



Hello! In this part of the documentation you will find informations about how to add own images to your level.  
version: final, author: Pejti

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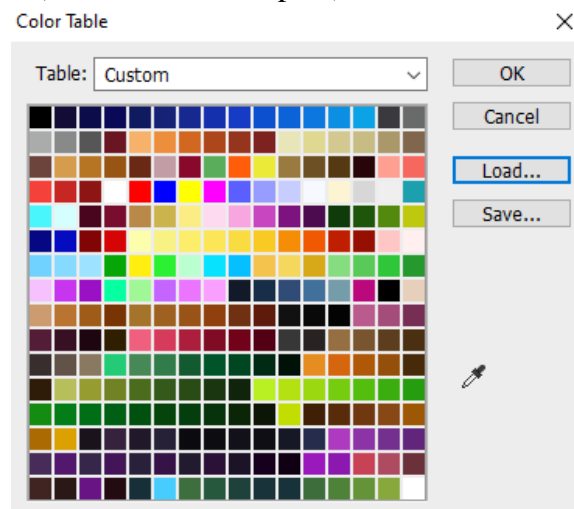
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## 1. Adding new images - informations

Creating level with own images is not as hard as you think. Prepare at least one image to convert. You will need basic knowledge and application which will allow to convert image under level palette.

Let's start. Every image which is using in the game is subordinates to colour palette. If images is to be displayed properly every pixel from image has to have colour from this palette.

Example colour palette (Level3 - The Footpath):



First 128 colours (upper half) match to images which occur in every level e.g. Claw, treasures, game interface. Second 128 colours (bottom half) match to images which occur in specific level, in this example in Level3. So we will focus attention on the second 128 colours. So the image which we want to add should has colours that will more or less coincide with those in the table. If image will have more red, orange, yellow pixels, it will lose more quality in this example. So before adding new images, you should think about what image and in which level you will want to use.

Let's assume however we will not focus on level palette but only level. In this example I chose third level and below you can see what image I chose:

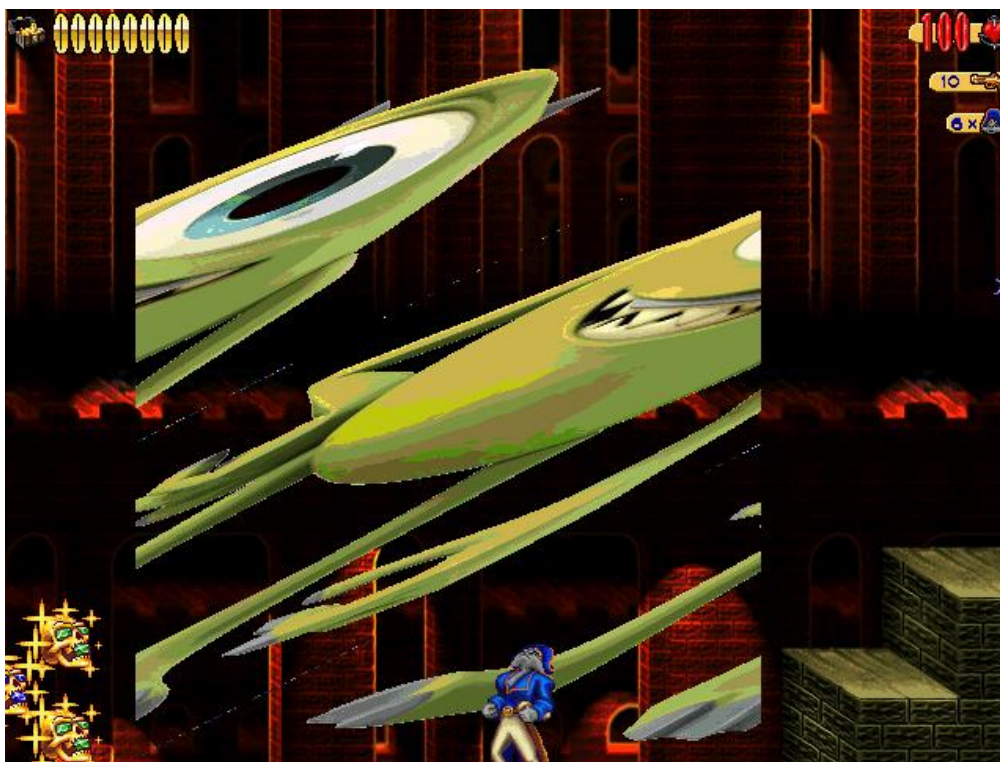


This image is in **PNG** format and background is transparent. We will save time and we will focus only on how to convert image (if image would be in **JPG** format, white background would be seemingly white - image would have many artifacts and you would have to sacrifice more time).

