Bitcomp 64

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Bitcomp 64

An application in C which can compare two images pixel by pixel and generate the comparative image showing the difference between the input images by color code.

Definitions:

File1 : It is the input image 1
File2 : It is the input image 2
File3 : It is the output image (comparison of File1 and File2)

“sacrosanct” color : A color which is the base color. It is the color which is assumed as the default color of both the input images. e.g. when we open a blank new file in MS Paint, then the default base color is white. On this white shade, we draw image by another color. Defining the sacrosanct color is purely contextual and upto the user. This document can be said to be having black text on white base or the white shaded negative of text on a black base. Sacrosanct color definition (declaration by user) will be used to determine whether a color (i.e. any other color than the base color) is present in an image or not. So the term presence of a colored pixel or absence of a colored pixel in an image file is understood as whether the color of that pixel is different from sacrosanct shade or same as sacrosanct shade respectively.

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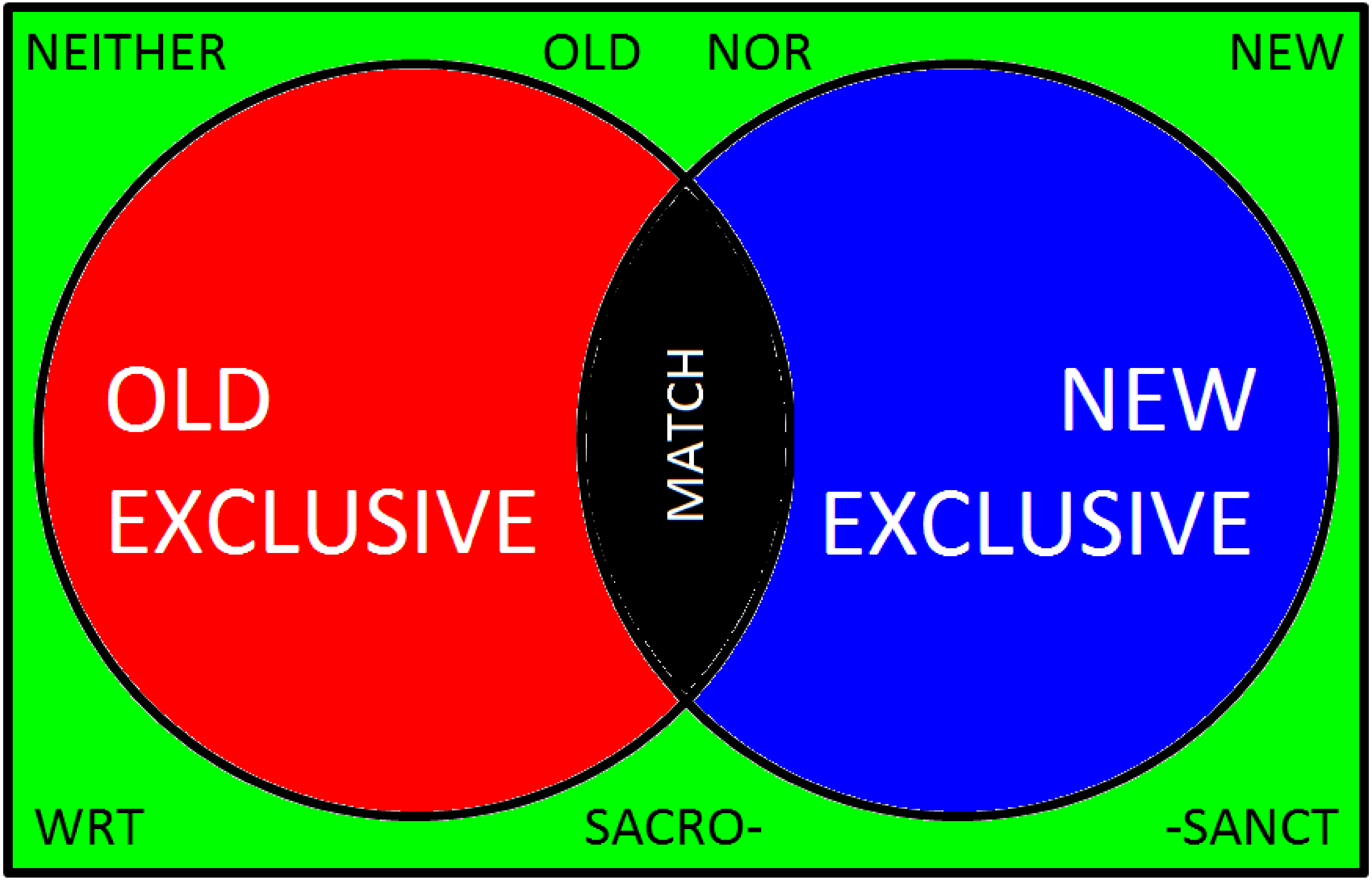
SACROSANCT



