



FLASHPAPER VS PDF

FLASHPAPER vs PDF

1.1. INTRODUCTION

The recent purchase of eHelp by Macromedia got me thinking about the future for one of eHelp's products - RoboPDF.

Macromedia have never been one to actively embrace PDF and now that FlashPaper is really starting to hit the scene I was wondering if Macromedia's purchase of eHelp was simply a manoeuvre to remove RoboPDF from the scene so FlashPaper could play a more prominent role.

Macromedia's current range of products are truly great, they have products for multimedia presentations, web site management, animation and authoring tools and of course graphics tools. Of all their latest product releases FlashPaper proves to be the most interesting new technology.

FlashPaper encapsulates a lot of the concepts and features that we have grown to love with PDF. However I wanted to know more and find out the nitty gritty to really see how they compare and see what potential FlashPaper could have.



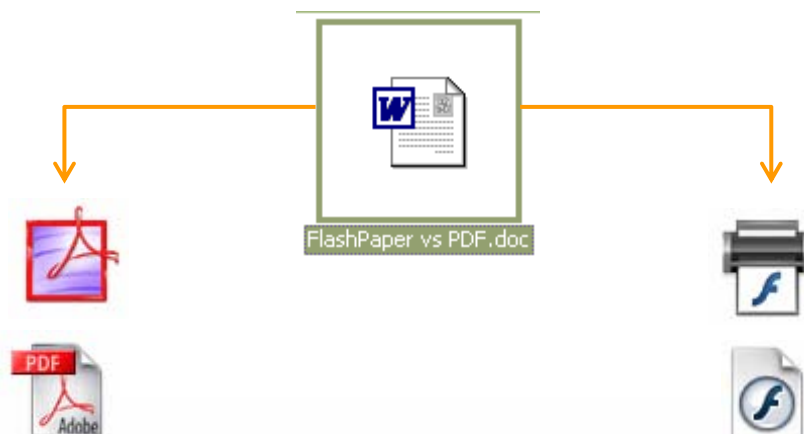
1.2. CREATION

We all know how to create a PDF, either using one of the many third party 'Print to PDF' tools, Adobes own printer driver 'Adobe PDF' or perhaps through the process of distilling a Postscript file into PDF.

There are many ways to create a PDF document using Acrobat. We can drag and drop files from the Operating System File Manager into Acrobat's desktop, choose File, Create PDF from within Acrobat, print to a Postscript file using any application and later process the Postscript file using Acrobat Distiller and we can even create PDF files using the Acrobat PDFMaker Macro available from MS Word, Excel, PowerPoint, Visio and also AutoCAD.

There are over 15 third party PDF creation 'Print Drivers' available, along with one that's open source and free – PrimoPDF, there are also various other PDF Creation Libraries.

I found the PDF Creation tools and libraries at the PDFStore (<http://www.pdfstore.com>). There was actually more than 15 however it's difficult to separate pure PDF creation tools from other more complete solutions.

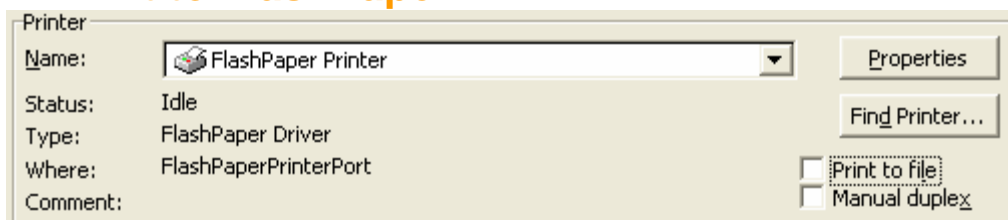


But what about FlashPaper? How do we create a FlashPaper document?

