

# User Manual INTRODUCTION







#### Note

The present manual, as well as all the educational material of the SCADA Pro application, constitute a guide for the correct use of the program and in no way substitute the specialized technical background of the professional engineer, which, together with the knowledge of the relevant technical legislation, are necessary conditions for the correct use and operation of the program.

#### Thanks to

The creation of this manual is the result of a collective effort of the entire team of design, development and distribution of the SCADA Pro application, which Ace Hellas would like to thank. Special thanks must also be given to our colleague civil engineer Ms. Amalia Bagourdi-Degleri for her significant contribution to the writing and general editing of the texts of the user manual.



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#### COMPANY

ACE-Hellas, a member of the Quest Group, was founded in 1979 and is one of the largest providers of integrated solutions in the field of IT and technical software applications. Its strategic objective is to provide its customers with integrated business solutions, designed to provide functional and effective solutions to all their technological and communication needs.

ACE-Hellas' successful multi-year track record in the Greek market is due to continuous growth and expansion in new activities, trusting relationships with customers and partners, strategic partnerships and investment in innovation.

SCADA Pro, a product of ACE-Hellas, is widely used in the Greek market as an easy-to-use and reliable program for structural calculations of buildings and engineering projects.

#### GENERAL INFORMATION ON THE PROGRAMME

SCADA Pro offers a single integrated environment for the analysis and design of new structures, as well as the control, evaluation and enhancement of existing ones.

It combines linear and surface finite elements, incorporates all applicable and non-applicable Greek regulations (N.E.A.K., N.K.O.S., E.K.O.S. 2000, E.A.K. 2000, E.A.K. 2003, Old Seismic, method of allowable stresses, KAN.EPE, KADET) and the corresponding Eurocodes.

It offers the designer the possibility to design structures of different materials, concrete, metal, wood and masonry, individually or mixed.

With the use of new cutting-edge technologies and based on the requirements of construction project designers, a program was created with a number of smart tools with we can create 3D constructions, process them in the field and build the final structure in simple steps and complete even the most complex studies.

SCADA is a program that is constantly upgraded, evolving and adapting. The technical department of ACE-Hellas in permanent cooperation with Metsovio Polytechnic University engaged in its continuous development and its adaptation based on new data, applications and needs. A "living organism" that matures!

#### GENERAL FEATURES OF THE NEW SCADA Pro

The product of SCADA development is the NEW upgraded SCADA Pro. It is a new program that includes all the applications of the "old" one and incorporates additional technological innovations and new features.



#### **INTRODUCTION TO SCADA Pro**

Selecting the SCADA Pro shortcut icon on the desktop opens program interface.



The user can either select one of the quick tools in the "Home Window" for immediate access, or close the window and execute the command through the menus.

SCADA P Structural Analysis	ro 23 <sup>m</sup> & Design	Finite Element - Structural Analysis & Design	www.scadapro.com 🗙
Αρχείο	Πρόσφατες Μελέτες	Προεπισκόπηση	Διαθέσιμα Modules
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Γενικές Πληροφορίες		, , , , Έκδοση Αρχείου : xx: Ημερομηνία,Κρτριχώρησης , , , ,	
SCADA Pho 22 Belle: 2022.11.13070 ZCORDA CAPBING SDFAMCSJ.4FD5-5504 Addteugn Engligueng: Ogr Adorupatival Exbeng: Ogr	Ekmaiðsumká Vídeo-Webinars	δία ς Επαλήθευση Αποτελεσμάτων Γαραδείγματα What's New	οσφορές Λήξη Συμβολαίου 31/12/2023 Υποστήριξη

Left click on the icons of the "Home Window " to:





Import of Autocad-2D file, as an auxiliary file within the interface with additional possibility of <u>Automatic Layer Creation</u> and <u>Automatic Identification of all static elements of</u> <u>the design</u>.

▲ In the example entitled "Design of a new reinforced concrete building" the use of automation is described in detail.



Reading ifc files from Autodesk Revit.

Making use of the "*scada\_revit\_families*" cross-section library, provided to the user to adapt them in Revit, SCADA Pro automatically identifies all the structural elements (columns, beams) with their respective properties, so that the structure is ready for analysis.





Reading xml files from ArchlineXP.

**Gstar** CAD

Import cad-2D or 3D file as an auxiliary file within the environment

Labour



Reading .edb & .edb files .sdb from static programs

#### ETABS & SAP2000.

The new bi-directional communication of SAP2000 and ETABS with SCADA Pro, allows the import and export of any project to SCADA Pro and SAP2000/ETABS, respectively.



٢	Open					×
	Look in:	2.dwg		~	G 🤌 📂 🛄 -	
	Quick access	Name	^		Date modified 5/12/2016 9:27 πμ	Type File folder
	Desktop					
	Libraries					
	Lange Contract Contra					
	Interview Network	<				>
	Mau ( Xan A au ( a	Files of type:	SAP2000 files (*.sdb) SAP2000 files (*.sdb)	6		Cancel
	MOVUUCS APACIOU		Lindo lies (leud)			

#### **OBSERVATION:**

The interface of SCADA Pro 22 has been updated with the new versions of the programs SAP2000 V23, IDEA StatiCa Steel V21.0 and ETABS V19.

For direct access to the "standard constructions" menu:



The same commands can be found in the SCADA Pro menu. For a more detailed explanation see the following chapters where the same commands are described by calling them from the menu.



#### **Recent Studies**

To select an existing file from the home screen with preview option.

Πρόσφατες Μελέτες							
D:\MELETES22\GIS11F3T							
D:\MELETES22\pant3bb							
D:\MELETES22\pantera6							
D:\MELETES22\ktirio1							
D:\MELETES22\ktirio1_64							
D:\MELETES22\ktirio1_32							
D:\MELETES22\pantera5							
D:\MELETES22\ORAIOscada3							
d:\meletes22\pis2							
d:\meletes22\pis1							

List of the most recent files.

Clicking on path of each file displays the model in preview and double-clicking opens the study.





#### Available modules

Διαθέσιμα Modules		Useful information about the modules that each user						
ENEPFA MODULES	•	owns, those that he does not own, as well as information about the support contract and general						
MH ENEPFA MODULES	•	information about the program.						
Εκπαιδευτικά Video-Webinars Σρήσης		παλήθευση ποτελεομάτων Ιαραδείγματα What's New Προσφορές Δήξη Συμβολαίου 31/12/2022 Υποστήριξη						

A new area where users can refer to the supporting documents that accompany the program (User Manuals, Examples) and videos, be informed about new versions and upgrades of the program, and receive support from experienced staff.

#### **A** OBSERVATION:

If the new version does not open or download the pdfs (manuals, examples etc.) from the home screen, then follow the 5 steps described below with pictures:



1



		Windows Settings							
	[	Find a setting	- P						
System Digitary, obset, notifications, prover	Devices Bustooth, pretters, traues	Concerned Android, Phone	Meters Wi-Fe	rk & Internet option mode VPN	Personalization Background, buck screen, on				
E Apps Unional, defaulte, spheral features	Accounts tour accounts, email, sync. sects, other people	Time & Language Speert report, data	Samir Made	19 Iere De, diptures Gene	Ease of Access Narrator, magnifier, high portrait				
Search Lost my flats permissions	Pressy Landon, sameng, menghana	Update & Security Windows Lipitate, recovery, factor							
5 settinos									
බ Home		Apps & feat	ures						
Find a setting	P	Choose where to get apps							
Apps		Installing apps only from Microsoft Store helps protect your device.							
14		Anywhere		~					
E Apps & feature	es								
15 Default apps		Apps & features							
0項 Offline maps		Optional features App execution allases Search, sort, and filter by drive. If you would like to uninstall or move an app, select it from the list.							
Apps for webs	ites								
Video playbac	k								
Startup		Search this list		R					
		Sort by: Name $\sim$	Filter by: All dri	ves $\checkmark$					
		131 apps found							
		3DMark			18/2/2021				
		Adobe Bridge	2021		109 GB 13/4/2021				
		Adobe Creativ	e Cloud		554 MB				

2



O Home	Default apps
UU Home	Delauit apps
Find a setting	P Choose default apps
Apps	Email
Ē Apps & features	Outlook 2016
I5 Default apps	Maps
邱 Offline maps	Maps
D Apps for websites	Music player
Video playback	VLC media player
₽ Startup	
	Photo viewer
	+ Choose a default
	Video player
	VLC media player
	Web browser
	Google Chrome
	Reset to the Microsoft recommended defaults
	Reset
	Choose default apps by file type
	Choose default apps by protocol
	Set defaults by app

Pressing the keys



← Settings		
Choose default a	apps by file type	
.pab Outlook Personal Address Book	+ Choose a default	
.pages PAGES File	+ Choose a default	
.pages-tef PAGES-TEF File	+ Choose a default	
.partial Partial Download	C Internet Explorer	
.pat PAT File	Adobe Photoshop 2021	
.pbk Dial-Up Phonebook	Remote Access Phonebook	
.pbm PBM File	Ps Adobe Photoshop 2021	
.pc3 PC3 File	рсЗехеехе	
pcast PCAST File	+ Choose a default	
.pcb PC8 File	+ Choose a default	Choose an app
.pcd PCD File	Ps Adobe Photoshop 2021	Microsoft Edge Recommended for Windows 10
.pch PCH File	+ Choose a default	Foxit PhantomPDF 10.1
.pox PCX File	Ps Adobe Photoshop 2021	Google Chrome
.pdb PDB Evyoanto		Ward 2016
pdd PDD File	Ps Adobe Photoshop 2021	Look for an app in the Microsoft Store
.pdf Microsoft Edge PDF Document	Microsoft Edge	
.pdn Paint.NET Image	Paint.NET	
-pdp PDP File	Ps Adobe Photoshop 2021	
.pds PDS File	+ Choose a default	
.pef PEF File	Photos	
P Type here to search	t: 🚳 🚍 🙉 🖻 🔄 🚳 🙃	

Single click on the icon next to the .pdf extension and choose as default application the Microsoft Edge which is present in all windows.

