What's New in Impact 2014

P. Spooner / 28 February 2014

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This document contains details on the new features in ImpactCAD. This document applies to only the specified version of ImpactCAD.

ARDEN SOFTWARE

Contents

Overview

This document covers the new features introduced in the 2014 Release of Impact. Many of these features can be utilised out-of-the-box; however, several may require configuration changes, i.e., where an existing installation is to be upgraded. Such features are identified throughout this document by an asterisk (*). Certain features were introduced towards the end of the Impact 2010 life-cycle. Such features are identified throughout this document by twin asterisks (**). Not all of the features described within this document are applicable to all Impact licenses. Please consult Arden Software for further details.

3D Animation

Simple Animation Editor Mode

The Animation Editor may now be switched between *Simple* and *Advanced* modes (*Simple* is the default for Impact 2014). *Advanced* mode displays a channel for each folding face of a model – as with previous Impact versions.

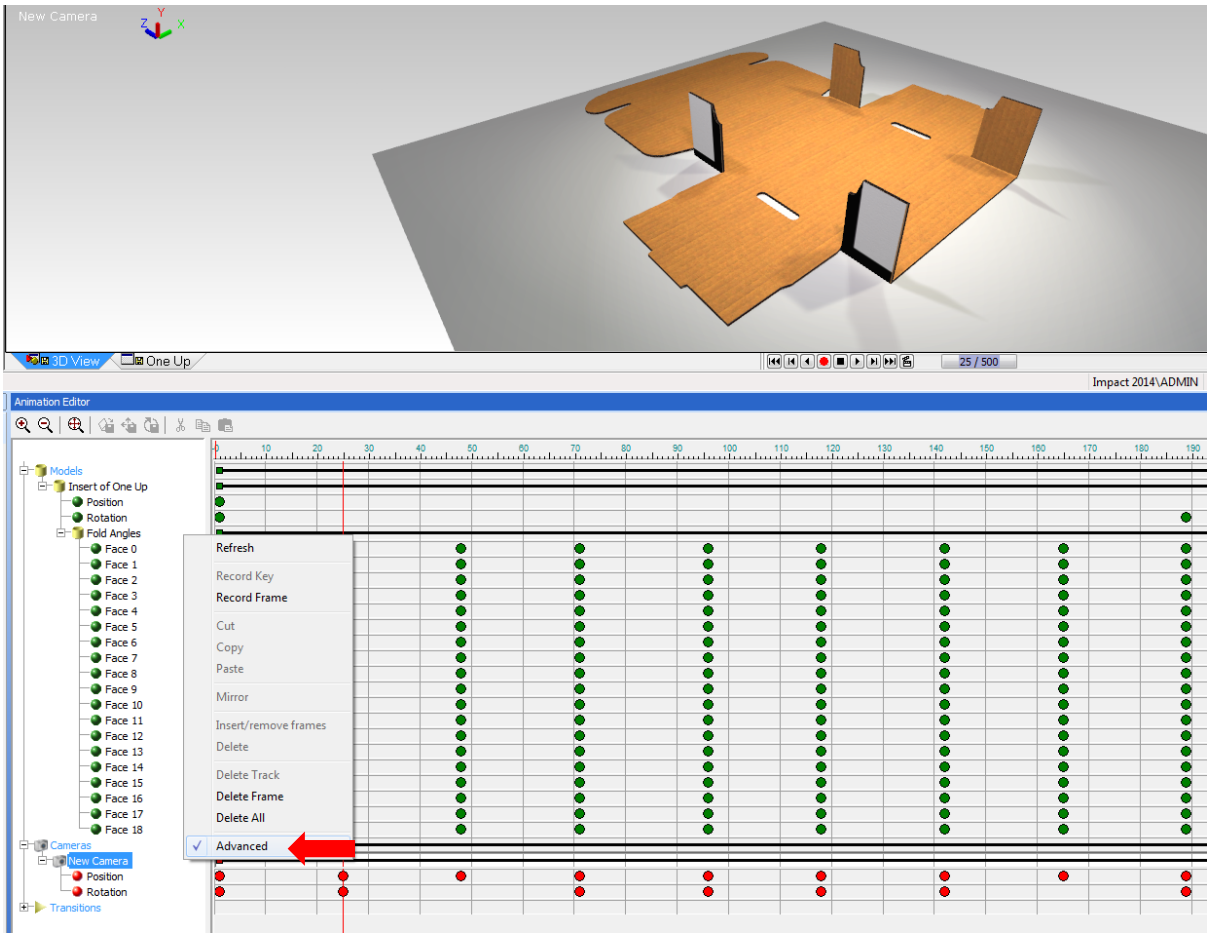


Fig 1 – Animation Editor in *Advanced Mode*

Simple mode allows a single key-frame to represent all folding key-frames for a single model. This speeds up the animation process as the animator no longer needs to repeatedly select all folding faces (in the 3D Fold Standard Toolbox), before recording a face-folding key-frame. An additional benefit is that it also simplifies the time-line to show a reduced number of channels (and hence key-frames).

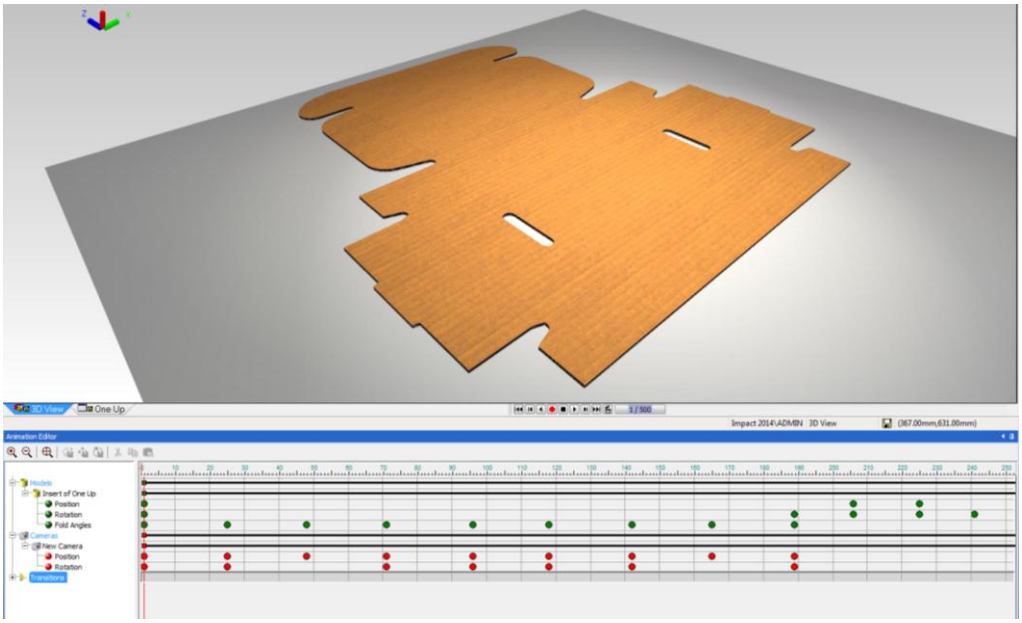


Fig 2 – Animation Editor in *Simple Mode*

Always use straight paths by default

In previous Impact versions, animated objects (folding models, mesh objects etc.) travelled along curved paths by default. When aligning multiple parts, this often resulted in an *over steer* effect which needed to be corrected via the Entity Inspector (the Path and Rotation options allow a choice of curves, Beziers or straight lines).

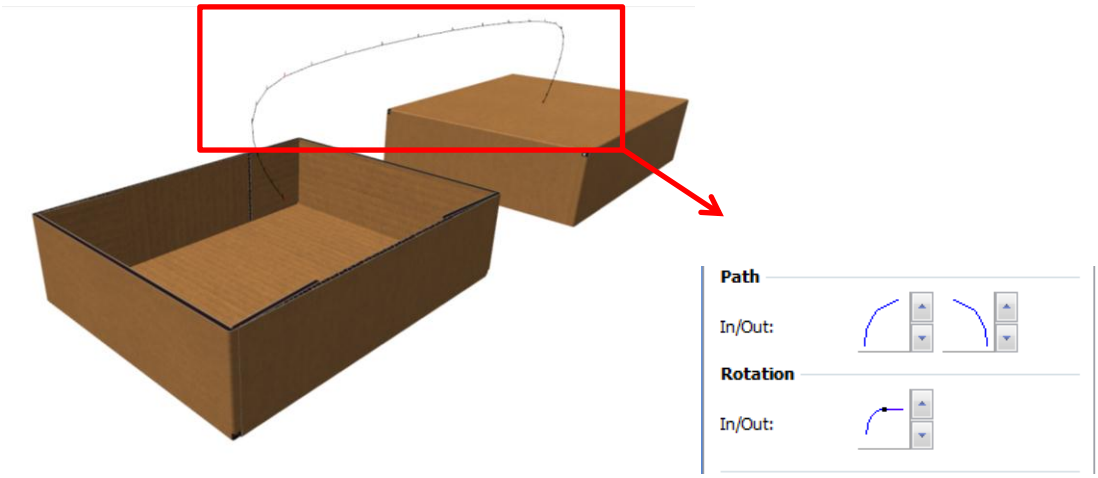


Fig 3 – Impact 2013 & earlier created *curved* paths by default

For the release of Impact 2014, the default behaviour of animated objects will be to move along straight paths. If curved or Bezier paths are required, changing the Path and Rotation options within the Entity Inspector will modify the object paths.

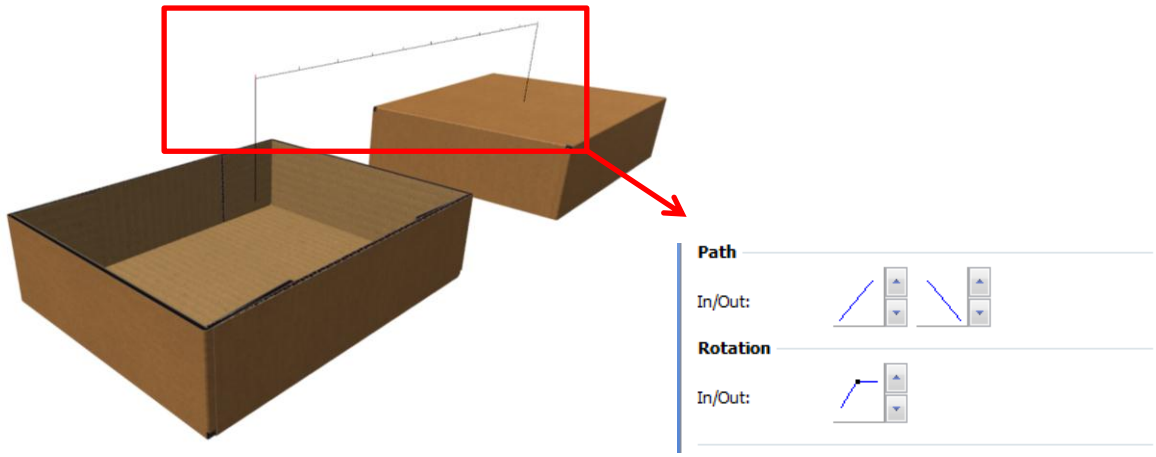


Fig 4 – Impact 2014 creates *straight* paths by default

Cut/Copy/Paste a range of key frames

A common animation requirement is the possibility to re-use key frames, in order to repeat the movement, rotation or face-folding of an object. In previous versions, it's been possible to copy a single key frame (right-click>copy) or an entire frame of key frames (shift + copy). In Impact 2014, it is now possible to Cut/Copy/Paste a range of key frames and to paste them into a different position on the time-line. Simply click & drag to define the start & end key frames and right-click to display a context menu featuring Cut/Copy & Paste options. Note that the key frames *must* be visible (their containing nodes must be expanded), if they are to be Cut/Copied/Pasted!

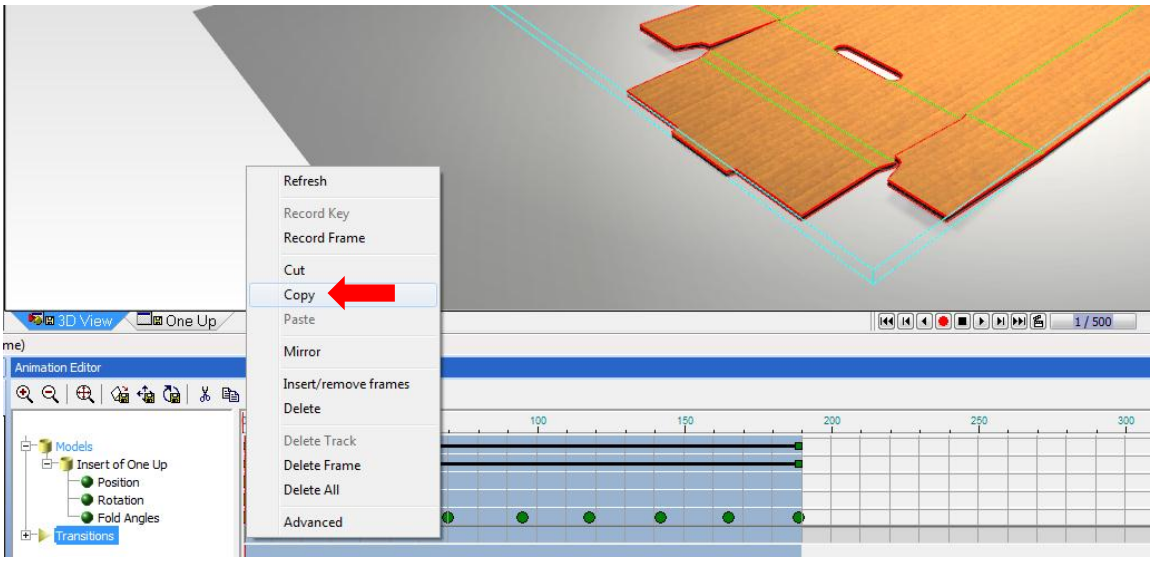


Fig 5 – *Select/Copy* a range of animation key frames

Reverse Animation (Mirror Key Frames)

Another common animation requirement is that of folding a model from flat and then returning it to a flat state. In previous Impact versions, the animator would have had to either animate the folding & flattening process manually or copy & paste multiple key frames along the time-line (as mentioned previously).

In Impact 2014, it is now possible to copy a *range* of key frames within the animation editor, paste them onto the time-line (as above) and then to *mirror* them. The *Mirror* option is available from the context menu (along with the Cut/Copy/Paste options mentioned previously). This represents a significant time-saving as the actual folding-from-flat key frames can simply be reversed to create the unfolding animation. A useful by-product is that this allows the simple creation of *looped* animations.

