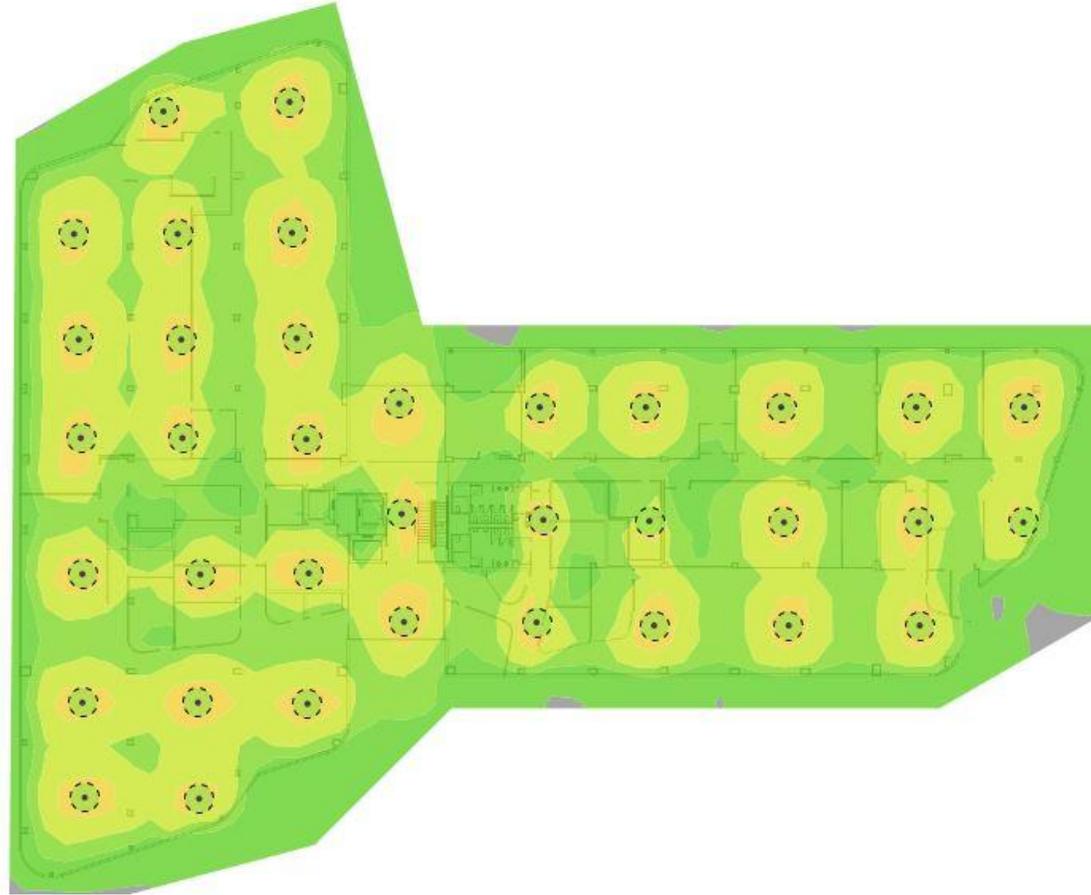


Good Morning Everyone

Steve Bunnell



Good predictive designs and passive surveys need clean floor plans as their foundation. How do we get there?



CAD Solution

➤ DraftSight 2D Design and Drafting Software

- Provides the ability to turn off unwanted layers, change layer colors for better visibility, delete unwanted detail, modify floor plans to reflect current construction and create PDF versions if needed. CAD files are always easier to manipulate so are preferred but not always available from the client.

PDF Solution

➤ Adobe Acrobat Pro DC

- Many PDF files are created from .dwg files without the layer option turned on during creation leaving many unwanted objects on the floor plan. Depending on how the PDF was created Adobe Acrobat Pro has the ability to delete unwanted objects within the file. This is much more cumbersome than using DraftSight so CAD files are always preferred.