NEITHER OLD NOR NEW

OLD EXCLUSIVE

MATCH

NEW EXCLUSIVE

WRT SACRO- -SANCT

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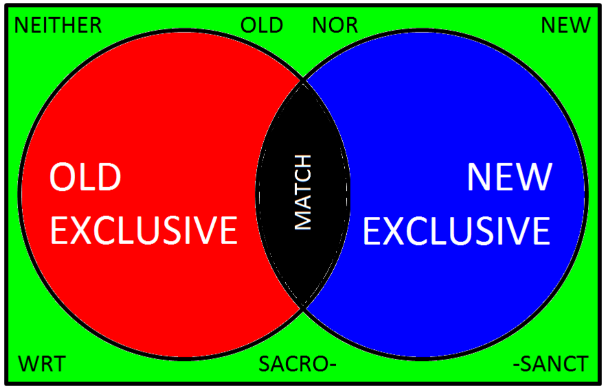
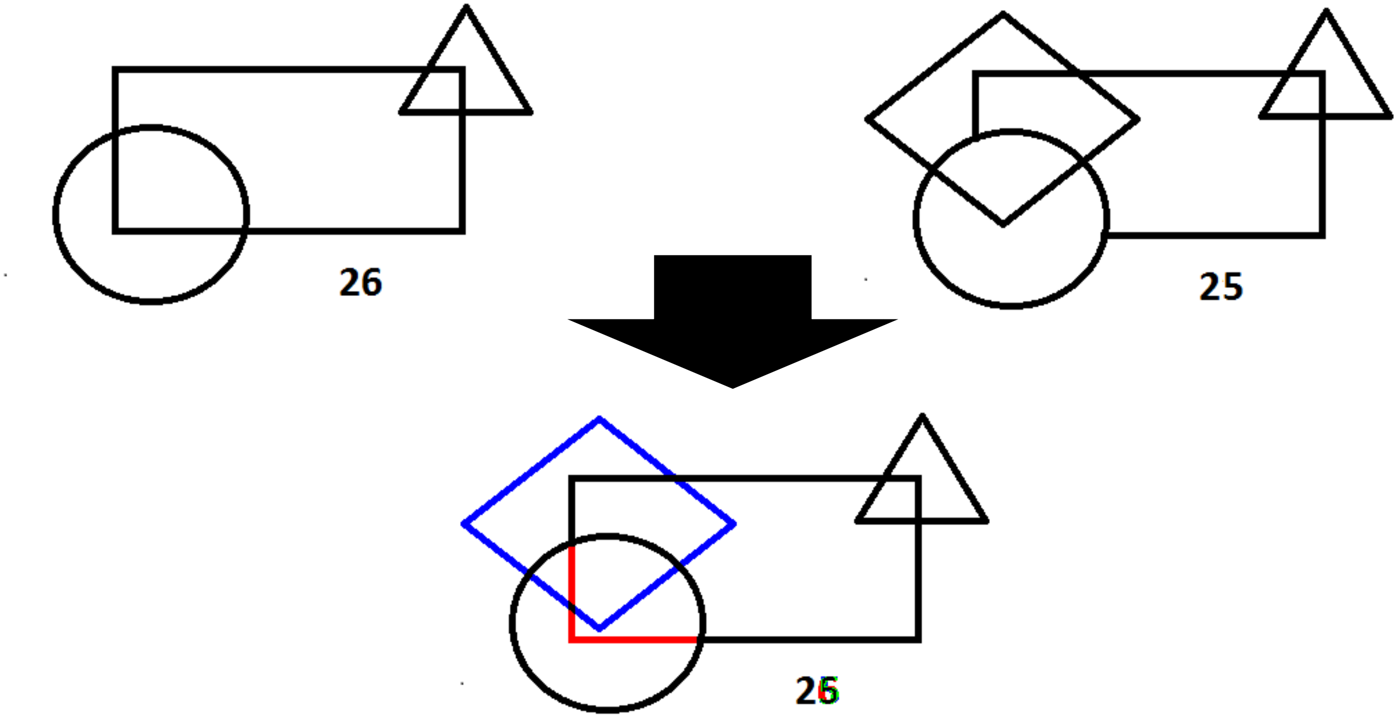
In this comparison run, the option was chosen such that if the color of two corresponding pixels in two images is different from the sacrosanct shade, but matching with each other, then in the output file, same colored pixel as the match color is outputted (Here, black)

