

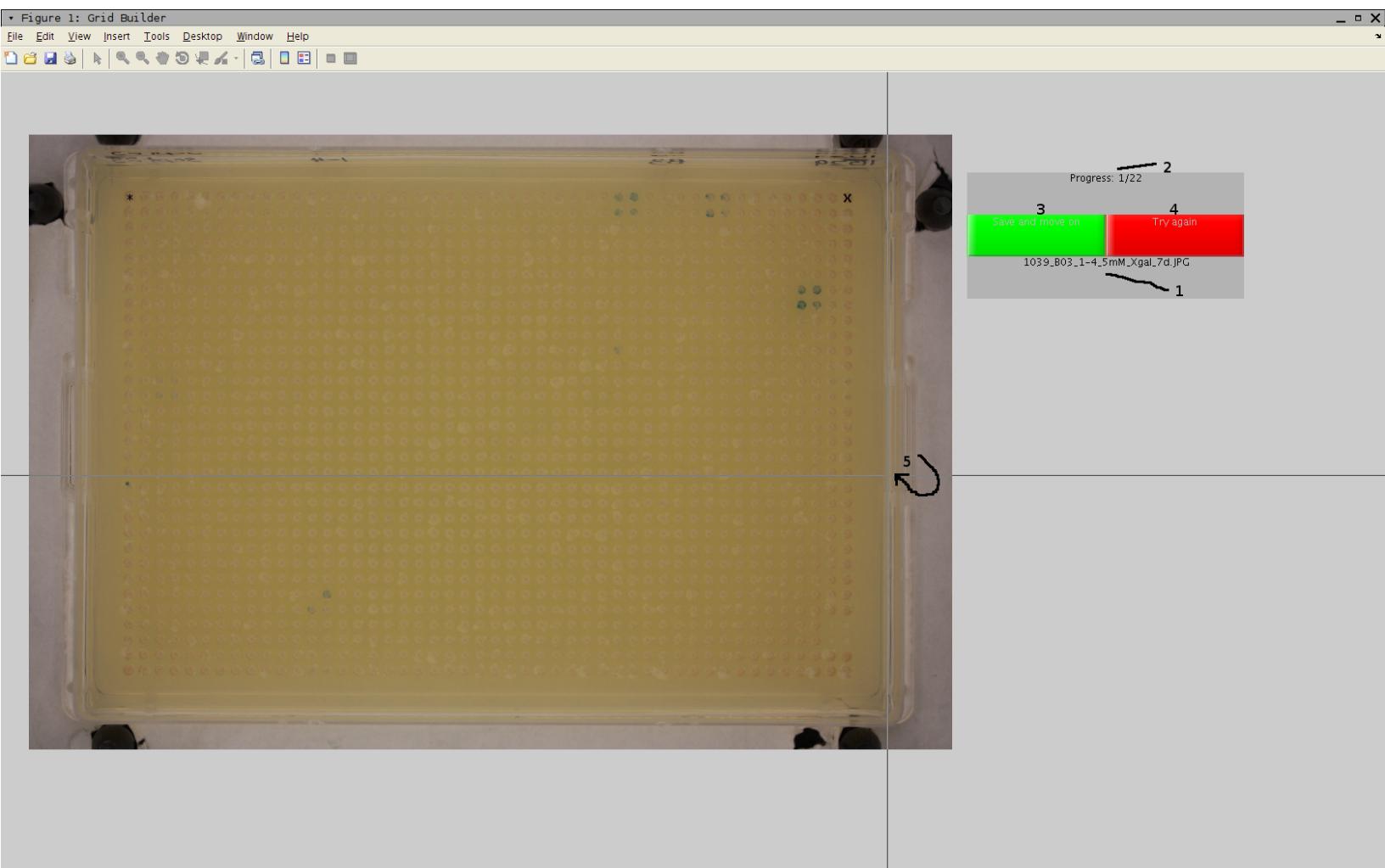
Interface:

This section explains all of the interface features that you will encounter when running this program. Additionally, it explains how to specify a potential grid.