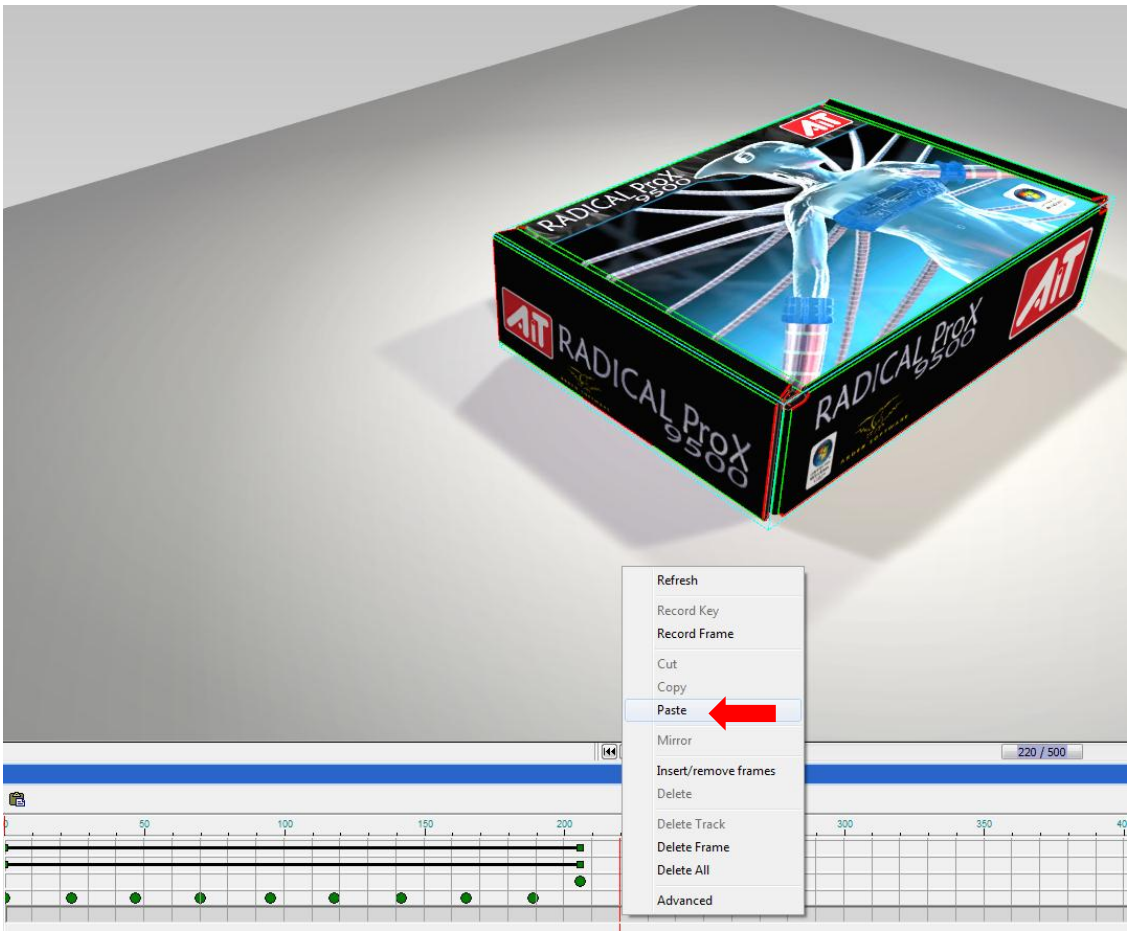


Fig 6 – *Pasting* a range of animation key frames

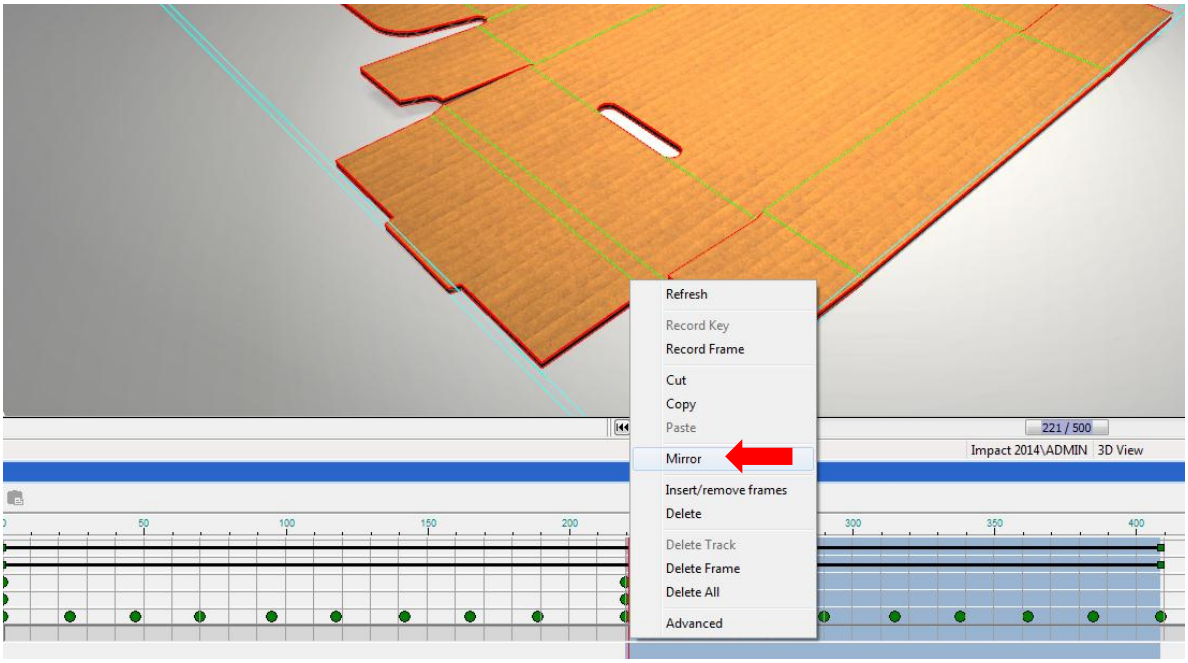


Fig 7 – *Mirroring* a range of animation key frames

Furthermore, in certain circumstances, it may be quicker to assemble a multi-part model and to animate the disassembly of the model to create an animation. As above, in previous versions, this would have taken a considerable amount of time to manually rearrange the key frames upon the time-line. In Impact 2014, the ability to mirror the key frames represents a major simplification. Simply assemble the model into a single piece, animate the disassembly and mirror the animation.

Go to frame/Jump to frame (Previous/Next)

To guarantee a well-paced animation, a common tip is to space animation events (faces folding, object movements etc.) apart by an identical number of key frames (animate every 10 or 20 frames, for example). This does require lots of interaction with the time-line, which can be quite time-consuming. As a result, two new Animation Editor controls have been added in order to speed up the animation process. *Go to Frame* allows the animator to enter the frame number they wish to move to and click *Return/Enter* – this is significantly quicker than manually clicking upon the time-line.

Jump to Frame allows the animator to quickly jump to the next-recorded (or previously recorded) key frame (again, without clicking on the time-line). As an example, this is especially useful for retrospectively adding camera frames to a folding/moving animation. You'd wish to check the camera positions at each fold or move/rotate event. The *jump to frame* option facilitates this without interacting with the time-line at all.

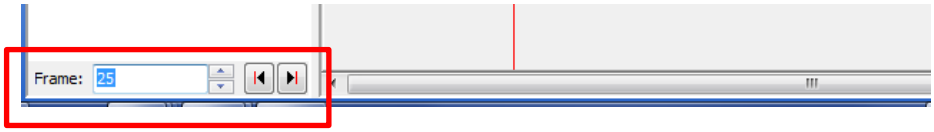


Fig 8 – *Go to Frame* and *Jump to Previous/Next Frame* controls

Note that it's possible to assign keyboard shortcuts to *Jump to Frame* (*Next* & *Previous*) tools, to further speed up the process. The command names are *3D Animation Next Key* and *3D Animation Previous Key*.

3D Import & Export

Collada 3D Export/Autocad DWG 3D Export *

Augmented Reality has become fairly well-established over the past few years. The *Collada* 3D file format is widely supported by many *Augmented Reality* solutions and Impact is now able to export 3D scenes in this format. Textures (and Artwork) are both supported whilst lighting and camera support is also provided. Impact provides two *Collada* export options – a **.dae* export and a **.zae* export. The former will export textures textures/artwork and the model separately, whilst the latter will effectively package the model & textures/artwork in a single zipped file. At the moment, Impact will only export *static* models to the *Collada* format.

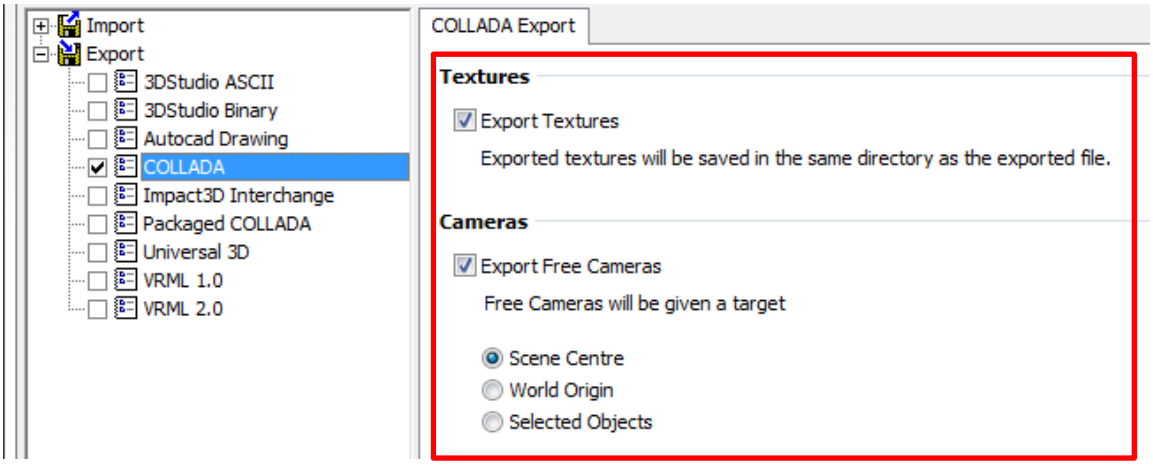


Fig 9 – *COLLADA 3D Export Settings*

As above, this format is widely used by *Augmented Reality* applications. The same functionality listed for the Collada format export is applicable to the DWG format. Note that the 3D *Autocad DWG* export also allows for a choice of *.DWG formats:

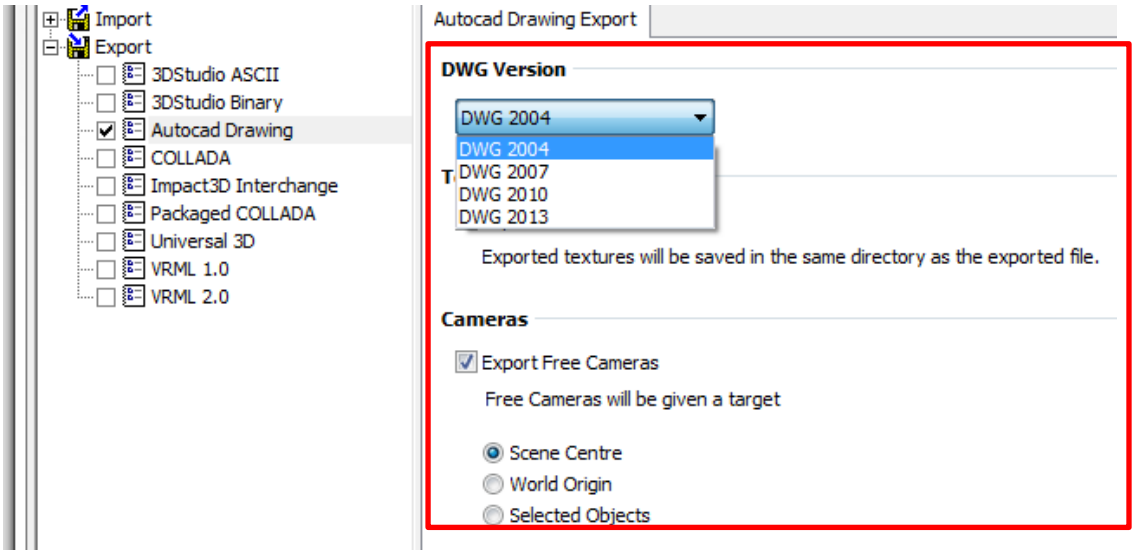


Fig 10 – *Autocad DWG 3D Export Settings*

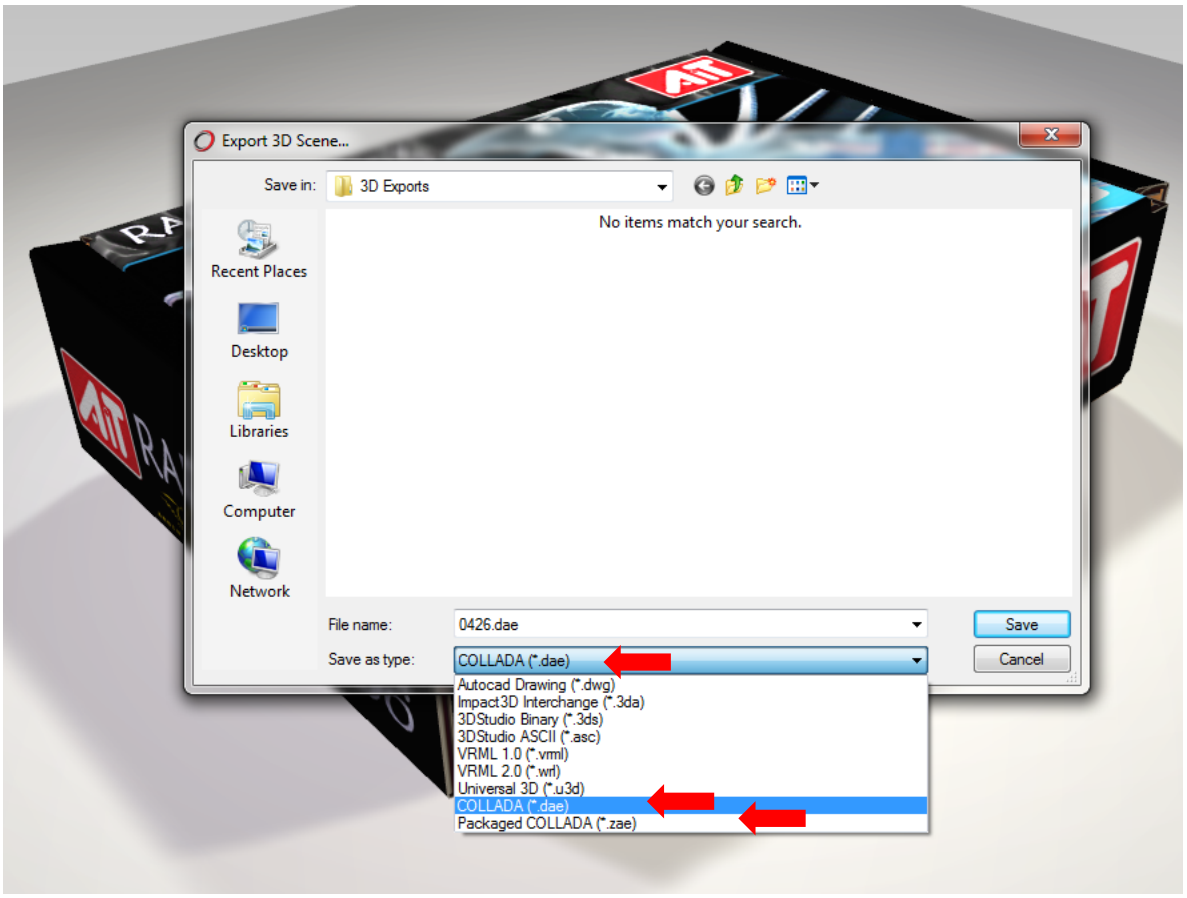


Fig 11 –*Export 3D Scene* Dialog offering *Autocad Drawing* (.dwg)* and *COLLADA* (**.dae* and **.zae*) exports**

3DX Library Update (Requires Version 1.4 of the 3DX Module)*

The *HOOPS Exchange library* (used for the *Impact 3DX* module) has been updated (to version 6.10) , which adds support for *RHINO 4* and *RHINO 5* file formats as well as providing *updated* support for the following formats:

Format:	Version:
Autodesk Inventor	2014
Creo Parametric	2.0
CATIA V5	V5-6R2013
CATIA V6	2013
Solid Edge	ST5
SolidWorks	2013
Siemens PLM NX Software	8.5
ACIS	Up to version 23

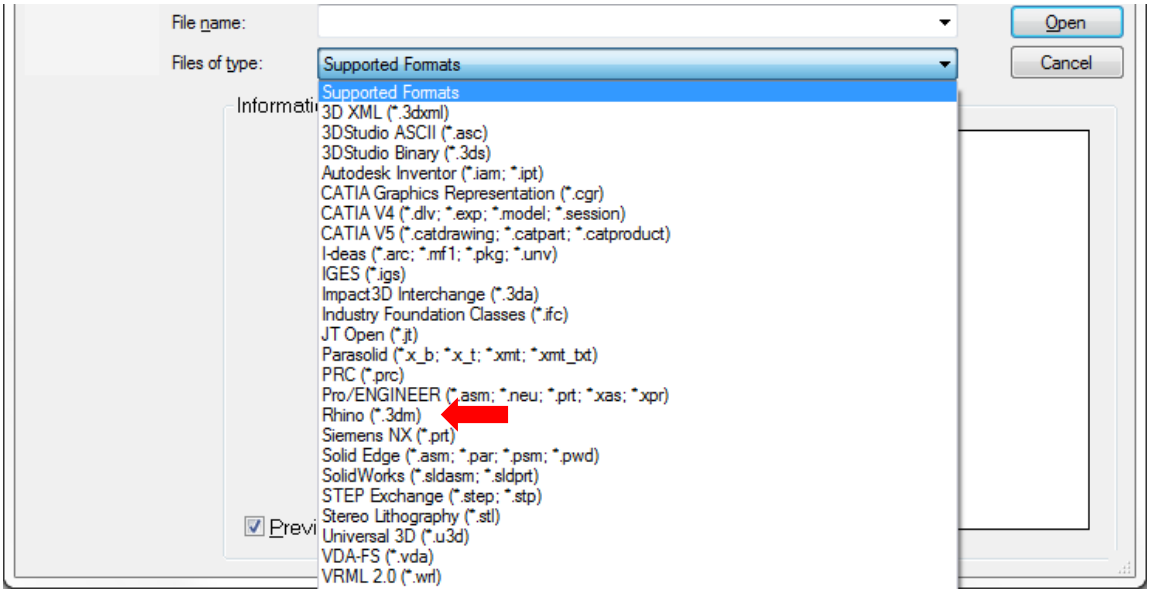


Fig 12 – *3DX Import* dialog showing the additional *Rhino* (*.3dm) format support

Reduced 3D PDF File Size – Image & Texture Compression for 3D PDF/U3D Exports*

Significant reductions in 3D file sizes can be achieved via new compression options for *PDF* and *U3D* file exports. *Compress Textures in 3D Layer* has been added to the *Adobe Acrobat* branch of the *Non-Native Export* node (*Options> Master Tool Settings> General Tools > Import/Export Settings*).
Following an Impact upgrade, this option will be switched off by default.

For consistency, the equivalent 2D tool (previous known as *Use Image Compression*) has been renamed to *Compress Images in 2D Layer*. During an Impact upgrade, the status of this option will remain unchanged.

