# Autodesk User Conference 2016 Powered by cadline



# Building & Infrastructure User Conference

Technical Masterclass:
AutoCAD 2017 Productivity Gains

Presented by: Stuart Tanfield,
AEC Lead

## AutoCAD 2017 Productivity Gains

AutoCAD, familiar to most of us, continues to be the product we turn to for producing design documentation and drawings. It is fair to say that many of us are self-taught or have not changed the way we use AutoCAD for years. In this session we demonstrate some of the hidden productivity tools that have been added to the software in recent releases.

**Stuart Tanfield**

**AEC Lead**

### Meet the Presenter

Hello, my name is Stuart Tanfield, I hold the position of AEC Lead at Cadline. I have spent over 10 years in the AEC industry, with a background in Mechanical & Electrical services, I took the unusual path of originally studying Architecture at University. It was at University where I was first exposed to the digital drawing world, and at the time, it appeared to be a completely alien topic to me.

I spent the early part of my career getting to grips with AutoCAD and developing my skills within an M&E practice. This helped to provide a clear understanding of the software and how it can be practically applied to provide greater efficiencies. As I gained more experience I progressed to a more senior role in an M&E/ Architectural environment where I first encountered Revit, back in version 7.1.

Having previously spent 5 years at Cadline as a product specialist, Revit and BIM was an integral part of my day to day role. Taking that knowledge away with me, I joined an M&E design team to aid in the implementation of all things BIM. This provided me with a real insight and great depth of working knowledge around the BIM environment, not just the Revit side, but also areas such as data management.

I re-joined Cadline in November of 2014 and the knowledge I have gained has certainly helped to drive an efficient service around BIM strategies and provide clear guidance on the implementation and execution of the delivery of projects. Software and services are ever evolving and that is one of the best parts about my role, I get to see and work with these products every day, and there is clearly a defined path for the future. A path that will drive efficiencies and the ability to collaborate and improve performance within design teams and into the construction and management phases.

Although BIM has been around for some time now, I believe we really are, in the overall scheme of things, still at the beginning of exploiting its potential. There are still lots of standards to be finalised and methods to be established and the way we work will develop and evolve. Of course BIM may now be the normal approach for many but there are still exciting times ahead as we now look to further engage with this new technology, and leverage its full potential.

**Guidance notes:**

There are lots of interesting tips around AutoCAD productivity. Here are a selection of the productivity tools that I used to use in industry and found to be particularly useful when trying to improve what I thought was a well-oiled system…

## Tool Palettes:

For standardisation it has to be tool palettes. These are superb for enforcing standards across offices, especially when you're finding it difficult to prevent those users, who like to do their own thing, from using their own personal "standard". Tool palettes are quick and easy to set up, and allow for very quick access to content you use time and time again, significantly reducing the time it takes to locate and import your blocks and content. Whole content library drawings can be added within a couple of clicks. Tool palettes can house all manner of AutoCAD objects from standard blocks, attribute enabled dynamic blocks, polylines, text styles, dimensions styles, hatching as well as AutoCAD commands! Type **TOOLPALETTES** into the command line to activate your tool palettes.
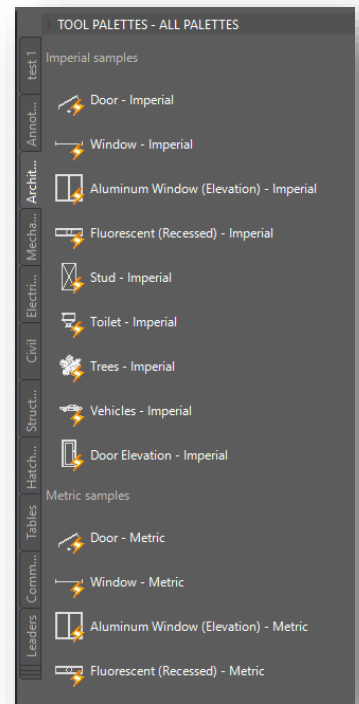


## Reference Manager:

Reference Manager is one of AutoCAD's best kept secrets. This utility allows users to re-path referenced files in mass. This is particularly useful when you have moved files to an archived location, but then need to view them at a later stage. This saves lots of time as folder locations can be re-pathed in one action. Reference Manager will provide a facility to re-path X-Refs, Fonts, Images and plot styles. It ships as part of the standard install for AutoCAD. Simply type into the start menu "**REFERENCE MANAGER**" and up pops the Reference Manager interface.





