



GE  **MAX**

TUTORIAL
DATA MANAGEMENT

DATA MANAGEMENT

DESCRIPTION

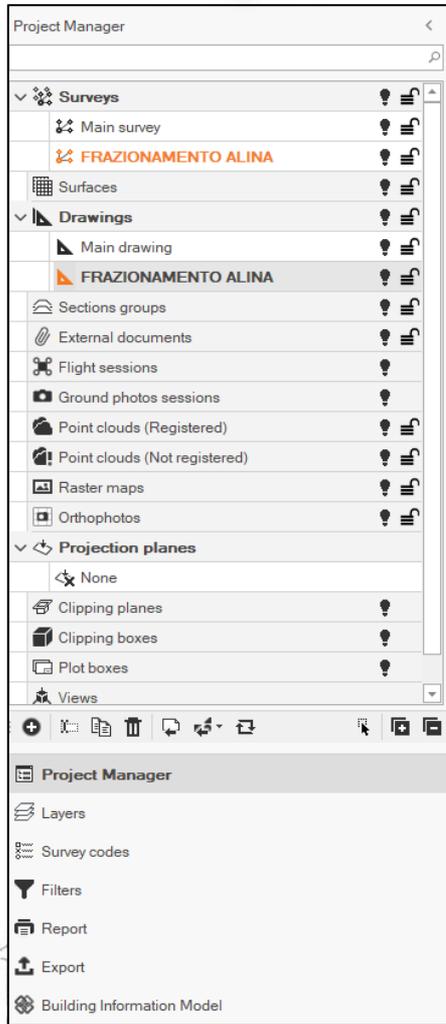
- Data management
- Data visualization

GOAL

- Learn how to use X-PAD FUSION main interface and project manager
- How to view and analyze the imported data



Project manager

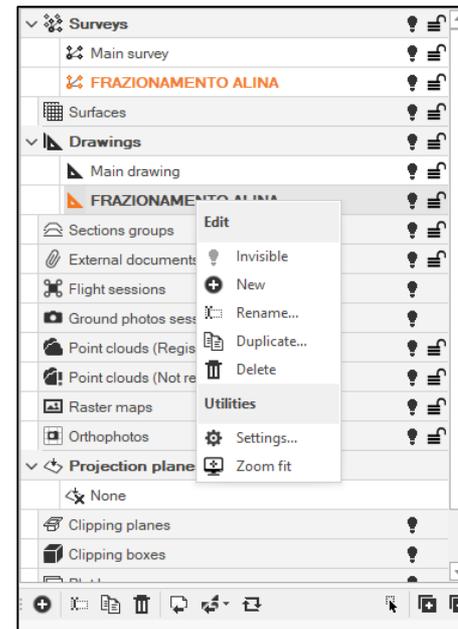
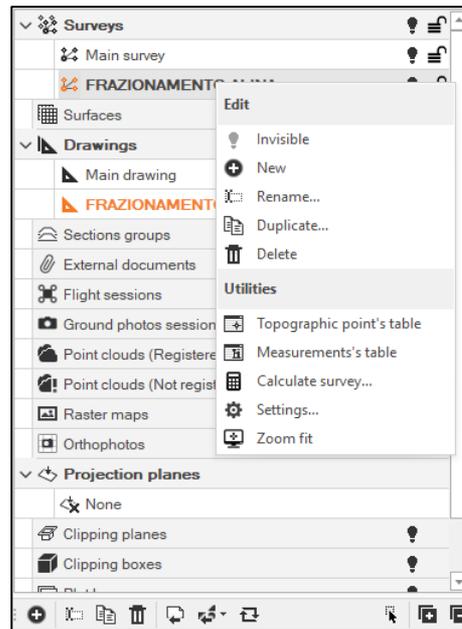
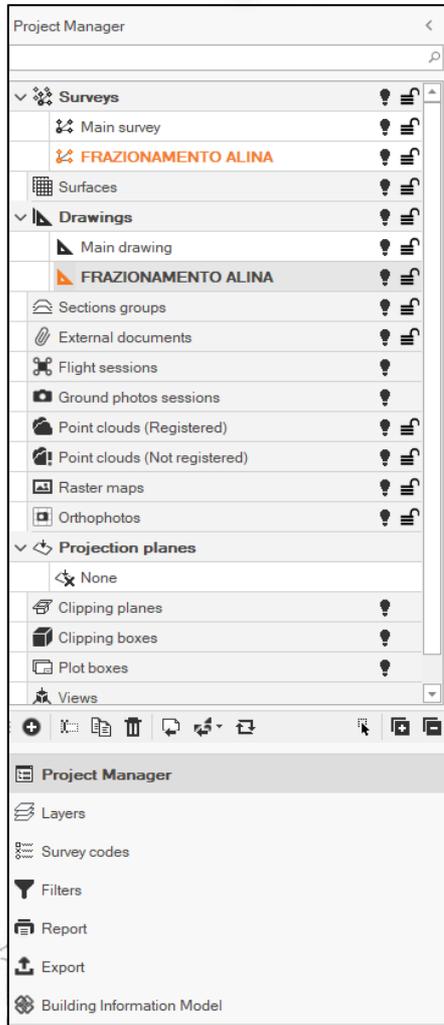


