

# EXchange



Turn to the experts

## HAP v6.0: An Overview of New Features and Building Model Workflow

*This is the fourth in a series of articles describing key new features in the upcoming HAP v6.0 release. In previous articles we described the rationale for transforming HAP, the "staged" approach designed to help you remain productive as the software evolves, a preliminary overview of the sketch-over, "visual" take-off process using a graphical input of building floor plans as well as an overview of the new HAP v6.0 Weather Data interface. As a general note, at the time of this newsletter writing, the HAP v6.0 software was still under construction therefore the final version may have slight differences from the figures shown in this newsletter.*

*In this latest article we will take a higher-level look at HAP v6.0. We will illustrate the main HAP v6.0 user-interface screen and highlight the changes and enhanced features in the new software. We will then illustrate the new building modeling workflow and demonstrate the steps necessary to get the physical space data into HAP and show how HAP takes this space data and auto-generates the space inputs, which now utilize a new grid (spreadsheet) feature of defining space data. Finally we will illustrate how HAP then creates a 3D rendering of the building.*



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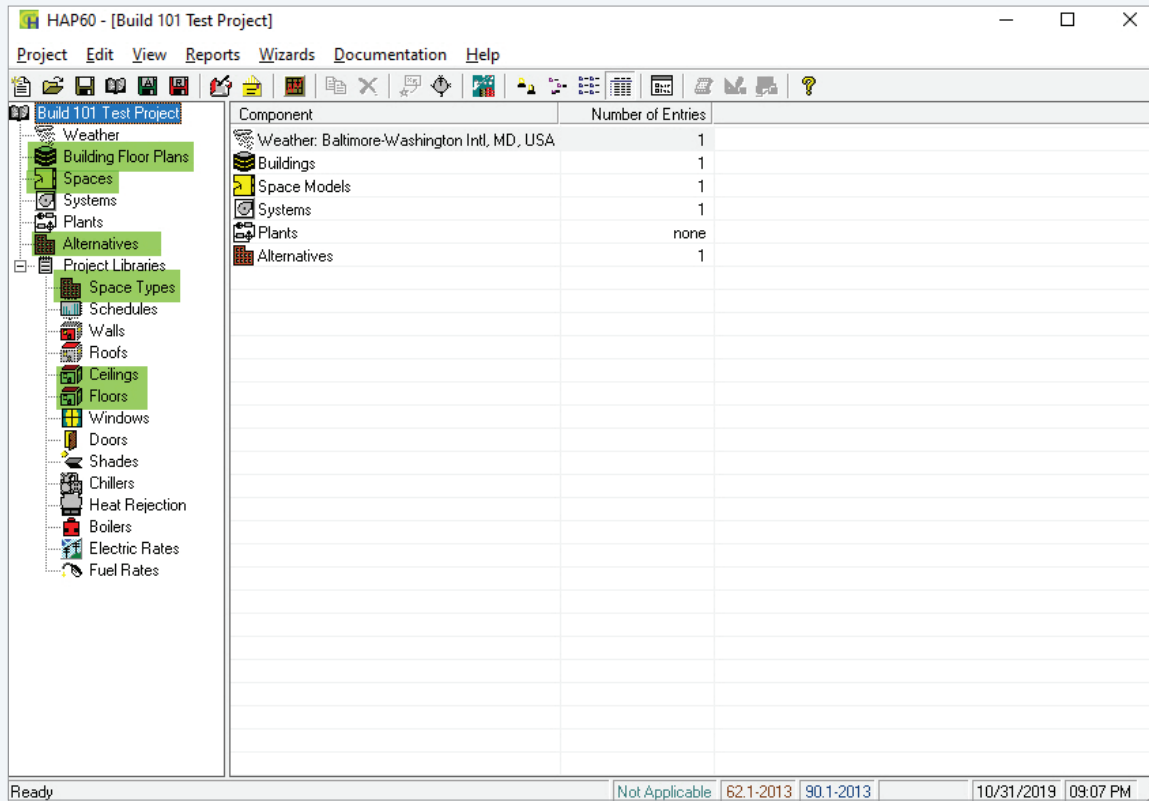
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## New HAP v6.0 User Interface

The first thing we want to look at is the new HAP v6.0 main program interface, as shown below in Figure 1.



**Figure 1. HAP v6.0 Main Screen User-Interface**

To existing HAP users this main screen may look somewhat familiar, which is intentional, and is due to our incremental, staged-approach for transforming HAP where with each subsequent update we add new features while maintaining enough familiarity (look-and-feel) for you to easily navigate the program and remain productive. However, there are some significant changes to the main HAP v6.0 user-interface, highlighted in green in Figure 1 above, which we will briefly discuss next. The next section of this newsletter, *New HAP v6.0 Building Model Workflow*, will go into much more detail about all of these new features.

Starting at the top of the tree on the left we have a new item, *Building Floor Plans*. This is where you set the Building Properties such as floor-to-floor and floor-to-ceiling height and height of window sill above floor, as described later in this newsletter in Step 1 of the HAP v6.0 Building Model

Workflow. Under Building Properties is also where we import the architectural floor plan images, described later in Step 2 of the HAP v6.0 Building Model Workflow.

Next, we have *Spaces*, which was in HAP previously, however the main difference is instead of having all the spaces listed in a big, long list in the main screen on the right along with their floor areas, we have replaced this with a single option called the *Space Model*. This is explained in much more detail in Step 4 of the HAP v6.0 Building Model Workflow.