SACROSANCT = WHITE



MATCH = ORIGINAL



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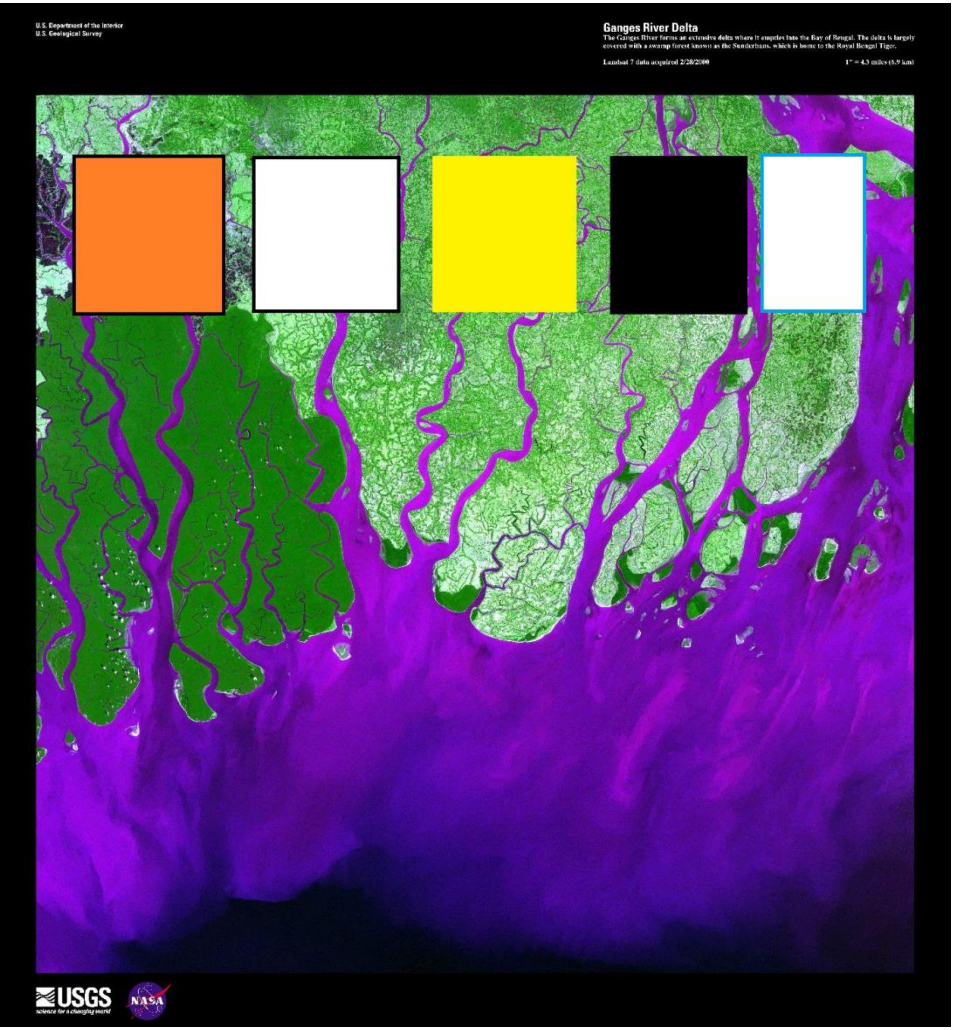
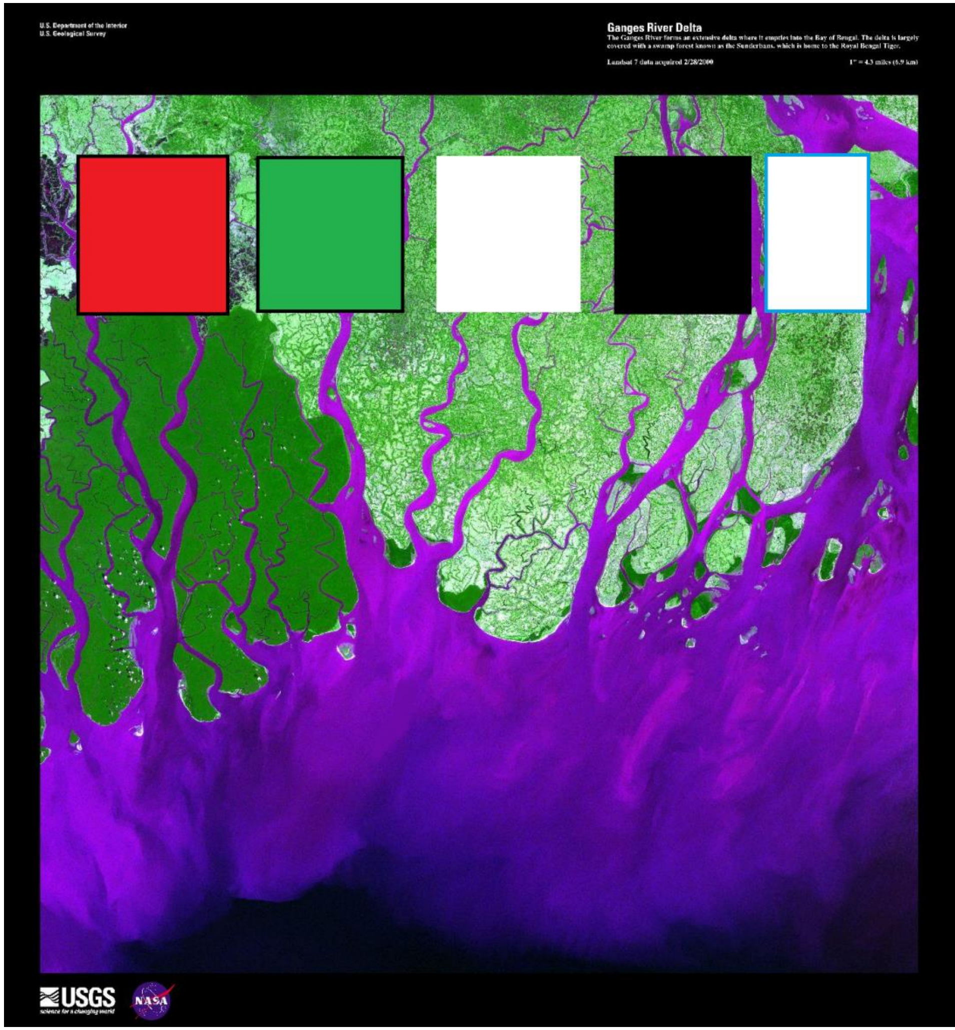

U.S. Department of the Interior
U.S. Geological Survey
Ganges River Delta
The Ganges River forms an extensive delta where it empties into the Bay of Bengal. The delta is largely covered with a swamp forest known as the Sunderbans, which is home to the Royal Bengal Tiger.
Landsat 7 data acquired 2/28/2000
1" = 4.3 miles (6.9 km)
USGS
science for a changing world
NASA

