

# What's New in BricsCAD V18

## Bricsys Conference 2017: New V18 features by Hans De Backer

A new face to the Bricsys conference this time was [Don Strimbu](#), VP of Communications at Bricsys. He anchored the entire Day 2 of the conference, filling in between each presentation with a booster dose of wake-up calls & motivating messages that prepped us, explained what to expect, where we are headed and stuff like that. I must admit that Don brought in a great deal of new energy to the conference this time and I am confident this is one guy who can lead the change in Bricsys from being a technology passionate company to a market, customer and brand sensitive organization.

### Session 2 : Hans de Backer, Head of Product Development, Bricsys

This is perhaps the most awaited presentation in any Bricsys conference. [Hans de Backer](#) (HDB in short) is part of the founding team and has been leading product development in Bricsys for as long as the company has been in existence.

I must say that he put up a show of V18 features which is one of the best orchestrated presentation so far, hitting right on the value and benefits V18 brings. Let us dig into the details right away.

**Don Strimbu: "It is all about you"**

Before handing over to HDB, Don starts the invocation about V18 base features. He promises that the new BricsCAD V18 is all about you: the end-user. Productivity improvements and usability features enhancements ensure that you get faster to what you want with the ease and speed.

**Clean v/s Crowded:** The familiar clean screen command now makes its entry in BricsCAD. How often do you find yourself in a situation where you add a lot of clutter (UI elements) on your screen and at one point, want to sit back and view your model in clarity. The clean screen command does just that.

**Temporary tracking in 3D:** This was always available in 2d and is now part of the repertoire of 3d functions as well.

*"Yet another new concept in V18 has been the concept of Create Once, Use Many. The ability to re-use faces, edges and points to perform more than one, more than the expected is something to look forward to in this new release",* said Don Strimbu in his introductory preamble.

Starting off the presentation, HDB Hans de backer demonstrates CleanScreen, a tool that he said was possible with ease due to the Redway Engine. *"You will never be lost in BricsCAD. At*

*any point, come back to controls using the QUAD by picking on the screen at any location", is the HDB message for us. Clearly, the push is very hard to get users use the QUAD.*

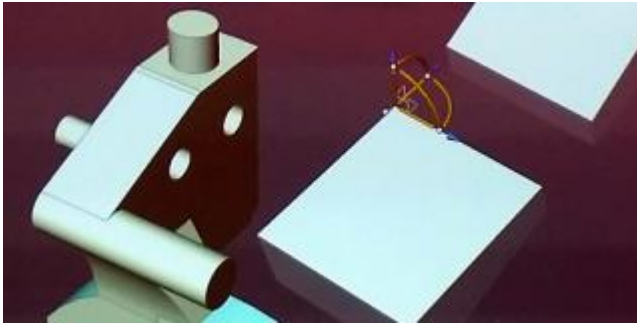


Photo courtesy: Ralph Grabowski [blog](#)

The Manipulator Tool joins the QUAD in BricsCAD V18 and offers more help to perform in-place geometric manoeuvres. We are now spoilt for choice. Multiple widgets now lurk around each entity to offer edit-copy and more help.

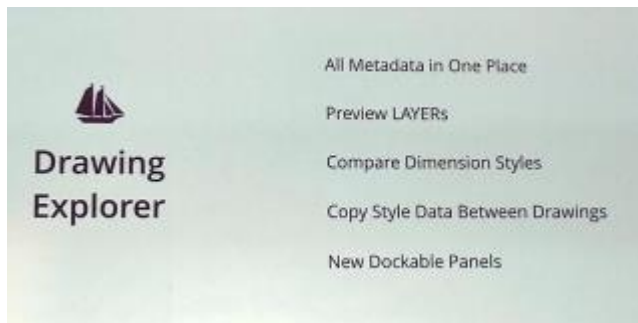


Photo courtesy: Ralph Grabowski [blog](#)

The Drawing Explorer now does much more than before. The above slide says it all. The key goal of all new features is built around few common themes:

- Create once, Use Many
- Find (and preview) data easily
- Access to clutter-free screens easily
- Reduce keystrokes, improve productivity

We are going to see more of it in this HDB presentation. At DesignSense, we have also always believed in this philosophy. The less number of keystrokes you use for a particular operation, the better we are in improving operator wellness. Even more so if the commands are going to be used repetitively.