Proceeding down the tree next we have *Alternatives*. This is a change in terminology-only and replaces what has been referred to as "Buildings" in previous versions of HAP. Think of *Alternatives* as different design scenarios or options, such as a Base Case and a Design Case or multiple design alternatives you wish to analyze side-by-side. *Alternatives* is

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a better descriptor of what we are doing at that high-level since an Alternative can consist of a portion of an actual building, or multiple buildings, each a different design scenario.

Under *Project Libraries* we have three new items, the first of which is *Space Types*, which is discussed in more detail later in this newsletter in Step 4 of the HAP v6.0 Building Model Workflow. This is where we store all the Space Type input defaults including ventilation, lighting, daylighting controls, electric equipment, occupancy, etc. These Space Types may be pre-configured to match the ASHRAE<sup>1</sup> Standard 90.1 or 62.1 input values or may be user-defined, custom space types, depending on your situation.

The other two new items under Project Libraries are *Ceilings* and *Floors*. Since we define the spaces graphically, we have an accurate geometric or spatial representation of all surfaces in the building. So, a ceiling on Level 1, for example, might be directly below the floor on Level 2 above it. Knowing the proximity of all building surfaces to each other allows HAP v6.0 to compute heat flow from one area to another. So, for example, on a multi-level building if the sun is shining through the windows striking the floor and there is a space directly below this floor, part of the solar heat energy striking the floor may actually pass through the floor above into the space or ceiling plenum below and show up as a solar load

<sup>1</sup>ASHRAE® is a registered service mark of the [American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.](http://www.ashrae.org)

there. The **ASHRAE Heat Balance Method**, the load and energy calculation methodology used in HAP v6.0, will take care of this type of situation for us. We could not model this previously in HAP v5.11, which uses the ASHRAE Transfer Function methodology. A future *EXchange* article will discuss the Heat Balance Method in detail.

The Ceilings and Floors inputs are very similar to the Roof inputs that you may be already familiar with from previous versions of HAP. However, HAP v6.0 will now have the ability to accurately model ceiling plenums as a specific volume of air since it knows the height and dimensions of the space. In previous versions of HAP, ceiling plenum heat flows were somewhat of an approximation of what might occur. With HAP v6.0 we will be able to perform an accurate heat balance calculation on ceiling plenums, wall partitions, floors above unconditioned spaces, attics, etc.

A similar input to Ceilings exists for the Floors. A typical floor may be a concrete slab with floor covering such as tile or carpet. If the slab is on-grade or below-grade it may also have insulation along the perimeter. This is defined in the Floors library item. You may recall that in previous versions of HAP, floors were defined space-by-space in a separate Floors tab. However, in HAP v6.0 floors and ceilings are now library items, available to be assigned to spaces that they go with.



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## New HAP v6.0 Building Model Workflow

Figure 2 below illustrates the five main steps in the new HAP v6.0 Building Model Workflow.

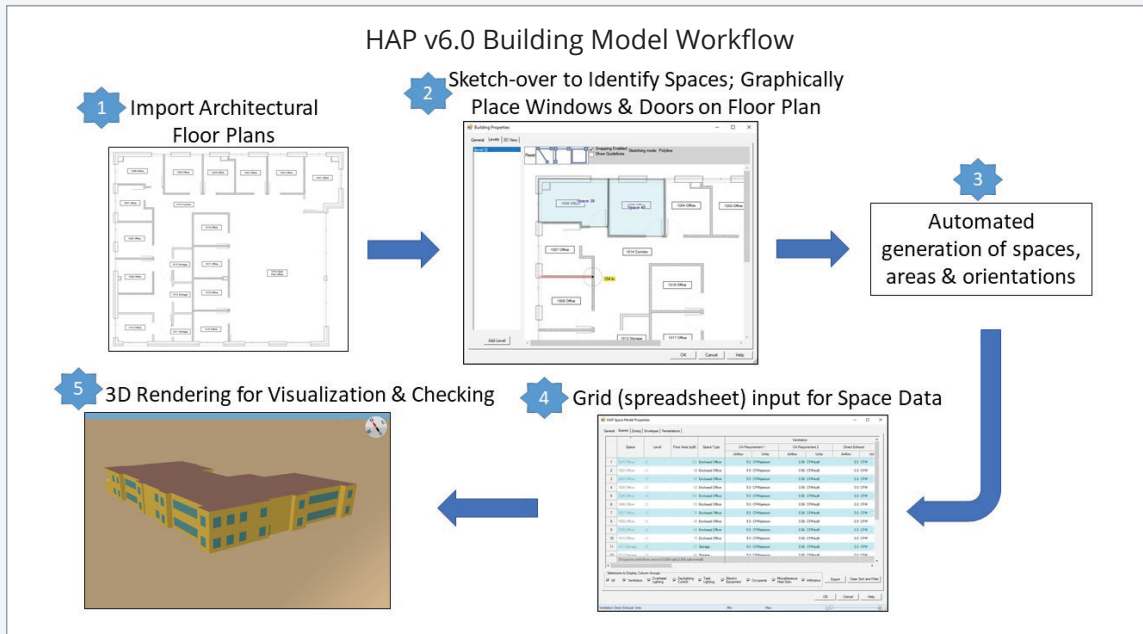


Figure 2. HAP v6.0 Building Model Workflow

**Step 1** - Define the General Building properties, as shown in Figure 3 below. This screen is located under the *Building Floor Plans* item in the tree (see Figure 1 on page 2).

