ICAMPS FREQUENTLY ASK QUESTIONS

1. Different Versions:
    a. ICAMPS for AutoCAD 2004 to 2006 in c:\applied.r16
    b. ICAMPS for AutoCAD 2007 to 2009 in c:\applied.r17
    c. ICAMPS for AutoCAD 2010 to 2012 in c:\applied.r18
    d. ICAMPS for AutoCAD 2013 to 2014 in c:\applied.r19
    e. ICAMPS for AutoCAD 2015 to 2016 in c:\applied.r20
    f. ICAMPS for AutoCAD 2017 in c:\applied.r21
    g. ICAMPS for AutoCAD 2018 in c:\applied.r22
    h. ICAMPS for AutoCAD 2019-2020 in c:\applied.r23
    i. ICAMPS for AutoCAD 2021-2024 in c:\applied.r24
    j. ICAMPS for AutoCAD 2025-2026 in c:\applied.r25
2. Installed the program but no menu commands do not work?
    a. Make sure you have installed the proper version for that version of AutoCAD as described in 1 above.
3. Most Common AutoCAD installation issue is that when the install program searches for the AutoCAD folder the installer needs to click Yes to browse for a different folder and then browse to (most likely) C:\Program Files\AutoDesk\AutoCAD 20xx where xx is the version of AutoCAD such as AutoCAD 2024 is installing for AutoCAD 2024.
4. Installed the Program but no STARTUP menu?
    a. Type CONFIG at the AutoCAD command prompt, go to Profiles tab and select the icamps-rxx (where xx is the number as above in 1 i.e. r16,17,18,19,20) profile or create if it does not exist. Set it to Current. Then go to the Files tab and Support File Search Path then add c:\applied.rxx\cfg then add c:\applied.rxx\miscdir and c:\applied.rxx\simmdir and c:\applied.rxx\ventdir and c:\applied.rxx\pumpsys if they have minewater for the last one and minevent for the previous one.
    b. AutoCAD 2013 and above add all those same folders in a above to Trusted Locations.
    c. Note: When those folders are in the AutoCAD search path it forces AutoCAD to load the acad.lsp file on running AutoCAD and acaddoc.lsp everytime it loads a new drawing. These two lisp files are at the heart of setting up some other variables that ICAMPS needs when AutoCAD is run. The acad.lsp and acaddoc.lsp files are in c:\appllied.rxx\cfg
    d. Also there is a file called c:\applied.rxx\miscdir\defaults.in which contains the folders of where to find icamps programs from the menu.
    e. The main files all have the extension of .arx. Note one file icamps11.arx is needed for all programs MineSimU (mainly) but MineVent and MineWater as well.

MineVent Information:

1. There is a branch on the drawing that I cannot see. It shows up in List Branches so that I have the Start Node and End Node or I know the Start Node and End Node. How do I get rid of it? Answer: Open the drawing then the MineVent menu then go to Advanced List Branches and delete it from the list or type ERASEBH at the AutoCAD command prompt and enter the start node and end node. It will try to delete each part of the branch individually….polyline, arrow and the block itself the block itself is the problem.

