



### ZWGeo

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#### **Manage points**

#### **Add points**

The command let user mark points by insert point entity and text containing series and number in points clicked by user. After running the command, the user will be asked to input series and start number. After that, click on the place where first point should be located, and set a symbol of this point.





#### **Describe points**

You can use this function to insert points based on a template. Run the command, and choose set of values from: Coordinates, Elevation, Point, Quick Point and Sump. You can then put a point into a drawing with chosen description. You can also add a leader to your point.

0.0000

0.0000

Insert description		×
Template		
	Coordinates ~	open
	[select]	
	Coordinates Elevation	
Y	Point	
X	QuickPoint	- optor a uplua
	Sump	
		@X
Add leader		
	Settings	
	Securitys	
Drav	v Zamknij	

#### **Quick point**

You can use this function to conveniently insert many points, one by one. The points will have advancing numeration. You can also edit it any time by double clicking.



#### Interpolate

This function can be used to define a plane and calculate coordinates of points in this plane. Any points that are to be interpolated must be located within boundaries of 3 lines.



- First, choose 3 points you want to be your reference point. Make sure that they have Z value set, and its different from each other.
- Then you can draw a line between them, so a triangle is created, but this only makes it more readable. Make sure you have localization to point turned on, or you won't be able to catch your points.
- Run the command, and draw 2 lines between your points to make a triangle.
- Now you can click on any point within the figure, to create points with Z value, based on created plane.

#### **Import points**

The command inserts into drawing points defined in text files. After executing the command, application will display a window:

Points import	×
data format	
Columns order	YXZND ~
Columns separator	[Space]
Data file	
Draw	Close

In this window user may select format of files with data, columns order and separator of columns. Also user may select file with data. After clicking button [Draw], application will insert points, numbers and blocks of symbols if contained on a data file.

#### **Export coordinates**

The command will export coordinates of points into text files. After executing the command, application will display window:

Points exp	port				×
A 42	501.4674 1	71 2757	0.0000		
A 41	607.2802 1	74.4943	0.0000		
A 40	629.0060 2	30.0158	0.0000		
A 39	521.5839 1	93.8061	0.0000		
A 38	538.0794 3	11.2865	0.0000		
A_37	421.8060 3	51.5195	0.0000		
A_36	503.4790 24	40.8788	0.0000		
A_35	275.3579 1	82.9432	0.0000		
A_34	252.4251 23	26.3949	0.0000		
A_33	305.1303 24	47.3160	0.0000		
A_32	247.1948 3	16.9191	0.0000		
A_31	254.8391 2	71.4558	0.0000		
A_30	248.4018 3	53.9335	0.0000		
A_29	298.2907 3	48.7032	0.0000		
A_28	390.4243 2	79.5024	0.0000		
A_27	458.0157 3	18.5284	0.0000		
A_26	585,9567 3	31.4030	0.0000		
A_25	631.8223 3	32.6100	0.0000		
A_24	640.6735 ZI	68.6335 00.03C4	0.0000		
A_23	E44 11 44 11	33.0364 an acao	0.0000		
A_22	/25/0229 1/	30.3030 97.0249	0.0000		~
( <u>A_21</u>	433.0623 1	37.0240	0.0000		•
Data fo	rmat				
Numbe	er 🔺		Number	<u>^</u>	^
X		->	Y		
Y			×		V
Z	~		Z	×	
					×
Column	s separator				[Snace]
Column	o ocparator				[obace]
File					
1	Caus	1			Class
l	Save				Liose

In this window, there is a list of points selected from drawing. If you want to select a new one, click point [+] and application will ask you to select points. You can remove them from this list by [-]. In this window you can also define format of a file, columns order and a separator. Also you must write or select a path to a file where points will be stored. After clicking [Save], points will be saved.

