ChemDraw and Office 2016 on Macs debugging notes and history

"Round trip" editing ChemDraw figures embedded within Office 2016 documents now behaves as expected. Had not for many, many years until ~Fall 2017, apparently.

See first

- ChemDraw and Office 2016 on Macs

Debugging notes and for any historical purposes

Current status:

- As of Fall 2017, could not reproduce prior problems "round-trip" editing ChemDraw figures embedded within Office 2016 documents.
- Have slowly had faculty upgrade from Office 2011 to Office 2016. As of 2/7/18, no known problems.
- Luis's notes
    - https://stackoverflow.com/questions/8003919/are-dynamic-utis-stable

Deprecated?

Title used to stated:

- ChemDraw and Office 2016 on Macs: Use "Paste as PDF"

Excerpt used to state:

- If you use a Mac and ChemDraw, learn the procedure to copy-and-paste ChemDraw elements for roundtrip editing with MS Office 2016 documents. The changed occurred after Microsoft Office 2011 (Mac) and staying with that version of Office is not a viable long-term solution.

Summary, for end-users

If you use a Mac and ChemDraw, now is the time to learn the procedure to copy-and-paste ChemDraw elements for roundtrip editing with MS Office 2016 documents. The changed occurred after Microsoft Office 2011 (Mac) and staying with that version of Office is not a viable long-term solution.

Here is the procedure to copy a ChemDraw object into MS Office 2016's Word or PowerPoint applications:

- Step one is unchanged: copy (+C).
- Step two has changed: Paste as PDF (+Control+V) into an Office 2016 document. (This is instead of drag and drop or a simple "Paste" (+V)).

With the end of the support life cycle for Office 2011 on 10/10/2017, it may no longer be possible to install Office 2011 on newer versions of macOS.

Chemistry IT sharing information to the department:

- http://it.chem.cornell.edu/2017/08/22/chemdraw-macs-office-paste-issue/

Prior information from Chemistry IT on this topic:

- http://it.chem.cornell.edu/2016/12/19/new-chemdraw-16-mac-roundtrip-editing/

- http://it.chem.cornell.edu/2015/10/30/chemit-flash-2015-10/

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What you need to know: Mac's MS Office and ChemDraw

The procedure to copy-and-paste ChemDraw elements for roundtrip editing with MS Office documents changed after Microsoft Office 2011 (Mac)

Microsoft changed how pasting works in Office 2016 for the Mac, as PerkinElmer support posts noted:

- http://forums.cambridgesoft.com/messageview.aspx?catid=12&threadid=3415
- http://forums.cambridgesoft.com/messageview.aspx?catid=12&threadid=3187

Similar programs have the exact same issue, also requiring you to "Paste as PDF" on the Mac:

- https://www.chemdoodle.com/features/universality/
  - **Round-trip Editing**: Round-trip editing allows you to insert content into 3rd party applications, and then place that same content back into ChemDoodle from that 3rd party application for further editing. Round-trip editing is supported on Windows through OLE, Mac OS X via PDF and on Linux with OpenOffice.

Continuing to use Microsoft Office 2011 (Mac) to "solve" this issue has worked but is is not sustainable

Up to now (as of August 2017), most people in our department have managed this change by continuing to use Office 2011 for Word and PowerPoint. This strategy is not sustainable for the reasons cited below.

1) Microsoft currently offers just Office 2016, and no other version is available for download via Office 365 to personal computers.

- Statement still valid, as of 8/2017.

2) End of mainstream support (no more security patching) for Microsoft Office 2011 on October 2017.

- https://support.microsoft.com/en-us/lifecycle/search/?p1=15627

3) Also, support may end simply by virtue of new Mac OS's. For example, macOS 10.13 "High Sierra" has a new file system (APFS). Although APFS nominally may run any software newer than ~2009, might not for some specifically such as MS Office 2011. Example:

- https://www.neowin.net/news/microsoft-says-office-for-mac-2011-will-not-be-supported-on-macos-1013-high-sierra?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+neowin-main+%28Neowin+News%29

Info more for Chemistry IT staff

Status in Chemistry:

As of August 2017:

Researchers and others to perhaps reach out to in person:

Person	Notes
Pete Wolczanski <ptw2>	
Geoff Coates <gc39>	
Dave Collum <dbc6>	
Others?	

Communication plan:

Method	Dates, aprox	Notes
Documented (wiki)	Fall 2016	Done, always being added to.

Newsletter (and News item)	Aug 2017	Initially noted to ourselves to do Jan 17, 2017.	
Talk about and meet with groups and individuals	Do?	See above table.	
Computing Cmt's role?			

