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Object numbering

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All objects in the GeoDatabase have a unique ID. This ID is generated automatically along with the import or manual input of objects and it cannot be changed by the user. The ID can be seen in brackets in the status bar when you hold the cursor on a point of the object or in column 0 of Property Explorer (see Fig 1). The ID is used by the logbook in Calculation and in GeoDatabase to identify objects and it is possible to search for a specific object ID (Edit > Search Object…).

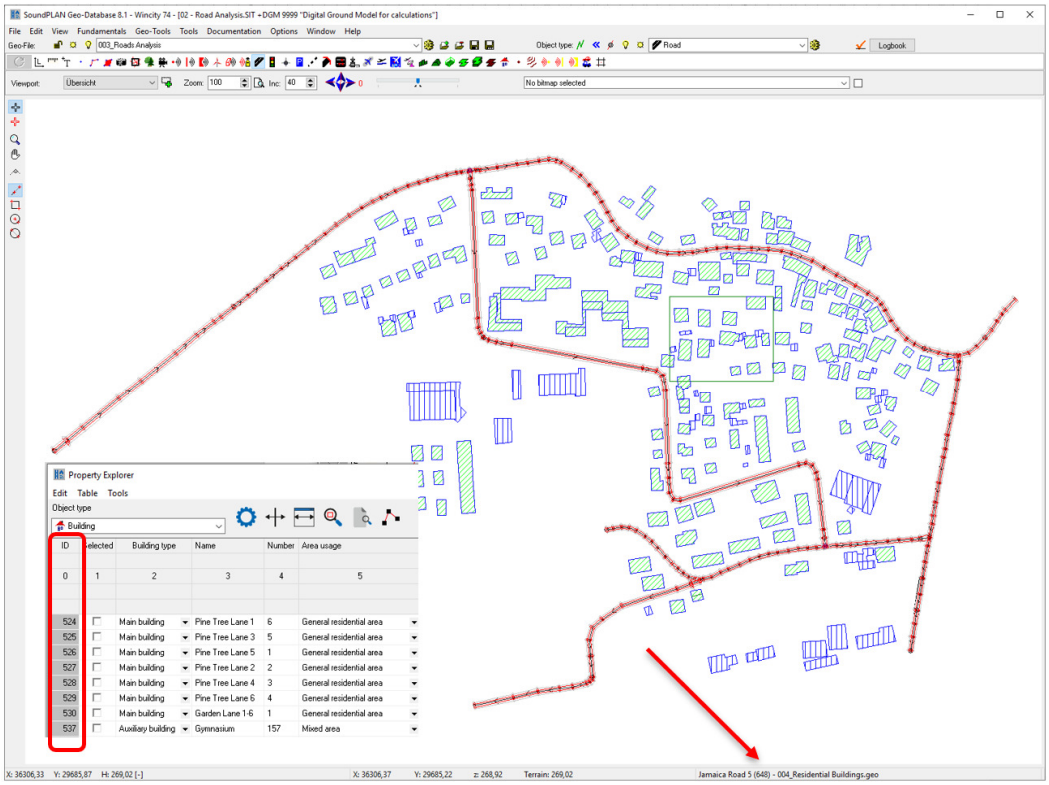

Fig 1 *The object ID number appears in the status bar and in Property Explorer*

Besides this ID, sources, receivers, buildings and photos can be assigned an **object number**, see Fig 2. The object number is user definable and can be changed later. However, this is (most likely, see later) manual work, so it can be recommended to decide for a format right from the project start. If the number is not set actively the program will automatically number new objects incrementally. If you want a number just entered to become a new start number from which new objects should be numbered incrementally, then click the button with the pencil next to the object number.

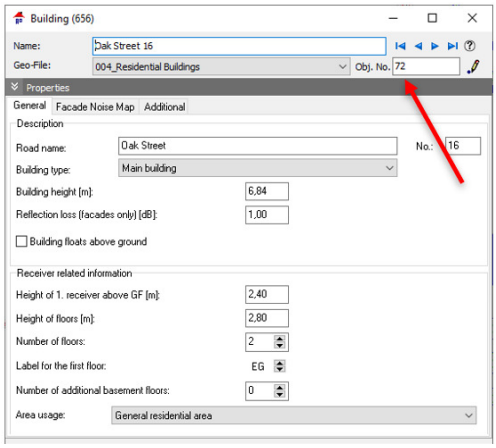

Fig 2 *The object number of a point source*

The object number is not only an identifier; it also provides basis for advanced sorting of result tables. Despite its name, it is not a number but a text string. This makes it possible to define more freely a format string in order to obtain a specific order in which the results should appear in result tables. This will be explained below in an example.

First define the format string and sort string. This is done in the Settings, see Fig 3.

