MagazineMaker

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1. Introduction

The concept of e-books is quite familiar by now. Lately I came across several other kinds of e-books which are known as magazines. A magazine is like an e-book, but it uses pictures instead of text.

MagazineMaker is easy to use program which is able to convert your images into a single standard document (magazine) format. The used standard is Adobe PDF (PDF stands for Portable Document Format), which is by far the most adopted magazine standard currently used. PDF-documents can be read on almost any computer or handheld.
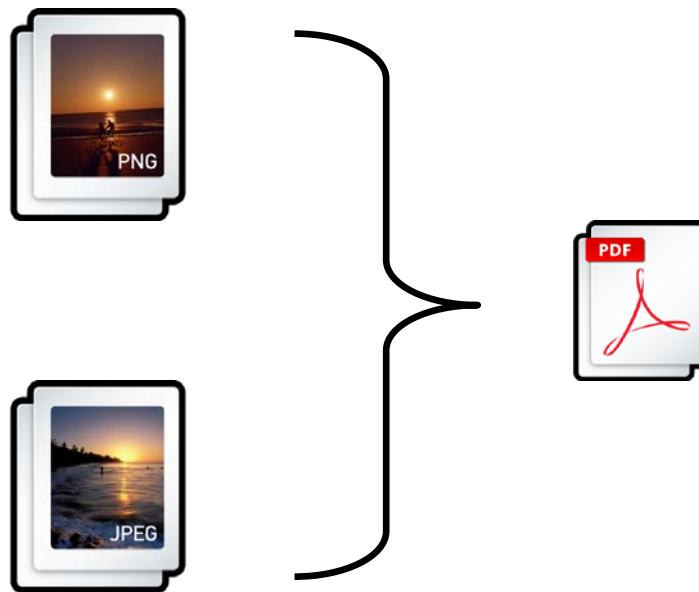
The image format used can be either of the JPEG (Joint Photographic Experts Group) or the PNG (Portable Network Graphics), format.

All mentioned formats are cross-platform supported formats, which makes both the input and output files extremely interchangeable.

1.1. How does it work?

The program first converts each image into single PDF-documents and stores these temporary files into the temporary-folder of your workstation. Next, the program is going to merge these single PDF's to consolidate all these temporary files into a single document, called magazine. During the creation of this magazine all additional user settings are going to be embedded within the PDF. This way the magazine behaves as required. So if you prefer to have the thumbnails-page open want to open the document full-screen, simply adjust the settings found within the main menu.

When the magazine is created, depending if the future is turned on within the preferences menu found under the 'Tools' menu, the magazine is opened. Your must have PDF-viewer installed prior being able to view the magazine. MagazineMaker does not require any viewer installed for the creation process.

One of the most common PDF viewers is Adobe Reader which can be freely obtained from their website: www.adobe.com.

The basic magazine information, like document settings and used images can be saved and loaded into a configuration file. This way the magazines information can be stored into a single file. Bear in mind that the image files will not be stored within this configuration file. Only the references toward these files and the settings used will be saved. Although the extension .MM is used for these files, you can read them using any plain text reader (like Notepad). The structure of the .MM files is explained later. The programs preferences will be saved into a configuration file, a XML fragment to be more precise, which is stored within the programs application folder. Beside the preferences also the last known Document Settings will be retained within this file. Settings found within a load .MM file will overwrite the current selected document settings.

Normally the page size is according to the used system document size, i.e. Letter or A4. But the MagazineMaker will use the original picture size as page size. So page sizes might differ per page. Due to this fact no compression or resizes takes place onto the used images.