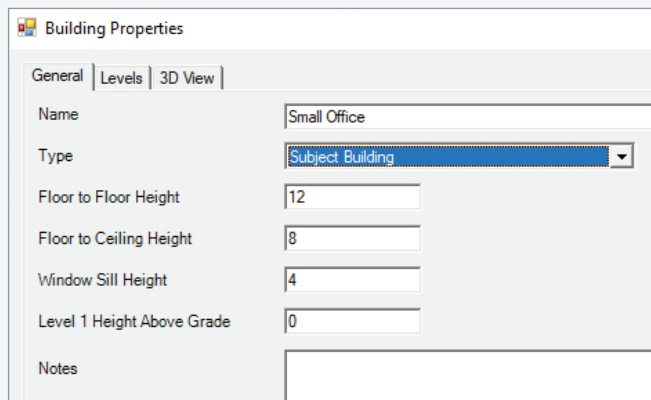


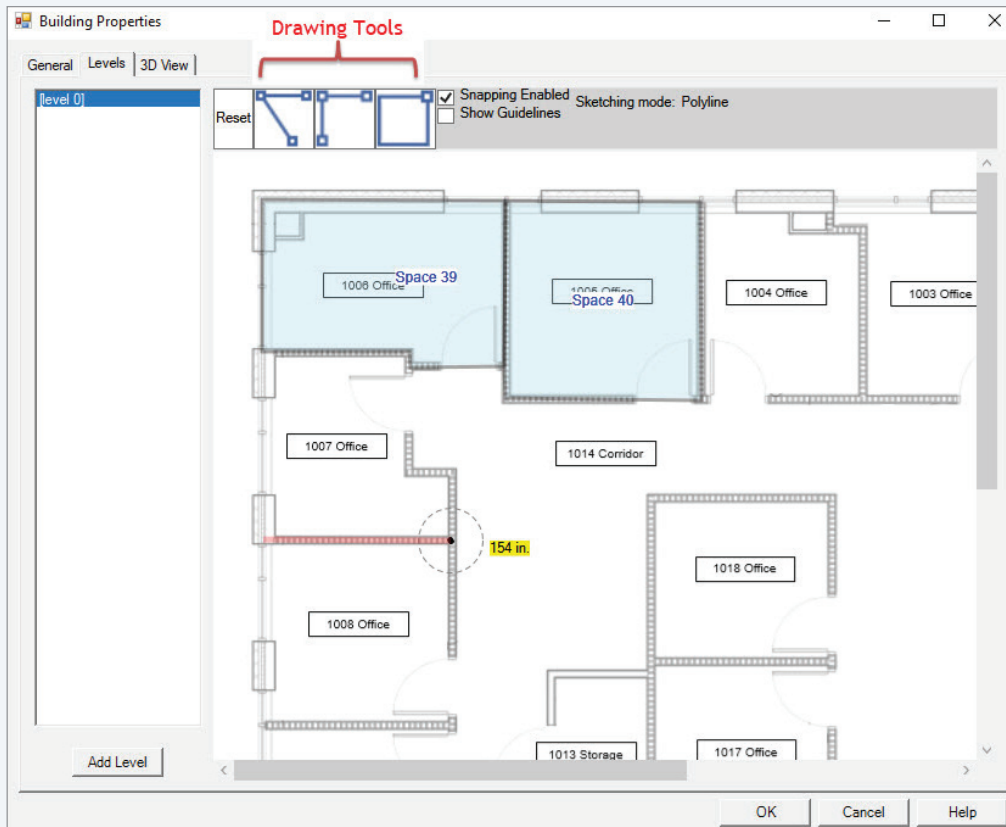
Figure 3. Building Properties - General

Under the General tab we define the floor-to-floor height, floor-to-ceiling height, window sill height above finished floor and the level height above grade.

These dimensions are used to determine the heights of all wall surfaces as well as determine the dimensions (volume) of any ceiling plenum above the ceiling. The window sill height is used to place the windows in their proper locations in the exterior walls. Varying window sill heights will be allowed for different windows. Window geometry is also used in the daylighting calculations, which is a new feature in HAP v6.0. Daylighting will be explained in detail in a future *EXchange* newsletter article.

Under the Levels tab (see Figure 4 on page 5) we import the architectural floor plan image(s) for the building. Each level (floor) in the building is imported separately in any of the popular image file formats, such as .JPG, .TIFF, .BMP, .GIF, .PNG or .PDF, or you can even import a screen capture from your clipboard. So, for instance if you were in a CAD program viewing a floor plan, you could simply create a screen capture of it and import that clipboard image into HAP. Once the architectural floor plan images are imported, you define the scale factor so that HAP knows how to interpret lengths of lines or rectangles that are drawn (sketched) over the floor plan image.

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**Figure 4. HAP v6.0 Building Sketch-Over Process**

**Step 2** – Next we use the sketch-over utility to draw the boundaries around individual spaces, as shown in Figure 4 above. While the software automatically creates a temporary space name, you would normally then override these and define the actual space names as indicated on the architectural floor plans. For example, the auto-named “Space 39” shown above would be renamed “1006 Office” to correspond with the actual space names.

