



Skinner for Treo 680

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How to create skins and splashes

Both skins and splash screens can be created using the Skinner Desktop software that is part of the Skinner for Treo 680 download.

The task of Skinner Desktop is not to supply you with an image editor, but rather to take a set of images and put it together into a skin. This allows you to use the image editor of your choice, for example Photoshop, to fine-tune your skin.

This document tries to outline a few basic rules and tips on how to create your own files. Please also refer to the manual for instructions on how to use Skinner on your Treo 680, as well as for support and contact information.

Creating splash screens

Creation of splash screens is very simple. You just need two image files which will be used as the images that are displayed when your Treo's phone is turned on or off (so called splash screens, carrier logos or welcome/goodbye screens).

The image files need to be

- JPEG only
- 320x320 pixels in size
- max. 16 bits in colordepth
- less than 64 kB in size each



The files will be included in the splash file without any modification, so please make sure that you have a correct JPG file. Skinner Desktop will do a basic check to see if the images are in the correct size (320x320 and less than 64kB) and in JPG-format. If any of these conditions is not fulfilled, the splash file will not be created.

No scaling will be done, so if you have a photo that you want to use as splash screen, you will have to use an image editing software like GIMP or Photoshop to adjust the image size to 320x320 pixels.

That's basically all there is to say about splash screens. The rest of this How To will thus concentrate on some basic techniques on how to easily create a skin for the phone application of your Treo 680.

Creating skin files

Skin files are harder to create than splash screens, as a skin consists of 40 different images. Here's a quick overview:

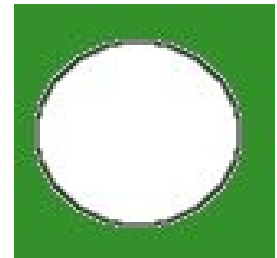
- 1 bitmap for the dialpad button
- 1 bitmap for the dialpad button pressed down
- 12 bitmaps for the text on the dialpad buttons
- 12 bitmaps for the text on the pressed dialpad buttons
- 2 bitmaps for the favorites buttons (normal and selected)
- 12 bitmaps for the tab section

As pressed and unpressed buttons and texts can be set separately, a 3D effect can – for example - be achieved for button presses by displaying text and inverting the border of the button.

All these bitmaps can be specified separately and need to be supplied in the correct size and in BMP format. Some of these bitmaps can be created automatically from a larger bitmap, which we will explain further below.

For all of these bitmaps Skinner Desktop allows you to specify the **transparency**. Transparency is specified by selecting the color that should be transparent (see-through).

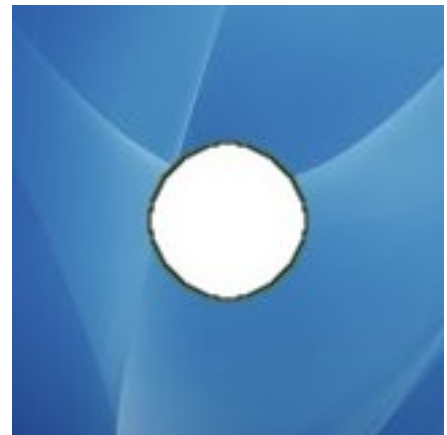
Example for transparency: Consider the image to the right which is a white circle on a green rectangle. If you were to paint this image on a blue background with no transparency, you would get the result as shown in the left picture below.



But if you set green as transparent color, painting the image on the blue background would let the background be visible where the green was before as you can see in the image to the right.



You want to use transparency whenever images are supposed to overlap and the image on top contains unused parts. The preview in Skinner Desktop will give you a realistic preview how your skin is going to look so you can experiment with the transparency settings to see the difference.



One caveat with transparency is that it only covers one colour. If the borders are dithered, they will most likely contain pixels of colors close to the transparent one and you may see artefacts – for example you may see that there is still screen and some white in the picture to the right. Use the magnifier in your image editing software to see and erase these pixels.