2. Almost all information for a MineVent drawing is stored in the attribute blocks, the only exception is the FAN and CFG files.
3. Edit Schematic under the Output Menu is where to setup the location of the FAN and CFG files as well as the size of node numbers, pressures, etc…
4. Problem does not converge. Try the Gradient method. But if you need gas injected through a dummy branch then since the Gradient method does not currently support this may have to try Display Mesh Correction and see if you can get it to converge by looking at the meshes. Or you can increase the correction factor 0.1 means within 100cfm, 0.01 means within 10cfm etc.. The more accurate you want it the less chance of convergence.
5. What is the C Value for Leakage branches? Leakage branches are not treated as turbulent flow but rather laminar so the program treats them special and instead of the regular formula P=RQ^2 it is P=RQ^cvalue.
6. I get a FAN error message. Look at the fan curve for the reference number specified in the error message. Discontinuity means your numbers between some points does not make sense, such as a decreasing quantity or an increasing pressure.
7. AutoCAD 2015 if screwy things are happening with the Gradient method or Calculate Resistance or in any other way. Type CONFIG at the AutoCAD command prompt and go to the Systems Tab then Graphics Performance and turn off Hardware Acceleration. This happens on some non-supported (by AutoCAD) graphics cards. As far as I can tell AMD graphics cards are more rpone to this. But the problem is that in the process of trying to store extended entity data there is a bug in AutoCAD 2015. They may fix this in future releases and are suppose to notify me when they do.
8. I get the message about “More than one defaults brand…” Use the hidden MineVent command DELBRAN that should fix it. Make sure layer 0 is not frozen/off/locked. For ANY issue with the Brand which is created with Edit Schematic and inserts the MVDEF.DWG file make sure layer 0 is not locked/frozen/off etc.. Also DELBRAN tries its best to delete MVDEF.DWG from the drawing. The program does now try to unlock layer 0 the layer on which the brand (MVDEF.DWG) is inserted.
9. Program says it cannot find or open the PNQ file. If you were using the Hardy Cross method this usually means that the FORTRAN penvent.exe file failed for some reason. You can go to c:\applied.rxx\ventdir at the Windows Command prompt and type penvent.exe and see if it creates the PNQ file and if it says Stopped Program Terminated or it gives another error. If you were using the Gradient method the results dialog box should tell you what error occurred in the program.
10. Quantity is not showing or changing on a branch. Make sure Hide Quantity is not checked for that branch using Modify Branch.
11. Gradient method says node is a duplicate. If the node ends in an ‘a’ then likely two fixed quantity branches with the same end node. Currently the Gradient method does not support this. You will have to make one of them a normal branch or LimitQ branch.
12. Gradient method says Node/junction not found. The node is likely in a branch attribute block but does not exist on the drawing use Find Isolated Node under the Branch Menu and see which Branch Block has the node that does not exist and place the node in the proper place.
13. How do I use or switch from Imperial to SI (or Metric to English)? This is under the Setup Menu and Drawing Configuration. Some formulas for leakage branches are not currently supported for

Metric such as the Stopping Resistance formula. The reason is as of yet we have no direct translation kcfm/ft^2/in w.g.

14. Gradient method only supports NVP on Normal branches but I have a LimitQ branch. Convert the LimitQ branch to a Normal Branch I believe you just need to get the resistance correct, however, there are users who know how to do this mainly Alpha Engineering and Dave Prelaz.
15. If the Gradient Method does not converge it is likely that the FAN is Out of the operating range. Sometimes the Gradient method will say Unbalanced after so many trials and give you the correction factor that you can use to make it converge.
16. Note for the Gradient Method it is important to Reverse All Negative flow LimitQ Quantity branches as it only limits flow in the positive direction. So the results could vary and be inaccurate if you negative limitq branches (air reversals). It is also important to reverse all negative flow leakage branches as the gradient method uses a flow versus loss curve for these and does not look in the negative direction.
17. If number do not look right look at the PNQ file. If it has ### in it on List Quantity mainly Hardy Cross you may have a network that is using too low or too high resistances.
18. The input file for the Hardy Cross is work.pen and the input file for the Gradient is <dwgname>.inv sometimes it may be necessary to look at these files in a text editor such as Notepad to trace problems. Likewise the output file for the Hardy Cross and Gradient is work.pnq. However the Gradient creates <dwgname>.vnt and creates the pnq file from that. The <dwgname>.vnt file is basically what is shown in the results after running the Gradient.
19. Look at pen file and PNQ File.
20. Strange things happening. Turn OFF Hardware acceleration in AutoCAD Config→System→Graphics Performance
21. A dialog comes up when inserting branches or nodes. Type ATTDIA at the AutoCAD command prompt and set to 0.

MineSimU Information:

1. When running Calculate Time I get a Polyline Crossover. I chose this one first because it is one of the worst yet one of the rarest. This happens in the “clipping” functions (clip.cpp and cliputi.cpp) and is essentially caused by the program trying to advance the timing to find the end of the month, apparently it advances then decides if it went too far and needs to backup, usually this is not a problem but sometimes while trying to “clip” the area to the gird and find the area it causes a polyline crossover. Now, the only way we have ever known to try to fix this problem is that when it is Timing look at the mining unit(s) or machines and the areas being Mined (not the ones Available or Waiting or Done) by moving the error message to the side to see the Calculate Timing dialog box. Then armed with that information first try to move the corners of the areas just a bit or try to redefine them. Then re-run Timing. This may not work so next go to Edit Machine Sequence File and adjust the mining rate for the machine(s) that may have had the problem by something small like + or - 5%. Ask the user if he has a backup before this error, or if he knows what he done in between the last time it ran without the error and when the error occurred. Also since it is a simulation just adding more areas or taking some away could make the problem disappear as well because in theory a simulation could change because of round-off error from run to run.