2. Main-form

When the program is started it will look like this (little bit depending on your active theme, I use a Glass theme within the following screenshots):
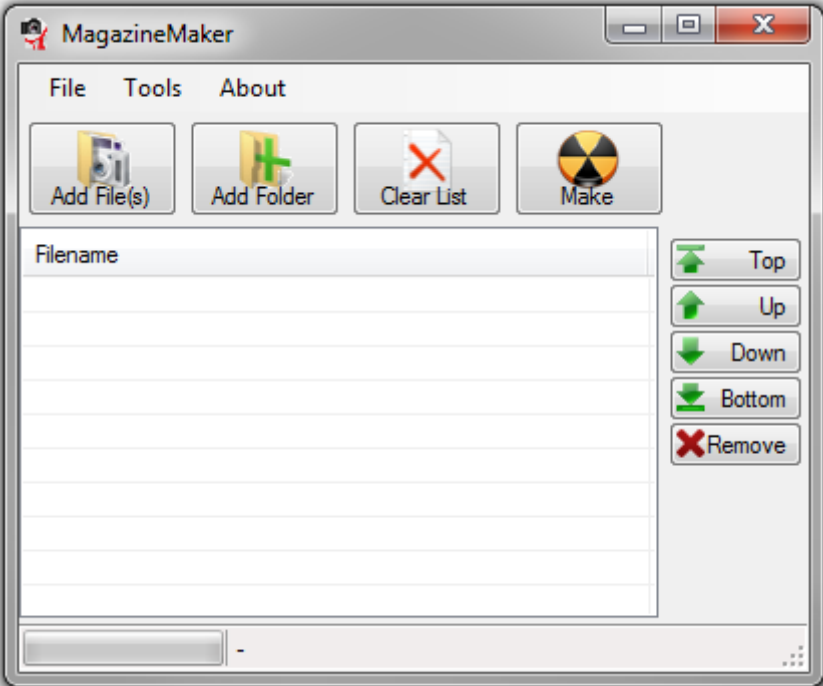

Figure 1: Program interface

2.1. Main Menu

With the main menu the following items can be found:

| Main menu	Caption	Description
File	Load Magazine	Loads a previously saved magazine. This feature can be selected using the Ctrl-L hotkey.
	Save Magazine	Saves the current magazine. This feature can be selected using the Ctrl-S hotkey.
	Clear List	Clear the selected image list.
	Exit	Exit the application.
Tools	Document Settings	Shows the Document Settings dialog.
	Window/UI Options	Shows the Windows/User Interface Options dialog.
	Preferences	Shows the Preferences dialog.
About	*None*	Shows the About-box as show in figure 2.

Table 1: Main menu items
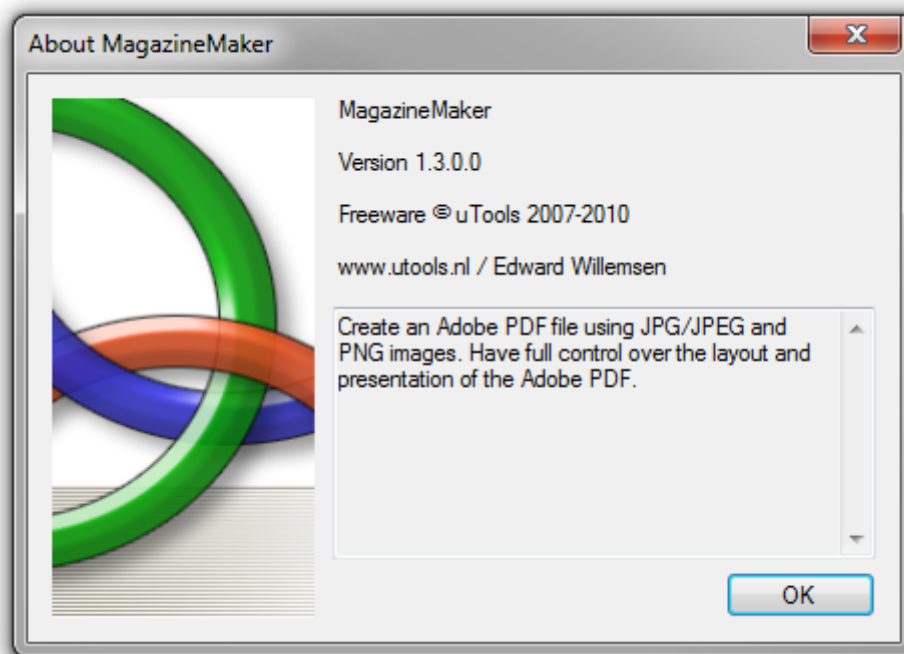
Figure 2: About-box

2.2. Icon-menu

Bellow the main menu the buttons of the icon-menu can be found. Using these buttons single images or complete folders can be added to the magazine.

