pdfT_EX in a Workflow

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Why PDF?

portable quality

Why PDF?
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Tips

portable

- Some like Word; some like WordPerfect.
- Most have Acrobat Reader . . .
- Others can get it for free.
- Ideally, PDF documents will look the same everywhere.

quality

- Looks great: scalable graphics and fonts print well and are attractive on screen.
- The medium provides sufficient accuracy for "dense" formats, e.g., business forms.

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Figure 1.1 complex form

Tips

Why PDF? Centralization The Problem

The Solution The Glue The Process Templates Examples

Centralization

data services

data

With centralized data, advantages include:

- Easier collaboration
- Multi-point access via the web
- Data security through server backups

services

With centralized services . . .

- Functionality is not limited by the software on the end user's machine
- Complexity is hidden from the user

The Problem

- No PDF on the fly
 Most of the time, users cannot get PDF documents that are generated from centralized, on-server data.
- GUI
 Most PDF software is GUI-based and oriented toward interactive use.
- Server environment must be batch-oriented.
- Users often dislike learning new things.
- Long waits are confusing to users.
- Quicker service leads to greater acceptance.

The Solution

- While pdfTEX can be used interactively, it is also well behaved in the batch processing environment of a server.
- The full power of TEX and friends is available for structured documents.
- The full power of PDF graphics is available with METAPOST.
- pdfTEX is very fast because Knuth was conservative with computer resources.
 - users are happy
 - server is happy

The Glue

To make it work, we must glue things together.

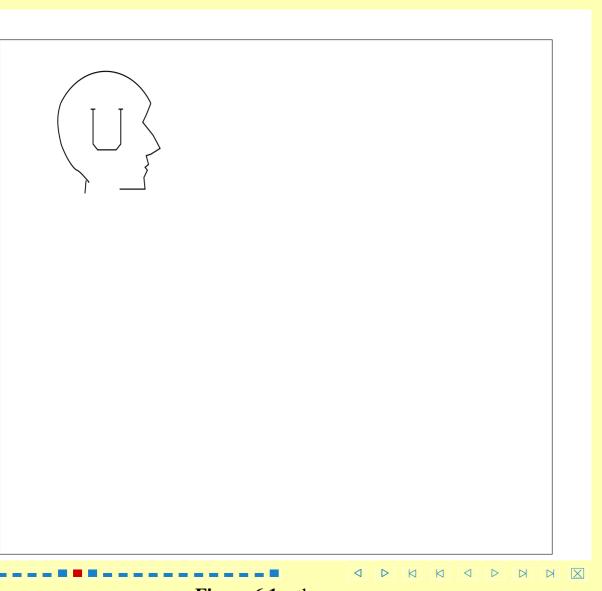
One way is to use perl to glue the web server to TEX and friends.

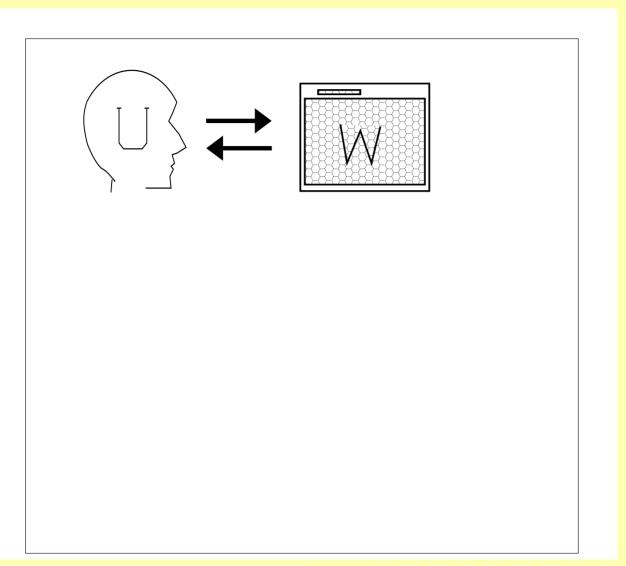
The Process

graphics

Overview:

- User comes to the web site
- User clicks something, and web server invokes perl
- Perl invokes pdfT_EX
- Perl serves PDF document to user and cleans up