There are three drawing tools available: Polyline, Perpendicular Polyline and Rectangle. The rectangle tool is used for rectangular-shaped rooms, such as Space 40 shown above. The polyline tool is used to sketch-over irregularly shaped spaces or spaces with non-perpendicular walls at an angle. And finally, the perpendicular polyline tool is used to sketch-over spaces with perpendicular walls, like Space 39 above. The two spaces (space 39 & 40) that have already been sketched-over are shown in light blue. The red line indicates how HAP interprets line segment dimensions from the predefined scale factor.

The sketch-over convention will be to start and end all line segments or rectangles from centerline to centerline of all walls bordering the space. Once the exterior and interior wall assemblies are defined, HAP will then compute the correct conditioned space floor areas by subtracting out half of the wall thickness from each space floor area. The sketch-over process continues until all spaces are defined. Once all walls bordering the space are drawn and the end point of the last line segment meets the starting point of the first line segment, the software will then create the space boundary and the space turns a light blue color, as shown in Figure 4 above. An optional snapping function in the drawing tools assists the user in correctly identifying the starting point and ending point of all lines.

**Step 3** – Once all spaces are sketched-over, we graphically place windows and doors directly on the perimeter wall floor plan. Icons of various window types, sizes and orientations are available to select from. (This feature cannot be shown at this stage since it is still under development.) These windows

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and doors are dragged-and-dropped directly onto the wall they go with in the proper location. HAP then automatically computes the floor, ceiling, wall, roof, window and door areas for you. This is much different than simply calculating areas, as we have always done in previous HAP versions. There are now 3D (x, y, z) coordinates defined for every surface in the building so the software knows the spatial relationship between all surfaces in the building. An example of spatial relationships would be when a wall is common to two adjacent spaces or if the floor of one space is also the ceiling of a space directly below it.

Once the sketch-over process and placement of all fenestration and doors in the building envelope is complete, HAP takes the sketch-over dimensions of all spaces and uses the floor-to-floor heights, etc. to extrude the building into a 3D representation and then computes all of the space areas and orientations.

**Step 4** – Next we define or validate all space input values. At this point we need to introduce a new HAP v6.0 concept called a Space Model. A *Space Model* is a collection of spaces in a physical building that represents one design alternative. So, for example, if this were a LEED®<sup>2</sup> analysis one Space Model might be the Proposed and another Space Model the Baseline Building. The Space Model is where we define and edit all space inputs, organize spaces into control zones and define the Envelope (walls, roofs, ceilings, floors) as well as Fenestration (window) properties. The Space Model contains an input grid (spreadsheet) as shown in Figure 5, below. Each space has a separate row and the inputs are organized horizontally with column headings along the top. The scroll bars (or arrow keys or tab key) allow you to move left and right or up and down within the grid, with similar functionality to a spreadsheet program.

The screenshot shows the 'HAP Space Model Properties' dialog box with the 'Spaces' tab selected. The grid contains the following data:

	Space	Level	Floor Area (sqft)	Space Type	Ventilation					
					OA Requirement 1		OA Requirement 2		Direct Exhaust	
					Airflow	Units	Airflow	Units	Airflow	Units
1	1001 Office	L1	132	Enclosed Office	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
2	1002 Office	L1	99	Enclosed Office	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
3	1003 Office	L1	85	Enclosed Office	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
4	1004 Office	L1	83	Enclosed Office	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
5	1005 Office	L1	102	Enclosed Office	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
6	1006 Office	L1	93	Enclosed Office	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
7	1007 Office	L1	76	Enclosed Office	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
8	1008 Office	L1	92	Enclosed Office	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
9	1009 Office	L1	89	Enclosed Office	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
10	1010 Office	L1	75	Enclosed Office	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
11	1011 Storage	L1	37	Storage	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
12	1012 Storage	L1	41	Storage	5.0	CFM/person	0.06	CFM/sqft	0.0	CFM
13	19 spaces with floor area of 2,826 sqft (2,826 sqft overall)				5.0	CFM/person	0.06	CFM/sqft	0.0	CFM

Below the grid, there are checkboxes for 'Selections to Display Column Groups' including All, Ventilation, Overhead Lighting, Daylighting Control, Task Lighting, Electric Equipment, Occupants, Miscellaneous Heat Gain, and Infiltration. There are also 'Export' and 'Clear Sort and Filter' buttons.

Figure 5. HAP v6.0 Space Model Properties - Grid Input Interface

<sup>2</sup>LEED® is a registered trademark of [US Green Building Council](http://www.usgbc.org)

(Continued from page 6)

With a typically-sized project, the space input grid can become very large (very tall and very wide). The number of rows is equal to the total number of spaces in the building and the number of columns is over 40. In order to effectively and efficiently work with this much data, we've provided multiple ways to help you slice-and-dice the data in different ways. The first data management feature is **filtering of columns**, that is columns may be displayed or hidden by checking or unchecking the selection check boxes located just below the grid. So, for example, if you only wanted to enter or edit internal loads such as overhead lighting, electric equipment and occupants you could check only those three boxes and hide all the other data. Then once that data is completed check other data categories such that you are only dealing with smaller, more manageable amounts of data. In addition, just as with any spreadsheet program, data may be sorted in ascending or descending order by clicking on the column headings at the top.