Icon	Explanation
	Add a single image. You can use the <control> and <shift> keys to add more than a single image.
	Add the images within the selected folder. Not the folder name, but the content of the folder will be shown within the list. Any non-image formats will be ignored. Beside these buttons, files and folders can be dragged and dropped onto the main form. One of more files can be selected at once and dropped. When non-image files are dropped a small not will be shown in the status bar. The same count for folder. When a folder is dropped, the content of the actual folder is added in the list, beside the non-images available in that particular folder.
	Clears the content of the image list.
	Create the Magazine based on the order and the content of the image list.

Table 2: Icon-menu

2.3. Order-menu

On the right on the main form five additional buttons exist. These buttons can be used to reorder the content of the list.

Icon	Explanation
	Move the selected item to the top of the list. This button can be reached using the Ctrl-T hotkey.
	Move the selected item one position up. This button can be reached using the Ctrl-U hotkey.
	Move the selected item one position down. This button can be reached using the Ctrl-D hotkey.
	Move the selected item to the bottom of the list. This button can be reached using the Ctrl-B hotkey.
	Remove the selected item from the list. This will not delete the actual item from your computer. This button can be reached using the Ctrl-X hotkey.

Table 3: Order-menu

All the order-menu buttons are multiselect enabled. So selecting five items and pressing the [Up]-button will move all selected items one position up. When pressing the [Bottom]-button will move all items towards the bottom of the list.

When images are loaded within the list, you can double click an image so that a small preview appears:
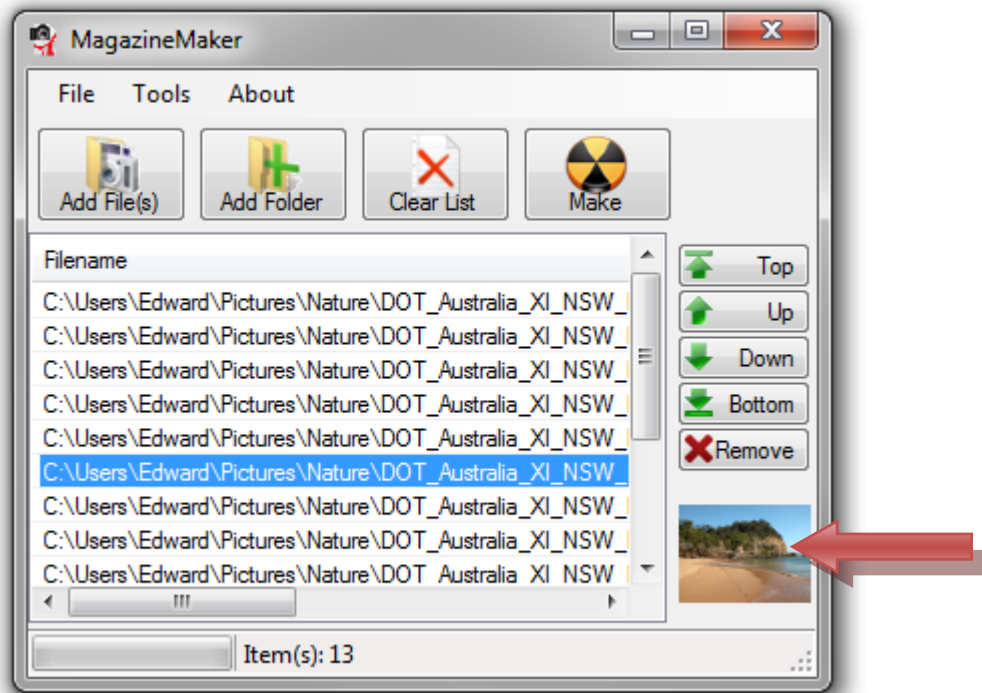
Figure 3: Small preview

2.4. Context-menu

This menu is also known as the right mouse click menu, but since that's only valid on systems with a right handed mouse configuration I prefer using the word context menu.