Loading and saving skins

Skinner Desktop allows you to load existing skins (created with Skinner Desktop only) and to modify them. This obviously is especially useful when you have downloaded a skin that you like and only want to make some small adjustments. For copyright and intellectual property reasons, please check with the author of the original skin, however, before you make your modied skin available to the public.

Creating a skin using single bitmaps

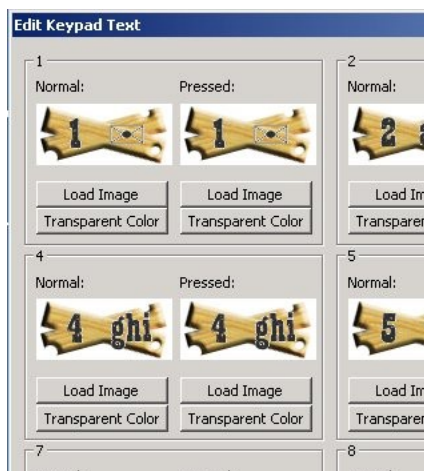
The historic way of creating a skin was to modify each of the aforementioned bitmaps to your liking. To aid you in this, use the “Export Bitmaps” menu item to have Skinner Desktop create all 40 bitmap files for you in the correct dimensions.

After you are done modifying the images, you can load them back into Skinner Desktop by selecting “Import Bitmaps” from the menu and files with the same filename used during the export will be loaded. Please note that transparency colors will have to be selected in Skinner Desktop manually.

Creating a skin using combined images

Alternatively, Skinner Desktop allows you to create the dialpad in one step using one single image (306x216 pixels). This allows you to create a bitmap containing the complete dialpad in one go.

For example, you could create a dialpad as shown to the right and load it in Skinner Desktop via “Import dialpad bitmaps ...”. You will be asked to select two bitmap files – one for the dialpad with unpressed, and one for the dialpad with pressed buttons. If you do not care about 3D or other effects when pressing a button, you can of course load the same dialpad image twice.



Technical background

On the device, the buttons will be drawn by displaying first the button graphic and afterwards painting the button text on it. As you see in Skinner Desktop, there is only one button image defined which will be used for all 12 buttons on-screen.

What is unique for each button, though, is the text. As it is impossible for Skinner Desktop to separate the button image from the text if you load the dialpad as one image, what will be done is to erase the button image to an all-white bitmap and putting all the information in as the dialpad text images.

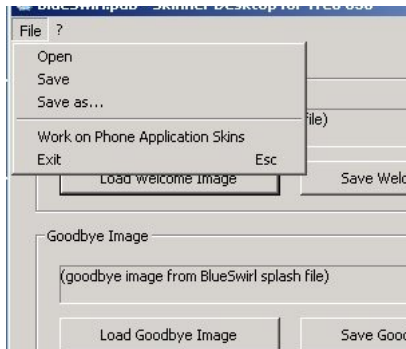
So when you load a dialpad image, it will be split into twelve parts, the dialpad button images will be erased and the dialpad text images will be set to these twelve parts. **Please note** that some dialpads need to have their transparency set afterwards (especially dialpads with white text).

Using this trick, it is also possible to create skins that seem to have a background by loading a corresponding dialpad. Or use the “Insert background image...” feature in Skinner Desktop to insert the background image behind the dialpad buttons and text. Read below for more information on how this can be done.

Menu commands – An overview

Skinner Desktop provides the following menu commands:

For splash file creation:



- Open – open a splash file
- Save – save the current splash file
- Save as... – save the current splash file under a new name
- Work on Phone application skins – Goes to the skin editor
- Exit – Quits Skinner Desktop

For skin file creation:



- Reset – Sets all bitmaps back to their default
- Open – Loads a skin
- Save – Saves the current skin
- Save as... – Save the current skin under a new name
- Work on Splash Images – Goes to the splash editor
- Exit – Quits Skinner Desktop

Export Bitmaps... – Saves all parts of the skin as single BMP files for modification. You will be prompted for the directory to save the bitmap files into. After you have modified them, you can load them back using 'Import Bitmaps ...'