2. You could also get a polyline crossover during Royalty or other places which is even more rare. In these cases you need to examine the polylines that are being used and the mining areas and perhaps re-define them.
3. What is the difference between Raw Tons and Clean Tons? In general it is just the percent Recovery. The percent Recovery can be a default or in the grid. But the %Recovery can vary based on the Seam Density.
4. Below is the mathematics behind the Raw Ton and Clean ton calculations. I think the 12.0 are in there to convert from inches to feet.

```
OSD Material = Mined Area * ((Raw Material - Clean Material)/12.0)

    Clean Tons = Mined Area * (Clean Material/12.0) * Seam Density / 2000.0
    Raw Tons = (OSD Material * OSD Density / 2000.00) + Clean Tons
if(Out of Seam Material is Present)
    {
      //Out of Seam Material is present
     Raw Tons = (OSD Material * OSD Density/2000.0) + Clean Tons;
    }
    else
    {
      //It is very possible that no Out of Seam Material was taken,
      //and thus the OSD for the complex calculation would be -99.0
      Raw Tons = Clean Tons;
    }
Recoverable Clean Tons = Clean Tons * Recovery / 100.0
```

5. My out of seam material (ASH) does not look correct. Try using Complex for Quality information under Setup→Configure MineSimU→Calendar and Grid Files. The Complex method is preferred and recommended.
6. What is the difference between the Quality Calculations of Approximate, Detailed and Complex?
    a. Approximate is the fastest and least accurate. It is a remnants of when computers were very slow.
    b. Detailed is a little more accurate but also a little slower
    c. Complex is the most accurate. Also look at the code
    d. For all of these see c:\icamps.3k\timing\gridin.cpp
7. What does the Calculate Raw Quality checkbox do under Calculate Timing? The following calculation is performed:

```
ASH = ( (ASH*area->cleton) + ((area->totton - (area->cleton*100/PercentRecovery)) * 100))/area->totton;
BTU = ( BTU* (area->cleton*100/PercentRecovery) /area->totton);
```

8. The program is crashing when I try to do something like use the Area Finish Unit Shutdown Table. I may have just copied from a different drawing. Make sure the drawing (.dwg file) matches the database files. Look at the code and delete some work files that do not have <dwgname>.??X and delete those work files. For the Area Finish Unit Shutdown Table this is WORK.LWX
9. How does MineSimU save files and the relationship between files and the drawing.

a. For the programmer this is done in icamps11.arx (c:\icamps.3k\quick). Icamps11.arx is also used by MineVent, MineWater, MineFire so make sure the install program has all the correct icamps11.arx files installed. They must match or MineSimU may not save the files properly if for example MineVent is installed overtop with and older icamps11.arx
b. When you load a drawing the <dwgname>.??x files get copied to the work.??x files and during editing you are only changing the work files so that if you mess up you can quit the drawing without saving and all is good. Whenever you Save or SaveAs the drawing then the work files get copied to the dwgname files. So that the drawing and the files are in sync.
c. Sometimes AutoCAD's Auto-save feature will try to save automatically this is why ICAMPS always brings up the dialog box "Update ICAMPS data Files Now?" that ask if you want to save the ICAMPS files. If you used Save or SaveAS click OK if it is AutoCAD's autosave click Cancel. Corruption can occur if you save the ICAMPS data files on an autosave as it may try to copy the work files to $autosave??? Something.

10. Royalty Tonnage Report
    a. Combined is for several files and properties (more than one property file) each property file can have several properties. Separate is for one property file. Also the big thing here is that Combined combines ALL of the properties for the reporting. Whereas Separate breaks it down and reports on each property separately.
    b. What is the RAW TONS for Area and RAW TONS for Property mean? It means that under Area for that month/date so much was mined from that area, under Property it means that for that month/date that is how much tonnage was mined from the Property.
11. In View Quality what is the difference between In-Place Tonnage and In-Place Clean Tonnage? The answer is that it is essentially the Percent Recovery. Here is the code:

    Below is from c:\icamps.3k\minesimu\newqual.cpp

    ```
    *RawTon = *RawTon + (warea * (Seam / 12.0) * Density / 2000.0);

    *CleanTon = *CleanTon + (warea*(Seam/12.0)*Density*Recovery/200000.0);
    ```

    warea is the area intersected with the grid block