File 1


U.S. Department of the Interior
U.S. Geological Survey
Ganges River Delta
The Ganges River forms an extensive delta where it empties into the Bay of Bengal. The delta is largely covered with a swamp forest known as the Sunderbans, which is home to the Royal Bengal Tiger.
Landsat 7 data acquired 2/28/2000
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File 2

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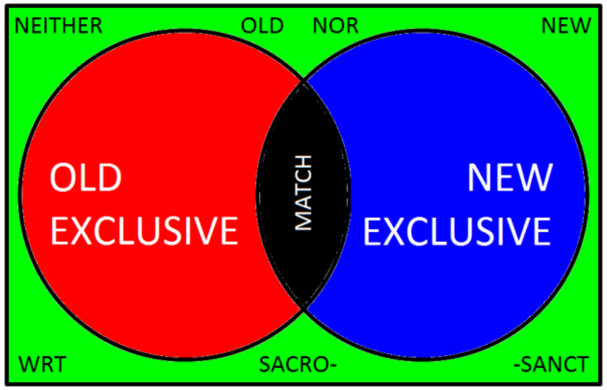
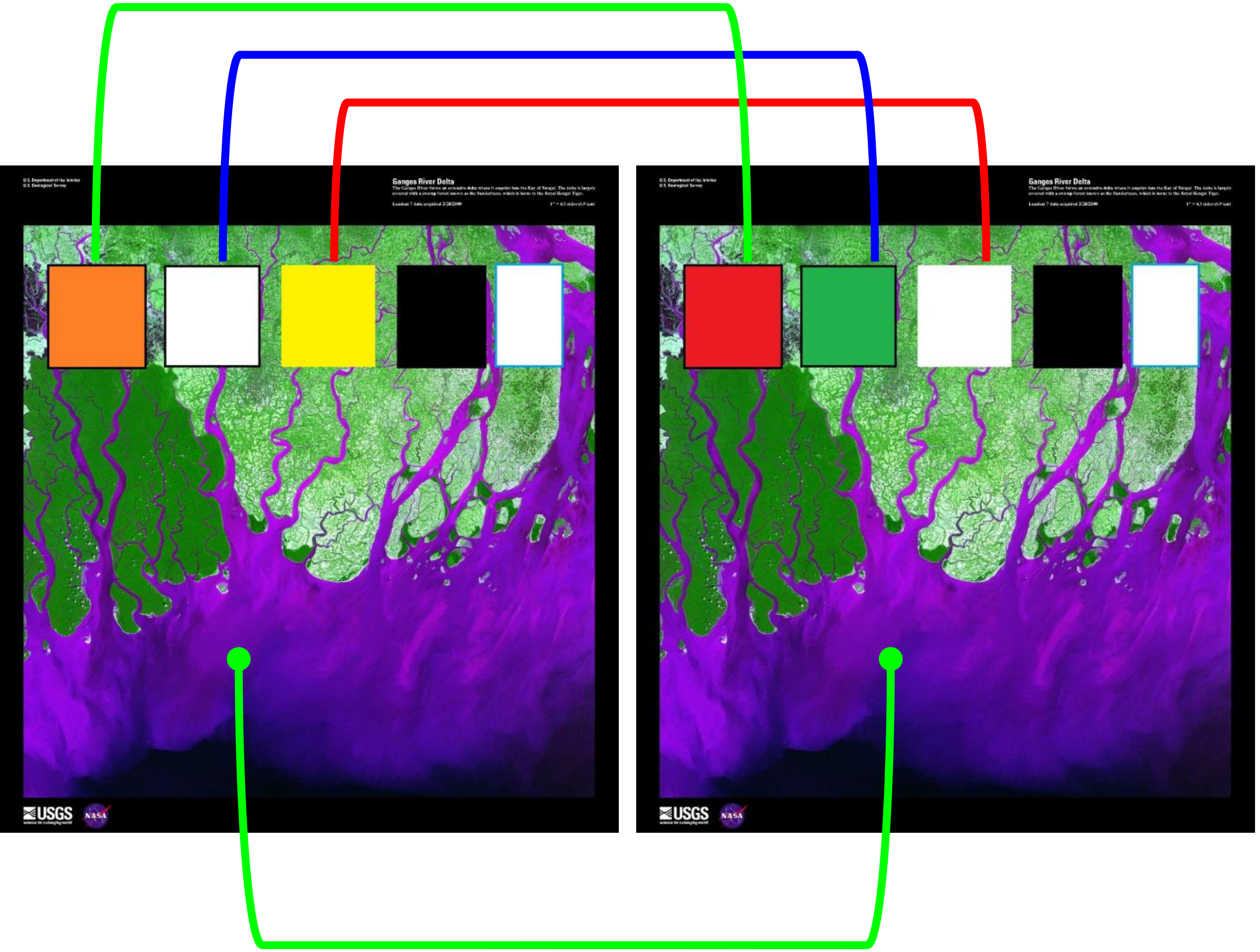
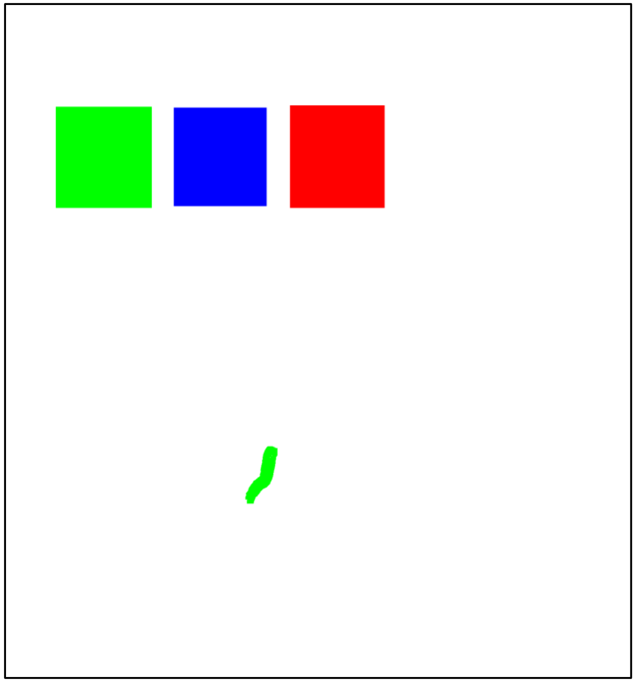
It is also possible to output the matching pixel same as the sacrosanct shade. (Here, white)

