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

GEOSUPPORT SYSTEM TECHNICAL BULLETIN 08-02

SUBJECT: Version 10.5 Enhancements

Date: 20 August 2008

Target audience: All Geosupport users

- -

Introduction

The principal enhancements to Geosupport for Version 10.5 include:

I. Fuzzy Search for Functions 1, 1A and 1E (COW and MSW)
II. Census Block Suffix (COW and MSW)
III. The Distance between Duplicate Intersections is included in the Error Message (COW and MSW)
IV. Add Option to Display only "Real" Streets for Function 3S (COW Only)
V. Enhanced Fuzzy Search for Function 2 (COW and MSW)
VI. Miscellaneous Enhancements and Corrections

In addition, various minor reported bugs have been fixed.

User Programming Considerations

I. Fuzzy Search for Function 1, 1A and 1E (COW[1] and MSW[2])

With Version 10.5, Geosupport has been enhanced to recognize situations where there is only one possible valid similar name and that valid similar name is created by adding the word EAST or WEST to the front of the input street name. Prior to this version, if a user supplied 212 146 Street in Manhattan (for example) as the input to a Function 1, 1A or 1E call, the call would be rejected because 146 Street does not exist in Manhattan. Geosupport would return West 146 Street in Manhattan as a "similar name". The user could then re-enter the call supplying the street name as West 146 Street.

Since, in this sample situation, only West 146 Street exists (there is no East 146 Street). Geosupport will now accept the call with a warning message indicating that West 146 Street is assumed.

---

[1] Character Only Work Area
[2] Mainframe Specific Work Area

II. Census Block Suffix (COW and MSW)

In preparation for the 2010 Census, the Census Bureau has started to implement a Census Block Suffix to be used in conjunction with the 2000 census block number. This suffix may or may not exist once "official" 2010 census block numbers are determined, but must be made available in Geosupport to facilitate the processing of pre-2010 Census files received from the Bureau.

The following table indicates the location of the **Census Block Suffix** in the work areas:

	MSW		**COW**	
Function 1/1E	101		234	
	Left	**Right**	**Left**	**Right**
Function 3	253	264	270	420
Function 3C	104		270	

The following tables provide the names used within the appropriate work areas for the Census Block Suffix (as defined in the work area COPY files).

The first table is for **MSW**: Please note that the **COBOL** and **Natural** names provided are preceded by **'GEO-WA2-'** and the **PL/1** names provided are preceded by **'GEO_WA2_'**. The leading qualifiers were omitted from the following table owing to space requirements.

MSW	**Function 1** **(Regular and Long Work Area)**	**Function 3**		**Function 3C**
		Left	**Right**	
BAL	W2F1CBS0 W21LCBS0	W23LBS0L	W23LBS0R	W23CCBS0
C	cen_blk_00_sufx	l_cen_blk_00_sufx	r_cen_blk_00_sufx	cen_blk_00_sufx
COBOL	FN1-2000-CENS-BLK-SFX 1L-2000-CENS-BLK-SFX	3L-L-2000-CENS-BLK-SFX	3L-R-2000-CENS-BLK-SFX	FN3C-2000-CENS-BLK-SFX
PL/1	FN1_2000_CENSUS_BLOCK_SUFX 1L_2000_CENSUS_BLK_SUF	3L_L_2000_CENSUS_BL_SUF	3L_R_2000_CENSUS_BL_SUF	FN3C_2000_CENSUS_BLOCK_SUFX
Natural	FN1-2000-CENS-BLK-SFX 1L-2000-CENS-BLK-SFX	3L-L-2000-CENS-BLK-SFX	3L-R-2000-CENS-BLK-SFX	FN3C-2000-CENS-BLK-SFX

The following table provides the name or names of the **COPY files** that you will need to use for **MSW**:

MSW	**Function 1** **(Regular and Long Work Area)**	**Function 3**	**Function 3C**
BAL	W2BAL & W2BALL	W2BALL	W2BAL
C	WAC	WAC	WAC
COBOL	W2COB & W2COBL	W2COBL	W2COB
PL/1	W2PL1 & W2PL1L	W2PL1L	W2PL1
Natural	GEOLW2 & GEOLW2L	GEOLW2L	GEOLW2

The following table is for **COW**: Please note that the **COBOL** and **Natural** names provided are preceded by **'GEO-WA2-'**, which was omitted from the following table owing to space requirements. Please note that the **PL1** names provided are preceded by '**PIWA2_**', which was omitted from the following table owing to space requirements.