## Table of points

Function can be run by using the command ATP\_START. Once the function is started, the following table will appear:



To which you can add points from drawing with this button and select objects (points in this case), just as presented below:



You will get the following result:

ATI	ATP Palete								
+	x								
1	D	Znajdź	Nazwa	Х	Y	Z			
30	C55	[1]	ZWGEO_Pt	446,207	172,375	0.000			
30	C1C	[1]	ZWGEO_Pt	370,510	144,209	0.000			
31	BE3	[1]	ZWGEO_Pt	310,657	165,040	0.000			
31	BAA	[1]	ZWGEO_Pt	390,251	208,936	0.000			
31	B71	[1]	ZWGEO_Pt	327,967	214,038	0.000			

This is the way how points have been added to the table. When changing properties in the table, the changes in the drawing are applied automatically.

ID 🔺	Znajdź	Nazwa	X	Y	Z
3B71	[1]	ZWGEO_Pt	400,000	150,000	25,000
2011	[*]	TWICED P	200.251	200 000	0.000

After changing coordinates of Punkt1, it will move to a different place. It is also possible to move points in the model:



Active Points Table will adjust values accordingly to their new position:

4	ATP Palete								
Ŀ	×						#		
Г	ID 🔺	Znajdź	Nazwa	Х	Y	Z	NUMER		
	3B71	[*]	ZWGEO_Pt	323,356	183,939	25,000	Punkt1		
	3BAA	[*]	ZWGEO_Pt	359,888	192,734	0.000	Punkt2		
	3BE3	[*]	ZWGEO_Pt	391,007	177,851	0.000	Punkt3		
	3C1C	[*]	ZWGEO_Pt	430,245	195,778	0.000	Punkt4		
	3C55	[*]	ZWGEO_Pt	461,628	172,572	0.000	Punkt5		

Once a selected polyline is added into the table, it will display all information regarding coordinates of polyline vertexes, its area and perimeter.



		Znaj	Nazwa	X	Y	Z	Powierzchnia	Długość
	>	["]	Polilinia				8323,573	395,411
				820,572	446,304	0.000		
I				863,129	455,687	0.000		
l				907,027	455,687	0.000		
l				950,255	436,251	0.000		
l				950,255	403,076	0.000		
l				898,650	405.087	0.000		
l				866,816	388,667	0.000		
l				839,002	377,944	0.000		
l				788,402	408,438	0.000		
				800,466	431,560	0.000		
1				820,572	446,304	0.000		'

Any changes to polyline vertexes will be automatically applied within the table. Active Points Table handles:

- points,
- group of objects,
- attribute blocks,
- polylines.

To access settings, click on this icon or type in the command ATP\_SETTINGS. Following parameters can be adjusted:

	Se	ettings			L	_		2	x
		]2↓   ==							
	⊿	Export							
		Column separator							
	4	View							
		Decimal Separator							
		Decimal Precision	3						
	De	cimal Separator							
	De	cimal Separator							
				Save			Can	cel	
L									ad

### **Report points as table**

You can use this command to make a table of points. Run the function, select points you want in your table, and confirm with Enter. Then place it in your drawing.

Zestawienie współrzędnych punktów						
Współrzędna X	Współrzędna Y	W spółrzędna Z	Numer			
322.813	185.3564	0	a1			
402.6712	245.874	0	a2			
431.9942	142.3078	0	a3			
511.8524	156.6573	0	a4			
739.0316	204.0972	100	1			
814.6298	244.8452	50	2			
859.1309	184.2594	20	3			
803.9066	129.0351	0	4			
896.6619	125.8182	0	5			
942.2353	239.4836	0	6			
975.6741	175.2768	0	7			
990.3674	192.1299	0	8			
1006.0752	188.3666	0	9			
993.3126	178.0584	0	10			
1015.8107	172.0044	0	11			

### **Points by distance**

With this function you can insert points on a polyline. You need to run the command, and choose a polyline. Command line will prompt for a distance:

Polecenie: ZWGeo Wskaż polilinię: Podaj odległość: (236.919 311.432 Podaj odległość: (297.137 345.415	:PointsByDistance 50 2 0.0) 120 5 0.0)
Podaj odległość:	
▦ ▦ ⊾	🛅 🗾 🖄 🔚 = 🔲 🗉 😘 📖

When you type the distance, a point will be made and its coordinates will be listed. You can continue inserting points or finish with Enter.



## **Manage lines**

### **Describe objects**

With this function, you can easily add values to points in your drawing. You may press S to go for setting, and then you can choose a set of values to input, for example Coordinates, Point etc.



