



ModelBuilder

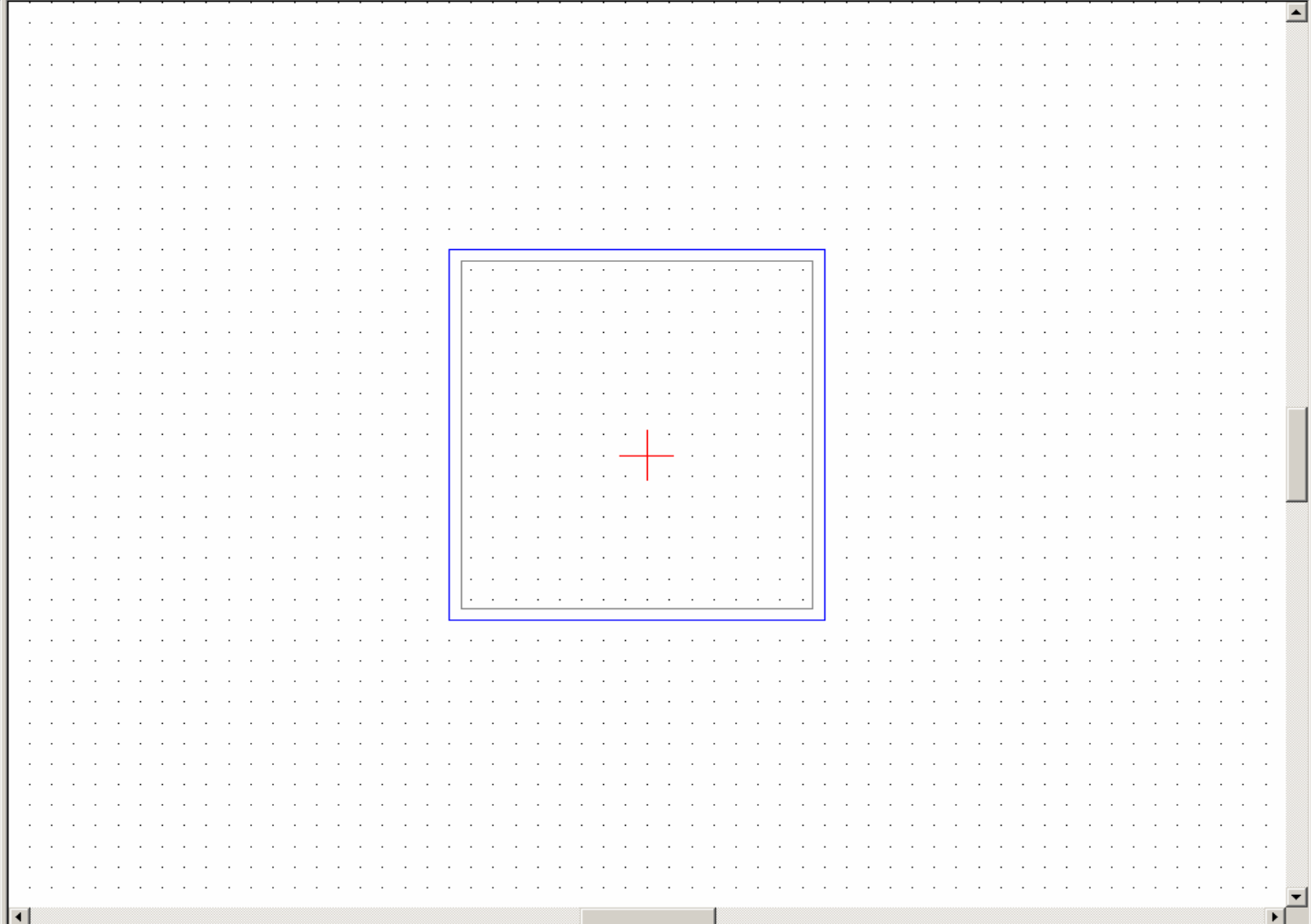
ModelIT - Example_template.mit - Plan : Model

Colour 01 Layer 01

Room Name

Model

- room001



- Thermal
- Lighting
- Solar
- Value
- Cost
- Evacuation
- Mechanical
- Electrical
- CFD

Plan Model -11.50, 9.50, 0.00

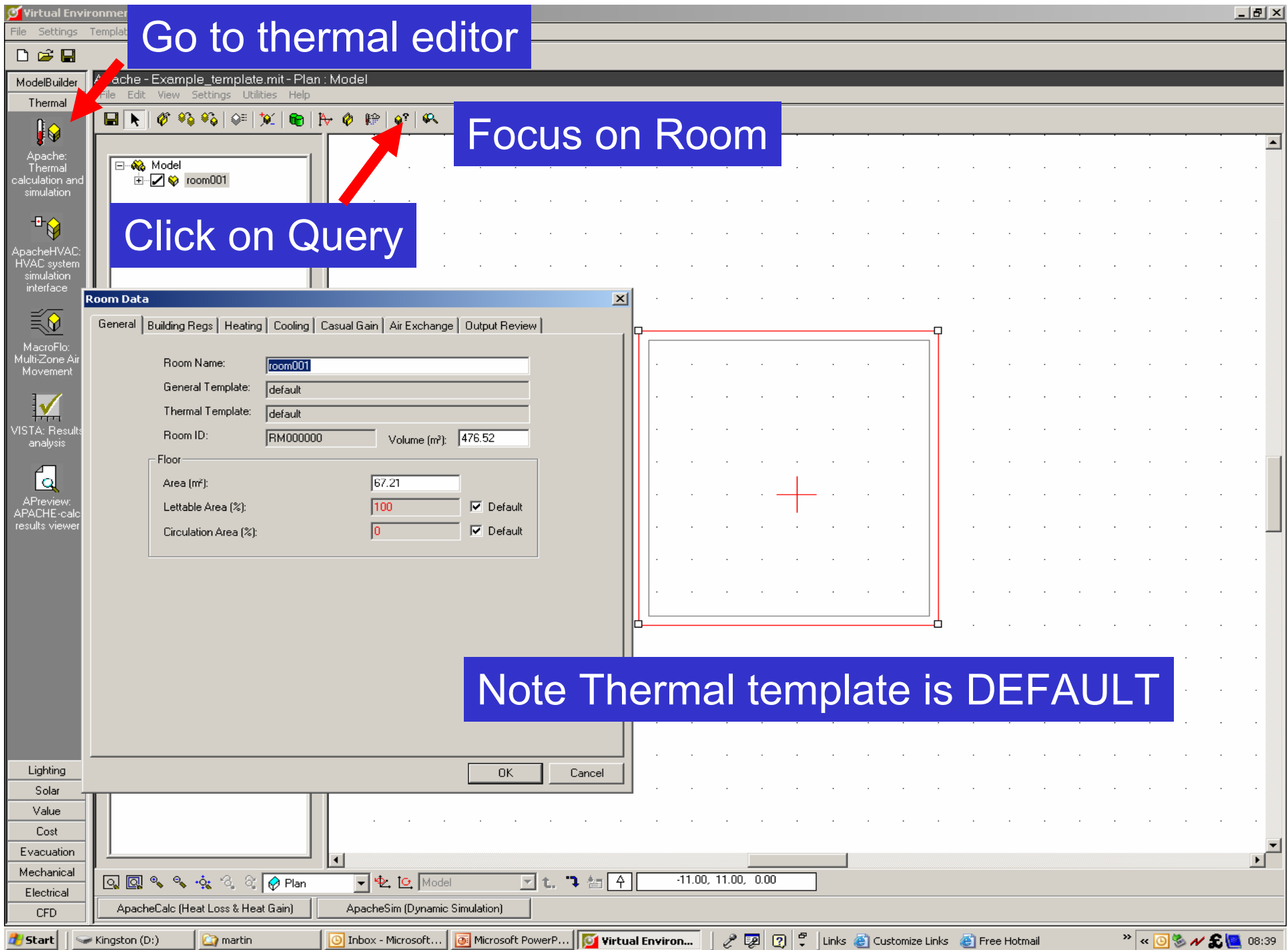
Room Name	Room ID	Volume (m³)	Floor Area (m²)	Colour	Layer
♥					