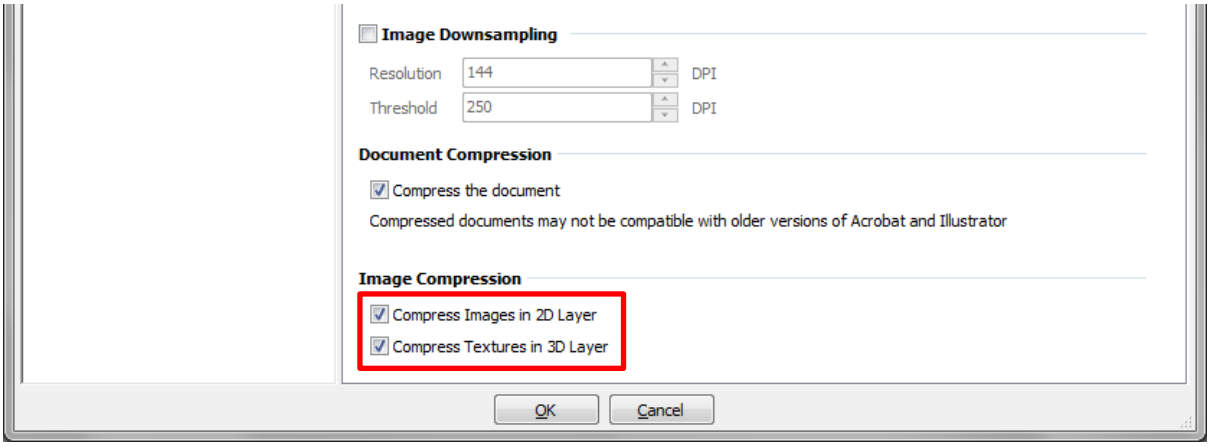


Fig 13 – *Texture Compression* for *3D PDF Exports*

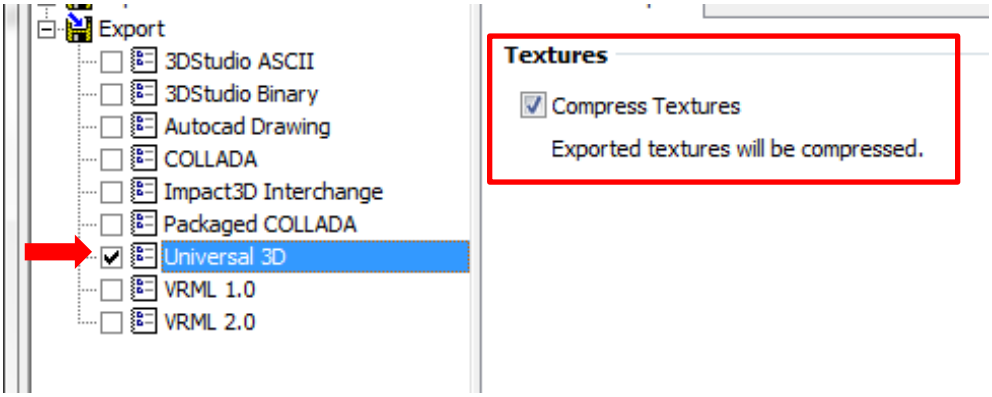


Fig 14 – *Texture Compression* for *U3D Exports*

Automation

Include Scripts

It is now possible to include other scripts (either from files or stored in the database), into your scripts using include directives. This way you can build up libraries of commonly used subroutines, avoiding duplication of your code.

Improved Plugin/COM Deployment (Impact Auto Plugins)

Traditionally, distributing macros, scripts and COM plugins has been quite a labour-intensive task, involving setting common file repositories, distributing custom icons and potentially updating many *Appearance Settings*. Over a large installation, this can be especially time-consuming. *IAP*s allow a macro/script/plugin to be packaged (complete with an icon, if required) for quick deployment, with minimal effort required for the Impact Administrator

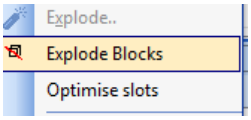


Fig 15 - Custom menu item (on a menu or toolbar), linked to a script.

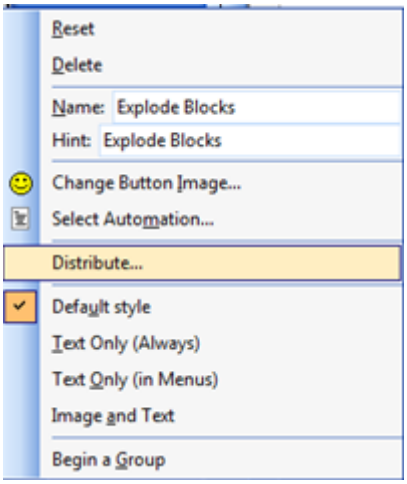


Fig 16 – *Distribute* option via *Customise* mode

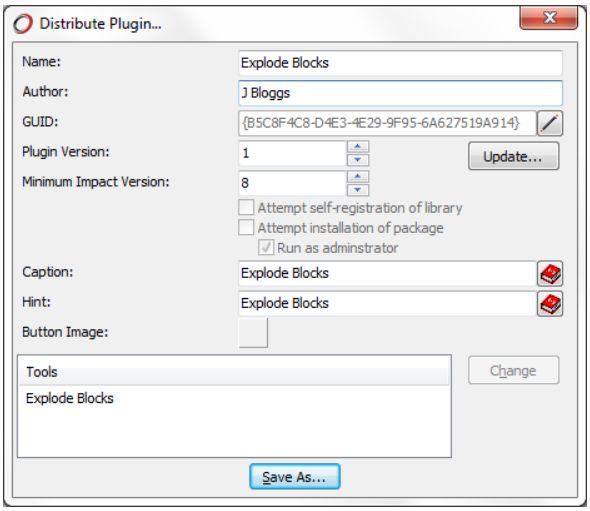


Fig 17 – *Author* the *IAP*

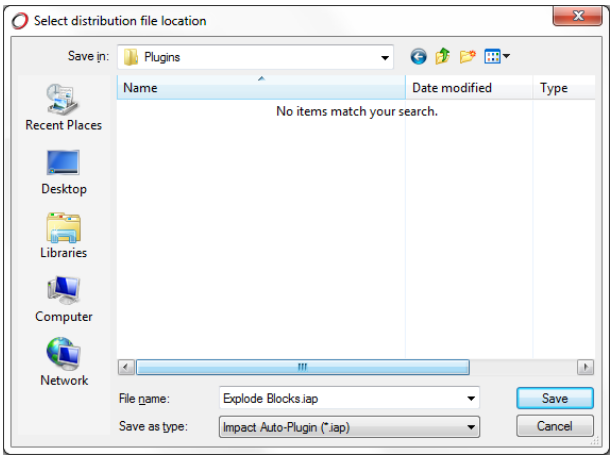


Fig 18 – *Save* and distribute the *IAP* to destination workstation(s)

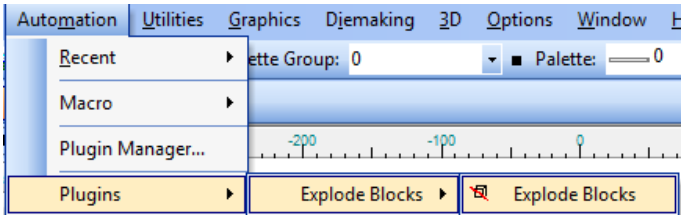


Fig 19 – *IAP added to Plugins* menu on destination workstation(s) upon login

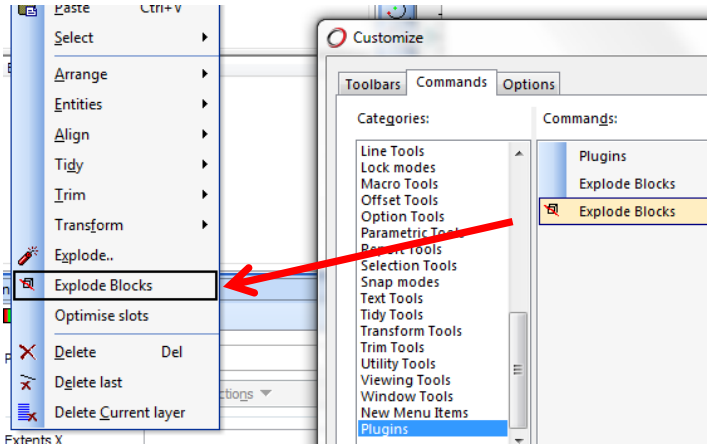


Fig 20 – *IAP can be added to any menu, context menu or toolbar on destination workstation(s)*

Modifications to AutoTask Settings

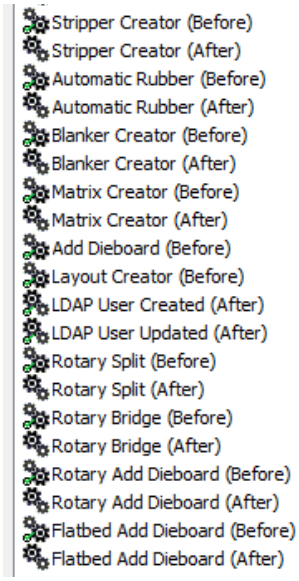


Fig 21 – Additional *Auto-Task Triggers*

The term *Macros* is outdated and has often been misused. As a result, the *Macros* menu item has been replaced by *Automation*.

Many of the Impact auto-tasks (now found within *Database Installation>Automation*) have been re-named to provide a clearer description of what the tasks actually do (as an example, *LayoutAddSheet* becomes *Layout Add Sheet Size and Symbol*).

The button for assigning an automation item to a task has been removed - simply double-click the task in order to assign an *Automation* item to that task.

Autotask scripts may now be stored *inside* the database (as opposed to referencing files) and several new auto-task triggers have been added (especially for the Diemaking tools). Some examples of the new *Impact 2014* triggers are presented on the left.

Programming Interfaces

More than 150 new objects, methods and properties have been added to Impact's COM interface, allowing even more powerful scripts and plug-ins to be written. The new interfaces provide: additional entity properties and palette properties; improved traversal though the block hierarchy; new entity comparison and copying; improved hatching, hole-finding and path-finding; improved entity picking and transformations; the ability for a script to call another script or macro. In addition, one of the most powerful new features is the ability to easily create and manipulate closed shapes, using IShape objects, with methods for offsetting, uniting, intersecting, masking/clipping, to name just a few. All the Impact COM interfaces are described in the Impact COM Documentation, available on request.

Databases

LDAP support for Impact (Logging on to Impact using your network credentials)*

If your company uses a directory service such as Microsoft Active Directory or Novell edirectory for user authentication and authorization, you may now configure Impact to use it. This allows you or your system administrators to manage Impact user access in the same way that you manage access to other network resources. Impact simply uses LDAP (lightweight directory access protocol) to retrieve the user's attributes and thereby determine their privileges. Using this mechanism, users no longer need a separate username and password to connect to the Impact database.

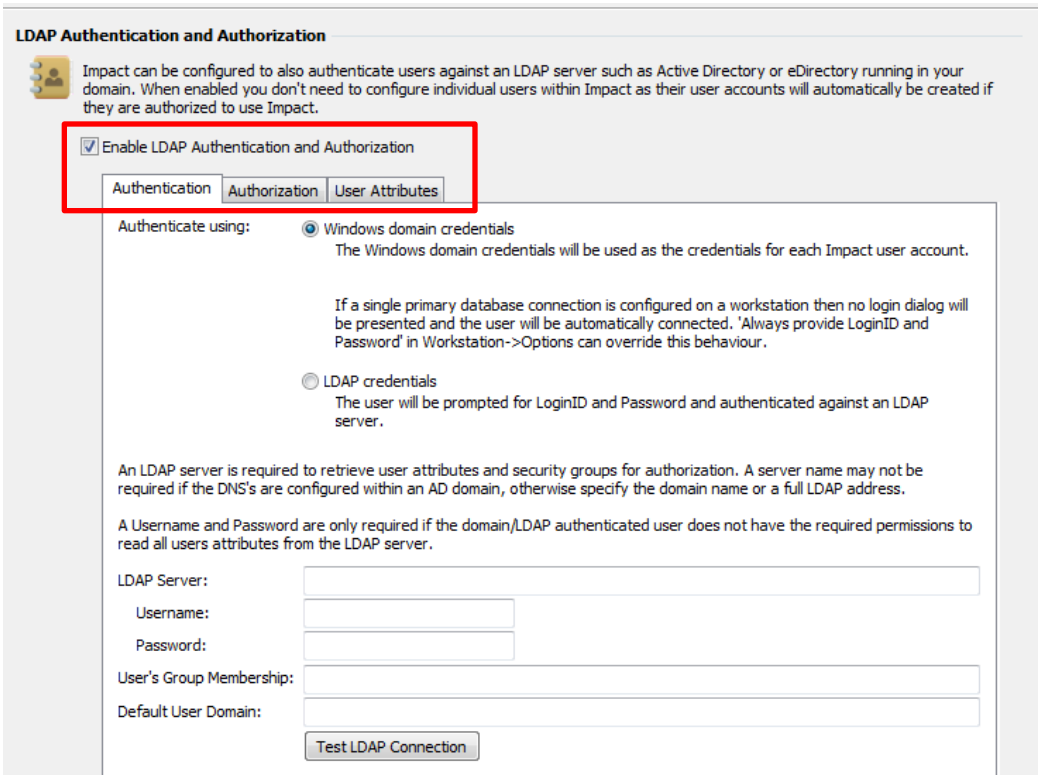
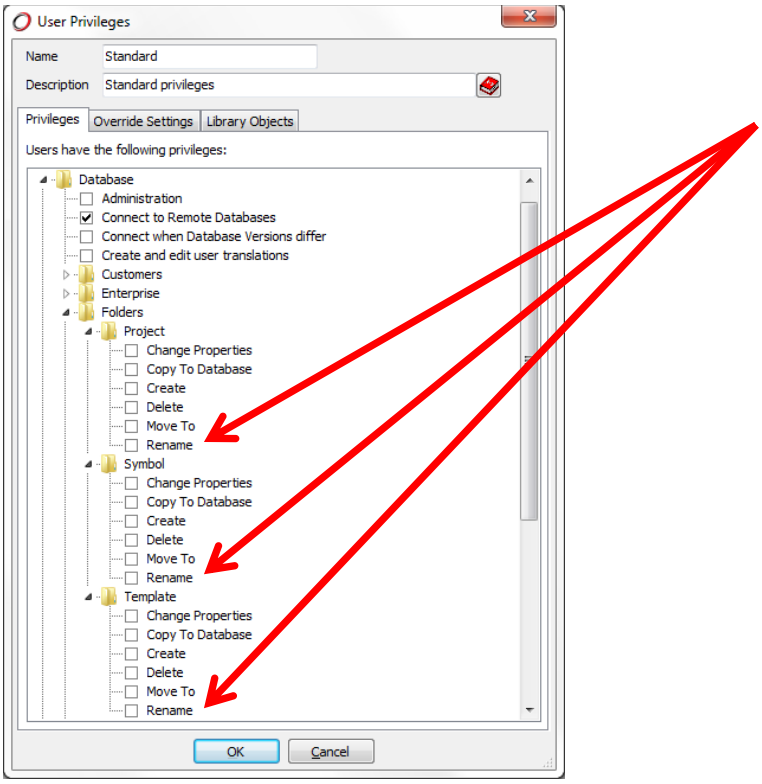


Fig 22 – *LDAP* Authentication

Database – Projects

User Privileges to prevent Project folder name changes*



New user privileges have been added to control the re-naming of *Project*, *Symbol* & *Template folders*.

Previously, the *Change Properties* privileges (within *Database>Folders*) controlled access to the renaming of folders, however if a user *created* a folder, they could rename it without this privilege.

The new privilege *Rename* may be found within the *Project*, *Symbol* & *Template* nodes of the *Database > Folders* branch.

Fig 23 – *Folder Rename* User Privilege

Diemaking

Rotary Split allows splits along user defined paths

The split line (or path) separating the extents of the rotary dieboard into two or more shells can lie along any user-defined path, as well as the previously-supported *construction* lines.

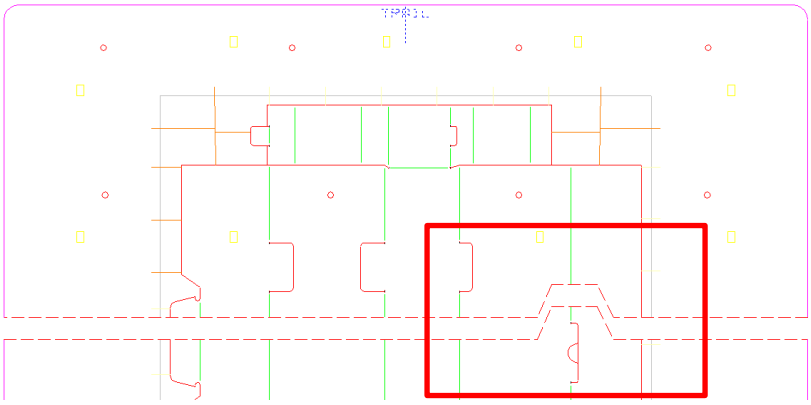


Fig 24 – *Rotary Split*

Quick Rebridge tool – Remove All Bridges

A new edit bar option *(All bridges)* has been added to the remove bridge mode of the *Quick Rebridge* tool. This allows all bridges to be removed from a picked entity, along with the option of *All Selected* entities.