ChemDraw 16:

Came out ~11/1/16:

The issues in the following section all apply to ChemDraw 16 as well as Chemdraw 15 and Chemdraw 15.1 on Apple MacOS computers.

- http://www.cambridgesoft.com/software/overview.aspx
    - http://www.perkinelmer.com/lab-solutions/resources/docs/DTS_012723B_01_ChemDraw_16.pdf
    - http://www.cambridgesoft.com/literature/PDF/ChemDraw_16.pdf

To do:

Work through this statement from a user at PerkinElmer's support page to see if it's really true:

http://forums.cambridgesoft.com/messageview.aspx?catid=12&threadid=3415

- **Topic Title**: Chemdraw Prime 15 copy and paste completely broken
- **Topic Summary**:
- **Created On**: 8/24/2016 2:13 PM
- (...)
- 4/13/2017 3:09 AM
  adpnm27
  No support have it totally wrong, follow this procedure and the cut/paste will return without problems.
    - https://dgleich.wordpress.com/2017/01/16/fuzzy-pixelated-pdf-copy-paste-from-macos-preview/.

What and where is the metadata embedded in files which can roundtrip?

- Figure this out for both TIFF (paste onto the desktop, for example) and(?) PDF (as in "Paste as PDF").
- This article <https://dgleich.wordpress.com/2017/01/16/fuzzy-pixelated-pdf-copy-paste-from-macos-preview/> states:
    - So eventually I track down Clipboard Viewer to look at raw clipboard data. This was invaluable!

        - https://developer.apple.com/library/content/samplecode/ClipboardViewer/Introduction/Intro.html

What of Apple's Office-like applications?

- Keynote. Heavily used by Geoff Coates, for example

Ensure the following compatibility behavior matrix is completed and accurate

- For any more-recent version of MacOS (macOS), Windows, and ChemDraw.
- Pay attention to version of MS Word (MS Office).
- Similar cut-and-paste issue as with MathType, apparently.
- Note: When creating pasting from CD into Windows (Office 16), it is possible to Paste Special from ribbon as a "CS ChemDraw Object" - double click image to roundtrip edit
- All with current version of ChemDraw (v16).

From ChemDraw to the following type of Word file:	Tested file on left on a Mac: Open in Word (Office 2011) => ChemDraw	Tested file on left on a Mac: Open in Word (Office 2016) => ChemDraw	Tested file on left on Windows: Word (Office 2016) => ChemDraw
Created/ edit on a Mac: Office 2011 (Word): - METHOD 1 (**default**): Drag or cut-and-paste	OK	OK	**FAIL**
Created/ edit on a Mac: Office 2011 (Word): - METHOD 2 (new): Paste Special => PDF	OK	OK	**FAIL**

Created/ edit on a Mac: Office 2016 (Word): • METHOD 1 (**default**): Drag or cut-and-paste	**FAIL**	**FAIL**	**FAIL**
Created/ edit on a Mac: Office 2016 (Word): • METHOD 2 (new): Paste Special => PDF	OK	OK	**FAIL**
Created/ edit on a Windows: Any Office version (Word): • The basic METHOD (**default**): Drag or cut-and-paste	OK?	OK?	OK?

Historical data-points (re: prior versions)

Issues with Round trip editing on Macs

- For those using Office 2011 on Macs, it was possible to be able to drag and drop from Chemdraw into Word 2011 and drag and drop the image back into Chemdraw for editing. This is no longer the case for Office 2016.
- Dragging and dropping from ChemDraw 15.1 to Word 2016 will paste an image into the Word document but the image will NOT be editable
- Copying(+C) and Pasting (+V) will only paste text into Word(2016)
- IMPORTANT: Opening an old Office 2011 file in Office 2016 and re-saving it will not affect the images already in the document (you can drag them into Chemdraw for editing). However, anything dragged into Office 2016 will still not be editable.
    - You must instead "Paste as PDF" (via menu or via +Control+V).

Supporting documentation

- Issue came up with MS Office 2016, back in version ChemDraw v13:
    - http://disq.us/p/z7dtk1
- Still a noted issue with ChemDraw v15:
    - http://media.cambridgesoft.com/support/manuals/15_1/ChemOffice%20v15.1%20Release%20Notes.pdf

    7 Known Issues, Limitations and Workarounds (as of download date 10/31/2016)

    The following list describes the known issues, limitations, and workarounds for ChemOffice 15.1:

    • When you copy any object from ChemDraw (Mac) and paste (default) in MS Word 2016, it pastes an MOL text version of that object instead of the original object view.

        o Workaround: Use the 'Paste Special >> PDF option in MS Word to get the original object view pasted. This PDF object can be copied back to ChemDraw by maintaining all ChemDraw object properties.