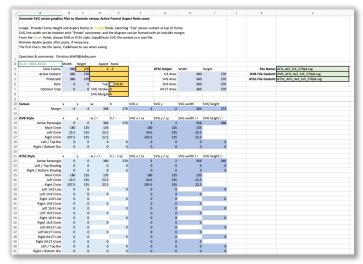
How to: Create AFD diagrams in SVG Format (Excel)

1. Open 'Active_Format_Aspect_Ratio_Calculator_v1.3.xlsx'



2. Select desired AFD parameter

-03-22	Width	Height	Aspect	Ratio
Total Frame:	360	270	4	:3
Active Content:	360	202.5	16	:9
Protected:	315	202.5	14	:9
Bars:	0	33.75	Top:	FALSE
Optional Crop:	22.5	0	SVG Stroke:	4
			SVG Margin	4

3. Select desired target style (e.g. "DVB") and copy content a.



b.

File Name:	AFD_4x3_16x9_14x9_270p4.svg			
DVB File Content:	DVB_AFD_4x3_1	Cut	₩X	
ATSC File Content:	ATSC_AFD_4x3_	Сору	ЖC	
		Paste	₩V	
		Paste Special	- N	

4. In text editor of choice, create a new document and paste

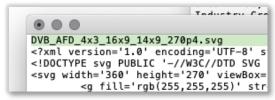
a.

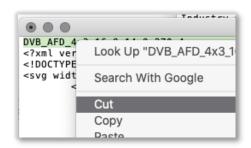


b.

5. Delete double quotes at start and end of file

6. Select and cut first line, containing the file name



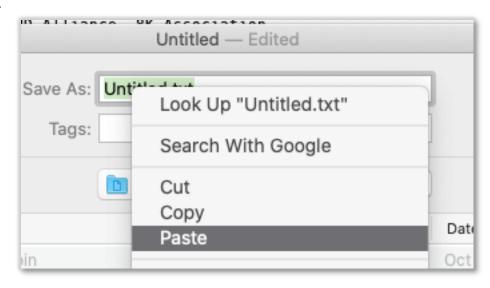


7. Save file, using the cut file name

a.

Edit	File	Edit	Fo		
Aut	Ne Op	w en			
nsert	Open Recent				
t che	Clo	se			
ch-	Save				
# S *	S Duplicate				

b.



8. If necessary, delete trailing space

a.



b.



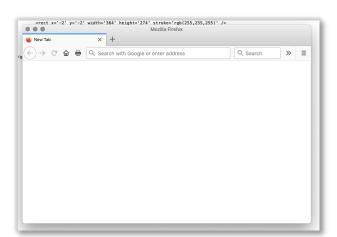
9. Make sure to use ".svg" file name extension



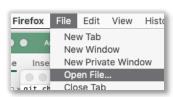
10. File looks good

11. Open file in web browser

a



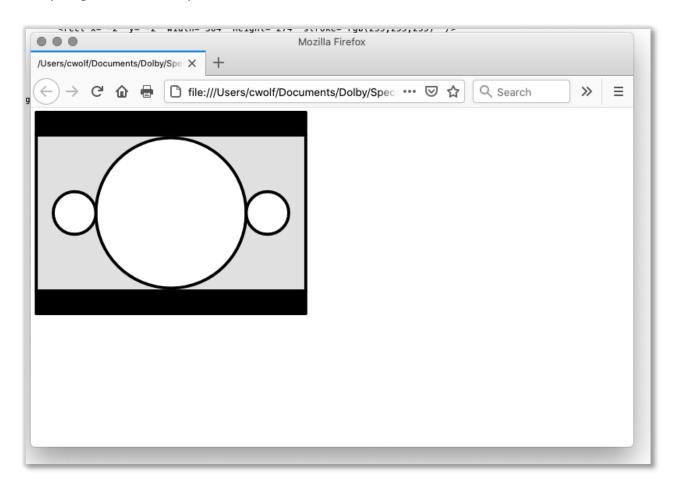
b.



c.



12. Verify diagram looks as expected



How to: Create AFD diagrams in SVG Format (Perl script)

Open a shell

```
■ afd_svg_generator — -bash — bash — ttys004 — 132×26 — \%1

CWOLFF-MBP16:afd_svg_generator cwolf$
```

2. Run perl script with '-help' option for detailed instructions

```
CWOLFF-MBP16:afd_svg_generator cwolf$ ./afd_svg.pl -help

Generate SVG vector graphics files to illustrate various Active Format Aspect Ratio cases.

Usage: ./afd_svg.pl [-h <height>] [-s <stroke>] [-asp <h> <v>] [-cont <h> <v>] [-prot <h> <v>] [-prot <h> <v>] [-t] [-style <style>]

Command line options:

-h <height>: SVG diagram height, integer. Default: 270
-s <stroke>: Stroke>: Stroke width (SVG line width), decimal fraction. Default: 4.0
-asp <x> <y>: Coded Frame Aspect Ratio, integers. Default 4: 3
-par <x> <y>: Pixel Aspect Ratio, integers. Default: 1: 1 (square pixel)
-cont <x> <y>: Active Content Aspect Ratio, integers. Default: full frame
-prot <x> <y>: Shoot&Protect Aspect Ratio, integers. Default: same as Content AR
-t: Place content at top of frame. Default: centered in frame
-style <style>: Select the AFD diagram style, either 'DVB' or 'ATSC'. Default: DVB
-shade <grey percentage>: Select the shading, 0 (white) to 100 (black). Default: 12.5
-margin -margin -prot <
```