When using this program, you will always be in one of three states:

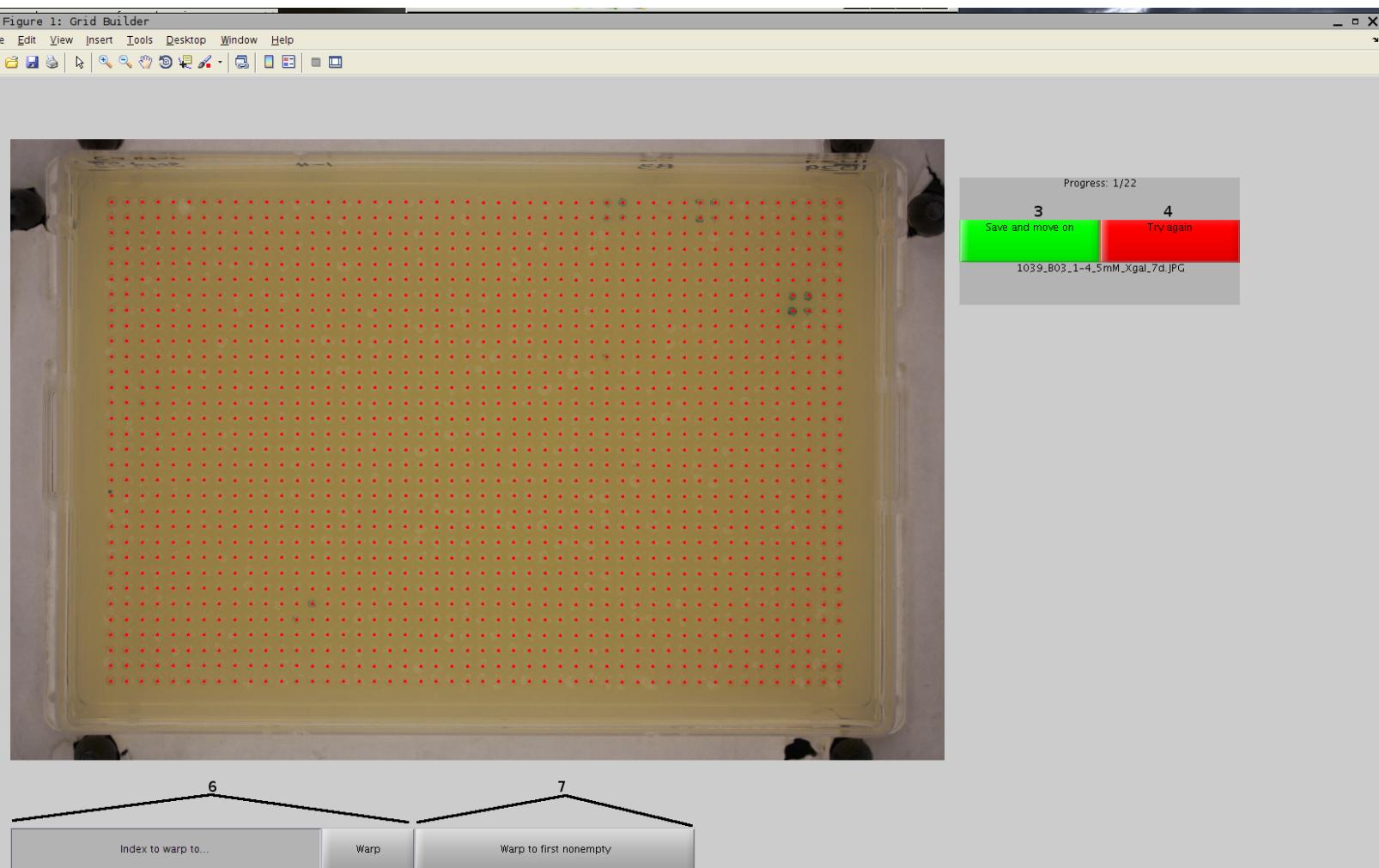
- Preparing to specify the grid
- Choosing to accept or reject a potential grid
- Reviewing a saved grid and deciding whether to keep it or replace it with a new one

The next three images will explain the various options available in these three states.