Go to thermal editor

Focus on Room

Click on Query

Note Thermal template is DEFAULT



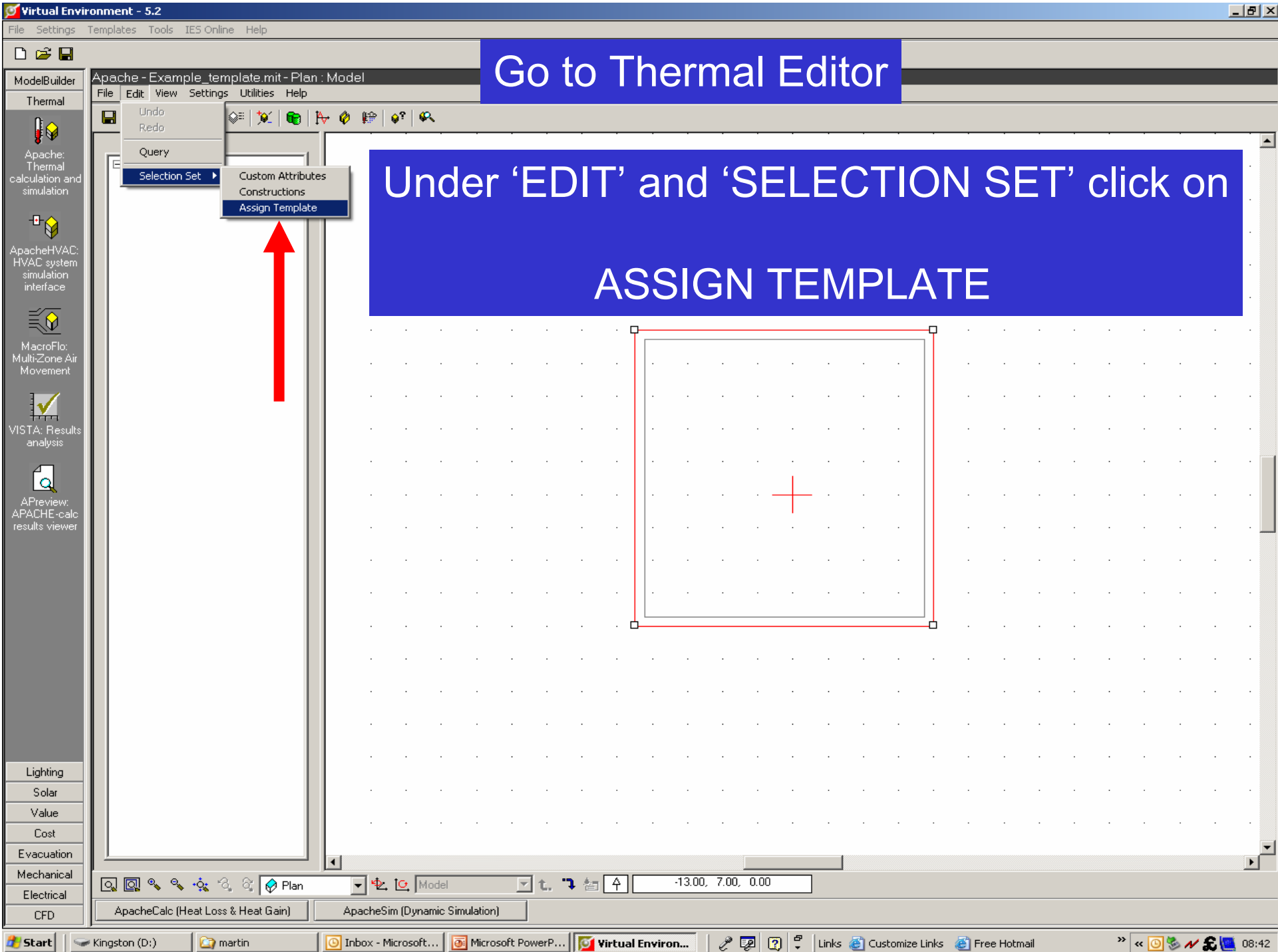
Create – by adding then editing to New template

The screenshot shows the 'Building Template Manager' dialog box in the Virtual Environment software. The dialog is titled 'Building Template Manager' and has a 'Project Template File' field set to 'C:\martinNES_test_rubbish\Example_template\Example_template.mtd'. The 'Thermal Conditions' tab is active, showing a list of templates with 'New_template' selected. Below the list are buttons for 'Import Templates', 'Add Template', 'Remove Template', and 'Apache Profiles Database'. The 'Heating' sub-tab is selected, showing the following parameters:

- Winter Design Room Temperature (°C): 19.0
- Simulation Heating Setpoint (°C): Constant, 19.0
- Simulation Heating Capacity (kW): Unlimited, -1.0
- Simulation Heating Profile: on continuously
- Heating Device Radiant Fraction: 0.3
- Heating Zone: Heating zone

At the bottom of the dialog are 'Save', 'OK', and 'Cancel' buttons. The background shows the 'ModelBuilder' interface with a grid and a table at the bottom.

Room Name	Room ID	Volume (m³)	Floor Area (m²)	Colour	Layer



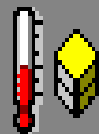
Virtual Environment - 5.2

File Settings Templates Tools IES Online Help

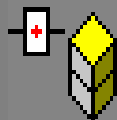


ModelBuilder

Thermal



Apache:
Thermal
calculation and
simulation



ApacheHVAC:
HVAC system
simulation
interface

Apache - Example_template.mit - Plan : Model

File Edit View Settings Utilities Help



Undo

Redo

Query

Selection Set ▶



Custom Attributes

Constructions

Assign Template

ModelBuilder

Apache - Example_template.mit - Plan : Model

- Thermal
- Apache: Thermal calculation and simulation
- ApacheHVAC: HVAC system simulation interface
- MacroFlo: Multi-Zone Air Movement
- VISTA: Results analysis
- APreview: APACHE-calc results viewer

ASSIGN TEMPLATE dialogue box appears

Assign Template

Thermal Template

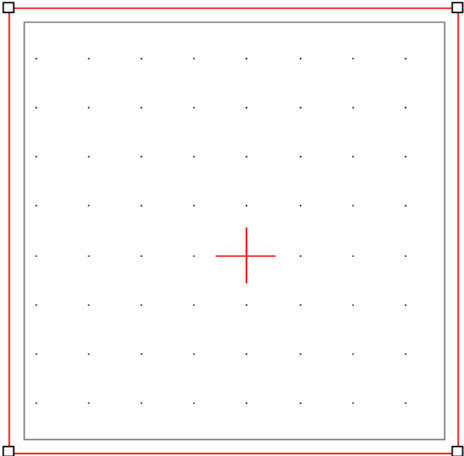
default

default

New_template

default

OK Cancel



- Lighting
- Solar
- Value
- Cost
- Evacuation
- Mechanical
- Electrical
- CFD

Plan Model -13.00, 6.00, 0.00

ApacheCalc (Heat Loss & Heat Gain) ApacheSim (Dynamic Simulation)

ModelBuilder

Apache - Example_template.mit - Plan : Model

- Thermal
 - Apache: Thermal calculation and simulation
 - ApacheHVAC: HVAC system simulation interface
 - MacroFlo: Multi-Zone Air Movement
 - VISTA: Results analysis
 - APreview: APACHE-calc results viewer
- Lighting
- Solar
- Value
- Cost
- Evacuation
- Mechanical
- Electrical
- CFD

