USING SCREEN CAPTURE TO MAKE AN LPSC POSTER STARTING FROM A POWERPOINT SLIDE SHOW. D. M. Burt, ASU School of Earth and Space Exploration, P.O. Box 876004, Tempe, AZ 85287-6004, dmburt@asu.edu.

Introduction: This presentation discusses, for purposes of education, an alternative or unconventional method for preparing posters for the Lunar and Planetary Science Conference and other scientific meetings, using an existing PowerPoint slide presentation as a basis. Note that a web search quickly reveals a number of articles on how to prepare a poster conventionally using PowerPoint (e.g., from Washington State University [1]). Basically, that method consists of setting up a single giant blank slide in PowerPoint, and then pretty much filling it in starting from scratch (or using provided templates). This single slide will become the poster, quite possibly too disorganized and data-dense for easy comprehension by the casual viewer.

Many experienced researchers and academics, including this author, might prefer not to have to start their poster-building from scratch, given how accustomed they've become to organizing and presenting everything as PowerPoint slides. Nevertheless, numerous session topics at the Lunar and Planetary Science Conference are now available only as poster sessions, and not for oral or virtual slide presentation.

The purpose of this discussion is to demonstrate how, with a few extra steps and some common image-editing software, a visually pleasing, well-organized, and informative LPSC poster can be prepared directly from a pre-existing PowerPoint slide presentation, as suitably modified for poster purposes (i.e., utilizing a relatively small number of slides).

Somewhat simplified, the method consists of preparing and presenting the slide show on a high-res screen (a full HD monitor or laptop screen, 1920 x 1080, should be sufficient), utilizing screen capture to save the individual slides in the presentation as image files (Windows or Mac computers readily allow this), manipulating, if needed, the saved image files appropriately in a graphics program, and then creating and publishing the desired poster utilizing the "create contact sheet" function of the graphics program itself.

A free (for home use) image-editing program for Windows, FastStone Image Viewer by FastStone Corp. [2], currently in version 7.7, has long offered all the needed capabilities for preparing posters from screen-captured PowerPoint slides, using its built-in contact sheet function. I have used it multiple times over the years for this purpose, and so in what follows I shall use it as an example of the method to follow in Windows. (Note that the FastStone creator does appreciate donations.)

Detailed Directions: Step 1 is to decide what size poster is desired. For 2022 the maximum LPSC poster size allowed was 44 by 44 in (112 by 112 cm). Poster sizes and formats for 2023 have not yet been formally announced, but using last year's limits seems reasonable.

Step 2 is to specify the shape (relative proportions) of the slides, which will determine the number and arrangement of slides that will become the poster. Modern PowerPoint slides tend to be 16:9 for use with modern wide-screen monitors and projectors. Other proportions could be used (or could be obtained by cropping later), but for purposes of this example, let's stick with 16:9. A convenient size for the poster might then be 2 slides wide by 4 tall, for a slide total of 8. Using the 16:9 proportions as inches, the poster would then be 2 x 16 = 32 in. wide and 4 x 9 = 36 in. tall, well within the 44 x 44 in LPSC limits.

Step 3 is to prepare the 8 PowerPoint slides that will make up the example poster, probably starting from an earlier, longer slide show and combining multiple simple slides into single more complex slides where possible. Possible poster slides, for example, might include a title slide, a summary slide of main points, four detailed data/example slides, a discussion/conclusion slide, and an acknowledgements/references slide. As usual with PowerPoint slides, pick a pleasing color scheme and keep font sizes as large and readable as possible (no need to reinvent the wheel just for the poster). Sequentially numbering the slides in PowerPoint may assist the poster viewer.

Once the simplified PowerPoint presentation is ready, step 4 is to do a screen capture of each slide as it is shown on the 16:9 laptop screen or monitor. In Windows 10 or 11, the Windows key + PrtScr key combination automatically saves the screen image to a subdirectory Pictures\Screenshots [3], although more complicated options are available. Do this 8 times for the 8 slides in the example. Assuming a full HD screen, the screenshots will be saved as 1920x1080 PNG files (a lossless format) named Screenshot (1), Screenshot (2), and so on. Note: screen capture can also be done within common graphics programs such as FastStone itself. Screen captures on a Mac are also straightforward [4].

