EEER-Group
In collaboration with G-Consultants

Presents

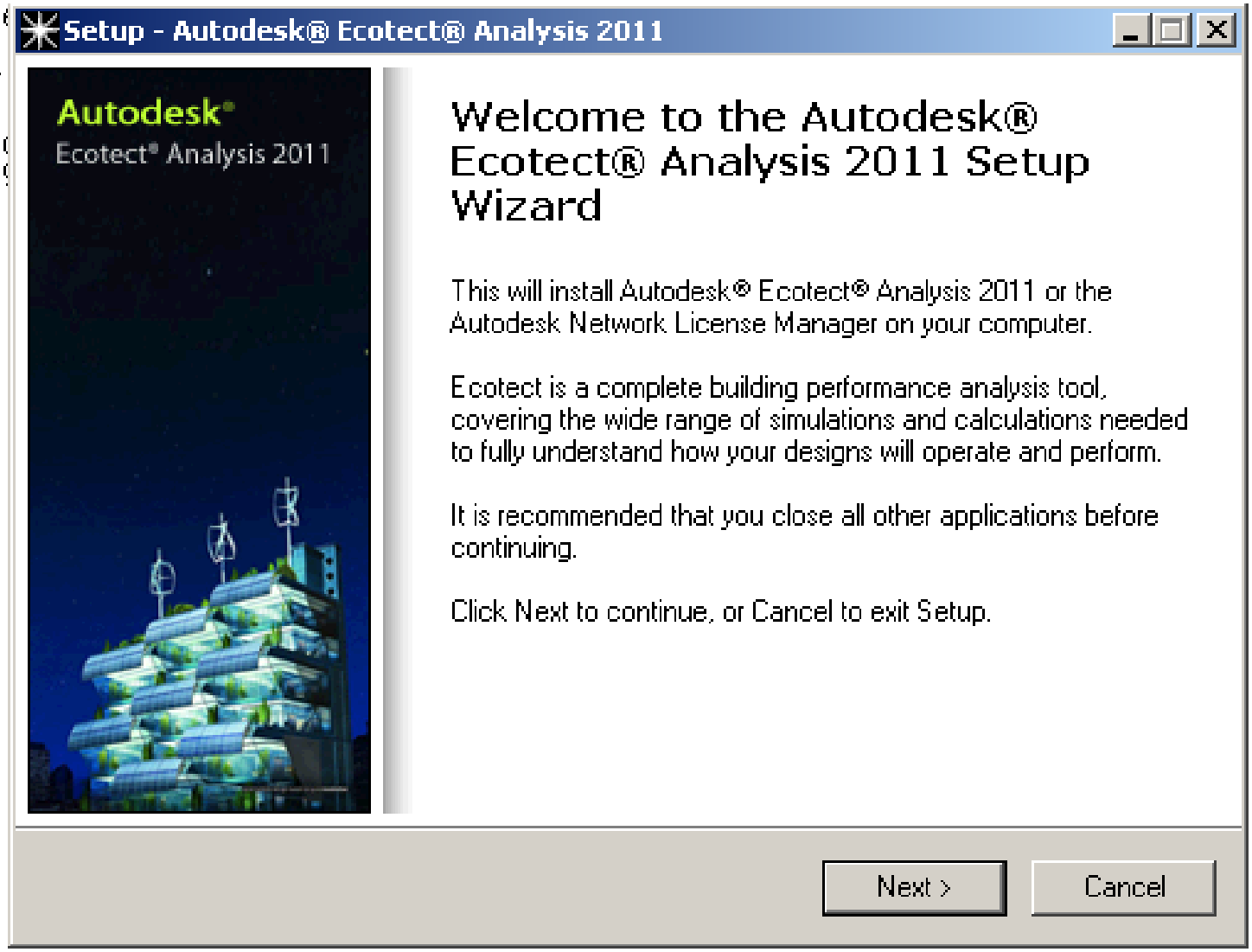
ECOTECT Short Course Part (I)

By

Dr. Mohammad Fahmy Abdel-Aleem

Contact: md.fahmy@live.com

Installing Auto-Desk ECOTECT Analysis 2011

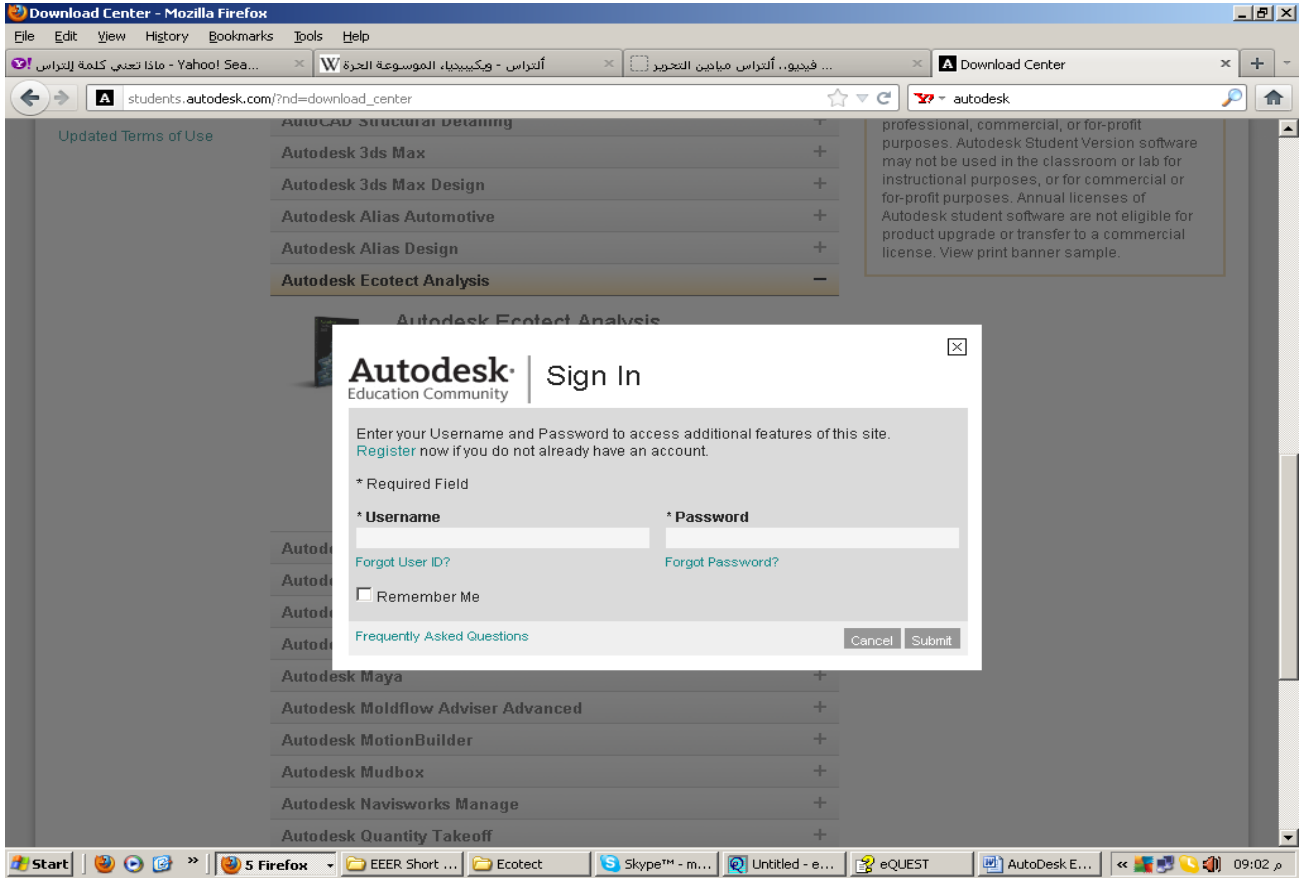


Contact: md.fahmy@ibpsa-interbuild.com

Serial Number: 354-46168284

Product Key: 593C1

You can download your own original copy from Educational downloads
http://students.autodesk.com/?nd=download_center



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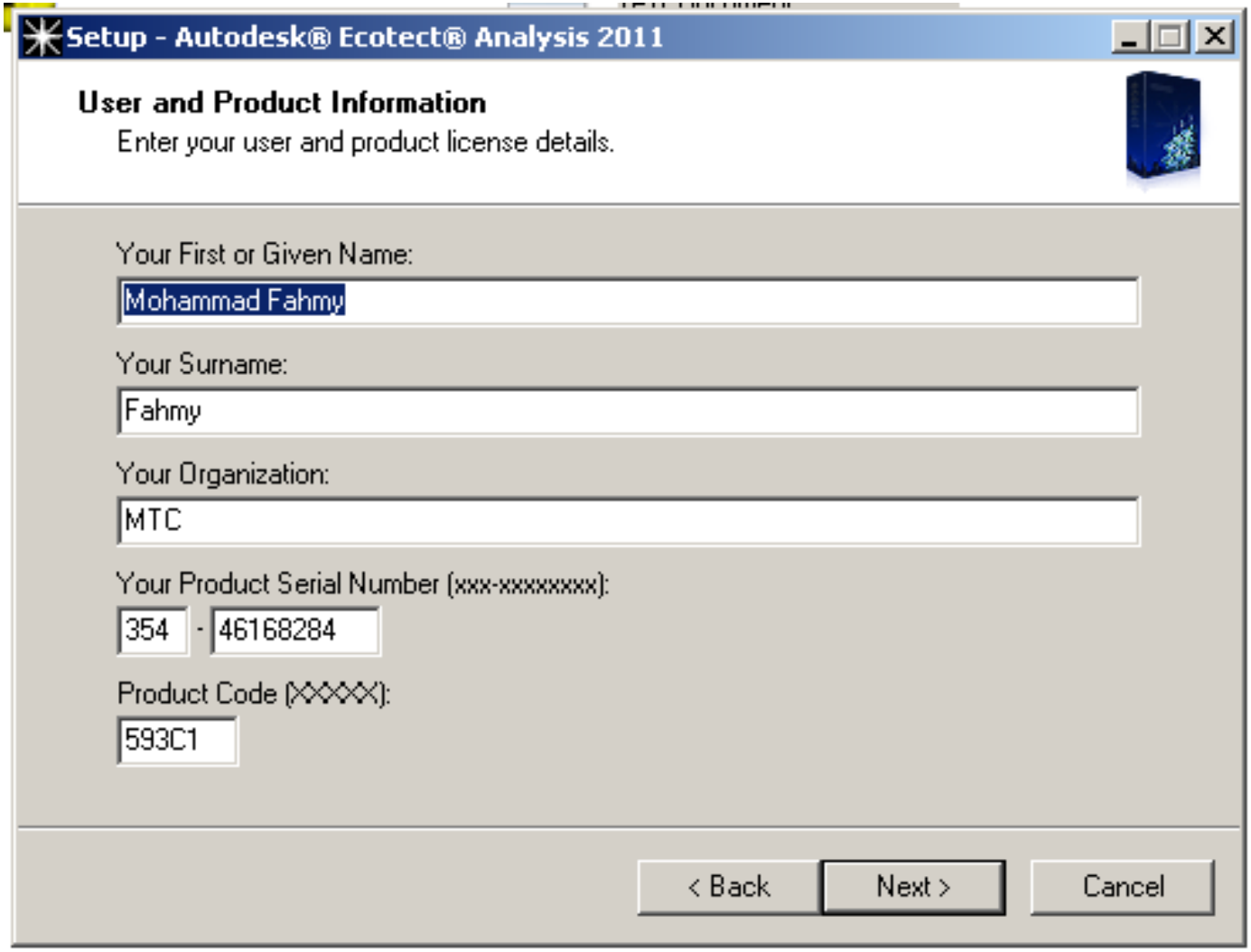
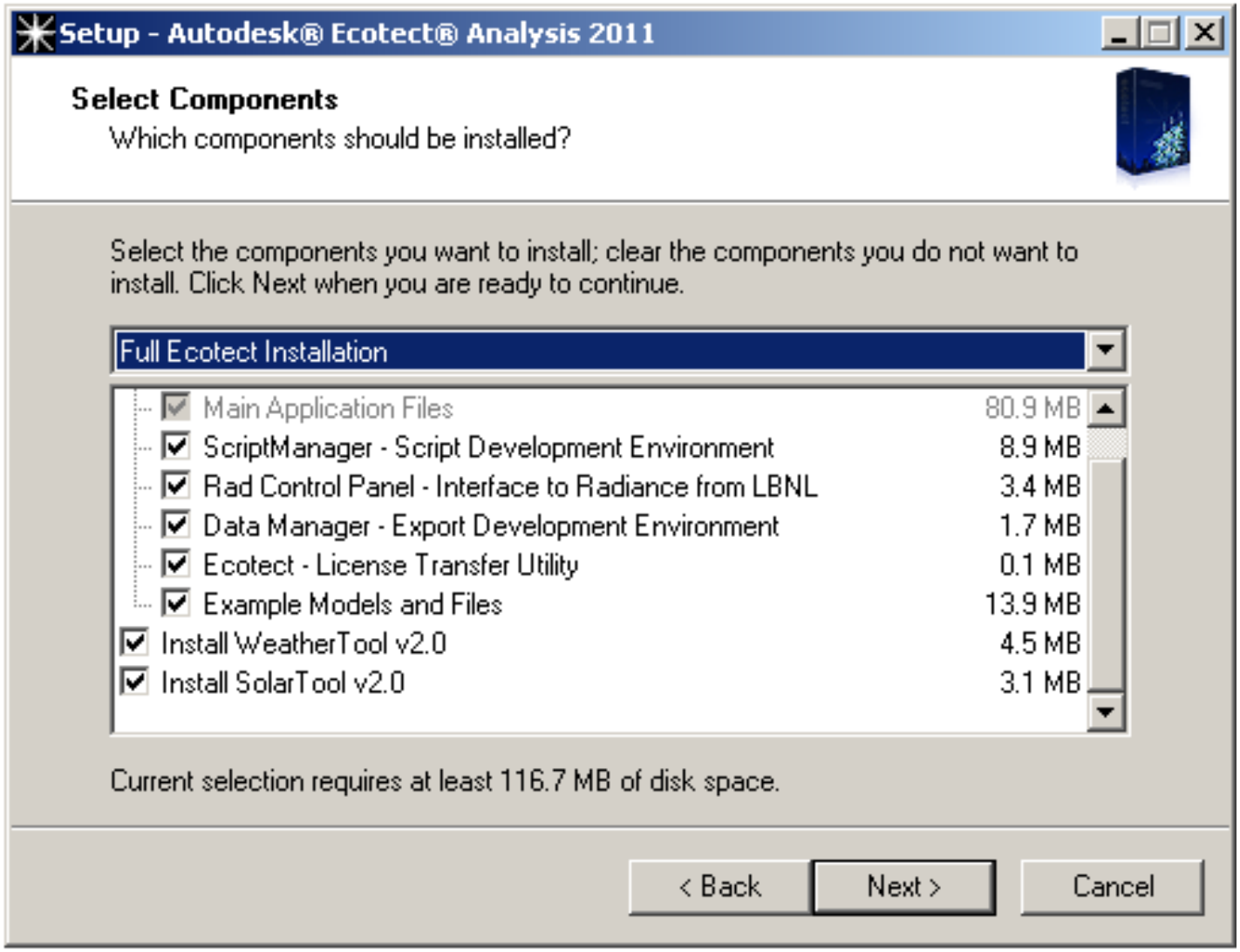