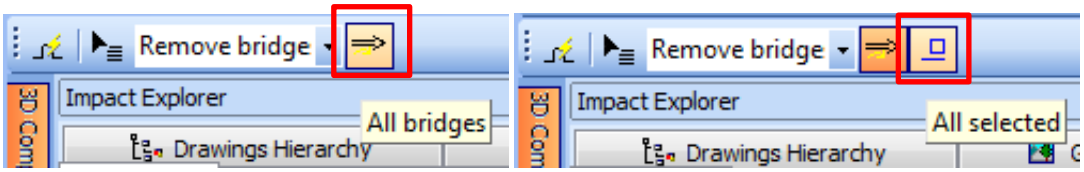


Fig 25 – *Remove All Bridges* and *Remove All Selected Bridges*

Option to offset a strip knife along the length of an entity/orthogonally

The *Stripping Knife* tool has had several new placement modes added, as well as a new edit bar option. The *type* of strip knife being placed needs to be *selected* (*gutter*, *internal knife*, *perimeter* or *perimeter slot*), whilst the mode for *gutter strip knife* placement has been extended. This mode now allows the position to be *offset from another entity* as well as *offset from end point* (along with the existing option of *snapped point*). The *offset from end* mode has a new offset option (*offset horizontal/vertical*). If enabled, the offset will be applied orthogonally (horizontal for 'angle vertical' and vertical otherwise).

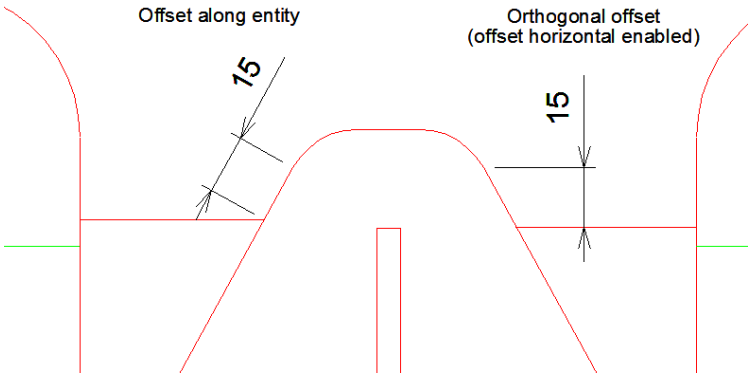


Fig 26 – *Offset Along Entity/Offset Orthogonal*

Stripper Creator

Conditional placement of Dynamic Stripping Components

To further extend the flexibility of the *Dynamic Stripper Component* master tool settings, a new option has been added to define if each male component is to be placed against a restriction (normal/point slot etc), when applied to an internal or perimeter waste area (or indeed both).

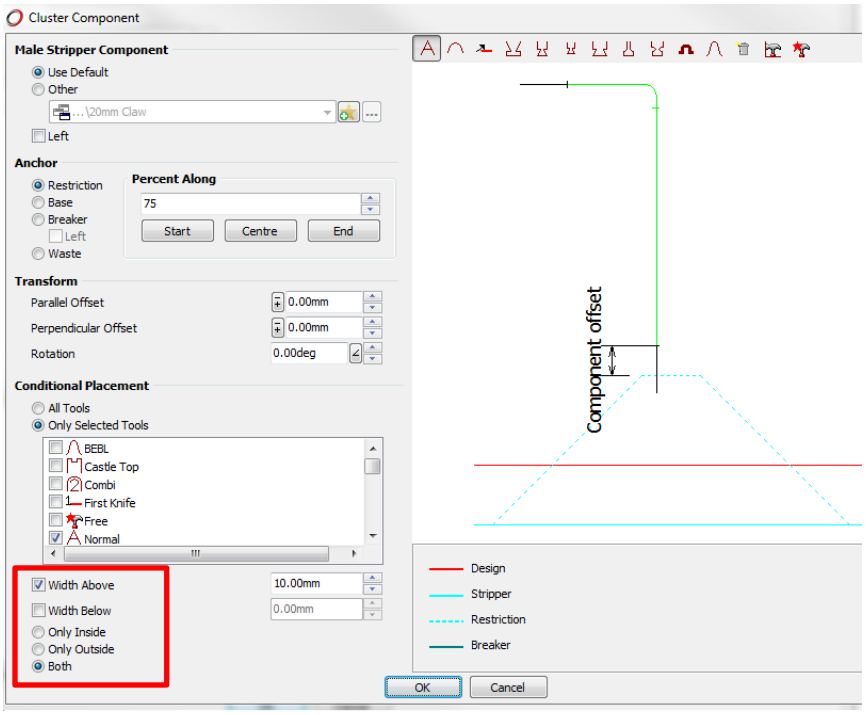


Fig 27 – *Stripping Component Conditional Placement*

Conventional Stripper Male Waste - automatic placement of claws in slots

The automatic placement of male components in a waste area now has the option to apply claws in slots areas.

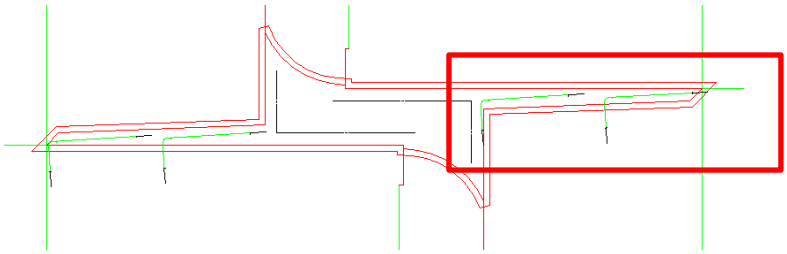


Fig 28 – *Claw Placement*

Conventional Stripper option to contour with male knives/claws/pins and a wooden block

The automatic placement of male components in a waste area can contour *first* with male knives/pins/claws and *then* create the wooden block.

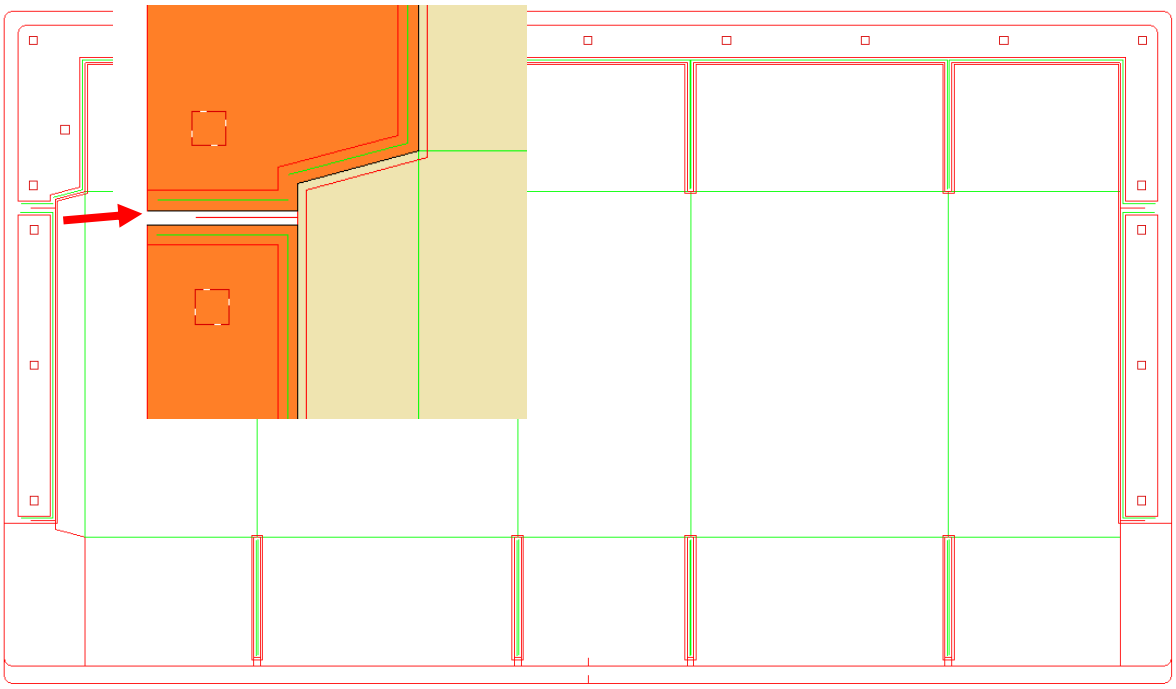


Fig 29 – *Composite Contouring*

Forced Slot / Remove Forced Slot

To compliment Impact's existing powerful Dynamic and Conventional stripping tools, Impact 2014 sees the introduction of further edit tools to hand the user even more control over the placement of internal and external slots. The new *Forced Slot/Remove Forced Slot* development works in tandem with the *Perimeter/Inside* tools to allow quick and easy identification of slots not automatically placed by the *Stripper Creator*. Once a slot is identified, the user has access to all *Male Stripper Components* allowing them to pick and choose how best to strip the chosen slot. These new features fully support replication along with copy/paste options to avoid duplicate effort for the user.

Slot Visibility*

Similar to the *Stripper Completion* visibility in Impact 2013, a new *Slot* visibility option has been added, allowing the user to quickly identify parts of a stripper where the chosen setting detects an area too narrow for generating male components at the standard offset. The fill colour is customisable via the environment options so each individual user may choose their preferred colour combination.

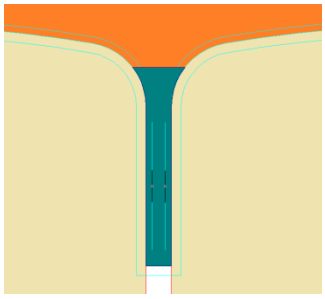


Fig 30 – *Slot Visibility*

Blanker

The blanker tool for 2014 has had several enhancements to support the creation of flat top blanking units as well as frame and bar separators.

Visibility and shortcuts

We have added new visibility controls to toggle the visibility of the male base and uppers as separate components. To improve the workflow it is possible to add shortcut keys to standard functions such as – new (item), delete and select.

Frame

The offset from the frame to the design extents has default values for single and double cut layouts, allowing the offset allowance to be automatically calculated dependent upon the layout.

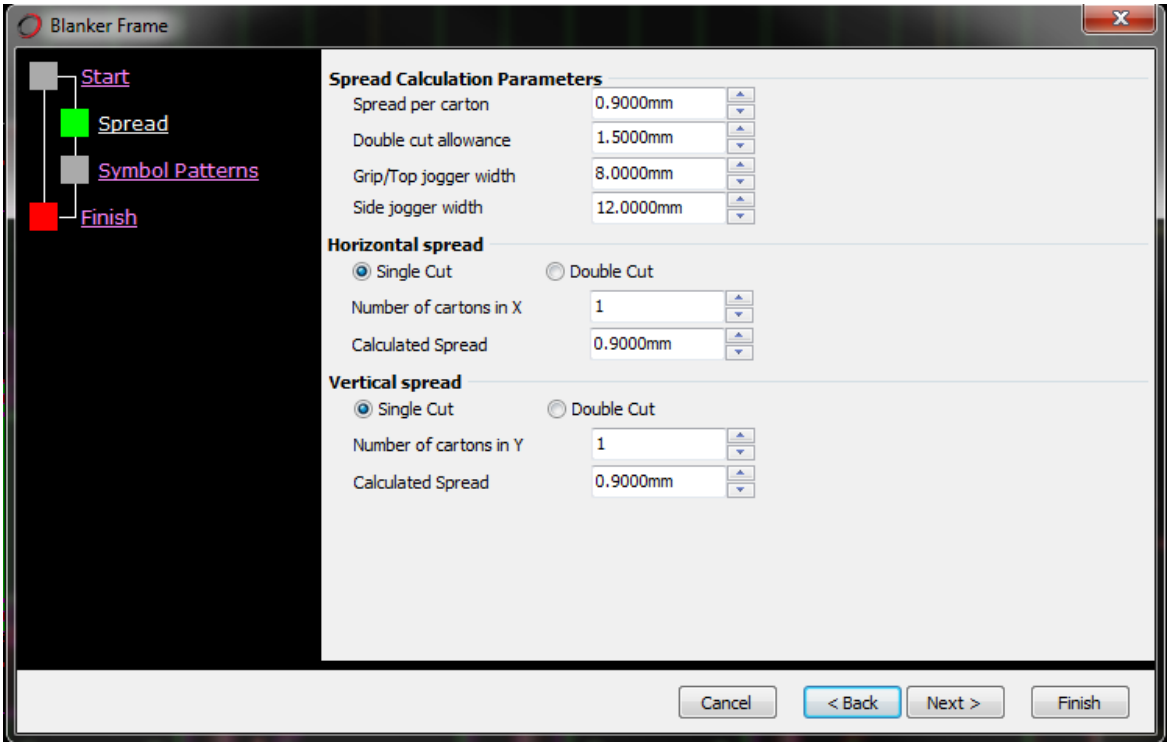


Fig 31 Frame Calculation

Bars

The lower frame bars have a centreline path defining the width properties for that bar, and when creating a bar section a bend radius is automatically applied.

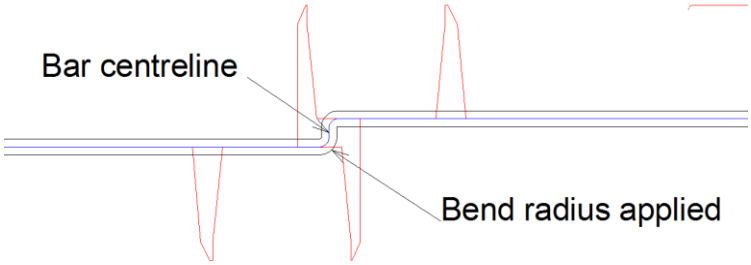


Fig 32 Bar Centreline and Bend Radius

The editing of bar paths has similar options to other manufacturing tools (allowing points to be added along a path and repositioned). The end point of a bar can be modified allowing a bar to finish unattached to the frame or another bar allowing the bar to be secured to the flat top. The symbol or component to attach the bar to the frame has been expanded, to allow different parts added to the side, front and back of the frame.

Joggers and frame component placement

The components placed on the lower blanking unit can now be defined as *frame*, *bar*, *grip*, *design* or *free placement*. This means that when positioning a symbol its placement can then be restricted to required area – for example a frame attached jogger can't be placed on a bar.

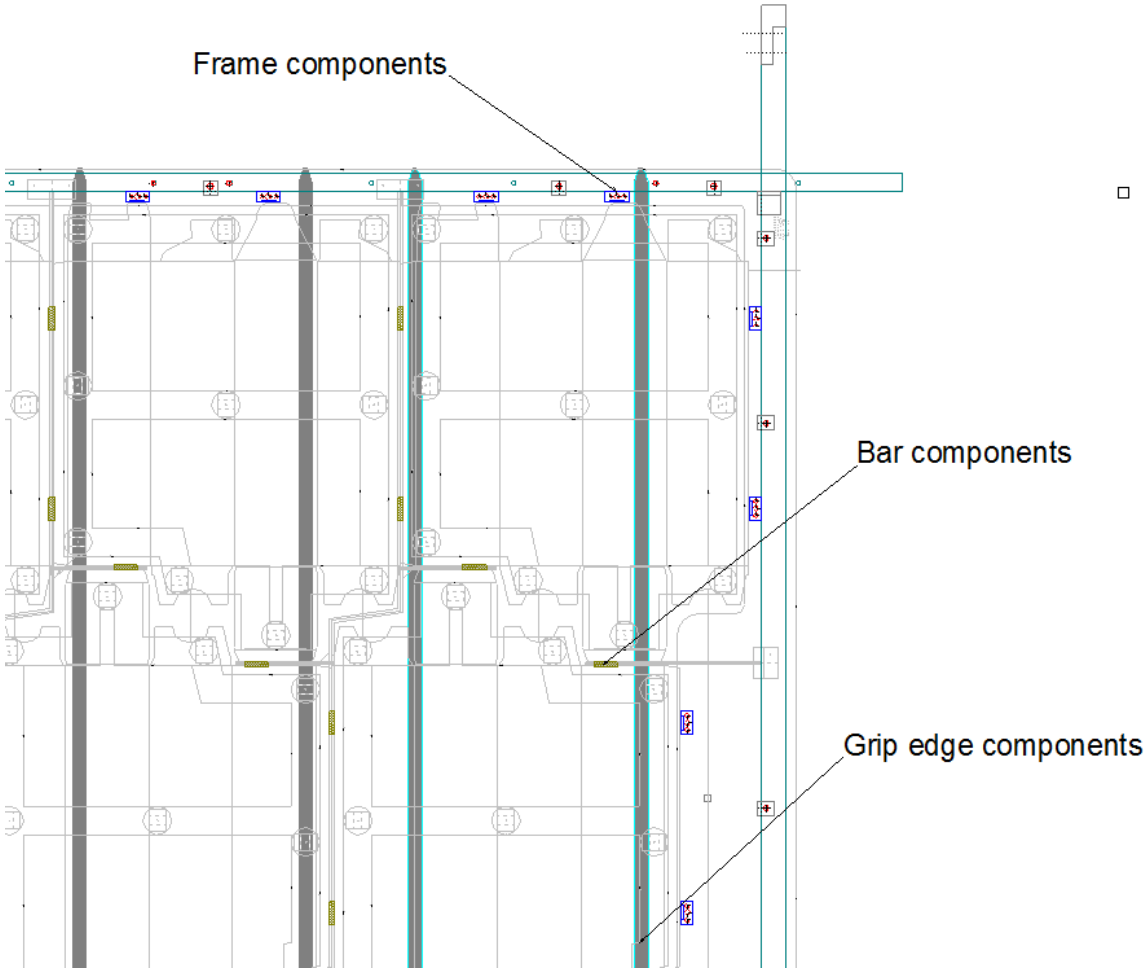


Fig 33 Frame Components

Flat top and grid lower unit support

The lower blanking unit now has the option to create a flat top (typically from wood or steel) as well as the standard frame and bar unit.