To open the links to New Releases and Support, you need an internet connection.



you will have direct access to the

project website to fill in the Support Form and send us your questions, as well as find out about our offers.



SCADA Pr Structural Analysis	ro 22 <sup>m</sup> & Design		Finite Element - Structural Analysis & I	www.scadapro.com	
Apxeio NEW OPEN A AUTOCAD REVIT	Hipósykorasz, Michéras D:/MELETES22/GIS11F3T D:/MELETES22/gantera6 D:/MELETES22/Janiera6 D:/MELETES22/Julio1 D:/MELETES22/Julio1_64	s	SCADA Pro -		
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#### THE NEW UPGRADED ENVIRONMENT OF SCADA Pro



In each New file you create, General Parameters window appears in the interface where you can specify from the beginning the Materials and Regulation to be used, as well as General Project Information and other parameters, such as the Autosave time discussed in chapter 11. "Extras" of the user manual.



Οθόνη			Σχέ	διο		Απεικά	όνιση	
Γενικά Στοιχ	εία Εργου	Y	λικό	ι - Κανονισμός		Αλλες Γ	Ιαράμετ	ρο
Κανονισμός	EC							$\sim$
Προσάρτημα	General							$\sim$
Βιβλιοθήκη Σιδ	ηρών Διατομά	ώv	E	uro				$\sim$
Σκυρόδεμα				Μεταλλικά				
Θεμελίωση	C20/25	$\sim$		Μελη - Στοιχεία	S275(Fe430)		$\sim$	
Ανωδομή	C20/25	$\sim$		Μεταλλική Πλάκα S275(F			Fe430) ~	
				Κοχλίες		4.8		$\sim$
Χάλυβας	B500C	~		Συγκόλληση		S275(F	e430)	$\sim$
Κύριος	00000							
Συνδετήρες	B500C	$\sim$		Ξύλινα		C14		$\sim$
Συντελεστές Αστοχίας	Ασφάλειας Λειτουργικ.		ү 1	M0 yM1	] [1.	γM2 25	γN 1.25	13
γc 1.5 γs 1.15	1		ү 1	M4 γM5	1.	γM7 .1		

ATTENTION: The materials must be in with the selected accordance regulation, and when data input, all cross-sections must

have the correct qualities (C for the newer

regulations, B for the Old)

1 \* Predefined scenarios are created according to the option Regulation

and Attachment you make at the beginning, within the General Configuration window that opens automatically immediately after the file name is defined.

#### **GENERAL DESCRIPTION OF THE NEW WORKING ENVIRONMENT**

Group of commands to open and save files

🚓 🏶 🗢 🗟 🕥 The user has the option to create his own group of commands for easy access to them, which is retained after the program is closed and remains every time you open it. You can add and remove

commands as well as move it via "customize quick access toolbar".

	Contra Source Mercers Lotertan
4	Quick Print
	More Commands
	Show Below the Ribbon
	Minimize the Ribbon

SCADA Pro 32Bit - Karasantes_6																			
	Βασικό	N	Λοντελοποίηση	Εμφό	νιση	Επεξεργασία	Εργαλεία	Пλ	άκες	Φορτία	Ανάλυση	Αποτελ	\έσματα	Διαστα	σιολόγηση	Ξυλότυποι	Πρόσθε	τα Βελτισ	ποποίηση
0	$\bigcirc$	C	$\bigcirc$	+		Ċ	/	×	:::	5		XZ *	1-325.00	- 1	0	) 🚜	DXF		
Γραμμ	ή Κύκλος	Τόξο	Πολύγωνο	Μεταφορά	Αντιγραφ	ή Περιστροφή	Επέκταση Δι κόψιμο *	ιαγραφή	Array)	ς Πολλαπλές επιλογές	😡 Γραμ	ιμές, Κύκλο	ы		<ul> <li>Ιδιοτήτ</li> <li>*</li> </ul>	ων Αριθμήσεις	Στρώσεις *	Αντιγραφή επιπέδου	Επικόλληση Επιπέδου
Σχεδίαση Επεξεργασία				Στρώσεις - Επίπεδα Αναφορά DWG-DXF Clipboard				oard											

In the new interface SCADA Pro uses RIBBON technology for even easier access to the commands and tools of the program. The main idea behind the Modules is, all program commands are brought together in one place, so that you avoid having to navigate through multiple levels of menus, toolbars and tables in search of the command you want.



Windows - Style - 🔁 🔚 - 🛈 Group of tools for selecting the interface format and language, as well as activating the program and searching for the active version. In the new interface of SCADA Pro the use of



windows, where it is possible to create up to ten (10) windows in a horizontal or vertical or sequential arrangement.



In the new interface SCADA Pro adopts the TREE application. An "interactive" list, "Project Data", which includes all the model elements in the corresponding groups and offers the user multiple possibilities to search and locate the study elements.

(osnap, zoom, select, undo)

\$\$10 trytec	8 X
않는 순부 🖃 🍠	
A/A	5
Στρώση	Δοκοί Σκυροδέματ
Храна	17
E douttook	
Waxd	Σκυράδεμα
Ποιότητα	C16/20
Διστομή	Ορθογωνική δοκός
Εικόνο	↓ ↓ +bw+
E Trouprepin	
bree	25.00
h	50.00
hf	15.00
bm	89.00
Feevia	0.00
Ανεστρομένο	10
Περισσότερο	194

A "Properties" list appears on the right and is automatically populated by selecting an entity item. It informs the user of its attributes, and also allows changes to them.

#### **ATTENTION**:



Do not close the "Project Data" and "Properties" windows by pressing on the x, because resetting them requires a complex procedure.

#### WCS ΟΡΘΟΓ. Ο SNAP ΒΗΜΑ ΚΑΝΑΒΟΣ ΜΕΤΟΜΗ ΕΝΤΟΣ

The status bar is located at the bottom of the screen and adjusts according to the selected Module and the vector display (2d/3d), giving additional possibilities for managing the project.

Button that allows selecting a color of an element importing it, different from the default layer. In addition, during the photorealistic visualization, double-clicking displays the carrier with the colors of its construction materials (gray = concrete, blue = metal, brown = masonry, beige = wood)





#### DETAILED DESCRIPTION OF THE NEW WORKING ENVIRONMENT

#### 1. FILE

New	Recent Documents	
-	1 C:\LIDRA15\9ksilino	
Open	2 C:\Pelates\MYKONOS5p	
Saus	3 C:\LIDRA15\7tixopoiia	
Dave	4 C:\Pelates\MYKONOS5\MYKONOS5	
Save <u>A</u> s		
Close Project		
Εισαγωγή		
Εξαγωγή		
Εξαγωγή Scadafw		
Print •		
Αρχικά Οθόμη		



To start a new study select the "New" command. In the dialog box that appears, you define the details of your new study. More specifically, in the "Name" field you define the name of your study.

Νέα Μελέτη	
Mελέτη Ονομασ MyProject	
θέση Folders: c:\scada15 Drives:	
Cancel	

A prerequisite for the program's commands to work is to give the file a name.



▲ The file name must consist of <u>a maximum of 8 Latin (not Greek) characters and/or</u> <u>numbers, without spaces and without the use of special characters (/,</u>

<u>-, )</u> (*e.g. ARXEIO1*). The program automatically creates a folder where it enters all of your study data. The "Location" of the folder, i.e. this folder will be created, should be on the <u>hard disk.</u> We suggest you create a folder in C (*e.g. MELETES*), where all SCADA studies will be located (*e.g. C:WELETESVARXEIO1*)

#### **ATTENTION**:

Open...

- 1. The entire route should be in roman characters and/or numbers, without spaces and without the use of special characters!
- 2. Make a separate folder containing your studies in C, and don't save them in the program folder!

The program automatically creates a folder with the specified name containing subfolders, ready to receive all the study data. In detail, in each subfolder are:

- scanal: the files of the analysis
- scades\_c: the files of dimensioning of concrete elements
- scades\_Sid: the files of the dimensioning of the metal elements
- scades\_Synd: the files of the dimensioning of the metallic connections
- scainp: the import files of the building elements and plates
- scapush: the analysis files (for next version)
- scatmp: temporary files
- tmp: temporary files
- progect.inf: data base-πληροφορίες

Select from the list the folder of the study you wish to open and "OK".

		ScadaPro Open
Select a folder ScadaPro Project	ſ	Ct2DKTIDIOtomient inf
D D IO	^	Cancel
MELET		~
A 📔 MELETES	ſ	
> 🍌 1SAIE		
▷ ↓ 1_ΔEΞAMENH		
Δ 1_ΠΙΣΙΝΑ     Δ		
a 🔐 3DKTIRIO		
🍌 postpro		
b b scaanal		
b scades_c		
scainp		
scaoptim		
Jan ScaPush		
d style opif		
heton(PIS		
betonG		
CHURCHZ 1		
EC1		
esempioCLS1 at		
Gerfinal		
Gernodesign		
Gerstart		
Greekfinal		
CroskAnal1	~	



Keyboard shortcuts: The three basic commands, New, Open and Save



can now also be activated with the keyboard shortcuts CTRL+N, CTRL+O, CTRL+S respectively.