- Essential tool to organize the data
- All your data can stay together and you can manage their visibility with one click
- It is possible to assign a color to each subproject
- It is possible to save and manage also Projection planes, Clipping planes, Plot boxes, Views



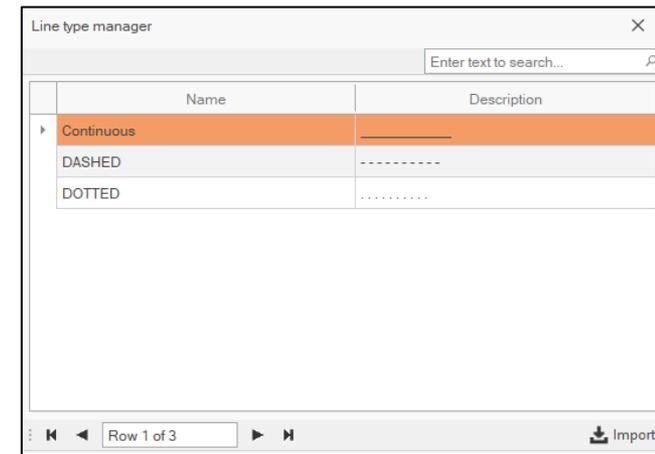
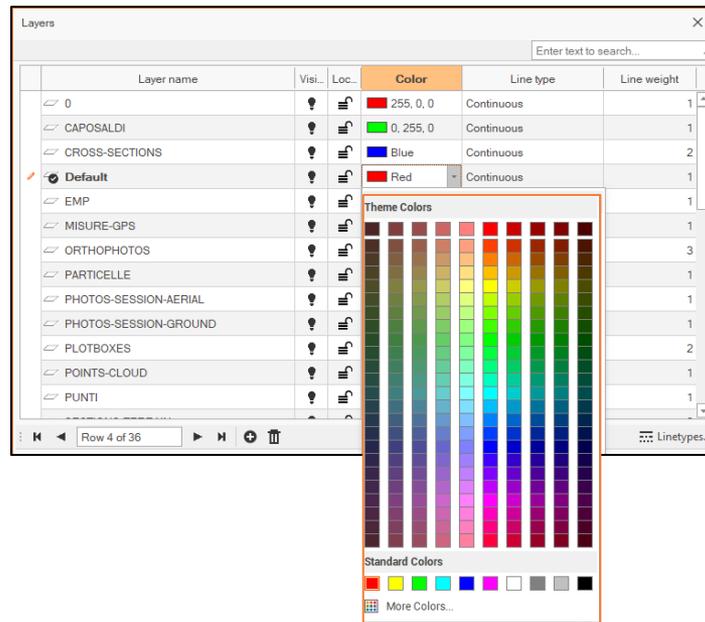
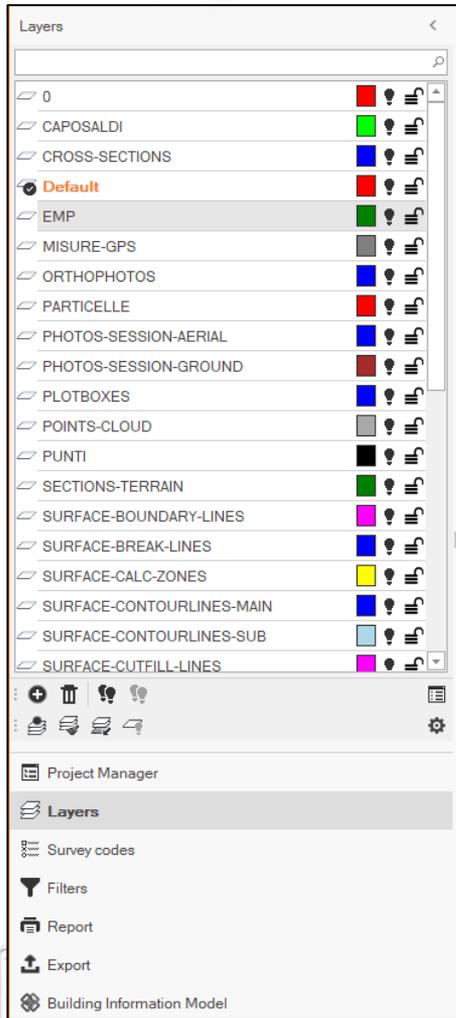
Project manager