SACROSANCT = WHITE







MATCH = WHITE

File 1

File 2

File 3

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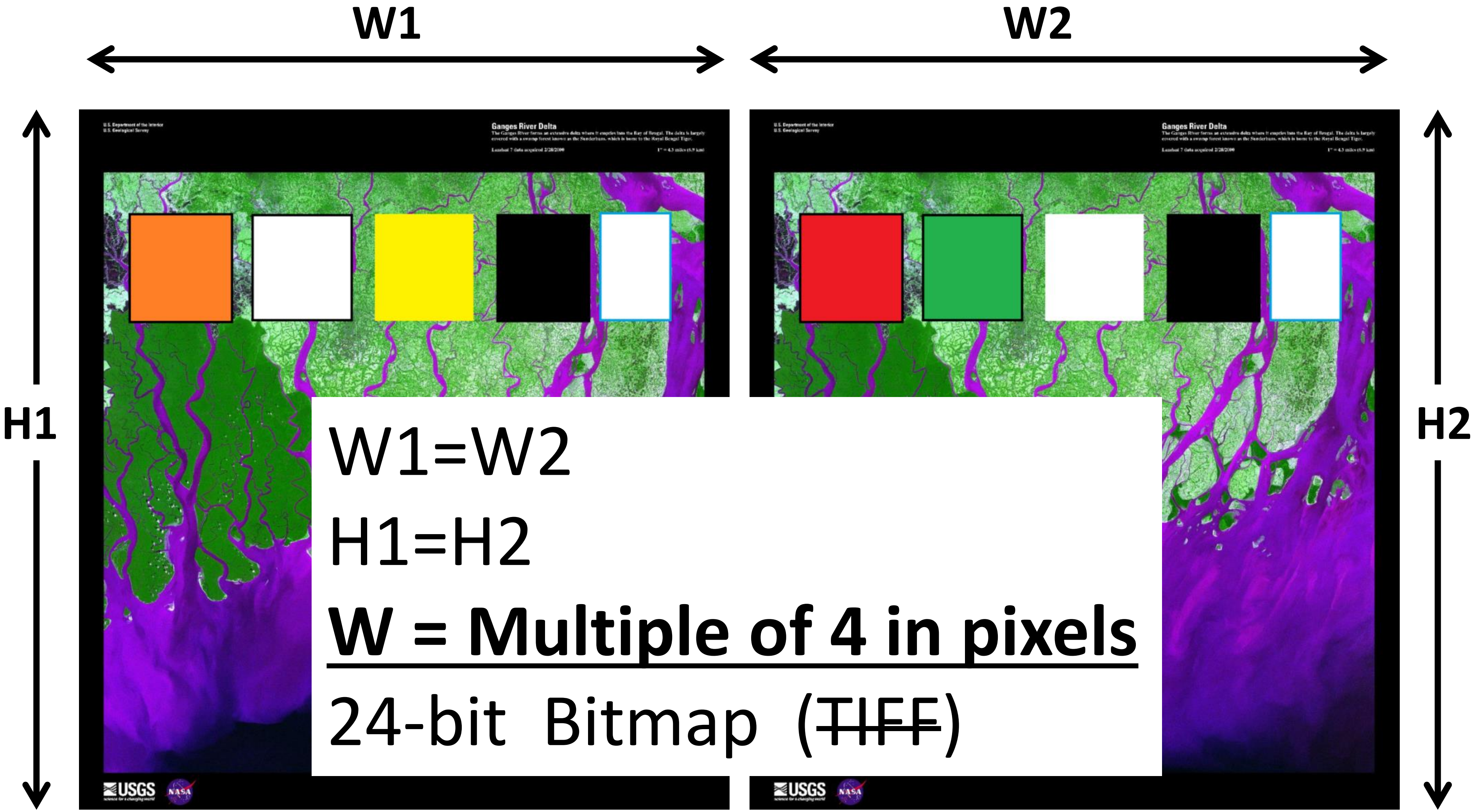
Requirements on the input images


W1
W2
H1
H2
U.S. Department of the Interior
U.S. Geological Survey
Ganges River Delta
The Ganges River forms an extensive delta where it empties into the Bay of Bengal. The delta is largely covered with a swamp forest known as the Sunderbans, which is home to the Royal Bengal Tiger.
Landsat 7 data acquired 2/28/2000
1" = 4.3 miles (6.9 km)
USGS
NASA