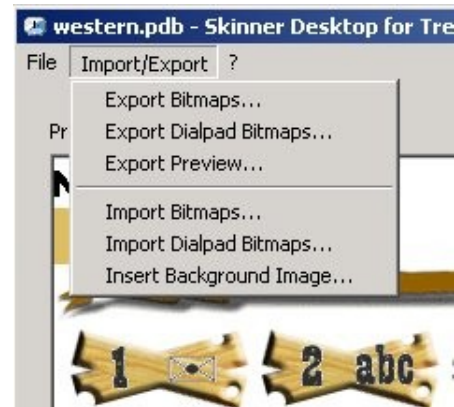
Export Dialpad Bitmaps ... – Saves the complete dialpad area as one image (e.g. suitable for modification in Photoshop/GIMP)

Export Preview... – Saves a screenshot (useful if you want to show your skin at your website)

Import Bitmaps... – Loads all bitmaps for a skin (same filenames as created by 'Export Bitmaps' above. You will be prompted for the directory that contains the bitmaps.

Import Dialpad Bitmaps... – This will load two bitmaps, one for the dialpad with the buttons not pressed, one for the dialpad with the buttons pressed. The images have to be 306x216 in size (width x height) and will be split in twelve parts and assigned to the dialpad text bitmaps (the dialpad button bitmaps will be set to all-white).

Insert Background Image... – You will be prompted to select one 306x216 bitmap which you want to use as background. On this image, the dialpad button image (if any) and the dialpad text images will be drawn. Afterwards the image will be split into twelve parts and assigned to the dialpad text bitmaps (the dialpad button bitmaps will be set to all-white).



Tips and Tricks to create a custom skin

The ideal way to create a good skin is to create all of the 40 different parts (bitmaps) of the skin separately so that they – when put together – form a beautiful skin. This requires talent, good skills with applications like Photoshop and is usually quite a bit of work. Describing all the tricks on how to create a perfect looking skin from scratch is not possible on these few pages. What we are going to do, however, is to show you how to create a custom skin by using existing features and some simple techniques.

There are a number of certain scenarios that are common when a user of Skinner for Treo 680 wants to create his own skin. The most common one is the wish to add a background image to the dialpad. Another common scenario is that users are looking for a skin with a certain theme. The following pages will try to cover these two common scenarios.

How to add a background to a skin ...

As the phone application does not support a background image for the dialpad (mainly because the default buttons are so big that a background image would not be visible), placing a background image on your skins can be a bit tricky. Yet, it is possible if you can live with the restriction that it will not be full screen but will only cover the dialpad area.

For this example, we are going to use the picture to the right as background image. This should also be your first step: prepare the background image that you want to use. The image needs to be 306x216 in size (width: 306, height: 216 pixels) and stored in BMP format (16 bit color depth). Use your favorite image editor or album application to scale or crop larger images and to convert i.e. JPG to BMP.



The second step is to decide upon the buttons you want to use. Either create your own ones, use an existing skin or use one of the sample dialpads that are included in the “Dialpads” directory (load them via “Import dialpads ...” in the menu).

The third step is to combine both the background and the buttons. There are several alternatives depending on what you imagine and what kind of buttons you selected.

The **simplest approach** to add the background to the skin is using the “Insert Background Image...” menu command. This will put the dialpad buttons and the dialpad texts on top of your background image. Of course, this requires that your dialpad buttons and text have sufficiently large transparent parts, otherwise there will not be a lot visible from your background image. You can also have problems with buttons that have dithered edges or shadows, if the background image's colors do not match the buttons. More to that later.

To show you what this approach could look like, we have added the above background image to the Western skin as well as to a dialpad that only has text but no button frame, both times using the “Insert Background Image...” menu command of Skinner Desktop:



As you see, the Western skin's buttons are too large to allow for a good view of the background image (though it's not that bad). The screenshot on the right side shows a text-only dialpad which allows the background image to be better visible. For the title bar and favorites buttons, use one of the existing skins.

