

# Translating Graphics With Paint.NET

One smart person once said that "a picture is worth a thousand words". As a translator, I can say that this was an exaggeration. I guess it should be something like "on average, a picture is worth a hundred words". Regardless of the actual word count, however, even a few words on a picture are a big challenge for a translator because the translation process is entirely different from translation of a text document.

In this article, you will learn how to use a free image editor called [Paint.NET](#) to translate graphics - regular image files (JPEG, PNG, GIF, etc), images in PDF files, and graphics embedded in other documents (e.g. Microsoft Word documents, etc). It will also teach you the principles you can apply with any other image editing software.

## Alternatives to using an image editor

One of the common methods of translating graphics is to use your word processor directly. In summary, you create text boxes with the translated text and position them over the original text. This method has several advantages: you use only one tool (i.e. the word processor) and you can easily correct mistakes in the text at any point. However, there are disadvantages: text is difficult to position precisely, it is very difficult to match background color of the text to the color on the original image, there are issues with grouping objects together, etc.

For those of you who are happy using the above approach, bear with me: I hope that after you finish reading this article, you will be able to use both approaches depending on the situation. For those of you who have never tried the above approach or think it is difficult, you should find image editors a lot of fun. And hey, you will also learn how to create a postcard or what not!

## Selecting the right tool

Selecting the right image editor is very important. For the purpose of this article, I selected a free program called 'Paint.NET'. Although this program is free, it is very sophisticated and mature and is equally suited for simple and very complex image editing tasks. If you are interested in other tools, check out a comparison matrix at the end of the article.

To install Paint.NET, download a latest version from [the program's website](#). The installer will automatically download and install a correct version of Microsoft .NET Framework which is required by the program. If you want to install Paint.NET on a computer with an unreliable or non-existent internet connection, you will need to download Microsoft .NET Framework separately (the download link is provided in the System Requirements section).

## Translation workflow

We will use the following workflow to translate graphics:

1. [Extract image](#) from the document (skip this if you already have a file in a graphical format, e.g. JPEG, GIF, PNG, TIFF, BMP, etc.) and [open it](#) in Paint.NET;
2. [Create 2 new layers](#) - one for hiding the original text (we'll call it the mask layer), and another one to hold all translated text (the text layer);
3. [Insert translation](#) into the text layer;
4. [Modify the mask layer](#) to hide the original text and match the original text background;
5. [Save the file](#) in a graphical format and, optionally, Paint.NET native format (pdn);
6. [Insert the file](#) in the word processor, etc. (skip this step if the original file was already in a graphical format, e.g. JPEG, GIF, PNG, TIFF, BMP, etc.)

## Step 1: Extracting the image and opening it in Paint.NET

To transfer the image into Paint.NET:

- If the image is stored in a Microsoft Office document (Word, Excel, Powerpoint, etc):
  1. Select the image (click anywhere inside it);
  2. Copy the image to the clipboard (*Office 2003 or earlier*: click *Edit -> Copy*, *Office 2007 or later*: click *Copy* from the *Clipboard* group on the *Home* tab);
  3. Open Paint.NET and create a new file by clicking *File -> New...*;
  4. In Paint.NET, click *Edit -> Paste* to insert the image from the clipboard. If you see a prompt that the image is too small, click '*Expand canvas*'.

However, Microsoft would not be Microsoft if this method worked perfectly. Sometimes, the image will not get copied into Paint.NET correctly. To fix this, follow this procedure:

1. Open Microsoft Powerpoint and click *Edit -> Paste* to insert the image from the clipboard (this time it will be inserted

correctly);

2. Right-click the image and choose *Save as Picture...* from the pop-up menu;
3. Save the image in PNG or JPEG format (PNG format is better since there is no quality loss);
4. Open the file in Paint.NET (*File -> Open...* menu);
5. If you don't have Powerpoint, you can use *Print Screen* button on your keyboard to copy the entire screen to the clipboard and then paste it into Paint.NET. Before you press *Print Screen* button, I would suggest to increase the zoom ratio so that the image looks bigger than it actually is. This will allow you to increase the print quality of the image in the translated document. When the image is pasted into Paint.NET, you will need to crop the screenshot down to your image: use the *Rectangle Select* tool from the Tools panel to select the image on the screenshot, and then click *Image -> Crop to Selection*.

- If the image resides in a PDF file:

1. In Adobe Reader, click the image. The image should become selected (it will look shaded). You can also select an area within the image;
2. Click *Edit -> Copy* to copy the image to the clipboard;
3. Open Paint.NET and create a new file by clicking *File -> New...*;
4. While in Paint.NET, click *Edit -> Paste* to insert the image from the clipboard. If you see a prompt that the image is too small, choose '*Expand canvas*'.