Moving on with the V18 presentation, Hans showed how the QUAD now has more teeth than ever before. And even more can be added via the CUSTOMIZE dialog and you can have the QUAD offer a bunch of exact stuff that you want, including custom actions that you can write. And an action that you use more than once jumps to the start of the list (**that is BricsCAD**

learning you!). So, yes, it has become easier to use than before but you must know where to look for the hidden gems and bring them out to the fore-front.



Hans has all the demo drawings open at once in his BricsCAD. Showing a park sample drawing, he demonstrated the manipulator tool to instantly select and manipulate geometry faces and also how faces can now be offset and extruded with automatic cut and fill of solids. That is AI working for you in the background. The next model of a house showed us how in-place property editing can be achieved without having to open the Properties panel.

Showing off some cool push-pull modeling stuff, Hans was quick to tell us that it is the Paris-based [Redway 3D](#) Graphics technology which was enabling BricsCAD to do all of this. Clearly, Redway has a lot of presence and role in the success of BricsCAD. They are also one of the sponsors of this event, the other being [Hexagon PPM](#).



In this slide, Hans showed how complex view configurations with their own section plane definitions and positions can all be composed in a multiple-viewport or multiple-layout configuration and printed to PDF with "un-precedented clarity", to quote his own words. BricsCAD V18 takes documentation detail to a completely new level. Many of these improvements apply in 2D also.

The next few minutes Hans showed how geometry could be easily created in a defined plane using dynamic UCS and intelligent 2d commands like offset, copy etc. There is one thing absolutely clear to me: BricsCAD has a lot of hidden command shortcuts and combinations. Unless you know them, you are unlikely to appreciate the full power of what the software can

do. Once you know them, it is pure addiction. Now, that is a big challenge for Bricsys and for its resellers, to take this across to the user and tell them how to use it. May I suggest that the next round of AI integration must be pop-out tutorials that anticipate what the user may be trying to do and show him how to do it or remind him of stuff that he he never knew existed.

Yet another addition to the keyboard/mouse tool is the slightly long click. It brings up the Manipulator.



The Manipulator improves typical edit operations like rotate about XYZ axes, move etc and brings in a lot of ease and comfort.

The Manipulator is like Dynamic UCS. Move it around and it re-aligns its three axes around what it locks on to. This gives you dozens of possibilities with visual identification so that you can find the exact line you are interested in.

Some cool stuff there!!

**"It is all about your data"**

Having entrusted your valuable data to the .dwg format, we count on BricsCAD to not just mess it up, but query and analyze it and extract meaningful data out of it. And today Don Strimbu is giving us that confidence @bricsys2017.

- What are the new ways you can extract information from your data (a.k.a dwg)?
- What are the new ways you can leverage your data?

These are key questions this presentation in answering for us.

We saw Properties panel and Rollover Tips in the Hans demo so far but Dom says there is more to come.

The new stuff now in V18 is the [Content Browser](#) and the [Structure panel](#).

*"Any one had a problem locating a line that is a billionth of an inch long and 14 light years away?"* asks Don Strimbu, echoing a CAD issue that almost everyone encounters ever so often.

BricsCAD V18 now has a solution for the same: [find all zero \(or nearly zero\) length geometry](#) is now a feature of the main program.

Some more cool stuff in Drawing explorer: you can now select more than one layer and preview contents.

Compare dimension styles now allows you to select more than one dimension style and highlight the differences between them in color coded panels.



Here, Hans is showing us how the content browser is used to browse through hundreds of blocks in multiple un-opened drawings.

The Content browser is intelligent and functions like a block library manager where the blocks can be inserted and automatically aligned to the entity near or on which it is placed. It is the equivalent of AutoCAD's Design Center plus much more.

Drawing with precision, whether in 3d or 2d has gotten much better in V18, you just need to leverage the full power of QUAD, Content Browser, keyboard shortcuts, roll-over tips and a bunch of other tools that may not be visible on the surface or on the menus.