To close a file without closing the program. Selecting the "Close Progect" command closes the study that was open while the program remains open either to open another study or to create a new one.



Select the command to save the study file you are editing. The program automatically updates the study file you originally created.

Motion: Ability to automatically save a project with a user-configurable time (Autosave)

Save As... Select the command to save the study file you are editing with a different name.



To import a file Autocad, Revit, SAP2000, ETABS etc. in the SCADA Pro interface.





C Remember to select from the list the correct unit of measurement, mm i.e. the one used when creating the .dwg, .dxf file.



- In the new version of the program, you can now import several dwg, dxf files (one or more per level) and these files are now saved with your design file.
- In the new version of the program, you also have the possibility to import 3D dwg, dxf files in 3D visualization.
- <sup>©</sup> The cooperation of SCADA Pro with Revit is even more complete, since it is not only limited to importing design auxiliary files, but also the entire vector.
- <sup>©</sup> The cooperation of the new SCADA Pro with SAP2000 and ETABS offers the possibility to import any type of structure into **Scada Pro** for the dimensioning of reinforced concrete, metal, load-bearing masonry and wooden structures based on the respective Eurocodes and the Greek National Appendices.

With this command you can export from your study various formats of design files \*.dxf, \*.dwg, image file of the format

\*.bmp and \*.sca files that open with SCADAFW, and \*.sdb files that are SAP2000 files and that open automatically in the SAP2000 environment if installed on the same computer.

Save As					<b>-</b> ×-
Save in:	🕌 LIDRA15		-	G 🌶 🖻 🗔 -	
æ	Name	^		Date modified	Туре
Recent Places	l.dwg 2.dwg			15-Jun-15 10:54 AM 15-Jun-15 11:11 AM	File folder File folder
	) 3.ifc ) 4fortia			05-Jun-15 2:18 PM 15-Jun-15 11:38 AM	File folder File folder
Desktop	6tixplir 7tixopoiia 8metaliko			17-Jun-15 5:05 PM 18-Jun-15 3:00 PM 17-Jun-15 12:17 PM	File folder File folder File folder
Libraries	<ul> <li>9ksilino</li> <li>10typikes</li> <li>dubai1</li> <li>SCADA15</li> </ul>		Scada Scada Dwg F	a Drawings(*.sca) Drawings(*.sca) illes (*.DVR)	
Network	ScadaLibDa	itaPath III	3D_D 3D_D 3D_D Old_D	es (.DAF) wg Files (*.DWG) xf Files (*.DXF) wg Files (*.DWG)	
	File name:	*.SCA	OId_D XMI f	bof Files (*.DXF) iles (*.xml)	
	Save as type:	Scada Drawings(*.sca)	XML f Bitmap SAP2 ETAB	iles HoloBim (* xml) o files (* bmp) 000 files (* .sdb) S files (* .edb)	

**Εξαγωγή Scadafw** Exclusively for SCADAFW users. Allows to export a file created in SCADA

Print

The print command to print your vector as it appears on the screen. Similarly, you can use "print screen" on your computer keyboard.

Αρχική Οθόνη

Select to open the "Home Window ".





#### 2. RAPID ACCESS TOOL LINE

In the new SCADA Pro environment the commands of the program are located in the corresponding Sections. For greater convenience and faster access to the most useful commands, the user has the possibility to create his own "quick access toolbar".

Move the mouse over the command and press the right key. A di box will appear.

- Option 1 adds this command to quick access bar.
- The 2nd option allows you to manage the commands you have entered on the line. Add, delete, move commands.\*
- The 3rd option moves the line from the top of the surface to a new position, below the Sections.\*
- The 4th option makes the line of Sections disappear, maximizing the drawing area. To display it again, press the arrow next to the line and uncheck the minimization.\* \*The same options are found in the arrow next to the "quick access toolbar".

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#### 3. CREATION AND DISPLAY OF MULTIPLE DYNAMIC WINDOWS

In the new version of SCADA Pro the use of windows has been added Windows 
Create Window
Horizontal
Vertical

Cascade Manager

Close All Window

You can create up to ten (10) windows by clicking on *Create Window* and selecting *Horizontal* to display them in a horizontal layout, *Vertical* for a vertical layout or *Cascade* for a sequential layout.



		SCADA Pro 328	it - el_ef_8p_4f			- o ×
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- 14 - 152 - 2-1015.0						
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<b>14 - 207 - 3-1485.0</b>						
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Selecting *Manager* opens the following dialog box:

Windows	×
Select window:	Activate
(0) Scada : 0-0.00 (1) Scada : 0-0.00	ОК
(2) Scada : 0-0.00 (3) Scada : 0-0.00	Save
(4) Scada : 0-0.00	Close Window(s)
(6) Scada : 0-0.00	Cascade
(7) Scada : 0-0.00 (8) Scada : 0-0.00	Tile Horizontally
(9) Scada : 0-0.00	Tile Vertically
	Minimize

By clicking *Activate* you can activate the selected window. You can register, close or minimize one or more selected windows by clicking *Save, Close Window(s)* or *Minimize* respectively. Finally, by clicking *Close All Window* you can directly close all windows and return to the original SCADA Pro desktop.

So by opening multiple windows you now see your operator simultaneously from multiple views (floor plan, elevations, 3D) so that you have full overview and control. Add elements in any window you like and see the other windows **dynamically** updated in whichever window the element is visible. You can even start importing an item from one window and end up in another! Multiple windows give you the flexibility and functionality so you can complete your studies in less time and be more productive.



#### 4. SECTIONS

In the new upgraded SCADA Pro all the commands of the program are concentrated within the 12 Modules.

Βασικό Μοντελοποίηση Εμφάνιση Επεξεργασία Εργαλεία Πλάκες Φορτία Ανάλυση Αποτελέσματα Διαστασιολόγηση Ξυλότυποι Πρόσθετα Βελτιστοποίηση

A detailed explanation of all Sections can be found in the relevant chapters of the manual.

#### 4.1 Key

	PLIRES3 - Scada													
	Βασικό	Μοντελοποίησι	η Εμφάνιση	Εργαλεία	Πλάκες	Φορτία	Ανάλυση Ατ	οτελεσματα	Διαστασιολόγηση	Ξυλότ	υποι Πρόσθετα			
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	Σχεδία	ση		E	πεξεργασία			3	Στρώσεις - Επίπεδα		Αναφορά	DWG-DXF	Clipboard	

The 1st Module is called "BASIC" and includes the following 6 groups of commands:

- Design
- Edit
- Layers-Levels
- Reference
- DWG-DXF
- Clipboard
- -

#### 4.2 Modelling

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The 2nd Module is called "MODIFICATION" and includes the following 7 groups of commands:

- Pillars
- Beams
- Foundation
- Surface
- Members
- Additional information
- Libraries



#### 4.3 Show

PROVA - Scada						
Βασικό Μοντελοποίηση Εμφάνιση Εργαλεία Γ	λάκες Φορτία Ανάλυση Αποτελεσματα Διαστασιολόγηση	Ξυλότυποι Πρόσθετα				
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Μέσω Στα ορια Προη- Με Με Μετα- Δυναμική παραθύρου του σχεδίου γούμενο βήμα + βήμα - τόπιση Περιστροφή	Επανασχε- 2D-3D Φωτο- Μαθηματικό Διακόπτες XZ YZ XY διασμός ρεαλισμός •	ΝΔ ΝΑ ΒΑ ΒΔ On/off Επίπεδα				
Εξερεύνηση - Zoom	Οπτικοποίηση	Οψεις Δυναμική Τομή				

The 3rd Module is called "REVEAL" and includes the following 4 groups of commands:

- Exploration Zoom
- Visualization
- Views
- Dynamic Section

#### 4.4 Edit

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Βασικο	Μοντελοποιηση	Εμφανιση	Επεξεργασια	Εργαλεία	ΠΛακες	φορτια
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The 4th Module is called "PROCESSING" and includes the following 4 groups of commands:

- General
- Cross section
- Model
- Members
- Nodes
- \_

#### 4.5 Tools

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	Βασ	πκό	Μοντελοποίη	ιση Εμφά	νιση	Εργαλεία	Πλάκες	Φορτία	Ανάλυση	Αποτελεσματα	Διαστα	ισιολόγηση	Ξυλότυποι	Πρόσθετ	α	
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θμησ	ση ση	μεια	Δοκων δι	οκου Στύ Δομικά στα	λου 🔻	δοκού	Δοκών	στυλου	UCS - WCS	Μοντέλο	Ť	Μέλη	Κόμβοι	Τωνία 🖤	Ι Διάφορα	διοτητων

The 5th Module is called "TOOLS" and includes the following 4 groups of commands:

- Structural elements
- UCS-WCS
- Model
- Members
- Nodes
- Miscellaneous



#### 4.6 Plates



The 6th Module is called "PLACES" and includes the following 4 groups of commands:

- Introduction
- Amendment
- Sections
- Checks

#### 4.7 Loads

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The 7th Module is called "FORTS" and includes the following 4 groups of commands:

- Definition
- Plate loads
  - Member loads
- Wind Snow loads

#### 4.8 Analysis

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			Σενάρια		Αποτελ	έσματα					Eµq	ράνιση				

The 8th Module is called "ANALYSIS" and includes the following 3 groups of commands:

- Scenarios
- Results
- Show



#### 4.9 Results

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		Διαγράμματα Παραμ	ορφώσεις				Βοηθητυ	ιά					

The 9th Section is called "RESULTS" and includes the following 2 groups of commands:

- Diagrams-Deformations
- Helpful

#### 4.10 Sizing

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	Σενά	ρια			Δοκοί		Ικανοτικά	ς έλεγχος	Υπο	στυλώμα	ατα	Πέ	διλα	Πλά	κες - Πλέ	γματα	Σιδηρά	- Ξύλινα	-	

The 10th Module is called "DISCUSSION" and includes the following 8 groups of commands:

- Scenarios
- Beams
- Legal control
- Pillars
- Sandals
- Slabs-Mesh
- Iron Wooden
- Masonry Control 2D diagrams

#### 4.11 Xylotyping



The 11th Module is called "WOODY" and includes the following 6 groups of commands:

- Archive at
- Design
- Wood type tools
- Edit
- Show
- Layers





## 4.12 Additional information

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Ελληνικά Γλώσσει	ά Παράμετρι Γιαράμετρι	οι Σκυρόδεμα Χάλυβας Προμέτρηση	Σιδ. Διατομές	τεύχος	<ul> <li>Output</li> <li>Tree</li> <li>Property</li> <li>Εμφάνιση</li> </ul>	COMPUEIX						

The 12th Module is called "ADDITIONS" and includes the following 7 groups of commands:

- Languages
- Parameters
- Preview
- Issue
- Show
- Fisherman

#### 4.13 Optimization

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Αντικε Κόσ	ιμενικό Αντι πος Ατ	κειμενική ιόδοση	Ορια Σχεδιασμού	Περιορισμοί	Μονάδα Κόστους Υλικών	Μονάδα Κόστους Παραγωγής	Διατομές	Μέλη	Αλγόριθμοι	ι Σύγκλιση	Ισότητα Ε	ξαίρεση	Εκτέλεσ	η Αποτελέσμαι	τα Επαναφορά Βοήθεια
	Βασικέ	ς Ρυθμίσε	ις		Παράμετροι Ερ	γου	Σχεδιαστικοί	Περιορισμοί	Επίλι	υση	Συναρτ	τήσεις		Ект	έλεση

The 13th Module is called "Optimization" and includes the following 6 groups of commands:

- Basic Settings
- Project parameters
- Design Parameters
- Resolution
- Settings
- Execution



#### 5. MANAGEMENT COMMANDS

#### 5.1 Style

Activate Product Activate Product

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	Black St	yle			200 + NC / XH F 0 4 0 40
	Silver St	yle			A 4 5 6 5 0 / 2
	Aqua St	yle			
	Window	vs 7			
	5.2a	cti	ve	product	

This is the activation field of SCADA Pro.

After the purchase of the program, the user is sent electronically the Serial Number. The Serial Number has the following characteristics:

- It consists of 16 digits, with numbers and Latin characters, separated by 4 hyphens.
- It is unique and includes all the Modules of the program that have been purchased.
- Any subsequent purchase of one or more Modules of the same version is added to the same Serial, without requiring any change by the user.
- Upgrading to the next version requires a new Serial Number.

The program can be installed on as many computers as you wish, but it can only be active on one.

You can easily turn the program on and off as many times as you want, on the same or another computer.

#### > To activate the program:

The first time you open the application, the first time you open the application, the window to activate it will appear inside the opening program environment.

Σχετικά.

Αγορά Τώρα



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	η', εισάγετε τον σεριακό αριθμό και ακολουθήστε εργοποίησης.	
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πς οδηγίες ενεργοποίησης.		
Για να ενεργοποιήσετε αργότερα πατήστε το κουμπί Βοήθεια		

Press	the Activate	button to	open the	dialog box.

Ενεργοποίηση

**A** NOTE: The same window is opened by selecting the padlock button in the program window, top right.

Αργότερα

				style 🔹 📔
ληροφορίες για	SCADA Pro			
		Διαθέσιμα Modules (λειτου	ογίες)	
Scada Pro Copyright	17 Rent 2017.1.2.2591 (©) 2010-16 Ace Hellas SA	Analysis : Ενεργό Οηλισμένο Σκυρόδεμα : Ε Μεταλλικές Κατασκευές & Διαστασιολόγηση Ψυχρής	νεργό Συνδέσεις : Ενεργό Ελασης : Ενεργό	
Σειριακός Αριθμός	16ψηφιος κωδικός	με παύλες	κενεργοποίησι	η μέσω Internet
Ενεργοποίηση ει Σε περίπτωση πο Ενεργοποίησης α	κτός σύνδεσης υ δεν εχετε σύνδεση Intern φού προηγουμένως διαβάα	et, παρακαλούμε ακολουθι ετε τις ακόλουθες οδηγίες.	είστε την διαδικασία Ι	Κειροκίνητης
Κωδικός Προϊόντος				Δημιουργία Κωδικού Προϊόντος
Κωδικός Ενεργοποίησης	gIA +mOOn7k6HwJ6d0TBngh Iferrot	nLK6sE5GRe2F5cbN7qQjcZv	/R 1U/zKLnDPzS1	Χειροκίνητη Ενεργοποίηση
Οδηγίες				
Οδηγίες Μπορείτε να εν ανάλογα με την Α) Internet: Ο i) Πληκτρο ii) Επιλέξτε και ανοίζτε ιάλ Β) Χαροκίνητη συνδεδεμένος j Ενεργοποίηση μ i) Πληκτρο	εργοποιήσετε το λογισμικό , περίπτωση: υπολογιστής όπου είναι εγκ λογείτε στο ποξίο «Σεριριακό «Ενεργοποίηση μέσω Interr την εοραμογή και είστε εί Ένεργοποίηση: Ο υπολογισ μέσω τηλεφώνου ή e-mail: λογείτε στο ποξίο «Σερισικό»	σας χρησιμοποιώντας μία αι ατεατημένο το λογισμικό εί ς Αριθμός» τον σεριακό αρ πεί». Η ενεργοποίηση γίνετ οιμοι να χρησιμοποιήσετε τ σύμο να χρησιμοποίησετε τ σύμο σχαι εγκατεατημέ ς Αριθμός» τον σειριακό αρ	τό της ακόλουθες μεθ ναι συνδεδεμένος με θμό που σας έχει δο αι αυτόματα. Παρακα ο λογισμικό σας. νο το λογισμικό ΔΕΝ θμό που σας έχει δο	λόδους το Internet. θεί. λιώ κλείστε είναι θεί.
Οδηγίες Μπορείτε να εν ανάλογα με τηγ Α) Internet: Ο Ι) Πληκτρο Ι) Επιλέξτε και αναίζετα πλά Β) Χαροανίνητη συνδεδεμένος μ) Πληκτρο Έλευρος μέτως	εργοποιήτατε το λογισμικό περίπτωση: υπολογιστής όπου είναι εγγκ λογάτε στο πεδίο «Σεριοκό «Ενεργοποίηση μέσω Intere πην εφορμογή και είταις έτ Ενεργοποίηση: Ο υπολογισ μέσω τηλεφώνου ή e-mail: λογάτε στο πεδίο «Σεριοκό κόδοστων	σος χρησμοποιώντας μία αι ατεστημένο το λογισμικό εί ς Αριβμός» τον σαριακό αρ στέν». Η σχοργοποίηση γίνετ στός όπου είναι εγκατεστημέ ς Αριθμός» τον σεριακό αρ	τό τις ακόλουθες μεθ ναι συνδεδεμένος με Φιμό που σας έχει δο οι αυτόματα. Παρακα ο λογισμικό σας. νο το λογισμικό ΔΕΝ Φιμό που σας έχει δο	λόδους το Internet. θεί, αλώ κλείστε είναι θεί.

- Enter the Serial Number,
- Select Activate via Internet and
- The programme is automatically activated.



NOTE: In case you do not have an Internet connection, follow the activation instructions on it.



When the program is activated, the Serial Number field is deactivated and the command that previously read **Internet Activation** is now **Internet Deactivation**.

#### > To turn off the program:

Open the program and press the command with the padlock

	00404.0		Style - 🔒 🗐 - 🛈	- Select <b>Disable via</b>
ΙΙληροφοριες	για SCADA Pro		×	Internet and
Scada F Copyrig	Pro 17 Rent 2017. 1. 2. 2591 ht(©) 2010-16 Ace Hellas SA	Διαθέαμια Modules (λεπουργίες) Analysis : Ενεργό Οπλισμένο Σκυρόδεμα : Ενεργό Μπαλλικές Κατασκευές & Συνδέσεις : Ενεργό Διαστασιολόγηση Ψυχρής Ελασης : Ενεργό	• •	- The programme is automatically switched off.
Σειριακός Αριθ	uóc	Aneveovonoino	π μέσω Internet	Now you can activate the program on
Ενεργοποίηση Σε περίπτωση Ενεργοποίηση	 η εκτός σύνδεσης που δεν εχετε σύνδεση Interr ις αφού προηγουμένως διαβάα	et, παρακαλούμε ακολουθείστε την διαδικασία ετε τις ακόλουθες οδηγίες.	Χαροκίνητης	another computer.
Κωδικός Προϊόντος			Δημιουργία Κωδικού Προϊόντος	
Κωδικός Ενεργοποίηση	gIA +mOOn7k6HwJ6d0TBngl Iferrot	LK6sE5GRe2F5cbN7qQjcZvR1U/zKLnDPzS1	Χειροκίνητη Ενεργοποίηση	
Οδηνίες				
<ul> <li>Νπορείτε να ανάλογα με:</li> <li>A) Internet:</li> <li>Πληκτ</li> <li>Επιλέξ</li> <li>και ανοίξτε τ</li> <li>Β) Χειροκίνη συνδεδεμένα</li> <li>Ενεργοποίησ</li> <li>Πληκτ</li> </ul>	ενεργοποιήσετε το λογισμικό την περίπτωση: Ο υπολογιστής όπου είναι εγκ ρολογείτε στο πείδια «Σεριακό τε «Ενεργοποίηση μέσω Inter πάλι την εφαρμογή και είστε έτ τη Ενεργοποίηση: Ο υπολλογισ ος με το Internet. η μέσω τηλετάνωνο ή e-mail: ρολογείτε στο πεδίο «Σεριακά	αος χρησιμοποιώντας μία από τις ακόλουθες με ατεστημένο το λογισμικό είναι συνδεδεμένος μ ς Αρθιμός- τον σεριακό αρθιμό που σας έχα δ ιέν Η ενεχρικοιήση νίνεται αυτόματο. Παραι ομοι να χρησιμοποιήσετε το λογισμικό σας. τής όπου είναι εγκατεστημένο το λογισμικό ΔΕΙ ς Αριθμός- τον σειριακό αριθμό που σας έχει δο	θόδους ε το Internet. νθεί. αλιώ κλείστε ν είναι νθεί. γ	
Ελεγχος νέα	ων έκδοσεων ς έλεγχος ενημερώσεων	Έλεγχος για νέα έκδοση	ок	



#### 5.3 Language



The new upgraded version of SCADA Pro includes 8 languages and the ability to automatically switch from one to another.