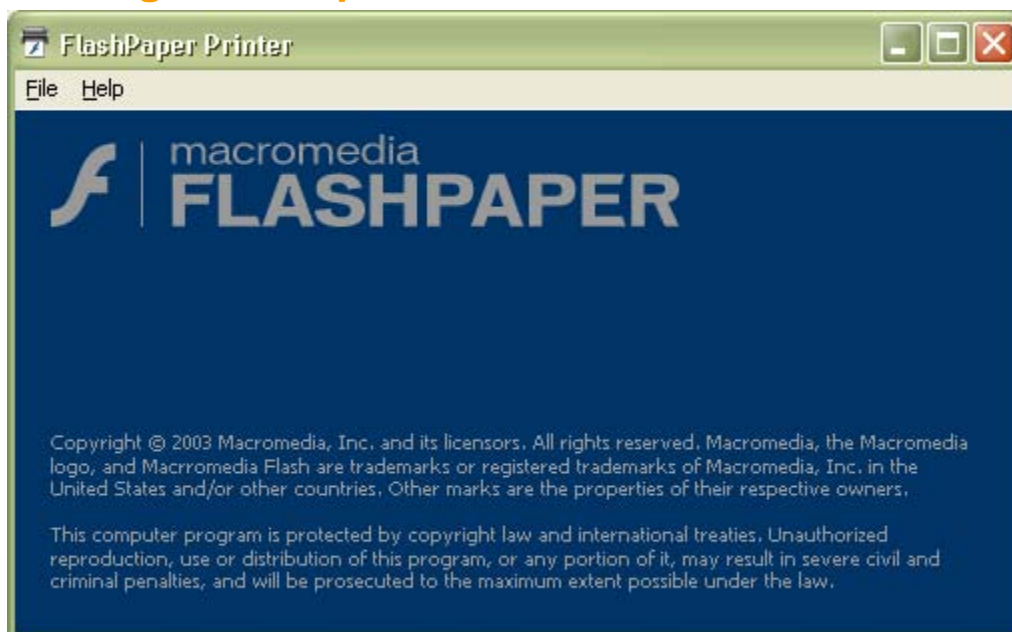
It turns out the process is very similar to the process used to create PDF, there are two options we can make use of: 'Print to FlashPaper' using the 'FlashPaper Printer' driver or we can run the FlashPaper application and drag/drop our files into it's main window.

The output of both steps is a ShockWave file (.SWF).

Method 1: Print to FlashPaper



Method 2: Drag and Drop Source Files



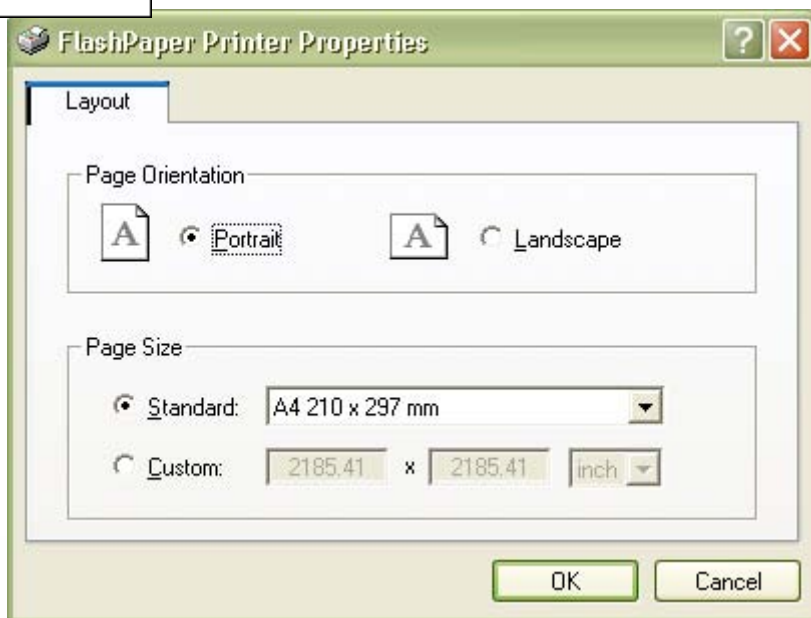
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When dragging content onto the FlashPaper Interface the application(s) that is(are) associated with the dragged source files is opened up and each file is printed to FlashPaper (i.e. the first method) – however, the biggest difficulty I found with this method was that there is no technique for creating a 'composite' FlashPaper document – i.e. if I dragged ten photos (.jpegs) into the interface I would get ten individual FlashPaper documents.

The FlashPaper Printer driver is actually part of Macromedia's Contribute application (Ecommerce/Web Management Tool), I found no reference on the Macromedia Website for an unbundled or separate version of the FlashPaper toolset, nor any reference to FlashPaper's integration into other Macromedia tools.