Temporary tracking in 3d is a great new way to align, offset and fix points and planes while working on a complex 3d model. Here, Hans showed us how to manipulate stuff around on a 3d piping model. We must admit one thing: having a good graphics card really pays. Invest in one if you are into 3D. Don't settle for a default one that comes with your PC.

Yet another major improvement in 2d is the ability to sort the entities by their properties. In this case, Hans de Backer showed how to sort entities by length and we quickly found a number of phantom entities that are zero length or nearly zero in length. It is now a breeze to find them

and select it safely knowing that the stray entity in stratosphere is now gone and your zooms now work in finite & defined boundaries. Easy garbage cleaning.

Talking about Rollover tip properties, Hans revealed a great hidden secret. There are a huge number of properties that are defined for each entity (including BIM properties) than can be configured and made to appear when you hover over the entities. That means the roll-over tips can be completely customized. This is a point to note for third party developers who may want to deliver that extra level of intelligence and information in roll-over tips. Take a look. It is hugely powerful. It was already there in V17 and extended further in V18 and looks very cools.



"It is all about performance"

The presentation takes a break at this point and Don is back on the floor with the next message "It is all about performance" and goes on to make an emphatic statement "*There has been no innovation in the .dwg world for 35 years - until today*", and goes on to wear his dark glasses, to signify the change that BricsCAD is ushering in on the .dwg world.



The Don speaks out: "*There has been no innovation in the .dwg world for 35 years, until.....TODAY*"

Dom Strimbu acknowledges the Bricsys user community: *"You have entrusted your engineering data wuith us, and it is safe"*.

He emphasized that Bricsys is here for the next 50 years to innovate and move the .dwg platform ahead. He gives us a guarantee that user data in dwg will always be open, supported and secure for the years ahead. And more than anything, it will be accessible to users on a perpetual basis.

### Drawing Compare and Visual Merge

V18 offers not just new tools but new technologies in the platform to make things happen. We are told that repositories are used to compare DWG data in memory and quickly identify visual similarities and differences. This allows lightning fast display of results and the highlighting of drawing differences. Don says this is possible by adding history to drawings that enables us to move back and forth on the stack to find out how the drawing has evolved with time.



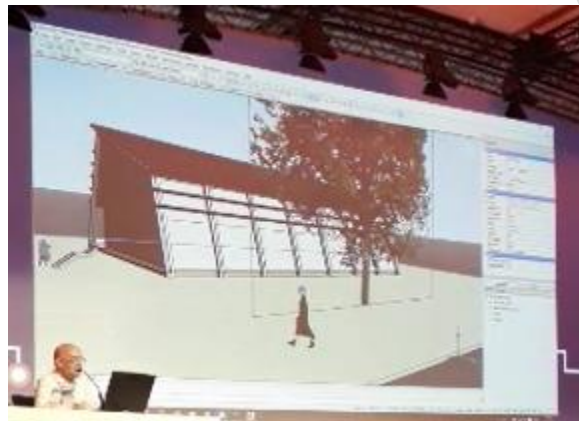
Photo courtesy: [UpfrontEzine twitter](#)

Versioning is now possible in V18, thanks to the new history maintained withing the dwg. Notice that AutoCAD stores the entire drawing in a buffer for each small change, while BricsCAD stores only the changed part of the drawing resulting in a very small footprint whole maintaining different versions of the drawing. The above chart shows and sums it all.

Regarding version control of the BricsCAD dwg, Dom Strimbu says, "This is going to allow us to support multi-user editing of the same dwg in future". A very bold statement and really something to look forward to: an environment where more and more users are going the collaborate and it would be nice to see one day multiple surveyors working on a same drawing from different locations of the field and the manager sitting in office can actually see the data being collected, cleaned and un-duplicated in real (well, almost) time to build the base map.