DraftSight Professional by Dassault Systemes

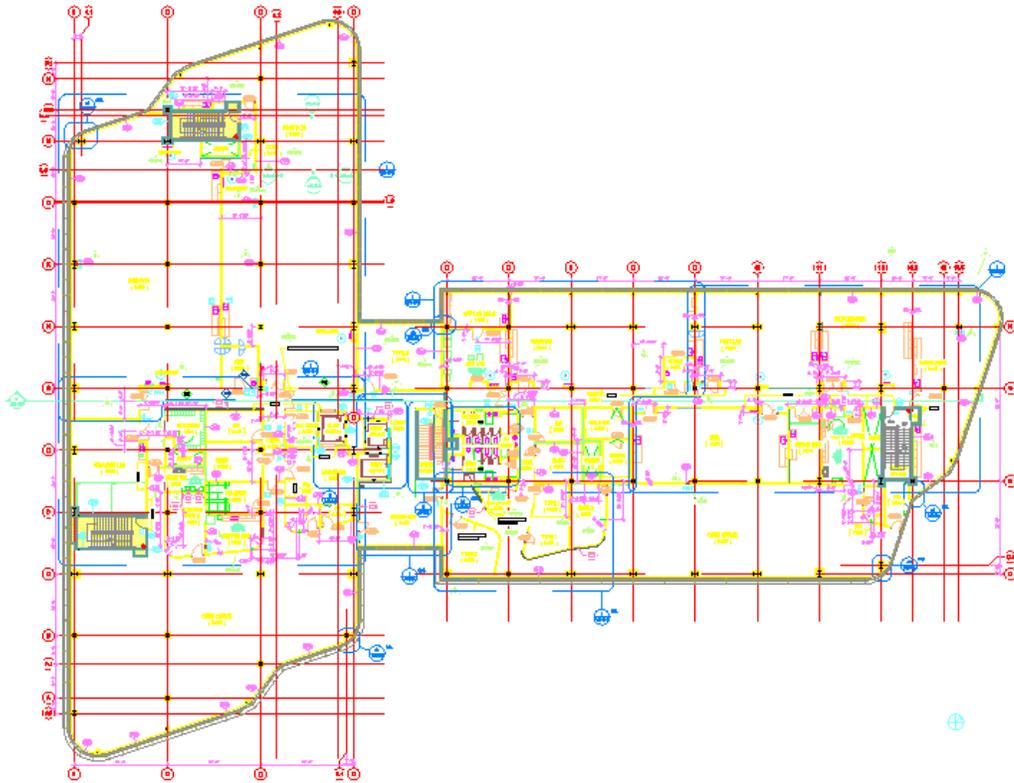


DraftSight is a full-featured drafting program which is an inexpensive alternative to AutoCAD. It can be used to clean-up floorplans, add, modify or delete walls and any other drafting work that is done in AutoCAD. This is not the only inexpensive program available, but the one I have used for years that satisfies all my needs.

There is a free download that has limited functions or it can be licensed annually for \$149. There is also a non-subscription option for \$299 that includes upgrades for one year. After the year expires an annual maintenance fee of \$99 is optional if you want to be able to receive updates.