Setup - Autodesk® Ecotect® Analysis 2011
User and Product Information
Enter your user and product license details.
Your First or Given Name:
Mohammad Fahmy
Your Surname:
Fahmy
Your Organization:
MTC
Your Product Serial Number (xxx-xxxxxxxx):
354
46168284
Product Code (XXXX):
593C1
< Back
Next >
Cancel


Setup - Autodesk® Ecotect® Analysis 2011
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Full Ecotect Installation
Main Application Files 80.9 MB
ScriptManager - Script Development Environment 8.9 MB
Rad Control Panel - Interface to Radiance from LBNL 3.4 MB
Data Manager - Export Development Environment 1.7 MB
Ecotect - License Transfer Utility 0.1 MB
Example Models and Files 13.9 MB
Install WeatherTool v2.0 4.5 MB
Install SolarTool v2.0 3.1 MB
Current selection requires at least 116.7 MB of disk space.
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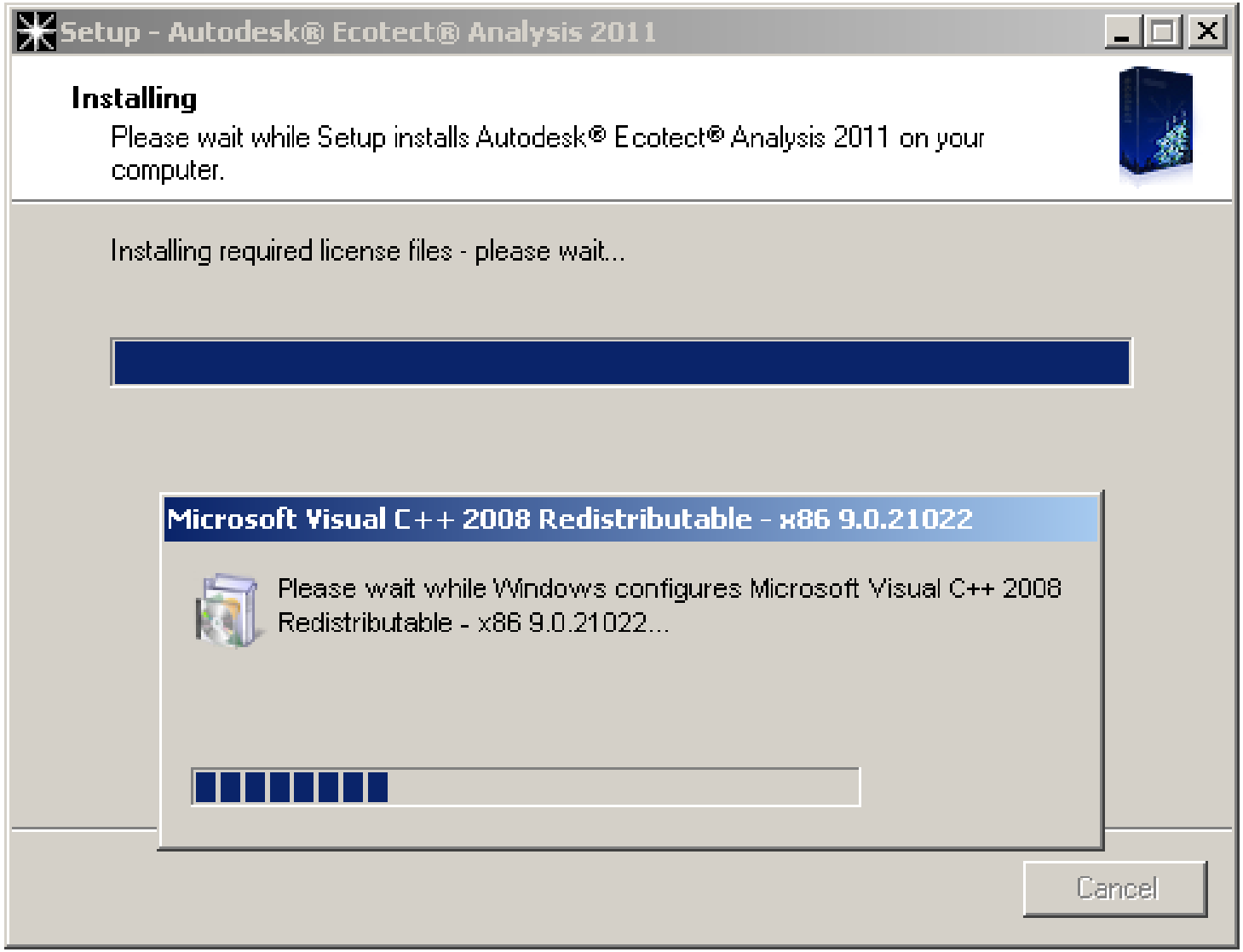
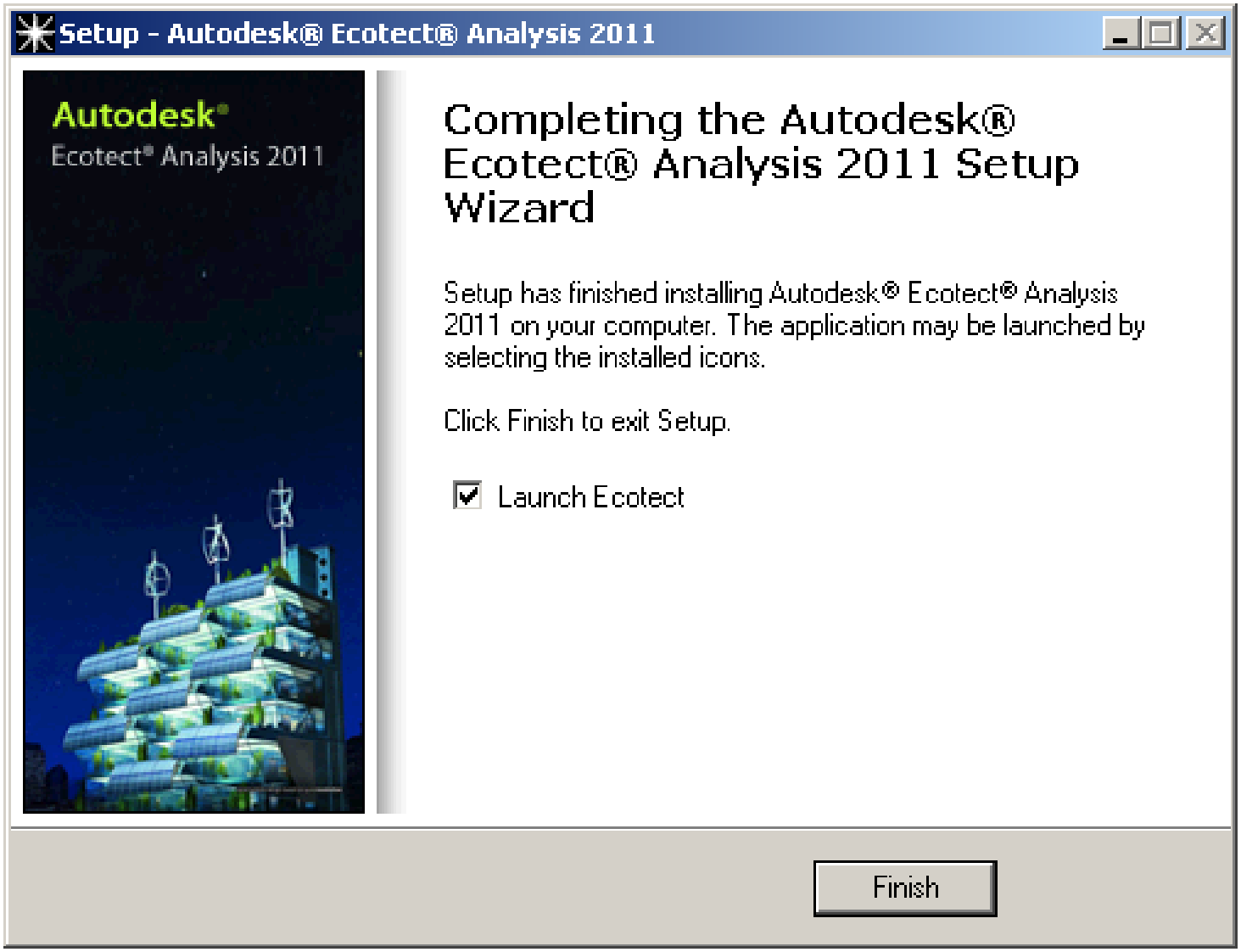
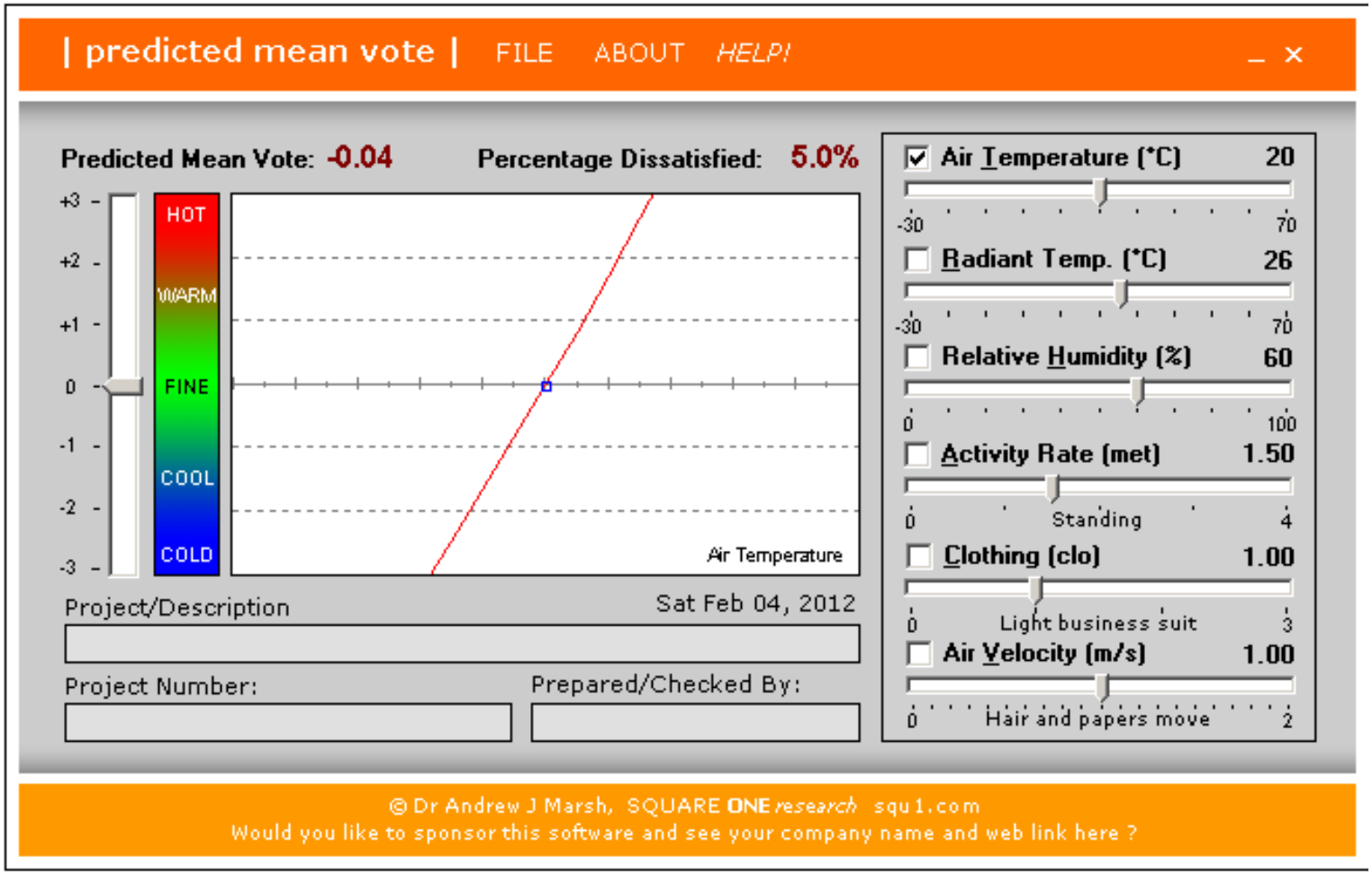

