

[Bricsys 2018 London: Day 2](#)

#bricsys2018



OK, here we are on day 2 of the Bricsys 2018 London conference and we are just waiting for the BLADE session to begin,

BLADE is the BricsCAD LISP advanced development environment for interactively programming with the LISP programming language. BLADE was introduced last year with BricsCAD V18.

While we wait, here is an overview that I gleaned from yesterday's session for third-party developers:

- BricsCAD V19 is compiled with Visual Studio 2017 and uses Teigha 19.5
- A public API is now available for sheet metal. It uses ARx syntax in BRx (API previously worked through LISP).
- BIM API is updated in V19 with IFC export classifications, all BIM properties, spatial id, such as buildings and stories, associative and non-associative rooms, compositions, linear elements like beams and columns, and BIM dialogs.
- BricsCAD App Store has been reworked to make it easier to find the specific add-ons.
- BricsCAD Solution Build V19 will be released end of 2018. It is not AutoCAD OEM, but the end result is the same.

BLADE

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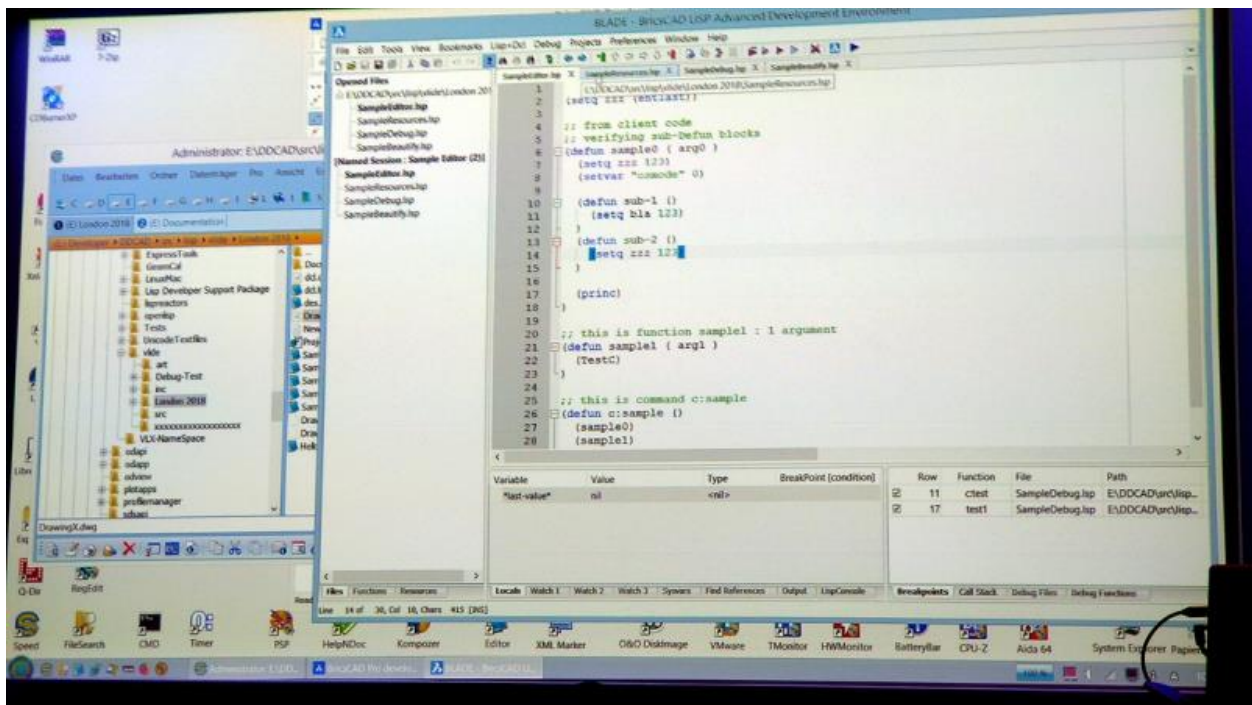
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Why still use LISP? It has low to zero maintenance, is compatible between releases (unlike C++), no compiler required (faster development), lots of libraries available, and it good enough probably for 99% of users programming needs.



Steve Johnson speaking on LISP in BricsCAD

Here is a picture of the BLADE user interface.



It offers parentheses highlighting, pretty printing, collapsing sections, automatic code indenting, and tooltips that show function syntax.

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One project can be open at a time, where a project consists of two or more files. A preferences dialog box lets you set up colors and other settings as you wish. You can add your own keywords, and can be highlighted in a different color from regular keywords. Define constants, text scaling factor, and save multiple configurations.

A very nice feature is the side panel that lists the functions used in the current code. Click on a function name, and it is highlighted in the code -- and vice versa. The function names can be sorted in a variety of ways, such as actual order and alphabetical.

BLADE is being updated with each new release of BricsCAD, such as the new syntax and variables check. More on BLADE from <https://blog.bricsys.com/inside-bricsys-blade/>

Future of Drawing

On to the next session, "The Future of Drawing," where we are getting some more previews of the next release of BricsCAD V19. First up, linking Excel spreadsheets to tables through data linking. It works only with Excel, alas.

The Dim command has been reworked to do semi-automatic dimensioning. As the cursor passes over geometry, BricsCAD selects the correct style of dimensioning, such as linear for lines and radial for circles.