What a Typical CAD File Looks Like Before Cleaning

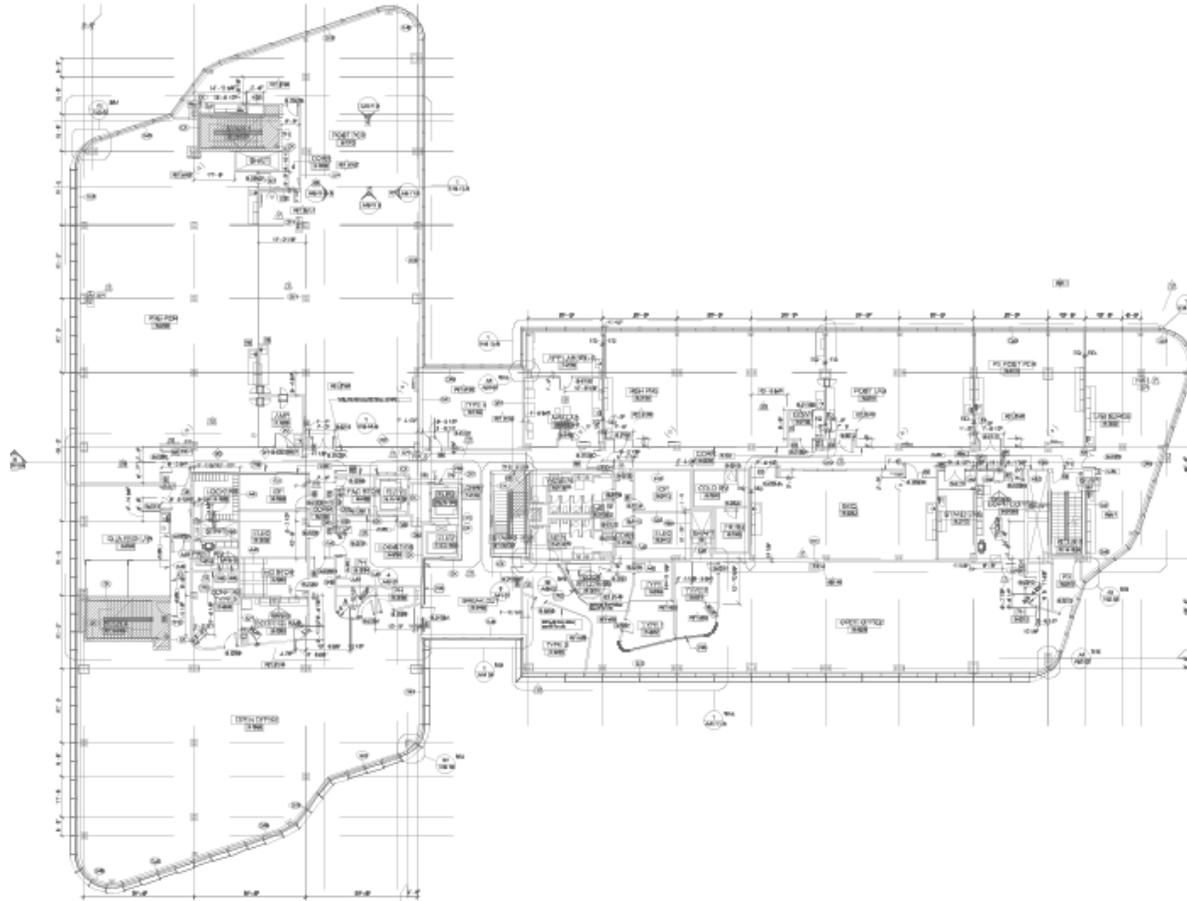


G-IMPT		<input checked="" type="checkbox"/>
I-WALL		<input checked="" type="checkbox"/>
P-SANR-FIXT		<input checked="" type="checkbox"/>
P-SANR-FIXT-HDLN		<input checked="" type="checkbox"/>
Q-CASE		<input checked="" type="checkbox"/>
Q-CASE-HDLN		<input checked="" type="checkbox"/>
Q-SPCQ		<input checked="" type="checkbox"/>
Q-SPCQ-HDLN		<input checked="" type="checkbox"/>
S-COLS-SYMB		<input checked="" type="checkbox"/>
S-GRID		<input checked="" type="checkbox"/>
S-STRS		<input checked="" type="checkbox"/>
S-STRS-ANNO		<input checked="" type="checkbox"/>
S-STRS-MBND		<input checked="" type="checkbox"/>

When importing this file into Ekahau here is the lengthy list of layers included in this file. It is time consuming to go through and look at each layer to determine, 1) if it is needed in the design, and 2) what the attributes (wall style, etc.) should be set for that layer.