**Note:**

The above technique will not work if the PDF file is protected (in this case the *Copy* command on the *Edit* menu will be disabled). Use the *Print Screen* button to copy the entire screen to the clipboard or request the image from your client.

- If the image is stored in an OpenOffice document (Writer, Calc, Impress):

1. Select the image, right-click it and choose *Save Graphics...* from the pop-up menu;
2. Save the image in PNG or JPEG format (PNG format is better since there is no quality loss);
3. Open the file in Paint.NET (*File -> Open...* menu)

As an example, I have copied the following graphic from a TV manual in PDF format:

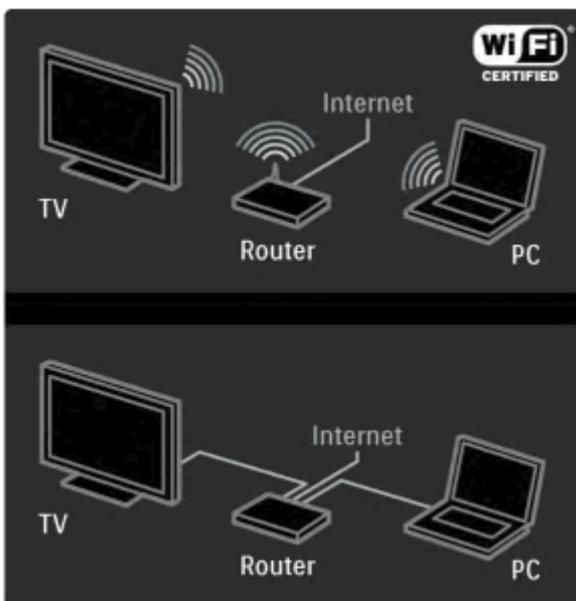


Figure 1: Original image extracted from a PDF

## Step 2: Create new layers

Before we continue, let's talk a bit about layers. If you are not familiar with this concept (hey, you didn't even hear Shrek's famous 'onions and ogres' talk?), layers are used in most drawing programs to separate various types of graphical information and make images more manageable. You can see layers in such popular programs as Adobe Photoshop, Autodesk AutoCAD, Corel Photopaint, Paint Shop Pro, etc.

With layers, you can:

- Store different types of graphical data in different layers (in our case we will have a background layer with the original image, a mask layer hiding original text, and a text layer containing translated text);

- Change the order in which this graphical data is presented (in our case the text layer will be the top-most layer, with the mask layer underneath, and the background layer at the bottom);
- Show/hide certain data, etc.

In Paint.NET, you manipulate layers using the Layers panel (click *Window -> Layers* if you don't see it). Using the Layers panel, you can add, delete, reorder, hide/show, rename, and merge layers.

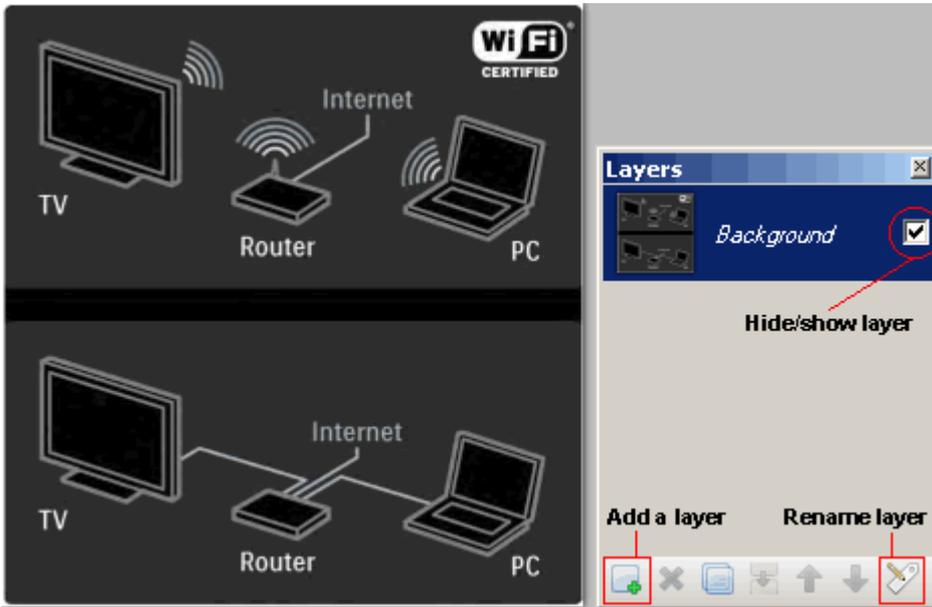


Figure 2: Our image and the Layers panel

When you create a new image in Paint.NET, it has only one layer called *'Background'*. All layers are created totally transparent at first, so if you have something in the background layer and add 10 other layers above it, you will still see the background layer. When you draw something in any of the layers, however, some of the things in the layers below will no longer be visible. We are going to use this very principle: above the *Background* layer we will create another layer (called *'Mask'*) to hide the text in the *Background* layer, and at the top we will create another layer (called *'Text'*) where we will put the translated text.