Solution #1: To quickly create a skin using your favorite background, follow these steps:

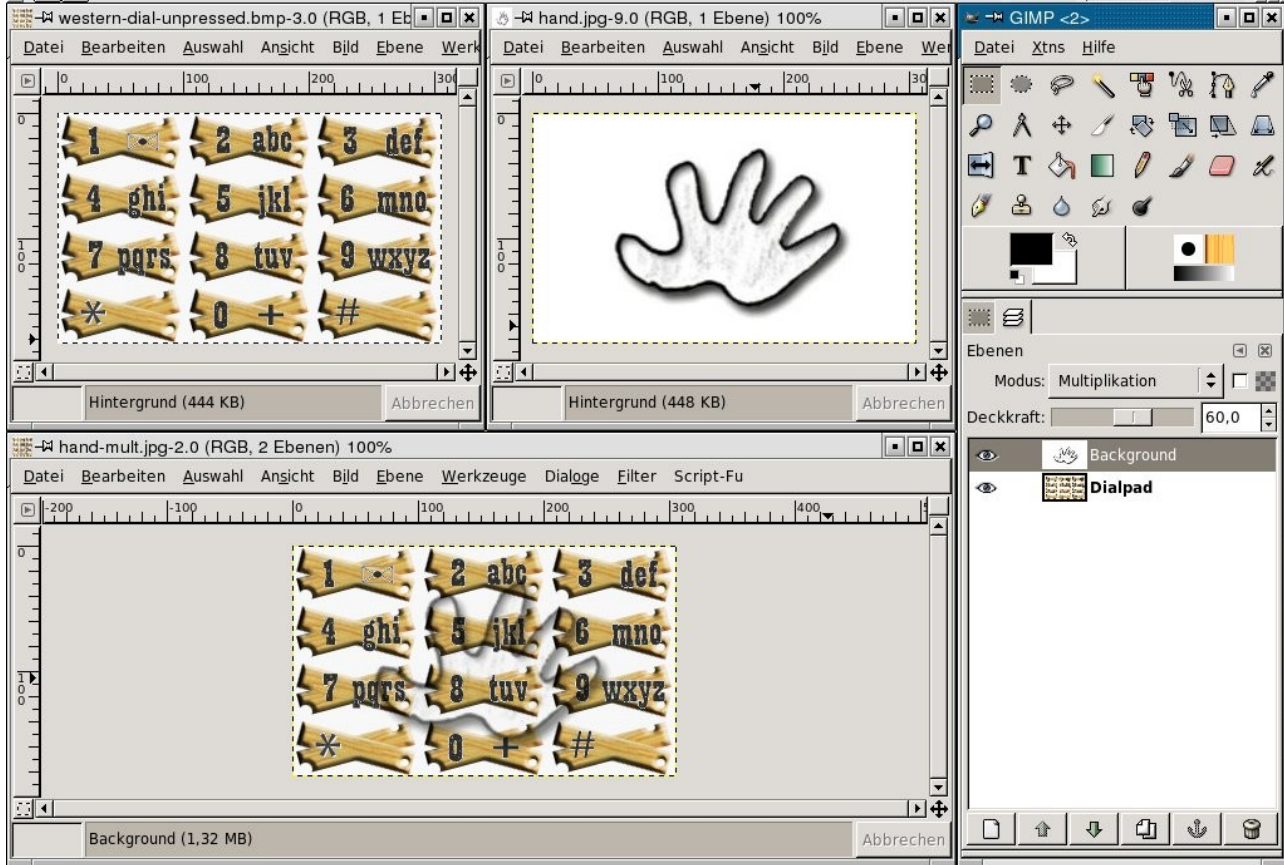
1. Load a skin of your choice that has a tab bar and favorites buttons that you like (or create your own).
2. Either keep the buttons of that skin (check transparency of the dialpad buttons!) or use "Import Dialpad Bitmaps..." to load a predefined dialpad from the "Dialpads" directory (recommended). If you do the latter, choose a dialpad with dark text for bright backgrounds, and choose a dialpad with bright text for dark backgrounds.
3. Use "Insert Background Image..." to have Skinner Desktop insert your background image. Skinner Desktop will show you what the skin will look like on your device.
4. Use "Save as..." to save the skin under a new name and install it to your Treo 680.