The next data management feature is **filtering of rows**, which limits what rows (spaces) are displayed in the grid. For example, suppose you only wanted to work on "Enclosed Office" space types. As shown in Figure 6 below, click on the Space Type column title block on the down-arrow and then select only the Enclosed Office space type, then press Apply. Now the only spaces shown are that particular space type, making it very easy to copy and paste common inputs such as ventilation, occupancy levels, lighting power, etc. for all similar space types. To copy and paste from one cell to another, simply highlight the data field you want to copy from then use the keyboard shortcuts, <Ctrl-C> to copy then select all the cells you want to paste to and use <Ctrl-V> to paste. Alternatively, right-mouse clicking on a table cell or group of cells pops-up a Copy or Paste option as well.

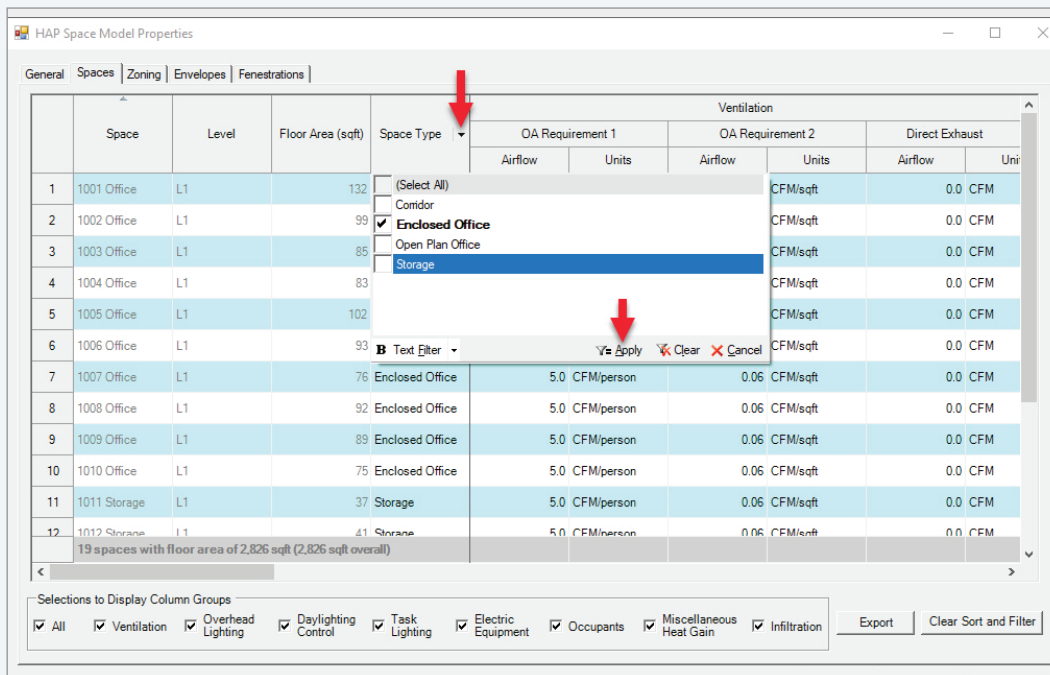


Figure 6. HAP v6.0 Space Model Properties Grid Input Interface – Filter by Space Type

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You may override the default inputs for one or more spaces. For example, for space "1006 Office" in Figure 7 below, if we want to change the Occupancy level from the default 250.0 sqft/person to 150.0 sqft/person simply click on the input field and enter the new value. You would then copy and paste this new value across any of the other spaces. This is similar to performing global space changes in previous versions of HAP. If changes are made, the background color of the modified field turns

light yellow to give you a quick visual reference that a change has been made. Should you later wish to delete all changes made to the space defaults, there is a button in the lower right corner of the screen labeled "Reapply Space Types to Spaces". This reverts all modified space inputs back to the original values used in the Space Types, which are explained later. There is also an "Export" button in the lower right corner, which may be used to export the grid into a spreadsheet program.

	Space	Level	Floor Area (sqft)	Space Type	Occupants					Miscellaneous Heat		
					Occupancy	Units	Schedule	Activity Level	Sensible (BTU/hr/person)	Latent (BTU/hr/person)	Sensible (BTU/hr)	Sr
1	1001 Office	L1	132	Office Enclosed	250.00	sqft/person	Office - Occupants	Office Work	245.0	205.0	0 (None)	
2	1002 Office	L1	99	Office Enclosed	250.00	sqft/person	Office - Occupants	Office Work	245.0	205.0	0 (None)	
3	1003 Office	L1	85	Office Enclosed	250.00	sqft/person	Office - Occupants	Office Work	245.0	205.0	0 (None)	
4	1004 Office	L1	83	Office Enclosed	250.00	sqft/person	Office - Occupants	Office Work	245.0	205.0	0 (None)	
5	1005 Office	L1	102	Office Enclosed	250.00	sqft/person	Office - Occupants	Office Work	245.0	205.0	0 (None)	
6	1006 Office	L1	93	Office Enclosed	150.00	sqft/person	Office - Occupants	Office Work	245.0	205.0	0 (None)	
7	1007 Office	L1	76	Office Enclosed	250.00	sqft/person	Office - Occupants	Office Work	245.0	205.0	0 (None)	
8	1008 Office	L1	92	Office Enclosed	250.00	sqft/person	Office - Occupants	Office Work	245.0	205.0	0 (None)	
19 spaces with floor area of 2,826 sqft (2,826 sqft overall)												

**Figure 7. HAP v6.0 Space Model Properties Grid Input Interface – Changing Default Values**

After completing the space inputs, we next group spaces into control zones. There are multiple ways to perform this task. One way is to graphically select the spaces from the sketch-over floor plan and then graphically combine them into zones. Each zone is a different color so that makes it very easy for you to see and validate your zoning.