Now, let's create those 2 layers we were talking about:

- To create a layer, click the small button with the green cross [see Fig. 2] or click *Layers -> Add New Layer*. The layer is inserted above the current selected layer.
- To change the position of the new layer, select the layer in the *Layers* panel and use *Move Layer Up* () and *Move Layer Down* () buttons.
- To give the new layers descriptive names, select a layer in the Layers panel and click the small button with a pencil [see Fig. 2], double-click the layer or select *Layers -> Layer Properties...* menu.

Let's call the layer above the background layer *'Mask'*, and the layer above it - *'Text'*.

When we are done, your Layers panel should look something like Figure 3 below:



Figure 3: Layers panel after adding 2 new layers

**Note:**

Read the Advanced Techniques section for additional information on working with layers in some images.

### Step 3: Inserting translation into the text layer

By now you are probably wondering: when am I going to do some translation? Well, we've prepared all the groundwork, so let's get the show on the road!

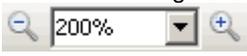
Working with text is pretty easy:

1. Use the *Color Picker* tool to pick the correct text color from the original image in the *Background* layer;
2. Select the layer that you designated for text;
3. Choose the *Text* tool from the Tools panel and click within the image;
4. Enter text, trying to match the original text formatting closely;
5. Correct typos, inconsistencies, etc. during the proofreading stage.

Let's break down each of the steps above. As an example, we will be translating the word 'Internet' in our sample image:

1. Use the *Color Picker* tool to pick the correct text color from the image.

Before you add a text block, you need to tell Paint.NET what color it needs to use to format the text. Unfortunately, it is quite difficult to change the text color when you have already typed some text, so we'll pick the right color before adding the text.

Select the *Color Picker* tool from the *Tools* panel (green eyedropper icon ). Switch to the *Background* layer (this is where all the original colors are stored). To zoom in on a specific area, use the plus and minus buttons (  ) on the toolbar or rotate the mousewheel up or down while holding the Ctrl key. Finally, click over the color you would like to use for the text. The *Colors* panel should change to something like this:

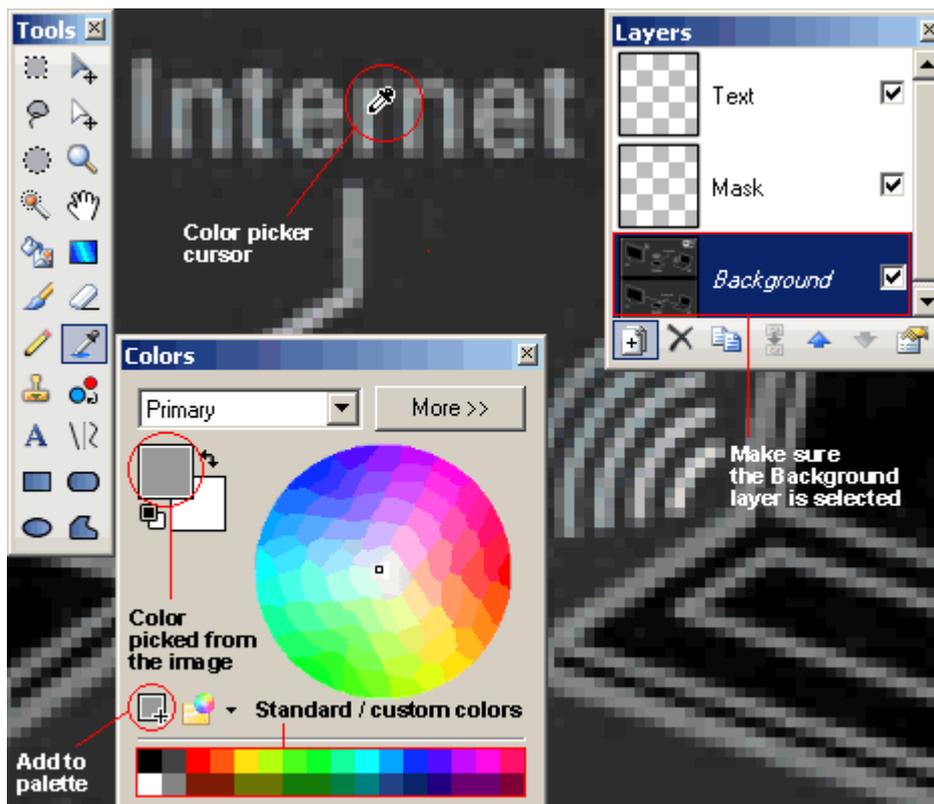


Figure 4: Using the Color Picker to pick a color from the original image

Tips:

- o if the color of the text you are about to add is already present at the bottom of the *Colors* panel, you can just select that color from there [see Standard / custom colors area in Fig. 4];
- o if your image has only a few colors and you need to translate a lot of text blocks, you can add all those colors to the standard palette by picking a color with the *Color Picker*, clicking the button marked 'Add to palette' in Fig. 4, and then clicking one of the colors in the standard colors area. This will allow you to choose those colors quickly.

2. Select the layer that we have designated for text

As soon as you finish editing a text block in Paint.NET, that text 'overwrites' anything stored in the same layer (using the graphical software terminology, the text is 'rendered' or 'rasterized'). This is why it is very important to choose the right layer in the *Layers* panel before adding text. Remember: always make sure that you have chosen the correct layer (preferably the layer designated for text) in the *Layers* panel, or you risk overwriting something (which you can always Undo, of course).

3. Make sure that nothing is selected within the image

When an area is selected (surrounded by a moving dotted line), the Text tool treats that area as a working area. In other words, only the text located inside the selection will be visible.

If you type the text and don't see anything, do the following: choose *Edit -> Deselect* or click  on the toolbar.

4. Choose the *Text* tool from the *Tools* panel and click within the image.

Once you do this, you will see a blinking caret with a cross-shaped icon next to it.

Paint.NET always remembers the formatting that you used for the previous text block, so if you have 2 or 3 different types of text formatting in the image, it is a good idea to add all text blocks with one type of formatting, then text blocks with another type of formatting, etc.

5. Enter text, trying to match the original text formatting closely.

You can change the formatting of the entire text block at any time while you are editing it using the Text Tool's Properties toolbar.

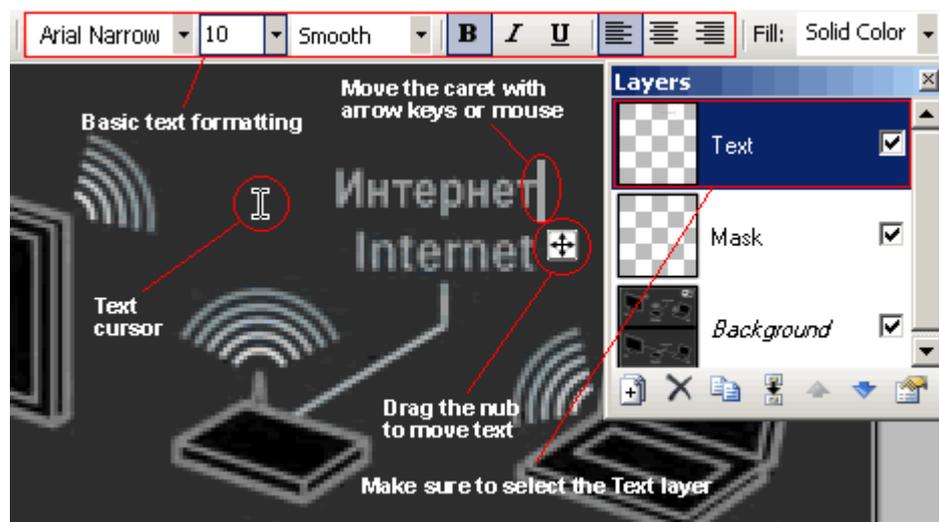


Figure 5: Text editing

You can also move the text around by dragging the cross-shaped icon in the bottom right corner of the text (press Ctrl key if you can't see this icon).

The text editor in Paint.NET is pretty basic. If you make a typo, use the left/right keys to go back to the mistyped text, or click the mouse where you want to modify something. To delete letters, press *Delete* or *Backspace* keys.

Check the text for typos, etc., and then position it right where you want to see it in the translated version (it will be above the original text). Click outside the text block and it will become rendered on the current layer.