Setup - Autodesk® Ecotect® Analysis 2011
Installing
Please wait while Setup installs Autodesk® Ecotect® Analysis 2011 on your computer.
Installing required license files - please wait...
Microsoft Visual C++ 2008 Redistributable - x86 9.0.21022
Please wait while Windows configures Microsoft Visual C++ 2008 Redistributable - x86 9.0.21022...
Cancel


Setup - Autodesk® Ecotect® Analysis 2011
Autodesk®
Ecotect® Analysis 2011
Completing the Autodesk® Ecotect® Analysis 2011 Setup Wizard
Setup has finished installing Autodesk® Ecotect® Analysis 2011 on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Launch Ecotect
Finish

Getting started

ECOTECT Tools – PMV tool



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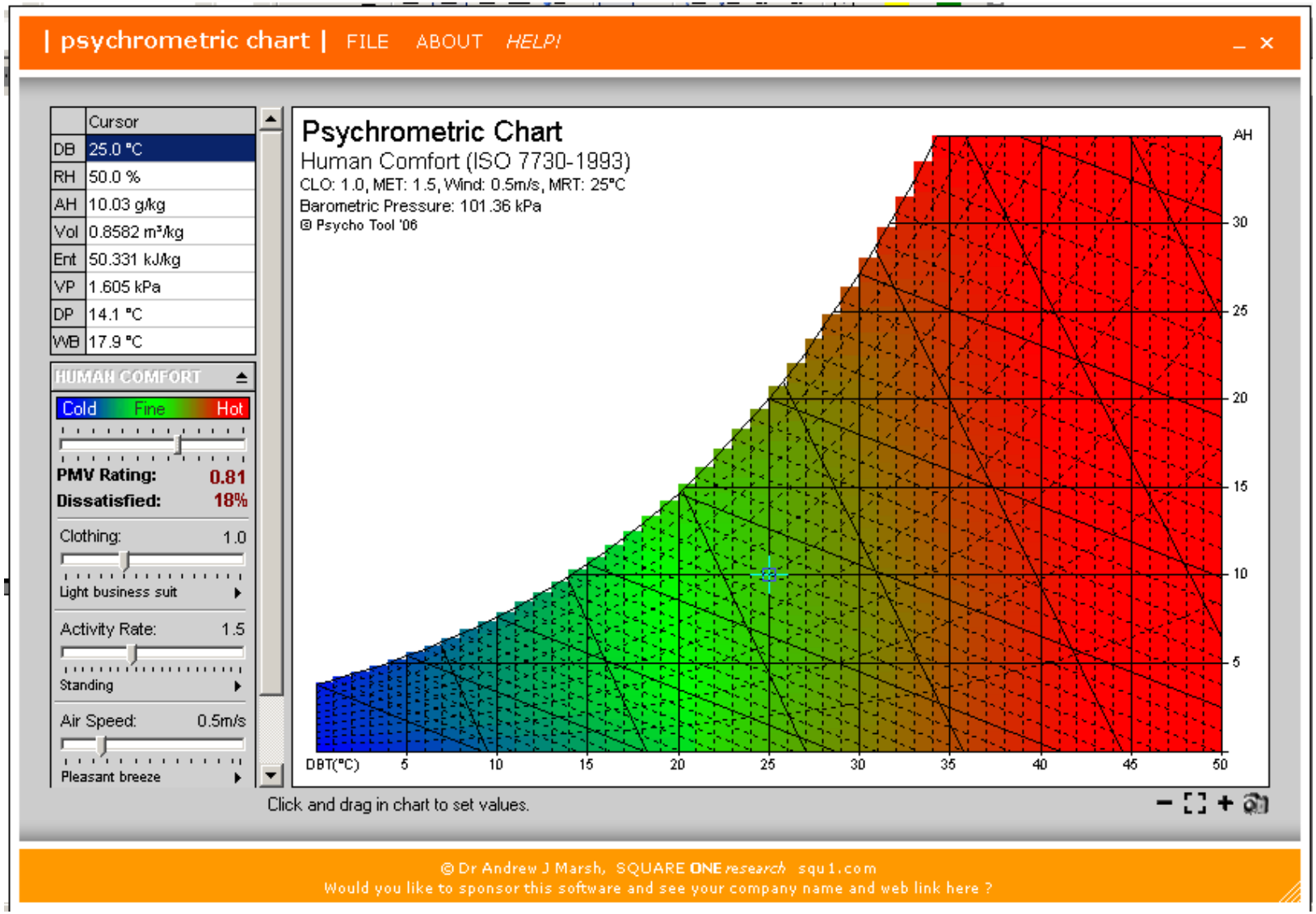
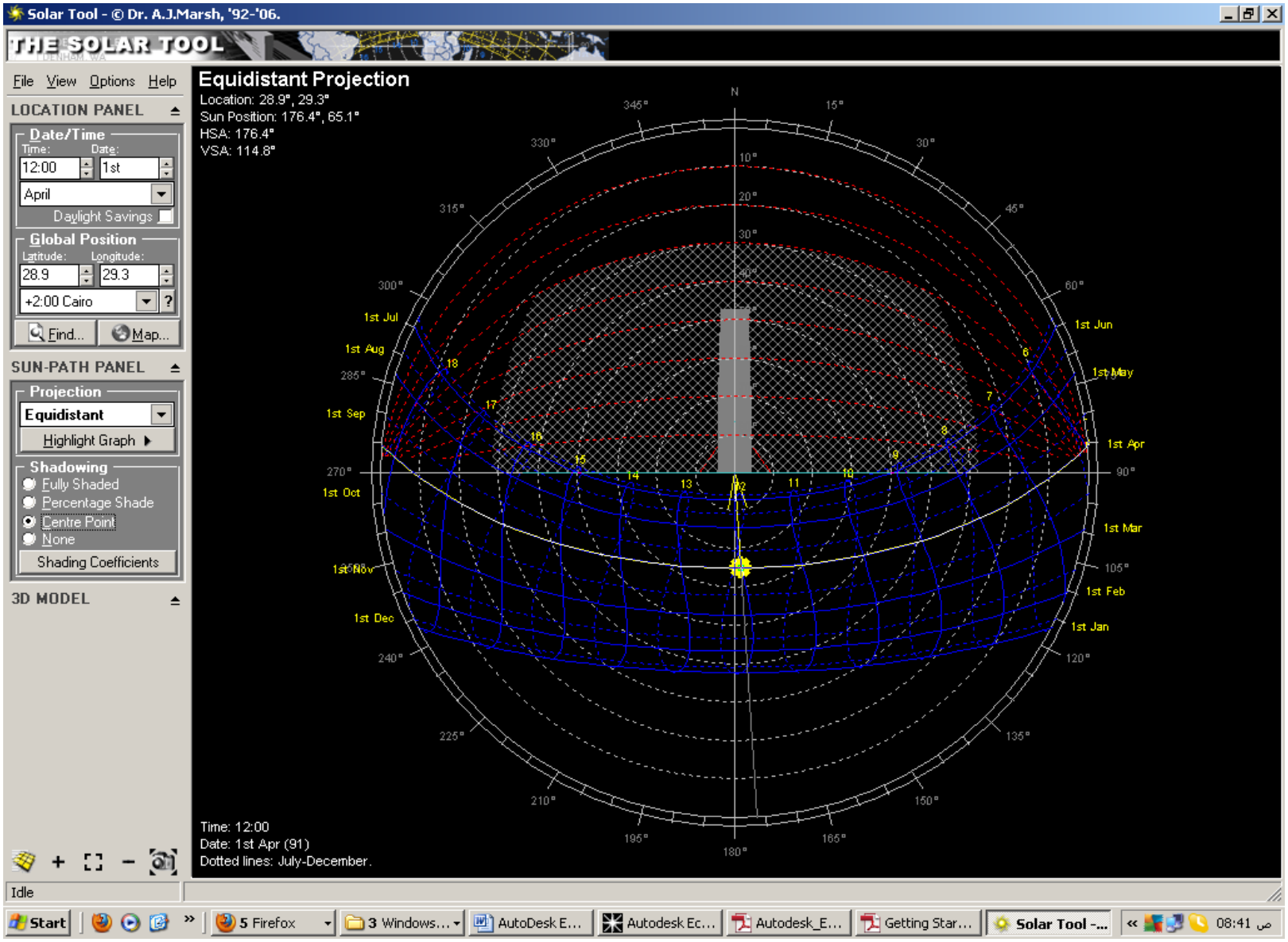
Psychometric tool