The context menu is available in the list are and looks like this:
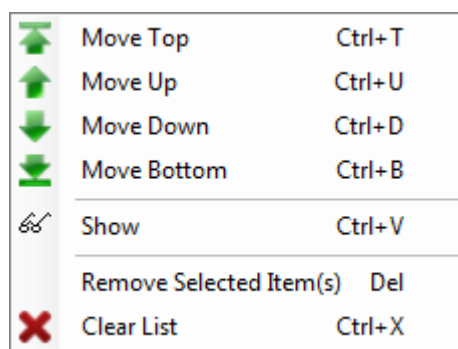
Figure 4: Image list context-menu

The items found in this menu are explained here:

Icon	Task	Description
	Move Top	Move the selected item(s) to the first position in the list.
	Move Up	Move the selected item(s) one position up in the list.
	Move Down	Move the selected item(s) one position down in the list.

|	Move Bottom	Move the selected item(s) to the bottom of the list.
	Show	The firstly selected image will be shown.
	Remove Selected Item(s)	Remove the selected item(s) from the list; this will not delete the actual item(s).
	Clear List	Clear the complete list; this will not delete the actual item(s).

<div align="center">Table 4: Context-menu</div>

2.5. Document Settings

The 'Document Settings'-dialog can be opened via the main-menu or by pressing the [Ctrl-D]-hotkey.
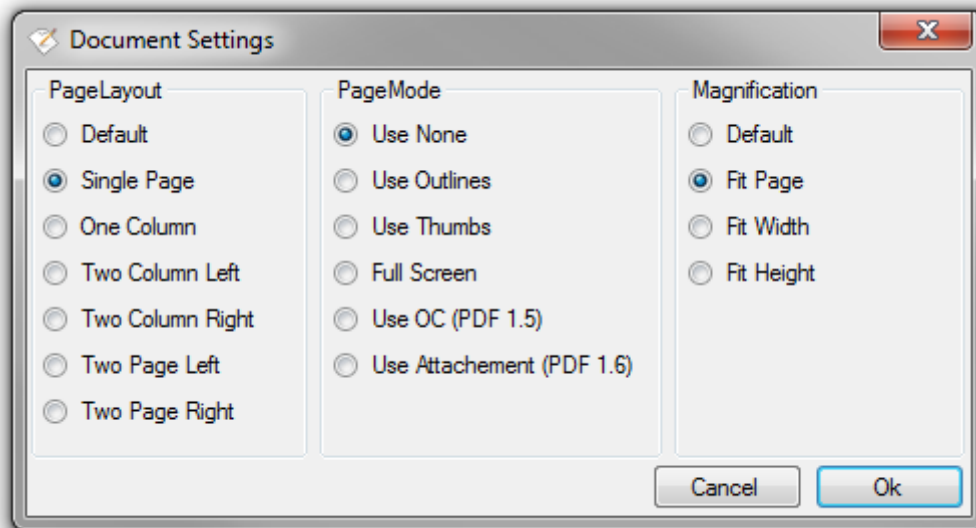

<div align="center">Figure 5: 'Document Settings'-dialog</div>

2.5.1. PageLayout

The PageLayout-options specifies the layout of the separate pages when the document is opened.