Select, from the list, the language in which the will be opened, as well as all the files that will be generated during the study (test files, results, issue, etc.)

The default language, at the start of the program, is Windows. Changing the language (either through the "Administration Commands", or from the

"Extras"), causes the program to close momentarily and open automatically in the selected language.

Files can be opened in all languages independently. You can start a file in one language and finish it in another.

#### 5.4 About (About)



Command to find out about the program features and version number. Users with an active maintenance contract for the program can upgrade the program automatically, as long as they are connected to the internet.

When you open the program a message will inform you in case of a new upgrade. Choose to accept and continue your work undisturbed. The upgrade is loaded automatically.



#### 6. TREE - PROJECT DATA

Opening the new SCADA Pro interface, on the left part of the screen, the TREE application appears. An "interactive" list that includes all the elements of the model in the corresponding groups and offers the user multiple possibilities to search and locate the elements of the study.

Initially the list is empty. Click on and select the type of display:



The symbol before the name specifies that:

- th 主 oup includes internal elements the
- gr 🖵 includes external elements
  - the group does not include data





It includes the groups of modeling elements, initially blank, which will be filled in as you enter your model elements.

- In 3D display+ Tree "On a floor":

data.

with their own subgroups, which will be filled in as you enter your model

By selecting an item in the list, the 3D representation of the floor it contains is automatically displayed on the desktop. The selected item is coloured red and the remaining floors are hidden.





A right mouse click on one of the elements of the tree opens a list of commands related to that element type.

So, if you mouse over an item in the Beams group, the command list that opens is for the beams, and if you mouse over an item in the Lines group, the command list will be for the lines.

#### 6.1 Show selected item number by type

In the new version of SCADA Pro there is now the possibility of visual display in the tree of the number of selected elements in cases where a command is executed that requires the selection of one or more objects. The information is displayed when the selection is made either graphically (in all modes) using the group selection command.



For example, if you select the "Delete" command and then graphically select the members of the beams shown in the image



you will notice in the tree on the left and in the section of the beam members in brackets the number 3. It is the quantity of items you have selected from this item. Similarly, if you select any other item, depending on the species it belongs to, the quantity will be indicated in the corresponding position. So you can know exactly how many and what kind of items you have selected.



#### 6.2 Table - Search by Number

In addition, in the new upgraded version of SCADA Pro, right-clicking next to the "Nodes", "Beam Members", "Column Members", a list of "Table" appears and "Search by Number"



#### For the **COMBS**: §

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5336.16 Πάκτωση

4758.26 Πάκτωση

5336.16 Πάκτωση

🚺 📔 Πίνακας Select and at the bottom of the screen the list all nodes, their geometry and their freedoms per direction is displayed.



The tables are all editable and allow changes to be made that update the model.

	You ca	in dis	play t	he ite	ms in	ascer	iding d	or des	cendi	ng ord	der by	selec	ting tl	ne Na	me.		
[	Ονομα 🛆	х	Y	Z	Dx	Node/Spring	Dy	Node/Spring	Dz	Node/Spring	Rx	Node/Spring	Ry	Node/Spring	Rz	Node/Spring	^
	1	2195.18	0.00	5866.16	Πάκτωση	(	Πάκτωση	C	Πάκτωση	C	Πάκτωση	0	Πάκτωση	0	Πάκτωση	0	
	2	2975.18	0.00	5866.16	Πάκτωση	(	Πάκτωση	0	Πάκτωση	C	Πάκτωση	0	Πάκτωση	0	Πάκτωση	0	
	3	3755.18	0.00	5866.16	Πάκτωση		Πάκτωση	0									
	4	4535.18	0.00	5866.16	Πάκτωση		Πάκτωση	0									
	5	2195.18	0.00	4776.16	Πάκτωση	(	Πάκτωση	0	Πάκτωση	0	Πάκτωση	(	Πάκτωση	0	Πάκτωση	0	
	6	2195.18	0.00	5336.16	Πάκτωση	(	Πάκτωση	0	Πάκτωση	0	Πάκτωση	(	Πάκτωση	0	Πάκτωση	0	

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122.90	-0.03	-30.00	95.00	
-95.00	-0.02	-30.00	95.00	
95.00	-0.0	-30.00	-105.00	
20.00	-80.00	-30	-20.00	
18.26	-143.68	-30.00	22.10	
22.10	-75.00	-30.00	40.00	

You can change the values by typing own <sup>22</sup>

By changing the value in the table, the corresponding value on the right side of the properties tab is automatically updated



The selection of a node in the table:

- Displays its properties in the right tab
- It shows him in red on the tree
- Displays it in red in the graphical interface

If more than one node is selected, the fields above show corresponding node selected with the last click.

By right-clicking on a cell containing the value of one of the node's properties



options are displayed that allow



- the *Isolation* of the selected node (isolation in the graphical environment):



- *Show Selected* (you can select more cells with Ctrl or Shift). This display applies to the table only and not to the GUI. Only the selected items are displayed in the table.

πινακές																					
Ονομα	x	Y	z	Dx		Node/Spring	Dy	1	Node/Spring	Dz		Node/Spring	Rx		Node/Spring	Ry		Node/Spring	Rz	Node/Spring	
1	620.00	300.00	700.00	Εξάρτηση	-	37	Ελευθερία	-	0	Εξάρτηση	•	37	7 Ελευθερία	-	(	Εξάρτηση	•	37	Ελευθερία	-	)
2	1320.00	300.00	620.00	Εξάρτηση	-	37	Ελευθερία	-	0	Εξάρτηση	-	37	7 Ελευθερία	-	(	Εξάρτηση	-	37	Ελευθερία	-	)
3	2080.00	300.00	620.00	Εξάρτηση	•	37	Ελευθερία	-	0	Εξάρτηση	-	31	7 Ελευθερία	-	(	Εξάρτηση	-	37	Ελευθερία	<u> </u>	)
4	620.00	300.00	1280.00	Εξάρτηση	•	37	Ελευθερία	-	0	Εξάρτηση	-	31	7 Ελευθερία	-	(	Εξάρτηση	-	37	Ελευθερία	<u> </u>	)
ICAL DE LE INIV	νακας																				

- The *Appearance of All*. This display applies to the table only and not to the graphical interface, and its use makes sense after using the selected display. It displays all the elements of the table.
- The Filters

Φίλτρα Κόμβων	×
Ονομα Από 0 Εως 0 Εφαρμογή	
Συντεταγμένες X V Από 0 Εως 0 Εφαρμογή	
Βαθμοί Ελευθερίας Κύριος Κόμβος · Κόμβος Ο Εφαρμογή	
Αρχικοποίηση Εξαίρεση Exit	

The filter dialog box allows you to display in the table (and not in the GUI) those nodes that match the following criteria:

- Display based on the name (number) of the node. In the From To fields you specify the nodes you want to display.
- Display based on the X or Y or Z coordinate of the nodes.
- Display according to the degrees of freedom of the nodes.



More specifically, you can display the main nodes (Diaphragm Nodes) with the "Main Node" option. The "Free Node" option displays nodes whose degrees of freedom are all free. The same applies to the option

"Tucked Node".

Finally, the "Dependent Node" option allows you to display only the nodes that are dependent on the aperture node, whose number you enter in the

"Node." A value in this field is meaningful only for the main node and not for the previous options.

Filters can be applied individually or cumulatively. Before applying the filter FOR THE FIRST TIME or when we apply multiple filters and we do NOT want them to be applied cumulatively, we press the "**Initialize**" button.

The "**Exception**" option makes the filters work the other way around. That is, instead of only the items that obey them appearing in the table, they are removed from the table. To apply the filters with exception, because the process works by subtraction, the table must initially contain elements, so for the application we do NOT select "Initialize".

<sup>©</sup> For example, if we set the first filter "From - To" to the numbers 1 - 5 and select "Exclude", these nodes will be removed from the table and the rest will remain.

The "Copy" and "Paste" options copy values from one cell to another. The command "Delete" deletes the node to which the selected cell belongs and should be used with care. Finally, the "Refresh" option updates the table fields for those nodes where there have been changes from the properties tab on the right. For example if we select a node e.g. 15 and in its properties tab change the Z coordinate from 620 cm to 700 cm



in order to update the value in the corresponding cell of the table, the "Refresh" option must be used



#### § For **MEMBERS**:

🚮 Πίνακας Γεωμετρίας Διατομών

Select and at the bottom of the screen the list of geometric features and freedoms of all members is displayed.