Talking about speed, Hans de Backer plays around with this 20-GB raster image in BricsCAD  
Photo courtesy: [UpfrontEzine twitter](#)



A new *"look-at-the-camera always"* setting ensures that this lady always looks at you from the drawing

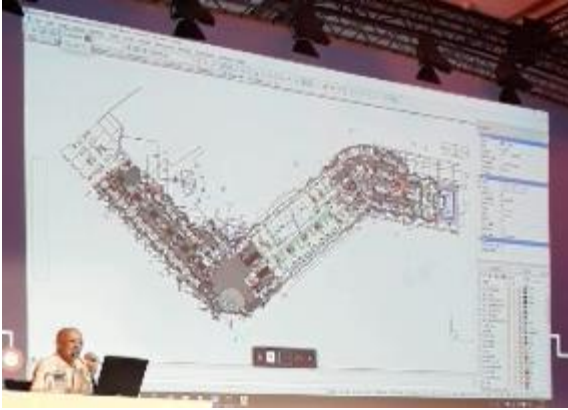
"Shadows in BricsCAD are real; you don't have to fake them like in Sketchup or create rectangular ones like in AutoCAD", says Hans, while reminding us this is once again a Redway 3D effect.

Another long-asked feature that is implemented is the layout manager. Layouts are now cached and switching between them is really fast. The Layout manager helps to re-order, delete and access layouts much faster than using it from the tabs. Yet another speed improvement.

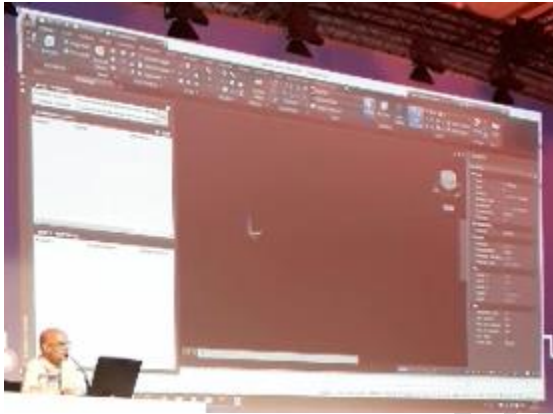
*"Pure number crunching or geometry in BricsCAD is anywhere from 60-600 times faster than in AutoCAD."* HDB declares.

In the next feature, Hans de Backer shows how interference checking is possible by calling out an action from the QUAD and it highlights crossing solids with a specified color.





The HospitalGroundFloor.dwg sample drawing, live in version compare demo by HDB.



AutoCAD 2018 introduced drawing compare in 2018 version. HDB cannot but resist showing how fast (*oops!, slow*) it happens in AutoCAD 2018 for the same drawing. Just a few hundred times slower, says he.

Showing the visual merge feature, it is a nice interactive way to figure out the differences and merge them one by one.

No more xrefs, no more stepping on each others data. HDB introduces us to a new way of working in V18.

And finally the animation feature too now is accessed from the QUAD, using a dynamic zoom and step in/out. Using gaming like controls, you can now navigate, move up, move down, look around and behave like a natural human being walking around the model.

Bricsys is delivering on its promise to be more user friendly and intuitive. Look forward to the good times ahead!

### **Other cool things**

- Civil 3d enabler now enables you to display and snap to Civil 3d objects (thank you: ODA)
- 3D Connexion 3D mouse support
- Camera facing blocks always