## ATTENTION!

Before adding new image create new folder called the same as level name (in this example RETAIL03) and inside folder called **IMAGES**.

Also before conversion it is good to check dimensions of original images from game e.g. extract CLAW.REZ with images converted from .PIDs to .PNGs. It is important because wrong dimensions of image cause bad displayed image in game (wrong dimensions in .PIDs cause the image will not displayed at all).



Above you can see how image will look if dimensions will be wrong.

Image which we want to add has 398 x 441. We can simply change dimensions using simple formula:  $X \cdot 64 \times Y \cdot 64$  where  $X \cdot 64$  - image width,  $Y \cdot 64$  - image height. X and Y - we substitute integers greater than 0 (zero). Closest to the original dimensions are dimensions: 384 x 448 so we change them. Now put converted image into folder **IMAGES**.

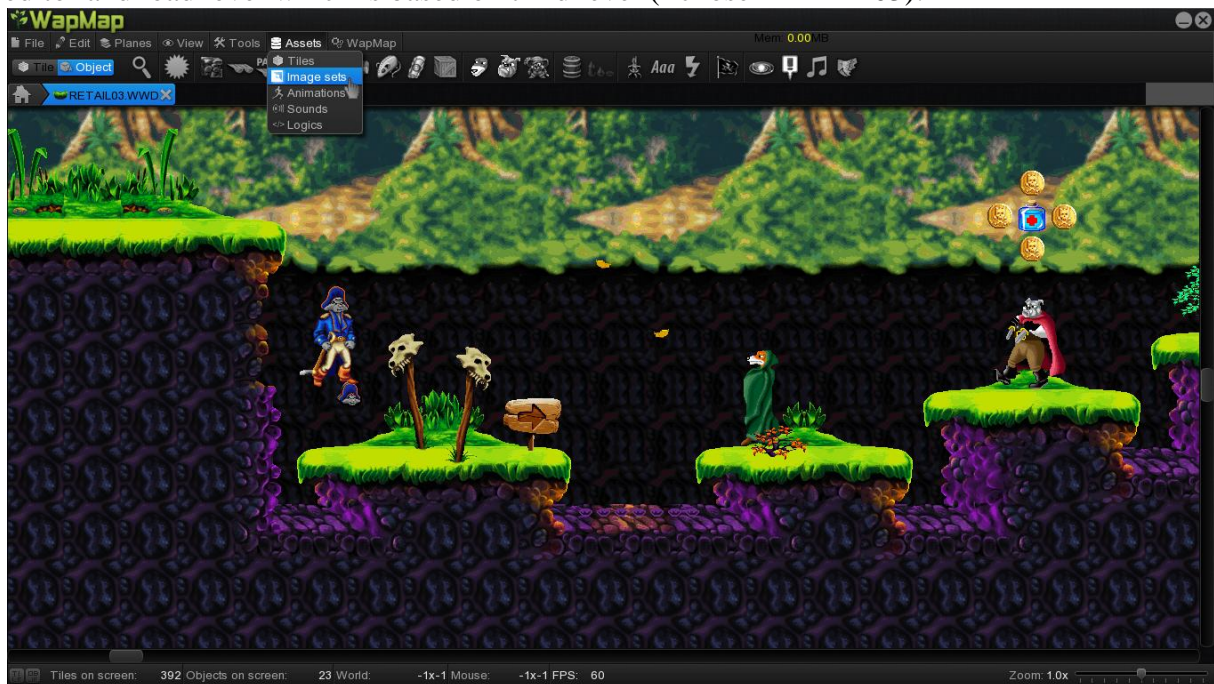
Second way is similar to the first way, instead 64 we use 32:  $X \cdot 32 \times Y \cdot 32$ .

Last way - we can check dimensions from original images from the game and use them.