Διδομένα Εργου 9 × →	ακας Γεωμετ	pice Alerte							8												
	<																				>
	Πινακες			-																	4 X
	Ονομα	Κόμβος	Κόμβος Τέλος	dx	dy	dz	dx Tribor	dy Tilor	dz	N Acri	Vy	Vz	Mx	My	Mz	N	Vy	Vz	Mx	My	Mz ^
	641	12	Q	85.00	-30.00	20.00	-85.00	-30.00	20.00	74224	740X4	- APAT	- APAT	- AP/(I	, ap X di	TENOS	TENOS	TENOS		TENOS	- Can
	642	9	7	85.00	-30.00	20.00	-85.00	-30.00	20.00			Γ	Γ		i -	F	Г	F	Г	Г	<b>_</b>
	643	7	6	85.00	-30.00	20.00	-85.00	-30.00	20.00	-	<b></b>	Γ	<b></b>		<b></b>	<b></b>	Г	F	Г	Г	
	644	6	116	85.00	-30.00	20.00	-60.00	-30.00	35.01			Г	Г	-		Г	<b>F</b>		Π		Г
	645	11	12	-0.02	-30.00	-95.00	-0.02	-30.00	95.00	_						Г	Г			Г	
	646	12	- 4	-0.02	-30.00	-95.00	-0.02	-30.00	95.00			Г									
	647	3	9	-0.02	-30.00	95.00	-0.02	-30.00	-95.00		-	Г	-				-				- v
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👿 Παράμετρ 🕸 Δεδομένα		Πίνακας																			

Ονομα	Κόμβος	Κόμβος	dx	dy	dz	dx	dy	dz	N	Vy	Vz	Mx	My	Mz	N	Vy	Vz	Mx	My	Mz ^
	Αρχή	Τέλος	Αρχή	Αρχή	Αρχή	Τέλος	Τέλος	Τέλος	Αρχή	Αρχή	Αρχή	Αρχή	Αρχή	Αρχή	Τέλος	Τέλος	Τέλος	Τέλος	Τέλος	Τέλο
641	12	9	85.00	-30.00	20.00	-85.00	-30.00	20.00												
642	9	7	85.00	-30.00	20.00	-85.00	-30.00	20.00												
643	7	6	85.00	-30.00	20.00	-85.00	-30.00	20.00												
644	6	116	85.00	-30.00	20.00	-60.00	-30.00	35.01			L13									
645	11	12	-0.02	-30.00	-95.00	-0.02	-30.00	95.00												
646	12	4	-0.02	-30.00	-95.00	-0.02	-30.00	95.00												
647	3	9	-0.02	-30.00	95.00	-0.02	-30.00	-95.00												
1																				>

Select Πίνακας Αδρανειακών Διατομών and at the bottom of the screen the list of inactive features of all members is displayed.





Ονομα	Αρχή	Τέλος	Τύπος	A(m^2)	Ak(m^2)	lx(dm^4)	ly(dm^4)	lz(dm^4)	Asy(m^2)	Asz(m^2)	beta	Υλικό	Ποιότητα	E(GPa)	G(GPa)	ε (kN/m3)	at*10^-5	Ks(MPa/cm)	^
641	12	9	B-3d	0.24000	0.24000	75.12365827	32.00000000	72.00000000	0.20000	0.20000	0.00	Σκυρόδεμα	C25/30	31.000	12.917	25.000	1.000	0.000	
642	9	7	B-3d	0.24000	0.24000	75.12365827	32.00000000	72.00000000	0.20000	0.20000	0.00	Σκυρόδεμα	C25/30	31.000	12.917	25.000	1.000	0.000	
643	7	6	B-3db	0.24000	0.24000	75.12365827	32.00000000	72.00000000	0.20000	0.20000	0.00	Σκυρόδεμα	C25/30	31.000	12.917	25.000	1.000	0.000	
644	6	116	B-3d	0.24000	0.24000	75.12365827	32.00000000	72.00000000	0.20000	0.20000	0.00	Σκυρόδεμα	C25/30	31.000	12.917	25.000	1.000	0.000	
645	11	12	B-3d	0.24000	0.24000	75.12365827	32.00000000	72.00000000	0.20000	0.20000	0.00	Σκυρόδεμα	C25/30	31.000	12.917	25.000	1.000	0.000	
646	12	4	B-3d	0.24000	0.24000	75.12365827	32.00000000	72.00000000	0.20000	0.20000	0.00	Σκυρόδεμα	C25/30	31.000	12.917	25.000	1.000	0.000	
647	3	9	B-3d	0.24000	0.24000	75.12365827	32.00000000	72.00000000	0.20000	0.20000	0.00	Σκυρόδεμα	C25/30	31.000	12.917	25.000	1.000	0.000	
648	9	10	B-3d	0.24000	0.24000	75.12365827	32.00000000	72.00000000	0.20000	0.20000	0.00	Σκυρόδεμα	C25/30	31.000	12.917	25.000	1.000	0.000	
649	8	7	B-3d	0.24000	0.24000	75.12365827	32.00000000	72.00000000	0.20000	0.20000	0.00	Σκυρόδεμα	C25/30	31.000	12.917	25.000	1.000	0.000	~

The tables are all editable and allow changes to be made that update the model.

You can display the items in ascending or descending order by selecting the Name. You can

-0.03	-30.00	95.00	
-0.02	-30.00	95.00	
-0.d	-30.00	-105.00	
-80.00	-30	-20.00	
-143.68	-30.00	22.10	
-75.00	-30.00	40.00	
	-0.03 -0.02 -0.03 -80.00 -143.68 -75.00	-0.03 -30.00 -0.02 -30.00 -0.03 -30.00 -80.00 <mark>-30</mark> -143.68 -30.00 -75.00 -30.00	-0.03         -30.00         95.00           -0.02         -30.00         95.00           -0.03         -30.00         -105.00           -80.00         -30         -20.00           -143.68         -30.00         22.10           -75.00         -30.00         40.00

change the values by typing your own

Πίνακες																				φ×
ΟγομαΔ	Κόμβος	Κόμβος	dx	dy	dz	dx	dv	dz	N	Vv	Vz	Mx	My	Mz	N	Vv	Vz	M×	My	Mz ^
W.	Αρχή	Τέλος	Αρχή	Αρχή	Αρχή	Τέλος	Τέλος	Τέλος	Αρχή	Αρχή	Αρχή	Αρχή	Αρχή	Αρχή	Τέλος	Τέλος	Τέλος	Τέλος	Τέλος	Τέλο
641	12	9	85.00	-30.00	20.00	-85.00	-30.00	20.00					<b>V</b>							
642	9	7	85.00	-30.00	20.00	-85.00	-30.00	20.00					✓							
643	7	6	85.00	-30.00	20.00	-85.00	-30.00	20.00					✓							
644	6	116	85.00	-30.00	20.00	-60.00	-30.00	35.01					~							
645	11	12	-0.02	-30.00	-95.00	-0.02	-30.00	95.00												
646	12	4	-0.02	-30.00	-95.00	-0.02	-30.00	95.00												
647	3	9	-0.02	-30.00	95.00	-0.02	-30.00	-95.00												
648	9	10	-0.02	-30.00	95.00	-86.98	-30.00	-126.74												
649	8	7	-53.75	-30.00	-122.90	-0.03	-30.00	95.00												
650	7	2	-0.02	-30.00	-95.00	-0.02	-30.00	95.00	_											<u> </u>
651	6	5	-0.02	-30.00	95.00	-0.02	-30.00	-105.00	_											<u> </u>
652	11	95	85.00	-30.00	20.00	-80.00	-30.00	-20.00	_	<u> </u>						<ul> <li></li> </ul>				<u> </u>
653	10	8	263.04	-30.00	18.26	-143.68	-30.00	22.10	_		<u> </u>			<u> </u>						<u> </u>
654	8	5	206.32	-30.00	22.10	-75.00	-30.00	40.00	_		<u> </u>					V				<u> </u>
655	5	113	75.00	-30.00	40.00	-280.00	-30.00	17.14	_	<u> </u>	<u> </u>			<u> </u>						<u> </u>
656	1	6	-0.02	-30.00	95.00	-0.02	-30.00	-95.00	_	<u> </u>	<u> </u>				-					<u> </u>
657	1	118	85.00	-30.00	-20.00	-85.00	-30.00	-20.00	_	<u> </u>	<u> </u>				-					<u> </u>
658	1	2	-85.00	-30.00	-20.00	85.00	-30.00	-20.00	_	<u> </u>					-					<u> </u>
659	2	3	-85.00	-30.00	-20.00	85.00	-30.00	-20.00	_	<u> </u>					-					<u> </u>
660	95	10	80.00	-30.00	-20.00	-186.96	-30.00	18.26	_	<u> </u>					-					<u> </u>
661	113	116	115.00	-30.00	-127.86	0.05	-30.00	130.00	_	<u> </u>					-					<u> </u>
662	116	118	0.00	-30.00	-130.00	15.00	-30.00	95.00	_	<u> </u>					-					<u> </u>
663	15	14	74.95	-30.00	-36.35	-84.38	-30.00	-22.16	_	<u> </u>					-					<u> </u>
664	15	16	-85.02	-30.00	-22 59	75.04	-30.00	-35.82												> *
	Πίνακας			_		_					_	_		_	_	_			_	

You can select one or more elements of the table (with Crtl) and right-click to select Show Selected. Only the selected members are displayed in the list.