Tips:

- You can also use the *Colors* panel to change the text color while the text is being edited;
- Paint.NET does not support formatting of individual letters, so you will have to outsmart the program by creating several text blocks;
- To insert a special symbol (e.g. a degree or Euro symbol), use one of these methods:
  - insert the symbol in Microsoft Word or another word processor, copy it to the clipboard and press Ctrl+V key combination to paste it in the text editor;
  - input the symbol using the numerical keypad located on the right side of your keyboard (this method works in all text editors). For more information, please [read this page](#).

6. Correct the text after it has been rendered

- Suppose you made a typo in the word 'Internet' (that stupid keyboard!). To correct it, you need to erase the text and type some new text instead. To do this:

1. Select the layer where the text is actually stored (i.e. the *Text* layer);
2. Select an area around the text using the *Rectangle Select* tool (


Figure 6: Selecting with *Rectangle Select* tool

3. Press *Delete* key to erase everything within the selection;
4. To erase individual areas, select the *Eraser* tool () from the Tools panel, set the appropriate brush width from the Eraser Properties toolbar, and make a couple of strokes over the text to erase it. I advise you to make a selection first to avoid accidentally erasing some other text in the same layer.

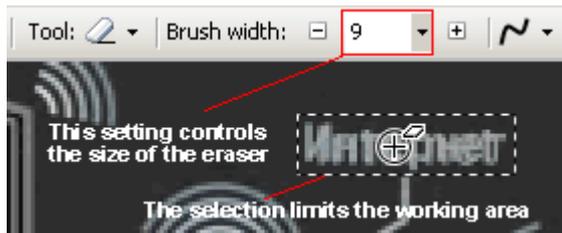


Figure 7: Using the *Eraser* tool

5. Reset the selection by choosing *Edit -> Deselect* or clicking  on the toolbar. This step is important, because if you leave an area selected, other operations you perform on the image will be constrained to that selection.
- o If you want to move the text that has been rendered:
    1. select the *Text* layer;
    2. select the area around the text using the *Rectangle Select* tool ()
    3. select the *Move Selected Pixels* tool () from the Tools panel;
    4. position the mouse cursor inside the selection, click the left mouse button and drag the selection to a new place:

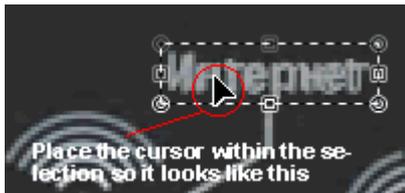


Figure 8: Using the *Move Selected Pixels* tool

#### Notes & tips:

- If you would like to insert rotated text, read the *Advanced Techniques* section;
- Sometimes you may insert text in a wrong layer. Unless this is the *Background* layer (in this case I would recommend you to undo the last action), you can use the *Rectangle Select* tool () to select the area around the text, click *Edit -> Cut*, select the right layer, and click *Edit -> Paste*. If you need to move the text, position the mouse cursor inside the selection, click the left mouse button and drag the selection to a new place.

#### Step 4: Modifying the mask layer to hide the original text and match the original text background

So, we have finally translated the text, but the original text is still visible underneath our translation. We are now going to hide this text by painting in the *Mask* layer (which is right between the *Text* layer and the *Background* layer).

To accomplish this:

1. Pick the background color of the text from the original image: select the *Background* layer, activate the *Color Picker* tool, and click on the background of the original text to copy this color to the *Colors* panel;
2. Select the *Mask* layer in the Layers panel. Again, be careful not to select the *Text* or *Background* layer;

3. Use the *Rectangle Select* tool () to make a selection around an original block of text. It is always recommended to make a selection prior to using other tools to avoid overwriting something else located in the same layer;
4. Use one of the following actions depending on the background of the text:
  - If the text background is uniform, select the *Paint Bucket* tool () and click within the selection to fill it with the current color:

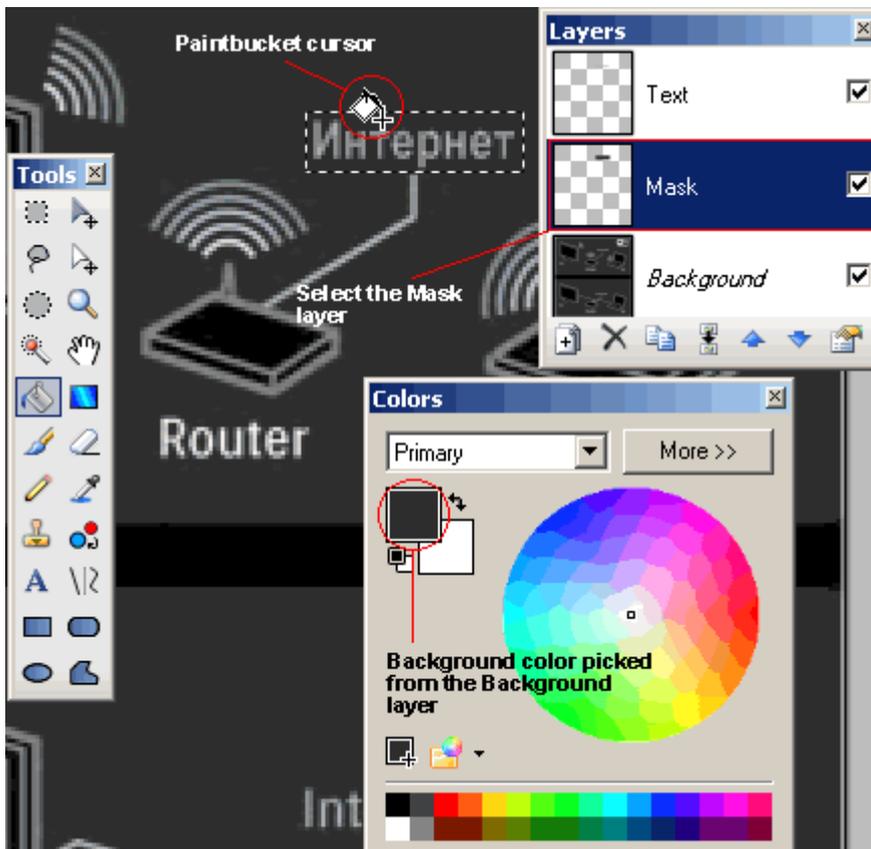


Figure 9: Using the Paint Bucket tool to modify the Mask layer

- If there are several colors in the text background, you will need to use the *Paintbrush* () or *Pencil* (). Use the Pencil to paint individual pixels with a specific color. The *Brush* is more versatile: you can change the size of the brush, and use it to create blurred transitions with the original background color when the text background is complex. Experiment with these tools to see the benefits of each one.

## Step 5: Saving the file

So, congratulations! You are only a few moments away from putting the image in the translated document. We now need to save the file in a format supported by your word processor.

Before we do this, it is a good idea to save the image in Paint.NET format. This way, you can make corrections to the image more easily because the file saved in this format will contain all the layers you created. In Paint.NET, click *File* -> *Save*, select a folder to save to, type the name of the image, and finally select "Paint.NET (\*.pdn)" from *Save as type* list before clicking the  button.

Now, let's save the image so that we could insert it in the translated document. Click *File* -> *Save As...* and choose "PNG" or "JPEG" from *Save as type* list before clicking the  button.

- For a **PNG** file, you will see a *Save Configuration* dialogue. In this dialogue, choose "24-bit", "32-bit" or "Auto-detect" and click .

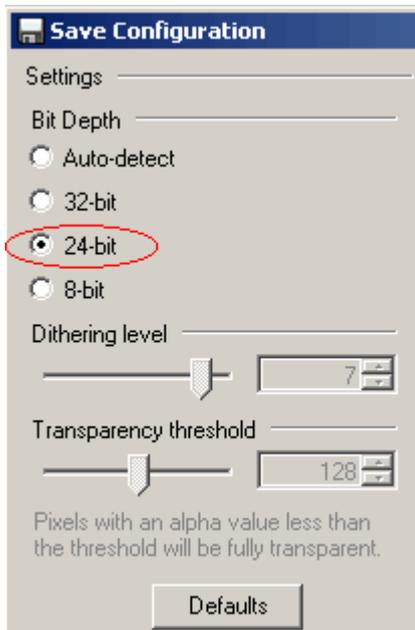


Figure 10: PNG file settings

- For a **JPEG** file, you will also see a *Save Configuration* dialogue. Select a high quality (90-95%) if the file size is not a problem for you. Otherwise, play with the quality until the file size is small enough and the preview image is satisfactory.

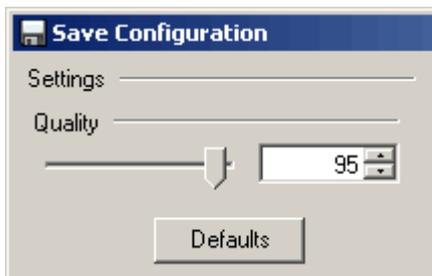


Figure 11: JPEG file settings

When you press **OK** in the *Save Configuration* dialogue, you will see a dialogue asking you whether you want to "flatten" the image. PNG and JPEG formats cannot store individual layers which you created, so all the layers need to be merged together. The image will still look the same, but it will contain only one layer. Click 'Flatten' to save the image:

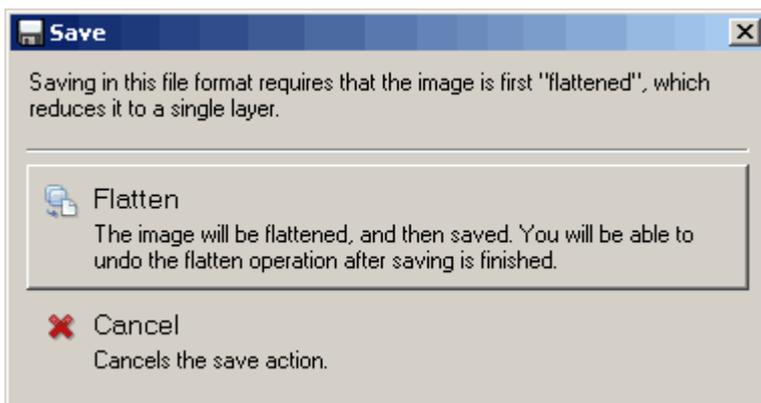


Figure 12: Flatten image prompt

Now, you will notice that the *Layers* panel now contains only one layer. At this moment, you can make further changes to the image (open the PDN file you saved before, or undo the last action to 'unflatten' the image) or insert the PNG / JPEG image in the word processor.

## Step 6: Inserting the file in the word processor

As the last step, we will need to insert our image (which we now have in PNG or JPEG format) into the final document.

- **Microsoft Office document (Word, Excel, Powerpoint, etc):**
  - *Office 2003 or earlier:* click *Insert -> Picture -> From file...*;
  - *Office 2007 or later:* click *Picture* from the *Illustrations* group on the *Insert* tab);

- **OpenOffice document (Writer, Calc, Impress):**

Click *Insert -> Picture -> From file...*

### Advanced Techniques

In this section, you will learn some advanced techniques for translating images using Paint.NET.

- **Inserting rotated text**

Sometimes you will need to translate rotated text (e.g. vertical text rotated at 90 degrees such as Y axis labels, etc.). Follow the steps below to insert such text in your images:

1. Insert a new layer above the existing *Text* layer. It must be a new layer because we will need to rotate it.
2. Select the new layer and type the text in the middle of the image using the procedure explained in Step 3 above.
3. Click *Layers -> Rotate / Zoom...*
4. In the *Rotate / Zoom* dialogue, type *90* (for text which will be read from bottom to top) or *-90* (for text which will be read from top to bottom) in the *Angle* box and click :

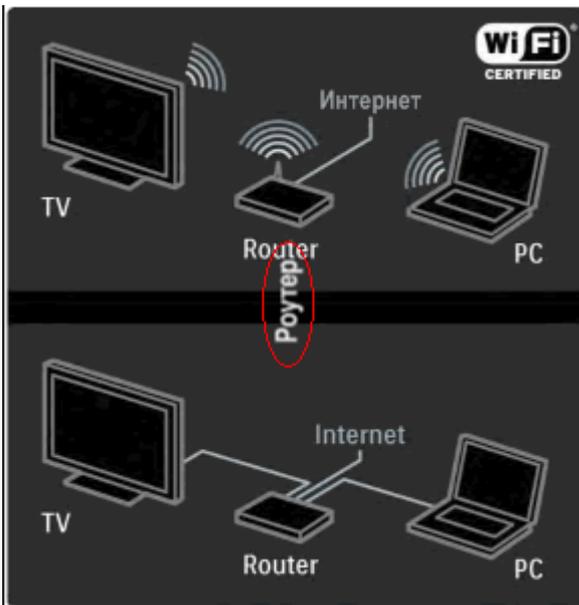


Figure 13: Text rotated 90 degrees

5. select an area around the rotated text, then select the *Move Selected Pixels* tool () from the *Tools* panel, and drag the text to its new position.

- **Working with transparent images**

Sometimes when you open an image in Paint.NET or copy it from the clipboard, it will appear like this:

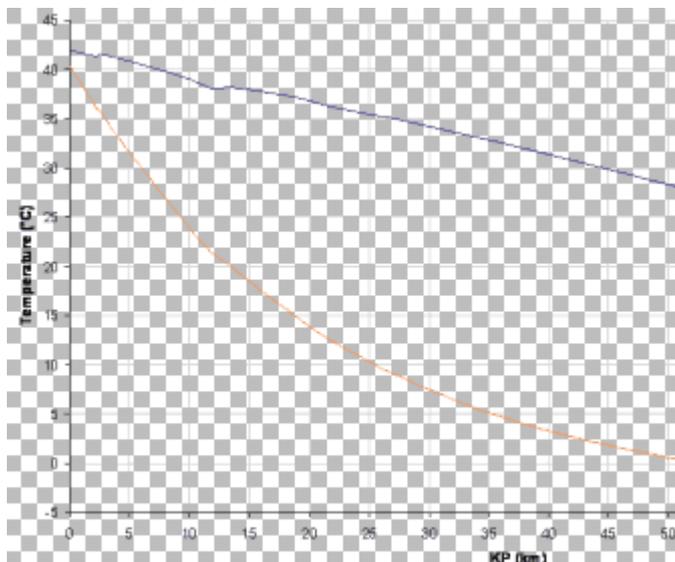


Figure 14: Transparent image example

The checkered background means that the image is transparent in those areas. If this is the case, follow this procedure:

1. Insert a new layer underneath 'Background' layer. To move the layer below the *Background* layer, select the new layer and click *Move Layer Down* button () on the *Layers* panel until the layer is under the *Background* layer.

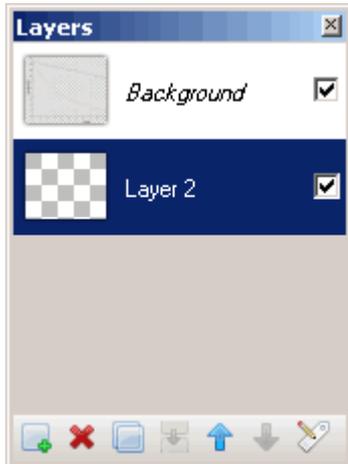


Figure 15: Layers panel for a transparent image

2. Select the new layer in the *Layers* panel and use the *Paint Bucket* tool () to fill the entire area with a White color (for details on how to do this, read the sections below). The image background will become white.

## Comparison of image editing software

Way back at the beginning of the article I promised to give you a comparison of some image editors. Well, here it is. It may be a bit subjective, so I strongly encourage you to install these programs and see them for yourselves.

### [Paint.NET](#)

Free, Windows

Rating - 6

#### Benefits:

- Clean, intuitive interface

#### Drawbacks:

- Text layers are not supported (i.e. you cannot modify text after it has been drawn, and such text overwrites other things in the layer)
- Basic text editor (only some keys may be used to edit text)
- Small Caps, All Caps - not supported
- Individual character formatting is not supported
- Some advanced text formatting features (e.g. kerning) are not supported

#### Promises:

- Text layers are promised in version 4.0. This will make it possible to modify text at any time

### [GIMP](#)

Free, Windows / Linux

Rating - 5

#### Benefits:

- Free open source application
- Available for almost all known operating systems
- Text objects are independent of their layer
- The Text tool supports line spacing

#### Drawbacks:

- Text layers are partially supported: they cannot be modified after being drawn, but unlike in Paint.NET they do not overwrite the underlying image in the layer
- Basic text editor (only some keys may be used to edit text)
- Small Caps, All Caps - not supported

- Individual character formatting is not supported
- Some advanced text formatting features (e.g. kerning) are not supported

[Corel Paint Shop Pro X2](#)

\$39.99 USD, Windows, 30-day trial

Rating - 7

**Benefits:**

- Text may be edited at any time
- Rotate text easily
- Some advanced text formatting features: letter spacing (kerning)

**Drawbacks:**

- Individual character formatting is not supported
- Rather basic text editor
- Small Caps, All Caps - not supported
- The program is optimized for photo editing, which makes it a bit difficult to use for translation

[Adobe Fireworks CS4](#)

\$299 USD, Windows & Mac OS, 30-day trial

Rating - 10

**Benefits:**

- Excellent text editor
- Text can be modified at any time
- Individual character formatting
- Easily rotate text
- A number of advanced text formatting features (line spacing, letter spacing, etc.)

**Drawbacks:** Virtually none

**Verdict:** If you need to translate a lot of images frequently, I strongly recommend to spend the money on Adobe Fireworks CS4 for the speed and flexibility it will give you compared to other products. However, if you translate images from time to time, I would recommend Paint.NET.

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**Congratulations!**

You have just learnt how to use Paint.NET to translate graphics.

Although Paint.NET is somewhat different from other graphical editors, the techniques covered in this article work just as well in other programs.

For your practice, use the following links to download Paint.NET and the image used in this tutorial:

- Paint.NET installer [<http://www.getpaint.net/download.html>];
- archive containing the image used for this tutorial in various formats [[http://www.translatortools.net/articles/paint-net/using\\_paint-net\\_files.zip](http://www.translatortools.net/articles/paint-net/using_paint-net_files.zip)].

Link: <http://www.translatortools.net/articles/paint-net.html>

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