1. Filename
2. Progress
3. Save and move on – grayed out, inactive
4. Try again – grayed out, inactive
5. Crosshairs follow your mouse to help you specify points

The program works by having you specify (in this order!) the middle of the upper left and upper right hand colonies (labeled * and x in this image). Click once on the upper left's center then once on the upper right's center. The program will compute the grid and draw it like this:



Items number 3 and 4 are now no longer grayed out and you see a red grid. This is the computed grid, but it is not yet saved. If you are satisfied, pressing the green button (3) will save your progress, and move to the next image. Pressing the red button (4) will wipe the grid and allow you to make another attempt, essentially taking you back to the state we just discussed.

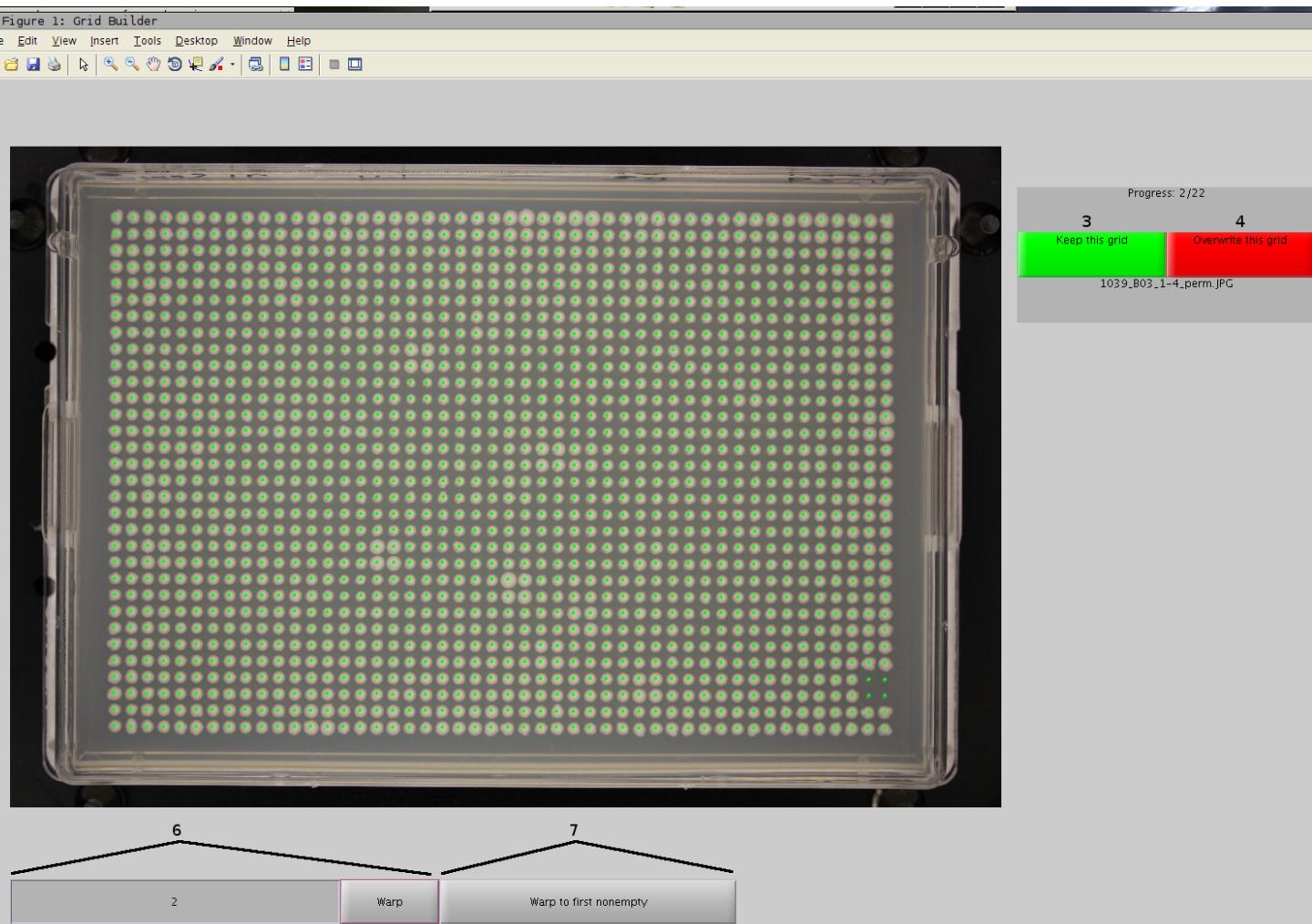
The new options are (6) and (7). Pressing (7) will skip you to the first image that has no data saved to it. Note that this might be equivalent to keeping you right where you are if you haven't ever saved a grid for it!