A3 297 x 420 mm
A4 210 x 297 mm
A5 148 x 210 mm
B4 250 x 354 mm
B5 182 x 257 mm
Ledger 17 x 11 inch
Letter 8.5 x 11 inch
Legal 8.5 x 14 inch
Executive 7.25 x 10.5 inch
Tabloid 11 x 17 inch

FlashPaper Printer Page Sizes built-in, and Properties Dialog for the Printer. *Note Custom Page sizes are easily created.*



1.3. PORTABILITY

PDF is cross platform, operating system independent, vendor independent and most importantly, completely portable. I believe this is why PDF has become the defacto standard because it can be sent anywhere, to any device on any platform.

The biggest restriction for portability with PDF is the availability and the richness of the toolset on each platform. Adobe, since version 4, have concentrated solely on Macintosh and Windows and with the release of version 6 Adobe have put what appears to be considerably more resources behind the Windows release of Acrobat than the apparently equivalent version on the Macintosh.

When we look at the portability of FlashPaper we need to think about the available viewing technologies. FlashPaper requires a Flash Viewer (ShockWave, Director etc) to be present which limits the choice of platforms and operating systems considerably, it also requires that the Flash Viewer can read version 6 and above ShockWave documents (SWF).

1.4. AVAILABILITY

There is a PDF viewer available for the following platforms and in the following languages:

Adobe Reader 6.0.1, full version

[Adobe Reader 6.0.1 — English for Windows®, 16MB](#)

[Adobe Reader 6.0.1 — English for Macintosh, 21MB](#)

[Adobe Reader 6.0.1 — French for Windows, 18MB](#)

[Adobe Reader 6.0.1 — French for Macintosh, 23MB](#)

[Adobe Reader 6.0.1 — German for Windows, 18MB](#)

[Adobe Reader 6.0.1 — German for Macintosh, 23MB](#)

[Adobe Reader 6.0.1 — Japanese for Windows, 17MB](#)

[Adobe Reader 6.0.1 — Japanese for Macintosh, 23MB](#)

[Adobe Reader 6.0.1 — Dutch for Windows, 17MB](#)

[Adobe Reader 6.0.1 — Dutch for Macintosh, 22MB](#)

[Adobe Reader 6.0.1 — Danish for Windows, 16MB](#)

[Adobe Reader 6.0.1 — Danish for Macintosh, 22MB](#)

[Adobe Reader 6.0.1 — Finnish for Windows, 16MB](#)

[Adobe Reader 6.0.1 — Finnish for Macintosh, 22MB](#)

[Adobe Reader 6.0.1 — Norwegian for Windows, 16MB](#)

[Adobe Reader 6.0.1 — Norwegian for Macintosh, 22MB](#)

[Adobe Reader 6.0.1 — Swedish for Windows, 17MB](#)

[Adobe Reader 6.0.1 — Swedish for Macintosh, 22MB](#)

[Adobe Reader 6.0.1 — Chinese Simplified for Windows, 24MB](#)

[Adobe Reader 6.0.1 — Chinese Simplified for Macintosh, 33MB](#)

[Adobe Reader 6.0.1 — Chinese Traditional for Windows, 21MB](#)

[Adobe Reader 6.0.1 — Chinese Traditional for Macintosh, 29MB](#)

[Adobe Reader 6.0.1 — Korean for Windows, 18MB](#)

[Adobe Reader 6.0.1 — Korean for Macintosh, 25MB](#)

[Adobe Reader 6.0.1 — Italian for Windows, 17MB](#)

[Adobe Reader 6.0.1 — Italian for Macintosh, 22MB](#)

[Adobe Reader 6.0.1 — Portuguese for Windows, 16MB](#)

[Adobe Reader 6.0.1 — Portuguese for Macintosh, 22MB](#)

[Adobe Reader 6.0.1 — Spanish for Windows, 17MB](#)

[Adobe Reader 6.0.1 — Spanish for Macintosh, 22MB](#)

[Adobe Reader 6.0.1 — Czech\(Central European\) for Windows, 11MB](#)

[Adobe Reader 6.0.1 — Czech\(Central European\) for Macintosh, 21MB](#)

[Adobe Reader 6.0.1 — English\(Central European\) for Windows, 10MB](#)

[Adobe Reader 6.0.1 — English\(Central European\) for Macintosh, 20MB](#)

[Adobe Reader 6.0.1 — English\(Middle Eastern\) for Windows, 11MB](#)

[Adobe Reader 6.0.1 — English\(Middle Eastern\) for Macintosh, 20MB](#)

[Adobe Reader 6.0.1 — French\(Middle Eastern\) for Windows, 17MB](#)