#### Draw by numbers

When using this function, you can draw a line through each point of your choosing. Run the command, and type points you want to be connected. You can divide points in order by a comma (,) or select more of them one by one for example 5-15.



#### Mark middle segment of the polyline

With this function you can put a block into the middle of each section of polylines. Run the command, then click on a block that will be put in the middle of a line, and choose polylines. Confirm with Enter.



#### **Export polyline coordinates**

In order to export coordinates of polyline's points you can use this function. The program will ask for location and a file to save, in which coordinates will be saved. You can save it in .csv or .txt.



Here is how it looks after the process:

	А	В	С
1	Х	Y	Z
2	1274.9220	183.3887	0.0000
3	1351.0564	129.7730	0.0000
4	1459.3602	153.3639	0.0000
5	1554.2601	106.1820	0.0000
6	1277.0666	89.0250	0.0000
7	1405.2083	64.8979	0.0000

#### Polyline coordinates to a table

This function makes a table with coordinates of a chosen polyline. Just select polylines you want to be labelled and confirm with Enter.

Zestawienie punktów					
Pozycja X	Pozycja Y	Pozycja Z			
1405.2083	64.8979	0			
1277.0666	89.025	0			
1554.2601	106.182	0			
1459.3602	153.3639	0			
1351.0564	129.773	0			
1274.922	183.3887	0			

## **Raster images**

#### Insert all rasters from a selected folder

By this command you can export values of texts into external text file. After running the command, go to select Texts or MTexts and choose a path to text file where data will be stored.

Przeglądanie w poszukiwaniu plików lub folderów	$\times$
Wskaż katalog z plikami obrazów	
Ten komputer 🔨	]
> 🔮 Dokumenty	
> 👌 Muzyka	
> S Obrazy	
> 🕹 Pobrane	
n.i	
< >	
Eolder: Ten komputer	
OK Anuluj	]

#### Insert multiple raster files

The function will let you select many raster images, and insert it automatically using positioning file.

4 Select File		×	
Look in	: MultiRaster	🛁 🗠 🏹 🎸 🖛 🖉	
History History Desktop My Documents Cocoments Favorites Network	Nazwa 09N3O5.tfw 09N3O5.tff 10N3O5.tfw 10N3O5.tff 11N3O6.tff 11N3O6.tff 12n34o56.tff 12n34o56.tff 15N3O5.tfw 15N3O5.tff	v Preview	
	<	>	
	File <u>n</u> ame:	Wipeout V Open	
	File type:	*.* V Cancel	

## Tools

### **Rectangular offset**

Offsets square is a function used to measure the details of a terrain. After activating the function, indicate two points on the base line. Then please specify the distance and offset. The location corresponding to the entered value will be inserted point.



#### Insert coordinate description

By this command you can mark points in project by describing coordinates X and Y. The application will ask you to pick a point and insert description block in the chosen point. If you click next points, there will be leader connecting first click point with the rest of points, and description block will be always on last picked point.



#### **Front measure**

Front measure can be used to add lengths of certain segments such as cabling or pipes.



#### **Describe conduit**

After running the layer label command, you'll have to select polylines and they'll get labelled with a proper layer name in the middle of each segment:



Layer label adds a description to each segment of a selected polyline as well as the name of the layer.



#### Mark a boundary

Draw a fence by multiple copy of selected object along selected path. To draw such fence you need to:

- 1. Draw symbol which should be copied
- 2. Draw axis of fence (lines or polylines).
- 3. Run the command.
- 4. Select a symbol to copy.
- 5. Pick a base point.
- 6. Write a distance between symbols or click two points.
- 7. Select fence objects, the same drawn on point 2.



On the picture above you can see project before and after using the command.

#### Insert a cross grid

The command will draw an array of crosses in range – windows selected by two opposite points. In the command bar you have to specify the distance between cross marks.

+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+

#### Save text in txt file

By this command you can export values of texts into external text file. After running the command, go to select Texts or MTexts and choose a path to text file where data will be stored.