### What do I conclude from this presentation?

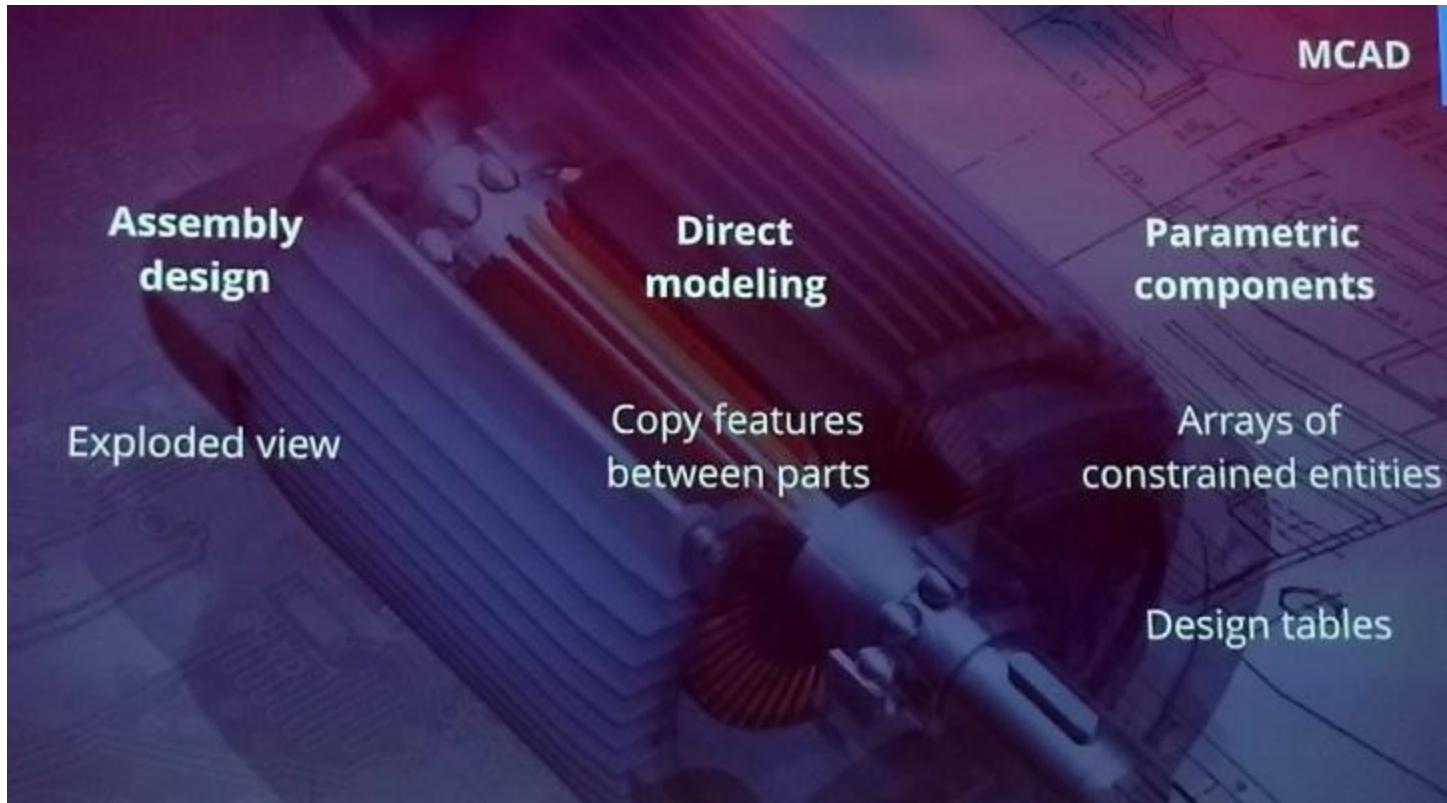
- This is for real. BricsCAD V18 delivers huge improvements in 2D, 3D and in the MCAD / BIM areas. This is a secular upgrade. There is something in it for EVERYONE in it. If you have not yet upgraded, do it TODAY.
- Nearly everything is on the QUAD. If not yet, you can get it onto the quad. It is highly customizable.
- I know many users from 2d workflow still don't use the QUAD. With V18, it is time you changed your mindset and embrace the QUAD.
- No QUAD, and you miss most of new features in BricsCAD V18.
- I am yet to see where the new features are accessed from the toolbar or menus. Nearly everything we saw in Paris has been pulled out of the QUAD bunny.

Thank you Hans de Backer & Don Strimbu for the amazing presentation.