[Adobe Reader 6.0.1 — French\(Middle Eastern\) for Macintosh, 22MB](#)

[Adobe Reader 6.0.1 — Greek\(Central European\) for Windows, 17MB](#)

[Adobe Reader 6.0.1 — Greek\(Central European\) for Macintosh, 22MB](#)

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[Adobe Reader 6.0.1 — Hungarian\(Central European\) for Windows, 17MB](#)
[Adobe Reader 6.0.1 — Hungarian\(Central European\) for Macintosh, 22MB](#)
[Adobe Reader 6.0.1 — Polish\(Central European\) for Windows, 17MB](#)
[Adobe Reader 6.0.1 — Polish\(Central European\) for Macintosh, 22MB](#)
[Adobe Reader 6.0.1 — Turkish\(Central European\) for Windows, 17MB](#)
[Adobe Reader 6.0.1 — Turkish\(Central European\) for Macintosh, 22MB](#)

Adobe Reader 6.0.1, basic version

[Adobe Reader 6.0.1 — English for Windows, 8.7MB](#)
[Adobe Reader 6.0.1 — English for Macintosh, 15MB](#)
[Adobe Reader 6.0.1 — French for Windows, 9MB](#)
[Adobe Reader 6.0.1 — French for Macintosh, 15MB](#)
[Adobe Reader 6.0.1 — German for Windows, 9MB](#)
[Adobe Reader 6.0.1 — German for Macintosh, 15MB](#)
[Adobe Reader 6.0.1 — Japanese for Windows, 10MB](#)
[Adobe Reader 6.0.1 — Japanese for Macintosh, 15MB](#)
[Adobe Reader 6.0.1 — Dutch for Windows, 9.4MB](#)
[Adobe Reader 6.0.1 — Dutch for Macintosh, 15MB](#)
[Adobe Reader 6.0.1 — Danish for Windows, 9.4MB](#)
[Adobe Reader 6.0.1 — Danish for Macintosh, 15MB](#)
[Adobe Reader 6.0.1 — Finnish for Windows, 9.4MB](#)
[Adobe Reader 6.0.1 — Finnish for Macintosh, 15MB](#)
[Adobe Reader 6.0.1 — Norwegian for Windows, 9.4MB](#)
[Adobe Reader 6.0.1 — Norwegian for Macintosh, 15MB](#)
[Adobe Reader 6.0.1 — Swedish for Windows, 9.4MB](#)
[Adobe Reader 6.0.1 — Swedish for Macintosh, 15MB](#)
[Adobe Reader 6.0.1 — Chinese Simplified for Windows, 17.4MB](#)
[Adobe Reader 6.0.1 — Chinese Simplified for Macintosh, 26MB](#)
[Adobe Reader 6.0.1 — Chinese Traditional for Windows, 14.6MB](#)
[Adobe Reader 6.0.1 — Chinese Traditional for Macintosh, 21MB](#)
[Adobe Reader 6.0.1 — Korean for Windows, 11.6MB](#)
[Adobe Reader 6.0.1 — Korean for Macintosh, 18MB](#)
[Adobe Reader 6.0.1 — Italian for Windows, 9.1MB](#)
[Adobe Reader 6.0.1 — Italian for Macintosh, 14MB](#)
[Adobe Reader 6.0.1 — Portuguese for Windows, 9.0MB](#)
[Adobe Reader 6.0.1 — Portuguese for Macintosh, 14MB](#)
[Adobe Reader 6.0.1 — Spanish for Windows, 9.2MB](#)
[Adobe Reader 6.0.1 — Spanish for Macintosh, 15MB](#)

Acrobat Reader for Pocket PC 2002 (all models - ARM, X-Scale)

[Acrobat Reader for Pocket PC 2002, English - 8.39 MB](#)
[Acrobat Reader for Pocket PC 2002, French - 8.37 MB](#)
[Acrobat Reader for Pocket PC 2002, German - 8.29 MB](#)
[Acrobat Reader for Pocket PC 2002, Italian - 8.27 MB](#)
[Acrobat Reader for Pocket PC 2002, Japanese - 11 MB](#)
[Acrobat Reader for Pocket PC 2002, Spanish - 8.30 MB](#)