COW	**Function 1**	**Function 3**		**Function 3C**
		Left	**Right**	
BAL	P2F1BLS0	P2F3BS0L	P2F3BS0R	P23CBL0S
C	cen_blk_00_sufx	cen_blk_00_sufx	cen_blk_00_sufx	cen_blk_00_sufx
COBOL	FN1-2000-CENS-BLK-SFX	3L-L-2000-CENS-BLK-SFX	3L-R-2000-CENS-BLK-SFX	FN3C-2000-CENS-BLK-SFX
PL/1	FN1_2000_CENSUS_BLOCK_SUFX	FN3_L_2000_CENSUS_BLK_SUFX	FN3_R_2000_CENSUS_BLK_SUFX	FN3C_2000_CENSUS_BLK_SUFX
Natural	FN1-2000-CENS-BLK-SFX	FN3-L-2000-CENS-BLK-SFX	FN3-R-2000-CENS-BLK-SFX	FN3C-2000-CENS-BLK-SFX

The following table provides the name or names of the **COPY files** that you will need to use for **COW**s:

COW	**Function 1**	**Function 3**	**Function 3C**
BAL	P2BAL	P2BAL	P2BAL
C	PAC	PAC	PAC
COBOL	P2COB	P2COB	P2COB
PL/1	P2PL1	P2PL1	P2PL1
Natural	GEOLP2	GEOLP2	GEOLP2

III. The Distance between Duplicate Intersections is Included in the Error Message

Function 2 is used to obtain information about an intersection. Currently, a user has to enter a compass direction when there is a duplicate intersection. When a user is on location, he/she can probably determine which compass direction to select. However, if the user is not at the location, he/she will frequently have to guess which compass direction to use or send someone to the location in order to determine the relative location of one intersection in relation to the other intersection. If the two intersections are close together, under certain conditions it may not matter which intersection is selected. For example, if a medical emergency occurred at the intersection of Reade and Elk Streets in Manhattan, when reporting the location it would not matter which of the two intersections were provided since the two intersections are separated by about 21 feet. On the other hand, if the medical emergency is reported as having occurred at the intersection of Castle Hill Avenue and Zerega Avenue in the Bronx, more information would be required as the two intersections are separated by about 10,631 feet or roughly two miles.

The error message returned by Geosupport for a duplicate intersection has been modified to include the number of feet between the duplicate intersections. Depending upon the

circumstance, the user may make a reasoned decision as to whether the precise intersection is required or if it does not make any difference which intersection information is returned to the user.

IV. Add Flag to Display only "Real" Streets for Function 3S (COW Only)

For users who are seeking the names of cross streets along a stretch of a street, receiving items defined as "Non-Street Feature" or "Bend" is not helpful in locating a particular segment. To this end, a new flag has been introduced in Work Area 1.

This new flag is referred to as the "**Real Street Only**" flag and occupies position 328 in the Character Only Work Area 1. If it is set to **R**, only "Real" streets are displayed for Function 3S. This means that "Non-Street Feature" or "Bend" is not displayed. The length from the previous node to the node with "Non-Street Feature" or "Bend" is added to the next segment and the **Gap Flag** is set to **C**, which indicates that segment lengths have been combined and one or more nodes have been omitted. There are two exceptions to this situation; namely, if the Gap Flag of the current node is equal to **N or G** which means a new stretch has commenced or if the Gap Flag of the next node is equal to **N** or **G**. In this case, a new stretch is starting and adding in the length of the preceding segment does not make sense. If the "Real Street Only" flag is set to any value other than **R**, all segments are displayed.

The following table indicates the labels used for the "Real Street Only" flag for the various languages supported by Geosupport:

Language	**Label**
BAL	P1IRSTON
C	real_street_only
COBOL	PIWA1-IN-REAL-STREET-ONLY
PL/1	PIWA1_IN_REAL_STREET_ONLY
Natural	PIWA1-IN-REAL-STREET-ONLY

The "Real Street Only" flag has been implemented in both GOAT and GBAT.

On the **GOAT CICS** Screen, there is an entry label "Real Street Only", which if set to **Y** will cause non-street features and bends to be omitted from the output.

For the **Desktop Edition of GOAT**, in the Dialog Box for Function 3S, radio buttons have been added for an entry labeled "Real Street Only". Non-Street feature intersections and bends will not be displayed if the Yes radio button is depressed. Non-street feature intersections and bends will be displayed if either the No radio button is depressed or if neither button is depressed.

A new control statement has been introduced for **GBAT**. The user has the option of coding "REALSTREETONLY=YES" if the user wishes to omit non-street features and bends from the output.