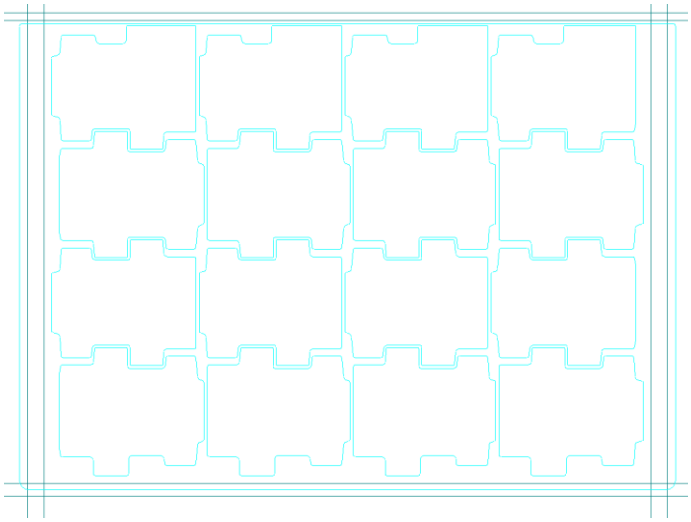


Fig 34 Flat top Lower Blanking Unit

The offsets can be created offset from the designs with enhanced editing tools and quick replication. It also possible to create a combination flattop and bar blanker lower unit.

Upper blanking unit

The upper pressers can be created offsetting from the one-up profile, with enhanced editing tools and quick replication of the pressers (relative to the one-up designs).

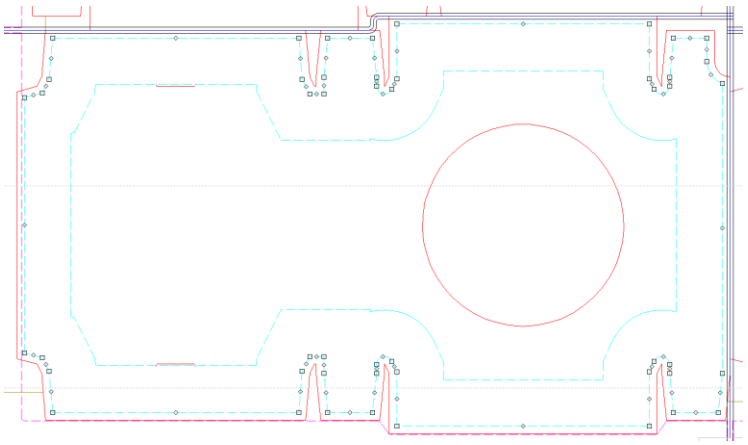


Fig 35 Upper Presser Offset and Editing

The rubber profiles for the upper pressers can automatically be generated, where the profile is created in a block (for ease of replication).

Drawing & Editing Tools

View Previous/View Next (View Menu/Pan and Zoom/Stripper Creator)

The *View Next* and *View Previous* functions have been expanded. Upon activation, the tools offer edit-bar options to jump quickly to various geometric items within the current drawing layer. These include *Blocks*, *Designs*, *Holes*, *Stripper Clashes*, *Stripper Regions*, *Symbols* & *Tool Markers*:

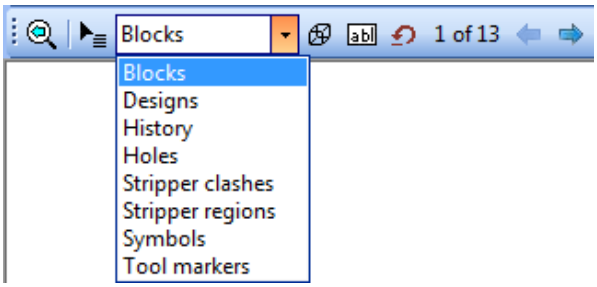


Fig 36 – *Edit Bar* options for *View Next/Previous* tools

Once an option has been selected, further options may be displayed on the *Edit Bar* (such as *Recurse into sub-blocks*, *Block Names etc*). The expanded tools have also been added directly to the *Pan and Zoom Standard Toolbox* and the *Stripper Creator* tool.

Pan and Zoom Standard Toolbox – Guidelines

When the *Pan & Zoom Standard Toolbox* uses a very high zoom factor, it can be difficult to locate the zoomed area (because the shaded rectangle representing the drawing canvas is so small). Optional markers (named *Guidelines)* have now been added, to help users locate the *viewed area*. The lines may be activated/deactivated via a *context menu* option (simply named *Guidelines*).

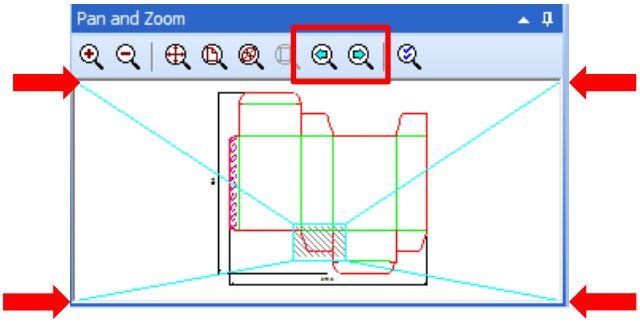


Fig 37 – *Pan and Zoom* Guidelines and *View Previous/Next Tools*

As is to be expected, the colour for the *Guidelines* is user-definable via (*Options>Environment>Environment>Colours>General>Pan & Zoom Box*). Additionally, *View (Selected) Extents, View Next* and *View Previous* functions have been added, as mentioned above.

More Interactive Tools – Line Perpendicular Offset

The *Draw>Line>Perpendicular Offset* tool has been enhanced by the addition of an *Interactive* mode, which allows the user to check the line-length details on the cursor.

Favourite Symbols/Design Components

Following on from the *Favourite Standards* developments for Impact 2013, a similar mechanism has been deployed to allow *Favourite Symbols*. This functionality applies to both *Symbols* and *Design Components*. The *Add to Favourites* option is available when inserting *Symbols* or *Components* via the *Block>Insert* tool (whether or not the *Use Browser to Select Symbols* option is enabled) and also via the *Design Component Library*. This development significantly reduces the time taken to insert oft-used symbols & components. As expected, once a symbol has been designated a *Favourite*, the *Add to Favourites* status will switch to offer *Remove from Favourites*.

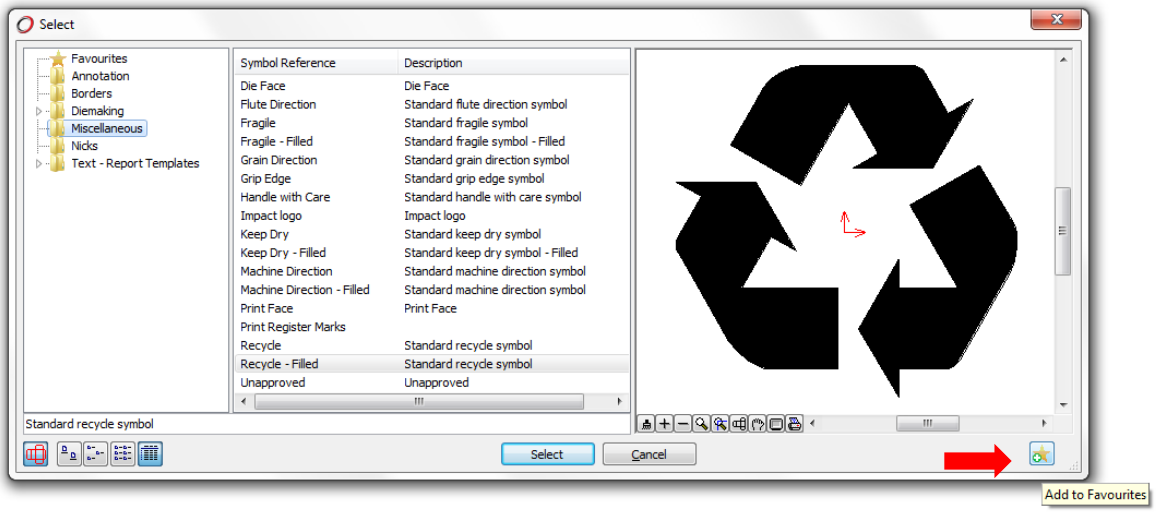


Fig 38 – Add to Favourites (Symbols)

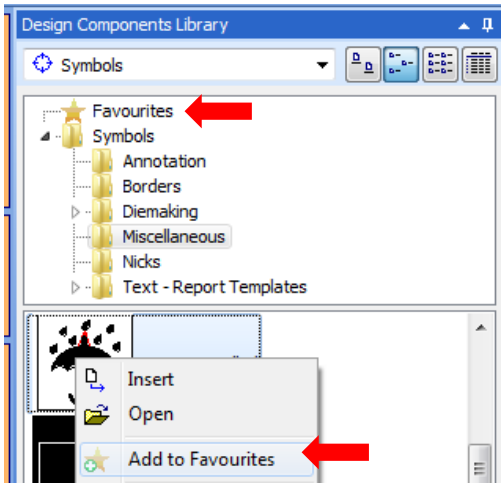


Fig 39 – *Add to Favourites (Design Component Library)*

Leave Original option Hotkey for Select & Drag tool*

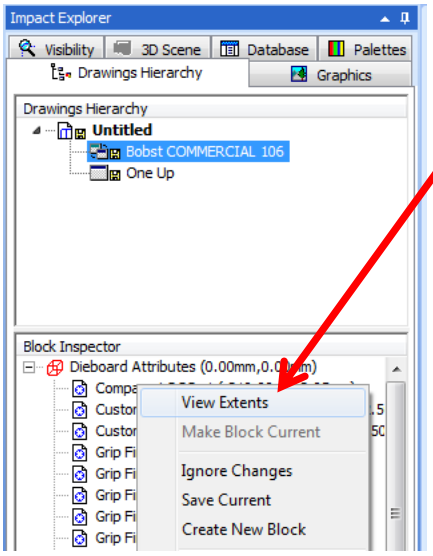
A new Edit Bar option (*Leave Original*) has been added to the *Select & Drag* tool. When dragging selected entities (using the central (triangular) node), this option will leave the original entity in place and create a copy, which increases the flexibility of the *Select & Drag* tool.

Fig 40 – *Edit Bar* option for *Select & Drag – Leave Original*

As it is expected that most uses will be using *Select & Drag* as their default tool, it should prove to be a time-saver in that it is a viable (and quicker) alternative to the *Transform Drag* tool.

Furthermore, a keyboard shortcut may be assigned to this option to toggle the *Leave Original* functionality on/off quickly. The shortcut may be found within the *General Tools* category of the *Impact Options* and is named *Edit Bar Toggle Leave Original*.

New View Extents option in Block Inspector



View Extents has been added to the *Block Inspector Context Menu*. This tool will benefit users who routinely make use of blocks within their projects

Fig 41 – *View Next item within the Block Inspector*

New Explode option for Arcs to Smaller Arcs

To aid the cutting of steel waste areas, *Arcs* may now be exploded into *Arc Segments* and *Quad Segments* (as well as *Lines*). If *Arc Segments* are specified, a maximum number of segments & tolerance may also be specified.

Support for Open Type Fonts

Open Type Fonts bring a larger character set and improved cross-platform compatibility. Both *True Type Open Type* and *PostScript Open Type* font categories are supported. *Type 1* and *Raster* fonts are currently not supported. *Open Type* fonts are signified by a new ***O*** icon alongside the font name.

Enterprise

Enterprise 2.0*

It is strongly recommended that all Enterprise users upgrading to Impact 2014 should also be upgraded to Enterprise 2.0. Please see "What's New in Enterprise 2.0" for a description of the new features. Note that Enterprise 2.0 is not compatible with Impact 2010 or Impact 2013.

Database Structure Changes

It is now possible to publish virtually all Database Installation settings from the central database to sites. Publishing installation options is not automatic - it must be performed manually, using Tools > Enterprise > Publish Installation Options to Sites from the Database Administration tool. From here you can select the options that you want to transmit. You can also view/print a report showing all the options that you are publishing.

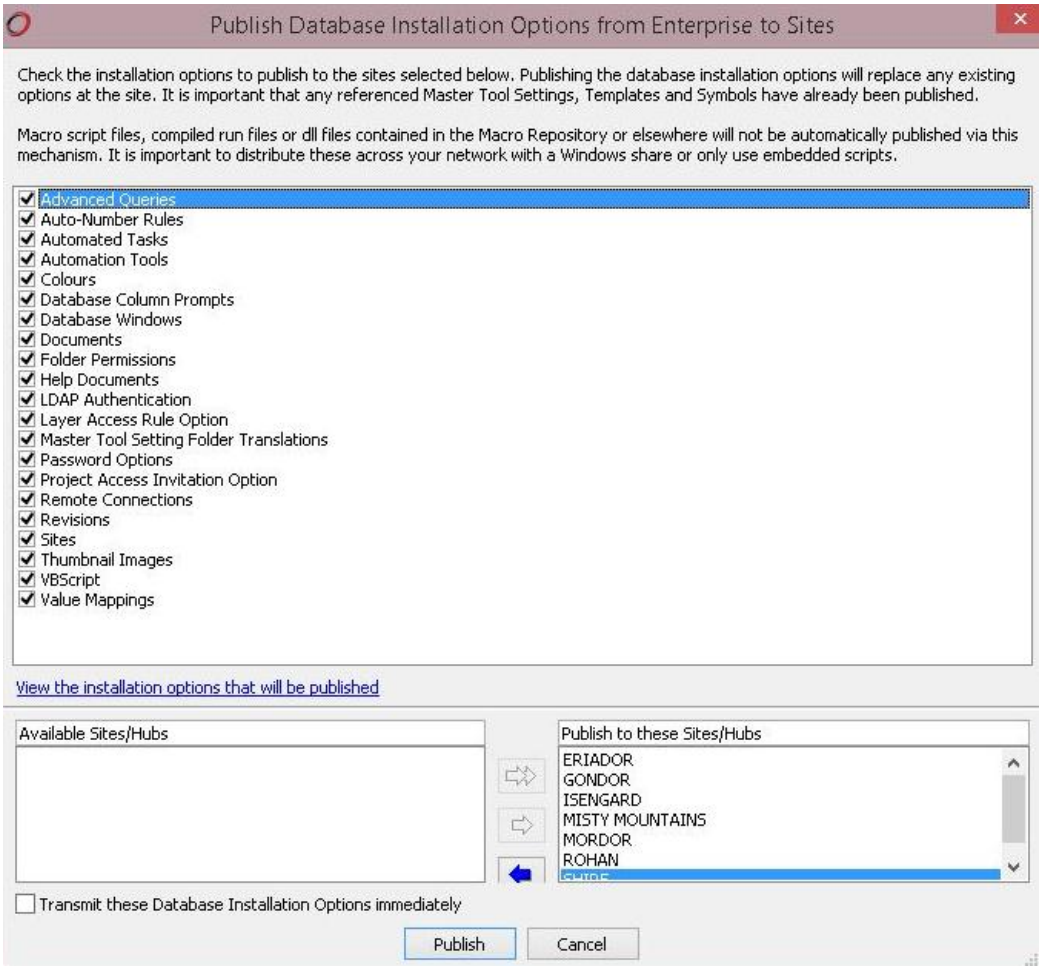
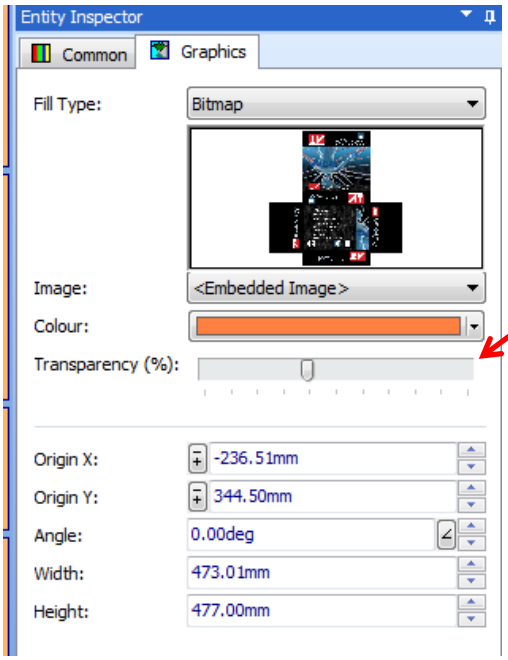


Fig 42 – *Publishing Database Installation Options from Enterprise*

Graphics

Semi Transparent Graphics (improved geometry visibility)



Transparency may now be added to artwork and filled areas, to aid the visibility of underlying geometry.