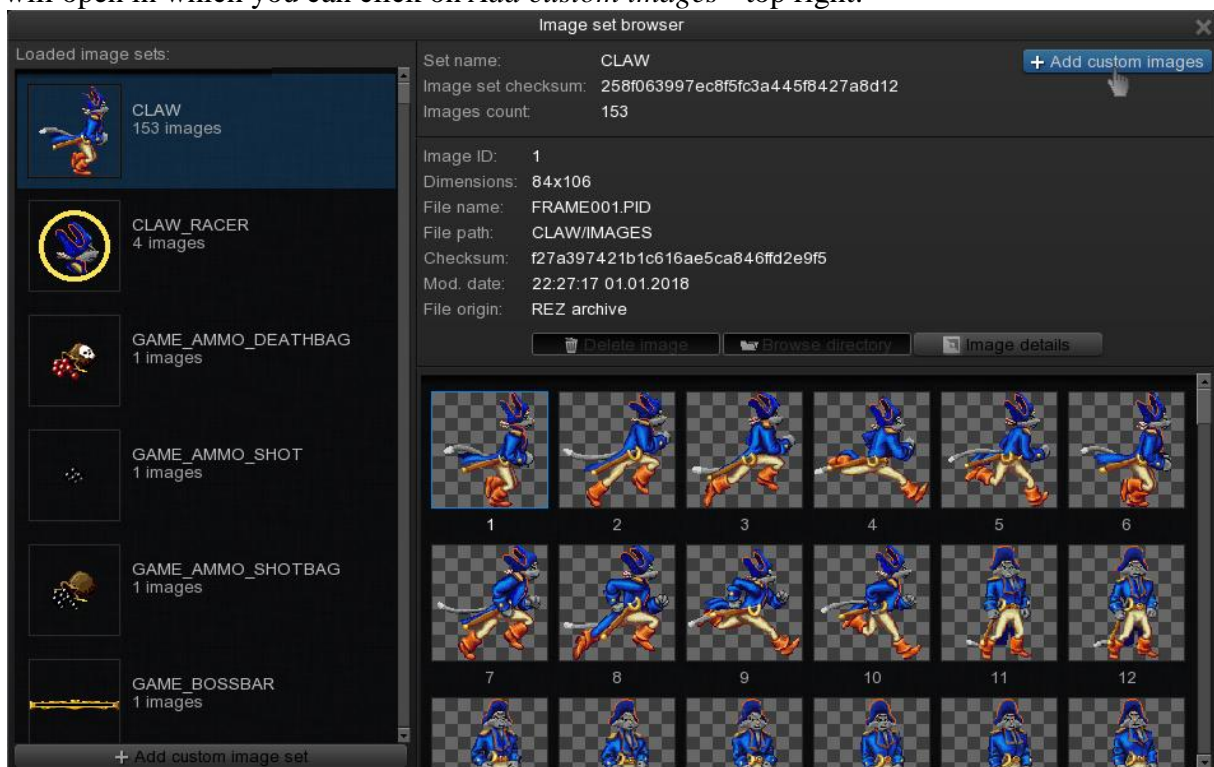


## a) WapMap Beta vDEV\* - Editor

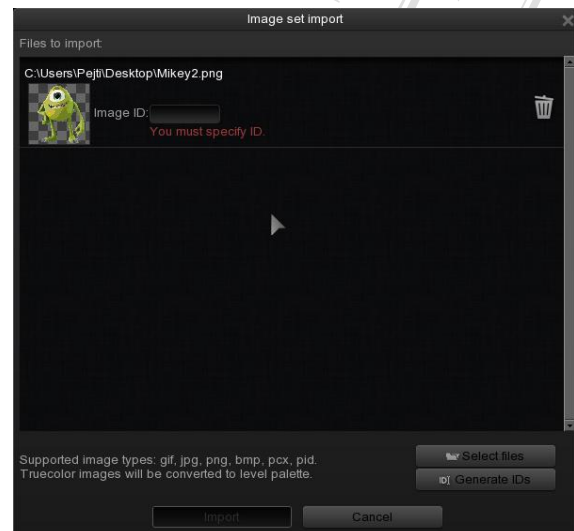
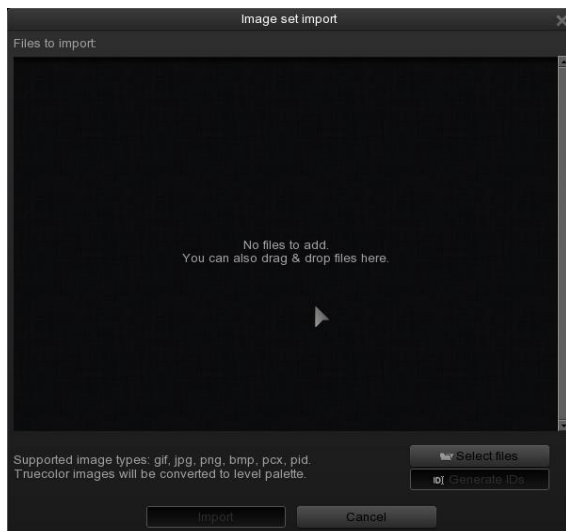
We will start from WapMap Editor to show how to convert images using this editor. Open editor and load level which is based on third level (I chose RETAIL03):



