PELT – "Program Extras Like This" presents

"AutoBlend"
Automatically Blends Borders

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1. Introduction

Blending objects into a background is very easy with the new AutoBlend program.

This program automatically blends and smooths borders of objects that have been dropped into a background image.

This is NATURAL "anti-aliasing", as occurs when a film camera produces an image. It is not artificial "pix-mixing" as is the function of some other well known photo-editing software. No manual "feathering" is required. You do not point your mouse at borders, set the pixel feathering amount, feather that area, etc. Feathering is a "pix-mix" process where the pixels are randomly mixed and shuffled around a bit in the areas which you have to specify with your mouse. In contrast, AutoBlend not only "knows" where the borders are, but performs "natural" anti-aliasing – which is just a fancy term for old fashion border blending, as occurs in a film camera.

You start with a background bitmap image which we'll call BMP1. You drop into it objects – persons, animals, things – using a pen tablet or lasso tool, and rename your background image BMP2.

If you don't have a pen tablet or lasso tool, a free "Lasso" module is provided which allows you to work from scratch using just this program along with Microsoft Paint (which is on your computer already) to do the work.

Then you simply click "Run This Program". BMP3 is produced, and you'll observe that ONLY the borders of your "drop-ins" are blended and smoothed!

2. Installation

To install this program, simply unzip “AutoBlend.zip” you downloaded, and click “AutoBlend.exe”.

Here’s a detailed explanation.

Once you have the installation ZIP folder:

(1) Copy the Installation ZIP folder to your Desktop.

(2) Right click on the Installation ZIP folder.

(3) Click "Extract All". Then simply click "Next", and let the computer create a folder onto your desktop. It will then extract the files into it.

(4) Click "View Extracted Files", or browse to the folder (using “My Computer” or “Windows Explorer”) that was just created.

(5) You are now ready to run the program. Just click “AutoBlend.exe” – it’s the icon with the yellow torch.

Optional:

(6) While in this temporary folder, click Install.exe. This will create the folder c:\Program Files\PELT\AutoBlend and will copy the file contents of the temporary folder to there. If all goes well, it should launch the program automatically.

To Windows VISTA users: Run the program by right-clicking on "AutoBlend.exe" (the icon is a yellow torch), and then click "Run as Adminstrator".

3. Register the Program

Before registering the program, it will produce images which have horizontal lines across the output image that you produce. You can zoom in on the borders to see that the borders are indeed blended and smoothed automatically. To get rid of these lines, you must register this program. Here’s how:

Note that when you run the program you produce a file named “My_Volume_Serial_Number_Is_This.txt". It will be produced in your “home” directory -- the same directory you are running the program from. Email this file to the program vendor, and secure payment for this program. In return, you will receive the file "ActivationCode.txt". You can then copy it to your home directory; if you installed the program, it would be here: c:\Program Files\PELT\AutoBlend. Alternately, you can open the file with any text editor (such as Notepad, Wordpad, Word, etc.), and view the Activation Code. Then click the "Utilities" drop down menu, and click "Register Program". Type the Activation Code into the box, and click "Go" to register your program fully.

4. Running the program – Jump in and Test drive it NOW!

Let's jump right in and see how the program works, using bitmap samples that are included with this program.

When you first start the program, it looks like this:

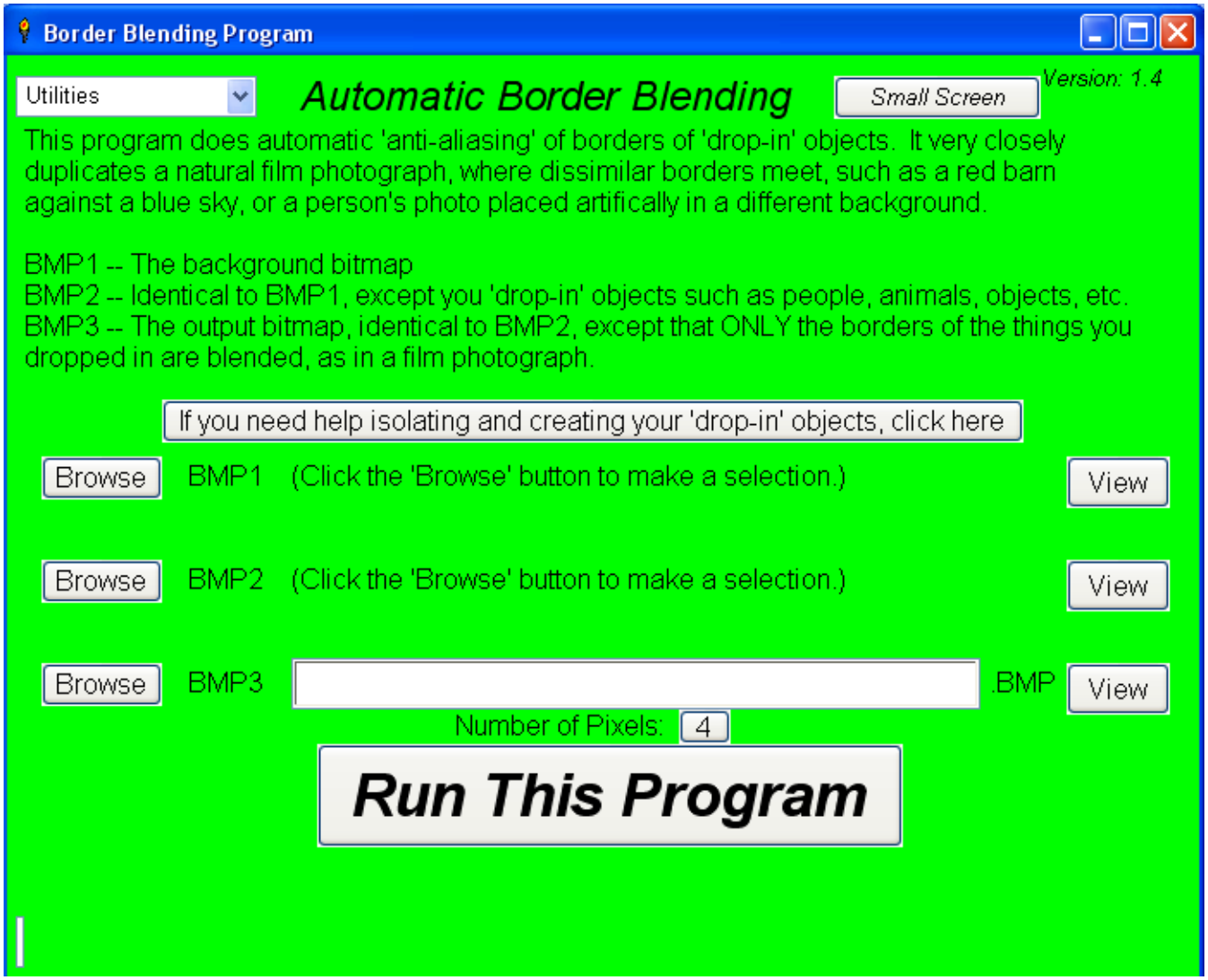


Diagram 1 – AutoBlend, the main screen.