Solar Tool


Solar Tool - © Dr. A.J.Marsh, '92-'06.
THE SOLAR TOOL
File View Options Help
LOCATION PANEL
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Date: 1st
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Daylight Savings
Global Position
Latitude: 28.9
Longitude: 29.3
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Find...
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SUN-PATH PANEL
Projection
Equidistant
Highlight Graph
Shadowing
Fully Shaded
Percentage Shade
Centre Point
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Shading Coefficients
3D MODEL
Equidistant Projection
Location: 28.9°, 29.3°
Sun Position: 176.4°, 65.1°
HSA: 176.4°
VSA: 114.8°
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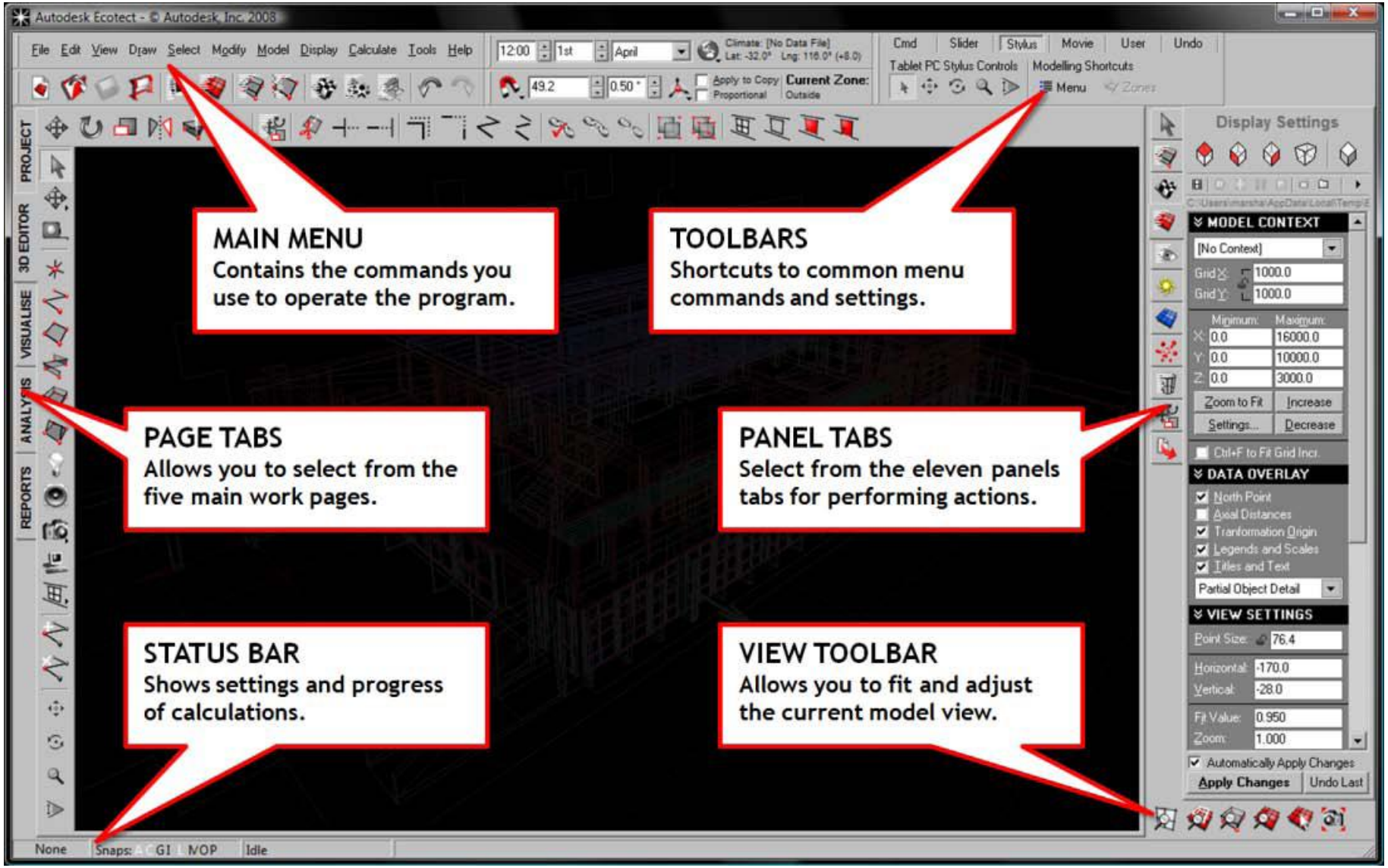
ECOTECT main panel



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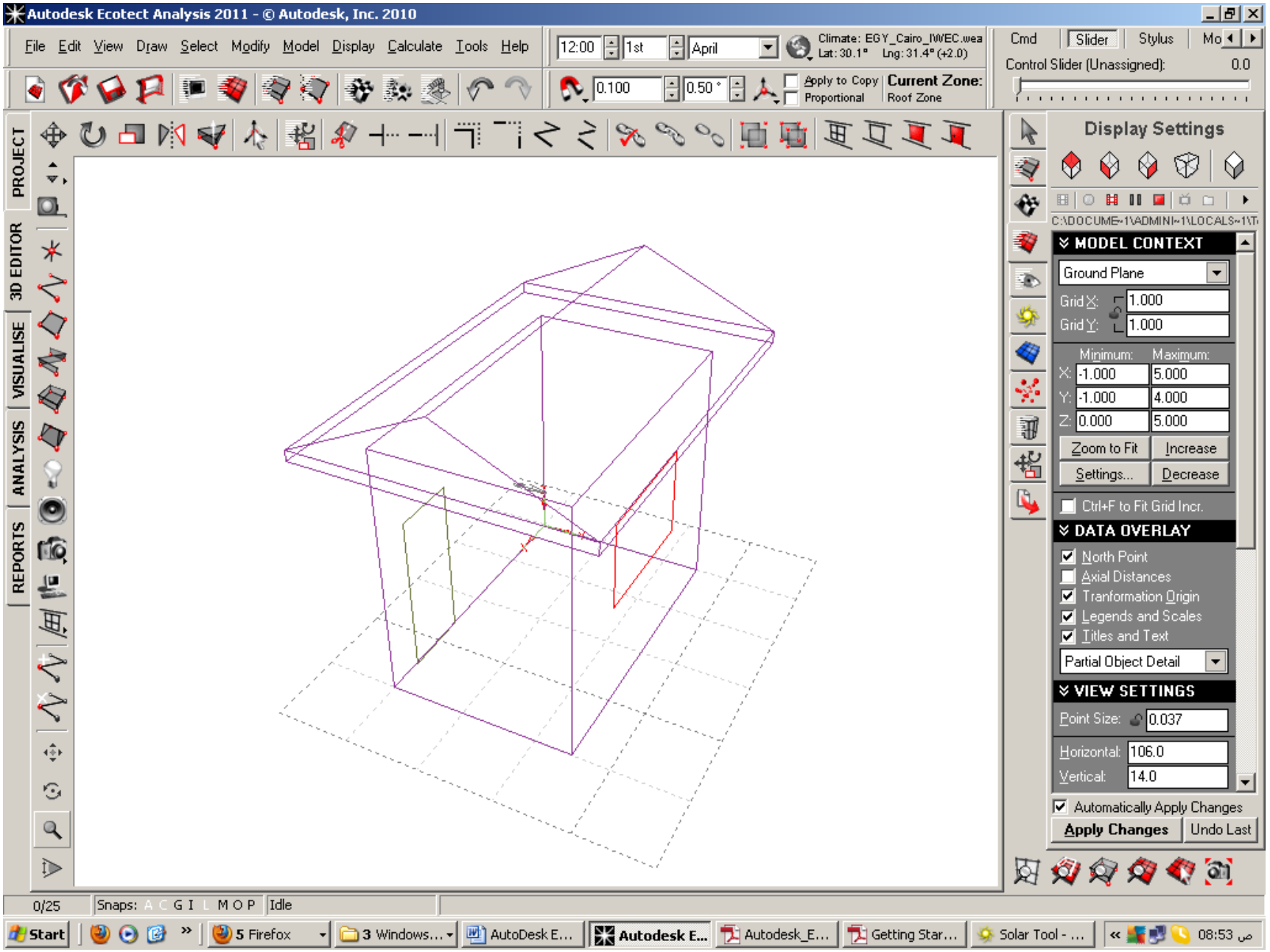
Autodesk Ecotect Analysis 2011 - © Autodesk, Inc. 2010
File Edit View Draw Select Modify Model Display Calculate Tools Help
Display Settings
MODEL CONTEXT
Ground Plane
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Tranformation Origin
Legends and Scales
Titles and Text
Partial Object Detail
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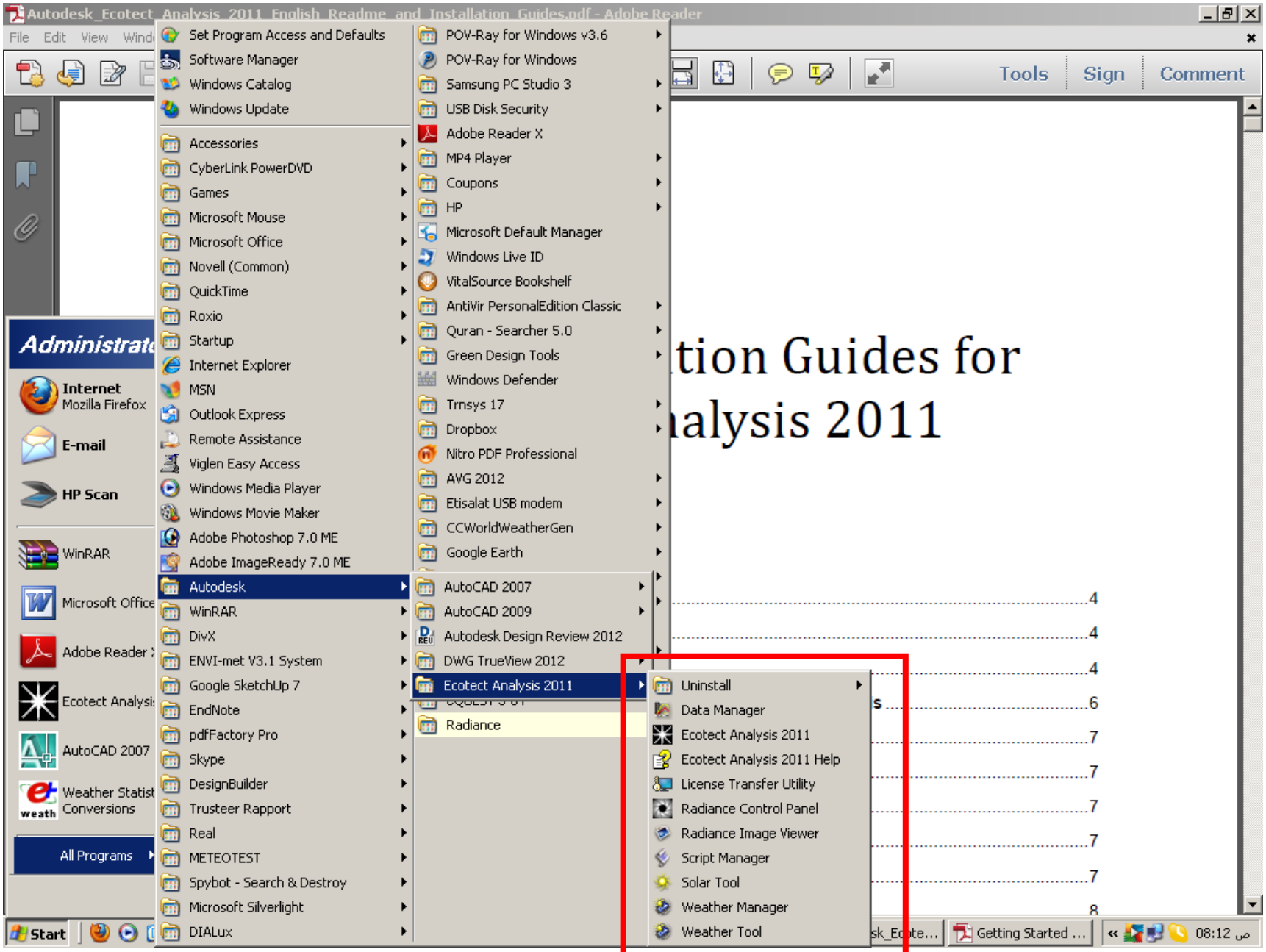
Automatically Apply Changes
Apply Changes
Undo Last
PROJECT
3D EDITOR
VISUALISE
ANALYSIS
REPORTS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Windows Catalog
Windows Update
Accessories
CyberLink PowerDVD
Games
Microsoft Mouse
Microsoft Office
Novell (Common)
QuickTime
Roxio
Startup
Internet Explorer
MSN
Outlook Express
Remote Assistance
Viglen Easy Access
Windows Media Player
Windows Movie Maker
Adobe Photoshop 7.0 ME
Adobe ImageReady 7.0 ME
Autodesk
WinRAR
DivX
ENVI-met V3.1 System
Google SketchUp 7
EndNote
pdfFactory Pro
Skype
DesignBuilder
Trusteer Rapport
Real
METEOTEST
Spybot - Search & Destroy
Microsoft Silverlight
DIALux
POV-Ray for Windows v3.6
POV-Ray for Windows
Samsung PC Studio 3
USB Disk Security
Adobe Reader X
MP4 Player
Coupons
HP
Microsoft Default Manager
Windows Live ID
VitalSource Bookshelf
AntiVir PersonalEdition Classic
Quran - Searcher 5.0
Green Design Tools
Windows Defender
Trnsys 17
Dropbox
Nitro PDF Professional
AVG 2012
Etisalat USB modem
CCWorldWeatherGen
Google Earth
AutoCAD 2007
AutoCAD 2009
Autodesk Design Review 2012
DWG TrueView 2012
Ecotect Analysis 2011
Radiance
Uninstall
Data Manager
Ecotect Analysis 2011
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License Transfer Utility
Radiance Control Panel
Radiance Image Viewer
Script Manager
Solar Tool
Weather Manager
Weather Tool
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Mozilla Firefox
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Conversions
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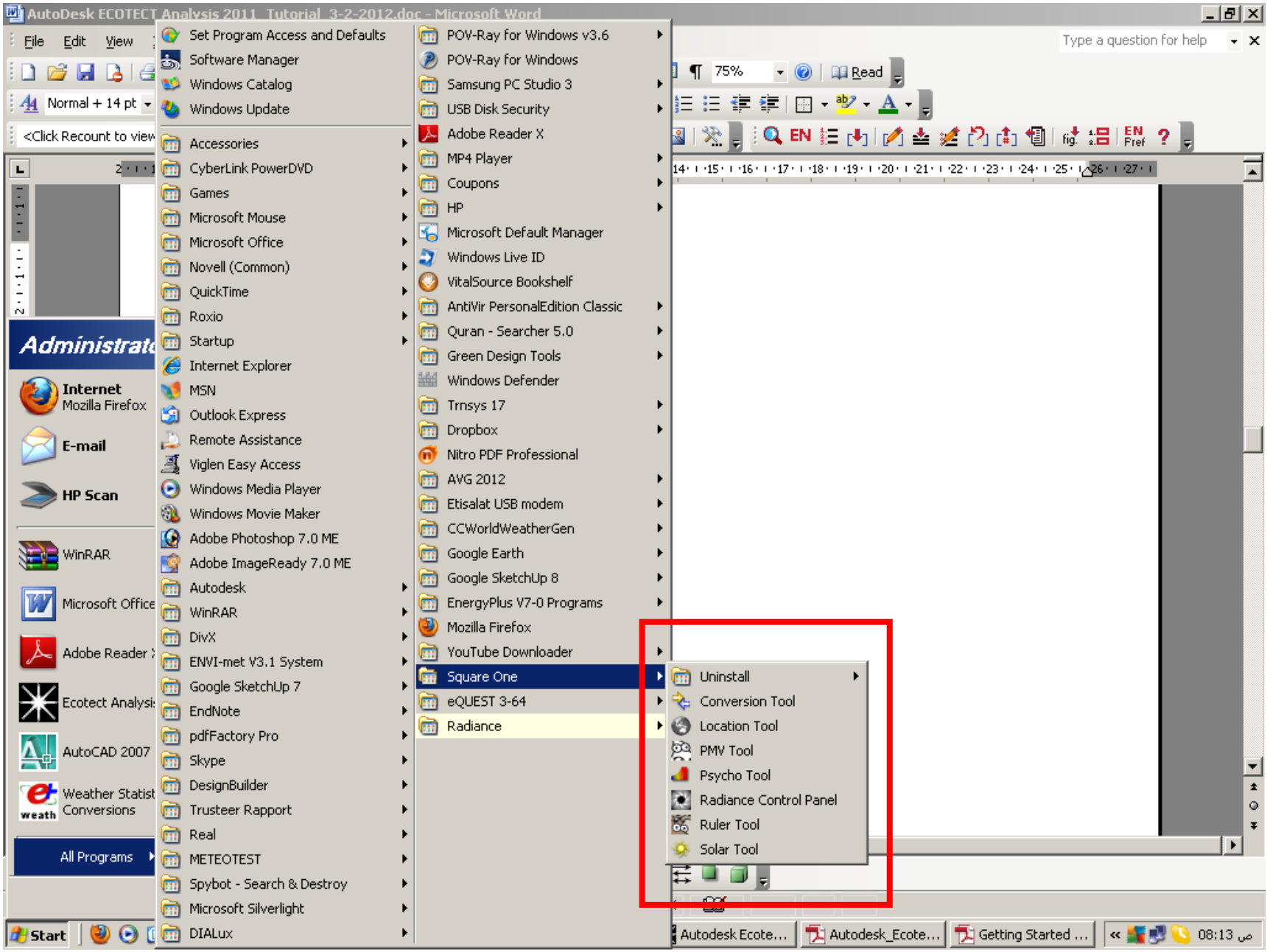
Getting Started ...
08:12 ص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Start
Set Program Access and Defaults
Software Manager
Windows Catalog
Windows Update
Accessories
CyberLink PowerDVD
Games
Microsoft Mouse
Microsoft Office
Novell (Common)
QuickTime
Roxio
Startup
Internet Explorer
MSN
Outlook Express
Remote Assistance
Viglen Easy Access
Windows Media Player
Windows Movie Maker
Adobe Photoshop 7.0 ME
Adobe ImageReady 7.0 ME
Autodesk
WinRAR
DivX
ENVI-met V3.1 System
Google SketchUp 7
EndNote
pdfFactory Pro
Skype
DesignBuilder
Trusteer Rapport
Real
METEOTEST
Spybot - Search & Destroy
Microsoft Silverlight
DIALux
POV-Ray for Windows v3.6
POV-Ray for Windows
Samsung PC Studio 3
USB Disk Security
Adobe Reader X
MP4 Player
Coupons
HP
Microsoft Default Manager
Windows Live ID
VitalSource Bookshelf
AntiVir PersonalEdition Classic
Quran - Searcher 5.0
Green Design Tools
Windows Defender
Trnsys 17
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AVG 2012
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Google Earth
Google SketchUp 8
EnergyPlus V7-0 Programs
Mozilla Firefox
YouTube Downloader
Square One
eQUEST 3-64
Radiance
Uninstall
Conversion Tool
Location Tool
PMV Tool
Psycho Tool
Radiance Control Panel
Ruler Tool
Solar Tool
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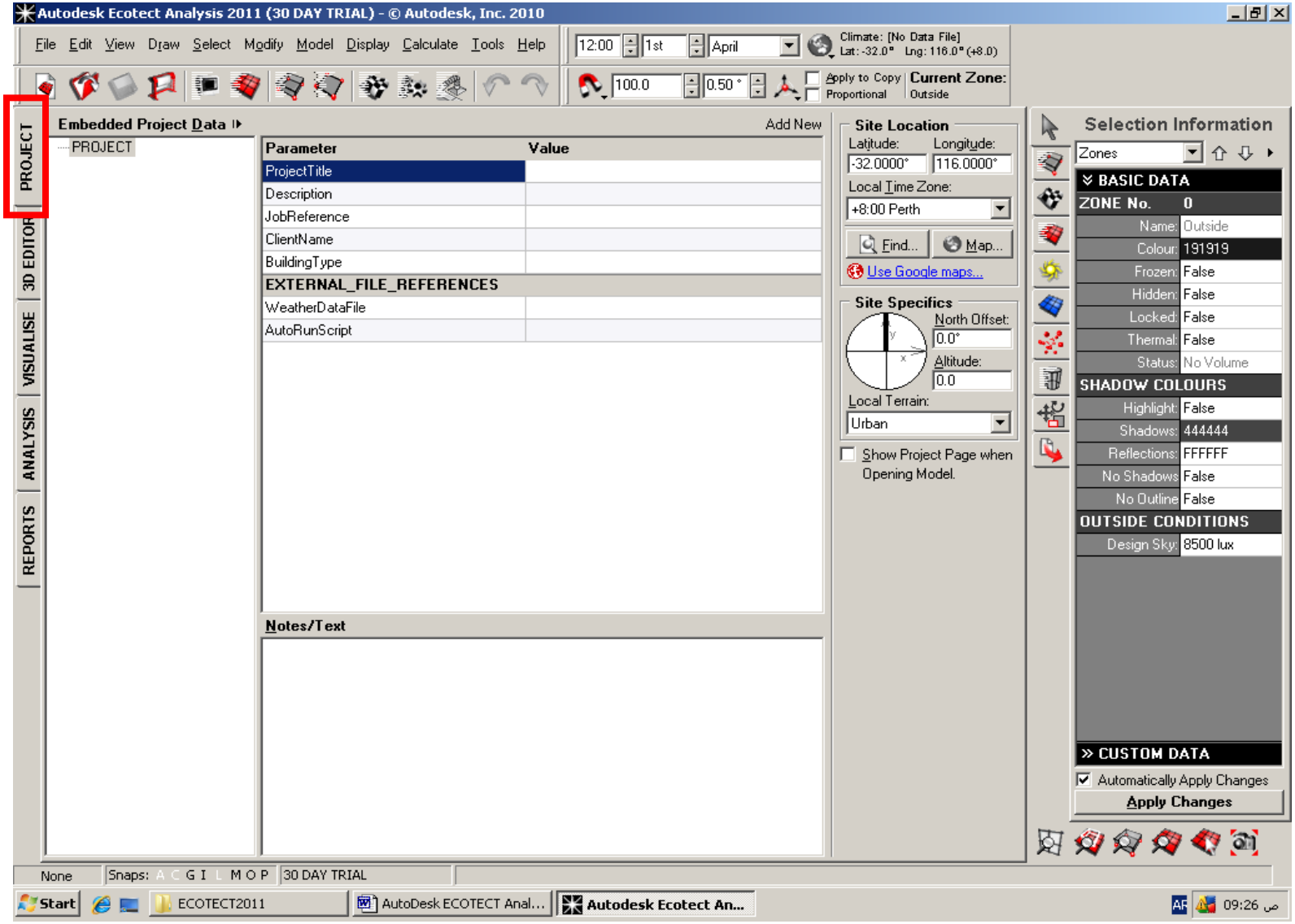
Autodesk_Ecote...
Getting Started ...
08:13 ص