Item (6) allows you to specify an index and then warp to it. If you give it a bogus number, or non-numerical entry, it will complain, and not take you anywhere.

IMPORTANT: The only button that will save your tentative grid is (3). The gray buttons will leave navigate you to another image, but your grid data will remain unsaved.

Finally, if you either use (6) to warp to something you've already evaluated or resume a saved session

you will see something like this:



(6) and (7) are the same, but note (3) and (4)'s names have changed, as has the color of the grid.

The changes to (3), (4), and the grid color are visual cues that you are looking at saved data

In this state, pressing (3) will essentially do nothing except advance you to the next image. It basically says, "I like this grid and am satisfied with it." Pressing (4), on the other hand, means that you are not happy with your saved grid, and would like to try to do better. Pressing it takes you back to the first state we discussed.

Running the program:

The program will automatically save your progress every time you close its window. You shouldn't need to do anything special to easily pick up where you left off, even if you close Matlab, shutdown your computer, etc. All Matlab commands will be Monospaced and the Matlab prompt will be represented as >>

Place y1h.m into the directory that contains the images you want to grid. When the program runs, it will look in its folder for files with 'jpg' (case insensitive) in their names.

1. Open Matlab.
2. Near the top of the window, find the “Current Directory” bar and change your directory to where you downloaded the data.
3. Run

```
>> ls
```

Matlab will list the contents of the directory you are currently in. Make sure you see y1h.m If you don't, you are in the wrong directory.

4. If this is the first time anyone has worked on this folder, run:

```
>> grid_positions = y1h();
```

Otherwise, if you have saved data (look for a file called 'results.mat') run this to continue your work:

```
>> load results
>> grid_positions = y1h(grid_positions);
```

5. The graphical interface will pop up and you can go to work. I suggest you maximize the window.
6. When you are finished close the graphical interface window as you normally would. The program will automatically save your progress in the results.mat file. Running

```
>> grid_positions = y1h(grid_positions);
```

will start you at the first image again, but it will display the grid you have associated with it. You can press the “Warp to first nonempty” button to take you to the first picture that has no grid computed. See the interface section above for more detailed discussions of how to use the program.
7. When you reach the end, the window will automatically close and return you to the main Matlab window.

If you have any problems, Skype (cpesyna) or e-mail (cpesyna@gmail.com) me. If you want, I wouldn't mind talking with you while you get rolling with it. E-mail me to set something up.

A Note About Saving:

By default, the program saves its progress every time you click the green (3) button, and when you exit. It **always** saves to the results.mat file, which it generates when you call y1h() with no arguments.

Obviously, this means that you can overwrite old work if you are not careful. For instance, if you mean to load old work, but accidentally call

```
>> grid_positions = y1h();
```

instead of

```
>> grid_positions = y1h(grid_positions);
```

You will overwrite your old results.mat with a fresh blank one. The moral of the story is this:

'results.mat' is there as insurance for you, but it would be very wise to save your own version in separate file. You can either make a copy of the results.mat file with another name every time you're done or, from within Matlab call

```
>> save mydata.mat grid_positions
```