- By clicking with the right mouse button on one of the entities from the Project Manager It is possible to open a drop-down menu and use further functionalities

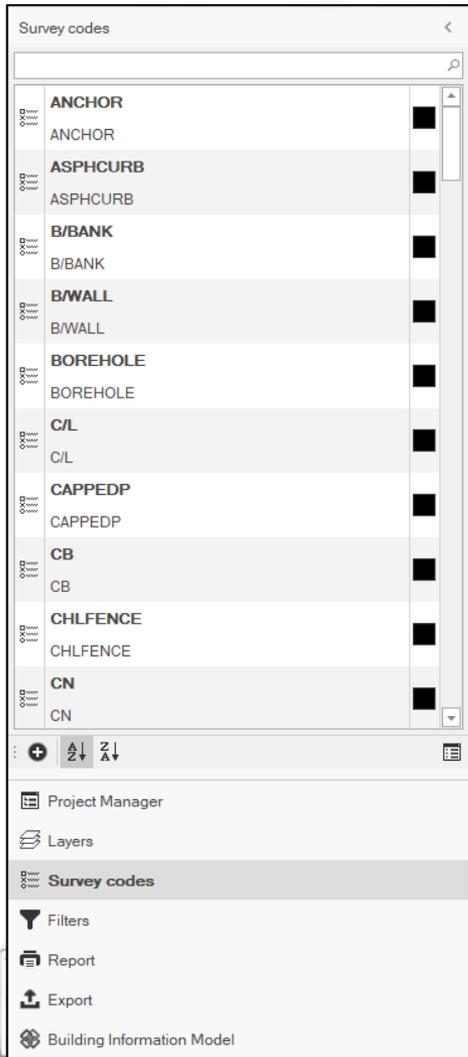


Layers

- Layers are organized in an AutoCAD style
- Automatic link «entity type» -> «layer»