Use the Browse buttons to navigate to where your bitmaps are located, and then either double-click on them, or click "Open" to copy that names of the bitmaps into the appropriate fields on your screen.

There are three main lines: BMP1, BMP2 and BMP3 on your screen.

The first line BMP1 should contain the name of the "background" bitmap. When you click on "Browse", a navigational box will open where you can then browse to the location of your background BMP. When located, double-click click on it, or click "Open". The name of this

bitmap will be copied into the first line.

Let's start right away with an example included with the program. Click on the above mentioned "Browse" button, and click on "Sample1.bmp". This is a low resolution (300 x 400 pixels) bitmap of trees and sky. This is what it looks like:

The second line contains the name of BMP2, which has the same exact background as BMP1, except that you have dropped in objects such as persons, animals, things, etc. Use the "Browse" button for line 2 to copy the name of bitmap 2 to this area. In the current example, you should see "Sample2.bmp", which is the same as BMP1 above, except that an eagle has been cut out and dropped into the background. Double-click on it. If you want to, click "View" at the end of the BMP2 line, and here is what it looks like:

Notice how rigid and artificial the borders of the eagle appear against the background. This is preciesly what we wish to fix.

The third line is a box, and it contains the name of BMP3, your output file.

Notice that when you select your bitmap 2 (above), that the same name is copied into the box for the third line, with an extension "-click" added. In this example, since the name of your bitmap2 is "Sample2.bmp", then "Sample2-click.bmp" will appear in the box in the third line. If this name (Sample2-click.bmp) is ok, then proceed. If you want to change the name of BMP3, then either manually alter its name, or use the "Browse" button for the third line to select an existing BMP name.

Finally, just click "Run This Program". A progress bar lets you know how far along (from 0 to 100%) the program is completed. When finished, you may view BMP3 by clicking on "View" (at the end of the BMP3 line). Observe that that ONLY the borders get blended! That is, only the borders of where the drop-in objects touch the background get smoothed. In this example, the output bitmap “Sample2-click.bmp”, zoom in on the borders where the eagle’s feathers touch the background. Notice how smooth this is in this version of the program being properly registered:

Example of running the program using the included examples Sample1.bmp and Sample2.bmp; note that an unregistered version will produce gray lines across the image. See how the eagle's feathers are blended against the background. Zoom in the borders for close inspection! Below is a comparison of the eagle's head in both Sample2.bmp (included) and Sample2-click.bmp (which you produce using this program):

Note that after you see “Progress: 100%”, the name of the finished image is displayed inside of the progress bar.

The program is set by default to blend four (4) pixels plus or minus around the edges of all the borders. It is not terribly important to alter this number one way or the other. If you're dealing with low resolution images, maybe drop it down to "2" or "3". For higher images, keep it at "4" or higher. If you want to change this number, you may do so by clicking on the number "4", which is located directly above the "Run This Program" button. The range is limitted to 1 to 6 pixels. Clicking on this small square will toggle the numbers up and down from 1 thru 6.

You can use the "View" buttons to view any of the bitmaps. Note that they will be displayed using your pre-assigned bitmap viewer program. Here's how to set your file associations:

Windows XP: While in Windows Explorer, click "Tools", click "Folder Options", click "File Types"; browse down the list to "BMP", then click "Change", then click either click on the icon for whichever program you want, or click "Browse" to browse to that program. Suggestion: keep your BMP viewer as Microsoft Paint.

Windows Vista: Right-click on a bitmap. Click "Open With", and click "Choose Default Program". Then click "Paint". Then, in small letters, click "Always use the selected program to open this kind of file", and click "Ok".

Suggestion: For your first few runs of this program, keep the images at low resolution, say about 600 x 400 or lower to begin with. You will then get the feel of how this program works. Avoid very large images for the first couple of tests. Keep it simple the first time, and test with low resolution images.

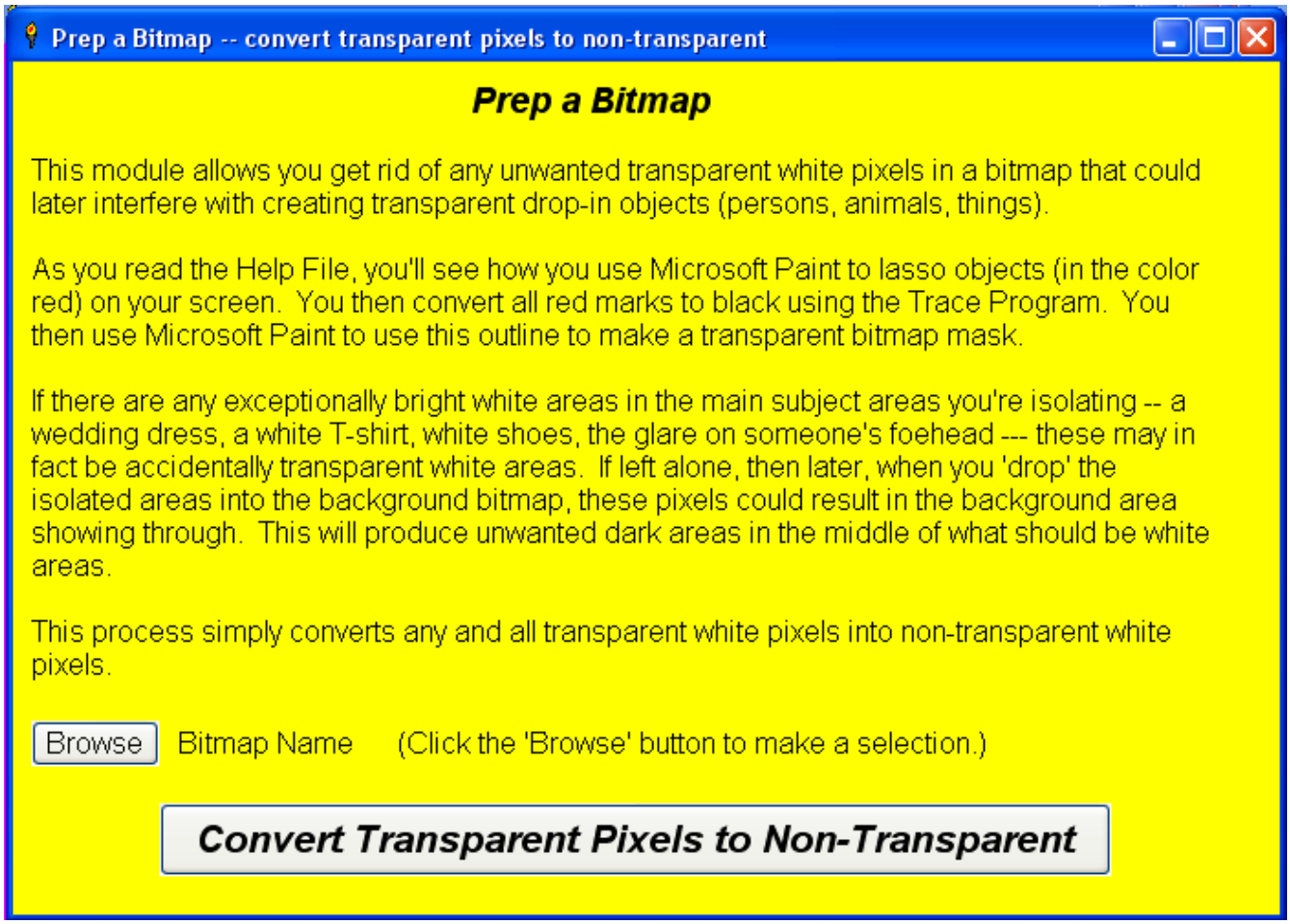
Let's now begin with step-by-step instructions.