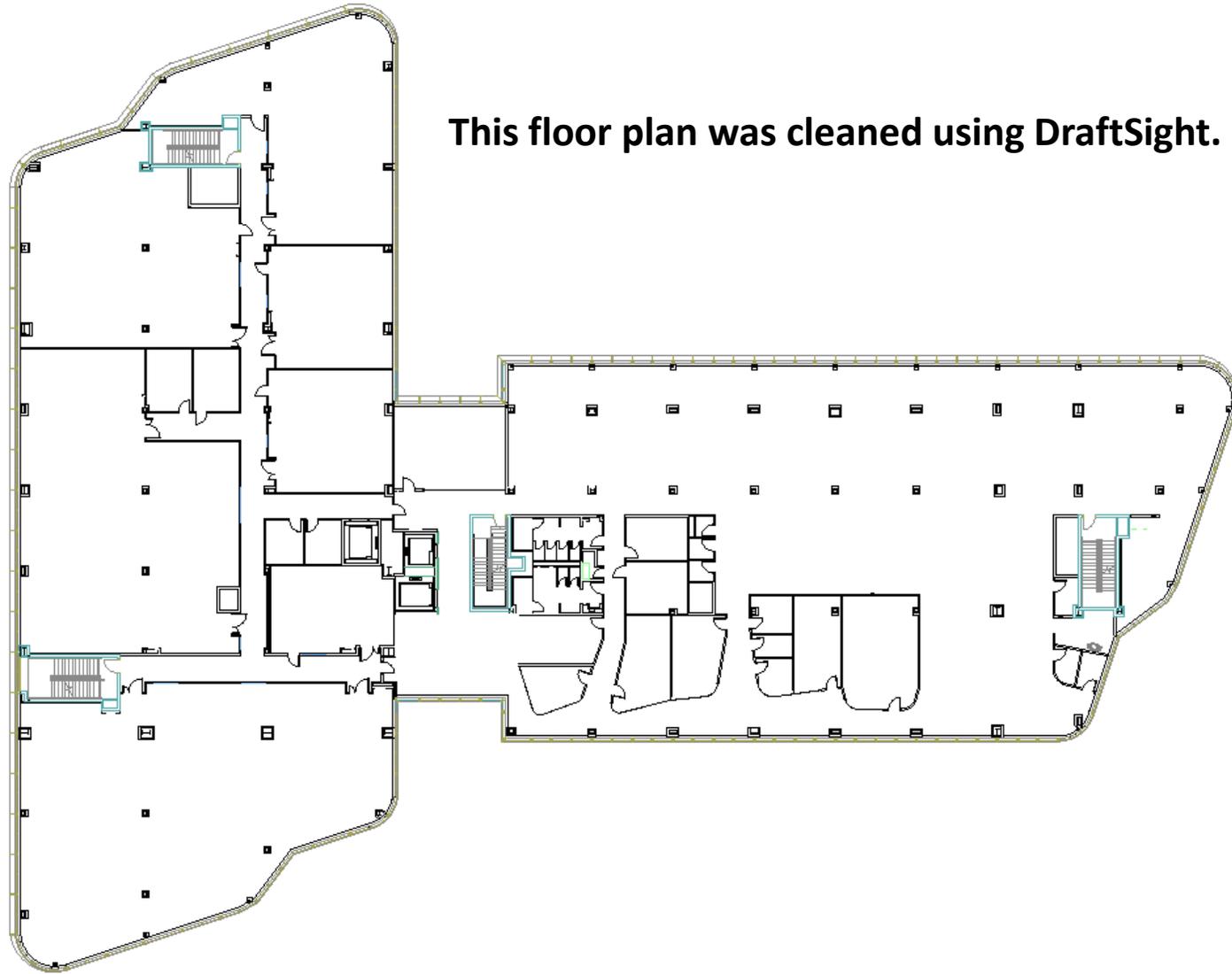
Layer Name	Wall Type	<input checked="" type="checkbox"/> Include in Background Map
0		<input checked="" type="checkbox"/>
A-ANNO-DIMS-128		<input checked="" type="checkbox"/>
A-ANNO-KEYN		<input checked="" type="checkbox"/>
A-ANNO-NOTE		<input checked="" type="checkbox"/>
A-ANNO-NOTE-128		<input checked="" type="checkbox"/>
A-ANNO-SYMB		<input checked="" type="checkbox"/>
A-AREA-IDEN		<input checked="" type="checkbox"/>
A-DETL		<input checked="" type="checkbox"/>
A-DETL-CNTR		<input checked="" type="checkbox"/>
A-DETL-GENF		<input checked="" type="checkbox"/>
A-DETL-THIN		<input checked="" type="checkbox"/>
A-DOOR		<input checked="" type="checkbox"/>
A-DOOR-FRAM		<input checked="" type="checkbox"/>
A-DOOR-GLAZ		<input checked="" type="checkbox"/>
A-DOOR-IDEN		<input checked="" type="checkbox"/>
A-FLOR-HRAL		<input checked="" type="checkbox"/>
A-FLOR-LEVL		<input checked="" type="checkbox"/>
A-GENM		<input checked="" type="checkbox"/>
A-GLAZ		<input checked="" type="checkbox"/>
A-GLAZ-CURT		<input checked="" type="checkbox"/>
A-GLAZ-CWMG		<input checked="" type="checkbox"/>
A-GLAZ-IDEN		<input checked="" type="checkbox"/>
A-WALL		<input checked="" type="checkbox"/>
A-WALL-IDEN		<input checked="" type="checkbox"/>
E-ELEC-EQPM		<input checked="" type="checkbox"/>
E-ELEC-EQPM-HDLN		<input checked="" type="checkbox"/>
G-ANNO-NPLT		<input checked="" type="checkbox"/>
G-ANNO-REVC		<input checked="" type="checkbox"/>
G-ANNO-REVC-IDEN		<input checked="" type="checkbox"/>
G-ANNO-SYMB		<input checked="" type="checkbox"/>
G-ANNO-TEXT		<input checked="" type="checkbox"/>
G-ANNO-TTLB		<input checked="" type="checkbox"/>
G-ANNO-TTLB-WIDE		<input checked="" type="checkbox"/>