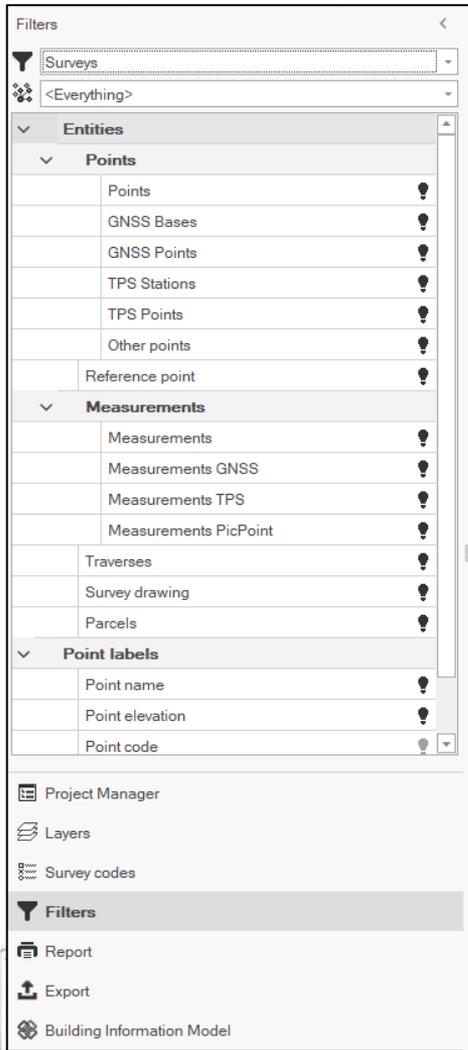
Survey codes



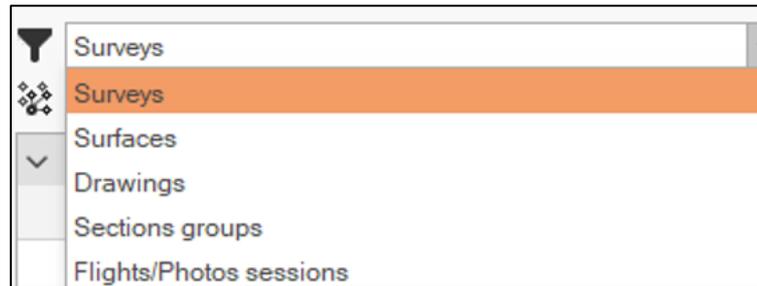
- Allows to create survey code list (importable and exportable to X-PAD Field)
- Allows to create survey drawing lines between points
- Drawing attributes and layers linked to codes
- Symbols linked to codes



Filters manager

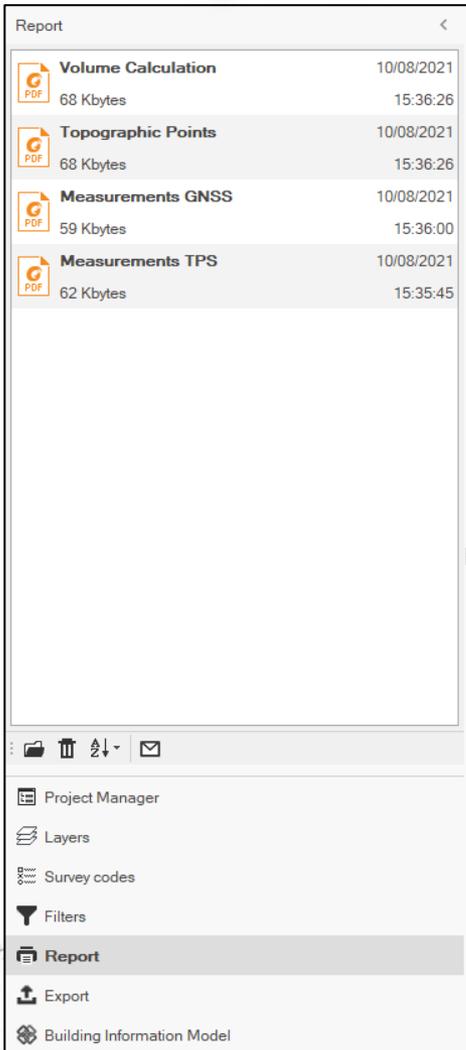


- Allow to make the entities visible/invisible
- In this way you can display/hide entities despite of their layer visibility