Step 1. Start with your background image, which we will nickname BMP1. An example is seen in Diagram 11 in the following pages.

Step 2. If your background image has any brilliant white areas (such as a wedding dress, a T-shirt, white shoes, etc.), you must now "prep" the image to convert any accidental transparent white pixels into non-transparent white. If you don't then, later on, when you click "Run This Program", any accidental white pixels will "show through", revealing the background pixels. This results in blotchy areas which could be hard to edit out.

If you know your background image doesn't have any brilliant white (transparent white) pixels in it, just skip to the next step.

To "prep" the image, click "Run Lasso Module", and then click "Prep a bitmap: get rid of unwanted transparent pixels". You will then see this screen:



Simply browse to the location of your background image, and click “Convert Transparent Pixels to Non-Transparent”.

Note that you should only prep the background bitmap. Do NOT prep any other bitmaps in the below working sequence. Doing so would change the intended transpareny effects, and not allow you to copy and paste one bitmap on top of the other.

Step 3. Take this background image and do a “Save As” or “Export” and rename this file as “background_with_object.bmp”, or something like that; we’ll nickname it BMP2 for short. An example is seen in Diagram 12 below in the following pages.

Step 4. If you’re using Adobe PhotoShop and/or have a pen tablet or a lasso tool, then “lasso” your object(s) – persons, animals, things – and insert them into BMP2, click Save, and then skip to Section 6.

If you don’t have a pen tablet or lasso tool, the next section (Section 5) details how the “Lasso” program module can be used (along with Microsoft Paint) to create a template that can then be used to drop into your background bitmap (BMP1) to then become “background_with_objects.bmp” (BMP2).

5.“Lasso” Your Drop-In Objects.

Your goal in using the Lasso program module is to “lasso” objects, that is, to create transparent white bitmaps of equal quality to highly priced photo editing software. The Lasso module is free and will run regardless if the main program has been registered or not.

To run the Lasso module, click the ‘Utilities’ drop-down menu, and click ‘Run Lasso Program’. Here is what you will see:

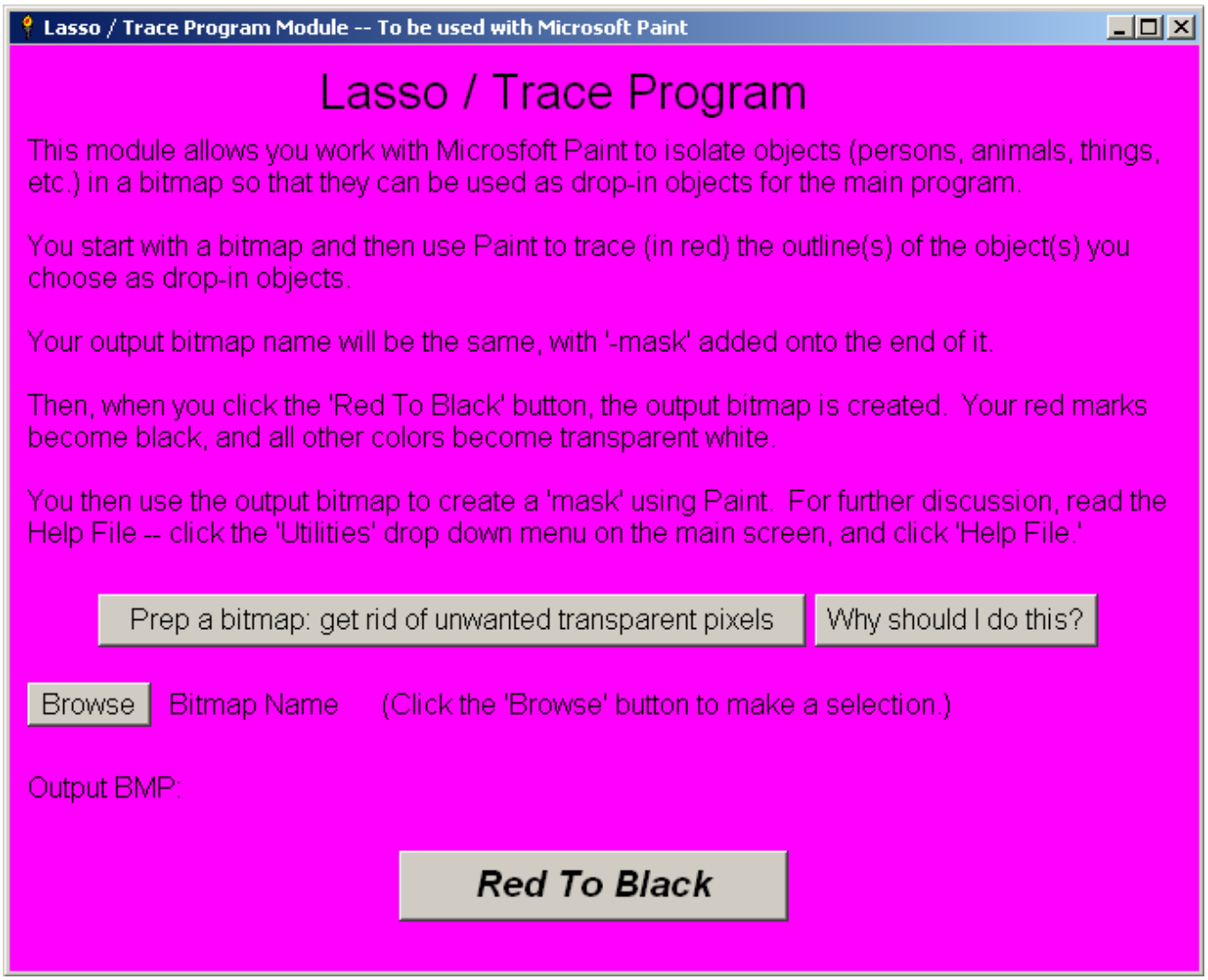


Diagram 3a: The Lasso Program – allows you to “lasso” objects.

To open Microsoft Paint, click “Start”, click “Programs” (or “All Programs”), click “Accessories”, and finally click “Paint”.