Solution #1 is an easy approach and gives you results very fast. Unfortunately it has some drawbacks. To make text look smooth, *dithering* or *anti-aliasing* is used. This basically means that the edges of the letters are painted in a "fuzzy" way (the edges do not have a sharp black-to-white transition but there is an area with a mixture of white, light-grey, dark-grey and black pixels).

Use of this trick has a big drawback when you paint this text (i.e. dialpad) on a background image. Depending on the exact colors and amount of "fuzziness", the edges of the text may seem distorted and rough. To reduce this effect, you can use an image editor like Photoshop or GIMP and either do the backdrop in it (smoothing the edges) or print your own text directly (perfect edges).

As we are at the image editor software already, let's stay there and read about the second possibility to add a background. This more **advanced approach** is not actually very difficult either, but requires a slight bit more of work and you may need to experiment a bit more. We will show you how to use an existing dialpad from a skin – which even may fill the whole dialpad area – and to add a background image to it using semi-transparency (and a concept called alpha-blending).

This time, the background image should shine through the buttons. This is the ideal solution for every kind of dialpad. Let's show you a few examples first of skins with a complex dialpad and some custom backgrounds:



We have used a western dialpad with our company logo and put them together. You can see that the background image (the hand) is visible through the buttons. You may also notice that the quality of the resulting dialpad depends on the amount of blending and the background and button images. A rule of thumb here is that mixing two complex pictures (i.e. a photo as background and a set of fancy button images) may not produce very good results.

But let's get to the interesting point on how to actually create these dialpads. We will explain this twice – first using GIMP, afterwards using Photoshop.

For **GIMP**, please load the “Skin Template for GIMP.xcf” file that you can find in the “Templates” directory. This will open an image in the correct size (306x216) which has two layers predefined. The top layer is for the background image, the bottom layer is for the dialpad.

In parallel, please open the background image (306x216 pixel) and the dialpad that you want to use. You can use one of the existing dialpads in the “Dialpads” directory, copy a dialpad from another skin (use the “Export Dialpad Bitmaps ...” menu item in Skinner Desktop) or use your own dialpad.

Copy the dialpad image that you opened into the dialpad layer, and the background image into the background layer. You can do this the following way:

1. Select the window with the image. Right-click into the image and select “Selection -> All” (or simply press Ctrl+A). Afterwards, right-click and select “Edit -> Copy” (Ctrl+C).
2. Select the window for your skin. Left-click on the corresponding layer and left-click once the titlebar of the skin window. Right-click into the image and select “Edit -> Paste” (Ctrl+V). Right-click into the image and select “Layer -> Anchor layer” (Ctrl+H).