W1=W2

H1=H2

<u>W = Multiple of 4 in pixels</u>

24-bit Bitmap (~~TIFF~~)

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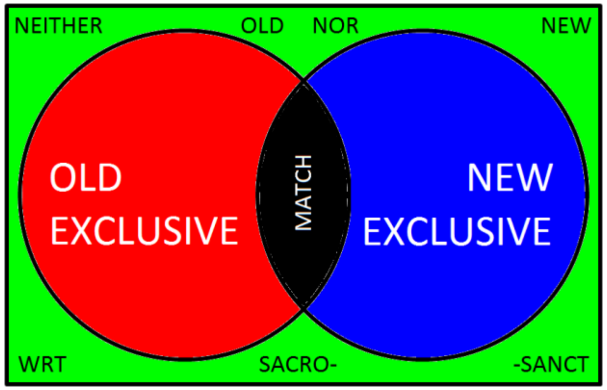
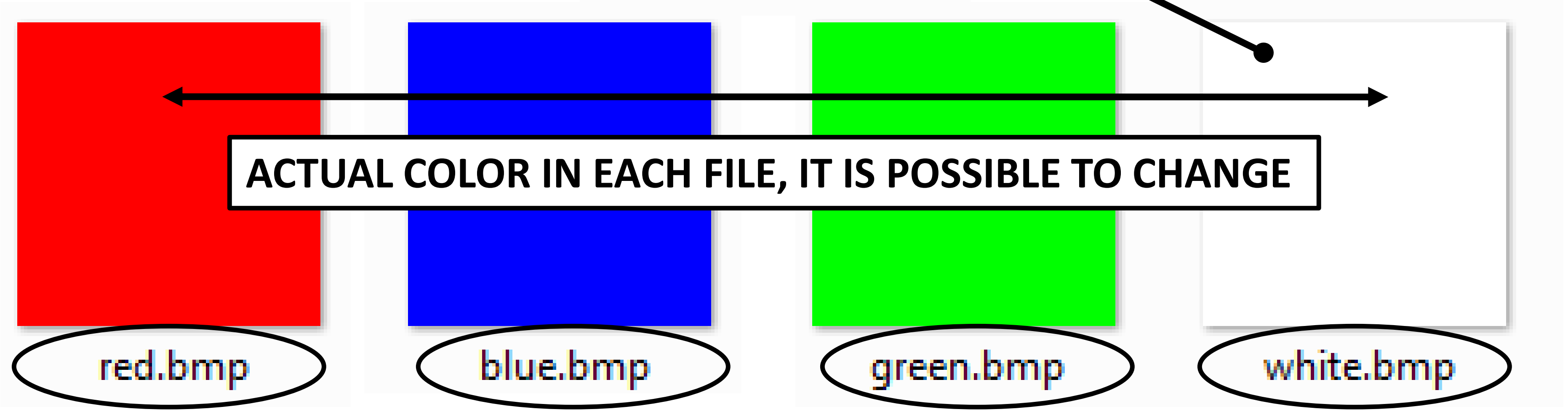
The actual colors to be used in output file can be changed by opening the files red.bmp, blue.bmp etc. in MS Paint and changing their fill color shade (but without renaming the file)

BITCOMP.exe

SACROSANCT



MATCH = (OPTION)



ACTUAL COLOR IN EACH FILE, IT IS POSSIBLE TO CHANGE

red.bmp

blue.bmp

green.bmp

white.bmp

FILE NAME, IT IS NOT POSSIBLE TO CHANGE

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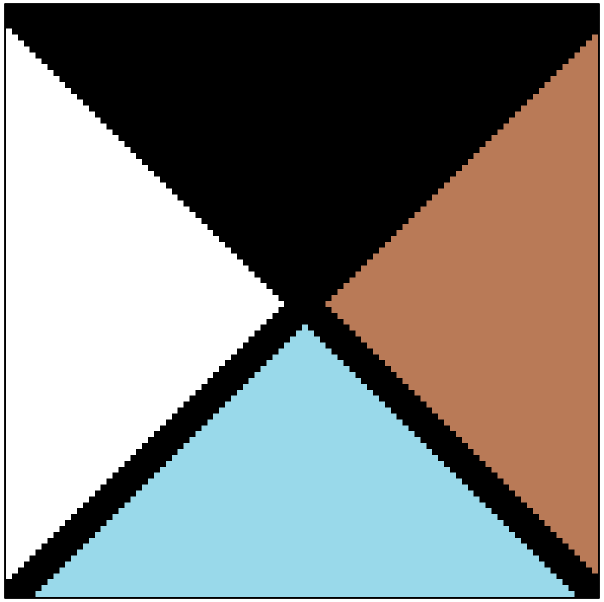
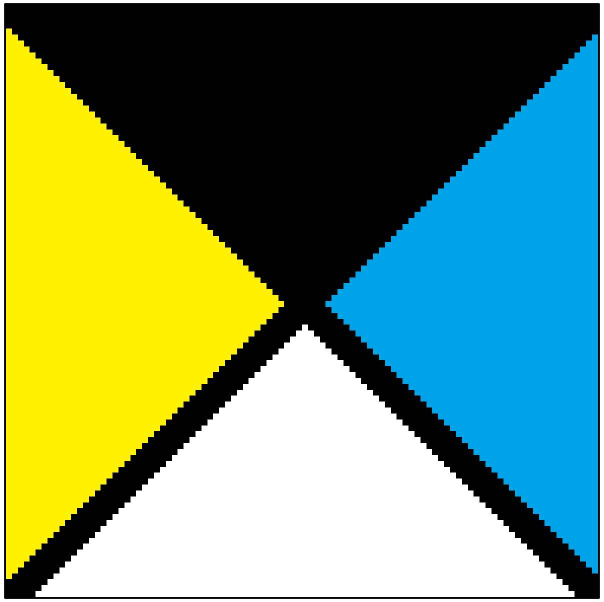
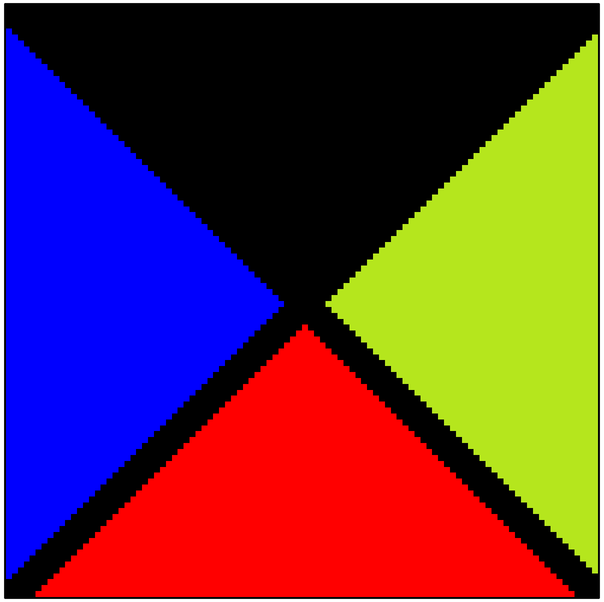