Getting started – Left side menus: Project details entry



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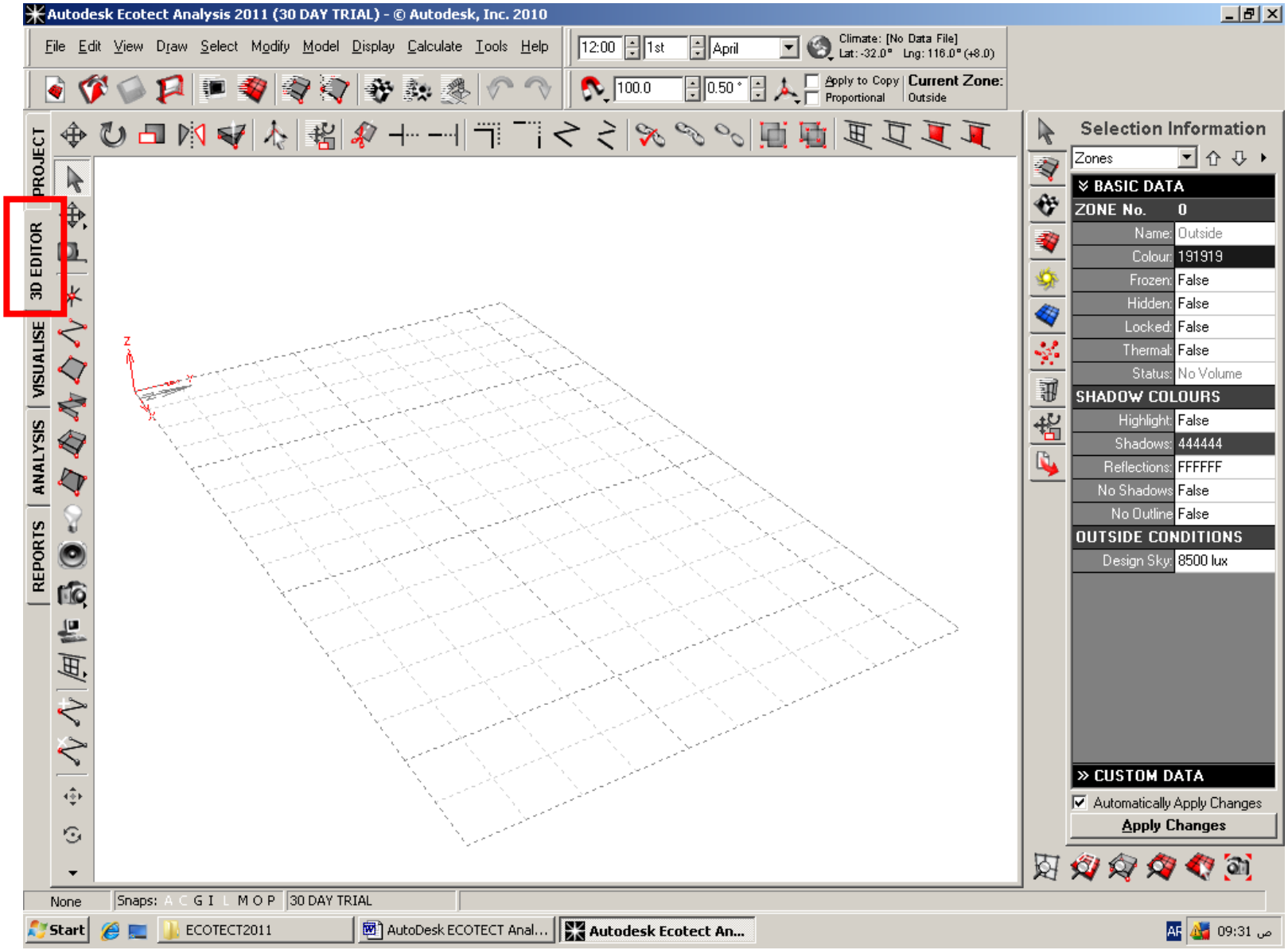
3-D editor panel