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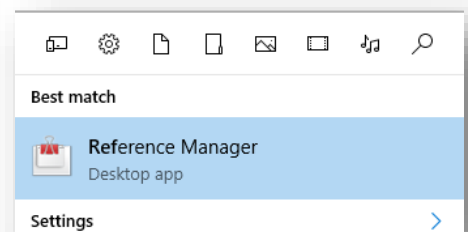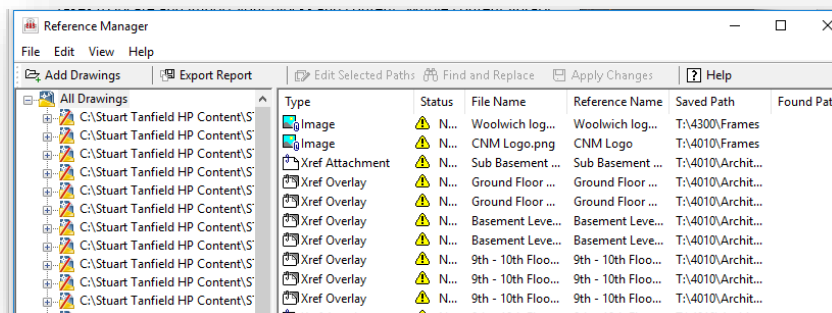
## Design Centre:

Design Centre is a great tool for transferring information from one file to another, it also helps to manage a consistant set of data from master drawing files. If you need to quickly import a block from a drawing you have worked on previously, it works for this too. Combining thumnails and an "Explorer" environment, makes this a clear and easy to use tool. Select the object you need and drag it in to your current drawing. Design Centre is very useful, especially when used to create a Tool palette from a drawing location. Type "**ADC**" into the command line to use the design centre. Design Centre helps to transfer data such as blocks, linetypes, text styles, dimension styles, layers, tablestyles, visualstyles and x-refs.
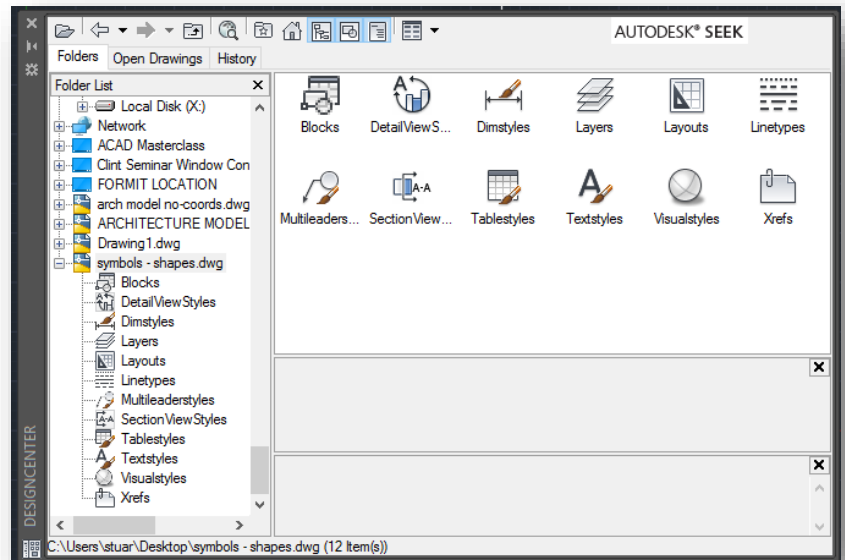


## Batch Plot

This is a tool that many struggle to get to work, and I can understand why. It seems that all the stars and planets have to be aligned to get this to work. But you can get this to work everytime, without crossing your fingers and toes. Most of the control stems from the "Page Set-up" on the drawing sheets. Making sure you have set your page set-up is vital. Without this, you will find it tricky to output the files of the right size. The batch plot command can be intiated by entering "**PUBLISH**" at the command line. It saves a huge amount of time and is something that once you have set up, will hold you in good stead, making those Friday afternoons dedicated to plotting a thing of the past!
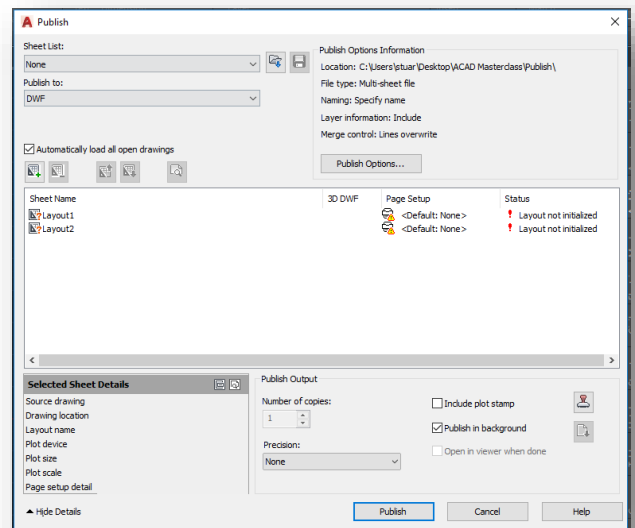


## Block Replace

Sometimes when working on a large scheme where you may have a number of blocks which need to be updated with another block rather than being redefined, can become time consuming. This is particularly evident if you are replacing the blocks manually and therefore may have to rotate each block into the correct position. Using "**BLOCKREPLACE**" will allow you to replace one block for another. You are able to select from a list of blocks within the drawing, or

graphically pick them by selecting the blocks in the drawing using the "Pick" function. The only thing to note when using block replace is to make sure you have defined your base point correctly.