File1.bmp



File2.bmp



File3.bmp

FILE NAME, IT IS NOT POSSIBLE TO CHANGE

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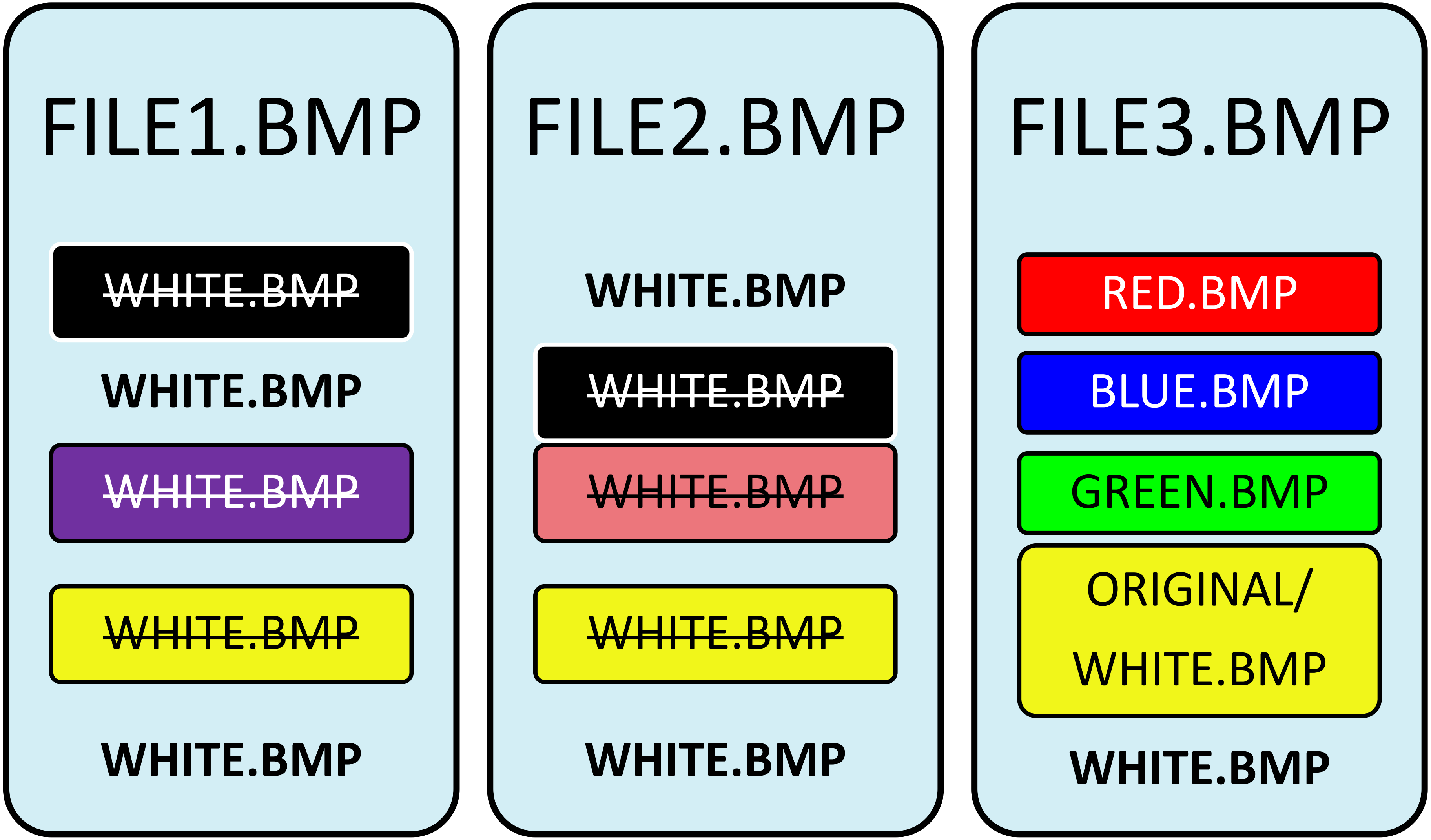
WHITE.BMP