There is another simple and fast way to group spaces into control zones using automation. In the Zoning tab of the Space Model input (see Figure 8 on page 9) you may choose any of the three *Auto-Zoning* schemes: One Zone per Space, One Zone per Level or Single Zone for All

Spaces. These are pretty much self-explanatory. So, say you are at the early schematic design stage or preliminary design phase of the project, you may not yet know exactly what all the space types are or how you want to zone the building. For simplicity and speed you may just assign each space to its own zone or if all you care about is a quick ballpark floor-by-floor load on the building, you might just combine all spaces into a single zone per floor. Then later as the design progresses, you can always come back and edit your zoning to represent the actual zoning layout.



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**Step 5** – The final step in the new HAP v6.0 Building Workflow is to display the 3D rendering of the building, as illustrated in Figure 9 below. This can actually be done before Step 5, after all spaces have been sketched-over, because at that stage HAP will have all it needs to render the 3D view. Using the scroll wheel on the mouse you can zoom in and out to enlarge or shrink the size of the 3D rendering. Clicking on the image with the mouse you can grab the building and spin it around in any direction.

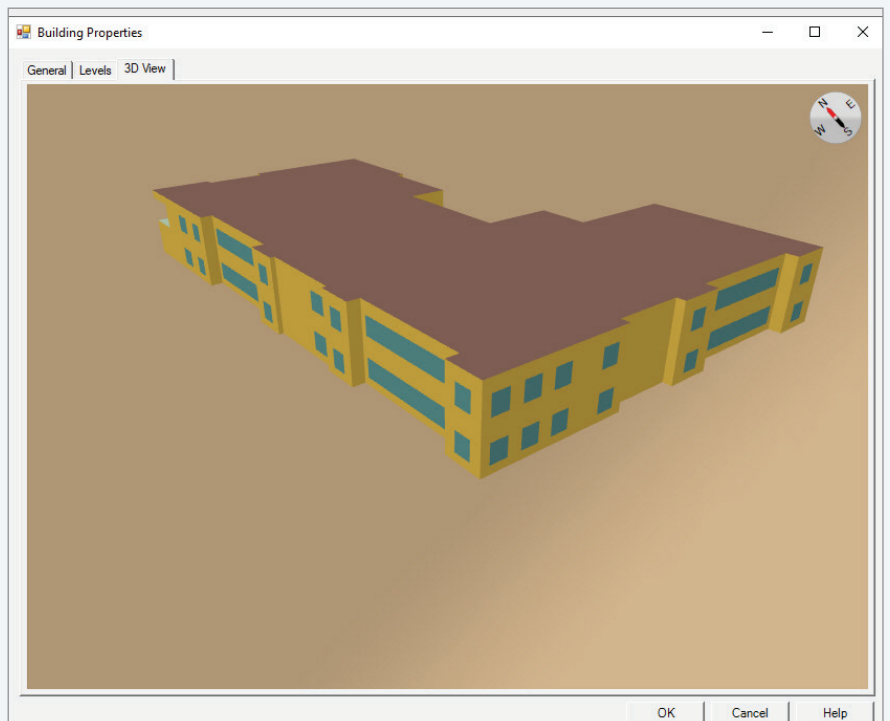
The 3D view allows you to quickly check and verify that you have correctly modeled all of the building areas and placed windows and doors where they are supposed to be located.

This concludes the overview of the new HAP v6.0 Building Model Workflow. We hope that you are just as excited as we are to see all the powerful new features that have been added to HAP to enhance your modeling capabilities and efficiency. Stay tuned for additional announcements as we get closer to releasing the final version of HAP v6.0. In future issues of the *EXchange* newsletter we will cover additional HAP v6.0 topics including the Heat Balance Method and Daylighting Simulations.

The screenshot shows the 'Space Model Properties' dialog box with the 'Zoning' tab selected. The 'Auto-Zoning Scheme' dropdown is set to 'No Action'. Below is a table with columns for Space, Level, Space Type, and Zone Name.

Space	Level	Space Type	Zone Name
1001 Office	L1	132 Office Enclosed	Zone for space 1001 Office
1002 Office	L1	99 Office Enclosed	Zone for space 1002 Office
1003 Office	L1	85 Office Enclosed	Zone for space 1003 Office
1004 Office	L1	83 Office Enclosed	Zone for space 1004 Office
1005 Office	L1	102 Office Enclosed	Zone for space 1005 Office
1006 Office	L1	93 Office Enclosed	Zone for space 1006 Office
1007 Office	L1	76 Office Enclosed	Zone for space 1007 Office
1008 Office	L1	92 Office Enclosed	Zone for space 1008 Office
1009 Office	L1	89 Office Enclosed	Zone for space 1009 Office
1010 Office	L1	75 Office Enclosed	Zone for space 1010 Office
1011 Storage	L1	37 Storage	Zone for space 1011 Storage
1012 Storage	L1	41 Storage	Zone for space 1012 Storage
1013 Storage	L1	46 Storage	Zone for space 1013 Storage
1014 Corridor	L1	404 Corridor	Zone for space 1014 Corridor
1015 Office	L1	82 Office Enclosed	Zone for space 1015 Office
1016 Office	L1	82 Office Enclosed	Zone for space 1016 Office
1017 Office	L1	82 Office Enclosed	Zone for space 1017 Office