## BURST

Exploding blocks can at times appear to be a really harsh command, especially when you explode a block with attributes.   Ordinarily we may want to retain the attribute data within the block whilst extracting the linework. If you require just the attribute text values, but want to reduce the block to single lines then use the "**BURST**" command instead of explode. This will explode your block, but maintain the attribute values.

## Sketch Visual Style

When producing conceptual design, it's an advantage to be able to show our design intent in a loose way. This is often reflected by creating layouts which reflect a hand sketch feel. This is possible in AutoCAD believe it or not. By creating your own custom visual style you are able to achieve this look.

## Additional Tips:

There are many AutoCAD tips and tricks which can help to produce drawings more efficiently. Below are some examples for you to try yourself when you have some time:

Layer States – Helps users to generate sets of layers which can be applied to viewports, saving time defining which layers need to be turned on and off for each viewport.  **LAYERSTATE**

Filter – Filter is a handy tool which allows you to define all objects within your drawing which match your filter selection. This is really useful when you need to delete all your hatching or dimensions in one go. **FILTER**

DWG Convert – If you require lots of drawings to be converted to older AutoCAD file types, which is more common than you'd think, then use the **DWG CONVERT** command found under the "Save As" drop down menu.
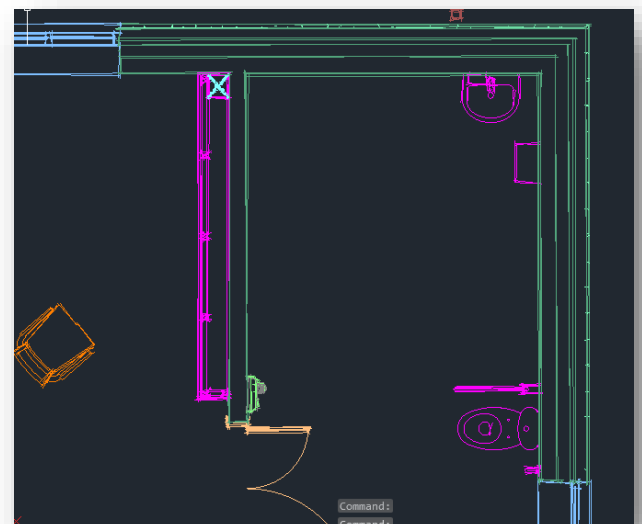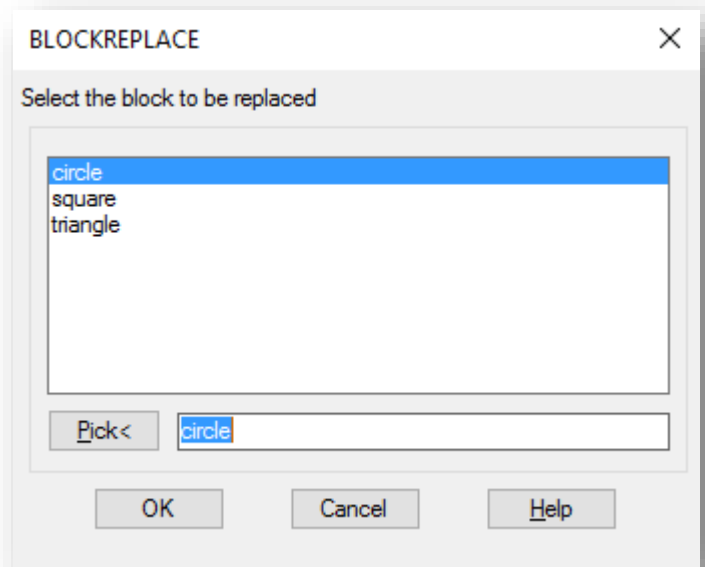
**Opening a File** – Did you know you can simply drag a file into AutoCAD to open it?

**Aligning Text** – When placing lots of text within your drawing, you can easily misalign the text. In order to get your text stacked and neatly aligned, select all your text and adjust the X co-ordinate value to make them all consistant, and all your text will line up.

**Overkill** – If you have lots of lines in your drawing which appear to be overlapping one another, use the **OVERKILL** command to remove all but one of each of the lines. This helps to drastically reduce file size and makes handling the drawing much easier.

**Dynamic Blocks** – Where do I start with these? Dynamic blocks are extremely useful for all sorts of applications within AutoCAD. We could literally spend all day on these. You can generate blocks which grow in size, allow mutiple selection of a block, demonstrate the block in plan, section and elevation, the possibilities are endless. They are quite specialised so if this is something you feel you may need help with, Cadline provide courses covering Dynamic Blocks.

I hope you enjoyed the session.