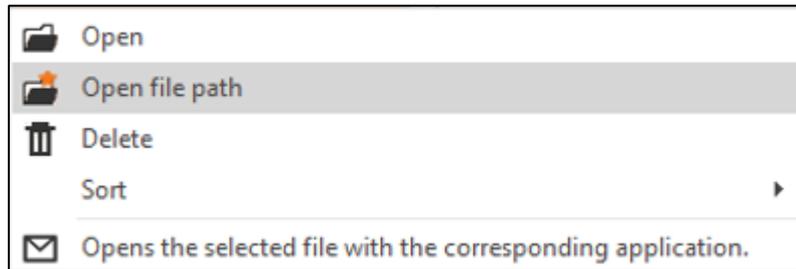
Reports manager

- List of all reports generated in the current project



Report	Date	Time
Volume Calculation 68 Kbytes	10/08/2021	15:36:26
Topographic Points 68 Kbytes	10/08/2021	15:36:26
Measurements GNSS 59 Kbytes	10/08/2021	15:36:00
Measurements TPS 62 Kbytes	10/08/2021	15:35:45

Project Manager
Layers
Survey codes
Filters
Report
Export
Building Information Model

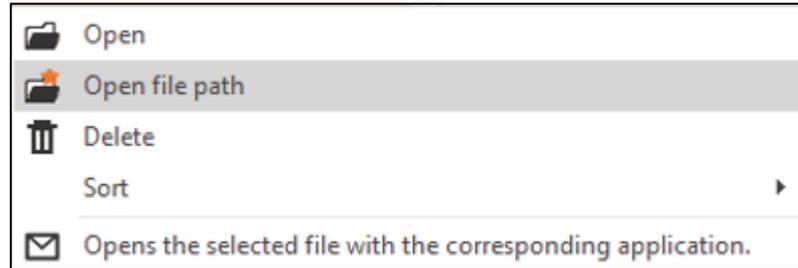


- Open
- Open file path
- Delete
- Sort
- Opens the selected file with the corresponding application.