The following two screen shots of CICS output illustrate the difference when the “Real Street Only” flag is used. The first is the normal output for A C Powell Boulevard between West 137 Street and West 140 Street in Manhattan.

```
***  GOAT  (Geosupport Online Address Translator)  --  Function Code = 3S  ***
OnStr: AC POWELL BLVD                    10610 AC POWELL BOULEVARD
Boro : 1   (M=1, Bx=2, Bk=3, Q=4, SI=5)  MANHATTAN
XStr1: W 137 ST                          36510 WEST  137 STREET
XStr2: W 140 ST                          36570 WEST  140 STREET
Which Intersections: Xstr1   Xstr2   (N,S,E,W-Req'd If Streets Intersect Twice)
Function : 3S  (QUIT=CLEAR,MENU=F3)                Real Streets Only: N (Y/N)
-------------------------------------------------------------------------------
Requested Stretch: AC POWELL BOULEVARD                Nbr of Intersections: 007
Stretch from WEST  137 STREET                 to WEST  140 STREET
Intersecting Street          2nd Intersecting             Node  No Ft from  Gap
                             Street (if any)               ID   Prev Inter Flag
WEST 137 STREET                                           0042455     260
Non-street Feature Intersection                           0087321     128
WEST 138 STREET                                           0042458     133
Non-street Feature Intersection                           0087324     126
WEST 139 STREET                                           0042459     134
Non-street Feature Intersection                           0087325     133
WEST 140 STREET                                           0042460     126



The Approximate Length of the Street Stretch is 780 Feet Excluding Gaps.
You are viewing the entire requested street stretch
```

The next illustrates the results when the “Real Street Only” flag is set on.

```
***  GOAT  (Geosupport Online Address Translator)  --  Function Code = 3S  ***
OnStr: AC POWELL BLVD                    10610 AC POWELL BOULEVARD
Boro : 1   (M=1, Bx=2, Bk=3, Q=4, SI=5)  MANHATTAN
XStr1: W 137 ST                          36510 WEST  137 STREET
XStr2: W 140 ST                          36570 WEST  140 STREET
Which Intersections: Xstr1   Xstr2   (N,S,E,W-Req'd If Streets Intersect Twice)
Function : 3S  (QUIT=CLEAR,MENU=F3)                Real Streets Only: Y (Y/N)
-------------------------------------------------------------------------------
Requested Stretch: AC POWELL BOULEVARD                Nbr of Intersections: 004
Stretch from WEST  137 STREET                 to WEST  140 STREET
Intersecting Street          2nd Intersecting             Node  No Ft from  Gap
                             Street (if any)               ID   Prev Inter Flag
WEST 137 STREET                                           0042455     260
WEST 138 STREET                                           0042458     261   CMB
WEST 139 STREET                                           0042459     260   CMB
WEST 140 STREET                                           0042460     259   CMB





The Approximate Length of the Street Stretch is 780 Feet Excluding Gaps.
You are viewing the entire requested street stretch
```

Please notice how the number of intersections went from 7 to 4 and how the Gap Flag field is displayed as CMB where the non-street feature intersection was merged with the following street. For example the distance from the previous intersection to West 138 Street in the first screen shot is 133 while in the second it is 261, which is the sum of distance from West 137 Street to the non-street feature intersection and from the non-street feature intersection to West 138 Street.

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

With Version 10.3 of Geosupport, fuzzy search for Function 2 was introduced. With this version of Geosupport, fuzzy search for Function 2 has been enhanced.

In Geosupport, all fuzzy searches are based upon Front Truncated Street Names in the Street Name Dictionary (SND). Originally a Front Truncated Street Name was only created if the Front Truncated Street Name could not be a partial street name of another street. An example of this would be “65 Street” in Manhattan. A Front Truncated Street Name could not be created because “65 Street Transverse” existed in Manhattan. By relaxing the rules for the creation of the Front Truncated Street Names, “65 Street” in Manhattan as well as 16 other Front Truncated Street Names in Manhattan and the Bronx have been added to the SND. As a result of the addition to the SND of these Front Truncated Street Names, Geosupport will now return data for the intersection of “65 Street” and Madison Avenue in Manhattan. Accompanying the returned data will be a warning message indicating that “East 65 Street” was assumed.

VI. Miscellaneous Enhancements and Corrections

There are situations where user input data may result in multiple warning messages. In some situations, the warnings may be combined into a single message; however in other situations, it is not possible to combine the messages. In this situation, Geosupport attempts to select the warning message that would be more important. Based upon user feedback, the relative importance of certain warning messages has been modified.

For Function 1A, the browse flag may now be set to **R**, which means that the user wants the input street name replaced with the DCP preferred street name.

Functions D, DG and DN have been enhanced to process the requested SNL (Street Name Normalization Length Limit).

In Brooklyn, S Avenue and N Avenue will be accepted as valid street names in addition to the more commonly used Avenue S and Avenue N.

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 Streets 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	Building 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