This is what this file would look like in Ekahau with all of the layers left on and no wall attributes set.



This is not exactly what you would want to present to your client when doing a Predictive Design or a Passive Survey with the various heat maps that Ekahau provides. This is what I would consider to be very unprofessional.

Although most of these layers can be eliminated in Ekahau, it is very time consuming and there is an easier and quicker way by cleaning the file first in DraftSight.

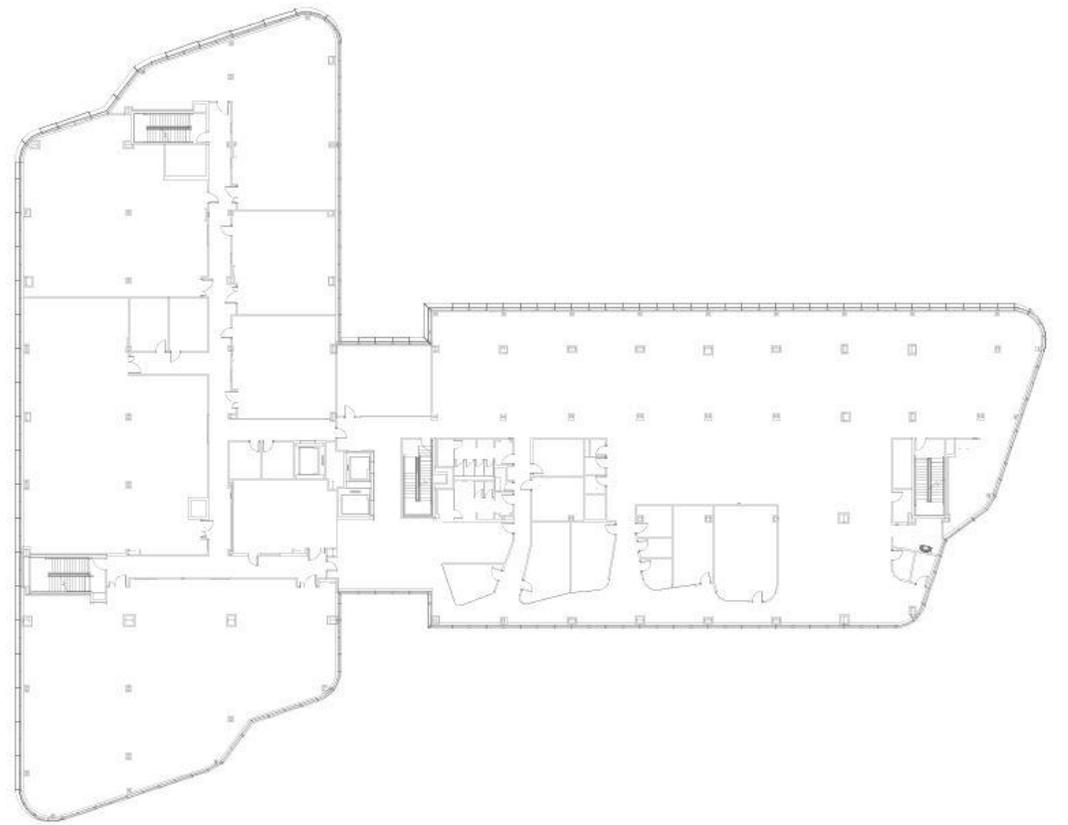


Time will not allow me to spend a lot of time showing how to use DraftSight to clean up a file to be used in the Ekahau tool.

This floor plan has been cleaned by removing all of the layers that are not needed. Depending on the drafter, some objects are not placed in a layer and must be removed individually.

Also, walls and other objects may be a color that is hard to see, such as yellow. A layer's color can be changed to make the floor plan easier to read.