Select **Assets** and **Image Sets** option as you can see on screen above. New small window will open in which you can click on *Add custom images* - top right:

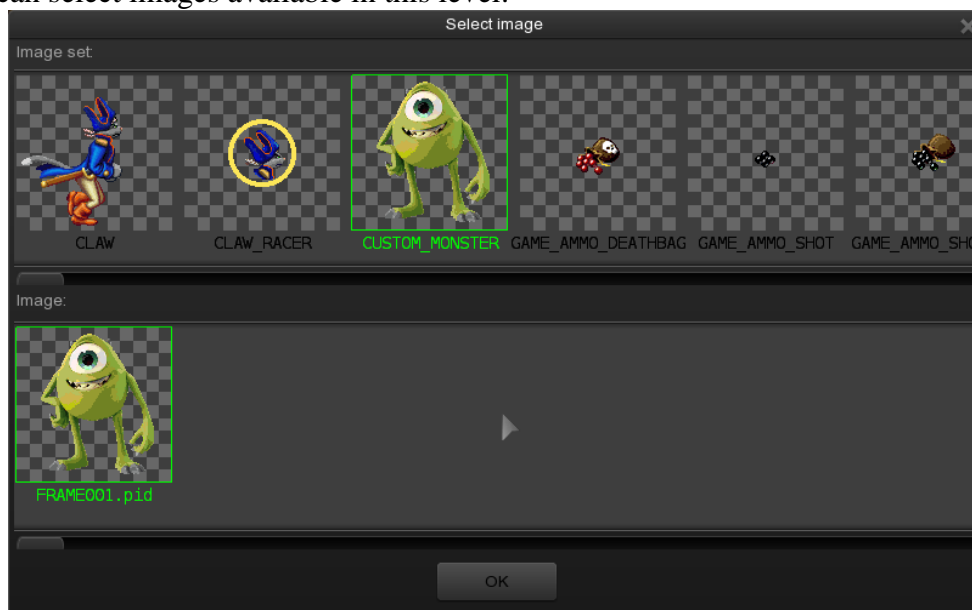


Another window will open, then drag and drop new image (screen on the next page):



Now you can type ID or click on *Generate IDs* button (recommended). When you will type or generate ID you will be able to click on Import button. Window will close. Close first window and go to the `..\RETAIL03\IMAGES\` directory. After importing new image, WapMap created `FRAME001.PID` folder. It is important to change name to `FRAME001` or own name (I will change to `MONSTER`). If you will leave `.PID` extension in folder's name, WapMap will not load level with new image. New image will have name `609`, but I will change to `FRAME001`.

After all changes directory for new image should look like this: `..\RETAIL03\IMAGES\MONSTER\`. We close level and open it again. We create new object and we choose *Select from list* button under Graphic field. New window will open and here we can select images available in this level:



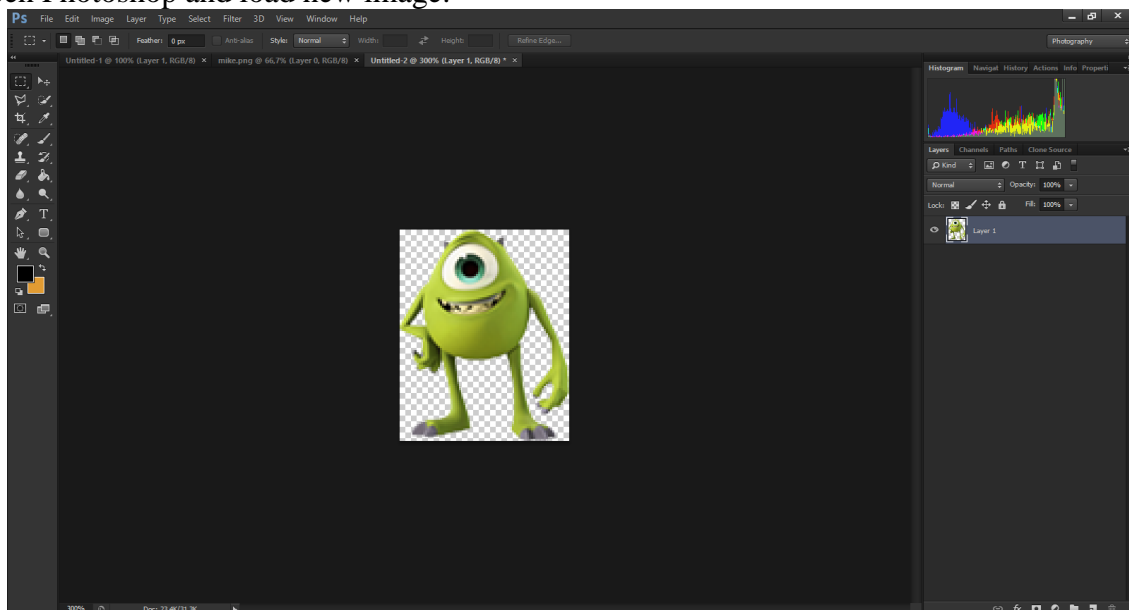
As you can see above, new image is ready to use. Select it, type or select from the list logic and that's it. Now you can save level. Unfortunately WapMap converts image with no transparent. You can see it on the next page (screen). In the same way you can add new Tile Set but adding new images using WapMap you can treat as curiosity.



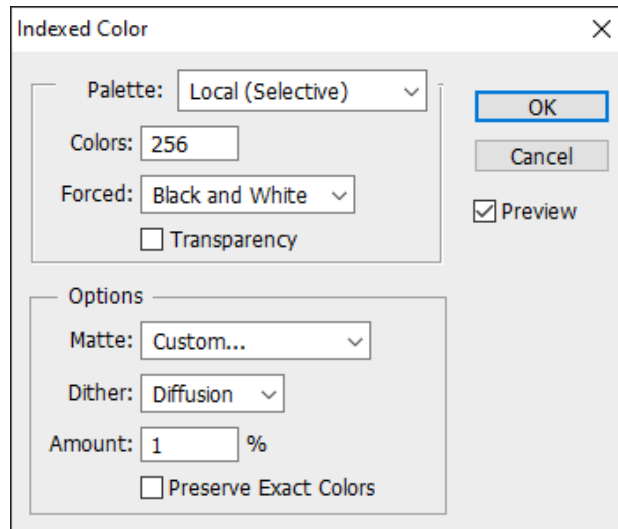
Unfortunately as you can see above, image has no transparent pixels so to add new images use Photoshop or GIMP.

## b) Photoshop

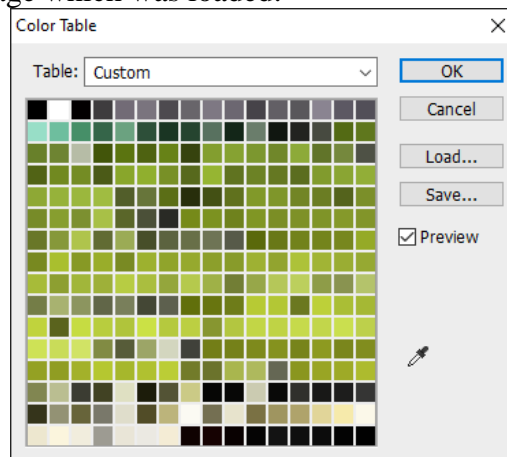
Except Photoshop and new image it is required to have colour palette from interesting for us level. All colour palettes from the game levels you will find in ACT folder which was attached to this part of documentation. For you important file has **Level3.ACT** name. Originally, all files have .PAL extension but you can change to .ACT to work with apps. Open Photoshop and load new image:



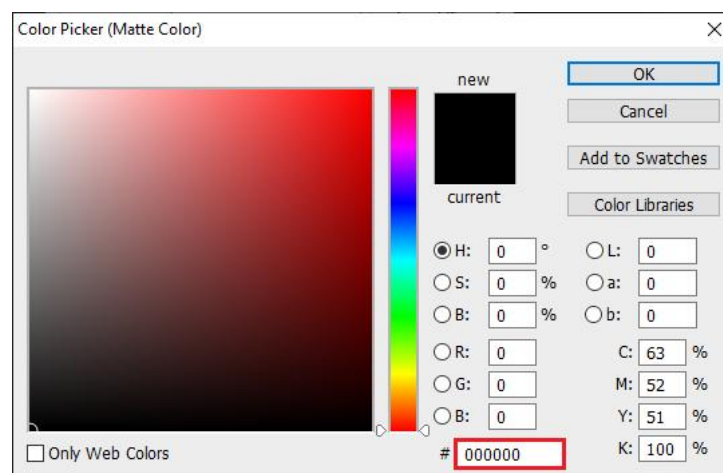
Now select **third** bookmark Image, then *Mode* → **Indexed Color...** New small window will open (screen on the next page):



You can select palette, type number of colours (Min = 2, Max = 256), select matte or dither. We want to change palette so we click next to Palette: in 'Custom...', new small window will open, the same as you can see on the second page of this documentation but colours are assigned to image which was loaded:

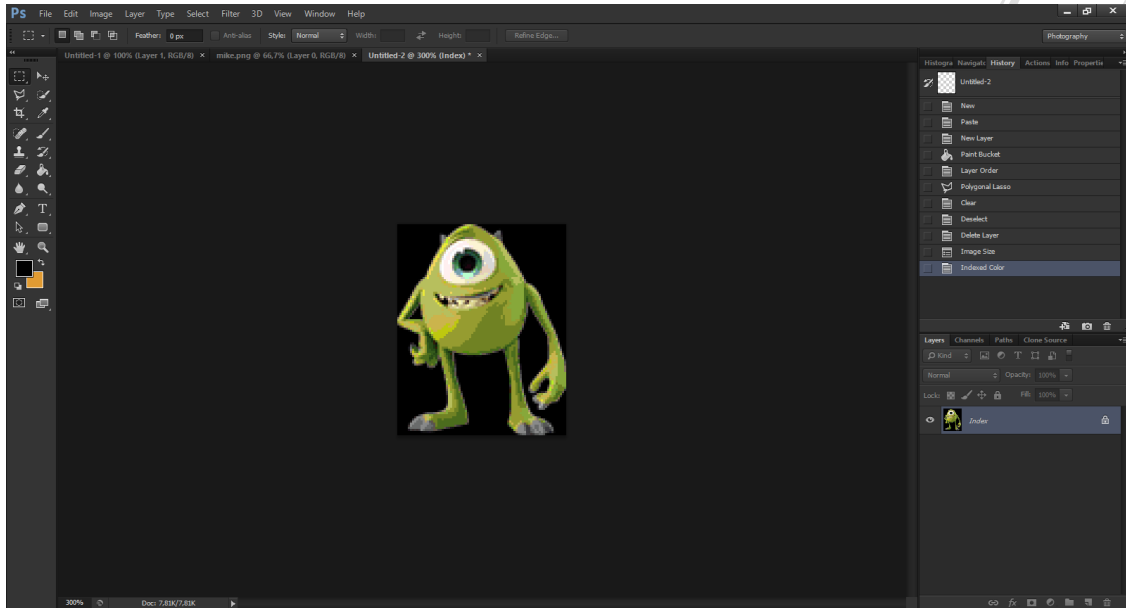


Now click on Load... and pick **Level3.ACT** file from your computer. Then close window by clicking on OK button. Still you should have first window open. In Matte option choose 'Custom...' and choose black colour or type 000000 (six zeros) in field which you can see on screen below:



Then click on OK button. In dither field I recommend to use - 'Diffusion' and type 1%. You can also check other options to see how image will look after converting. The final result (Diffusion, 1%):



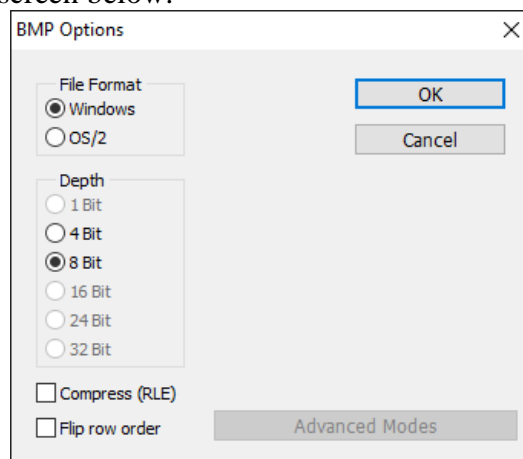


We can compare image before and after conversion.