Assuming step 4 is complete, step 5 is to inspect each of the screen captures in FastStone Image Viewer, using the drop-down menu tools at the top (or hovering the mouse to the left of the viewing screen) for making modifications. This step is when the captures can be

cropped to change their proportions, or reduced in pixel dimensions, or have the colors and contrast muted or intensified, or possibly be sharpened (or numerous other manipulations to taste). Adjustments made to one slide should be repeated for other slides to keep the poster uniform in appearance. Most likely, if care was taken in preparing the PowerPoint presentation itself, no such adjustments or modifications should be necessary.

Step 6, the final one, is to use the mouse to select the 8 screenshots (possibly as modified), and then go to the top menu item Create\Contact Sheet Builder. Fill in the Settings Menus for the size of the Sheet (for our example, 32 in. wide by 36 in. tall), the margins to use, the background color, the number of thumbnail columns (2) by rows (4), the inter-figure spacing, the border spacing, and so on. You may have to experiment with the settings in the contact sheet builder (using the Preview option) to get the exact appearance you want. This could well include modifying the exact poster dimensions. Save your completed contact sheet (poster) as a pdf file (although it can also be saved in various image file formats).

An example of a 2021 poster (greatly reduced in size) prepared using the exact screen capture method described above is given for reference in Fig 1.
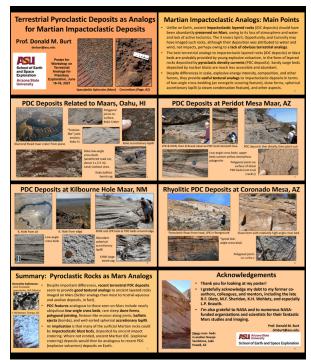

Fig. 1: Example of a screen capture poster from slides (2021 LPI Workshop on Mars Terrestrial Analogs [5]).

Discussion: This method, as used by me, is somewhat complex and requires passing familiarity with both PowerPoint and a suitable image-processing program, such as FastStone, that has a built-in contact sheet builder to build the poster. If this seems too complex, one could simply directly copy and paste the 8 screen captures obtained via Step 4 above onto a single very large PowerPoint slide to make the poster (a modified version of the giant-slide method described by WSU [1]). This would be a more conventional technique. Its unconventional or unique feature would be that it still would amount to using PowerPoint twice in succession in vastly different ways, first to organize and set up the poster, and second to actually prepare or make it. If you use this method, please let me know how it works out. Note that I have always been pleased with the results obtained using FastStone's Contact Sheet Builder (e.g., Fig. 1).

Given the required use of the proprietary software iPosters for virtual posters at the last several LPSC meetings, virtual meeting posters probably could not be prepared using this exact method. Still, clever use of copy and paste should allow use of the basic PowerPoint screen capture approach in organizing and preparing this year's virtual posters for LPSC, if desired.

Conclusion: The advantages of using PowerPoint slides in creating a poster presentations are first, that the program should already be familiar, second, that the needed PowerPoint slides may already be available in some form, third, that the bulleted slide text should be relatively simple to understand, fourth, that the fonts should be relatively large (visible from a distance), and fifth, that the presentation can be fully organized in advance of actually making (setting up) the poster. In this regard, individual slides should, in principle, be much easier to revise or modify than the much larger poster taken as a whole.

References: [1] WSU/CougPrints (2022) https://cougprintsplus.wsu.edu/making-posters-with-powerpoint/, [2] FastStone Corp (2022) https://www.faststone.org/index.htm, [3] Antonelli, W. (2022) https://www.businessinsider.com/guides/tech/how-to-screenshot-on-windows, [4] Antonelli, W. (2022) https://www.businessinsider.com/guides/tech/how-to-screenshot-on-mac. [5] Burt, D.M., (2021), *LPI Contrib. No. 2595*, Abstract #8099.