Model

- room001

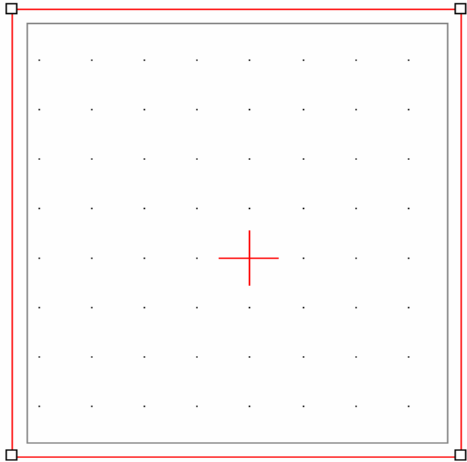
Double click on New_template

Assign Template

Thermal Template
New_template

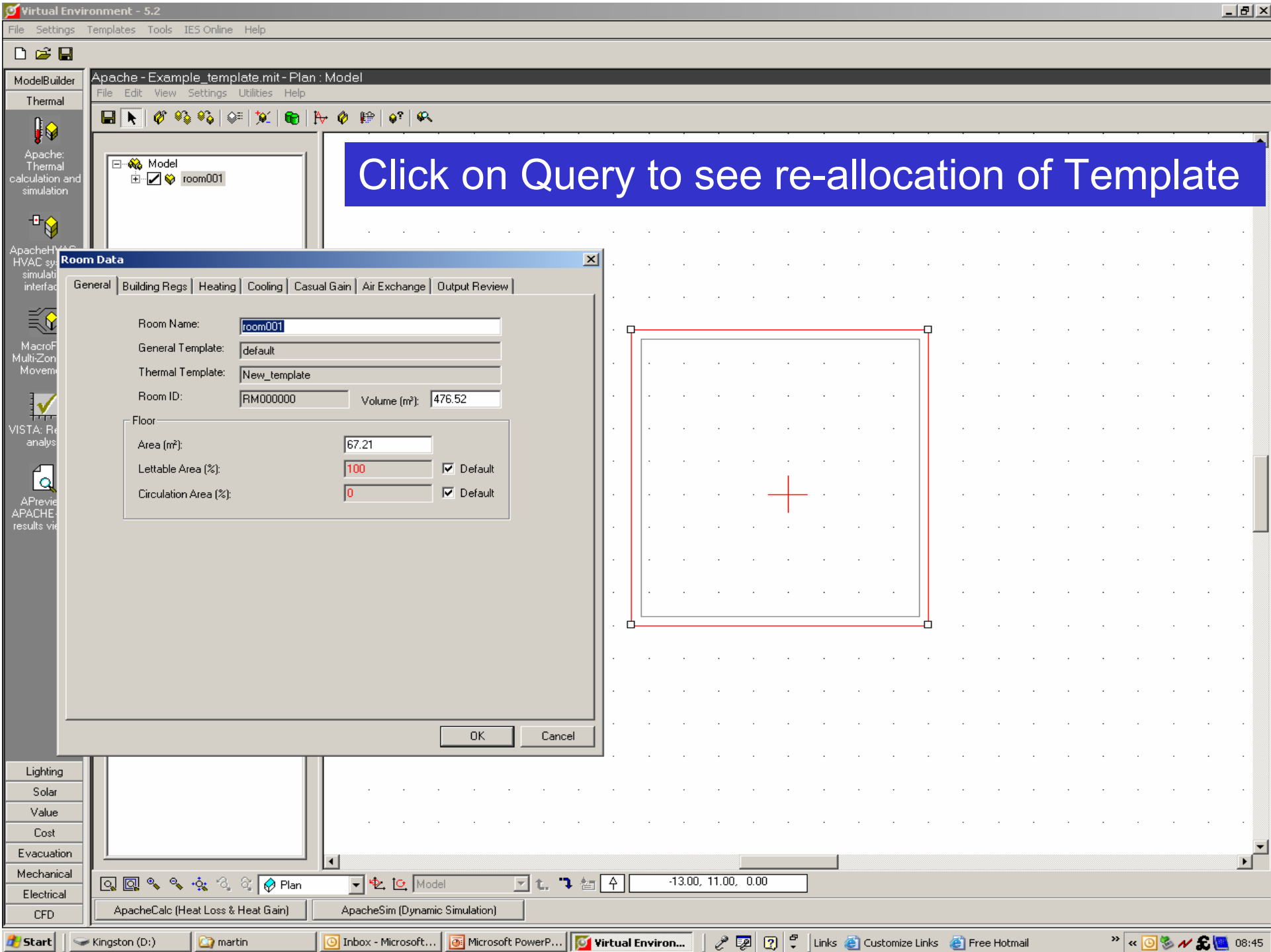
General Template
default

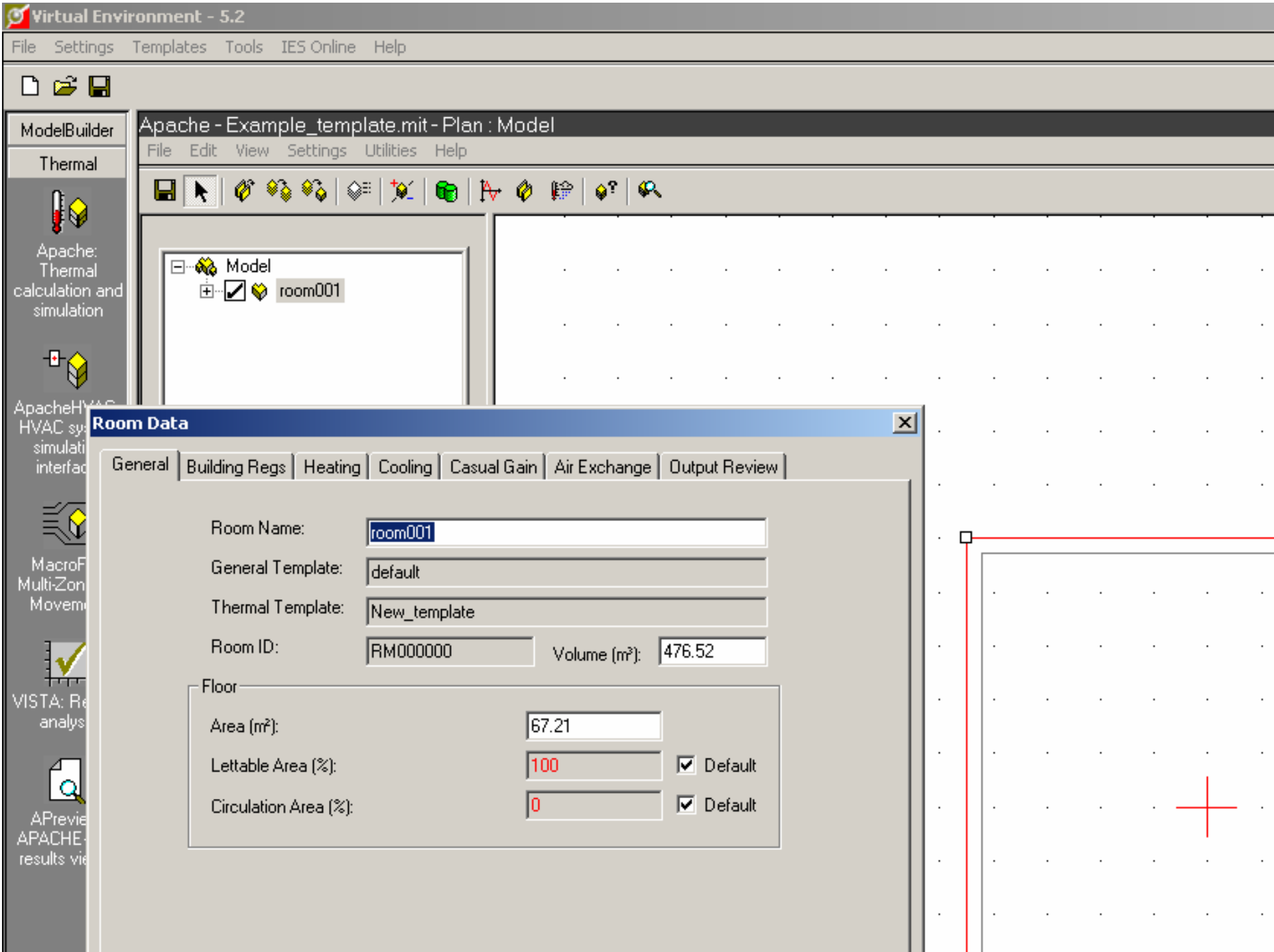
OK Cancel

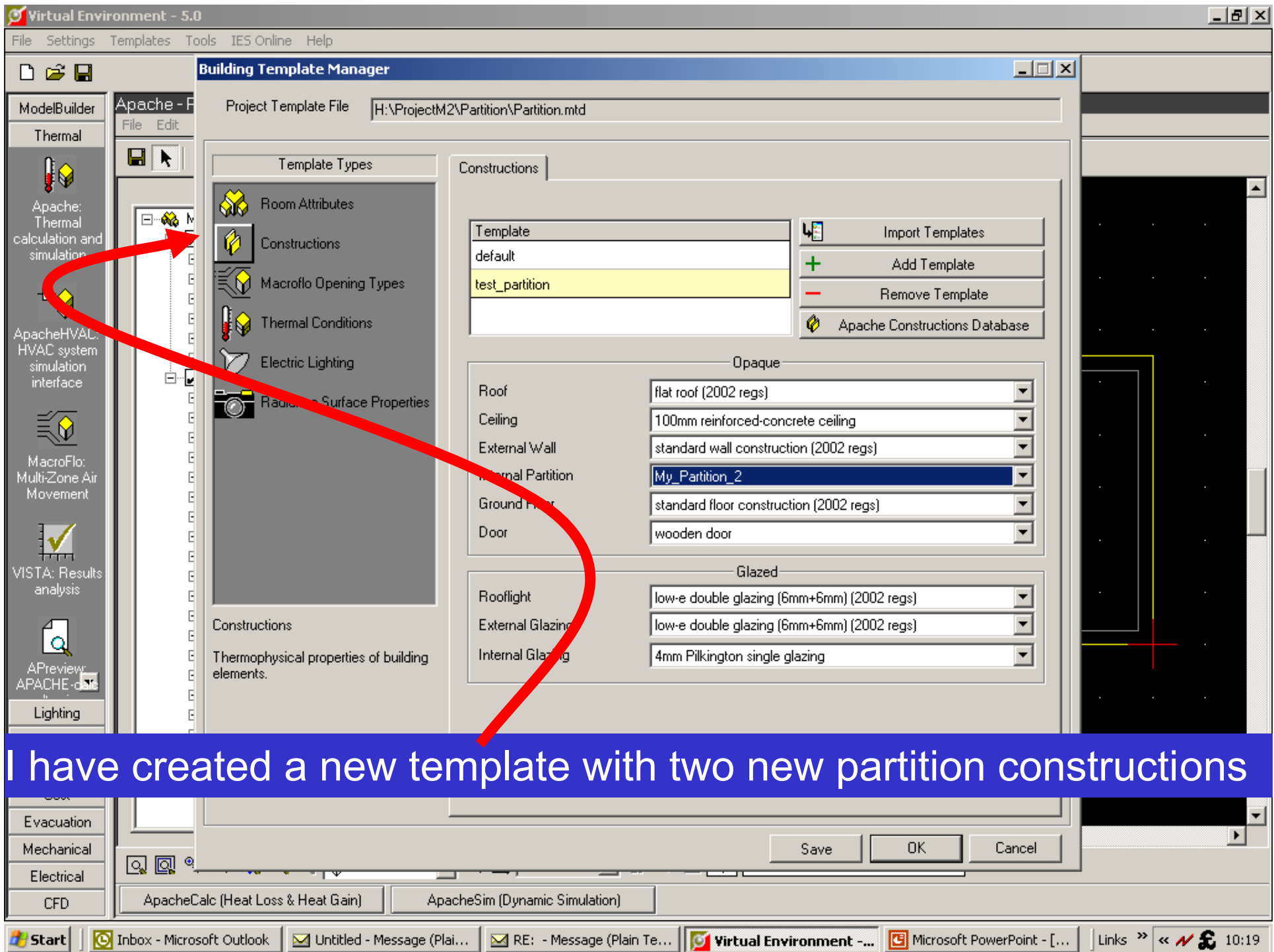


Plan Model -13.00, 6.00, 0.00

ApacheCalc (Heat Loss & Heat Gain) ApacheSim (Dynamic Simulation)