Adobe Reader for Palm OS, version 3.0

[Adobe Reader for Palm OS, version 3.0 English for Macintosh — 8.4MB](#)
[Adobe Reader for Palm OS, version 3.0 English for Windows — 9MB](#)
[Adobe Reader for Palm OS, version 3.0 French for Macintosh — 9,431KB](#)
[Adobe Reader for Palm OS, version 3.0 French for Windows — 8,891KB](#)
[Adobe Reader for Palm OS, version 3.0 German for Macintosh — 9,356KB](#)
[Adobe Reader for Palm OS, version 3.0 German for Windows — 9,181KB](#)
[Adobe Reader for Palm OS, version 3.0 Italian for Macintosh — 9,347KB](#)
[Adobe Reader for Palm OS, version 3.0 Italian for Windows — 8,837KB](#)
[Adobe Reader for Palm OS, version 3.0 Japanese for Macintosh — 9,538KB](#)
[Adobe Reader for Palm OS, version 3.0 Japanese for Windows — 9,035KB](#)
[Adobe Reader for Palm OS, version 3.0 Spanish for Macintosh — 9,345KB](#)
[Adobe Reader for Palm OS, version 3.0 Spanish for Windows — 8,835KB](#)

Acrobat Reader for Symbian OS (Nokia Communicator 9000 series), version 1.0

[Acrobat Reader for Symbian OS, version 1.0 English for Windows — 757KB](#)
[Acrobat Reader for Symbian OS, version 1.0 French for Windows — 810KB](#)
[Acrobat Reader for Symbian OS, version 1.0 German for Windows — 810KB](#)
[Acrobat Reader for Symbian OS, version 1.0 Italian for Windows — 810KB](#)
[Acrobat Reader for Symbian OS, version 1.0 Spanish for Windows — 810KB](#)

Acrobat Reader 5.0.8 with Search

[Acrobat Reader 5.0.8 — English for IBM® AIX® 18MB](#)
[Acrobat Reader 5.0.8 — English for HP-UX 14MB](#)
[Acrobat Reader 5.0.8 — English for Sun™ Solaris™ SPARC® 9.5MB](#)

Acrobat Reader 5.0.8

[Acrobat Reader 5.0.8 — English for Linux® 8.9MB](#)

Acrobat Reader 3.0

[Acrobat Reader 3.0 — English for OS/2® Warp 4.2MB](#)
[Acrobat Reader 3.0 — Dutch for OS/2 Warp 4.4MB](#)
[Acrobat Reader 3.0 — French for OS/2 Warp 4.3MB](#)
[Acrobat Reader 3.0 — German for OS/2 Warp 4.3MB](#)
[Acrobat Reader 3.0 — Italian for OS/2 Warp 4.3MB](#)
[Acrobat Reader 3.0 — Spanish for OS/2 Warp 4.3MB](#)
[Acrobat Reader 3.0 — Swedish for OS/2 Warp 4.3MB](#)

There are also many open source and commercial PDF Viewers available that have not been listed above, check out the list of PDF related companies at the AcroTips PDF Web Links page (<http://www.acrotips.com/links/index.php>).

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There is a FlashPaper viewer for the following platforms and languages:

Windows 98/ME/2000/XP	Internet Explorer/AOL	Netscape/Mozilla/Opera/CompuServe
Installer	Flash Player 7	Flash Player 7
Uninstaller	Flash Player Uninstaller	Flash Player Uninstaller

Mac OS	Internet Explorer/Safari/Netscape/Mozilla/Opera
Installer	For OS X Flash Player 7
	For OS 9 Flash Player 7
Uninstaller	For OS X Flash Player Uninstaller
	For OS 9 Flash Player Uninstaller

Other Operating Systems	Browser compatible
Linux x86 ⁽¹⁾	Flash Player 6 for Mozilla 1.1
Linux x86 ^{(1) (2)}	Flash Player 6 for Mozilla 1.1
Pocket PC (color devices supported only)	Flash Player 6 for Pocket PC 2003
OS/2	Flash Player 4 for Netscape
Sun Solaris (Sparc)	Flash Player 6 for Netscape
Sun Solaris (Intel x86)	Flash Player 6 for Netscape
HP-UX	Flash Player 6 for Netscape
SGI IRIX	Flash Player 4 for Netscape

(1) Not officially supported by MacroMedia

The FlashPlayer makes use of Environment Variables to determine the locale, and automatically displays the correct internationalized text (FlashPlayer interface only no conversion is performed on the content).