A slider has been added to the Entity Inspector to allow various degrees of transparency to be applied quickly & easily to suitable (selected) entities.

Fig 43 – *Transparency* slider within the Entity Inspector

ArtTrace Modifications

The *View Zoom Box* icon within the *ArtTrace* tool has now been enabled. This allows a quicker zoom to areas of interest.

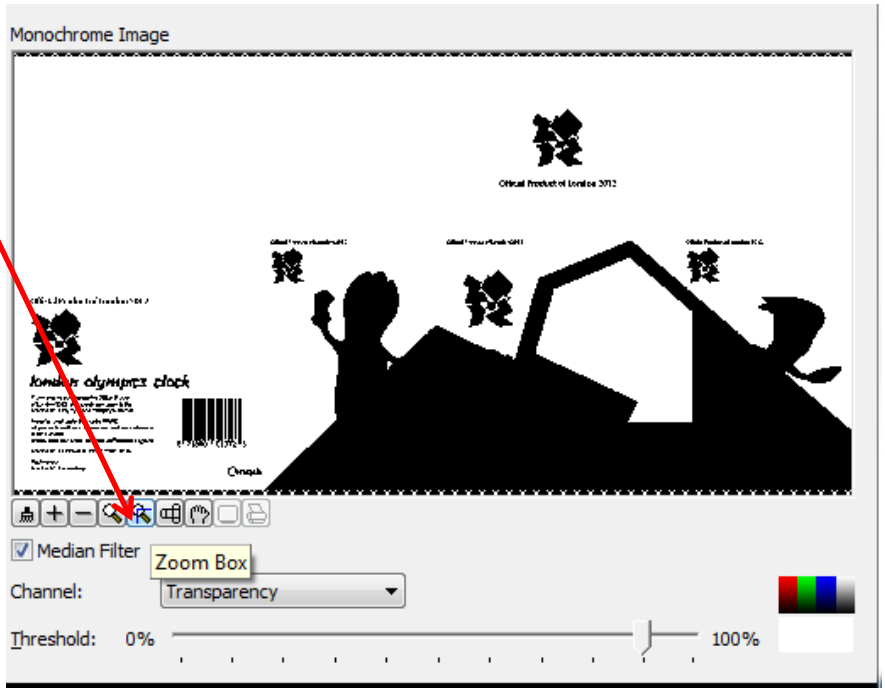


Fig 44 – *Zoom Box* tool within *Art Trace*

Layouts

Composite Layout Creator

A new Layout tool has been developed for Impact 2014 – *Composite Layout Creator*. The tool utilises the existing *Layout Sheet Assistant* and *Layout Creator* components but with several modifications specifically aimed at *composite layout* creation.

The existing *Layout Creator* defaults to *fill-sheet* mode (filling the sheet with the current One_Up layer) upon startup. The *Composite Layout* Creator suppresses this behaviour – and provides an empty sheet upon startup. Creators of *composites* no longer have to begin by *removing* the contents of the filled sheet provided by the *Layout Creator*.

Furthermore, the *Composite Layout Creator* displays the *Add Design Components to Layout* dialog straight away – allowing users to begin adding designs to the layout, 'right out of the box'. Users don't need to locate the *All Design Components* roll-up to start adding designs to the layout.

Layout Enhancements

Many new additions have been made to the Impact 2014 *Layout Creator* – including only checking for overlaps when the layout creator is closed and only fixing them if explicitly requested (via Layout>Check overlaps). This prevents the unwanted/unexpected movement of designs within the tool. The undo/redo functionality has been extended to include many additional actions (such as *Check Overlaps*). The placement of components has been significantly improved via the new placement options - you can now specify the number of components *at the time of placement.*

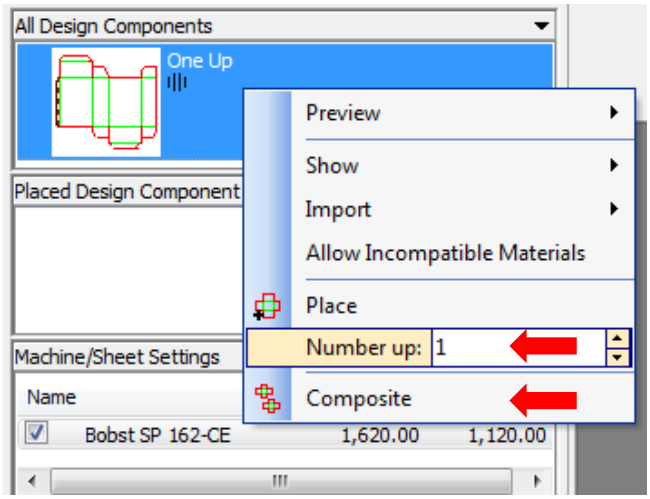


Fig 45 – New *Component Placement* options

Composite Component Placement

The *Composite* placement option allows you to specify a number of components to place, plus the required *Layout Pattern*. You can use the keyboard to type a number of designs **or** use *Ctrl + click & drag* to quickly create a *number in X & number in Y* placement. Move the cursor in the x-axis to change the number of designs in X, and move the cursor in the y-axis to change the number of designs in Y.

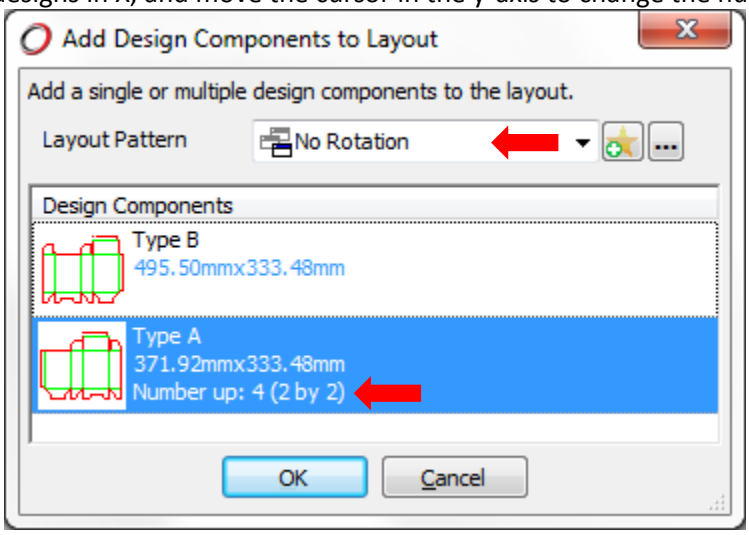


Fig 46 –*Composite Placement* options

Drag & Drop Component Placement

D*rag & drop* placement now displays the component at the cursor – improving performance.

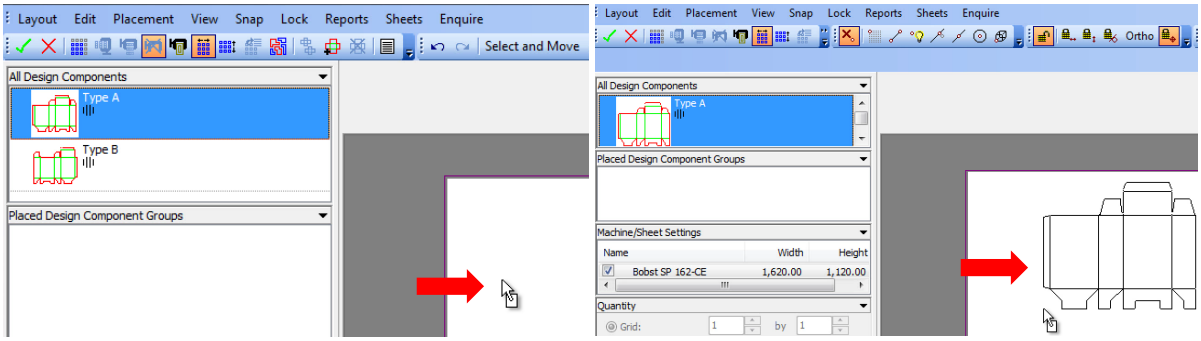


Fig 47 – *Drag & drop* component placement in Impact 2013 (left) and Impact 2014 (right)

Hotkeys & Shortcuts

Hotkeys have been improved. The *Delete* key will remove placements - and so the *Remove Selected* tool has been removed from the context menu. The *Nudge* functionality (cursor keys/Shift + cursor/Alt + cursor) has now been added to the *Layout Creator* (for both *standard* & *composite* layouts).

Machine/Sheet Utilisation

The *Utilisation Panel* has been reworked in order to be less confusing. Simply *click* the panel to toggle between *Utilisation* and *Scrap/Waste*.

Fig 48 –*Utilisation panel for Scrap/Waste*

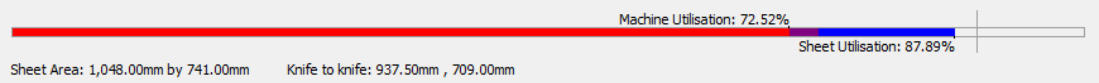


Fig 49 –*Utilisation panel for Utilisation*

Colour Options for Layouts

Several new *Layout Colour* options have been added to *Environment>Colours>Layouts* (including *Utilisation* & *Waste* colours)

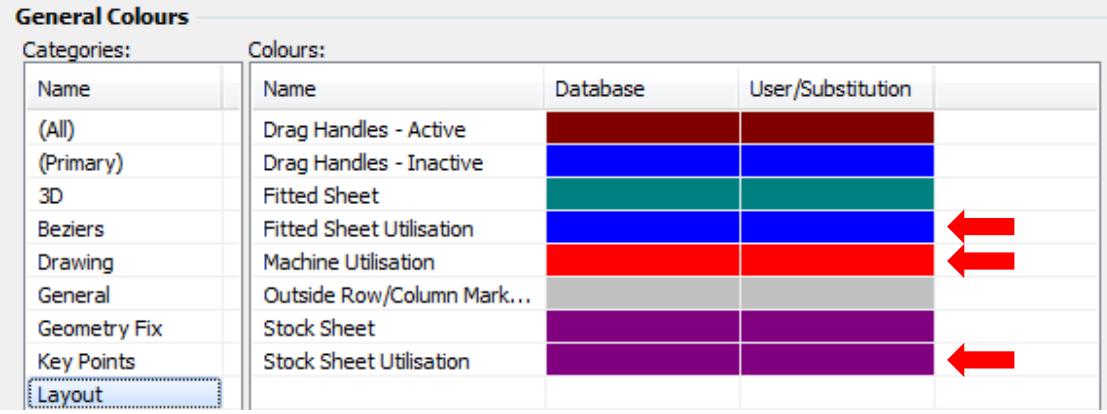


Fig 50 – New *Layout Colour* options

Sheet Layout Estimation Feature

It's now possible to generate many of the statistics for a layout without actually generating the layout. A new button has been added to the *Layout Sheet Assistant (Show Utilisation).* This allows the calculation of *Machine & Sheet Utilisation*, *Sheet Area, Knife-to-Knife, Number_Up, Total Sheets, Total Over-Produced* and *Time* for a layout, based upon *Design*, *Machine/Sheet Size*, *Layout Pattern* and *Run Length.* Additionally, the *Show Utilisation* option also allows the filtering of machines based upon *Largest Number_Up, Least Wasteful* and *Quickest* machines.

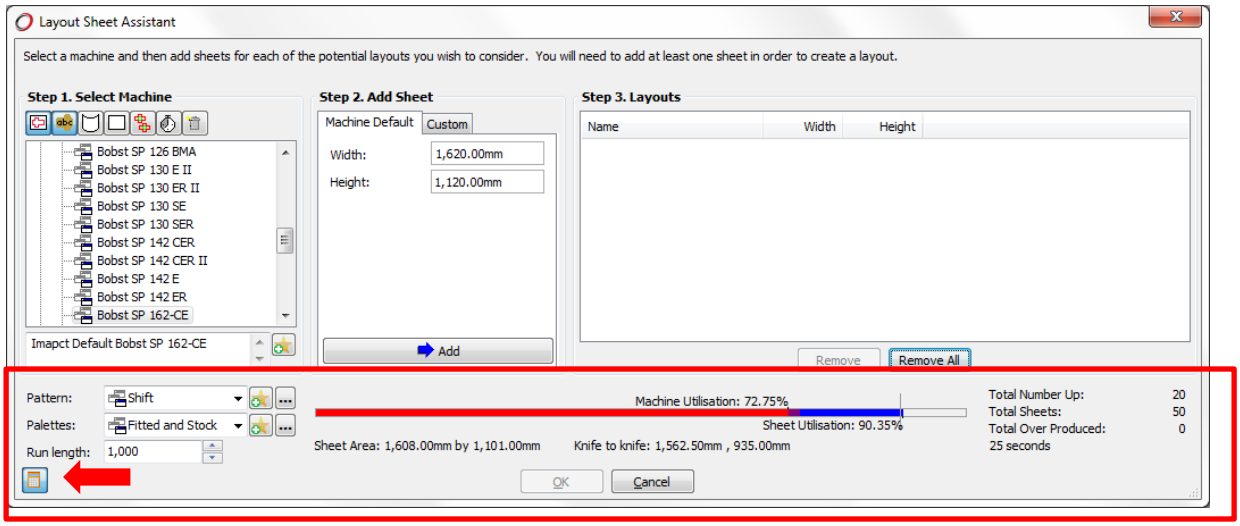


Fig 51 – Utilisation panel & option within the *Layout Sheet Assistant*

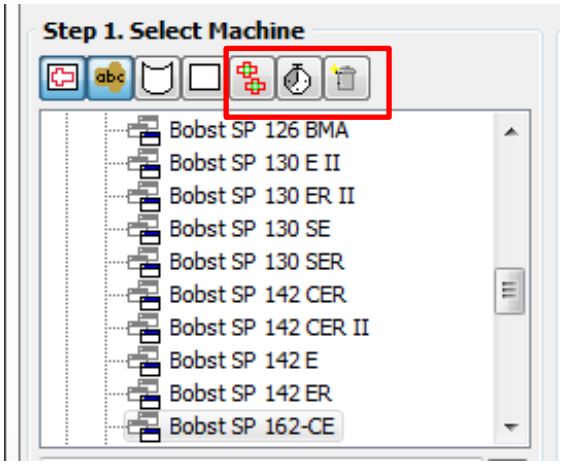


Fig 52 – Additional filters within the *Layout Sheet Assistant*

Layout Estimator Plugin *

An Impact plugin has been made available to assist with layout estimation (again, without the creation of the layout). This is the first IAP to be made available for Impact. The plugin generates all layout stats (including number across/down and run waste calculations) for selected design/machine/layout pattern combinations. The plugin also provides an optional preview of each layout.

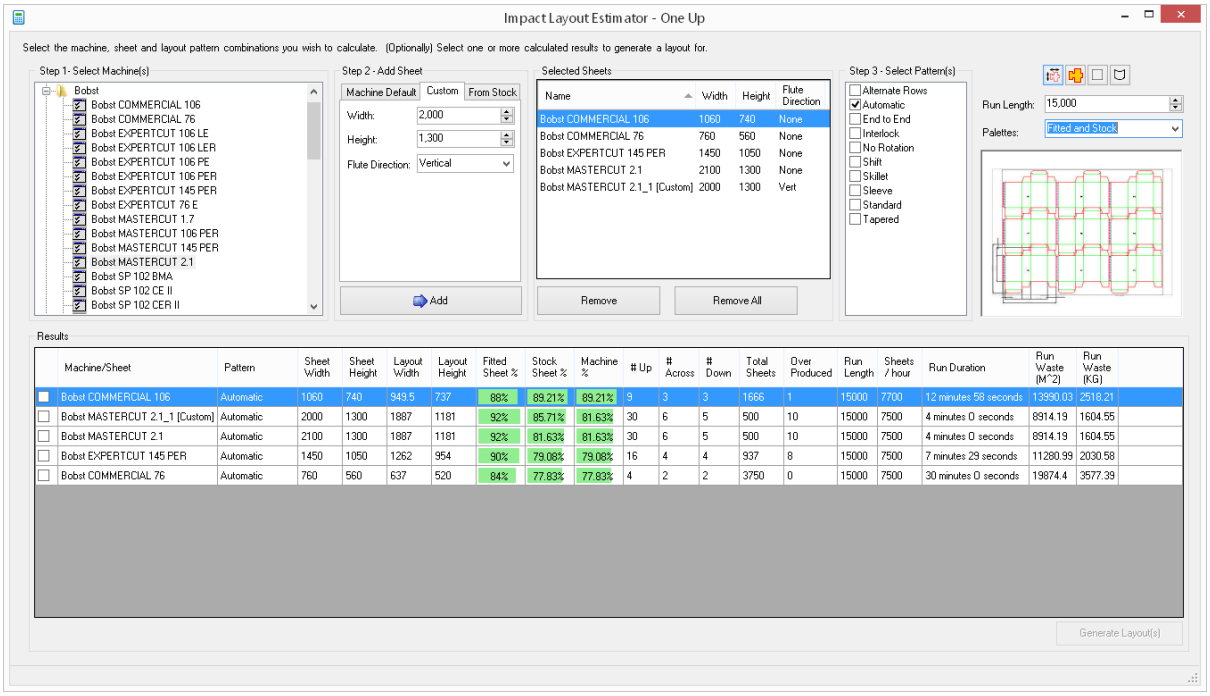


Fig 53 – *Layout Estimator* plugin

Master Tool Settings

Favourite Master Tool Settings

Following on from the *Favourite Symbols* development, the *Favourite* concept has been expanded to apply to **all** *Master Tool Settings*. Where Master Tool Settings may be selected (in dedicated forms such as Layout Sheet Assistant, Plot etc), or via a drop-down list on the Edit Bar, the *Add to Favourites* and *Remove from Favourites* icons will be displayed. This should make it quicker to select oft-used Master Tool Settings.