Here is what Paint looks like when opened with Windows Vista.

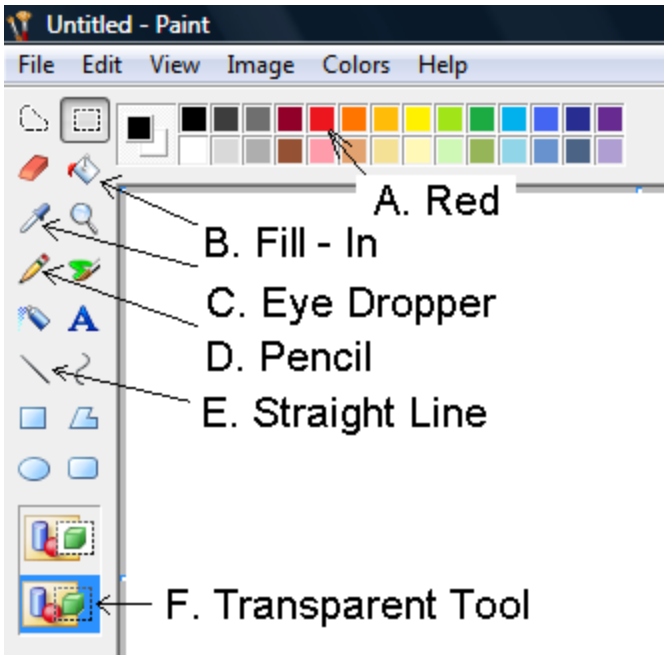


Diagram 3b – Microsoft Paint, with emphasis on features you need to know.

Here's a nutshell of what you'll be doing:

You will be using the color red ("A", in diagram) to outline your objects by using either straight lines ("E"), or irregular lines using the pencil ("D"). When done, you'll run the Lasso program. This will make a duplicate bitmap, converting your red lines to black, and turning everything else to transparent white. You then use the fill-in feature of Paint ("B", above) to create a black and white "mask". After this, you'll copy this mask on top of your original bitmap. VERY IMPORTANT: When you do this, the transparent tool ("F", above) then becomes visible. You click on it to overlay your mask on top of your original bitmap. You again use the fill-in tool ("B"), this time turning the solid black areas into transparent white. You're done! You now have your "objects" isolated into transparent white bitmaps.

Here's an example in detail:

First, I choose a photo of a good foreground subject that does not have a very good background. Here's a parrot, with in a dull, drab background.

Diagram 4. A sample background image: Z1.jpg, your original photo.

We'll call the above photo Z1.jpg. Open it using Microsoft Paint, as detailed above. The next step is to save it as a bitmap. In Microsoft Paint, click "File", click "Save As", and rename it as "Z2" (in the "File Name" line), and then directly under it, choose "24-bit bitmap". From now on, we will maintain our file format in bitmap. When we refer to a "bitmap" or "BMP" we refer to the 24-bit bitmap format. Do NOT switch back to JPG or any other file format.

Trace around your subject area(s) in red.

The next step is to simply copy this bitmap as the next letter in the sequence: Z3.bmp. To do this, click File, Save As, then click Z3 and on the next line, choose bitmap.

While in Microsoft Paint, click on the color red in the "color box". If the color box is not visible, click "View" and check "color box" square. You can then click "View", then "Zoom", then "Custom", then "600%" or maybe "800%", and click "OK". This will allow you to magnify the image on your screen, and outline the borders in red using either the pencil ("D", Diagram 3b above) or the straight line ("E", Diagram 3b).

You'll find that most of your time will be spent carefully tracing the outline(s) of your subjects in red. When you're done you'll have the below image:

Diagram 6. Image Z3.bmp, your image outlined in red.

Run the Trace Program, as described above. Click the “Browse” button, and use the browse function to navigate to where your image Z3.bmp is located, and then double click on it. You’ll see the name and location of Z3.bmp shown beside the words “Bitmap Name”, as seen in the above diagram.

Then click the button “Red to Black”. As explained above, you’ll be creating a bitmap with your red markings turned to black, and everything else converted to transparent white. The output bitmap will be the same name except that “-mask” will be tacked onto the end of the name. The program will then open the output bitmap, using whatever you have set as your default bitmap viewer. The result will be the below image:

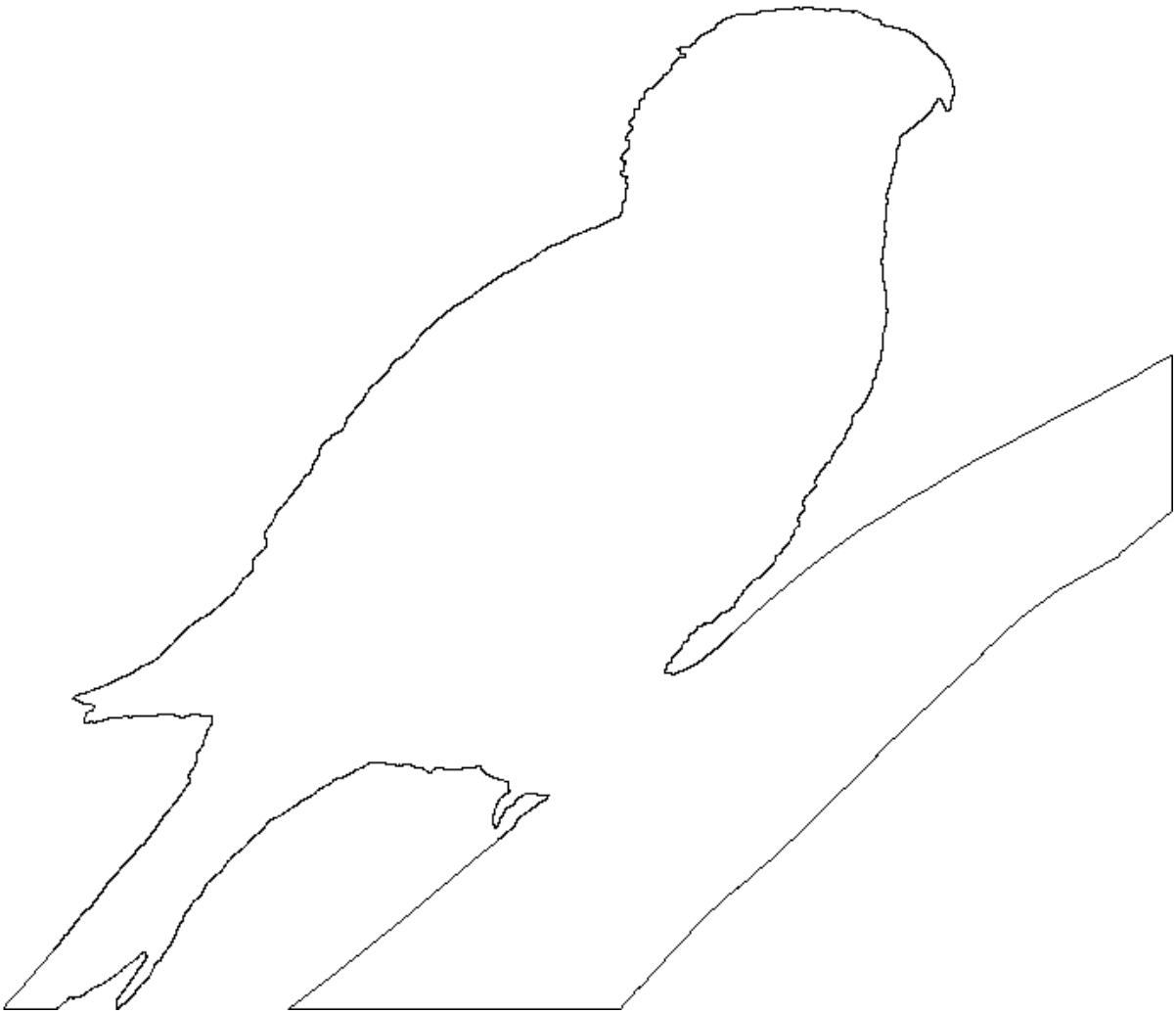


Diagram 7. Z3-mask.bmp: Your red markings are turned to black; everything else becomes transparent white.

Next, using the Fill-In tool of Microsoft Paint (“B” in Diagram 3b, above), click on the exterior area(s) and turn these areas black. Re-save the image as Z4.bmp. (Click “File”, “Save As” and enter “Z4” in the “File Name” box. Keep the format as “24-bit bitmap”.)

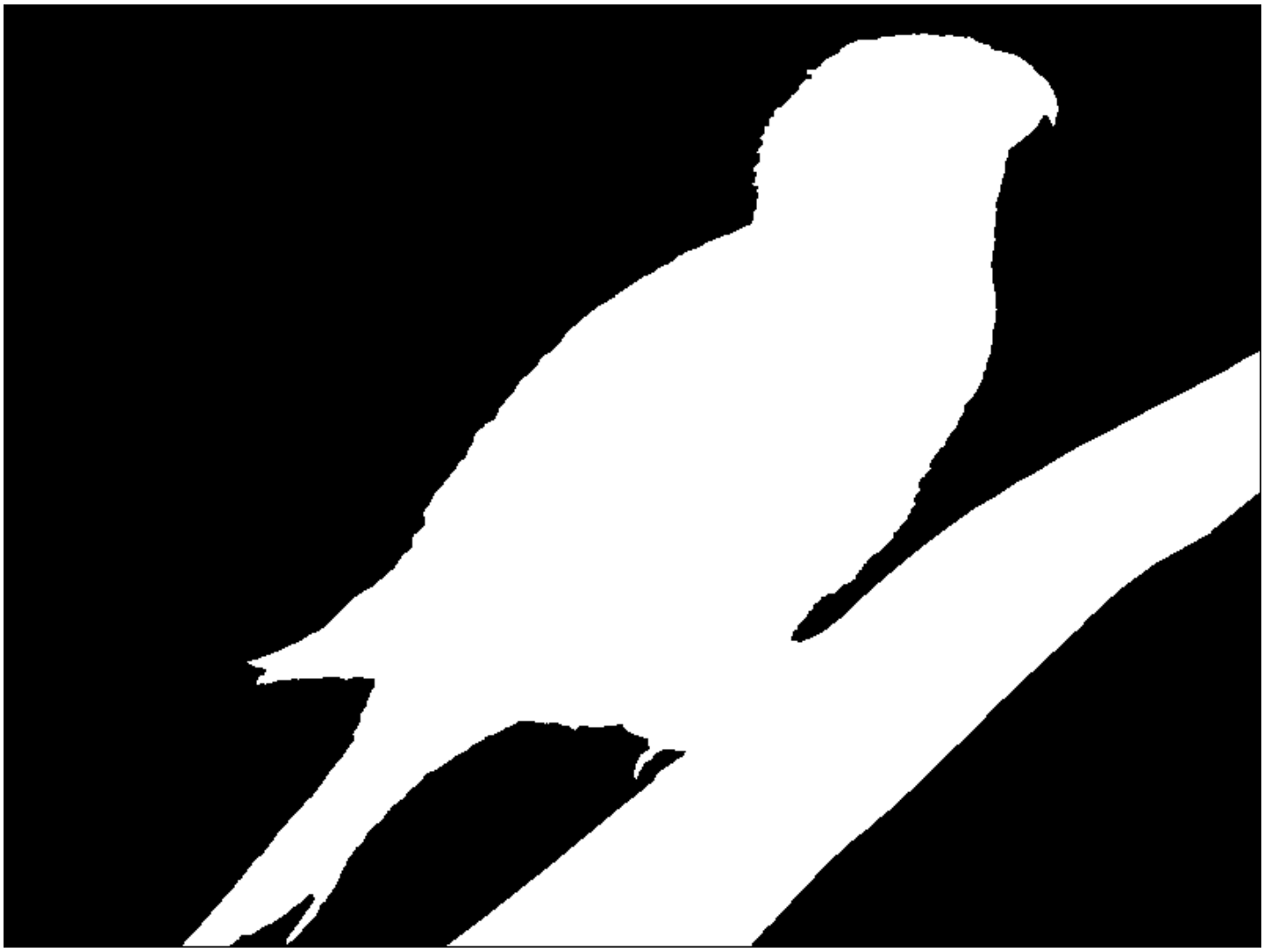


Diagram 8. Image Z4.bmp, a black and white “mask”.

While viewing Z4.bmp using Microsoft Paint, click “Edit”, then click “Select All”, and click “Copy”.

Then click “File”, click “Open” and click on Z2.bmp. When you’ve opened Z2.bmp, click “Edit” and click “Paste”. You’ll notice that the “Transparent” tool (“F”, in diagram 2 above) is now visible. Click on it. Then click “escape”, which bonds the two images together --- the dotted lines surrounding the borders disappear. Here’s what will appear on your screen:

Diagram 9. In progress: masking the subject.

Finally, in the “color box” (in Microsoft Paint) click the color white. (If the “color box” is not visible, click “View” and check the “color box” square.) Then click on the “Fill-In” tool (“B”, in diagram 2), and click on the solid black areas, turning them into transparent white. Resave the final image as Z5.bmp, as shown below:

Diagram 10. Z5.bmp, the final isolated image: A drop-in object with transparent white as the background.

Here's a sample bitmap I chose as a background, and renamed it here as Z6.bmp. Notice that it is a bitmap, not a JPG or GIF or any other format image. You must stick with the bitmap format.

Diagram 11. Z6.bmp -- a sample background, which will be your background.bmp (BMP1)

We open our drop-in object with Microsoft Paint. In the previous section, it is Z5.bmp, which is the parrot against a transparent white background.

Click “Edit”, “Select All”, “Copy”.