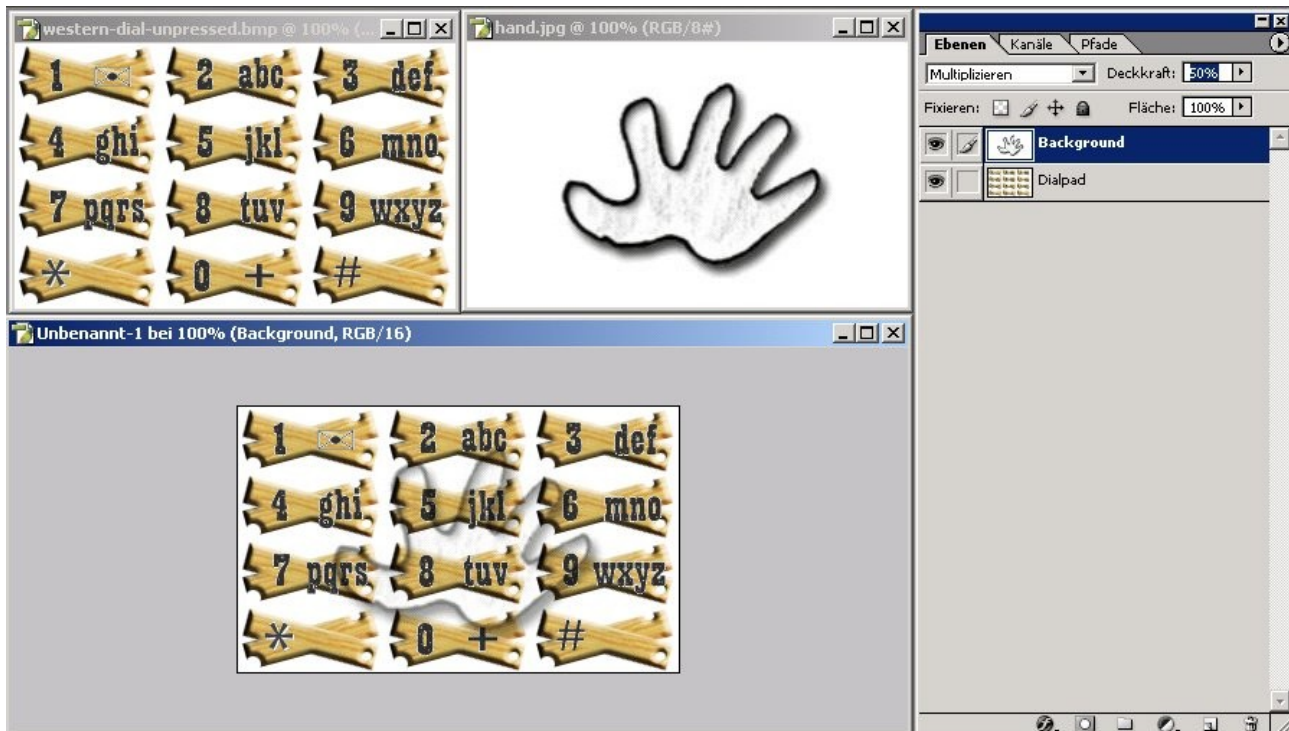
After you are done, select the background layer and use the slider above it to change how much the background should shine through. You could also experiment with other layer modes (by default the template file included with Skinner Desktop uses “Multiplication”).

-- See the screenshot at the top of this page on how it could look for this example. --

If you want some 3D or shading effect when you press a dialpad button on your Treo, you will need to repeat this for the dialpad with pressed buttons. Otherwise you can of course use the same dialpad for pressed and unpressed.

When you are done, save the file as bitmap and use the “Import Dialpad Bitmaps...” menu item in Skinner Desktop to load everything into your skin. That's it.

Doing the same in **Photoshop** is very similiar. Please load the file “Skin Template for Photoshop CS.psd”. This will open an image in the correct size (306x216) which has two layers predefined. The top layer is for the background image, the bottom layer is for the dialpad.



In parallel, please open the background image (306x216 pixel) and the dialpad that you want to use. You can use one of the existing dialpads in the “Dialpads” directory, copy a dialpad from another skin (use the “Export Dialpad Bitmaps ...” menu item in Skinner Desktop) or use your own dialpad.

Copy the dialpad image that you opened into the dialpad layer, and the background image into the background layer. You can do this the following way:

3. Select the window with the image. Right-click into the image and select “Select All” (or simply press Ctrl+A). Afterwards, select “Copy” from the “Edit” menu (or simply press Ctrl+C).
4. Select the window for your skin. Left-click on the corresponding layer on the right and left-click once the titlebar of the skin window. Select “Paste” from the “Edit” menu (or simply press Ctrl+V). Select “Merge Down” (or simply press Ctrl+E).