💤 Wskaż plik	do zapisu danych					×
Zapisz w	r: 📑 Dokumenty		~	🚁 🚅	<u>W</u> idok	▼ N <u>a</u> rzędzia▼
ZWCAD Syble	HelpNDoc Niestandard RPS Zoom Zrzuty ekran ZWCAD Syb Zwsoft Drawing1 ZWCAD 2024	owe szablony pakietu Office u le 4 Polski_Custom_Settings	2	Podgląd	rak podglą	jdu
Ulubione						
<b>S</b>	Nazwa pliku:	Rysunek1			~	Z <u>a</u> pisz
Sieć	Typ pliku:	*.txt			~	Anuluj

#### Rectangle

This function makes drawing rectangles at any angle. Run the command, choose an angle and height/width.



## View

## **Cover elements with text**

This command helps you make drawing more readable, by covering objects under MText by wipeout. All you need to do is run the command and select multiline text entity. Everything under this MText will not be visible, but it will remain there.



## Bring forward

Just run the command and select those entities, which should be over the other ones, and then select one entity which should be at the bottom of draw order.



## Trim Map

Maps can be cut by using a single button. Select an area outside of a closed polygon. Once the area to cut is selected (LINE, POLYLINE, ARC, CIRCLE, ELLIPSIS, IMAGE or TEXT), and there is something outside of the cut line, the effect will be similar to the one presented below:



This functionality makes work much smoother and easier. Cutting maps is considered as a work improvement since at the end of the design process, almost always maps require manual cutting, as the terrain is too large and, as confirmed by many users, this part of work is the most time consuming one when working on maps.



## Visibility

After running the command, indicate items that will be in one of the first group of objects. After selecting the items and approving by pressing Enter, previously selected objects won't be visible. To enable it you have to run the command. In this way, the user can quickly turn on and off groups of elements in the drawing. Just make sure that objects are on a different layers.



The user can make eight groups of objects in the drawing, they are formed in an analogous manner.



The function allows you to turn off or on all previously defined object groups 1-8.

## ZWGeo

#### Activate

A trial period that lasts for 30 days with full functionality is available after installation of the application.

## Activation must be completed on an account with administrative privileges.

Once the trial period of 30 days runs out, a licence will be needed in order to use the program. After receiving the payment, an e-mail with an activation code will be sent. Activation is available directly in ZWCAD or by using the function Activation from menu of the application. It is also possible to activate the program from its installation folder. By default located in:

C:\Szansa\Aktywator\2024\EN and run Aktywator\_2024.exe.

In operating systems such as Windows Vista, Windows 7, Windows 8 and Windows 10 it is necessary to right click on ZWCAD icon and select Run as Administrator.

Full licence code is only visible on the licence certificate that is sent out during completion

of the order due to security reasons. Once Activator has been launched, the following window will be displayed:

式 Usłu	ugi informatyczne '	SZANSA' appli	cation licence	es report			_ <b>D</b> X
	Application	Module	Version	Licence type	Licence state	Expiring	The code
	(Million)		100	(All states)	(Marrow )		
Þ	ZW Traffic	All	2019	The forward	Active	1-8.85	Terrate and an other
	ZWTraffic	Lite	2019	the increased	Active	10.00	100.000
	30 holds		100	(Margaret	(Married		
	100 No. 10	No.	1000	10000	Children .		
	Cit hadde	100	100	(All second	Pierre .		
	20 Teach		200	10000	(Margaret		
	Citation 1		10.00	The second	1000	10-00-00 Th	2000 COLUMN 2010
	(Withold)		1000	10000	(Margaret	-	
	1000000		1000	Children and	Children .		
	Other		199	(Margaret	Pierren .		
	(And the second		200	100000	(Margaret		
	10000		100	and the second	(Bernet)		
Leam	more				Activate	Return	Close

Please click on **Activate**.

A choice between activating the application online or offline will be present.

### **Online activation**

In the field **Activation code** please type in the information sent during realization of the order, afterwards click on **Activate**.

An information window will pop up confirming the activation.



Once ZWCAD is launched, all functions of the program should be loaded and available.

required to complete the

## **Offline activation**

In the <b>Offline</b> tab	Online	Offline	
In the <b>Offline</b> tab			additional steps are

activation.