I have created a new template with two new partition constructions

Virtual Environment - 5.0

File Settings Templates Tools IES Online Help

Building Template Manager

Project Template File: H:\ProjectM2\Partition\Partition.mtd

Template Types

- Room Attributes
- Constructions
- Macroflo Opening Types
- Thermal Conditions
- Electric Lighting
- Radiance Surface Properties

Constructions

Template	
default	
test_partition	

Buttons: Import Templates, Add Template, Remove Template, Apache Constructions Database

Opaque

Roof	flat roof (2002 regs)
Ceiling	100mm reinforced-concrete ceiling
External Wall	standard wall construction (2002 regs)
Internal Partition	My_Partition_2
Ground Floor	13mm pll 105mm bri 13mm pll
Door	My_Partition_2

Glazed

Rooflight	low-e double glazing (6mm+6mm) (2002 regs)
External Glazing	low-e double glazing (6mm+6mm) (2002 regs)
Internal Glazing	4mm Pilkington single glazing

Constructions

Thermophysical properties of building elements.

Save OK Cancel

ApacheCalc (Heat Loss & Heat Gain) ApacheSim (Dynamic Simulation)

Start | Inbox - Microsoft Outlook | Untitled - Message (Plai... | RE: - Message (Plain Te... | Virtual Environment - ... | Microsoft PowerPoint - [...] | Links » << >> 10:20

ModelBuilder

Apache - F

Thermal

Apache: Thermal calculation and simulation

ApacheHVAC: HVAC system simulation interface

MacroFlo: Multi-Zone Air Movement

VISTA: Results analysis

APreview: APACHE-d...