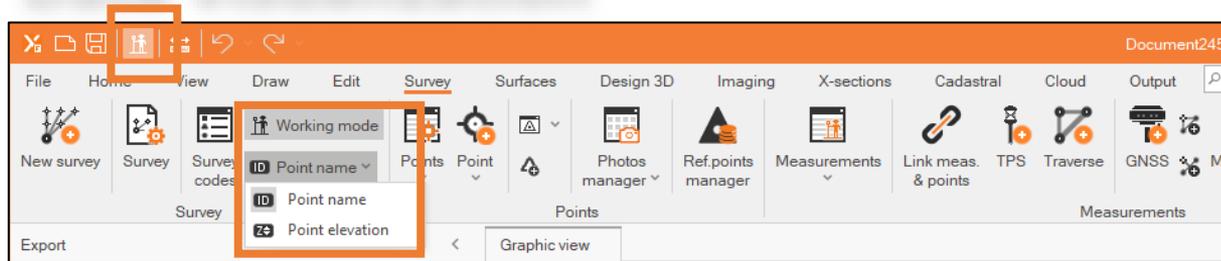


Export manager

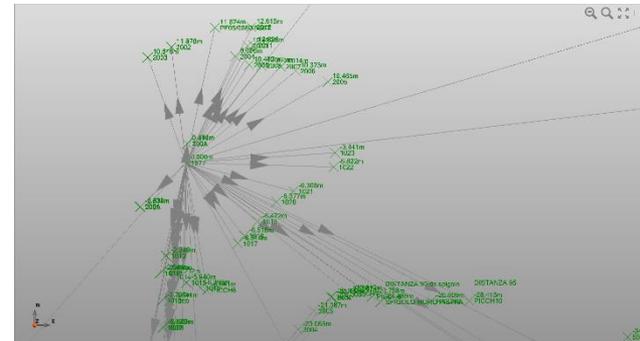
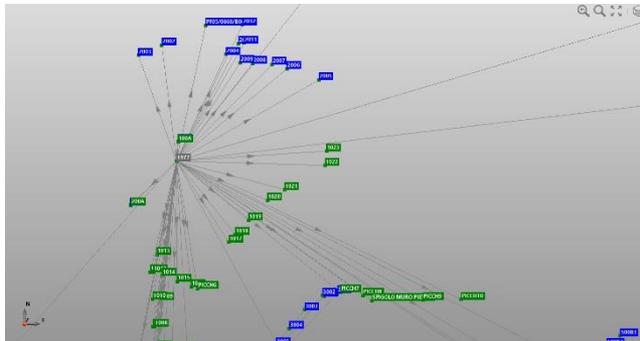
- List of all exported files for the current project



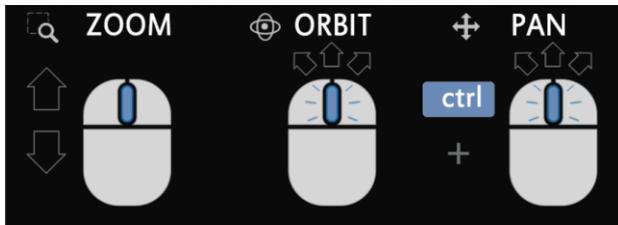
Data visualization



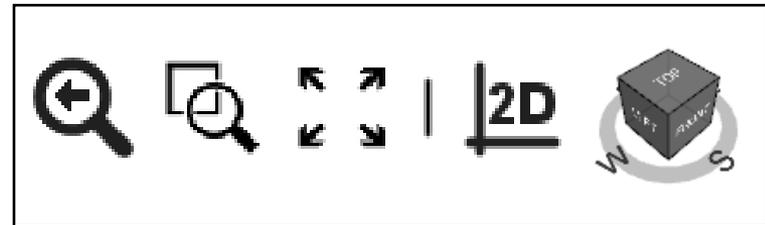
- **Working mode** changes the visualization of the drawing and points in CAD view
- Is the best way to work while drawing or making operations on the points, the point labels are automatically scaled



Data visualization



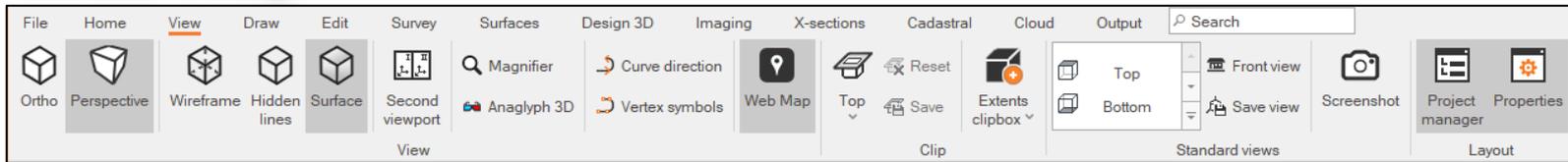
Mouse navigation



Previous view, zoom windows, 2D/3D

- The buttons located on top-right of the graphic view are used to Zoom and Rotate the view
- Selecting the 2D/3D button is possible to switch between a 2D visualization and a 3D visualization
- After the 3D view is selected, use the central button of the mouse or the 3D cube to rotate easily the view