Activation		
Online	Offline	
	Activation code	
1.	Create request file	
2:		
3:	Activate	
		Close

In the field **Activation code** please type in the information sent during realization of the order.

Activation code					
Activate					

Afterwards it is necessary to click on Create a request file, it will create an additional file which needs to be saved on the desktop or in any other directory of the computer.

1:	Create request file	
	croate requeetine	

The file needs to be sent in a form of an attachment to, <u>pomoc@zwcad.pl</u> and a reply will consist of response file which then needs to be loaded in the activator:



Response file needs to be saved on the computer and its localization needs to be

determined by clicking on the following icon.

Once the response file is loaded, click on Activate.

3:	Activate
----	----------

An information window will pop up confirming the activation.



Once ZWCAD is launched, all functions of the program should be loaded and available.

#### **Manual load**

After installing the overlay, it should load automatically after running ZWCAD 2024. The functions should be available and the toolbar with the icons should be displayed. If after running ZWCAD the overlay does not appear, please follow these steps:

- Run the command \_menuload.
- Press the button and select the file ZWGeo.cuix or ZWGis.cuix located in
   C:\Szansa\ZWGeo\2024\EN. Confirm the file by clicking Add.

Wczytaj/usuń dostosowania	×
Wczytaj konfigurację: ZWCAD ZWGEO_2024_0 ZWGis_2024_0 ZWNesting_2024_0 ZWToolbox_2024_0 ZWTraffic_2024_0	<u>R</u> ozładuj
<u>N</u> azwa pliku:	<u>W</u> czytaj
	Zamknij <u>P</u> omoc

## ZWGis

## Import/Export

### Import SHP

With this tool you can import .shp file to the drawing. Run the command, choose a file and click Import. You can also label with one category of the file or fill with hatch.

	int -	$\sim$	
		Import SHP	- 0 X
	Y	Plik danych	
		Uklady wepálczednych	
$\sim$ $R_{\rm i}$	~ ~	Układ pliku shp WGS84	
	- F	Układ rysunku WGS-84 (EPSG:4326)	~
	- Cart	Opisywanie Opisz elementy	• Opcje
R And R	Asi	Poligony	Opcje
The first of the f	L.	Opcje ogólne	
	$\tilde{\boldsymbol{\zeta}}$	Użyj wartości atrybutu jako warstwy	
the state of the s		Użyj losowych kolorów dla warstw	
	h	Importuj	Anuluj
<u>ل</u> "			

#### **Export SHP**

With this function you can export elements of the project with set values. Run the command so the window will pop out:

🖶 Zapisz dane gis		-	-		×
<b>Wybierz eleme</b> Wybierz obiekt	<b>nty</b> y do eksportu			X	
⊖ Wszystkie					
🔿 Warstwa	· · · · · · · · · · · · · · · · · · ·				
⊖ Wybierz	Wybierz				
<ul> <li>Zaawansowane</li> </ul>	Wybierz				
Pomoc	Anuluj Cofnij	Następny		Zakończ	

You can choose to export all, one layer, selected elements or one table.

🖳 Wybierz		_		×
Tabela Atrybut	Tabelka powiaty		~	
	gis_osm_railways_tree_1 gis_osm_natural_free_1 województwa			•
Anului			Arbierz -	
Anong		v	rybierz	

In next window you should choose a reference systems to save to.

ľ	🖳 Zapisz dane gis				-		×	
	Wybierz układ odu Wybierzwyjściowy	<b>iesienia</b> i docelowy układ współrzędnych				*		
	Układ rysunku Układ decelowy	WGS-84 (EPSG:4326) WGS-84 (EPSG:4326)	~					
	Pomoc	Anuluj Cofnij		Następn	y 2	Zakończ	)	

With last window, all there is to do is choose a location of the file to be saved in.

🖶 Zapisz dane gis				_		×
<b>Wybierz lokaliz</b> Określ gdzie ma	<b>ację</b> zostaćzapisany plik				(*	)
				Format	t .shp	~
Pomoc	Anuluj	Cofnij	Następny		Zakończ	

## Data

#### Gis data panel

With this command you can turn on the Gis data panel on.