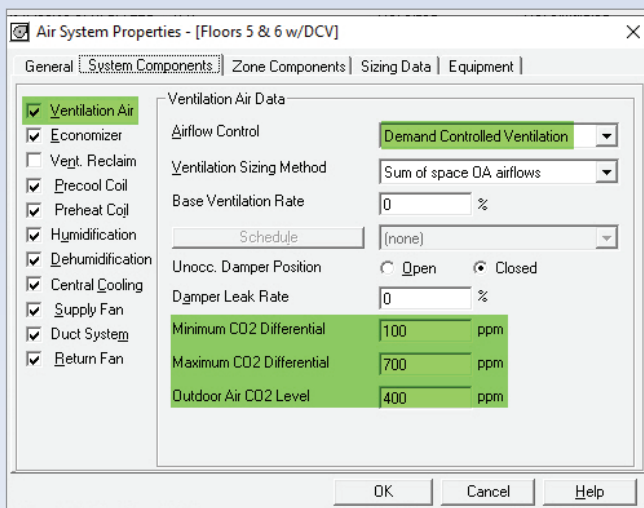
**Figure 8. HAP v6.0 Space Model Properties Grid Input Interface – Changing Default Values**



**Figure 9. HAP v6.0 Building Properties – 3D View**

# Frequently Asked Questions

**FAQ #1: I am using a CO<sub>2</sub> Demand Control Ventilation (DCV) setting in HAP with 400 ppm outdoor air and 700 ppm CO<sub>2</sub> differential. From the system psychrometrics report I notice for some hours the CO<sub>2</sub> levels are going up above 2100 ppm (see below). With 700 ppm differential shouldn't the HAP DCV control maintain my CO<sub>2</sub> levels at or below 1100 ppm (= 400 + 700 ppm)?**



**TABLE 1: SYSTEM DATA**

Component	Location	Dry-Bulb Temp (°F)	Specific Humidity (lb/lb)	Airflow (CFM)	CO2 Level (ppm)	Sensible Heat (BTU/hr)	Latent Heat (BTU/hr)
Ventilation Air	Inlet	62.3	0.01320	5507	400	22546	77369
Preheat Coil	Outlet	62.3	0.01320	5507	400	0	-
Precool Coil	Outlet	53.0	0.00827	5507	400	170506	125807
Vent - Return Mixing	Outlet	73.3	0.00979	27382	1792	-	-
Central Cooling Coil	Outlet	55.1	0.00884	27382	1792	528181	119765
Central Heating Coil	Outlet	55.1	0.00884	27382	1792	0	-
Supply Fan	Outlet	58.0	0.00884	27382	1792	84144	-
Humidifier	Outlet	58.0	0.00884	27382	1792	-	0
Cold Supply Duct	Outlet	58.9	0.00884	26013	1792	-	-
Zone Air	-	76.4	0.01024	26013	2161	481519	168100
Return Plenum	Outlet	76.4	0.01024	26013	2161	0	-
Duct Leakage Air	Outlet	58.0	0.00885	1369	1792	-	-
Return Duct	Outlet	75.5	0.01017	27382	2142	-	-
Return Fan	Outlet	78.4	0.01017	27382	2142	86014	-

*Air Density x Heat Capacity x Conversion Factor: At sea level = 1.080; At site altitude = 1.056 BTU/(hr-CFM-F)  
Air Density x Heat of Vaporization x Conversion Factor: At sea level = 4746.6; At site altitude = 4640.7 BTU/(hr-CFM-F)  
Site Altitude = 623.0 ft*

**TABLE 2: ZONE DATA**

Zone Name	Zone Sensible Load (BTU/hr)	T-stat Mode	Zone Cond (BTU/hr)	Zone Temp (°F)	Zone Airflow (CFM)	CO2 Level (ppm)	Terminal Heating Coil (BTU/hr)	Zone Heating Unit (BTU/hr)
Floor 5	263281	Cooling	259297	76.4	14006	2177	0	0
Floor 6	226027	Cooling	222222	76.4	12006	2143	0	0

**Figure 10. Demand Controlled Ventilation (DCV) Modeling – Resulting High Zone CO<sub>2</sub> Levels**

**Answer:** If the CO<sub>2</sub> in the zones is over 2100 ppm it is likely that your system is operating at the design outdoor ventilation CFM, which is shown as 5507 CFM. If so, this is just a case of the design ventilation CFM specified not being sufficient to achieve the 700 ppm differential. This is an issue of “tuning” the ventilation CFM and the ppm differentials so they are in synch (i.e. that at design ventilation CFM you can maintain the desired CO<sub>2</sub> ppm differential).

Design ventilation CFM is calculated based on CFM/person and CFM/sqft requirements set for the space. However, these CFM/person and CFM/sqft requirements don't guarantee anything about the CO<sub>2</sub> levels in the space (indirectly the CFM/person and CFM/sqft numbers may intend to get you to certain CO<sub>2</sub> differentials, but there are enough independent factors at work that the ASHRAE Std 62.1 requirements can't guarantee a CO<sub>2</sub> differential). **It is important to understand that HAP will not override the user-specified ventilation quantities to automatically maintain the desired zone CO<sub>2</sub> levels.** If 700 ppm is the maximum differential

desired, but if using the design ventilation CFM isn't sufficient to flush the CO<sub>2</sub> out of the building, then you will see CO<sub>2</sub> differentials going above 700 ppm.