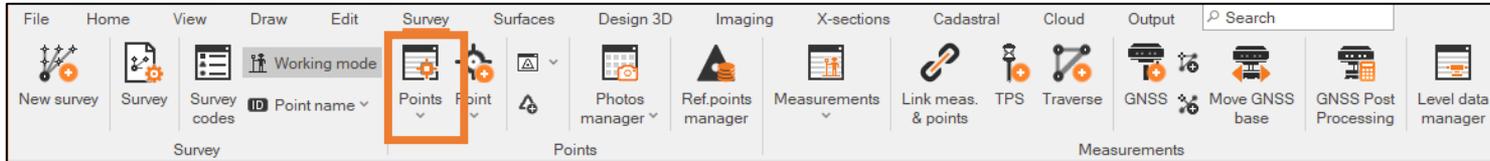
Web Map



- *Web Map* visualizes the points over a Web Map (Google Map, Bing, etc...) or a defined Web Map Service
- Points must have a valid WGS84 position or a function to locate the project on Web Maps is available



Points table

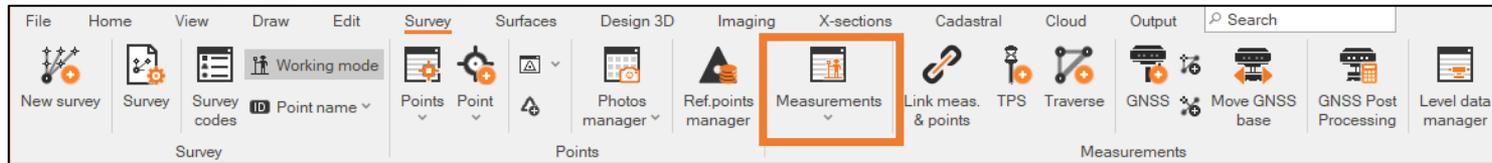


- *Points table* allows to view all the points in a survey
- Double click on a point to review more information

Points [FRAZIONAMENTO ALINA]												
	Type	!	Name	Code	E	N	Z	Description				
1		<input checked="" type="checkbox"/>	100		0.284m	4.038m	0.386m		<input checked="" type="checkbox"/>			
2		<input checked="" type="checkbox"/>	200		-9.338m	-9.061m	-0.630m		<input checked="" type="checkbox"/>			
3		<input checked="" type="checkbox"/>	300		-13.107m	-68.626m	-11.496m		<input checked="" type="checkbox"/>			
4		<input checked="" type="checkbox"/>	400		7.357m	-131.228m	-21.082m		<input checked="" type="checkbox"/>			
5		<input checked="" type="checkbox"/>	PF06/0860/B067		202.489m	261.373m	13.134m		<input checked="" type="checkbox"/>			
6		<input checked="" type="checkbox"/>	401		202.485m	261.375m	13.125m		<input checked="" type="checkbox"/>			
7		<input checked="" type="checkbox"/>	AUX_1		250.739m	-164.576m	-32.990m		<input checked="" type="checkbox"/>			
8		<input checked="" type="checkbox"/>	AUX_2		249.292m	-163.487m	-33.207m		<input checked="" type="checkbox"/>			



Measure table



- *Measure table* allows to manage all types of measures
- Measures are divided by type
- Double click on a measure to review more information

Measurements [FRAZIONAMENTO ALINA]												
Type	Use	Date/Time	Base name	Base Height	Name	Code	Latitude	Longitude	Height	Rover Height	Description	
1	H+V	20/07/2016 08:04:11	6977	1.980m	100		N 44°24'12.20...	E 9°22'52.2763"	229.692m	2.200m		
2	H+V	20/07/2016 08:05:06	6977	1.980m	200		N 44°24'11.77...	E 9°22'51.8417"	228.647m	2.200m		
3	H+V	20/07/2016 08:07:26	6977	1.980m	300		N 44°24'09.84...	E 9°22'51.6739"	217.775m	2.200m		
4	H+V	20/07/2016 08:09:58	6977	1.980m	400		N 44°24'07.82...	E 9°22'52.5962"	208.195m	2.200m		
5	H+V	20/07/2016 08:34:13	6977	1.980m	PF06/0860/B067		N 44°24'20.53...	E 9°23'01.4145"	242.411m	2.200m		
6	H+V	20/07/2016 08:34:21	6977	1.980m	401		N 44°24'20.53...	E 9°23'01.4144"	242.402m	2.200m		
7	H+V	20/07/2016 09:20:11	6977	1.980m	AUX_1		N 44°24'06.74...	E 9°23'03.5943"	196.287m	2.200m		
8	H+V	20/07/2016 09:21:01	6977	1.980m	AUX_2		N 44°24'06.77...	E 9°23'03.5289"	196.070m	2.200m		
9	H+V	20/07/2016 09:23:20	6977	1.980m	402		N 44°24'06.71...	E 9°23'03.4941"	196.194m	2.200m		