#### Data: Table edit

You can use this function to create or edit a table, that is used to label objects in your drawing.

	atrybut	Tabelka powiaty				
Þ	iip_przest	gis_osm_ra gis_osm_n województ	ailways_free_1 atural_free_1 wa			
	iip_identy	* Útwórz n	ową tabelę *			
	jpt_sjr_ko		Tekst	$\sim$		
	jpt_kod_je		Tekst	$\sim$		
	jpt_nazwa_		Tekst	$\sim$		
	jpt_nazw01		Tekst	$\sim$		
	jpt_organ_		Tekst	$\sim$		
	jpt_orga01		Tekst	$\sim$		
	jpt_jor_id		Liczba rzeczy	$\sim$		
	wazny_do		Data	~		
	jpt_wazna_		Tekst	~		
	wersja_do		Data	~		
	jpt_powier		Liczba rzeczy	~		_
	jpt_kj_iip		Tekst	~		
	jpt_kj_i01		Tekst	~		_
	jpt_kj_i02		Tekst	$\sim$		_
	jpt_kod_01		Tekst	$\sim$		
	id_bufora_		Liczba rzeczy	~		
	G L.2.01		1 :	1		

## Data: Add data

This function allows you to add a point or polyline to a table. After running the command, just point at proper table and object.

🖳 Wybierz tabelę		—	×
Wybierz tabelę	powiaty		$\sim$
Anuluj	powiaty gis_osm_railways_free_1		 

#### Data: Remove data

You can use this command to remove any element off the table. Run the function, then select proper elements and confirm with Enter.

## GML

#### **GML Import**

This function can import a GML file into a drawing.



#### **GML Export**

This function can be used to export a piece of a drawing into GML file. You need to start the command, and then select needed elements, then press Enter.

🕢 Gdzie zapisać plik	GML			×
$\leftarrow  \rightarrow  \checkmark  \uparrow$	🛄 > Pulpit >	~ C	Przeszukaj: Pulpit	م
Organizuj 🔻 No	owy folder			□ • 😲
> 📥 Maciej — oso	bi:			R
🛄 Pulpit	*			
🚽 Pobrane		SHP	WFS	Grafiki JG
Dokumenty	*			
🔀 Obrazy	*			
🕖 Muzyka	* 7	7		
🔀 Wideo	Moje pliki	Zrzuty ekran		
🔀 Polskie				
<u>N</u> azwa pliku:				~
Zapisz jako <u>t</u> yp:	Pliki GML (*.xml)			~
🔨 Ukryj foldery			Zapisz	Anuluj

#### **WFS Import**

You can use this function to insert WFS data from a server directly into your drawing. In order to do so, you need to copy an address of a service to the top box and connect.

🖳 WFS	- 0 ×	🔛 WFS	- 🗆 ×
Serwer https://mapy.geoportal.gov.pl/wss/ser	vic 🗸 😑 Połącz	Serwer https://mapy.geoportal.gov.pl/wss/servi	i v = Połącz
Dane		Dane	
S01_Sad_apelacyjny         R02_Granice_obwodow_spisowyce         R01_Granice_rejonow_statystyczn         A06_Granice_obrebow_ewidencyj         A05_Granice_idenostek_ewidencyi         A04_Granice_miast         A03_Granice_gmin         A02_Granice_powiatow         A01_Granice_powiatow         A01_Granice_ponter	h ych nych jiŋych	S01_Sad_apelacyjny         R02_Granice_obwodow_spisowych         R01_Granice_rejonow_statystyczny         A06_Granice_obrebow_ewidencyjn         A05_Granice_jednostek_ewidencyjn         A04_Granice_miast         A03_Granice_gmin         A02_Granice_wojewodztw         A01_Granice_panstwa	n ch ych nych
Zakres współrzędnych		Zakres współrzędnych	
55,0320	Wskaż na rysunku	812 266,3773	Wskaż na rysunku
13,7047 24,8676	Widoczny obszar	110 124,8544 874 705,153	9 Widoczny obszar
48,6446	Ustaw widok na za	99 874,9376	Ustaw widok na za
Układy odniesienia dostępne na serwe	rze	Układy odniesienia dostępne na serwerz	ze
WGS-84 (EPSG:4326) ~		1992 (EPSG:2180)	
Wstaw	Zamknij	Wstaw	Zamknij

Here is the effect of importing WFS map with Polish borders.