## What's New in BricsCAD V18 For Mechanical Design

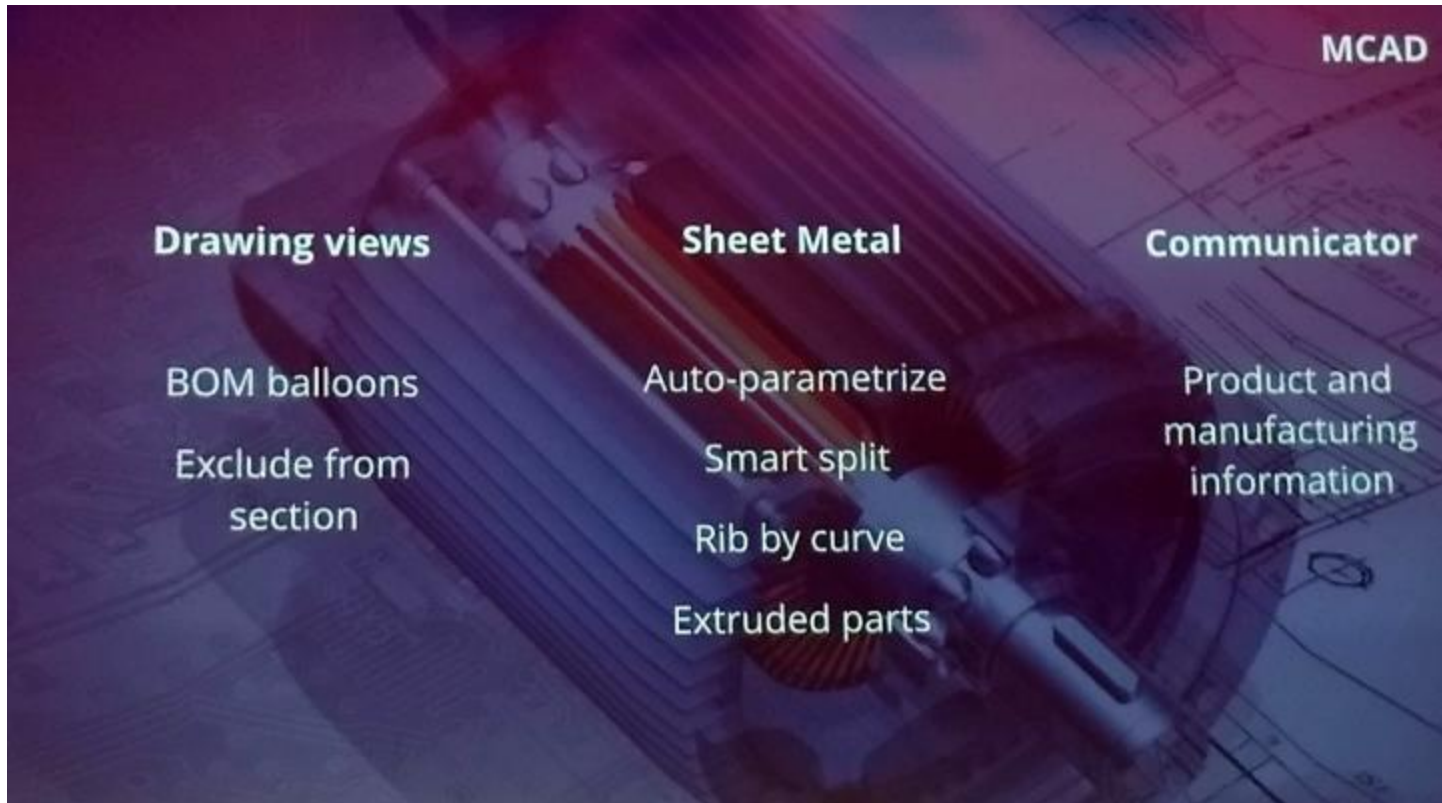
(reproduced from Ralph Grabowski's blog)

BricsCAD Platinum is the top end version of BricsCAD, and as such offers 3D constraints, design intent, and other high end functions. Naturally, it costs more than basic BricsCAD, but still far less than AutoCAD that doesn't have them. For V18 (to be released in November), BricsCAD Platinum get the following new functions:



...and:

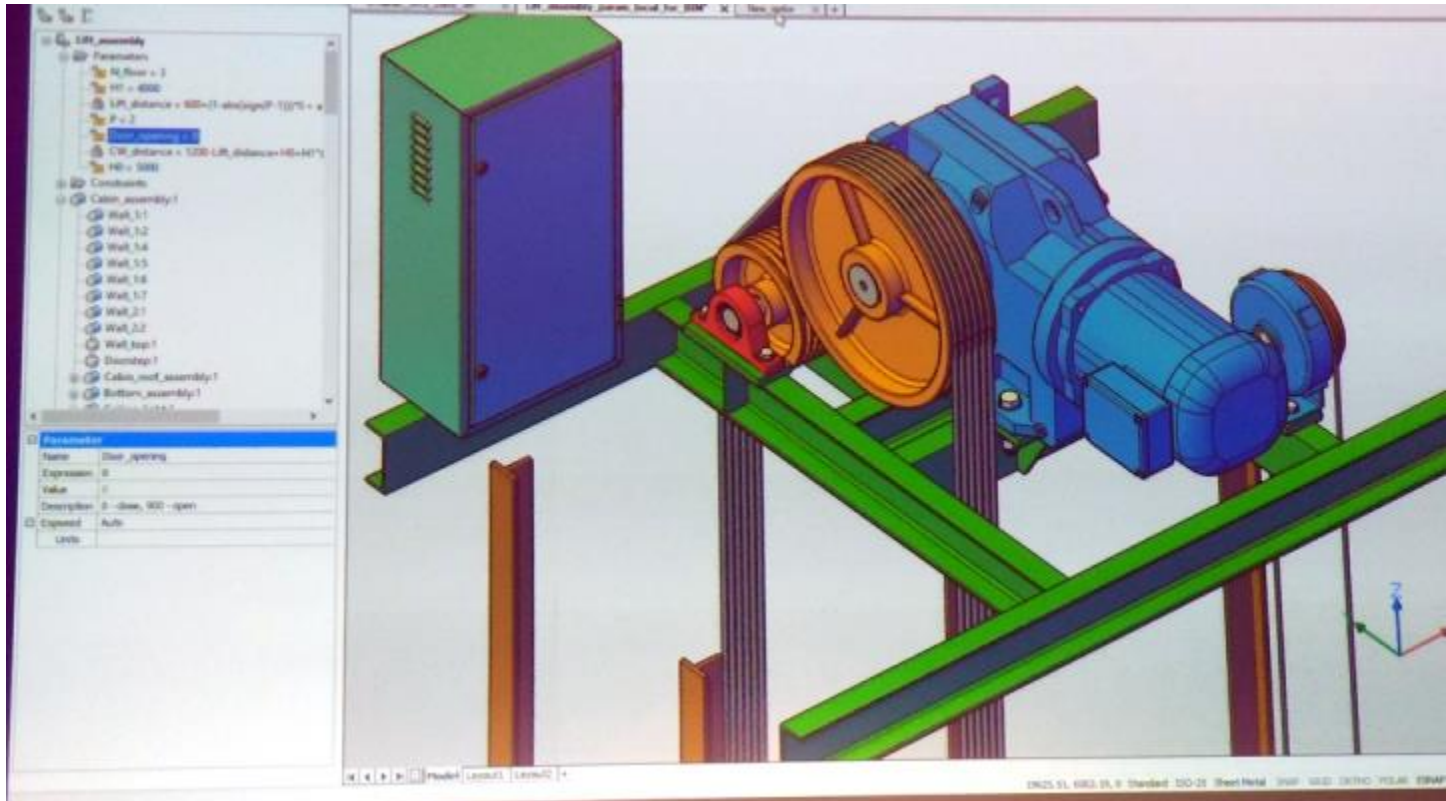
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Communicator is the extra-cost translation add-on for Bricsys Pro and Platinum for translating drawings.

## MCAD and BIM Editing in One

At this conference, Bricsys is making the remarkable claim that BricsCAD is the only CAD system in the world that can do MCAD and BIM design in the same model (and the same file format, DWG). The demo they are showing is of changing the design of a parametric elevator inside a building model. In this tutorial, they replace the elevator's motor by importing a new one from Solidworks, and then making changes to the elevator to adapt the new motor.



Other new features:

- Linked balloons to auto-generated BOM table in generated views.
- Creating ribs along polylines; edit the polyline's path to edit the rib's path
- Determines which are sheet metal parts, and which are not
- Adding a sheet metal part intelligently to an existing assembly with no collisions
- Draw freehand along an assembly, extrude to create shell for assembly.
- ...and more

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