Measure table

 Colors by Station

 Colors by Code

- The function *Colors by Station* or *Colors by Code* allows to display the observations with a different color depending on the station or depending on the point code

 FRAZION_			
 GNSS			
	 6977	(66)	
 TPS			
	 6977	(15)	
	 800	(16)	
	 600	(5)	



Property windows, Autolist

Entity	
Type	Measurement GNSS
General	
Layer	MISURE-GPS
Color	■ 128, 128, 128
Color mode	By Layer
Linetype	Continuous
Linetype mode	By Layer
Linetype scale	1.000
Line weight	0.5
Line weight mode	By Layer
Survey	FRAZIONAMENTO ALINA
Measurement data	
Base name	6977
Base Height	1.980m
Name	PF02/0040/F173
Code	
Description	
Measurement values	
Latitude	N 44°24'02.6512"
Longitude	E 9°22'40.9307"
Height	281.094m
Rover Height	2.200m
Quality	
Solution	RTK Fixed
HRMS	0.016m
VRMS	0.046m
Epochs	3
Antenna tilt	0.0°
DOP	
HDOP	0.800
VDOP	1.700
GDOP	0.000

- Property window is used to visualize the properties of selected items
- Depending on the object selected, different information are displayed

TOPOPOINT	
Layer	PUNTI
Color	RGB: 0.0,0 (By_...
Linetype	(ByLayer)
Lineweight	1.0 (ByLayer)
Survey	FRAZIONAME_...
Name	PF02/0040/F173
Code	
Description	
E	-250.798m
N	-290.809m
Z	51.817m
Type	GNSS survey p_...

- Properties of an element are also displayed when moving the mouse pointer over the element



How copy data between surveys

- Data is subdivided in project and subprojects
- Using the New Survey is possible to create a new survey database



- With copy and paste function, any set of point can be copied from a survey to another survey

How copy data between surveys

- The tools in the Project Manager allows different operations:



- Create, Rename and Duplicate a subproject



- Import a subproject from a different project



- Import defined entities (topographic points, measures, surfaces, drawing, etc..) from another project or from current project

Info functions

Distance ✕

Points	
From	To
PF02/0040/F173	AUX_1
400	700
600	600A
600	600A

Distances report	
Distance 2D	0.029m
Distance 3D	0.031m
ΔE	0.022m
ΔN	0.019m
ΔZ	-0.011m
Azimuth	55.1839g
Slope	-38.58%
600	
E	96.462m
N	-58.813m

Options

Distance 3D Yes

Store annotation Yes

Progressive distance No

Distance Close

Properties Distance

File Home View Draw Edit Survey Surfaces Design 3D Imaging X-sections Cadastral Cloud Output Search

Project
Scanner
TPS
Digital level
Controller
X-PAD Survey
Text
DWG/DXF
LandXML
Survey data
BIM model
Scanner data
XYZ
Annotation
Distance
Distance object
Area
Angle

Settings Transfer Import file Info

- *INFO functions* are used to quickly get information from a survey
- Selecting *Store annotation*, the measure is also saved graphically