Then open Z6.bmp using Microsoft. Then click “Edit”, then click “Paste”. You’ll then see the “Transparent” tool (“F” in diagram 3b, above) become visible. Click on it. You now see the parrot and the background image together. Click “Save As” and save it as Z7.bmp, as shown here:

Diagram 12. Z7.bmp: Parrot with other background. This is your background_with_object.bmp (BMP2).

Notice how rigid and artificial the borders look against the background. This is precisely what we want to fix. We want to blend JUST the borders of the image above.

6.Run the Program!

If you've been following the above, here's a re-cap so far of what we've done:

Step 1: Begin with a background image (BMP1).

Sep 2. If necessary, "prep" the image to remove any unwanted accidental transparent white pixels and convert them into non-transparent white.

Step 3. Copy and rename BMP1 as background_with_objects.bmp (BMP2).

Step 4. Drop objects into BMP2, and then resave it.

Now we're ready to use AutoBlend to do the hard work of identifying the borders and blending them as they would appear in a film camera image.

Step 5. Run AutoBlend.

Step 6. For "BMP1", select your background image.

Step 7. For "BMP2", select your background_with_objects.bmp.

Notice that at the same time the name of BMP2 is displayed, the program copies that name as the name of bitmap 3 (BMP3) and adds "-click" to the end of it. Thus, you'll see the name of the output bitmap, BMP3, as "Z7-click.bmp". (If you wanted to, you could change the name in this box.)

Step 8. Click "Run This Program"

You will see a progress bar display the percent that the program is completing the output bitmap, which in this example is Z7-click.bmp. When it is done, simply click "View" – at the far right of the output bitmap line; see Diagrams 1 or 2. (Or, you could browse to its location with Windows Explorer or My Computer.)

When you open the bitmap (BMP3) to view it, you will see the below:

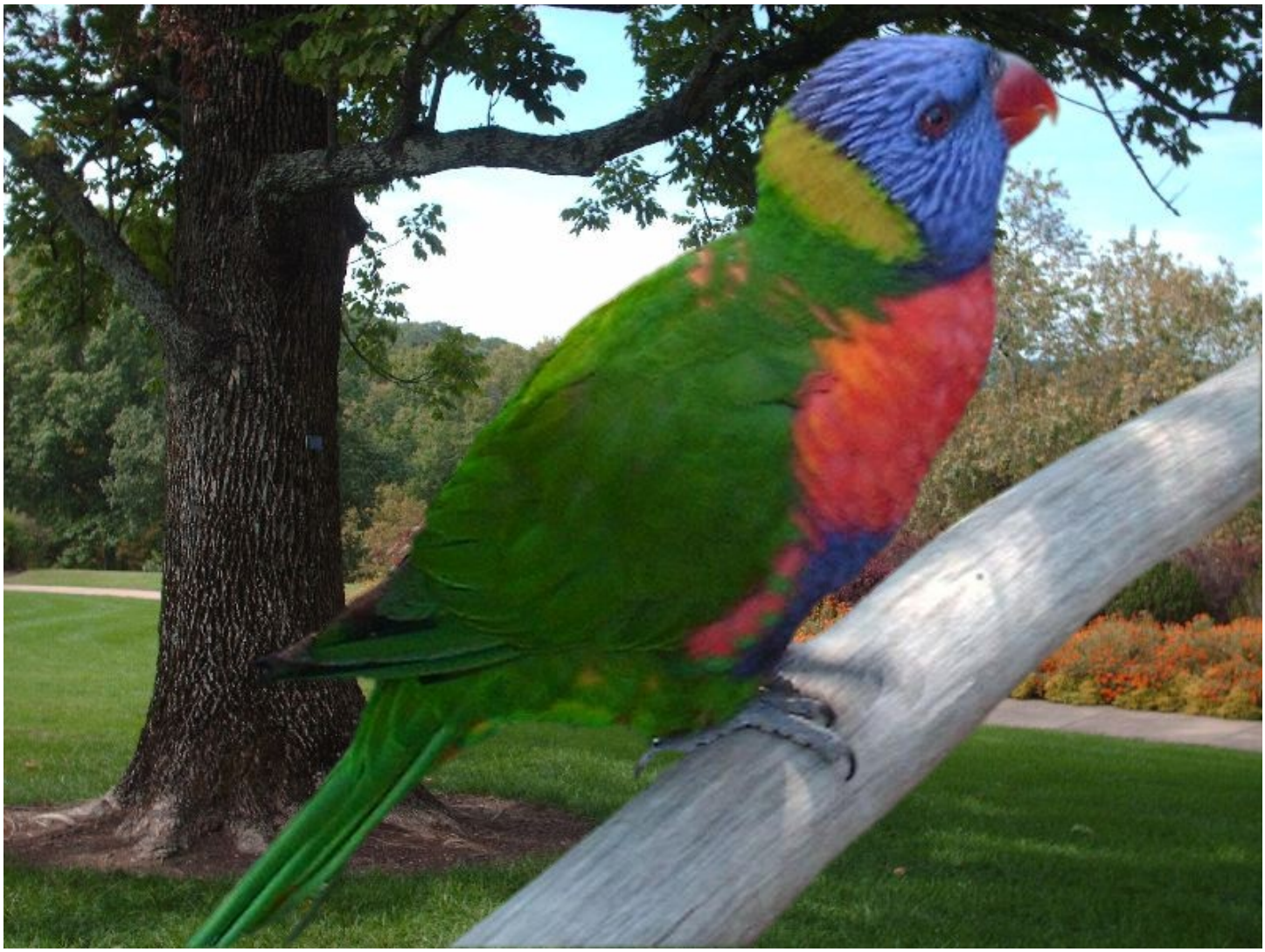


Diagram 13. Z7-click.bmp. Notice the soft borders: this is automatic border blending!

And below is a close-up of the parrot's head, the top from Z7.bmp and the bottom from Z7-click.bmp.

Diagram 14. Before and After close-up comparisons.

Notice the before and after effect how that JUST the borders are smoothed. No other areas are changed at all. Using AutoBlend, you just hit “Run This Program” to achieve the results.

7. Multiple Drop-In Objects

You can drop several objects into a background bitmap. Let's say we want to make a picture of the two 2008 presidential candidates with an eagle, and paste these onto a background of Mount Rushmore. First we find sample photos, as shown below.

Begin by scaling your subjects to the sizes you want. In the below example, the original of Obama was about twice that of McCain or the eagle. To enlarge or reduce images, using Microsoft Paint, click "Image", click "Stretch/Skew" and enter the percentage you wish to enlarge/reduce by in both the "horizontal" box and the "vertical" box.

After I sized both images of Obama and McCain to be about equal to one another, I reduced the size of the eagle to be much smaller. I then followed the directions in the previous section to isolate the borders of McCain, Obama and the eagle against transparent white. Here is the output:

Diagram 15: Obama, eagle and McCain --- in their original backgrounds, and also against transparent white, following the directions in the previous section.