After you are done, select the background layer and use the “Opacity” slider above it to change how much the background should shine through. You could also experiment with other layer modes (by default the template file included with Skinner Desktop uses “Multiply”).

If you want some 3D or shading effect when you press a dialpad button on your Treo, you will need to repeat this for the dialpad with pressed buttons. Otherwise you can of course use the same dialpad for pressed and unpressed.

When you are done, save the file as bitmap (".BMP") and use the "Import Dialpad Bitmaps..." menu item in Skinner Desktop to load everything into your skin. That's it.

Solution #2: To create a skin with semi-transparent buttons (or simply for more control), use Photoshop, GIMP or any other good image editing software and apply alpha-blending (see above for instructions) or any other filters that you need. Use your custom background image (306x216) and a dialpad of your choice (either from our collection, another skin or one of your own creations).

Creating theme skins

Now that we have covered the background image, let's shortly tackle the topic of creating your own theme skin. This requires a bit more of work, so we won't go into a lot of details as every theme and every skin will require a different approach based on your expectations.

Theme skins are skins with a topic – for example operating systems (e.g. PocketPC, Treo, MacOS X), holidays, Sports teams, games (e.g. Poker), seasons (e.g. Winter), and so on.

You probably already know the theme you are going for and you will have to create suitable images.

Creating a themed dialpad can vary in complexity from very easy to very difficult. The most basic approach is to just use a suitable background image (for example with the logo of your company, the logo of your favorite sports team, a picture of a dog, etc) and create a dialpad as outlined on the previous pages.

One example for this would be the dialpad to the top-right, where we used the Western skins' dialpad and put our company logo behind it. Another example could be the skin to the right that makes use of a background image to give you a winterly theme. As you see it also uses custom dialpad text images, but of course you could just go with one of the available dialpad bitmaps that are included with Skinner Desktop.

For more abstract themes, you will need to create keypad button images (and probably associated keypad text images) individually. Use the "Export bitmaps..." menu item in Skinner Desktop to have the images created for you in the appropriate dimensions and use GIMP/Photoshop/... to modify them. The example to the right is a Poker theme skin with custom dialpad button and dialpad text images.



The tab bar images need to be modified in Photoshop/GIMP/... as well, to match the dialpad in theme and color. How you do that depends on the theme and your requirements. In the simplest case, you could just take the images from another skin and add a little something to it – for example a small image at the left-side.

The same goes for the favorite buttons. Either create your own one or re-use the buttons of an existing skin.

What you should always consider is having some kind of effect when pressing a dialpad button. You can create this by using different dialpad images (i.e. using different dialpad button images and/or text images). In the simplest case you could just shade the graphics for the pressed buttons, if you want a 3D effect you will need to modify the pressed button image accordingly.

Information for the Tab Bar

If you want to perfect your skin after having designed the dialpad, you definitely want to redesign the tabs at the bottom of the screen. Using Skinner Desktop, this is very straightforward, but there are some small things you may want to be aware of beware tackling this step:

- In the default layout, the vertical separation lines between two unselected tabs is not an extra image, but is rather part of the tabs itself – the left tab has half of the vertical line, the right tab the other half and together they form the vertical separation line you can see. Of course, it is up to you how you are going to design this – you could have no separation, empty space or put the separation line in either of the tabs.
- The phone application assemble the tab bar by drawing the left border image (4 pixels width), followed by the 5 tabs unselected (62 pixels each) and finally the right border image (6 pixels). When the selected tab is drawn, it will partially paint over parts of the tabs on its left and right as it is 12 pixels wider than the unselected tab – hence 6 pixels of the tab to the left and 6 pixels of the tab on the right will get lost in this display. The Skinner Desktop shows you a preview for when the left- and the right-most tab is selected.

This is the end of our little workshop on “How to create skins and splashes”. We hope that you have learned a few basic ideas and how to quickly add a custom background image to any skin (and how to easily create your own background image skin).

For information on Skinner for Treo 680 itself, including contact/support information, please refer to the manual.pdf file that is part of this download as well.