Lighting

Solar

Value

Cost

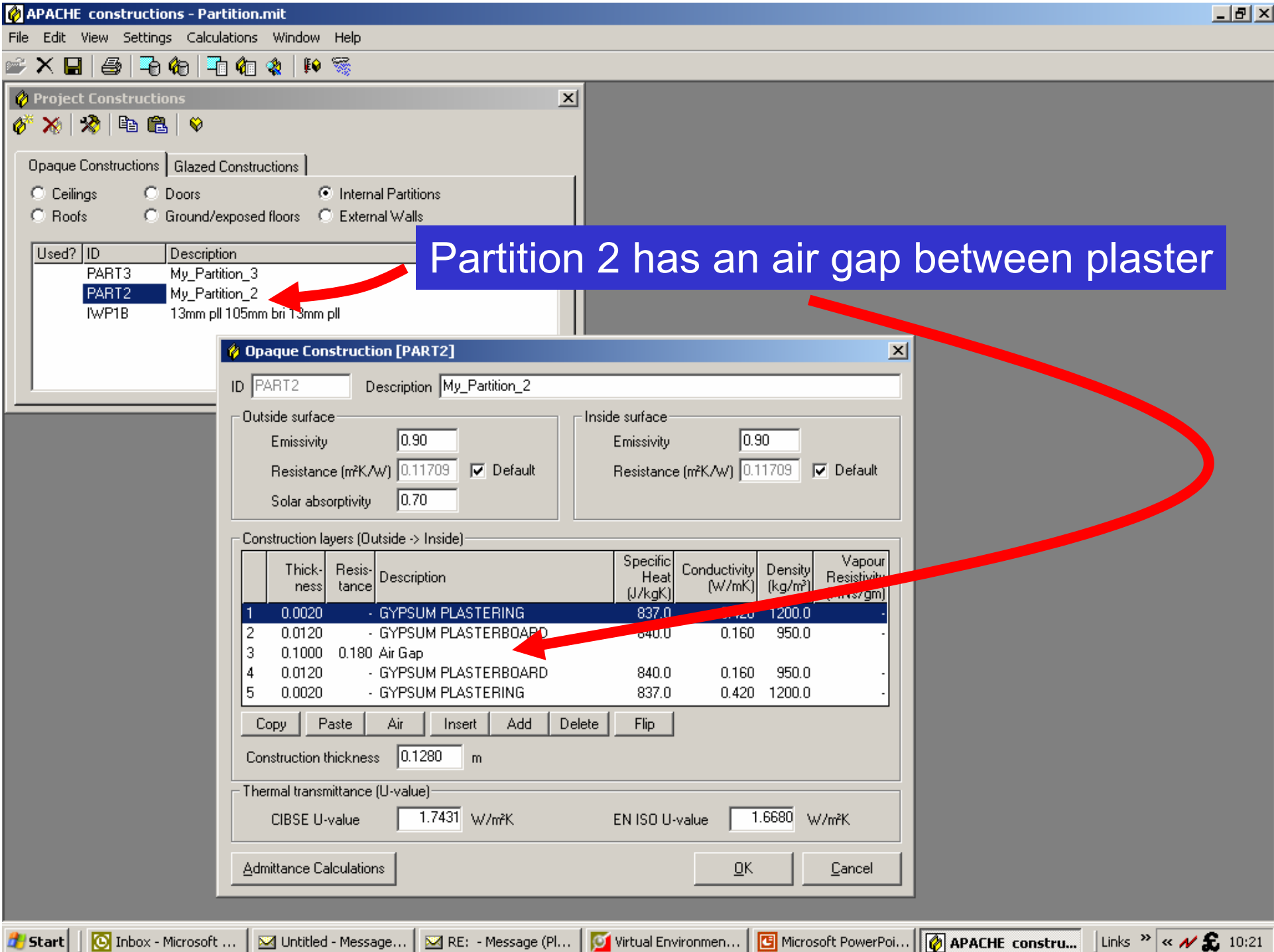
Evacuation

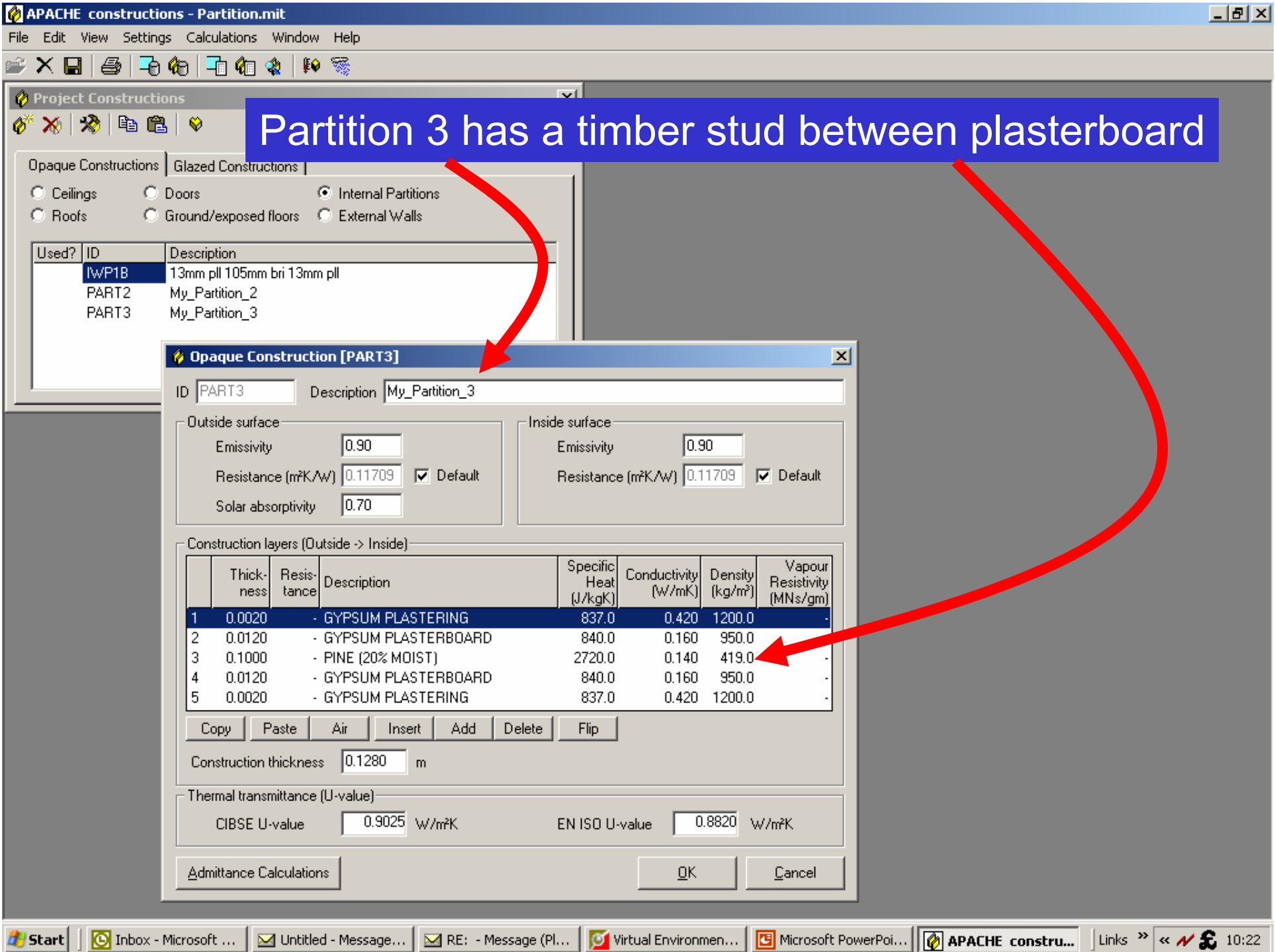
Mechanical

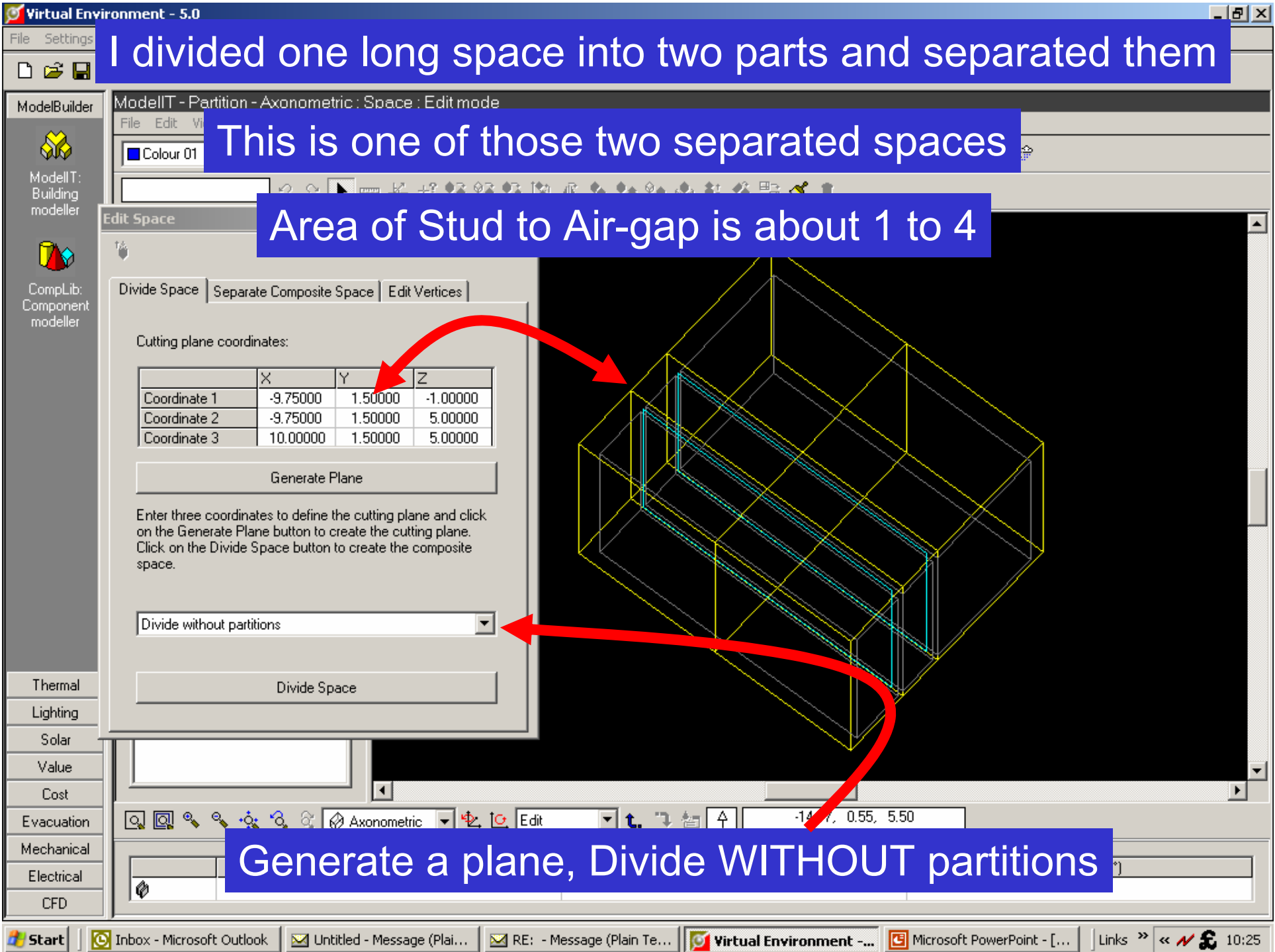
Electrical

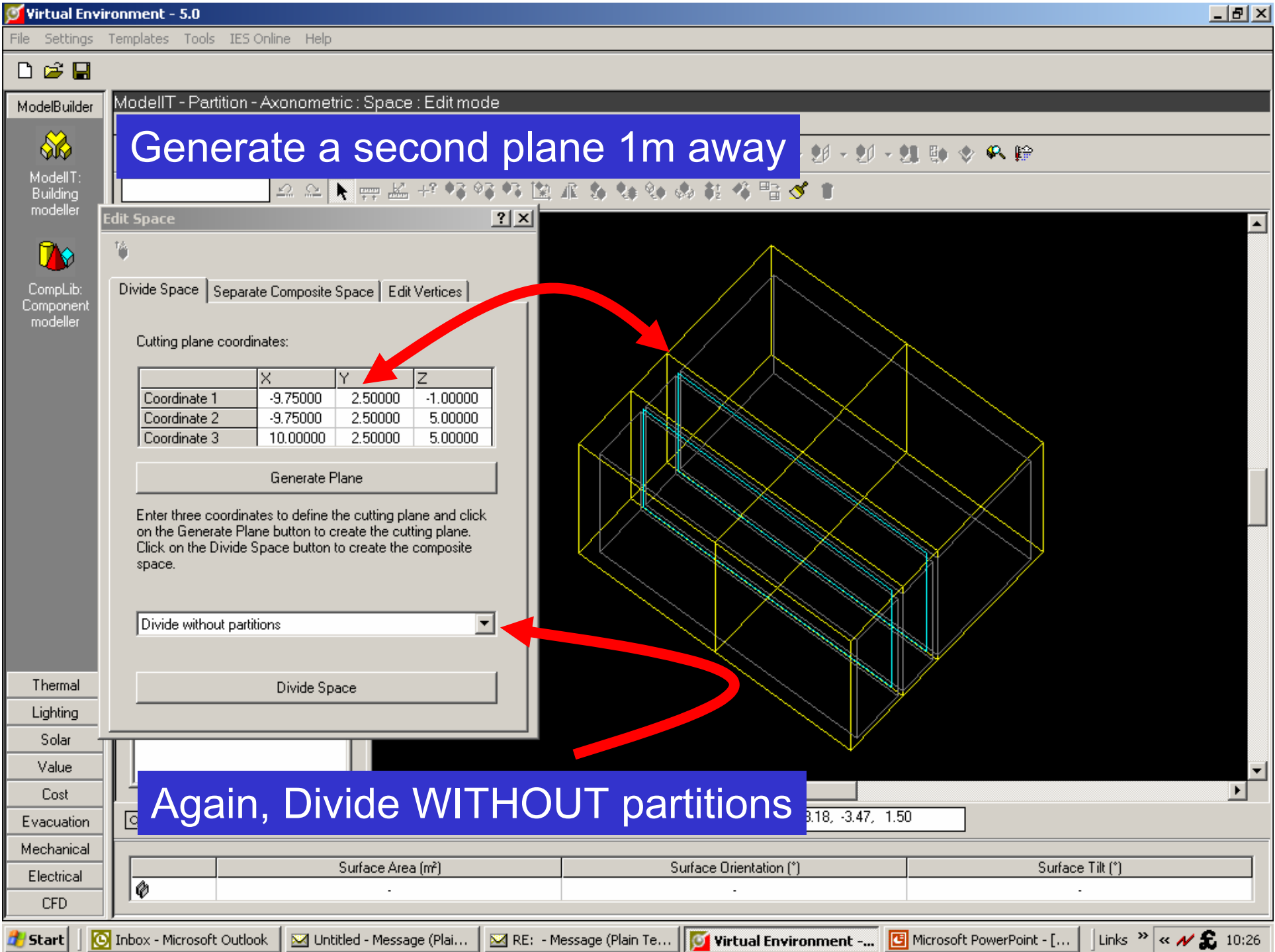
CFD

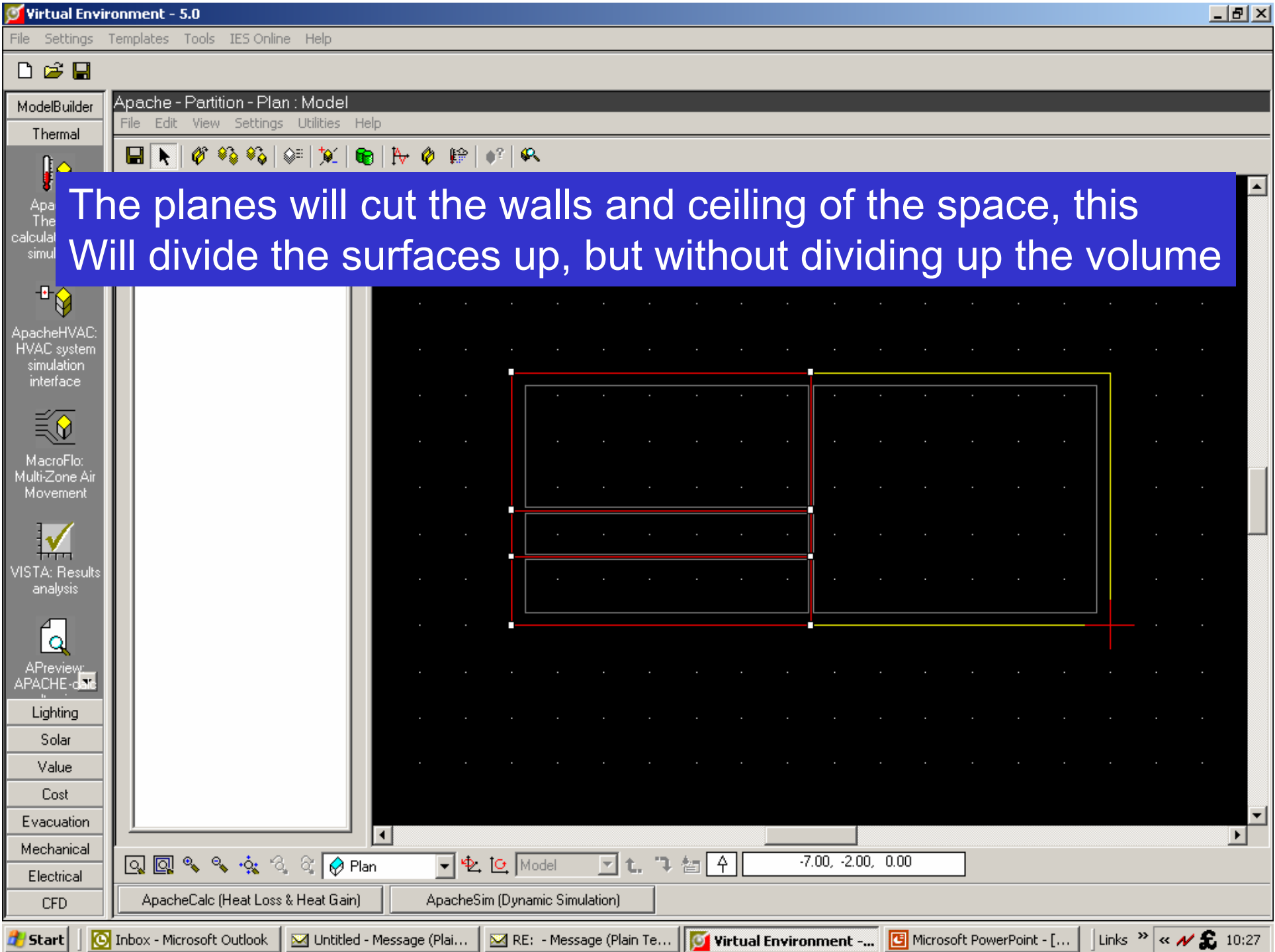
Two New partitions











Virtual Environment - 5.0

File Settings Templates Tools IES Online Help

ModelBuilder

Apache - Partition - Axonometric : Space : Surface mode