For the corresponding right-click menu options, the same applies as for the nodes. The only difference is in the "Filter" option where the following dialog box appears

Φίλτρα Μελών	×
Ovoµa Anò 0 Ewa	ο Εφαρμογή
Μέλη που συντρέχουν στον κόμβα	0 Εφαρμογή
Βαθμοί Ελευθερίας	Mu Me
Ν Vy Vz Mx Αρχήί	Μιγ ΜιΖ Εφαρμογή Εφαρμογή
Αρχικοποίηση Εξα	ιρεση Exit

The filter dialog box allows you to display in the table (and not in the GUI) members that meet the following criteria:



Display based on the name (number) of the item. In the From - To fields you specify the members you want to display.

The filter "Members co-occurring in node" isolates those members that co-occur in the node whose number you enter in the field.

The "Degrees of Freedom" filter shows you only those members who obey the specific degrees of freedom for the beginning and end as you choose.

For the Initialize and Exclude options, the same applies as for the nodes.

Αναζήτηση με Αριθμό Select

and enter the number of node or member you are looking for. It will automatically be identified in red within the vector.





#### 7. OSNAP, ZOOM, SELECT, UNDO

#### **IMPORTANT OBSERVATION:**

In SCADA <u>first</u> select the command you wish to execute and <u>then</u>, with the help of OSNAP & SELECT, select the elements on which it will be executed. Cancelling
 a command is done by pressing "Esc" or by right mouse button.

#### 7.1 osnap toolbar

#### / / / L @ \$ O X \_ 1/ X % [° ™ ™ \$ 0 × @

The first 9 commands and 16<sup>h</sup> activate the osnap at the points with the corresponding illustration:



First select the command icon and then point first to the first line and then to the second line. The indication of finding the point is x. Note that the intersection point can also be the intersection of two perpendiculars of beams, column sides, etc.

#### ---- View

You use the projection point to select a point that is the projection of another given point on a given line. First you select the point and then the line. The point finder is an inverted Tau.

tops of the columns



// Parallel with



This option allows you to draw a new entity (e.g. a line or a beam) parallel to a given line. You first define the first starting point of the entity, then select

from the toolbox to select the specific traction point and finally point the mouse at the line with which it will be paralleled.

Ολίσθηση	×
Απόσταση	500
ОК	Cancel

Once the mouse pointer is on the line, the characteristic square appears which defines the second point for the parallelism.

Slip, to determine a point on a straight line.



For example, suppose you want to place a 40x40 post at a distance of 5.0 m from the end of a straight line.

First you select the 40x40 sub-post you want to place. Then select the "Slip" traction point and the following dialog box appears, where you enter the distance (500 cm) from the end of the line you are interested in.

Moving the mouse closer to the line will display a symbol indicating the position of the



Distance - Angle, The first option is to find length, relative distances by x, y and z and angle of inclination. After selecting the command you select the first point which defines the origin and then by moving the mouse pointer you can see in the bottom right of the status bar the distance L, the relative coordinates Dx, Dy and Dz

and the angle of inclination \_\_\_\_\_L=800.00 Dx=-800.00 Dy=0.00 Dz=0.00 Angle=0.00 By selecting the second point you can see the items you want.

# X,Y,Z Coordinates

With this option you can set the X,Y coordinates of a point from those of other points. After starting a drawing or modification command and calling the "X,Y,Z Coordinates" command, you first select the point whose

use the X coordinate and then point to the point whose Z coordinate you want to use. Selecting the second point automatically locates the point with the requested coordinates.

Related Coordinates

With this option you enter points relative to another point which can be either the immediately previous point or a point you specify.

Calling the command displays the following dialog box:

# **EXAMPLE** Place a 40x40 column in a position which is at a distance of x=3,0 m and z=5,0 m from a point (which you will define).

Select the substructure to be placed and the command "Relative Coordinates".

In the dialog box that appears, enter the relative X and Z coordinates assuming a new coordinate system whose origin (0,0) is the point with respect to which the relative movement will be made and whose axis direction is that of the absolute axes. "OK"

Enabling the  $\Sigma x \varepsilon \tau \kappa \dot{\alpha} \mu \varepsilon \delta \varepsilon \delta \sigma \mu \dot{\varepsilon} \dot{\alpha}$  option means that the relative coordinates given be to the point you specify, or otherwise to the last point you entered.

#### Absolute Coordinates

This command inserts points with absolute coordinates, i.e. with point 0,0,0 the origin of the axes. Calling the command displays the following dialog box where you set the X,Y, and Z coordinates respectively. Entering the Y coordinate is optional. If you leave the value 0, the point is given the elevation of the elevation level.

to cancel all pulls to lock the coordinates

Σχετικές	Συντεταγμένεα	ς Χ
X (cm)	0	
Y (cm)	0	OK
Z (cm)	0	Cancel
Σx	ετικά με δεδομ	ένο σημείο



Απόλυτο	Σύστημα Συντ	εταγμένων Χ
X (cm)	0	
Y (cm)	0	OK
Z (cm)	0	Cancel



#### 7.2 Zoom toolbar

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Command that cleans the desktop from various design debris.

# Q & C A A

A command that allows the user to zoom in and out of objects on the desktop for a better urbanization. Zooming is done:

- With window
- Within the limits of the project
- Previous
- With +
- With step -

Command that allows the user to move the entire drawing within the desktop.

## 7.3 Select toolbar

🗹 羅 \land 🔽 🕜 🔛

Activate the command and left-click:

- select the objects one by one
- This is a new option that offers the possibility to select an entire subgroup of surface by selecting a single element of it, a very useful tool especially in complex operators and when you want to make a specific subgroup Delete, Change direction, Change material etc.
  - draw a polyline that intersects the selected objects
- draw a window containing the selected objects
- draw a polygon containing the selected objects

ME TOMH inactive means that objects **NOTE:** in the status bar the option intersected by the window or polygon will not be selected, unlike

when the option is active. Activation and deactivation is done by double-clicking. Depending on the options . ENTOS EKTOS



# 뛢 Group selection

Command that allows objects to be selected based on their common characteristics.

Φόρτωσε Ομάδ	α	
🔲 Υλικό	Σκυρόδεμα	<ul> <li>Δοκοί - B3D</li> <li>Προσθήκη Καθάρισμα</li> </ul>
🔲 Ποιότητα	C8/10	<b>•</b>
📃 Τύπος	B-3d	B-3d - 44(11,10) - Γ 25/50/15/40 - L:Δοκοί Σκυροδέματος
📃 Είδος	Δοκός	B-3d - 45(10,9) - Γ 25/50/15/47 - L:Δοκοί Σκυροδέματος B-3d - 46(9,7) - Γ 25/50/15/46 - L:Δοκοί Σκυροδέματος
📃 Στρώση	Γραμμές, Κύκλοι	Β-3d - 47(7,8) - Γ 25/50/15/40 - L:Δοκοί Σκυροδέματος Β-3d - 48(8,12) - Γ 25/50/15/57 - L:Δοκοί Σκυροδέματος Ε
🔲 Προτίμηση	Cross Section	B-3d - 49(12,5) - T 25/50/15/68 - L:Δοκοί Σκυροδέματος B-3d - 50(5,2) - T 25/50/15/67 - L:Δοκοί Σκυροδέματος
🔲 Χρώμα	0	B-3d - 51(5,14) - T 25/50/15/67 - L:Δοκοί Σκυροδέματος B-3d - 53(13,11) - T 25/50/15/89 - L:Δοκοί Σκυροδέματος B-3d - 54(11,6) - T 25/50/15/61 - L:Δοκοί Σκυροδέματος B-3d - 55(6,8) - T 25/50/15/61 - L:Δοκοί Σκυροδέματος
Επιλογή	Από Σε Βήμ	ήμα B-3d - 56(13,18) - Τ 25/50/15/69 - L:Δοκοί Σκυροδέματος B-3d - 57(12,18) - Τ 25/50/15/67 - L:Δοκοί Σκυροδέματος
Στοιχεία	0 0 0	B-3d - 57(12,16) - Γ25/50/15/38 - L:Δοκοί Σκυροδέματος
(+) με φίλτρο Φόρτωσε Ομάζ	ο (-) με επιλογή + Καθάρ δα Σώσε Ομάδα Ο	Δ-33         -53 </th

1. Activate "Material" or "Quality", "Type", "Type", "Layer", "Preference", "Color" and from the respective lists select the common attribute.

🔽 Χοώμα										
M Yhoha	1									

For the colour option you can choose directly from the palette or type in the corresponding number of the colour you want.

Then, select the command to generate the list of all objects in the study that have the selected attribute on the right.

and the screen will display the selected objects with a dashed line between them. line.

2. Select an item category from the list on the right and the command **Doothin** to display, in

the white box below, all the study items belonging to the same category. The Kaddaxaya command clears the box of all items, and selecting one or more items from the box and the command will clear only those items.

3. The command **Exace Quadrant** allows the user to create his own groups of items based on his own criteria, by selecting some items within the box and the command



Φόρτωσε Quáδα. Then select "Save Group", give it a name and "New". With "Load Group" and "OK" select the group you created.