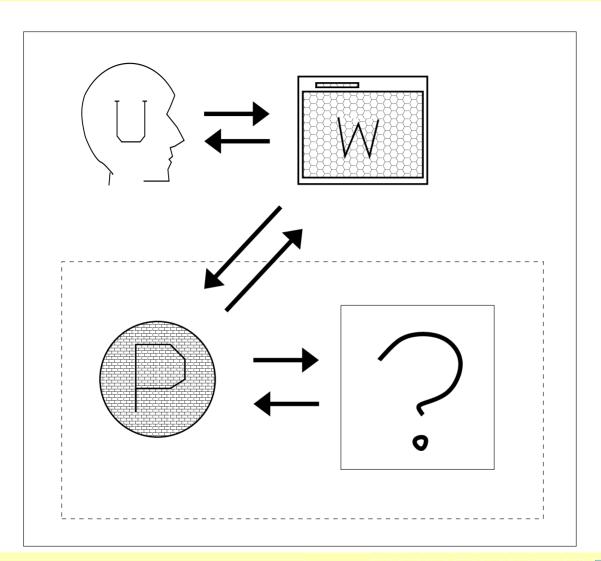


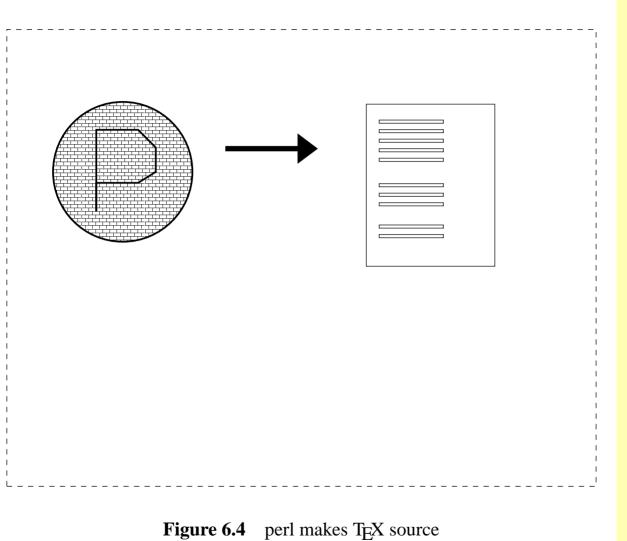












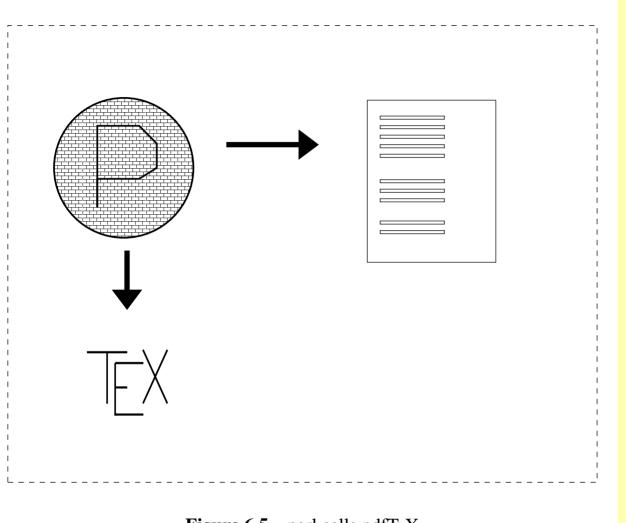


Figure 6.5 perl calls pdfTEX

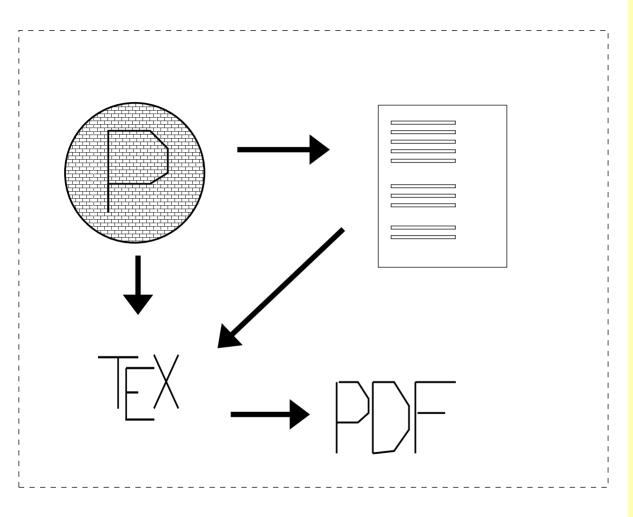


Figure 6.6 pdfTEX generates PDF

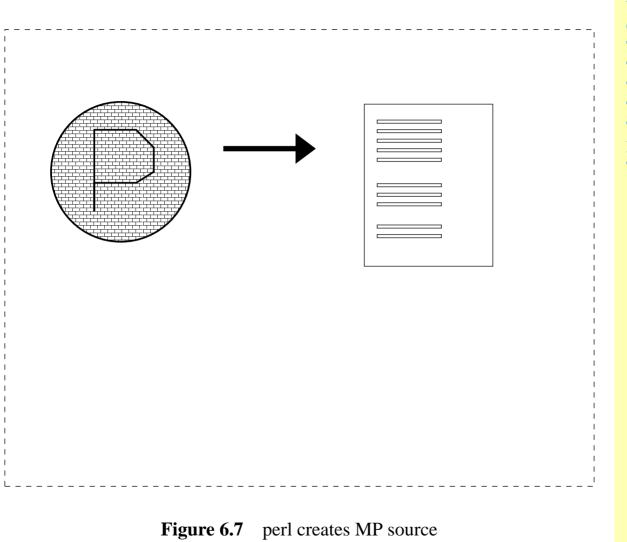
graphics

What about graphics?