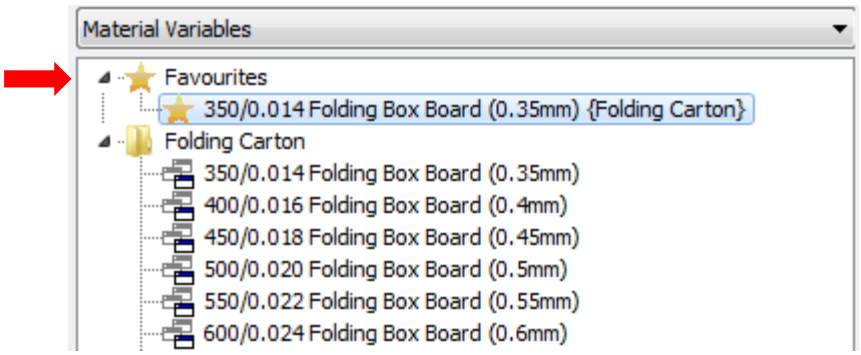


Fig 54 – *Favourite Master Tool Settings* within *Standards Wizard*

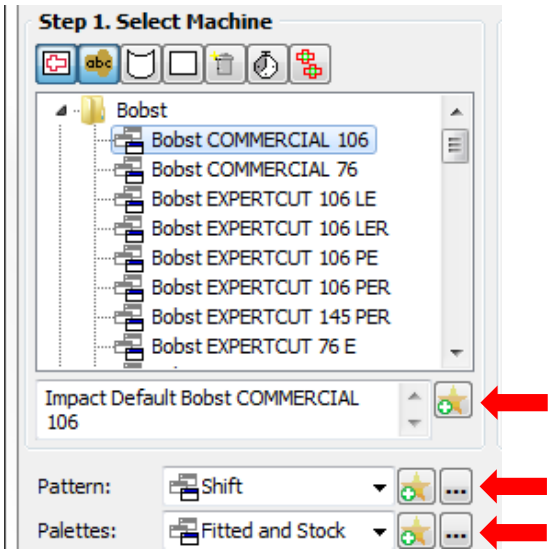


Fig 55 – *Favourite Master Tool Settings* within *Layout Sheet Assistant*

Output

Extended Plotter/Post Processor Substitution Codes to access any database field*

Additional plotter substitution codes are available in Impact 2014, allowing the user to output any database field in NC-code using the syntax *%<DBF:TABLENAME.FIELDNAME>*

As an example *%<DBF:DRAWINGS.D_KEY>* would insert the D_KEY value from the DRAWINGS table for the current drawing.

Similarly, *%<DBF:CUSTOMER.CS_NAME>* would insert the CS_NAME value from the CUSTOMER table, for the current drawing.

And *%<DBF:LAYERS.L_SHELLRAD>* would insert the value of the SHELLRAD field from the LAYERS table for the current drawing layer.

This new feature works seamlessly with existing substitution codes for Drawing name, Layer name and Overall drawing size. This can be especially useful for CNC machines where job specific information is required for the front-end controller.

Post Processor Pocketing Options*

Impact 2014 sees the introduction of the new Post Processor pocketing option - 'Pocket all entities separately' ideal for when cutting both wood and steel. This new function prohibits the build-up of waste in slotted areas by optimising the output so that each entity is cut separately. This results in a higher quality manufactured finish and reduces the likelihood of damage to the CNC machine's tool head.

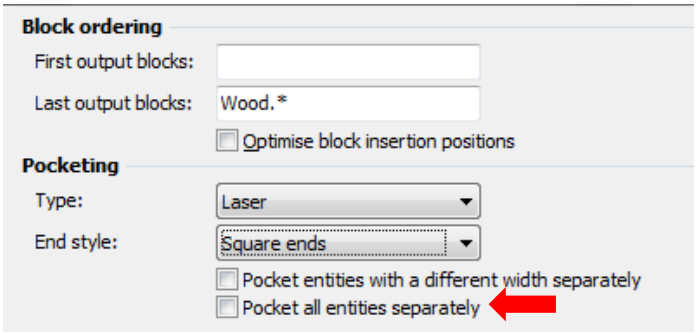


Fig 56 – New Post Processor Pocketing Option

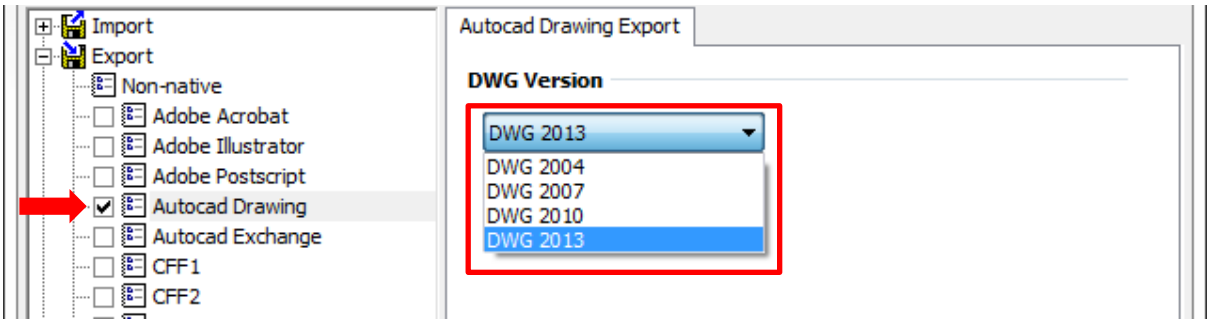
Import/Export

Support for Autocad 2013 DXF & DWG file Import

A 3rd party library update allows Impact to expand support up to and including the '*2013*' versions of the *.dxf and *.dwg file formats.

Support for Autocad DWG Export *

This functionality is linked directly to the *Collada 3D* and *AutoCAD DWG 3D* developments. Impact now provides support for the 2004/2007/2010 & 2013 versions of the *.dwg file format. The exact version of the format maybe selected from a drop-down list within the *Autocad Drawing* node of an Import/Export Master Tool Setting.



Note that DWG exports from an *Impact 3D layer* will be exported in the *Autocad 2013* version of the DWG format, *regardless* of the DWG version specified in the export setting.

Fig 57 – *Autocad Drawing* (.dwg*) export configuration within *Master Tool Settings***

Tool

Imperial/Metric Toggle (without changing Appearance Settings)*

A new tool has been added to aid users needing to switch between Metric & Imperial units regularly. The tool is named *Toggle Measurement Unit* and is available via *Customise* mode (*Options* tools) – simply drag & drop the tool onto a menu or toolbar to make it visible.

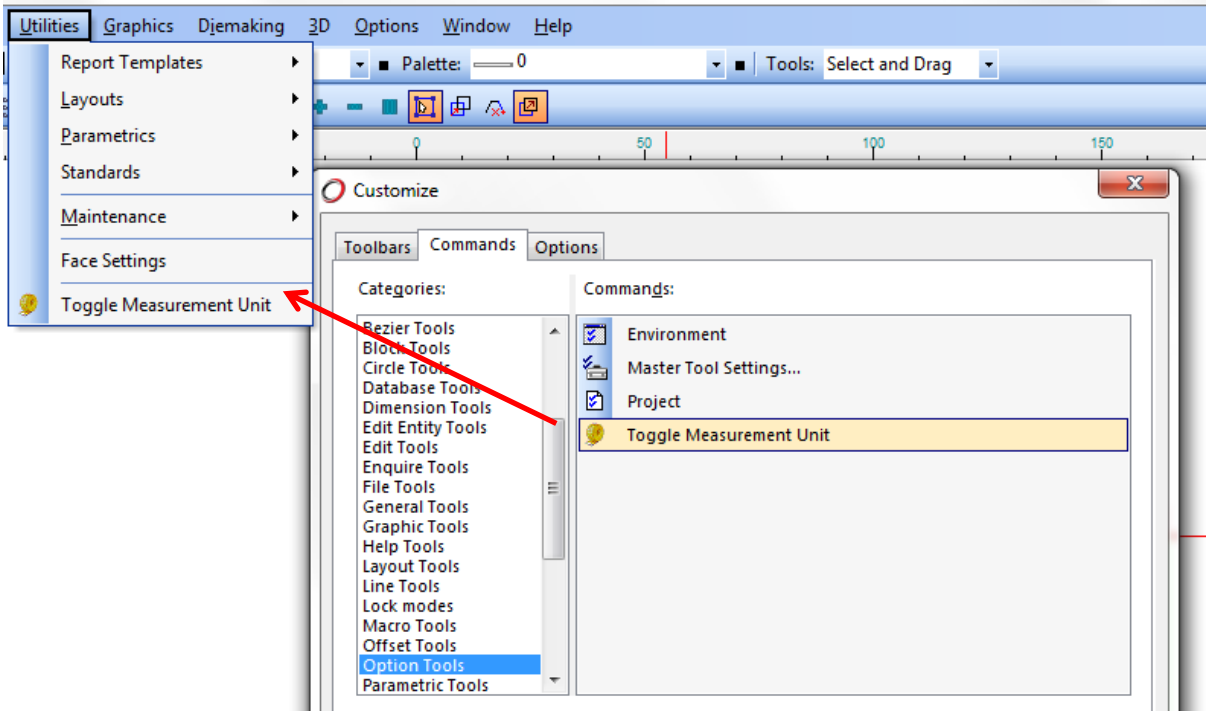


Fig 58 – *Toggle Measurement Unit tool*

Because this is an actual Impact tool, it's also possible to assign a *keyboard shortcut* to the tool. You can find the shortcut assignment via *Customise* Mode, within the *Option Tools* category on the *Commands* tab. You can also find the tool via *Options* > *Environment* > *Environment* > *Keyboard* > *Option Tools*.

If *Rulers* are being displayed, you can also double-click at the intersection between the rulers to switch units. This is perhaps the quickest & most intuitive use of the new tool.

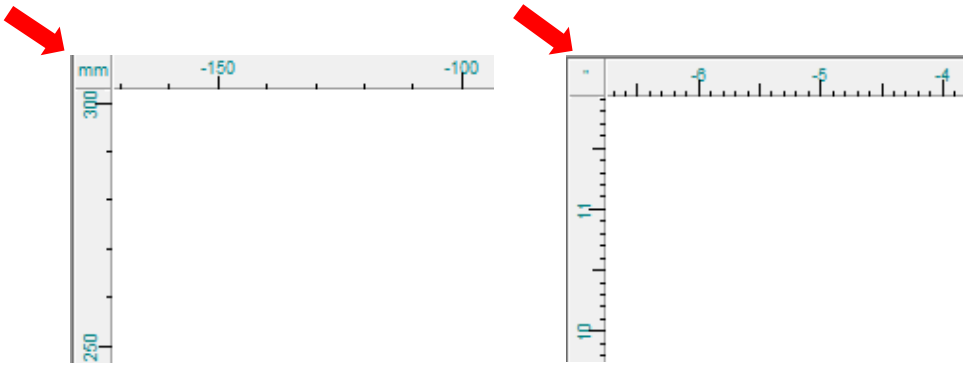


Fig 59 – *Toggle Measurement Unit* – within *Rulers*

Please note that this tool does require users to have the *Settings* privilege (found within the *Environment* folder of a *User Privileges Master Tool Setting*) to be enabled.

Impact Viewer

Hiding Files/Database Navigation Panes*

The (Stand-Alone) Impact Viewer can now accept a range of command-line arguments:

ImpactBrowser.exe -[fpstkcnl] parameter

Where

f = specifying a filename
p = specifying a project
s = specifying a standard
t = specifying a template
k = specifying item using a key
n = specifying item using a name
c = specifying item using a code
l = specifying a layer

The viewer will then launch and display the relevant drawing/layer but the navigation panels will be hidden. Effectively this presents the Viewer as a stripped-down *Information Pane* with the *Preview* enabled.

Working Environment

'Apply' Button added to Options>Environment

The presence of an *Apply* button allows the user to preview certain environment changes, before accepting them. This is perhaps most noticeable when making changes to Impact colour such as the Project Background (*Options>Environment>Environment>Colours>Drawing>Project Background*).

New option for Selection Cursor (Arrow)*

For new users, Impact's default cursor may be quite confusing – especially when used for relatively simple operation such as entity selection. A new Environment option has been added - *Show crosshair when selecting entities* to help with this issue. When *enabled*, users will see the traditional Impact *Entity* cursor. When *disabled*, a much simplified cursor (resembling the *Windows Normal select* pointer) will be displayed. As soon as a drawing (or other) tool is activated, the traditional Impact cursor will be displayed.

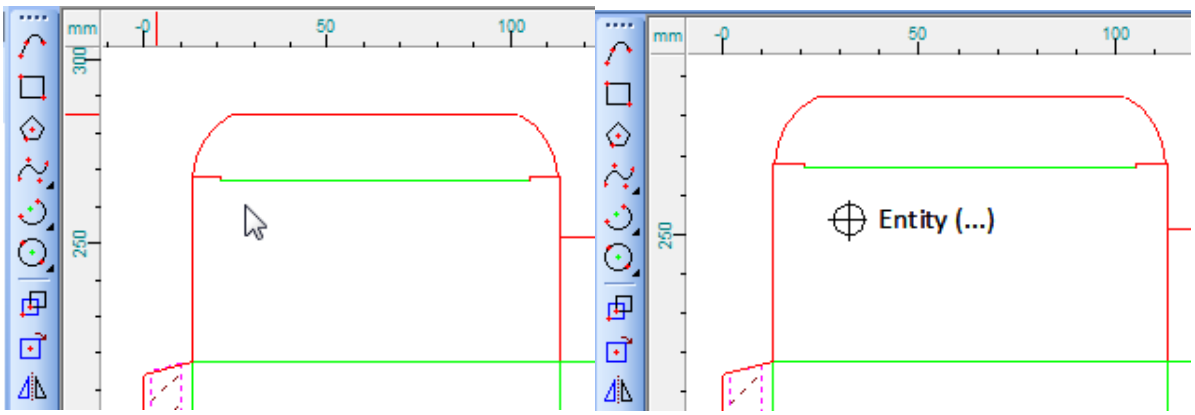


Fig 60 – Simple and default selection cursors

Convert a Layer Insert into a Block Insert

In certain circumstances, it may be desirable to convert a *Layer Insert* into a *Block Insert*.

Hotkey to toggle Visibility of Drag Handles*

Impact's *Drag Handles* are very powerful & useful. However, in certain circumstances (such as many selected entities within a small area), they can hamper entity visibility & general usability. In these circumstances, the ability to toggle the *Drag Handles* on & off quickly can be advantageous. The existing

edit-bar tick-box has been augmented by a user definable keyboard shortcut, to make the toggling of *Drag Handles* quicker & easier. The shortcut may be assigned via the *General Tools* category of the Impact Options dialog, and is named *Edit Bar Toggle Drag Handles*.

Icons for Options Environment

Impact 2014 now has a *full* set of icons for the various nodes found within *Options>Environment* (*Database Installation*, *Database Operation, Environment, Standards & Workstation*).

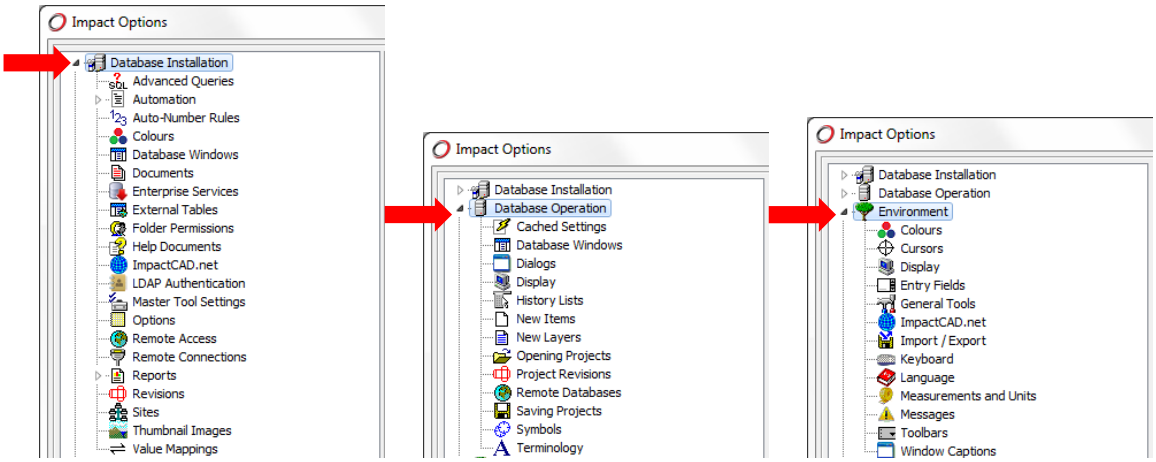


Fig 61 – Complete *Environment* icons

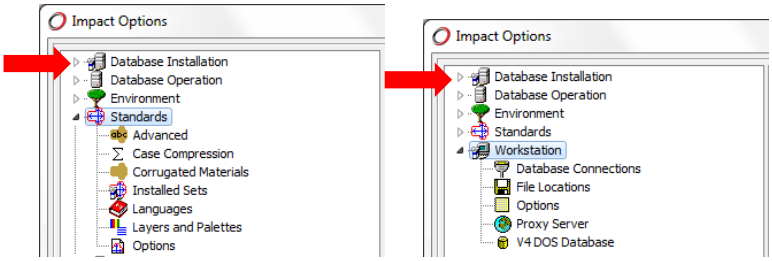


Fig 62 – Complete *Environment* icons - continued

Multilingual Settings*

Certain items in the database may now be translated to aid any users who do not speak your company's primary language. This can be particularly useful for *Enterprise* users, where there might be multiple databases running in several countries. Items which may be translated include: *Master Tool Setting names*, *Symbol names*, *Folder names*, and *Descriptions*.