- English
- German
- Spanish
- French
- Italian
- Swedish
- Portuguese
- Japanese
- Korean
- Chinese Simp
- Chinese Trad

1.5. FUTURE PROOF

FlashPaper is over a year old now (since 2003) and although that's not a significant enough history for a version 1.x product to see how future-proof it is, we can gather enough data to make some assumptions about what features will be available in future versions of Flash and which features will be dropped or replaced with new technologies/features.

In my opinion FlashPaper, like PDF will continue to be backward compatible, meaning a document created in FlashPaper version 1.0 will be readable by Flash viewers many years to come, however due to the more dynamic nature of the FlashPaper viewer I believe a dynamic upgrade/conversion will happen to older FlashPaper documents automatically - what the consequences of that will be remain to be seen (or even if this process even happens).

A major drawback for FlashPaper is that only version 6 Flash Players and above can view and make use of FlashPaper documents.

PDF has proved itself to be stable and strongly backward compatible. This isn't to say that the PDF specification has changed and not broken past features, rather this has only happened on few occasions.

For the cases I can think off, the change/break in backward compatibility has only been in the spec - Acrobat(full version) has always been able to deal with older PDF files and generally prompted for the repair/upgrade of the older PDF files.

1.6. FONTS AND GRAPHICS

Two of the biggest strengths of PDF are it's ability to embed fonts and it's ability to include almost any type of graphics. These two features get around a lot of the problems encountered by proprietary formats.

When a PDF is created the author of the PDF can rest assured that the text in the PDF will look exactly as it did in the original source document - this is because the actual fonts used in the source program can be included (or only the characters in the font set that were used by the source documents) in the PDF.



Text in Adobe Reader, Zoomed in to 6400% Magnification. The Sharpness is still clearly visible.

This really does provide WYSIWYG (What You See Is What You Get) documents. It also means that authors of PDF files on Unix or Macintosh no longer have to struggle with fonts issues when distributing their files to Windows users. The big gotcha of course is Font Licensing - Acrobat cannot embed/subset (include) a font that has licensing restrictions - which means the author of the PDF has to think about how and where the PDF will be distributed for the consideration of fonts.

If the user receives the PDF and the own and have installed the font on their machine then Acrobat/PDF can easily display the text in the way it was intended - but what happens if they don't have the font? Well it turns out that Acrobat can do a substitution on the font, providing it's best guess look-alike for the originally used font.

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When a PDF is created any graphics in the source document are automatically converted and included in the PDF - via Acrobat Distiller the author of the PDF also has complete control over the compression of the graphics: everything from specifying the type of compression used for different types of graphics to being able to reduce the resolution of the graphics for the reduction of the resultant file.

During the process of creating a FlashPaper document the fonts are rasterised, this prevents many of the features we have grown use to from actually being available – such as text selection and font embedding.

FlashPaper Viewer:
Maximum Zoom is
250%.

Note control over
compression of
Graphics is provided.



To create a FlashPaper document the FlashPaper Printer Driver is actually requesting the graphics context information from the operating system, essentially 'screen scraping' the source document into a FlashPaper document.

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This is akin to Adobe's PDFWriter technology that leveraged the Microsoft Windows GDI (or Mac QuickTime) to generate PDF's. The quality is always lower due to the limitations of rasterised graphics and the operating systems ability to generate high quality screens and the features found in the resultant PDF were significantly less (i.e., no font selection, font embedding, vector graphics etc).

Adobe no longer distribute the PDFWriter technology (as of version 6), instead opting to generate PDF documents via Postscript/Distillation techniques. The quality that is gained (not to mention the retention of vector artwork and font embedding) through the Postscript -> PDF process is far greater than the process gained through the generation of PDF's via operating system based graphics content.

1.7. NAVIGATION

The FlashPaper viewer (i.e. Flash Viewer, ShockWave Viewer) has very little built in navigation. Two ways exist to navigate the document, the first is to use the vertical scroll bar to the right of the document and the second is using the 'Previous/Next' button at the top right of the interface.

