

# WAP Pictus

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## Requirements

Software and hardware requirements for WAP Pictus:

- Microsoft Windows 95, Microsoft Windows 98, Microsoft Windows NT or Microsoft Windows 2000
- SVGA (800x600) display or higher
- 2 MB of free hard disc space

## Installation instructions

Run setup program and follow the installation information in the setup dialogs.

## Getting started

### *Converting Bitmaps to WBMP*

The source bitmap file must have 4 or 8 bpp.  
(bpp = bits per pixel)

### *Converting JPEG images to WBMP*

When you open a JPEG image, the WAP Pictus converts it automatically to a temporary bitmap. You can select the resolution of the wbitmap.

## Features

### **Settings**

- User preferences – You can select what type of dithering is used to convert BMP file to WBMP as well as select threshold value (for more information see appendix A)
- Directories – Your working and temporary directory path

### **Zoom**

- You can zoom in and zoom out to view details of the image

### **Download**

- You can download images from internet and work with them

### **Zoom\Resize**

- You can easily make your image viewable in most WAP - enabled devices (Nokia 7110, Ericsson RS320, Ericsson RS380)

### Batch Conversion

- You can convert many files at once, and create WML code for those images so converted images can be immediately visible on WAP enabled devices

### Others

doubleclick the image to get image information

**Chessboard icon** – converts the image to a monochrome

in WAP Pictus you can save files as Bitmap (.bmp) or Wireless Bitmap (.wbm)

## Appendix - Dithering methods

### What is dithering

Dithering methods are used to display (or print) a high resolution image on a simple screen device (e.g. truecolor image on 16 color monitor), in this case to display image in monochrome.

### Colors

Color palettes used in WAP Pictus:

- a) 1 bpp ==> |palette| = 2
- b) 4 bpp ==> |palette| = 16
- c) 8 bpp ==> |palette| = 256

(bpp = bits per pixel)

### Dithering methods used in WAP Pictus

#### Thresholding

```
If (value of pixel > threshold value)  
    enable pixel;  
else  
    disable pixel;  
end if
```

#### Random

```
If (value of pixel > random value around the threshold)  
    enable pixel;  
else  
    disable pixel;  
end if
```

#### Matrix dithering

for displaying

for printing

```
If (value of pixel > matrix[row % 4][column % 4])  
    enable pixel;  
else  
    disable pixel;  
end if
```

#### Floyd – Steinberg

*Fault distribution method.*