A formal block editor is added to V19, which is accessed through the BEdit command or by double-clicking a blk.

Tangent and Perpendicular entity snaps controls geometry being stretched, such as resizing an arc attached to lines.

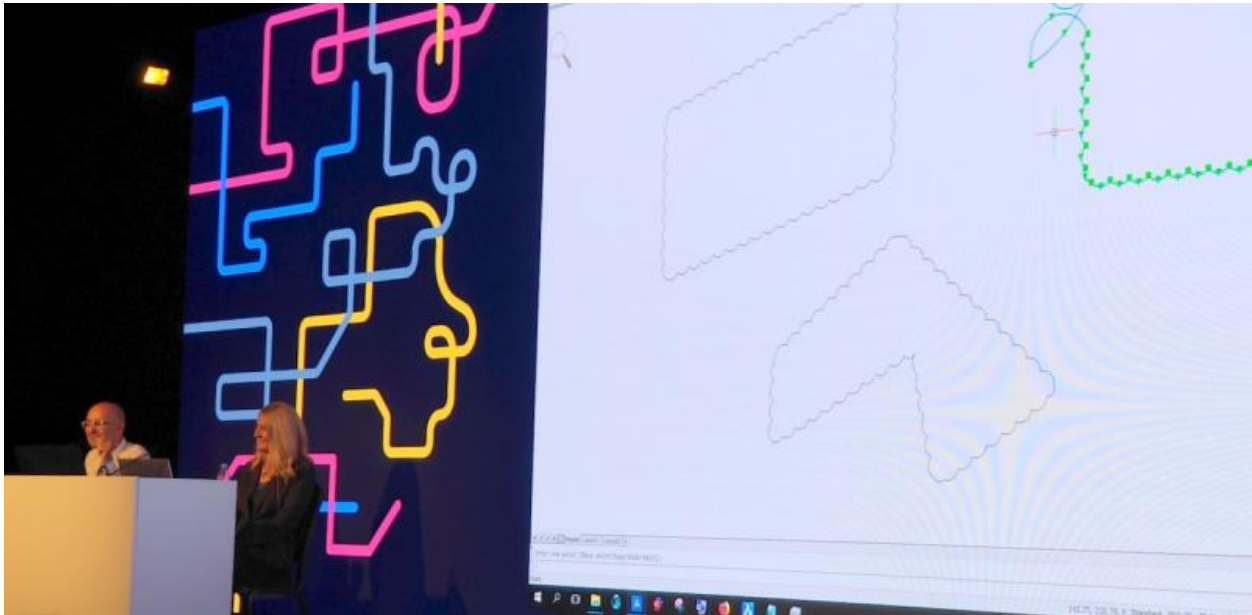
NearestDimension shows you the distance between two objects: just select two of them. See my tutorial on using it at <https://www.worldcadaccess.com/blog/2018/10/bricscad-v19-best-1-nearest-distance-editing.html>

Nudge lets you move entities with the arrow keys. The distance moved depends on the zoom level.

Blockify converts individual entities to identical-looking blocks, which helps reduce file size. See my tutorial at <https://www.worldcadaccess.com/blog/2018/10/bricscad-v19-2-blockify-conversion.html> . It is useful for cleaning up imported STEP files. In one example, the filesize went from 33MB to 3.5MB.

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PDF files can be imported as drawing entities.

The manipulator gets a ruler and a protractor, and recognizes snapping. The Repeat option makes multiple copies, while the Copy option makes copies at any angle or distance.

Point clouds can be imported, and entity snaps used with them. A future release will add object recognition.

After the break, the future of mechanical...

The Future of Mechanical

And we're back.

A new module is called **BricsCAD Mechanical**, which combines BricsCAD Platinum with the old Sheet Metal module. The tease question is "What's wrong with mechanical design?"

- AutoCAD Mechanical is not a choice because it is just a toolset to create 2D drawings -- not 3D. No collision checks, no mass properties, because it is not 3D.
- Autodesk Inventor is not a choice because it loses the ability to edit 3D DWG files. "It forces you to be a programmer not a designer," because it uses history.
- Fusion is not a choice because it requires a stable Internet connection, and uses the same engine as Inventor.

The right MCAD software is

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- Compatible with AutoCAD (like Bricsys), even at the API level
- Full-blown 3D with parts and assemblies, sheet metal, and drawing views
- Able to edit any DWG and imported 3D geometry from other MCAD programs
- able to do parametric modeling without getting into the history trap

Also: be affordable, work without an Internet connection, and have a permanent license.

The backhoe was modeled from scratch in BricsCAD, and moves using parameters.



See my Twitter stream at upfrontezine for more on mechanical and sheetmetal.

<https://twitter.com/upFronteZine>

Want to know more about DesignSense, BricsCAD?

- CADPower V19 for BricsCAD: [EXE](#) (-or-) [ZIP \(Linux/Mac compatible\)](#)
- CADPower V19 for AutoCAD: [EXE](#) (-or-) [ZIP](#)
- GeoTools V19 for BricsCAD: [EXE](#) (-or-) [ZIP \(Linux/Mac compatible\)](#)
- GeoTools V19 for AutoCAD: [EXE](#) (-or-) [ZIP](#)
- BricsCAD V18: [Trial download](#)
- BricsCAD V18 Shape: [Free download](#)
- BricsCAD Communicator V18: [Trial download](#)

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