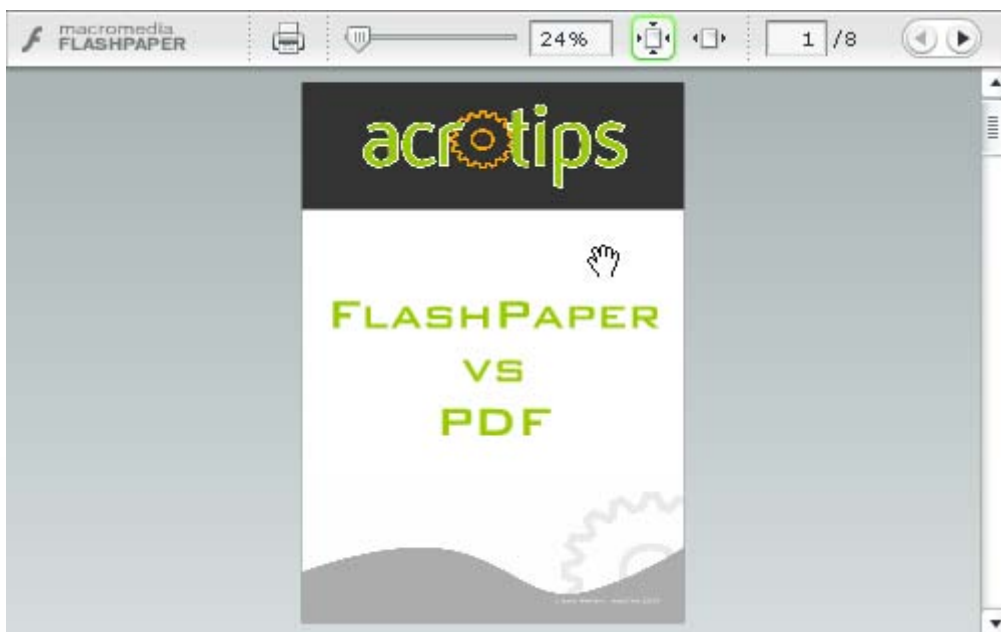
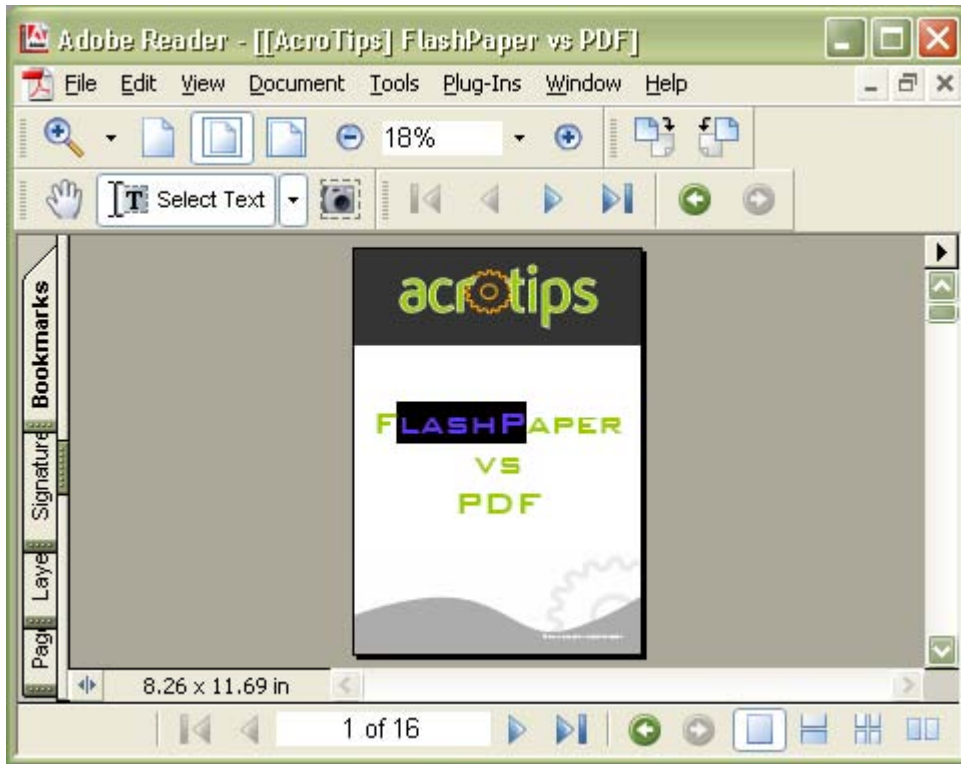
There is also no concept of Hyperlinks. This is a major drawback, having a method to link from page to page or document to document or even document to web page is essential to making the document interactive.

The FlashPaper format seems to have been primarily designed as an on-screen reading format, not including interactive features such as Bookmarks, Thumbnails, Hyperlinks, Form Fields and also not including extended navigation features in the viewing interface seems to be either a glaring omission or a current limitation based on the viewing technology.

