

[Jakob Nielsen's Alertbox](#), July 14, 2003:

# PDF: Unfit for Human Consumption

## Summary:

Users get lost inside PDF files, which are typically big, linear text blobs that are optimized for print and unpleasant to read and navigate online. PDF is good for printing, but that's it. Don't use it for online presentation.

PDF is great for one thing and one thing only: **printing documents**. [Paper is superior to computer screens](#) in many ways, and users often prefer to print documents that are too long to easily read online.

For online reading, however, PDF is the **monster from the Black Lagoon**. It puts its clammy hands all over people with a cruel grip that doesn't let go.

## PDF Usability Crimes

The usability problems that PDF files cause on websites or intranets are legion:

- **Linear exposition.** PDF files are typically converted from documents that were intended for print, so the authors wouldn't have followed the [guidelines for Web writing](#). The result? A long text that takes up many screens and is unpleasant and boring to read.
- **Jarring user experience.** PDF lives in its own environment with different commands and menus. Even simple things like printing or saving documents are difficult because standard browser commands don't work.
- **Crashes and software problems.** While not as bad as in the past, you're still more likely to crash users' browsers or computers if you serve them a PDF file rather than an HTML page.
- **Breaks flow.** You have to wait for the special reader to start before you can see the content. Also, PDF files often take longer time to download because they tend to be stuffed with more fluff than plain Web pages.
- **Orphaned location.** Because the PDF file is not a Web page, it doesn't show your standard navigation bars. Typically, users can't even find a simple way to return to your site's homepage.
- **Content blob.** Most PDF files are immense content chunks with no internal

navigation. They also lack a decent search, aside from the extremely primitive ability to jump to a text string's next literal match. If the user's question is answered on page 75, there's close to zero probability that he or she will locate it.

- **Text fits the printed page, not a computer screen.** PDF layouts are often optimized for a sheet of paper, which rarely matches the size of the user's browser window. Bye-bye smooth scrolling. Hello tiny fonts.

## Users Hate PDF

In several recent usability studies, users complained woefully whenever they encountered PDF files.

Following are quotes from investors [testing the investor relations](#) area on corporate websites:

*"It's a pain that I have to download each PDF. Pain in the ass... I find it to be annoying. It's slow to load. It's hard to search within it. I find HTML easier to deal with... This is all PDF instead of a chart. My dream site is to come to a site and get a bar chart for the sales within the last ten years."*

*"I hate Adobe Acrobat. If I bring up PDF, I can't take a section and copy it and move it to Word. There could be stuff like graphics I don't want. I prefer documents in HTML format so that it's editable."*

The following user quotes are from journalists [testing the PR area](#) on corporate websites:

*"They [PDF files] don't behave like Web pages. It's not the speed. It is like having a solid thing rather than a fluid thing."*

*"What we've got is a page of a PDF document which is great when printed out, but on the screen it is hard to read. The print is too small..."*

*"I am a little frustrated with Acrobat... They made every page a file. So what happens here is when you scroll, it jumps, which is really not helpful."*

This quote is from an employee who was [testing an intranet](#):

*"It would have helped if the first page was an index and you could scroll to it. That must be what this side part means. But who am I to say?"*

As the last quote shows, even when a PDF file has its own navigation aides, they don't typically help because they're nonstandard and based on a paper metaphor rather than hypertext navigation.

We've had similar reactions from users in many other studies, including tests of **B2B websites** where users complained when sites presented product specs or customer success stories in PDF instead of Web pages. Here's a quote from a customer who shunned those parts of the site that were in PDF:

*"It looks like I'm going to have to go to PDF, which I'm dreading."*

## Next Column: Action Items

Given PDF's poor usability for online reading, what are Web designers to do? [My next Alertbox will discuss PDF presentation strategies](#) that minimize user suffering.

## Earlier Studies

See my Alertbox from June 2001, [Avoid PDF for On-Screen Reading](#), for an earlier analysis of PDF based on the studies I did a few years ago.

The difference between then and now? Not much. Fewer crashes (good), but more user hostility toward PDF because people now have more experience with its usability problems.

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