Option	Explanation
Default	The magazine will be opened according to the default settings of your PDF-viewing program.
Single Page	Display one page at a time.
One Column	Display the pages in one column.
Two Column Left	Display the pages in two columns, with odd-numbered pages on the left.
Two Column Right	Display the pages in two columns, with odd-numbered pages on the right.
Two Page Left	Display the pages two at a time, with odd-numbered pages on the left (PDF 1.5).
Two Page Right	Display the pages two at a time, with odd-numbered pages on the right (PDF 1.5).

<div align="center">Table 5: PageLayout-options</div>

Both the TwoColumnLeft and TwoPageLeft layout will show the pages starting from left to right. The difference is the fact that the TwoColumnLeft allows you to scroll through the pages step by step (also known as continuous), while the TwoPageLeft will scroll two pages a time. Using the TwoColumnRight and TwoPageRight the first image location is empty. This is actually how a real book starts; it starts at page 1 and not at page 0. So if the magazine is supposed to be printed use one of

these layout options. The scrolling behavior is the same as found with the TwoColumnLeft en TwoPageLeft options.

2.5.2. PageMode

The PageMode-settings specify how the document should be displayed when opened.

Option	Explanation
UseNone	Neither document outline nor thumbnail images will be visible.
UseOutlines	Document outlines will be visible.
UseThumbs	Thumbnail images will be visible.
FullScreen	Full-screen mode opens the magazine full screen.
UseOC	Optional content group panel visible (PDF 1.5).
UseAttachments	Attachments panel visible (PDF 1.6).

Table 6: PageMode-options

2.5.3. Magnification

The Magnification-settings specify how the content of the magazine will be shown within the viewer.

Option	Explanation
Default	Use the default settings of the your PDF-viewer program.
Fit Page	Fit the page (or pages; depending on the PageLayout) within the PDF-viewer.
Fit Width	Fit the width of the page(s) according to the size of the PDF-viewer.
Fit Height	Fit the height of the page(s) according to the size of the PDF-viewer.

Table 7: Magnification-options

2.6. Windows/UI Options

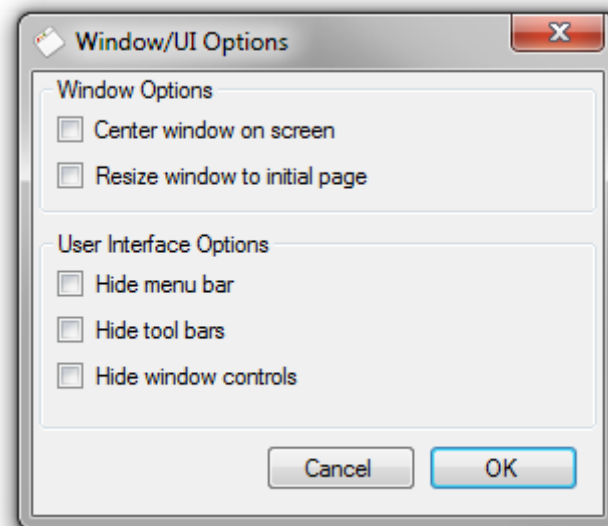This dialog contains the Windows and User Interface-options. The dialog is shown next:

Figure 6: Windows/UI-options

2.7. Preferences

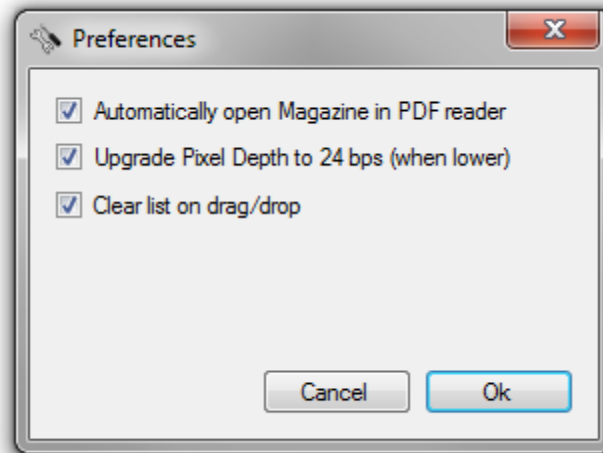The Preferences dialog is shown next:

Figure 7: Preferences-dialog

By default the 'Automatically open Magazine in PDF reader' option is checked. The magazine will only be shown when a PDF reader is installed on your system. You can obtain a free PDF reader from: www.adobe.com.