As you can see image lost some quality but it is not all that bad. Black colour in this method is treated as transparency (it is also first colour in palette). It is important to convert image without any black pixels inside image. If image will have black pixels inside you will have to change them to pixels with other colours, pixels similar to black like 16,16,16 (RGB) or 11,4,2 (RGB).

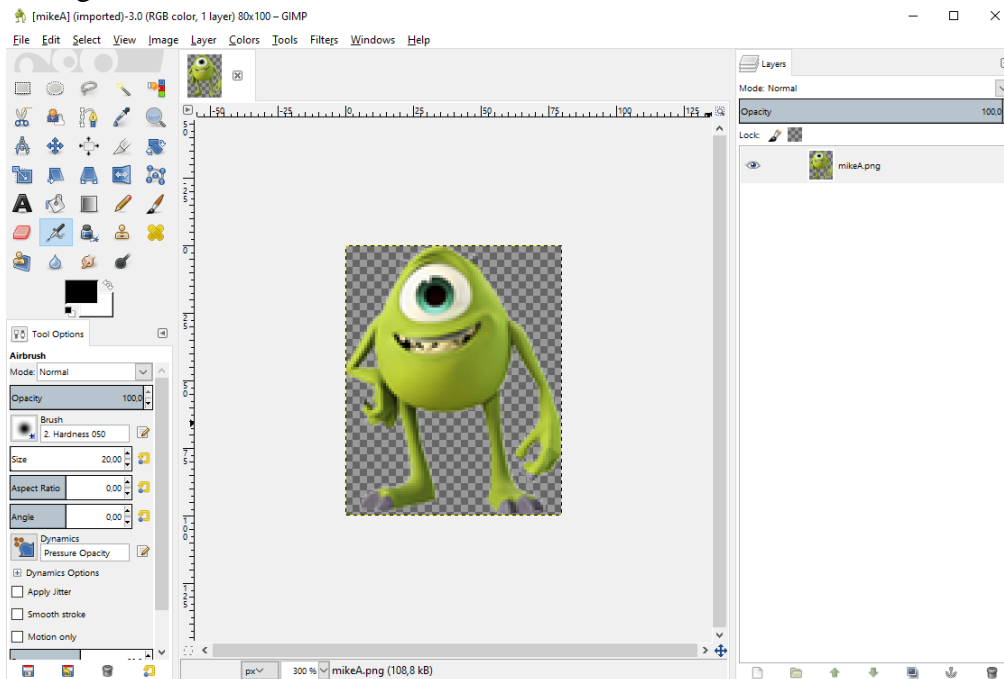
Now you can save new image as .BMP file and put it in IMAGES folder in level directory. Just leave options like on screen below.

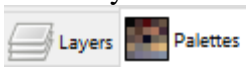


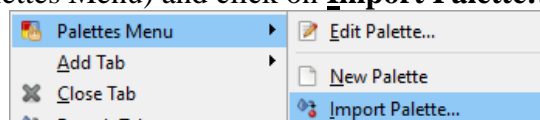


## c) GIMP

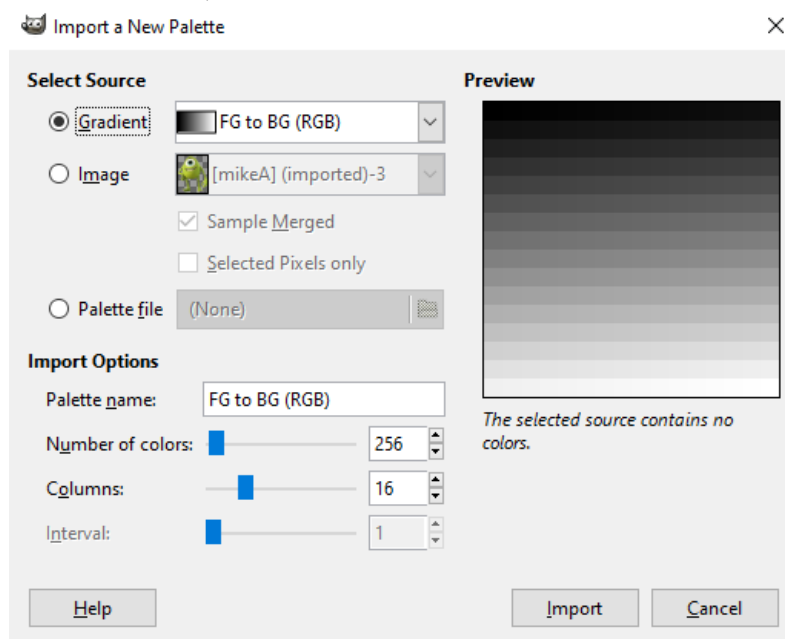
Alternative app for Photoshop. You can convert image in similar way. Open GIMP and load new image:



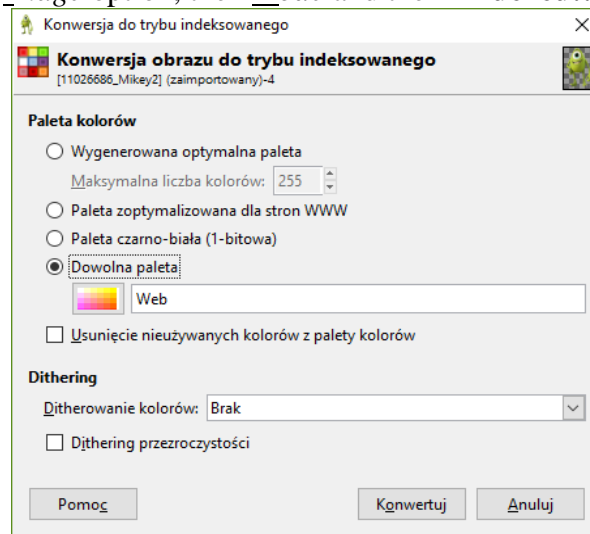
Before conversion go to Windows option and then Dockable Dialogs bookmark and click on **Palettes**. Now you have to add palette from third level to app, so click on small triangle - top right: . After click, you will see list, then choose first from top (Palettes Menu) and click on **Import Palette...** :



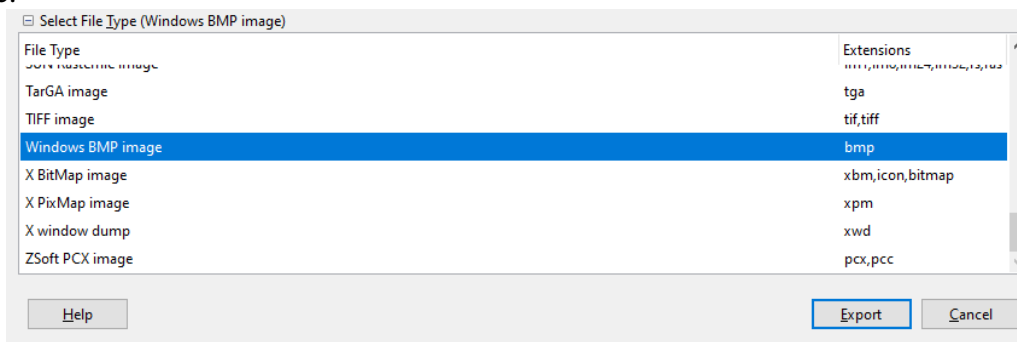
You should see new window, screen below:



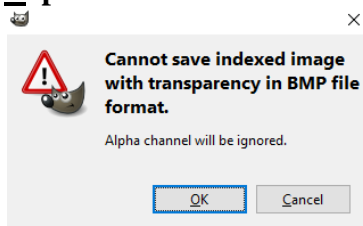
Choose **Palette file** option and click next to (on window) to search **Level3.ACT** file. Then click on *Open* button and then on *Import* button. Ok, you added colour palette, now you can convert image. Choose *Image* option, then *Mode* and then '**Indexed...**'.



Choose *Use custom palette* and click on button with colours. You will see list with available palettes, find **Level3.act** and click on it. Focus on *Dithering*, choose 'None' and then click on *Convert* button. Great, you can **Export** new image. In *File* option choose '**Export As...**'. New window will open, in which you can change directory and choose extension for this file.



Click in '+' - bottom left, next to 'Select File Type' and select **bmp** extension. Now click on **Export**.



If image before conversion had transparent background, you will see this window (screen), just click OK. Image will be saved with black background what is equal to image with transparent background.



Image before and after conversion.