File Edit View Settings Utilities Help

Model

- SURFACE: Wall
- SURFACE: Ceiling
- SURFACE: Floor
- SURFACE: Wall
- SURFACE: Wall
- SURFACE: Wall
- SURFACE: Ceiling
- SURFACE: Wall
- SURFACE: Floor
- SURFACE: Wall
- SURFACE: Wall
- SURFACE: Ceiling
- SURFACE: Wall
- SURFACE: Floor
- SURFACE: Wall
- SURFACE: Wall

Lighting

Solar

Value

Cost

Evacuation

Mechanical

Electrical

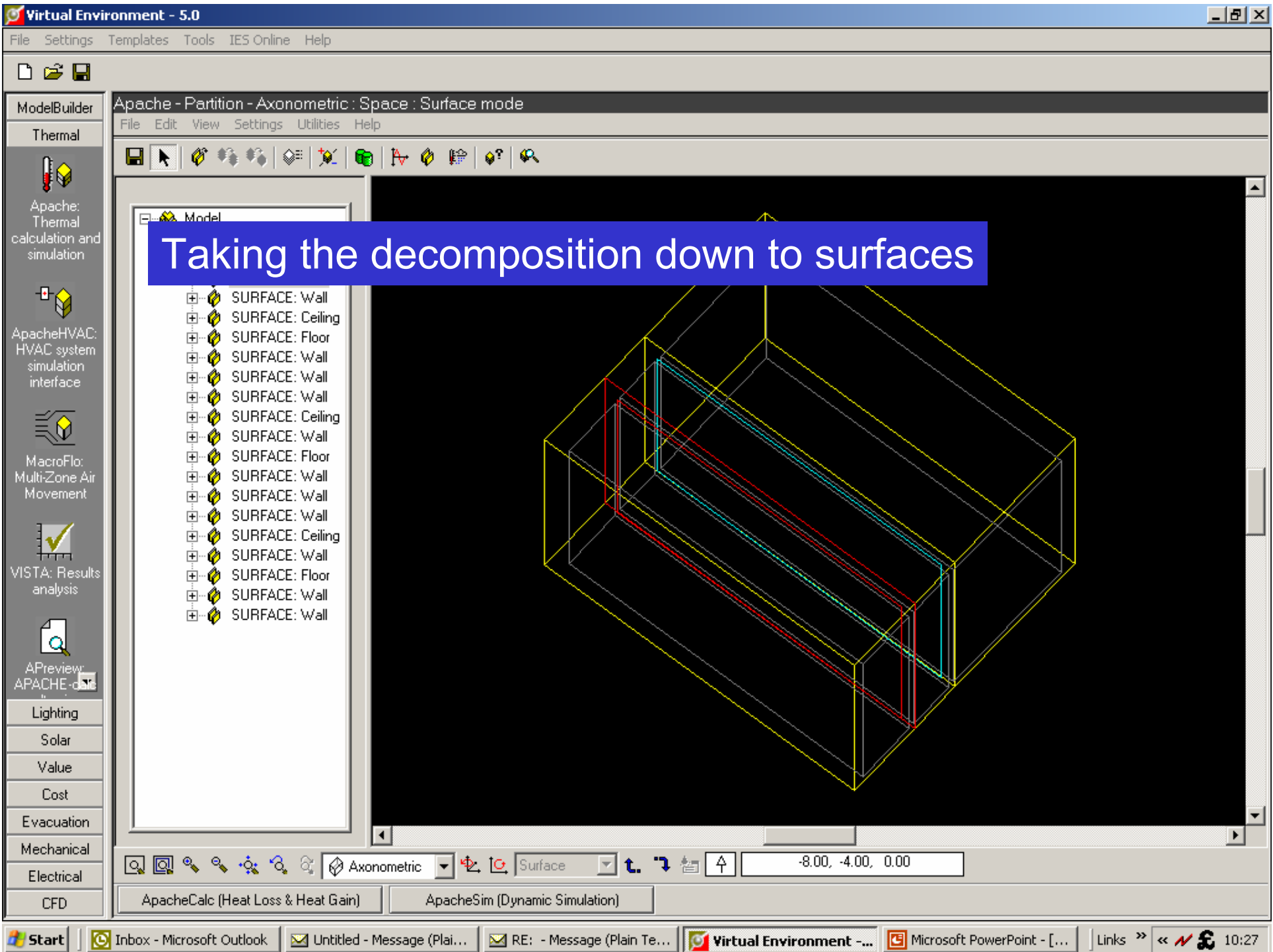
CFD

ApacheCalc (Heat Loss & Heat Gain)