A couple of the factors that are outside the control of ASHRAE Std 62.1 are:

- Activity level of the occupants - User is free to define these as whatever he or she feels are appropriate and they might not be perfectly in synch with what Std 62.1 assumed in setting the CFM/person value. The higher the activity level (higher heat gains), the higher the MET rate for occupants and therefore the higher the CO<sub>2</sub> generation.
- Infiltration or lack thereof. The more infiltration you have the more flushing with low-CO<sub>2</sub> outdoor air. When none is present, you have no flushing.

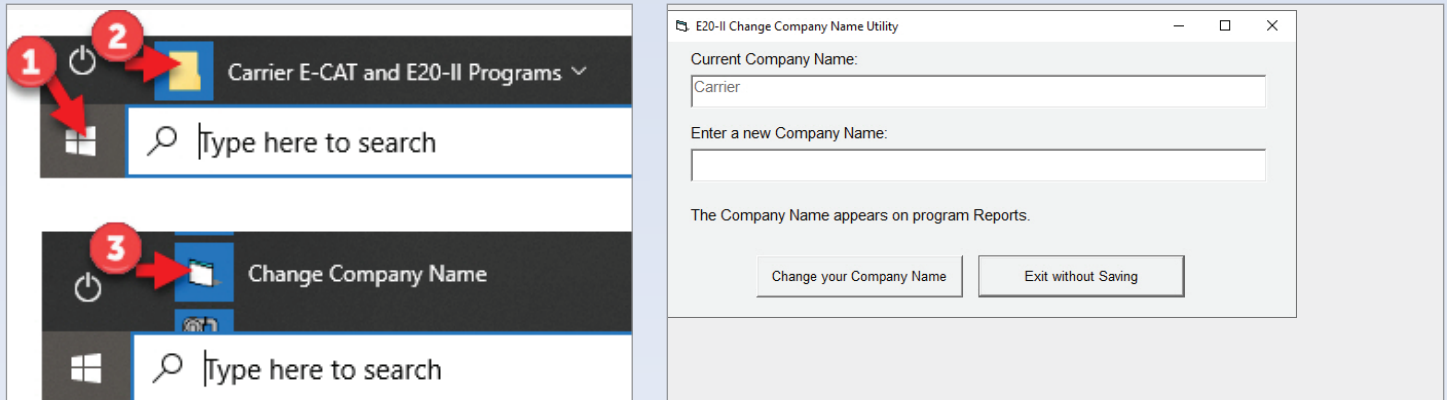
If you are finding that CO<sub>2</sub> differentials are going above 700 ppm (or your particular setting) a solution might be to tune the system by increasing the design ventilation CFM slightly to provide the ability to flush the building with more low-CO<sub>2</sub> outdoor air.

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**FAQ #2: Our company recently had a name change and I notice on all my reports it still lists our old company name. How do I edit this name in the software? I see no settings inside the program to do so.**

**Answer:** The company name is entered the first time the Carrier eDesign software is installed on the computer and is only required to be entered one time only, then all Carrier software uses this same name. To change your company name, there is a small utility software tool that resides inside your Carrier Programs group, "Carrier

E-CAT & E20-II Programs". To launch this utility, go under the Start > Programs and look for the Carrier program group, as shown in Figure 11 below. Located under this program group is a utility program called, "Change Company Name". Run this and it will allow you to enter the new company name.



**Figure 11. Launching "Change Company Name" Utility Program**









## Upcoming eDesign Suite Training Classes

Location	Load Calculation for Commercial Buildings <i>System Design Load HAP</i>	Energy Simulation for Commercial Buildings <i>HAP</i>	Energy Modeling for LEED® Energy & Atmosphere Credit 1 <i>HAP</i>	Advanced Modeling Techniques for HVAC Systems <i>HAP</i>	Engineering Economic Analysis <i>EEA</i>	Block Load Basic <i>Block Load</i>
Syracuse, NY	Jan. 13	Jan. 14	—	—	—	—
Pensacola, FL	Feb. 18	Feb. 19	—	Feb. 20	—	—
Omaha, NE	Mar. 10	Mar. 11	—	Mar. 12	—	—
Syracuse, NY	Apr. 14	Apr. 15	—	—	—	—
Syracuse, NY	Jul. 13	Jul. 14	—	—	—	—
Syracuse, NY	Nov. 2	Nov. 3	—	—	—	—

This schedule is current as of January 10, 2020.  
Additional classes are being scheduled now. Please [click here](#) to check for updated schedules.

[Click here](#) to REGISTER FOR UPCOMING CLASSES

### eDesign Suite Software Current Versions (North America)

Program Name	Current Version	Functionality
 <a href="#">Hourly Analysis Program (HAP)</a>	v5.11	Peak load calculation, system design, whole building energy modeling, LEED® analysis
 <a href="#">Building System Optimizer</a>	v1.60	Rapid building energy modeling for schematic design
 <a href="#">Block Load</a>	v4.16	Peak load calculation, system design
 <a href="#">Engineering Economic Analysis</a>	v3.06	Lifecycle cost analysis
 <a href="#">Refrigerant Piping Design</a>	v5.00	Refrigerant line sizing
 <a href="#">System Design Load</a>	v5.11	Peak load calculation, system design



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