NB.: '-par' option is implemented in version 1.4 and above of the script

3. Run perl script with desired AFD parameters

```
CWOLFF-MBP16:afd_svg_generator cwolf$ ./afd_svg.pl -asp 4 3 -cont 16 9 -prot 14 9 -style DVB
Generating SVG 'DVB_AFD_4x3_16x9_14x9_270p4.svg'
CWOLFF-MBP16:afd_svg_generator_cwolf$
```

4. Where bash shell is available, the 'afd_svg_set.sh' shell script will generate a full set of AFDs in a folder

```
CWOLFF-MBP16:afd_svg_generator cwolf$ ./afd_svg_set.sh 4
Creating AFD set with stroke 4, height 270, shade 12.5 and margin 4 in 'AFD_SVG_Stroke4'
Generating SVG 'DVB_AFD_4x3_16x9top_270p4.svg'
Generating SVG 'ATSC_AFD_4x3_16x9top_270p4.svg'
Generating SVG 'DVB_AFD_16x9_16x9top_270p4.svg'
Generating SVG 'ATSC_AFD_16x9_16x9top_270p4.svg'
Generating SVG 'DVB_AFD_64x27_16x9top_270p4.svg'
```

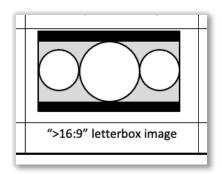
[...]

5. Verify generated files in web browser, see step 11 above

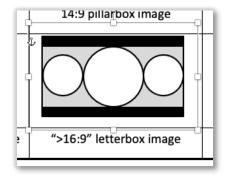
How to: Embed AFD diagrams in CTA-861 Word document

1. Click on diagram to be replaced, to select it

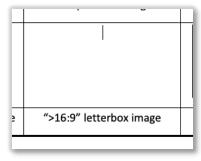
a.



b.



2. Delete the old diagram, with Del / Backspace

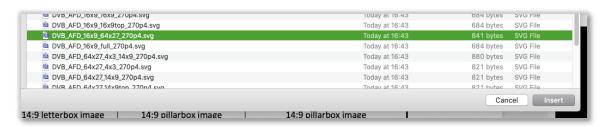


3. Place the cursor where the diagram was, and select from the menu "Insert" --> "Pictures" --> "Picture from File..."

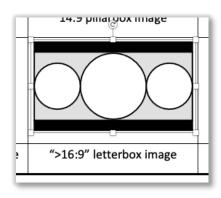


4. Choose desired replacement file and click "Insert"

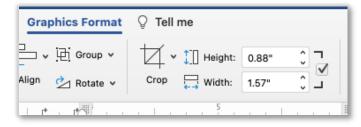
a.



b.



- 5. Adjust picture size, e.g. by setting a unified height. Make sure Height and Width are locked to each other
 - a.



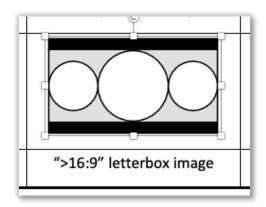
b.



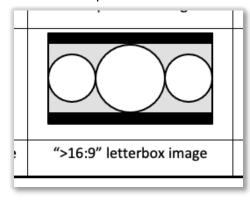
c.



d.



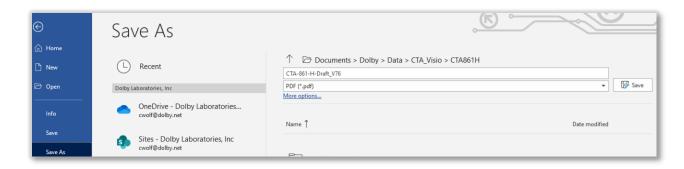
6. De-select the picture



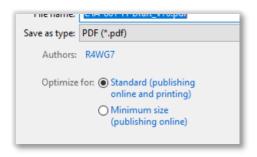
7. Done.

How to: Convert Word file to PDF

- 1. Use MS Word for Windows. Word for Mac and the online version on office365.com are insufficient and will not maintain SVG graphics as vector format in PDFs.
- 2. Select "File" --> "Save As..." and select "PDF (*.pdf)" (do **not** use "Print to PDF"!)



3. In "More options...", make sure that PDF format is "Standard":



4. Select a destination folder and a file name, if needed, then save the file.