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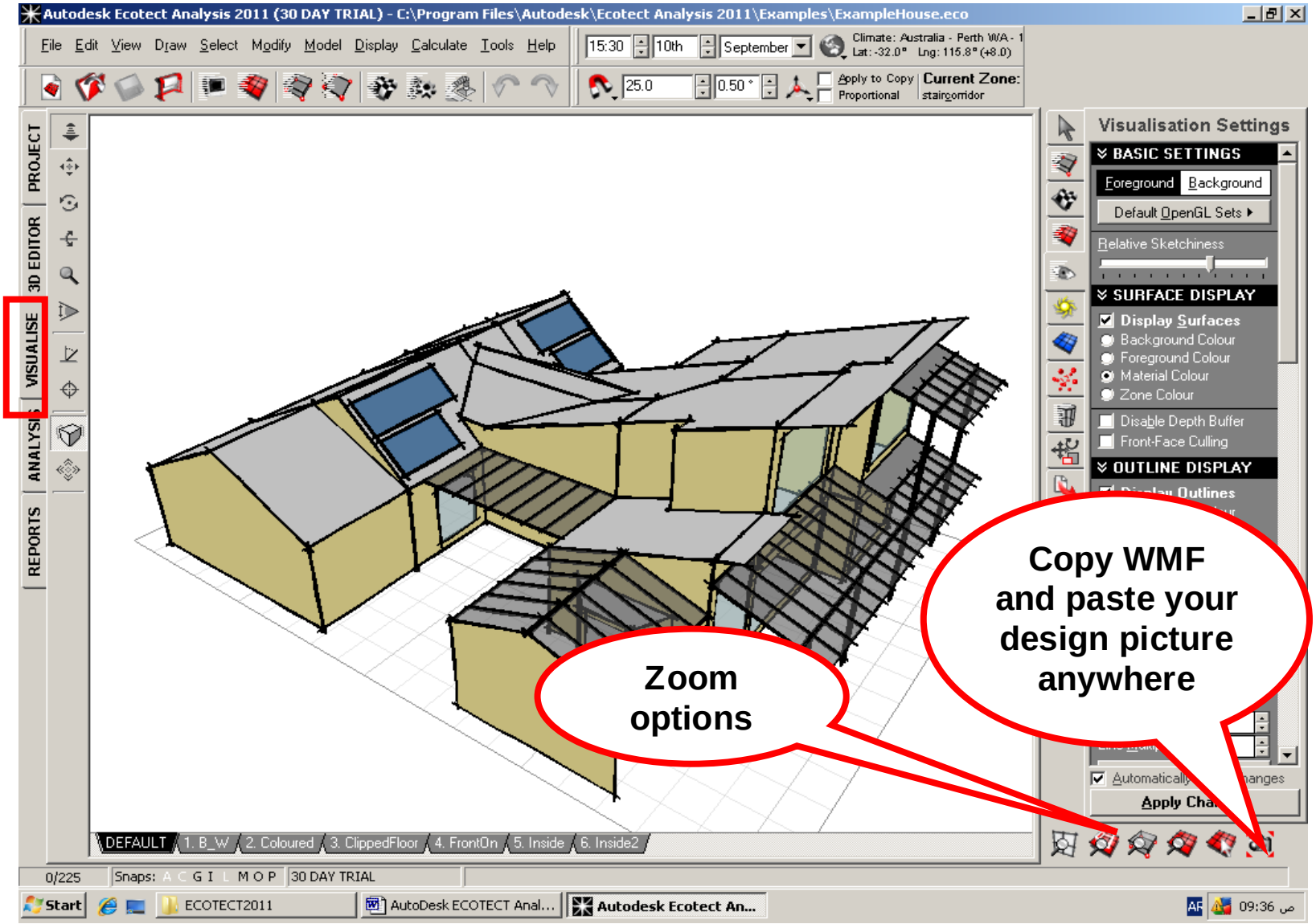
Visualize panel



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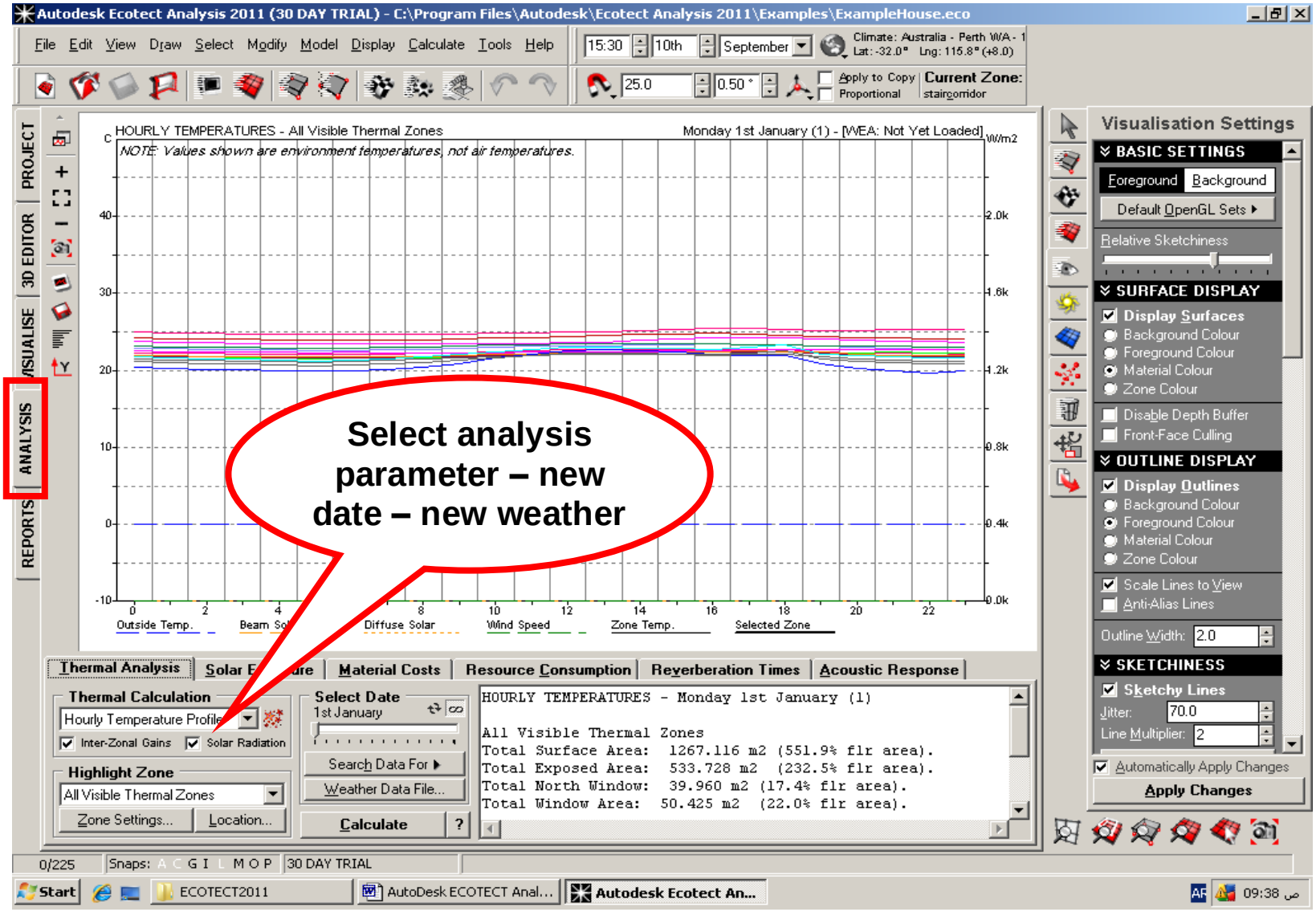
Analysis for results