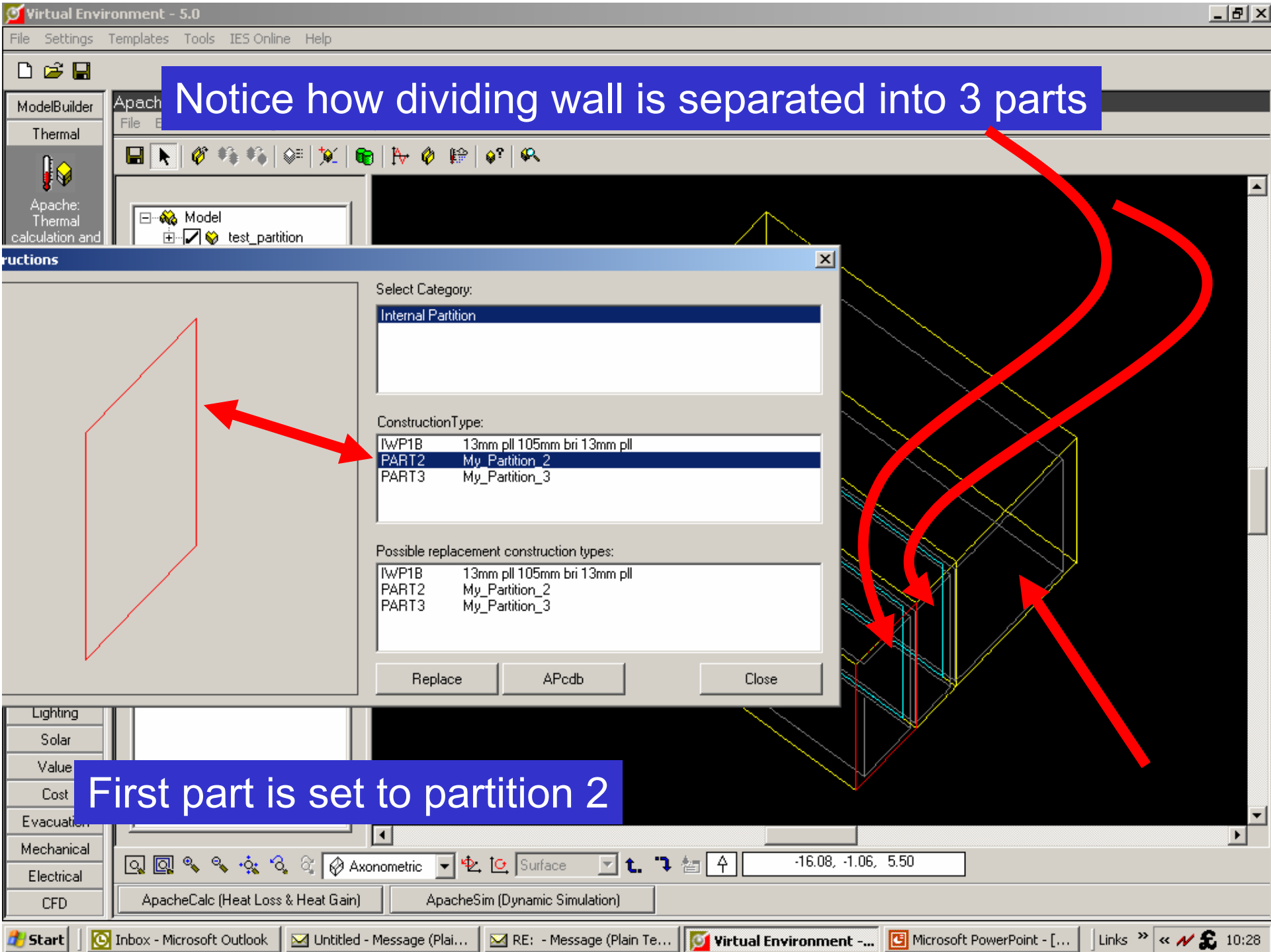
ApacheSim (Dynamic Simulation)