Υλικό	Σκυρόδεμα	G	ve Group	· · ·	<b>X</b>	<ul> <li>Προσθήκη Καθα</li> </ul>	յեւմ
Ποιότητα	C8/10	50	Holes 1				
 Τύπος	B-3d		dokol I		5/50/15/40	- L:Δοκοί Σκυροδέματος	1
] Είδος	Δοκός				/50/15/47 - 50/15/46 - L	L:Δοκοί Σκυροδέματος :Δοκοί Σκυροδέματος	
Στρώση	Γραμμές, Κύκ	101			50/15/40 - L /50/15/57 -	:Δοκοί Σκυροδέματος L:Δοκοί Σκυροδέματος	
Προτίμηση	Cross Section				/50/15/68 - 50/15/67 -L	L:Δοκοί Σκυροδέματος :Δοκοί Σκυροδέματος	
] Χρώμα			Ονομα		/50/15/67 - 5/50/15/89 /50/15/61 -	L:Δοκοί Σκυροδέματος - L:Δοκοί Σκυροδέματος L:Δοκοί Σκυροδέματος	1
Επιλογή	Anò	Σε	dokoi 1		50/15/61 - L 5/50/15/69 5/50/15/67	:Δοκοί Σκυροδέματος - L:Δοκοί Σκυροδέματος - L:Δοκοί Σκυροδέματος	į
Στοιχεία	0	0	Νέο	Διαγραφή	/50/15/38 -	L:Δοκοί Σκυροδέματος	
(+) με φίλτρ	о (-) µс спи	λογή +	ОК	Cancel	5/50/15/40 5/50/15/47	<ul> <li>- L:Δοκοί Σκυροδέματος</li> <li>- L:Δοκοί Σκυροδέματος</li> </ul>	

#### 7.4 UNDO-RESET toolbar



Revocation of the previous order/ Reinstatement of the order previously revoked.

#### 7.5 Performance of PROPERTIES

Command that allows the properties of the selected object to be assigned to other objects <u>similar</u> objects.



Απόδοση Ιδιοτήτων 🏾 💌
🗌 Στρώση 📄 Χρώμα 📄 Υλικό 📄 Διατομή
🔲 Συμετοχη Εδάφους
Αδρανειακά
beta
E G
ε at
🔲 Ελευθερίες Μελών
🔲 Βαθμοί Ελευθερίας Κόμβου
OK Cancel

Select the command and left-click a model object to open the corresponding window containing the individual properties.

Check the properties you want to assign and OK to close the window. Then, select (using one of the Select tool modes) the similar objects to which the selected properties of the first one will be assigned.

Automatically a separation is made in the attribution of properties between columns and concrete walls, with a ratio of 1:4, so that the properties of e.g. a column are attributed only to columns, separating them from walls.

▲ In the window, properties that cannot be transferred are automatically disabled.

#### 8. PROPERTIES

-

\_

Ιδιότητες	3 X
計 21 田 💋	
A/A	5
Στρώση	Δοκοί Σκυροδέματ
Χρώμα	17
E Autout	
νλικό	Σκυρόδεμα
Ποιότητα	C16/20
Διστομή	Ορθογωνική δοκόι
Εικόνα	÷bw+
В Гомратрія	
bw	25.00
h	50.00
hf	15.00
bm	89.00
Γωνία	0.00
Ανεστρομένο	10
Περισσότερα	Core .

In the new interface of the upgraded SCADA Pro, the list of "Properties" is displayed on the right, informing the user about its characteristics and allowing to make possible changes. The list is automatically populated if selected:

a vector element on the desktop



- a subgroup element within the TREE
- in the "BASIC" SECTION the command Report-Activities

In



1. if you select a mathematical member, the properties also show the data of the physical member to which it belongs





2. on a surface with surface elements, you can select individual elements and explore their properties

3. by selecting a slab (either from TREE in the Slab subgroup or from the Slab section by left-clicking on its surface), its properties are displayed in the properties field.

4. In the properties of Line and Polyline it displays in the properties and their length L in meters (m).

Στρώση	Γραμμές, Κύκλοι
Χρώμα	2
🗉 Σημείο Αρχής	1794.00, 400.00, 273.80
X	1794.00
Y	400.00
Z	273.80
🗉 Σημείο Τέλους	2070.00, 400.00, 444.20
X	2070.00
Y	400.00
Z	444.20
L(m)	3.24
.(m) picture below:	3.24 in
WCS	1455.6 . 1337.0 . 400.0 (4)

When an element is inserted with a first and second point, after the first point and before the second point, with the movement of the elastic line shows the current coordinates and the distance from the first point in cm.

For example, having defined the first point in the design of a line and before defining the next point, the coordinates (x,z and y-height) of the point where the cursor is located (the second end of the elastic line displayed on the screen) and in brackets the distance from the first point as in the

x=1455.6, z=1337.0 y=400 distance=423.4 (all

By selecting the More in the properties of a selected Beam-Pillar-Column-Multiplication-Lattice, Member, Node, the corresponding window of the element's properties opens where you can make all the changes you wish:



			Επιφανειακά	Στοιχεία					6				×
			Πλέγμα 3D	∼ Pl	LATE 1			Υλικό	Тохоп	oiia ~	Ποιότητα	Λιθοδο	μή-M2 ( ∨
			Επιφάνε	ia S	1/4/2 <b>(</b> P	PLATE)			гропіко	Ορθοτρ	опко	Γωνία	0
Ιδιότρτος		пх	Στοιχείο Plat	te	$\sim$	Ks (MPa/cm)	0					_	
		* ^	Ονομασία	7088		Πάχος (cm)	60	Exx (0	SPa)	2.619226111	Gxy (GPa)	1.0	47690444
	7000		Κόμβοι		i .	k		Eyy ((	SPa)	2.619226111	ε <mark>(kN/m3)</mark>	26	
A/A Emunéricies 2D	DI ATE 1		10261	1008	33	10267	10443	Ezz (G	iPa)	0	atx*10-5	1	
επιφανείες 30	S1/4/2(DLATE)		0			0	0	vxy(0	. 1-0.3)	0.25	aty*10-5	1	
Στοώση	Πλένμα 3D					0	•	vy7(0	1-0 3)	0.25	- atxv*10-5	1	
Χοώμα	35		Πλέγμα 3D				~	0	10.2)	0	Exx * vx	7 = Fvv	* vxv
Περισσότερα		_	0	К		Cance	el	vy2(0	. 1-0.5)	0	1 200 10		14)
Ιδιότητες Βι 2↓ □ \$ Α/Α Στρώζα Χρώμα Περισσότερα Σάκατομή Υλικό Ποιότητα Διατομή Εικόνα	2 Δοκοί Σκυροδέματος 21  Σκυρόδεμα C30/37 Γ δοκός t t bm t t bm t t t bm t t t bm t t t bm t t t t	Διστο Υλικό Σκυμ Ποιότ C30,	μή οδόεμα ητα (37 ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )		Γεωμε bw h hf m Γωνία Ανε	rpia (cm) 30 95 18 60 Οffsets Ο Φ στραμμένο ×				Karaxwan EniXoyn Info 0 90 180 270 CK C	an 3D View		

**OBSERVATION:** The selection point or pass of the element is the one that will remain constant in the event of a change in its dimensions.

#### 9. PARAMETERS

<sup>Context</sup> Project Param... <sup>Context</sup> Project Data Toggle display of parameters and study data (TREE). The list of study parameters will be activated in the next version.

#### **10. STATE LINE**

WCS 3881.8 , 2183.3 , 700.0 ΟΡΟΟΓ. ΟSNAP ΒΗΜΑ ΚΑΝΑΒΟΣ ΜΕΤΟΜΗ ΕΝΤΟΣ

The status bar is located at the bottom of the screen and adjusts according to the selected Module and the vector display (2d/3d), giving additional possibilities for managing the project.

• 2D imaging: WCS



• **3D visualization**: <sup>**Φ**+**M**</sup> Single-click to toggle the visualization of the model, going from mathematical to physical, from physical to both mathematical and physical, and back to the beginning.

OPOOL.

• **DEFINITE**: Single click to enable or disable OPOOL.

OSNAP: Informs that no Osnap is active. OSNAP In the opposite case. informs for .
 if there is no active SnapSnap or if there is no active SnapSnap in the
 system. Osnap is active

	AKPO	ΜΕΣΟ	ΠΛΗΣ.	KAO.	KENT.	КҮКЛ.	ΕΦΑΠ.	TOMH	TAP.	

and allows it to be switched off and on by clicking on it.

- **STEP**: Single click to activate or deactivate the "step" of the canvas (for moving the mouse)
- CANAVOS: Single click to make the canavos appear or disappear
   KANABOΣ

έκτος

- SECTION: Active means that, objects intersected by the window or polygon will be selected, inactive, no. Activation and deactivation is done with a single click.
- INSIDE: Depending on the

#### **10 COLOUR MANAGEMENT**

Allows you to select a color from the color palette, when inserting an element, other than the default layer color.

During the photorealistic visualization, double-clicking on the carrier shows the colors of its construction materials (gray = concrete, blue = metal, brown = masonry, beige = wood).

The switch at the bottom of the screen allows you to modify the intensity of the photorealism display. When you move the switch close to -, the physical model is dimmed and the mathematical model is displayed in sharp focus. Conversely, moving the switch closer to +.



AKPO

ΚΑΝΑΒΟΣ

AKPO



BHMA

BHMA





#### **11 NEW PAN-STRONG GRAPHICS LIBRARY**

The new version of Scada Pro includes a new graphics library developed entirely with the latest and most innovative developments in the field.

This library takes full advantage of the graphics card's memory and combines it ideally with the main memory when required, as well as using the power of the multiple cores of your computer's processor. This allows you to display 3D realistic renderings of even huge bodies in a fraction of a second. You can rotate and view your model at any angle you want, as well as navigate through it and quickly and easily spot any errors. The visualization of the static vector of your structure is now the most vivid and photorealistic.



This library allows you to display all the display formats of the model.

- Photorealism
- Wireframe
- Hidden lines

Let's now look at the above options with an example:











#### AEON 0.0, 427.1, 2163.9 ΓΕΩΜ ΦΥΣ Wireframe HiddenLine