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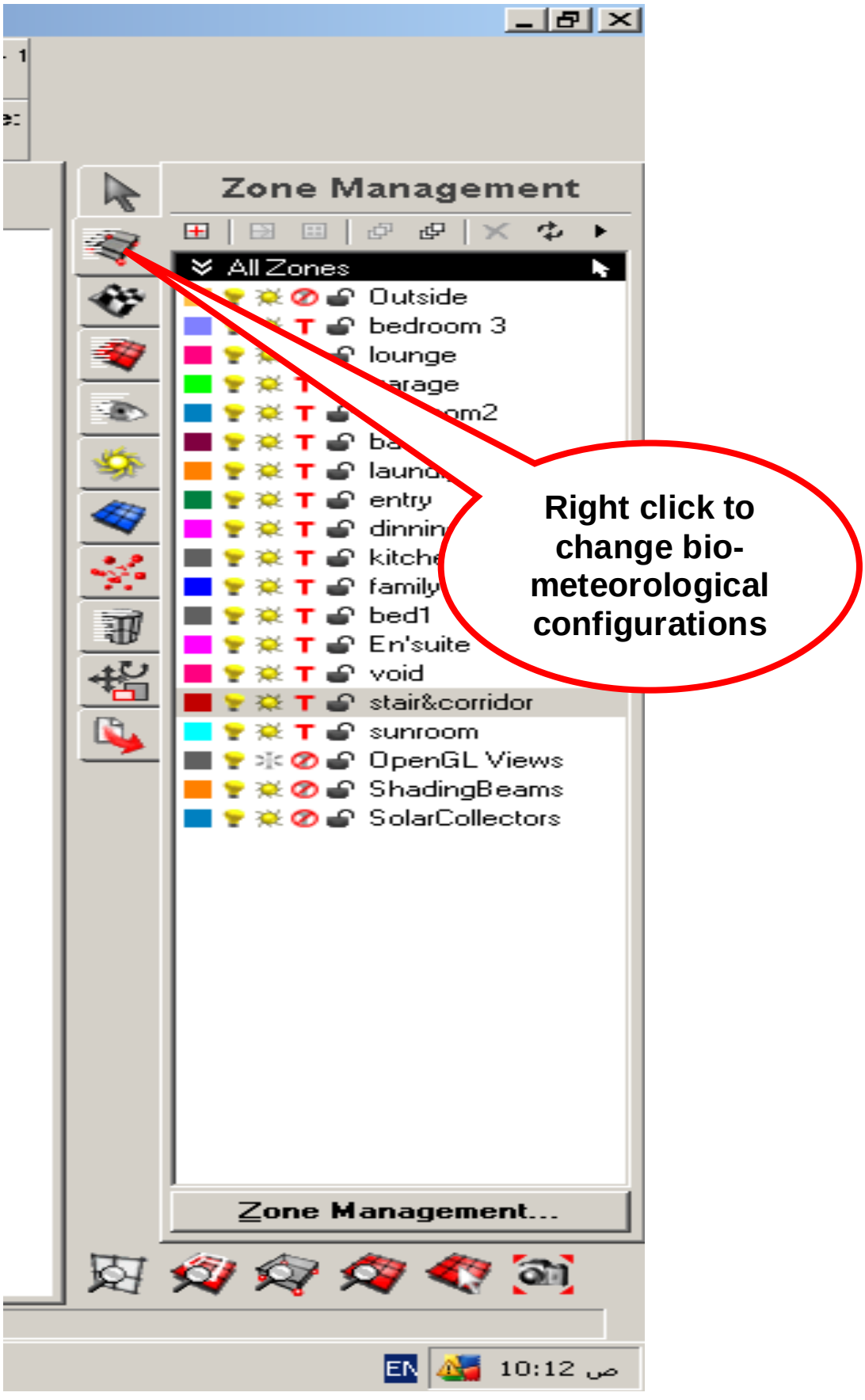
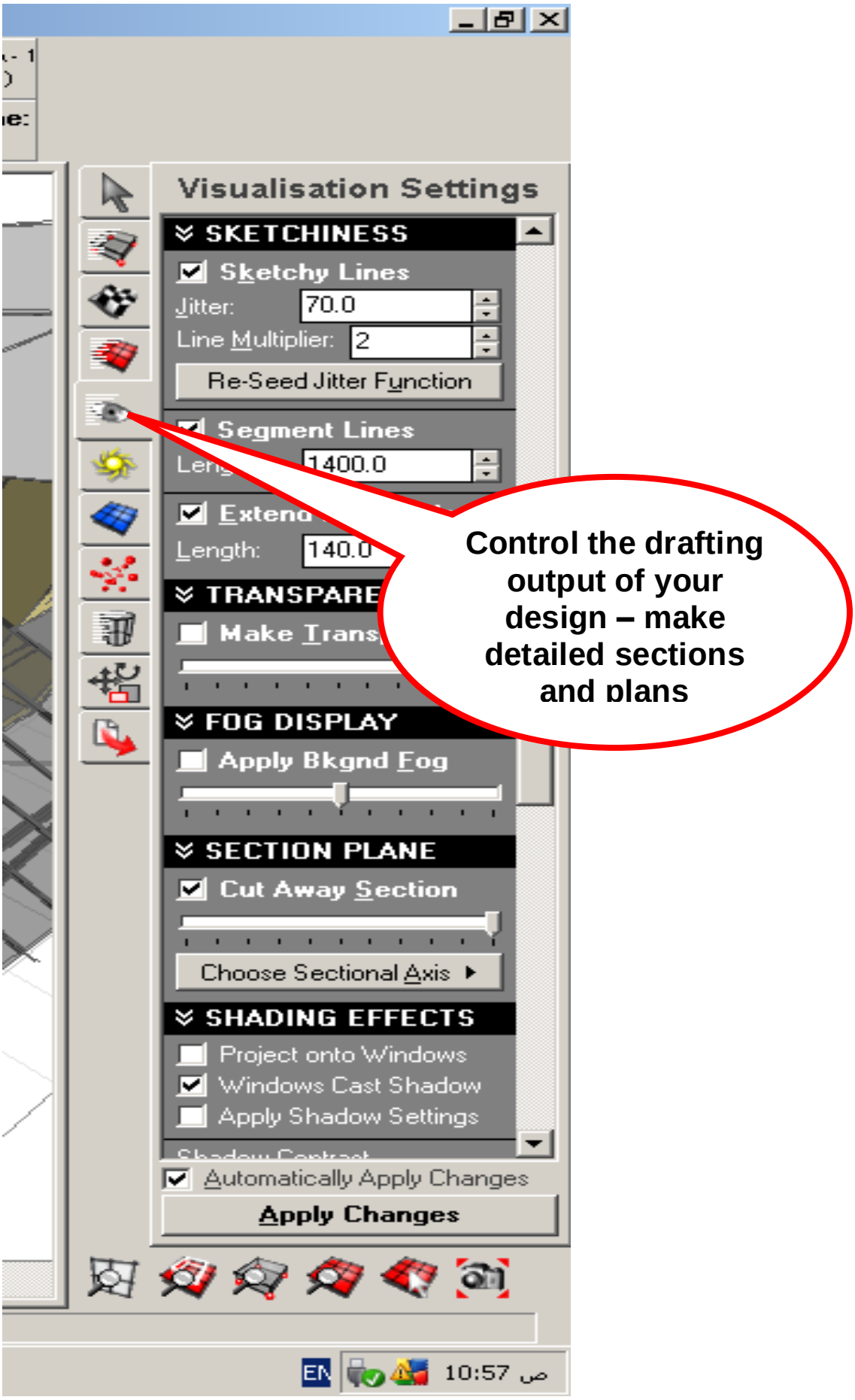
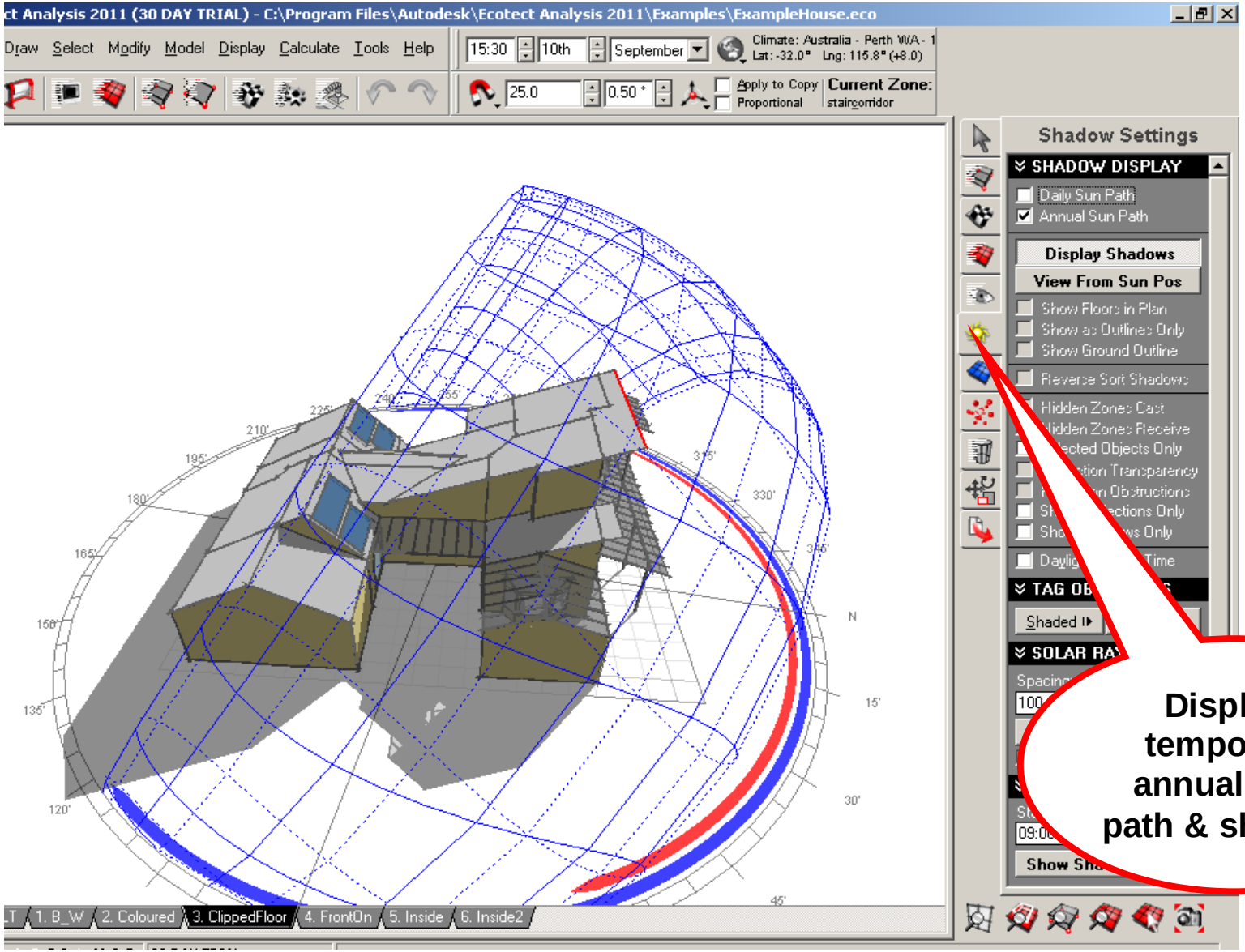
Right side menus




Visualisation Settings
SKETCHINESS
Sketchy Lines
Jitter:
70.0
Line Multiplier:
2
Re-Seed Jitter Function
Segment Lines
1400.0
Length:
140.0
FOG DISPLAY
Apply Bkgnd Fog
SECTION PLANE
Cut Away Section
Choose Sectional Axis
SHADING EFFECTS
Project onto Windows
Windows Cast Shadow
Apply Shadow Settings
Automatically Apply Changes
Apply Changes
Control the drafting output of your design – make detailed sections and plans

Shadow settings; Sun-Path diagram tool



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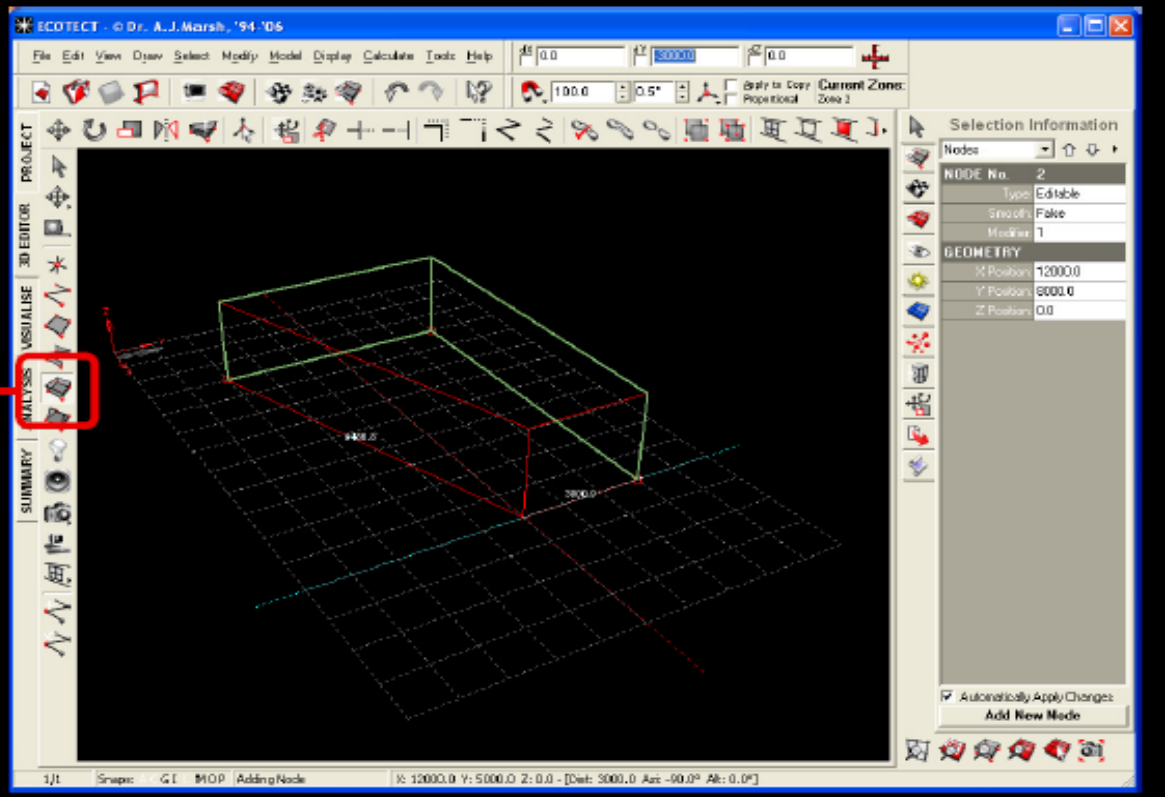
Modeling in ECOTECT
Drawing in ECOTECT - Drawing Tools - Modifying Tools

8.

It is now time to build your first simple model in ECOTECT. Go to the 3d Editor tab and select the 'ZONE' icon.

Start by defining the first corner of the volume you wish to analyze. Continue to outline the perimeter, and press 'ESCAPE' to close the volume and establish your ZONE.



INFO

It is fairly easy to model simple volumes in ECOTECT. The program will automatically provide you with guidelines. Distances are displayed as you move your cursor. You can also input a specific distance from your keyboard.

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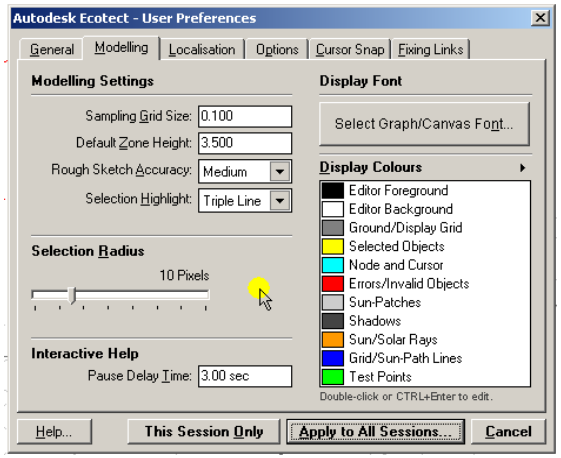
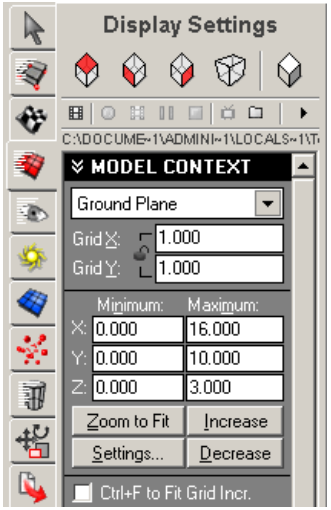
Steps for modeling in ECOTECT