I then began with a picture of Mt. Rushmore:

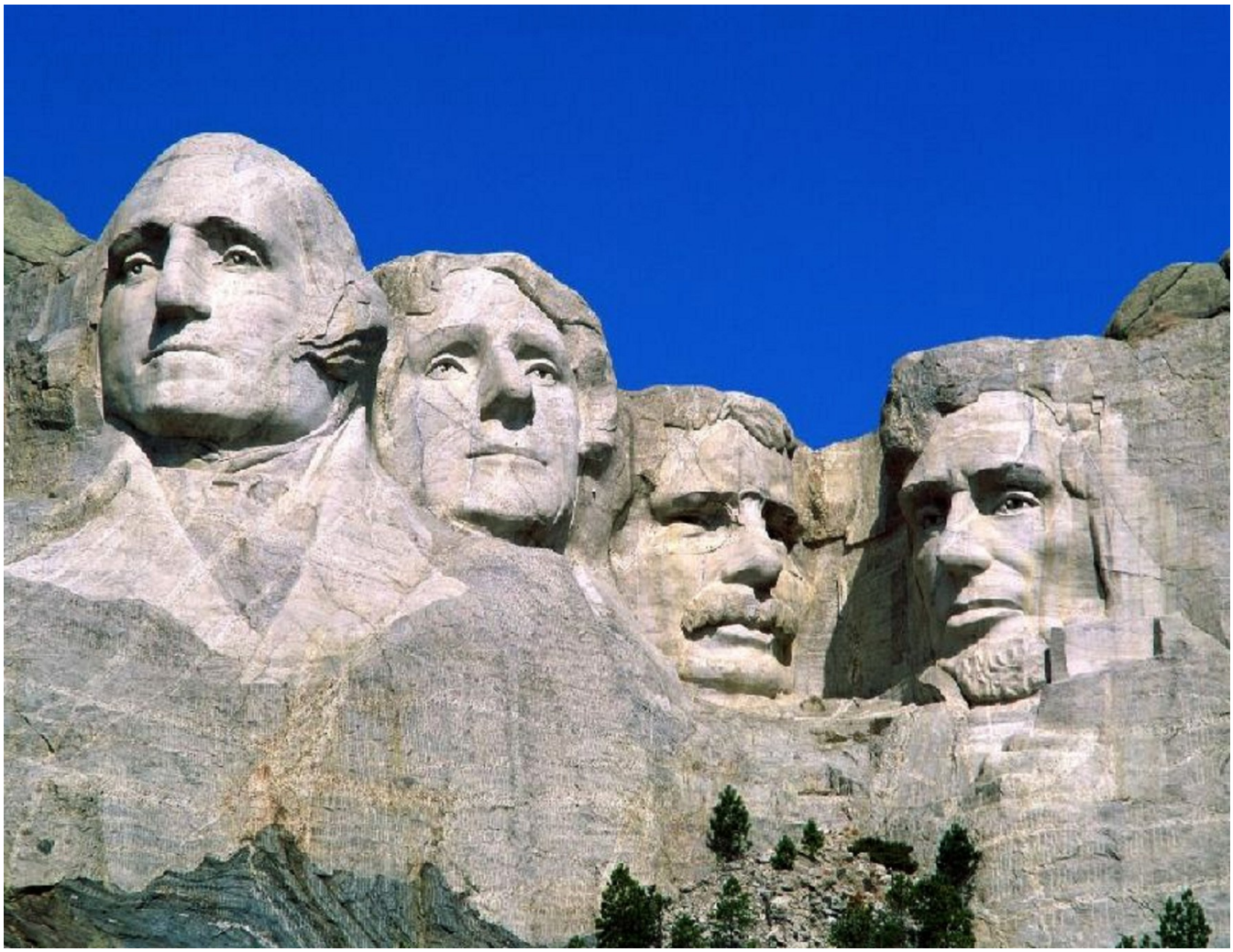


Diagram 16. Main1.bmp: Mt Rushmore, to be used as the background.bmp (BMP1).

I copied the Mt Rushmore image (Main1.bmp) as Main2.bmp; to do this, I did “File”, “Save As”, and typed in “Main2” and kept it as a 24-bit bitmap.

I then dropped the images of McCain, the eagle and Obama into Main2.bmp. To do this, I followed the same instructions as with the parrot and garden example (see above). For each of the “drop-in” images, while in Microsoft Paint, I clicked “Edit”, “Select All”, “Copy”. Then I opened Main2.bmp, and clicked “Edit”, “Paste”, and made sure that the Transparent tool (“F”, in diagram 2) was checked. I re-saved the result image Main2.bmp each time I dropped a different person or object into it. Here is the way it turned out:

Diagram 17. Mt Rushmore, with drop-in objects. This is your background_with_objects.bmp, also refered to by its nickname BMP2.

Next, I simply ran the main program to smooth out all the edges!

On the main screen, I clicked “Browse” and navigated to where Main1.bmp was located, clicked on it, and watched as the background image (Main1.bmp) was displayed. Then I clicked the second “Browse” button, and clicked on Main2.bmp. Finally, I clicked “Run This Program”. The result is below:

Diagram 18. “Main2-click.bmp” --- Running the main program to blend the edges.

And here is a close up of the top of McCain’s head, a before and after comparison.

Diagram 19. A before and after comparison.

So there you have it, a step-by-step set of instructions with illustrations that show:

(1) how to create your own drop-in objects using this software along with Microsoft Paint, and

(2) how to run the main program to blend just the borders of all of your drop-in objects.