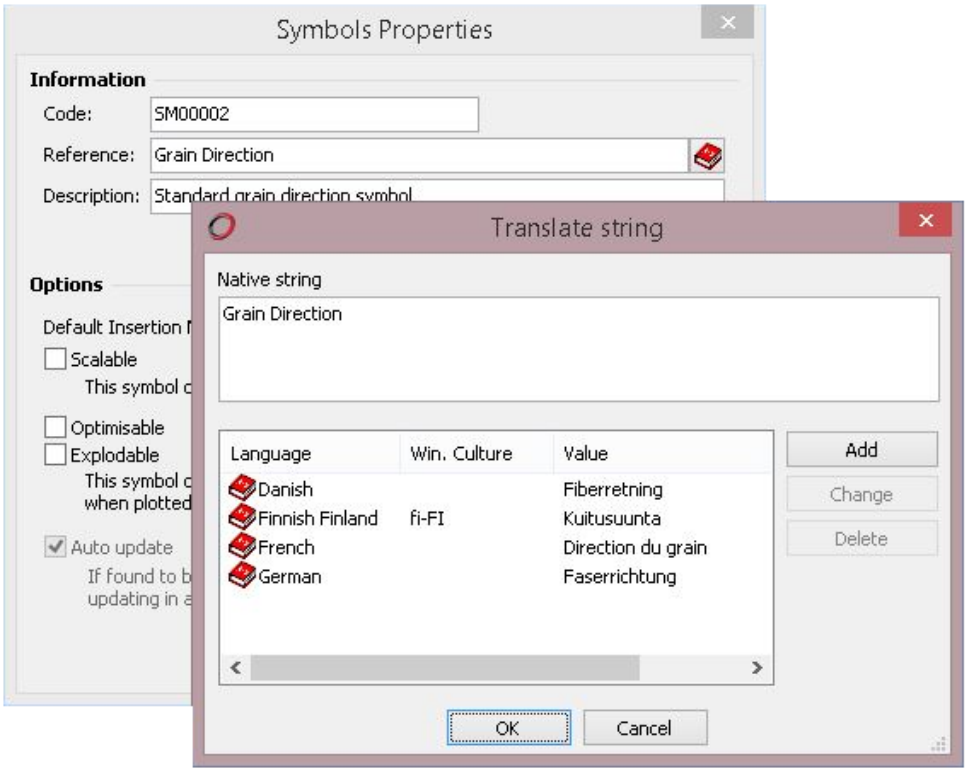


Fig 63 – *Multilingual Settings – String Translation* dialog

Using this mechanism, for example when inserting a symbol into a drawing, each user will see the symbol names in their own language.

Print-Face/Die-Face Simplification*

For users who do not need define different faces/sides of a drawing, simplified terminology has been introduced (whilst previous functionality has been retained).

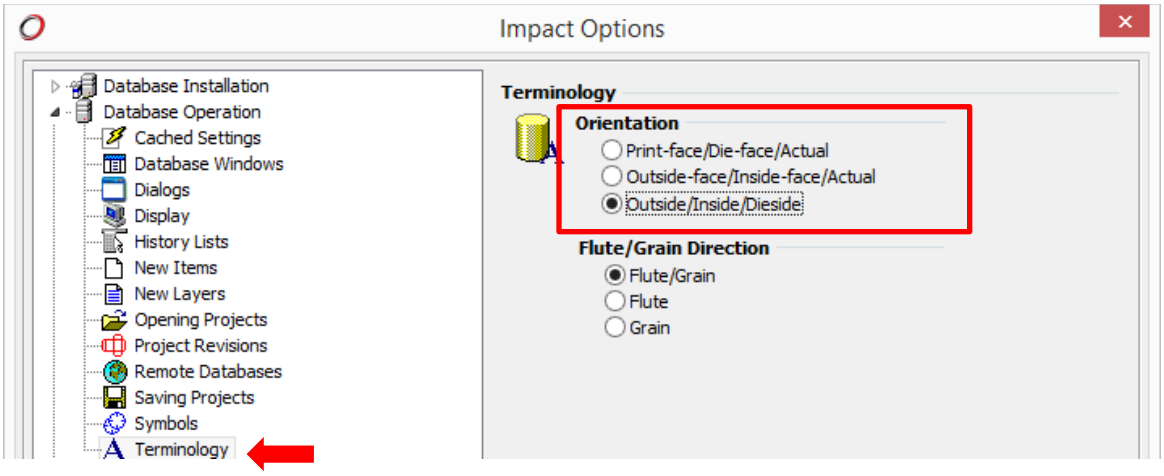


Fig 64 – Simplified *Orientation Terminology* options

Additionally, the *Utilities* > *Face Setting* dialog has been modified to reflect these changes.

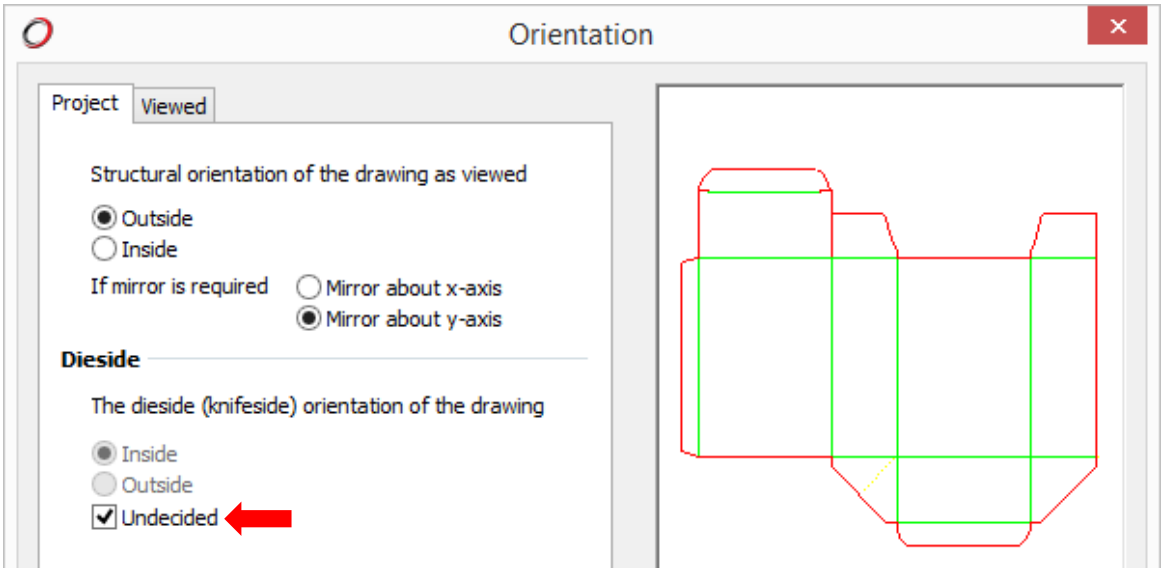


Fig 65 – Simplified *Face Settings* dialog

The Actual View (a.k.a. Dieside with the new simplified terminology) can now be set to *Undecided* and thereby reducing the sometimes confusing options of “actual view” and “viewed as” view.

If enabled, the *Undecided* setting will simplify all input/output dialogs *(Import/Export*, *Plot* etc) by removing the superfluous options.

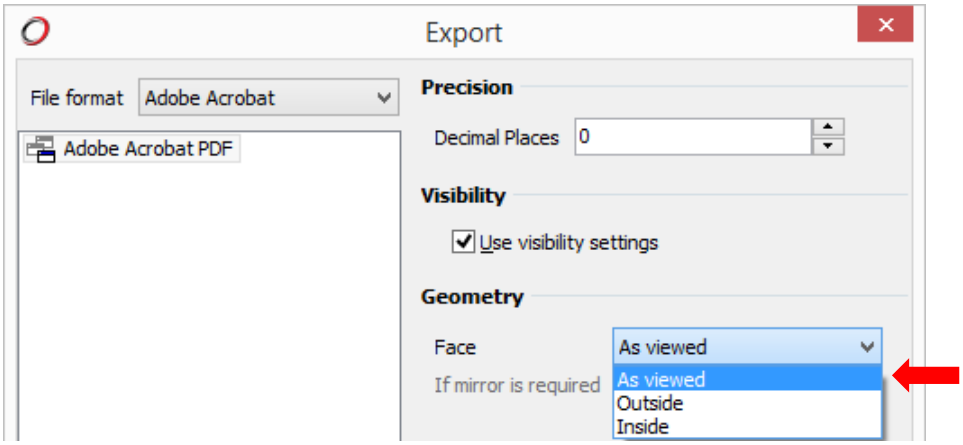


Fig 66 – Simplified *Face* options in the *Export* dialog

Denote Current Appearance Setting

Many users create/use multiple *Appearance Settings* (eg dedicated screen layouts for 2D design work, 3D animation etc). In Impact 2014, a tick will be placed by the currently-loaded *Appearance Setting*, within the *Appearance* menu, so at any point, the user will be sure *which* setting they are currently using. This can be especially useful when settings are about to be modified/over-written.

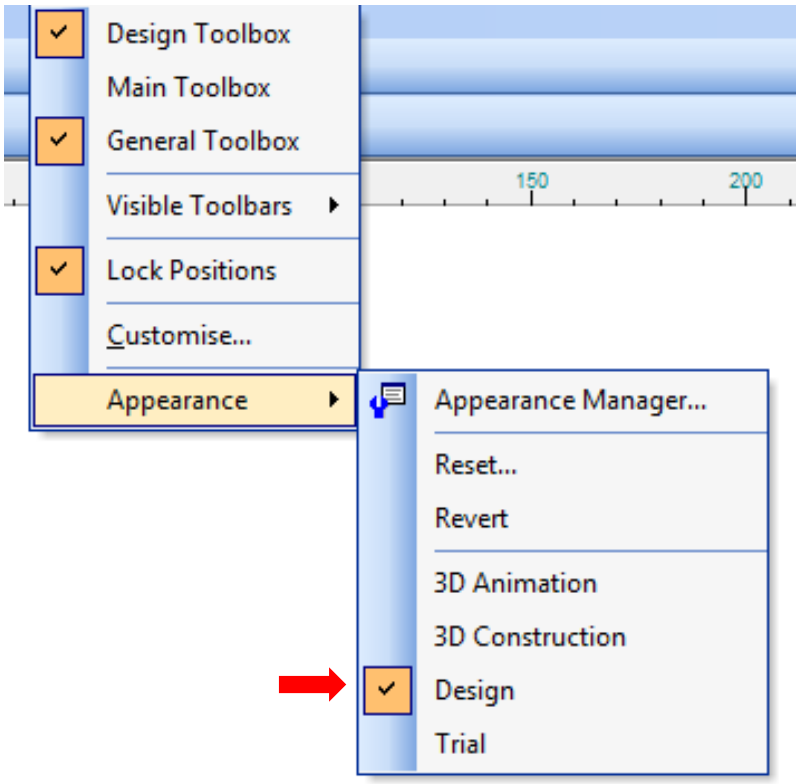


Fig 67 – Current *Appearance Settings* hint

Enhanced Layer Properties – Session Information

Tools such as the *Parametric Editor*, *Stripper Creator* and *Layout Creator* store 'session' information within an Impact drawing. Users can therefore create a *partial* stripper, parametric model or layout, quit the tool and then *return* to the tool at a later date to 'carry on where they left off'. This *session data* is therefore extremely useful - but it will contribute to overall file size, and there may be circumstances in which people may wish to 'start from scratch'.

New layer status icons indicate whether a drawing layer has stored parametric, stripper or layout *session data* and allows that data to be purged (if required). The new icons are found within the *General* tab of the *Layer Properties* dialog box.

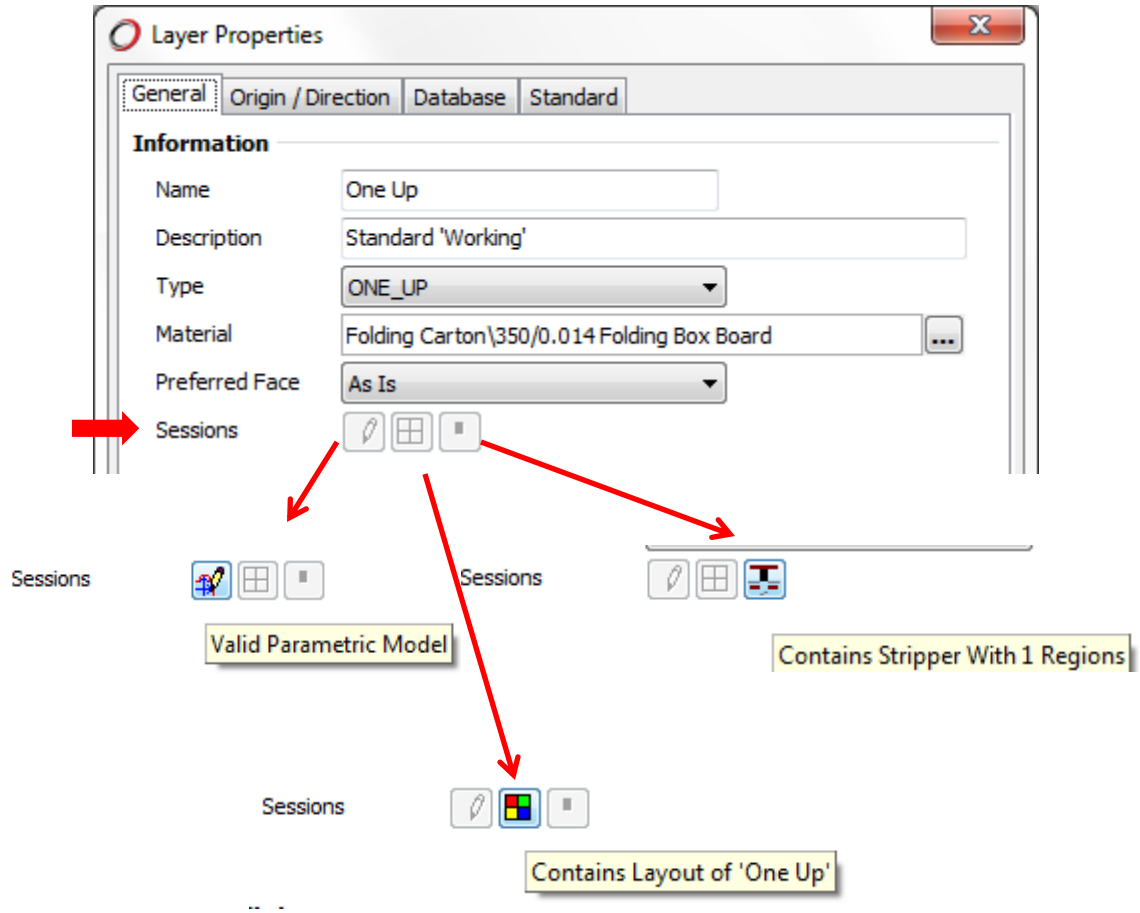


Fig 68 – *Session Information* icons

Clicking the icons will display the following message:

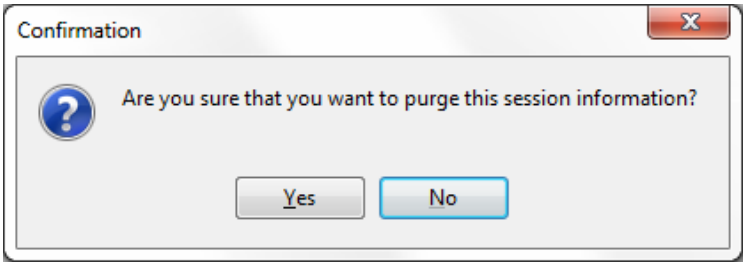


Fig 69 – Purging *Session Information*

At this point, any saved Parametric/Layout/Stripper session information will be removed for the drawing – keeping file size to a minimum but also allowing the user to 'start from scratch' as mentioned above.

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