

EXPECTED INPUT DATA (GIpSyNOISE)

1 Object: Contour line (topography)

Geometry:

3D-polyline with altitude (absolute height) at each polygon-point.

Attributes:

attribute	name	type
name	NAME	C40
identification code	ID	N10

2 Object: Height point (topography)

Geometry:

3D-point with altitude(absolute height).

Attributes:

attribute	name	type
name	NAME	C40
identification code	ID	N10

These 2 layers "contour lines" & "height point" let to constitute a topography layer bases for meshing. In 3D, roads, railways, industries & buildings are supposed to be lay down on this topography layer.

3 Object : „Road“ to be calculated with NMPB

Geometry:
2D-polyline.

Attributes:

attribute	name	type
name	NAME	C40
identification code	ID	N10
distance of center lines of outer lanes (in meter)	SCS	N5.2
hourly averaged traffic day (in av.veh/h)	M_D	N5
hourly averaged traffic evening (in av.veh/h)	M_E	N5
hourly averaged traffic night (in av.veh/h)	M_N	N5
percentage heavy vehicles day (in %)	P_D	N5.1
percentage heavy vehicles evening (in %)	P_E	N5.1
percentage heavy vehicles night (in %)	P_N	N5.1
speed of light cars day (in km/h)	V_PKW_D	N3
speed of light cars evening (in km/h)	V_PKW_E	N3
speed of light cars night (in km/h)	V_PKW_N	N3
speed of heavy vehicles day (in km/h)	V_LKW_D	N3
speed of heavy vehicles evening (in km/h)	V_LKW_E	N3
speed of heavy vehicles night (in km/h)	V_LKW_N	N3
road surface (selection from list)	R_SURF	N2
slope (in %)	SLOPE	N4.1
traffic flow (selection from list)	TRAF	N1
altitude (relative height) (in m)	ALT	N5.1

Διαγράφηκε: C15

The cross section of roads is constant, the outer lanes are symmetrical relative to the centreline of the road and the road cross section is horizontal. If one or more of these conditions are not true, the centrelines of the outer lanes are modelled as two independent roads with cross section 0 and with adapted attribute values.

Roads are considered to be on the same height as topography layer. If there are some differences of ground level, altitude indicates size of rubble or embankment regarding to topography layer (negative or positive value).

Road surface list:

road surface	code
Tarmac	1
Draining covering	2
Gravel chipping covering	3
Smooth concrete	4
Grooved concrete	5
Paved roads (in a town)	6

Traffic flow list:

traffic flow	code
Fluid traffic	1
Interrupted traffic	2
Accelerated traffic	3
Decelerated traffic	4

4 Object: „Railway“ to be calculated with SRM II

Geometry:
2D-polyline.

Attributes:

attribute	name	type
name	NAME	C40
identification code	ID	N10
train wagons type 1 day	W1_D	N5
train wagons type 1 evening	W1_E	N5
train wagons type 1 night	W1_N	N5
percentage of breaking vehicles (in %)	P1_TR	N5.1
speed (in km/h)	V1_TR	N5.1
train wagons type 2 day	W2_D	N5
train wagons type 2 evening	W2_E	N5
train wagons type 2 night	W2_N	N5
percentage of breaking vehicles (in %)	P2_TR	N5.1
speed (in km/h)	V2_TR	N5.1
train wagons type ... day	W..._D	N5
train wagons type ... evening	W..._E	N5
train wagons type ... night	W..._N	N5
percentage of breaking vehicles (in %)	P..._TR	N5.1
speed (in km/h)	V..._TR	N5.1
superstructure (selection from list)	S_TR	N1
disconnection (selection from list)	D_TR	N1
altitude (relative height) (in m)	ALT	N5.1

From 3 to 13

Railways are considered to be on the same height as topography layer. If there are some differences of ground level, altitude indicates size of rubble or embankment regarding to topography layer (negative or positive value).

Train type:

train type	code
passenger pads (C01)	1
passenger pads + disk (C02)	2
passenger disk (C03)	3
passenger disk motor (C03m)	4
freight trains pads (C04)	5
diesel trains pads (C05)	6
diesel trains pads diesel (C05d)	7
diesel trains disk (C06)	8
diesel trains disk motor (C06m)	9
urban subways (C07)	10
Intercity (C08)	11
high speed trains (C09)	12
high speed trains rail??? (C09r)	13

Superstructure list:

superstructure	code
concrete sleepers in gravel	1
wooden sleepers in gravel	2
gravel	3
blocks	4
blocks and gravel	5
contr. rail fixation	6
contr. rail fixation and gravel	7
poured in railway lines	8

Disconnection list:

disconnection	code
jointless rails	1
rails with joints	2
2 swiches / 100m	3
> 2 swiches / 100m	4

5 Object : Ground absorption

Geometry:
2D-polyline.

Attributes:

attribute	name	type
name	NAME	C40
identification code	ID	N10
ground absorption	G	N3.1

Ground absorption is a numeric value in the range from 0 (reflecting ground) to 1 (totally absorbing).

For example,

ground absorption	Value
totally absorbing ground (green areas)	1
reflecting ground (cement, asphalt, water, ...)	0
intermediary ground (land)	0.5
...	

6 Object: Building

Geometry:
closed 2D-polyline.

Attributes:

attribute	name	type
name	NAME	C40
identification code	ID	N10
nature (selection from list)	NAT	N1
reflection loss (in dB)	RL	N5.1
altitude (relative height) (in m)	ALT	N5.1

Nature list :

nature	code
dwelling	1
school	2
hospital	3
industry	4
commerce / business	5
others	6

Reflection loss is a numeric value in the range from 1 to 8 (highly absorbing).

For example,

reflection loss	value (in dB)
Smooth facade	1
Structured facade	2
Absorbing	4
Highly absorbing	8

7 Object: Barrier

Geometry:
2D-polyline.

Attributes:

attribute	name	type
name	NAME	C40
identification code	ID	N10
reflection loss left side (in dB)	RL_L	N5.1
reflection loss right side (in dB)	RL_R	N5.1
altitude (relative height) (in m)	ALT	N5.1

Reflection loss is a numeric value in the range from 1 to 8 (highly absorbing).

For example,

reflection loss	value (in dB)
Smooth facade	1
Structured facade	2
Absorbing	4
Highly absorbing	8

8 Object: Reference map

Geometry:
2D-polyline.

Attributes:

attribute	name	type
name	NAME	C40
identification code	ID	N10
prevalent zone (selection from list)	REF	N1

Prevalent zone list :

area	code
residential	1
mixed (residential / commercial)	2
industrial	3
sensitive area	4
others	5

9 Object: Population per blocks

Geometry:
2D-polyline.

Attributes:

attribute	name	type
name	NAME	C40
identification code	ID	N10
population	POP	N8