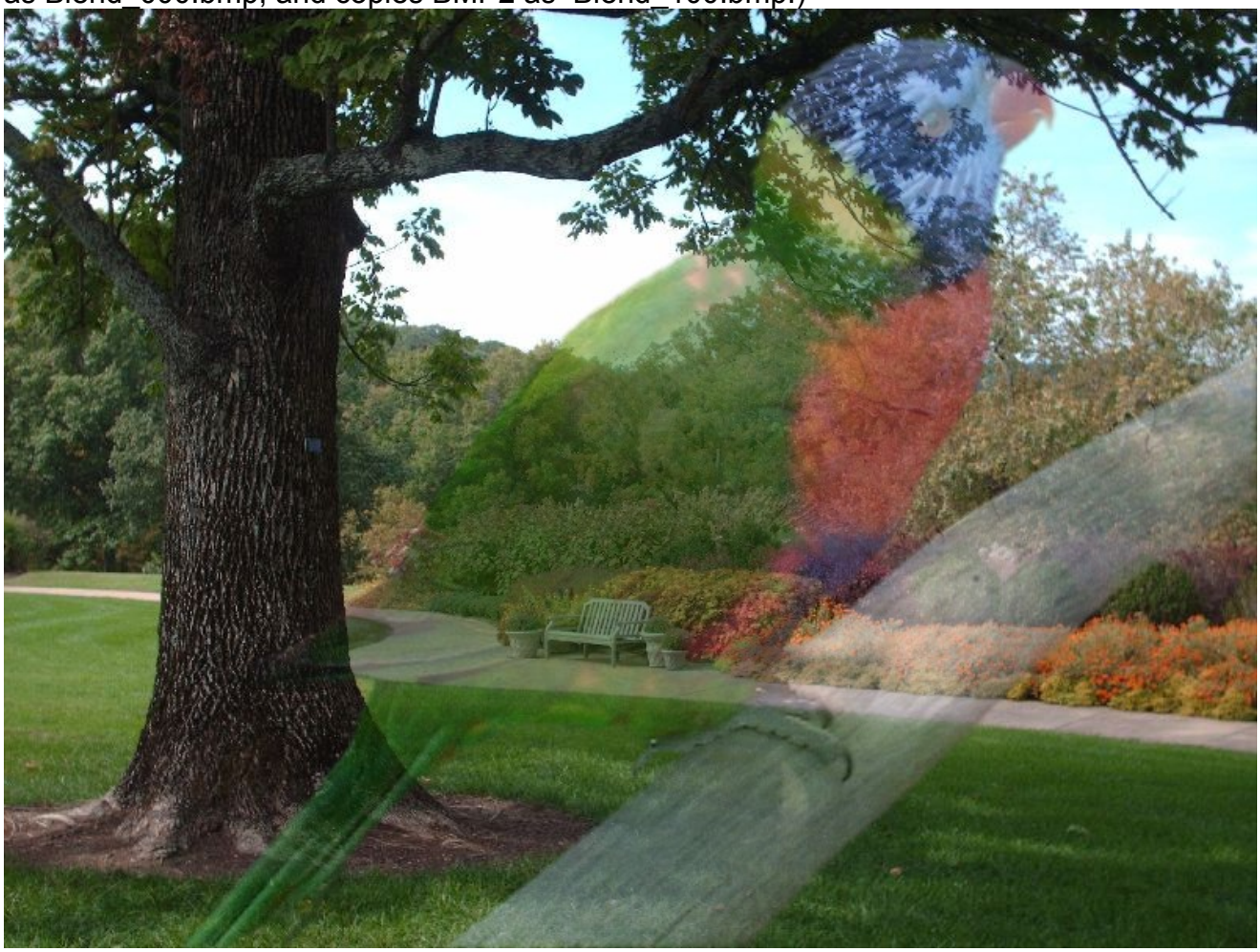
Bonus Program: "Blend"

Blend two bitmaps together in various degrees
"Ghost" one image on top of another.

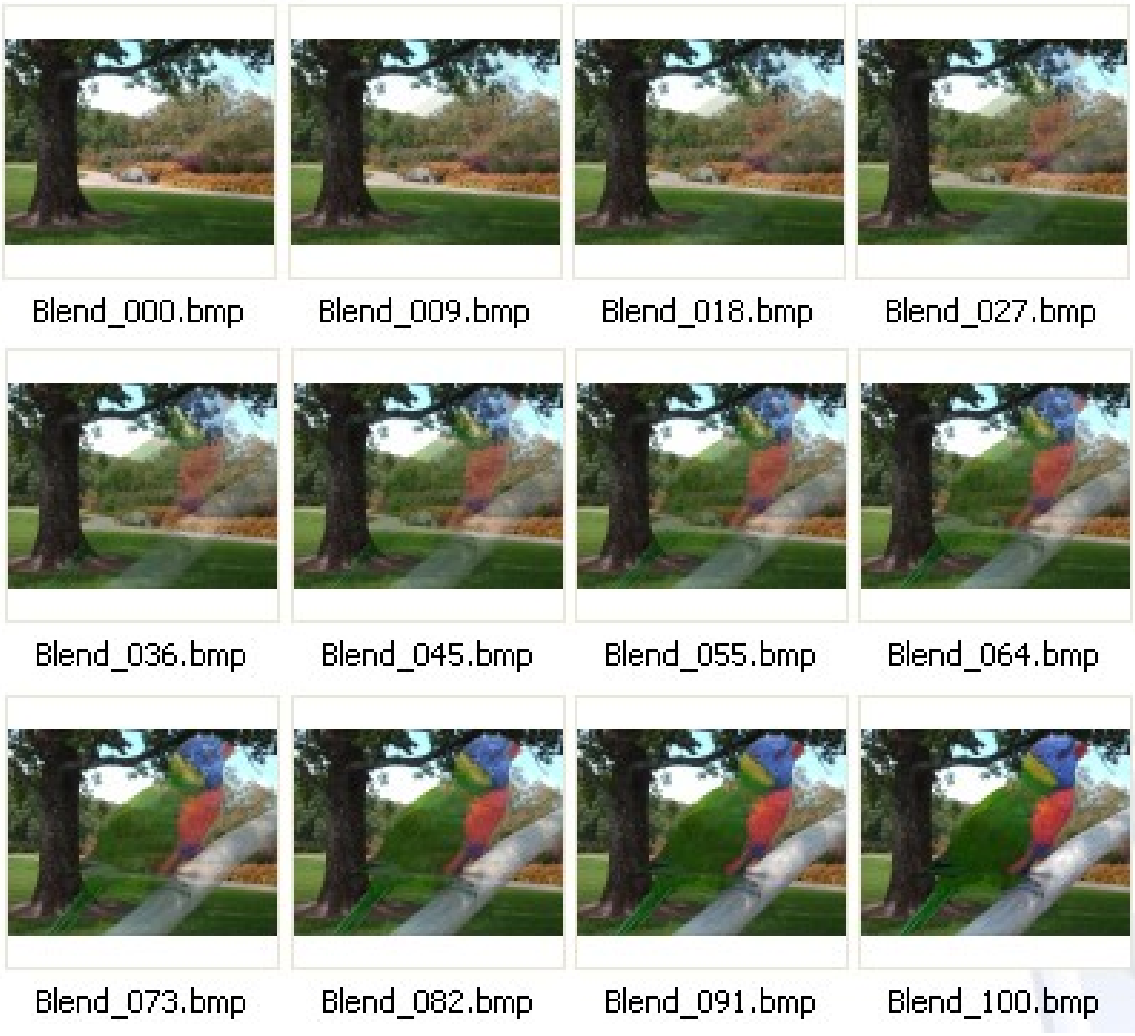
Click on the "Utilities" drop down menu from the main screen. Click "Run Blend Program". You will the be able to browse to the locations of two bitmaps you wish to blend together.

If you want to create just one image, enter the percentage – from 1 to 99 -- of how much you want BMP2 to be blended in with BMP1. For exemple, if you type in the number 70, then 70% of bitmap 2 will be blended in with bitmap 1.

If you want to create a series of bitmaps, click the indicated arrow box, and select how many bitmaps you want to create, in various increments and degrees from 1% to 99%. For instance, if you choose to create 10 bitmaps, then a total of 12 bitmaps will be produced in the c:\Program Files\PELT\AutoBlend\Blend directory. (The program automatically copies BMP1 as Blend_000.bmp, and copies BMP2 as Blend_100.bmp.)



A sample of two photos blended



A series of blended images from 0% to 100%. The Blend Program is free to use, and will run regardless if the main program is registered or not.