## WMS

#### WMS\_Import

With this function you can import WMS map from Polish servers. You can choose a server and decide which features are to be imported.



## OSM

## **OpenStreetMap**

This function enables you to insert a map as a raster image from any place using OpenStreetMaps. After running the command, open a map you want to be placed and click Insert. You may have to choose a reference system as well.



Η

Н

With this function you can easily set up points or blocks in the drawing, or copy them to fill an area. After running the command, choose a point or a block to be copied, then start inserting them. You can also type A as Area in command tab to fill a rectangular area with your objects. You can also type D as Density to control distance between elements.

#### **Reference systems**

#### Set reference systems

You can set a reference system in your drawing with this command. The window will pop out, in which you can choose the system you need.



#### **Transform drawing**

With this function you can convert reference system in your drawing into another geodetic reference system. After executing the command and choosing a new system, a copy of it will be saved with date and time, and the current drawing will be converted into the new reference system.

#### Mark coordinate

You can use Mark coordinate function to insert a point into your drawing from another reference system. The system will ask for a system and then for coordinates to insert.



Here is an example of inserted point, labelled in two reference systems:



## Tools

#### Label

Label function is for inserting a description of a point that is available for it. After running the command, select the objects and choose the attribute.

💀 Opisywanie		-		×
Wybierz atrybut	osm_id			~
Wybierz styl	code fclass			
Wybierz wysokość opisu	name 0,0025			
Wyrównanie tekstu	Centrum s	symeria		$\sim$
<ul> <li>Użyj zasłony tekstu</li> <li>Liniowe</li> <li>Wstaw równolegle</li> </ul>				
Położenie	Środek			~
🕑 Wstaw wielokrotnie w odstę	pach co:	10	0	
Anuluj			Opisz	2



Report

The Report command creates an editable table in a drawing. You need to select the elements you want to be placed and confirm with Enter.

gis_osm_pois_a_free_1			
osm_id	code	fclass	name
770396316	2083	kindergarten	Przedszkole Miejskie nr 27
747454371	2083	kindergarten	Przedszkole Akademia Kolorowych Podróży
700129963	2082	school	Szkoła Podstawowa nr 17
549207655	2744	theme_park	Centrum Rozrywki Sosnowiec
549207655	2251	sports_centre	Centrum Rozrywki Sosnowiec
469455864	2541	car_dealership	Skoda Auto Śliwka Sosnowiec
427792938	2950	to wer	Dawna wieża transformatora
398213757	2204	park	Park Sielecki
398213756	2204	park	Park Sielecki
248842594	2501	supermarket	ALDI
193684679	2404	guesthouse	Pensjonat Sielec
193684541	2402	m otel	Okrąglak Residence
189308365	2251	sports_centre	Centrum wspinaczkowe Sport Poziom 450
180841320	2501	supermarket	Biedronka
180816934	2012	community_centre	Sosnowieckie Centrum Organizacji Pozarządowych
133017945	2251	sports_centre	M OSiR Kąpielisko Sielec
133002047	2256	sta diu m	Stadion Zimowy
133002039	2721	attra ction	Zamek Sielecki
133002039	2731	castle	Zamek Sielecki
133002039	2014	arts_centre	Zamek Sielecki
70083988	2504	mall	Centrum Handlowe Plejada Sosnowiec

#### Select

You can use the Select function in order to select elements from one group. Just turn on the command and select a group from your table. All of the objects in this group will be selected.

🖳 Wy	/bierz		- 0	×
Tabela	3	gis_osm_pois_a_free_1		~
	Atrybut	Porówna Wartość	Wy Operator	
1	name	V = V ALDI		7 L+
				-
Ar	nuluj		Wybierz	



In this example, all ALDI buildings in the area were selected:

## Select by area

You can use this function to select points or lines inside an area. Run the command, select the rectangular frame and all the objects inside will be selected.



## Turn on/off fill

You can turn filling of objects on or off with this command.