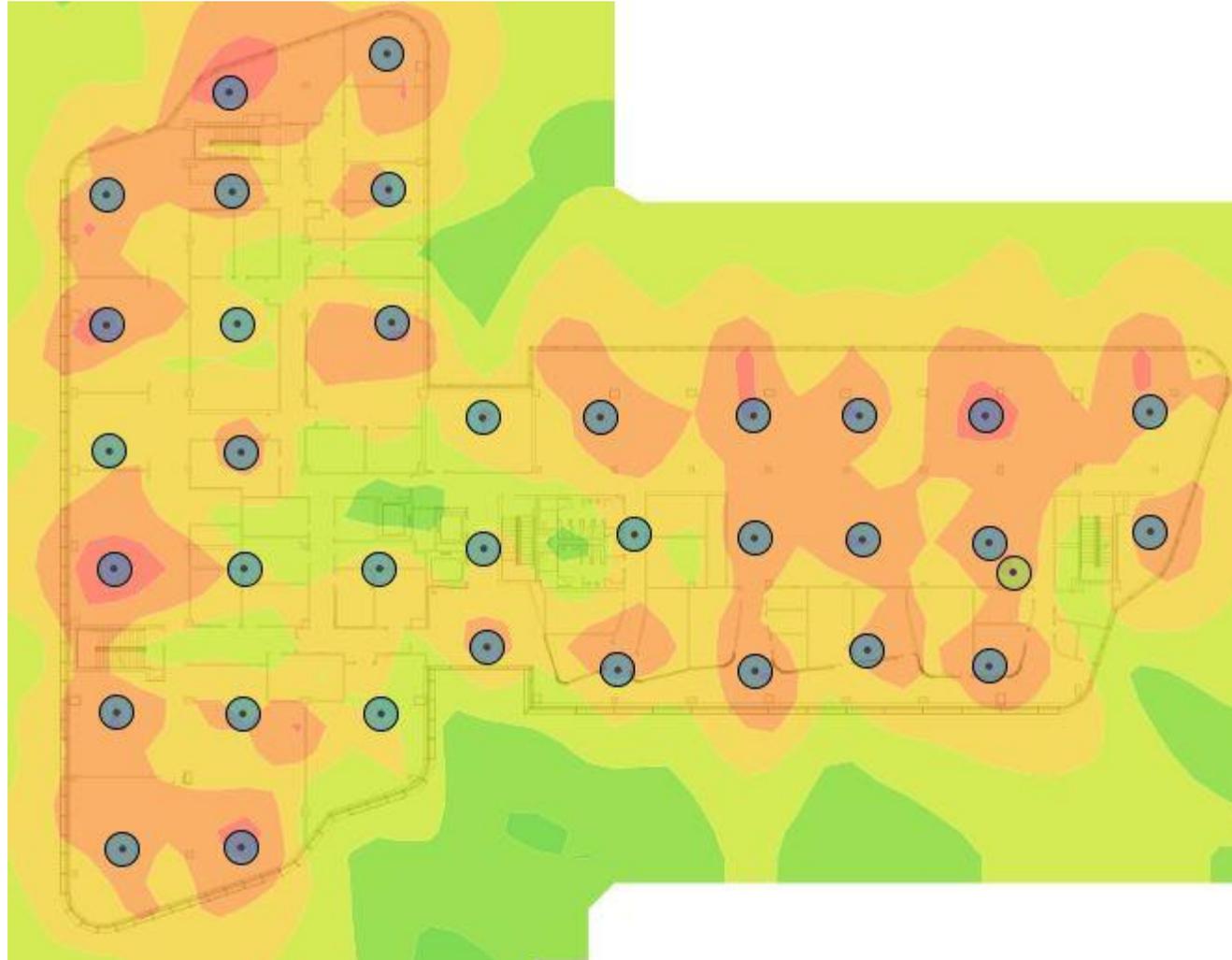
Layer Name	Wall Type	<input checked="" type="checkbox"/> Include in Background Map
0		<input type="checkbox"/>
A-DETL-THIN		<input checked="" type="checkbox"/>
A-DOOR		<input checked="" type="checkbox"/>
A-DOOR-FRAM		<input checked="" type="checkbox"/>
A-DOOR-GLAZ		<input checked="" type="checkbox"/>
A-FLOR-HRAL		<input checked="" type="checkbox"/>
A-GENM		<input checked="" type="checkbox"/>
A-GLAZ		<input checked="" type="checkbox"/>
A-GLAZ-CURT		<input checked="" type="checkbox"/>
A-WALL		<input checked="" type="checkbox"/>
G-IMPT		<input checked="" type="checkbox"/>
I-WALL		<input checked="" type="checkbox"/>
P-SANR-FIXT-HDLN		<input checked="" type="checkbox"/>
Q-CASE-HDLN		<input checked="" type="checkbox"/>
Q-SPCQ-HDLN		<input checked="" type="checkbox"/>
S-COLS-SYMB		<input checked="" type="checkbox"/>
S-STRS		<input checked="" type="checkbox"/>



Remember from a previous slide what the file looked like in Ekahau before cleaning and the lengthy list of layers that needed to be dealt with.

This is the cleaned file from DraftSight. It is better to use in the tool and the list of layers is much shorter to deal with. The less information that is in the file, the quicker Ekahau will load and the faster it will reload during the survey or design phase.

Now we have a clean heat map that can be used in a report to the client, vs. the file below.





This is the same floor plan that hasn't been cleaned up. I don't like to include screen shots that look like this in my reports. I don't think it looks professional.

Thank You