and Madison Avenue in Manhattan as the input to a Function 2 call, the call would be rejected because, in addition to East 33 Street and West 33 Street, there is also the 33rd Precinct. With this

[6] Adam Clayton Powell

enhancement in Version 10.4, the 33rd Precinct is eliminated as a possibility because it is a Non-Addressable Placename which may not be used in a Function 2 call. This leaves only East and West 33 Street as possibilities and since only East 33 Street intersects Madison Avenue in Manhattan, the call will be processed successfully and a warning message will indicate a street name change.

VI. Processing Duplicate Address Psuedo-Streets (DAPSs) in Function 2, 3, 3C and 3S (COW and MSW)

If one of the DAPSs is supplied as input to a Function 2, 3, 3C or 3S call, the associated "town name" will be stripped off to provide a valid street name for these calls. For example, if the input to the Function 2 call is "Hillside Avenue Douglaston", the word "Douglaston" will be removed and the street name "Hillside Avenue" will be used.

VII. "No Cross Street" and Coincident Segment Processing (COW and MSW)

Prior to Geosupport Version 10.4, if there were no cross streets at the end of a street segment, cross streets from preceding or subsequent segments were picked up and returned to the user. No other changes were made to the information returned to the user. This presented two problems.

The first problem involved the address numbers, in that the low address number did not necessarily match the low address number associated with the low end cross street and the high address number did not necessarily match the high address number associated with the high end cross street. This issue has been resolved in Version 10.4 by returning the low and/or high address number associated with the cross street returned in Work Area 2. This resulted from the fact that while we moved the cross streets from the preceding or subsequent segment into WA2, we did not move their associated low and high address numbers.

The second problem involved the situation where there is one feature on top of another feature. An example of this is the Long Island Railroad which is above Atlantic Avenue in Brooklyn. To provide the Long Island Railroad as a cross street for Atlantic Avenue is not helpful at all. Geosupport has been modified to prevent this from happening.

VIII. Cross Street Names Flag (COW and MSW) (Review Item)

This functionality has been available in both COW and MSW since before Version 10.0 and it might prove helpful in that it may reduce the number of Geosupport function calls required in a particular program. This functionality applies to Functions 1, 1E, 2, 3 and 3C. If the Cross Street Names Flag is set to **E**, then the cross street names will be returned in Work Area 1 in the same fields used for similar names and for the Browse Function.

The following table provides the name of the field in Work Area 1 for the supported languages:

Language	Field Name in COW COPYLIB	Field Name in MSW COPYLIB
BAL	P1IEXPND	W1IXSTF
C	expanded_format	xstreet-flag
COBOL	GEO-WA1-IN-XSTREET-FLAG	GEO-WA1-IN-XSTREET-FLAG
PL/1	PIWA1_IN_EXPANDED_FORMAT	GEO_WA1_IN_XSTREET_FLAG
NATURAL	PIWA1-IN-EXPANDED-FORMAT	GEO-WA1-IN-XSTREET-FLAG

For a Function 1, 1E, 3 and 3C call, the low end cross street names are stored in the first five street names of the fields used for Similar Names and for the Browse Function. The high end cross street names are stored in the last five street names of the fields used for similar names and for the Browse Function. The actual number of street names is found in Work Area 2 in the fields which provide the number of cross streets at each end of the street segment.

For Function 2, the cross street names are stored in the first five street names of the fields used for Similar Names and for the Browse Function. The actual number of street names is found in Work Area 2 which provides the number of intersecting streets at the specified intersection.

The following table provides the name of the field in Work Area 1 which contains the street names for the supported languages:

Language	Field Name in COW COPYLIB	Field Name in MSW COPYLIB
BAL	P1ONAMES	W1ONAMES
C	st_names[10]	sim_names[10]
COBOL	GEO-WA1-OUT-SIMILAR-NAMES OCCURS 10 TIMES	GEO-WA1-OUT-SIMILAR-NAMES OCCURS 10 TIMES
PL/1	PIWA1_OUT_SIMILAR_NAMES(10)	GEO_WA1_OUT_SIMILAR_NAMES(10)
NATURAL	PIWA1-OUT-SIMILAR-NAMES 32 (1:10)	GEO-WA1-OUT-SIMILAR-NAMES 32 (1:10)

TABLE OF GEOSUPPORT FUNCTIONS

Function	User Input	Selected Geosupport Output Items
1	Address	Standardized Street Name and Street Code, Address Range, List of Cross Streets, Zip Code, Community District, Health Area, Health Center District, 1990 Census Tract, 2000 Census Tract and block, Fire Engine or Ladder Company, School District, Police Precinct, XY Coordinates (based on the State Plane Coordinate System)
1E	Address	Same as for Function 1 + Political Geography (Election District, Assembly District, Congressional District, City Council District, Municipal Court District and State Senatorial District)
1A	Address	Standardized Street Name and Street Code, Tax Block and Lot, Alternative Addresses for Lot, Building Identification Number, RPAD Building Class, Interior Lot Flag, Vacant Lot Flag, Irregularly-Shaped Lot Flag, Corner Code, etc.
1N	Street Name	Standardized Street Name and Street Code (not available in the Desktop Edition of GOAT)
2	Pair of Intersecting Streets or Named Intersection	Standardized Street Name and Street Codes, List of Additional Cross Streets, Zip Code, Community District, Health Area, 1990 and 2000 Census Tract, Fire Districts, School District, Police Precinct, XY Coordinates (based on State Plane Coordinate System)
3	On Street and a pair of Consecutive Cross Streets	Standardized Street Names and Street Codes, Lists of Cross Streets at both ends, and information about both sides of the street, (including Zip Codes, Community Districts, Health Areas, 1990 and 2000 Census Tracts, Fire Districts, School Districts, Police Precincts)
3C	On Street and a Pair of Consecutive Cross Streets & a Compass Direction (Side of Street)	Same as Function 3 but for one side of the street only (Blockface information)
3S	On Street and an Optional pair of any Intersecting Street along the On Street	Street Stretch information: List of intersecting streets in order along 'on' street, the distance between them and node IDs
BF, BB	Character String	List of street names in alphabetic order - supports street name browsing
BL	Tax Block and Lot	List of Addresses for Lot, List of Building Identification Numbers (BINs), RPAD Building Class, Interior Lot Flag, Vacant Log Flag, Flag, Corner Code, etc.
BN	Bldg Identification Number	List of Address Ranges for Building, Tax Block and Lot, RPAD Building Class, Interior Lot Flag, Vacant Lot Flag, Irregularly Shaped Lot Flag, Corner Code etc.
D,DG,DN	Street Code and/or House Number	Street Name and./or House Number in Displayable Format