FILE1.BMP

~~WHITE.BMP~~

WHITE.BMP

~~WHITE.BMP~~

~~WHITE.BMP~~

WHITE.BMP

FILE2.BMP

WHITE.BMP

~~WHITE.BMP~~

~~WHITE.BMP~~

~~WHITE.BMP~~

WHITE.BMP

FILE3.BMP

RED.BMP

BLUE.BMP

GREEN.BMP

ORIGINAL/
WHITE.BMP

WHITE.BMP

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To run the program, keep following files in the same folder

File1.bmp
File2.bmp
Red.bmp
Blue.bmp
Green.bmp
White.bmp
BITCOMP.exe

And run Bitcomp.exe
[Make sure that the conditions on File1.bmp and File2.bmp are met]

BITCOMP.exe creates just 1 output file File3.bmp

BITCOMP_2.exe creates 2 additional output files file3_1.bmp and file3_2.bmp

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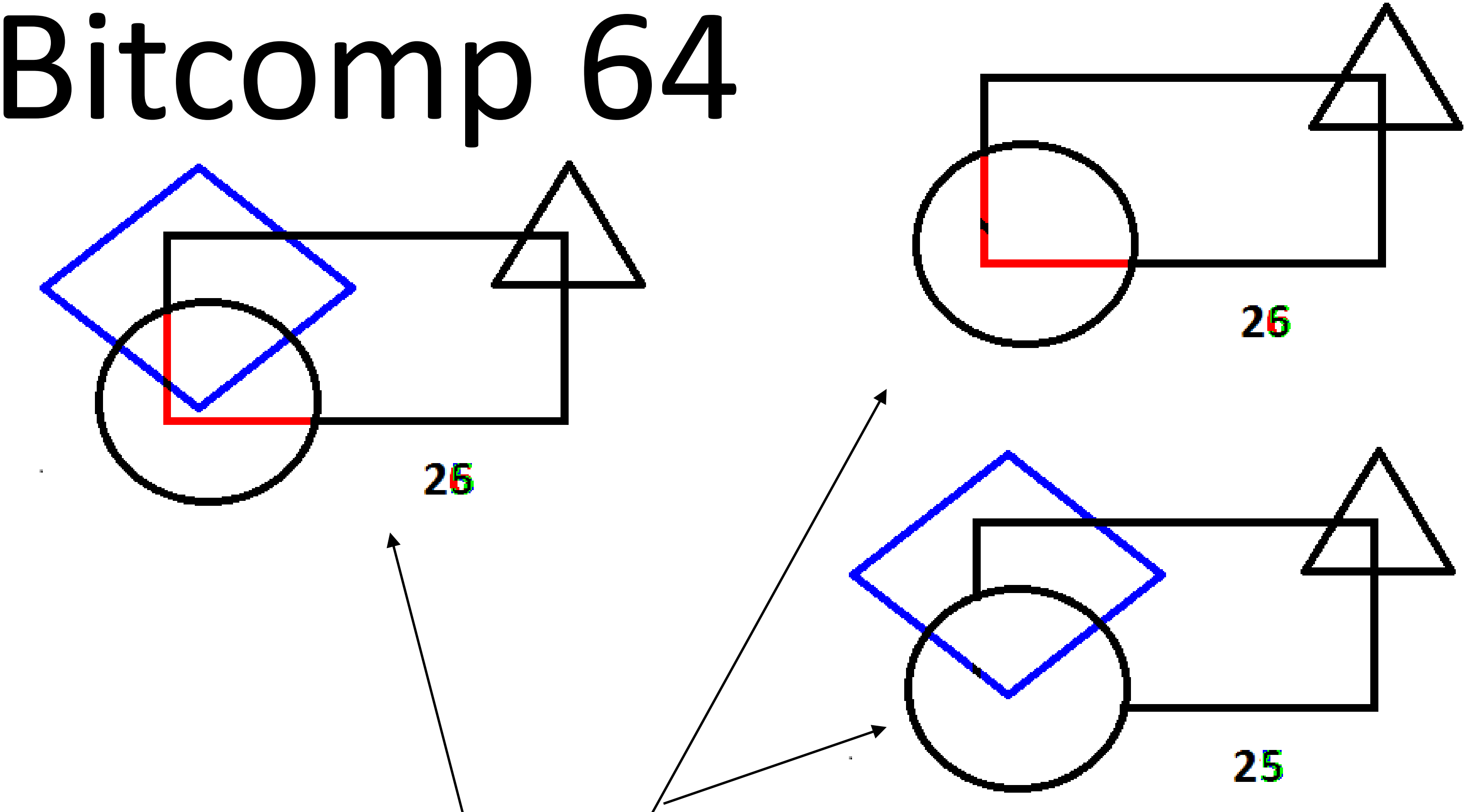

BITCOMP.exe creates just 1 output file File3.bmp

BITCOMP_2.exe creates 2 additional output files file3_1.bmp and file3_2.bmp