1- Set preferences; colors, unit distances, snap options…



2- In the Display settings  ; adjust the model area



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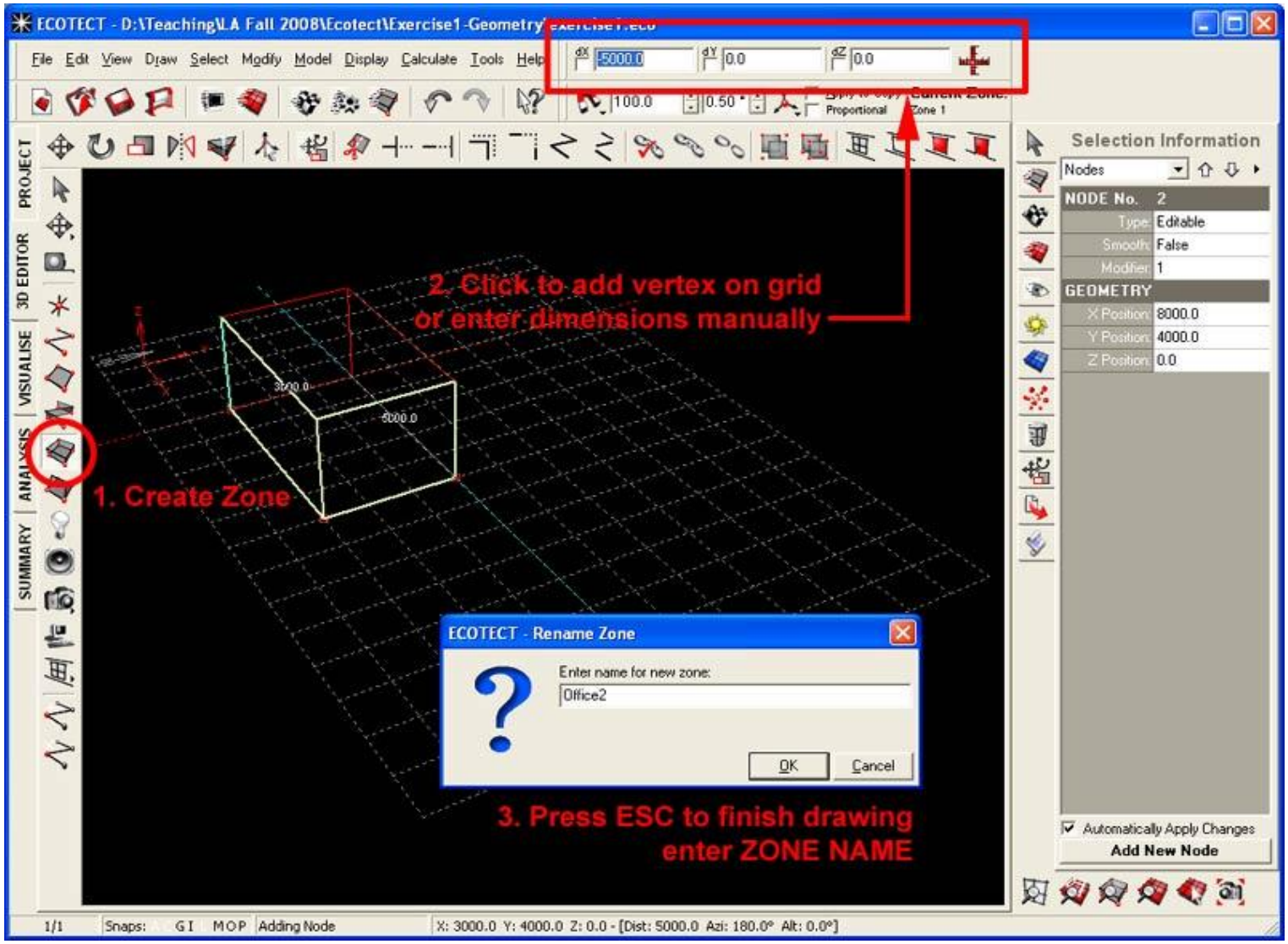
3- Draw thermal zone  in the 3D editor panel & give it the name RECEPTION



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4- Using F5, F6, F7, F8 you can toggle between the plan – elevation – side elevation – perspective.

5- Now draw more zones and give it names BEDROOM, KITCHEN and TOILET.

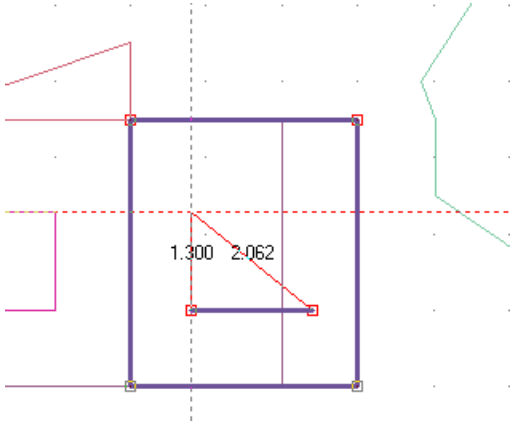
6- The left mouse click rotates the perspective view.

7- In the select mode  click on any surface; you can toggle between surfaces of same intersecting line by clicking the space bar.

8- To draw construction lines to assist in drawing the sloped ceiling, press the Line  button, click on the vertex to start, and enter the dimensions manually in the menu bar. Remember to delete these lines after use, or draw them on a separate "temporary" layer.

9- Set up your zone height in the Object transmission panel

10- Get back to the 3D editor, select the surface you want & draw windows or doors



Press escape when finished to complete drawing the window.

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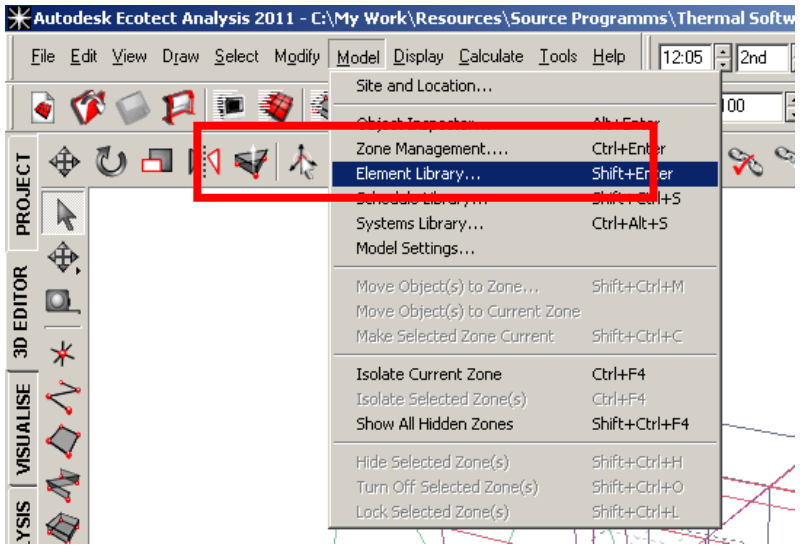
11- In the Materials assignment panel select the type of object & then set its material

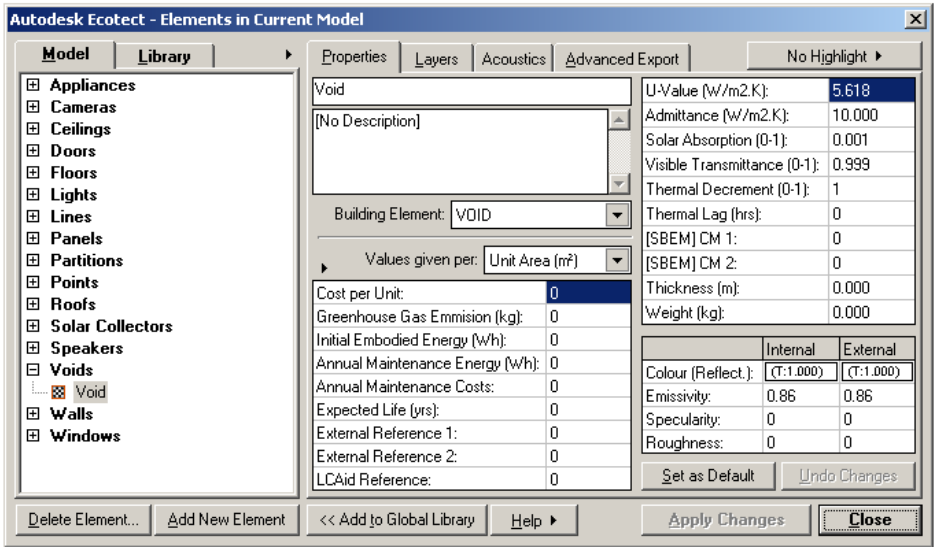
12- In the Scripts & wizards select a roof shape, set its geometry & press create new object button

13- In the Analysis grid panel  , adjust the no. of grids analyzed. And perform lighting analysis.

14- To perform lighting or thermal calculations, you need to perform inter-zonal adjacencies from the calculate menu to thermally calculate heat transfer between the intersected walls.

15- To assign specific material





Then edit your material thickness, thermal properties….

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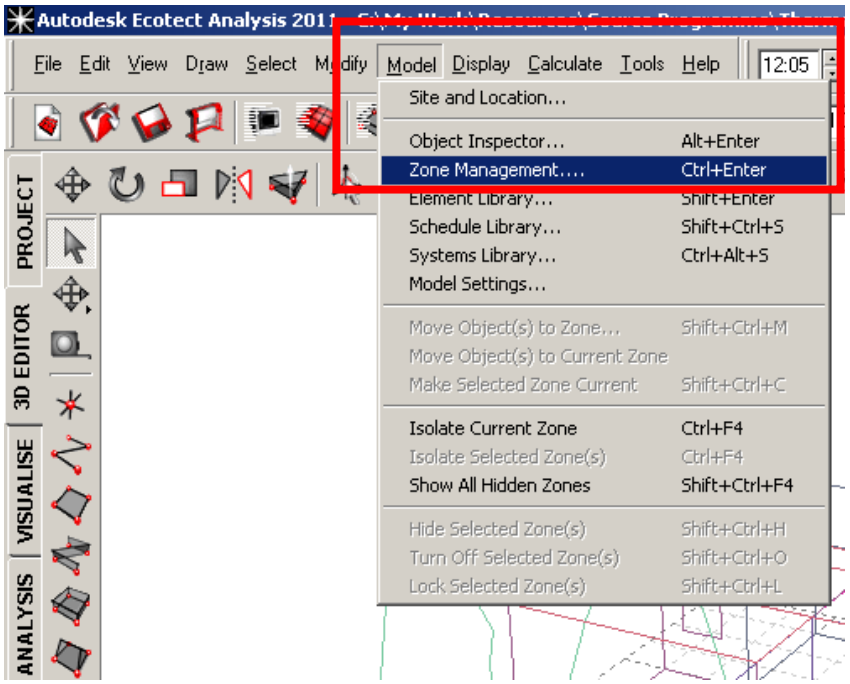
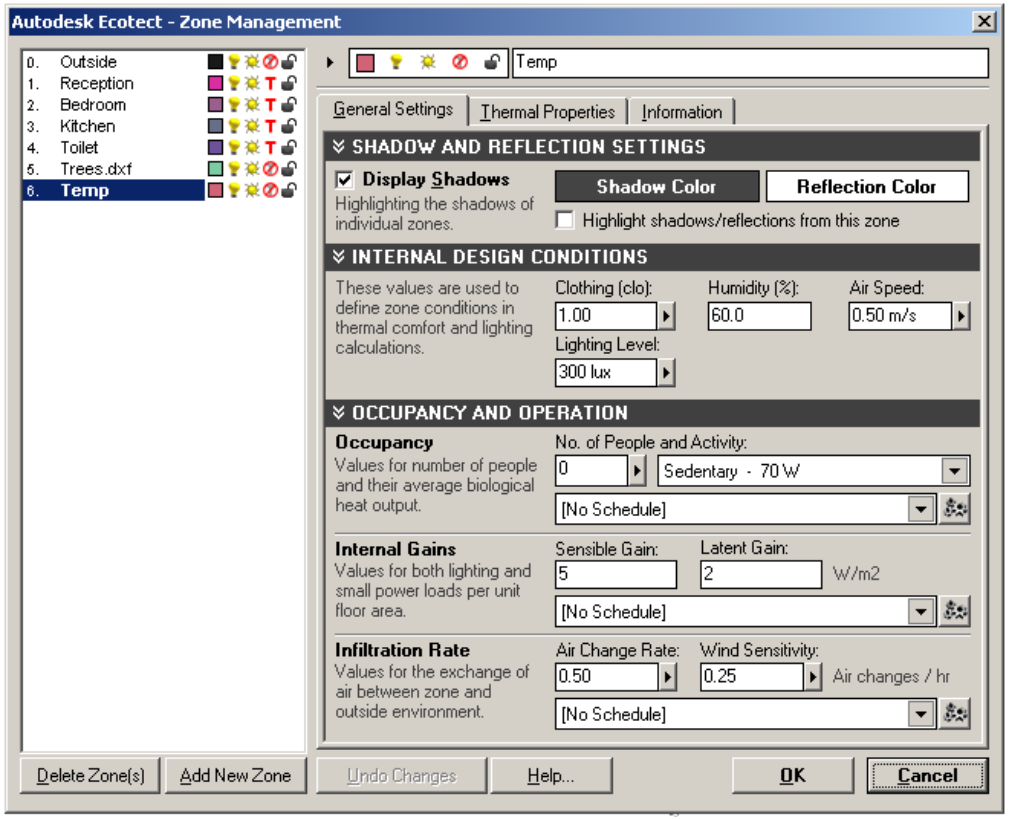
16- You have to assign each zone to be thermal and then modify zone bio-meteorology to enable ECOTECT to consider it in thermal calculations.





End of Part (I)….. Thanks very much.

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