Unlike FlashPaper, Acrobat Reader/Adobe Reader often has too many techniques for navigation – Hyperlinks, Named Destinations, Form Fields, Interface Navigation tools (x3), Bookmarks, Web Links and much more.

The reason for limitations in FlashPaper/Flash Viewer are two fold. Firstly the format specification doesn't support interactive features for navigation and secondly the interface is the same application used to view normal Flash documents (or ShockWave in the case of Shockwave content). This separation of Flash Viewer and FlashPaper Viewer could certainly provide an easy way for MacroMedia to provide better built-in Navigation in the Interface without changing the underlying FlashPaper document specification/format.

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1.8. CONTENT EXTRACTION

An non-protected PDF file's content is available for extraction. Text can be copied to the clipboard, exported in bulk to other proprietary formats and even have the entire contents of a structured PDF exported to XML for use in repurposing applications.

No such extraction, copying or repurposing facilities have been provided with FlashPaper, either directly via the document or externally via the interface. This leaves me wondering where Macromedia are going to take FlashPaper in the future – will it remain a useful technology for sharing exact 'view-only' copies of source content or will interactive features and content extraction et al, be included bit by bit?

1.9. SENDING VIA EMAIL

Put simply, FlashPaper is meant to be viewed online via the Web. Although the FlashPaper document (SWF) could be emailed, there's no guarantee that the recipient would even know what to do with the SWF file. If the recipient didn't have a standalone Flash Player then they would have to rely on the Web browser to do the work – and only if it had been correctly setup.

PDF on the other hand is completely Portable. It's a standalone document and can be emailed regardless of transport mechanism or underlying operating system functionality. However we could run in to two problems at the other end: The recipient doesn't have Acrobat Reader or the version of the PDF file you sent is newer than the Acrobat Reader they have installed.

The first problem is easily solved by simply downloading Adobe Reader from the Adobe Website, and the second problem is also solved by the solution to the first problem – download the latest Adobe Reader.

1.10. COMMENTING / ANNOTATIONS

The ability to mark up a PDF document with comments, annotations is an extremely useful function. If I have the full version of Acrobat I can mark-up a document forward it on and the recipients can make further comments or adjust my comments.

The FlashPaper format as it stands has no support for such technology, basically rendering any FlashPaper document as purely onscreen paper.

1.11. OVERVIEW

	MacroMedia FlashPaper	Adobe PDF
Security	N	Y
Portability	2	9
Font Embedding	N	Y
Interactive Features	2	9
Control over Creation	1	9
Bookmarks	N	Y
Thumbnails	N	Y
Anchors/Named Destinations	N	Y
Navigation	3	8
Commenting	N	Y
Send via Email	N	Y
Embed Document in other Applications	8	8
Select Text	N	Y
Maximum Zoom	250%	6400%
Creation Method	GDI/OS	Postscript
Creation Accuracy	7	9
Layers	Y* (not natively)	Y
Hyperlinks	N	Y
Backward Compatibility	7	8
Content Extraction	N	Y
Content Repurposing	N	Y
Read Only	Y	Y* (security dependent)
Document Information	N	Y
Composite Document	N* (unless combined prior)	Y
Language Support	7	8
Platform Support	7	8
Support for Large Page Sizes	Y	Y
Large Document Support	Y	Y
Forms	N	Y
Ease of Use	9	9
Distribution	6	8
Viewing Platform Distribution	7	7
Programming Interface	N	Y
Plugin Environment	N	Y
Small File Size	8	8
Compression on Graphics	Y	Y
Support for Transparency	Y* (source dependent)	Y

1.12. SUMMARY

FlashPaper has a lot of potential to provide source content in a form that is useful inside other Macromedia technologies (Director, ShockWave, AuthorWare) and also in common web standards such as HTML.

However it's future usefulness as a means to sharing content may be limited by either the underlying document format or the viewing technology.

The table above highlights some of the key differences between the two document formats and also has a rating from 1 to 10 on key areas of importance, with 10 being the better score (better feature support).

Please understand that it's very hard to stay unbiased when talking about PDF, I have been using PDF since day one and have been completely convinced of it's usefulness and purpose.

All comments in this document are strictly my own opinion, not influenced by any company or third party, it's also important to note that I only had the trial version of Contribute/FlashPaper for testing.

Dave.....