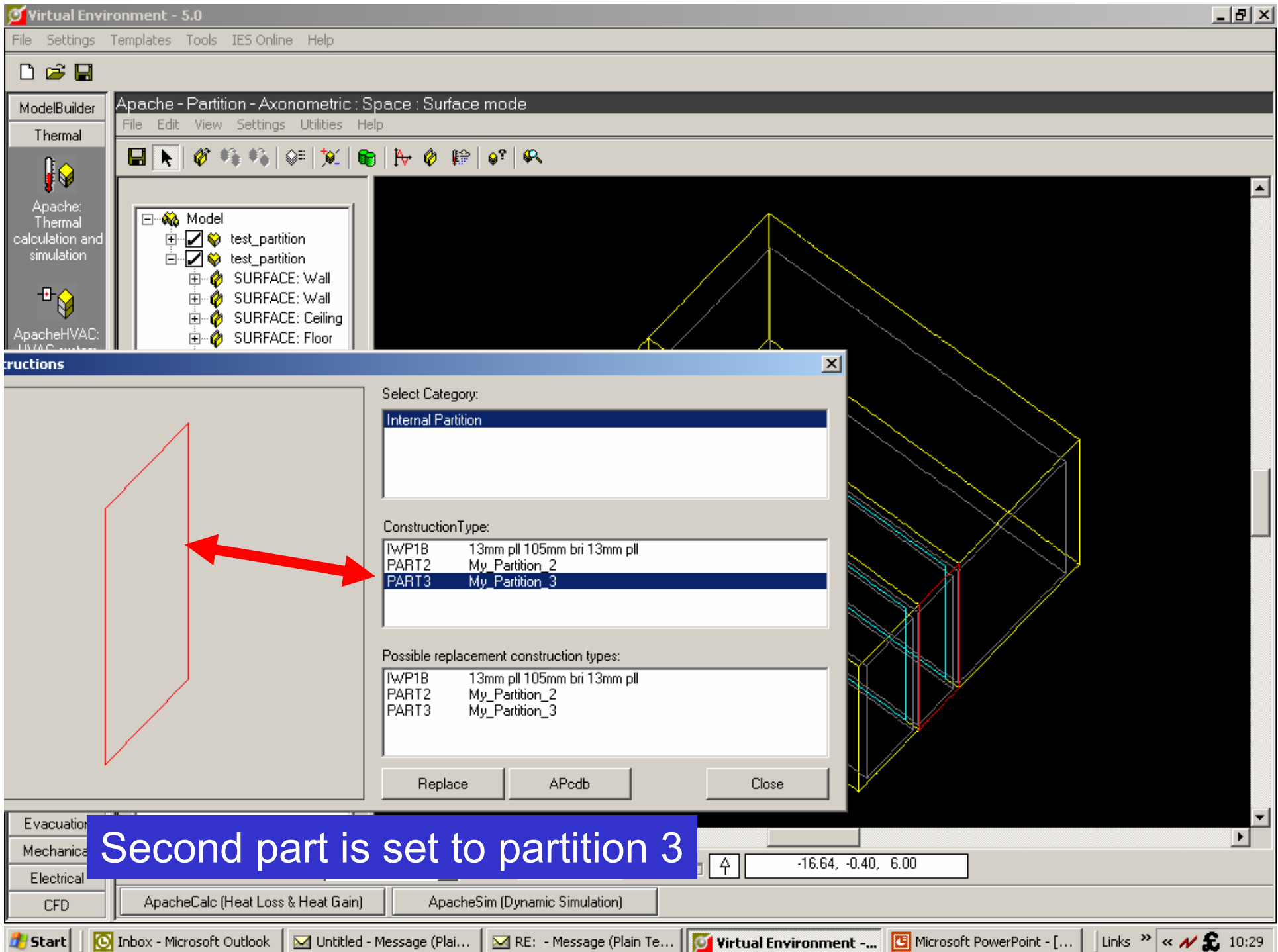
Axonometric Surface -8.00, -4.00, 0.00

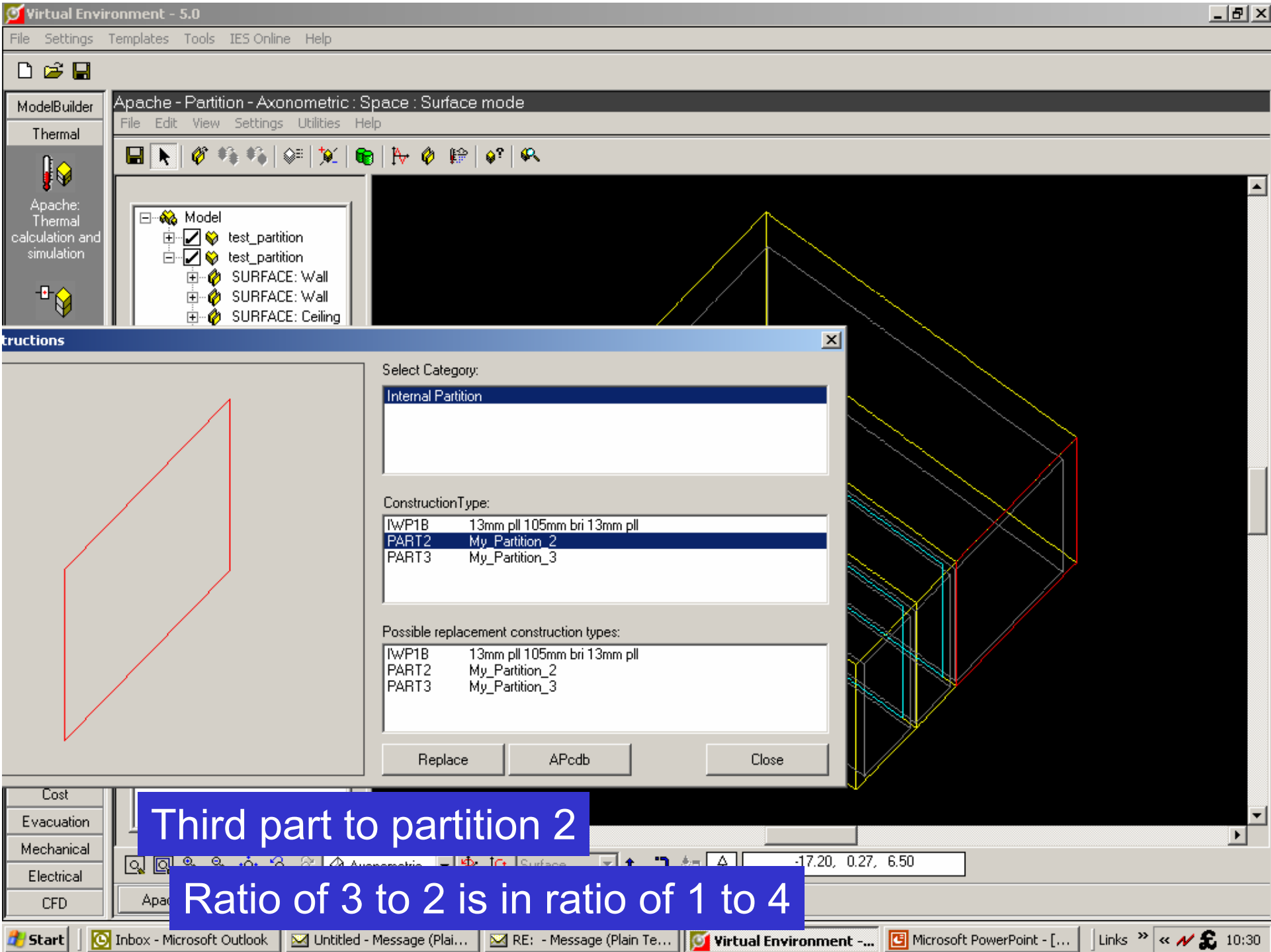
Start | Inbox - Microsoft Outlook | Untitled - Message (Plai... | RE: - Message (Plain Te... | Virtual Environment - ... | Microsoft PowerPoint - [... | Links >> << 10:27



Taking the decomposition down to surfaces

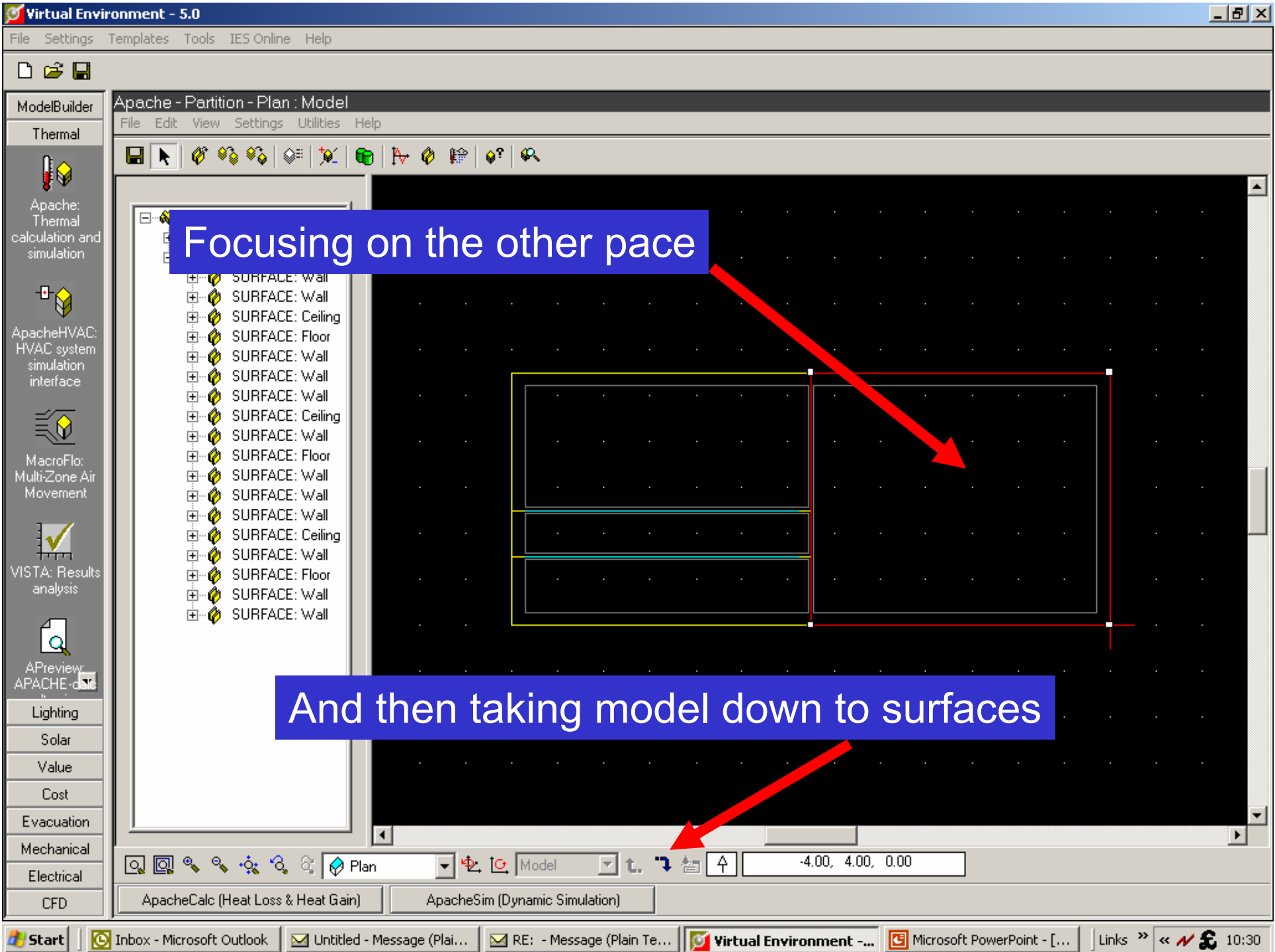






Third part to partition 2

Ratio of 3 to 2 is in ratio of 1 to 4



Focusing on the other pace

And then taking model down to surfaces

Note that although one does not see partition divided in the overall surface, the different parts are seen in the construction allocation of the thermal sub-prog

The screenshot shows the Virtual Environment 5.0 interface. On the left is a vertical toolbar with icons for various simulation tools: Apache Thermal calculation and simulation, ApacheHVAC HVAC system simulation interface, MacroFlo Multi-Zone Air Movement, VISTA Results analysis, and APreview APACHE. The main window displays a 3D model of a room with a partition. A tree view on the left lists the model's components: Model, test_partition (expanded to show SURFACE: Wall, SURFACE: Ceiling, SURFACE: Wall, SURFACE: Floor, SURFACE: Wall, SURFACE: Wall), and another test_partition (expanded to show SURFACE: Wall, SURFACE: Wall, SURFACE: Ceiling, SURFACE: Floor). An 'Assign constructions' dialog box is open in the foreground, showing a 2D view of the partition. The dialog includes a 'Select Category' dropdown set to 'Internal Partition', a 'ConstructionType' table, and a 'Possible replacement construction types' table. The 'ConstructionType' table has three rows: IWP1B (13mm pll 105mm bri 13mm pll), PART2 (My_Partition_2), and PART3 (My_Partition_3). The 'Possible replacement construction types' table has three rows: IWP1B (13mm pll 105mm bri 13mm pll), PART2 (My_Partition_2), and PART3 (My_Partition_3). Buttons for 'Replace', 'APcdb', and 'Close' are at the bottom of the dialog. The Windows taskbar at the bottom shows the Start button and several open applications: Microsoft Outlook, an untitled message, a RE message, Virtual Environment, and Microsoft PowerPoint. The system clock shows 10:31.

ConstructionType:	
IWP1B	13mm pll 105mm bri 13mm pll
PART2	My_Partition_2
PART3	My_Partition_3

Possible replacement construction types:	
IWP1B	13mm pll 105mm bri 13mm pll
PART2	My_Partition_2
PART3	My_Partition_3