Lower pixel depth images can result in misinterpreted output. The result might be visible as showing the image three times in a rather crappy way. Using this feature images with a lower pixel depth will be upgraded first and afterwards embedded in the magazine. After creating the magazine the upgraded images will be removed again.

When using drag-and-drop most of the time, it might be handy to turn on the clear list on drag/drop option.

2.8. Key Summary

Within MagazineMaker the following keys can be used to quickly access some of the feature.

Key	Purpose
Ctrl – L	Load a MM file into MagazineMaker.
Ctrl – S	Save the current content into a MagazineMaker MM file.
Ctrl – T	Move the selected item(s) as first item in the list, making it the first page.
Ctrl – U	Move the selected item(s) one position up.
Ctrl – D	Move the selected item(s) one position down.
Ctrl – B	Move the selected item(s) to the bottom of the list, making it the last page.
Ctrl – V	The firstly selected image will be shown.
Del	Delete the selected item(s) (from the list only).
Ctrl – X	Clear the content of the list.

Table 8: Key summary

3. MM Files

The .MM files contain the document settings and references to the original picture. When a .MM file is loaded all the references are being tested on their presence. A pop-up will appear for each file which is missing.

Within the document the following markup is used:

Sign	Comment
#	Line will be ignored.
V	The version of the MM files mark-up language.
D	Document Preferences can be found multiple times.
I	A single line item containing a reference to a picture. This item can be found multiple times as well. The lines will be added in order of appearance in this document.

Table 9: Markup of MM files

Why not using an XML fragment like with the application configuration settings? The necessity of editing the application configuration file is nearly zero, but possible for technical staffed people. The ability to change the MM file using a tool like Notepad makes the .MM format more accessible. Furthermore the need to have a MM file modified could be higher, especially in cases where the original pictures are stored on a memory stick or a removable hard disk. The disk path can be changed easily using Search and Replace, i.e. D:\ -> F:\.

4. TechnoTalk

To make the classes of Paolo and Zainu work according to my demands I had to change some code sections. First of all I had to create two overloads on the merge functions, since I only want to merge documents with single pages only. This way I was able to avoid the usage of the project class which saved me some space on the heap. Secondly I had to change the Finish routine, since this is the routine to modify the document (magazine) settings.

> ✏ **Note**
> The main form supports drag and drop, but keep in mind that will running the program using the IDE this, by default, will not work.

The PDF version finally created is version 1.5. Although in the Document Settings area a 1.6 tag has been added, the additional parameters are not. So why did I've added it? Just to have it prepared for the future.

5. History

Here is a table with the history information of this application.

Version	Comment
1.3	Added PNG-format support. Added the Windows/User Interface dialog and functionality. Added two new preferences; Upgrade Pixel Depth and Clear list on drag/drop. Added multi-select on all the 'move item'-functions. Added image preview. Changed the application configuration management. Changed the programs icon. Improved navigation graphics.
1.2	Added horizontal scroll bar when content doesn't fix in the item list. Added a check for the existence of the selected image when the view option is selected from the context menu.
1.1	Added the image View option in the context menu. Added button access using the Alt key. Added load and save shortcut keys. Bugfix: On dragdrop mixed case items were not added (like 'Jpeg').
1.0	First edition of MagazineMaker

6. Credits

This way I would like to thank the following people or companies for their effort, sources and information provided:

Name	Comment
Paolo Gios	For the PDF Merge and Spilt routines, www.paologios.com.
PMP Design	For the updated PDFLibrary, www.pmpdesign.com.au.
Zainu of Kochi	From India for his original PDFLibrary.
Adobe	For their manual - www.adobe.com/devnet/pdf/pdf_reference.html