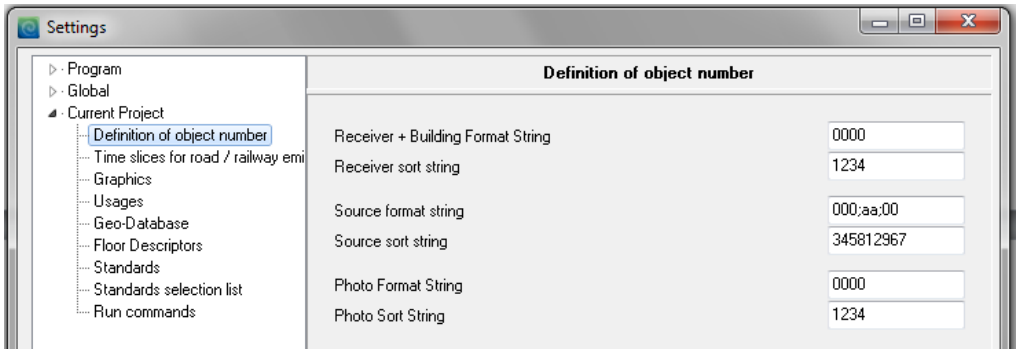

Fig 3 *The format string and sort string is defined in the Settings*

You have 9 characters available, and these characters can be gathered in blocks. As separator between blocks you can use comma, dot, semicolon or – (minus).

The format string is defined using place holders:

0 and 9 are place holders for numbers:

- 0 fills the numbers from right to left and all places do not need a digit
- 9 fills the number from left to right and all places must have a digit

A or a are place holders for characters/letters

Example:

Suppose you want your source object number to reflect both to which production / department / building it is related and what type of source it is (ventilation, cooling, transportation etc). Suppose it takes 3 digits to identify the production / department / building and 2 letters to identify the source type. Also, a consecutive source number up to 99 is needed. In that case define the format string as <000;aa;00>, see Fig 3.

Now assume you want to sort your result table by the source type first, secondly by the building number and finally the consecutive number. Then key in the sort string <345812967> as illustrated in Fig 4.

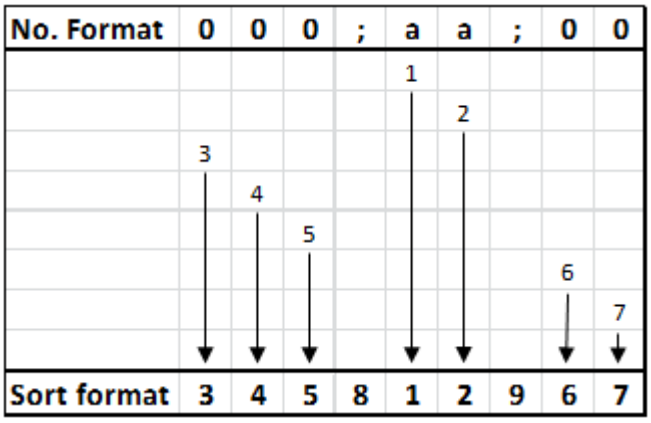

Fig 4 *Building up a sort string*

If you instead want to gather all contribution levels building by building primarily, then source type by source type secondly, in that case define the sort string <123845967>.

The object number is printed to result tables in two different formats, one format is a copy of Object No in the property window and another format – 'Formatted Object Number' – controlled by the sort string. In the 'Formatted Object Number' the characters appear from left to right in the order defined in the sort string. In Fig 5 the sort sting is <345812967>, and in Fig 6 it is <123845967>. These two examples match the cases mentioned above.

Object ID	Source name	Object Number	Formatted Object No.	LAeq, 8h dB(A)
4	Condensor AA	322;CO;5	CO32205;;	35,3
5	Cooling tower	555;CO;63	CO55563;;	39,1
3	Fork lifter	2;MO;56	MO00256;;	36,3
6	Truck BB	654;MO;33	MO65433;;	37,7
7	Outlet zz	2;VE;1	VE00201;;	41,0
2	Ventilator yy	22;VE;23	VE02223;;	40,4
1	Exhaustor xx	123;VE;1	VE12301;;	37,9

Fig 5 *Sort string <345812967>*

Object ID	Source name	Object Number	Formatted Object No.	LAeq, 8h dB(A)
3	Fork lifter	2;MO;56	002MO56;;	36,3
7	Outlet zz	2;VE;1	002VE01;;	41,0
2	Ventilator yy	22;VE;23	022VE23;;	40,4
1	Exhaustor xx	123;VE;1	123VE01;;	37,9
4	Condensor AA	322;CO;5	322CO05;;	35,3
5	Cooling tower	555;CO;63	555CO63;;	39,1
6	Truck BB	654;MO;33	654MO33;;	37,7

Fig 6 *Sort string <123845967>*

All that now needs to be done is to sort the table using 'Formatted Object No' as sort key. <u>This column does not need to be visible in the table.</u>

Hints:
As mentioned above you can leave it to SoundPLAN to number new objects. Default the Object No is incremented automatically, meaning that Object number increases with the ID, see example in Fig 7. If you for whatever reason find that inconvenient, you can use Tools > 'Object number' to renumber the objects. The numbering will in that case increase with the Object Name (sorted alphabetically), see Fig 8.

ID	G	Selected	Name	Number
0	1	2	3	4
2	P	☐	Exhaustor xx	1
3	P	☐	Ventilator yy	2
4	P	☐	Fork lifter	3
5	P	☐	Condensor AA	4
6	P	☐	Cooling tower	5
7	P	☐	Truck BB	6
8	P	☐	Outlet zz	7

Fig 7 *Default numbering acc to ID*

ID	G	Selected	Name	Number
0	1	2	3	4
5	P	☐	Condensor AA	1
6	P	☐	Cooling tower	2
2	P	☐	Exhaustor xx	3
4	P	☐	Fork lifter	4
8	P	☐	Outlet zz	5
7	P	☐	Truck BB	6
3	P	☐	Ventilator yy	7

Fig 8 *Numbering acc to Name*