- The old way: perl invokes METAPOST
- The new way: TEX invokes METAPOST itself

Why PDF? Centralization The Problem The Solution The Glue The Process Templates Examples

Tips



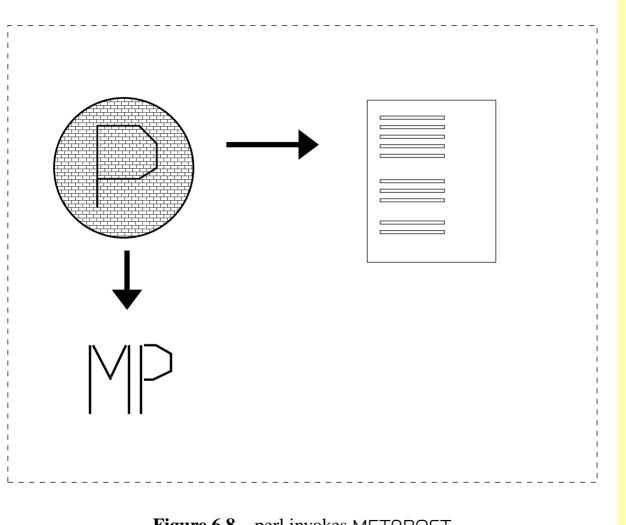


Figure 6.8 perl invokes METAPOST

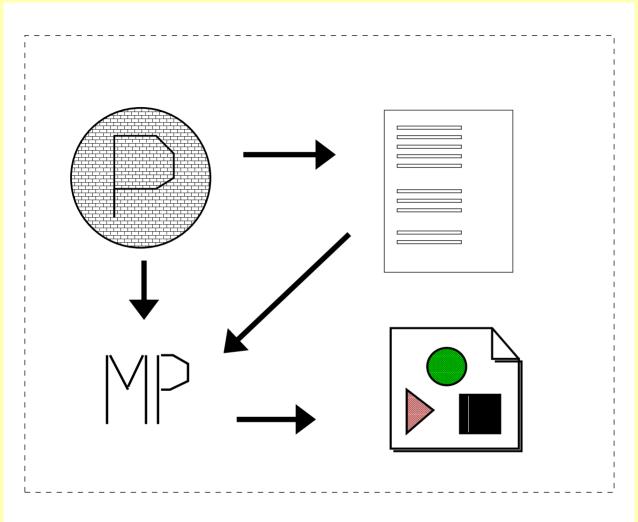
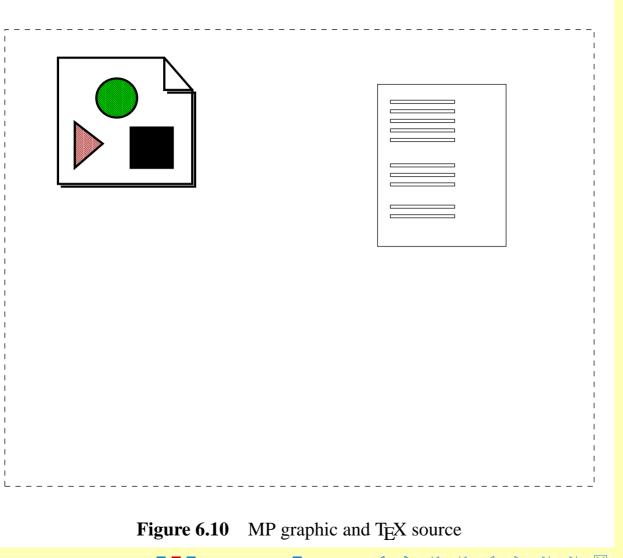


Figure 6.9 METAPOST produces graphic



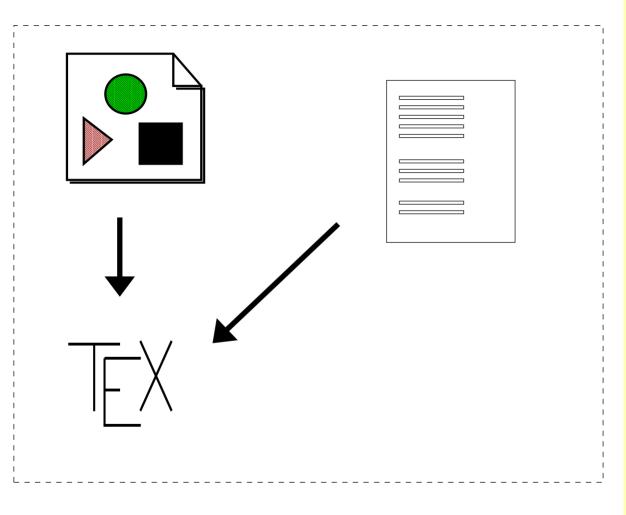


Figure 6.11 TEX puts them together . . .

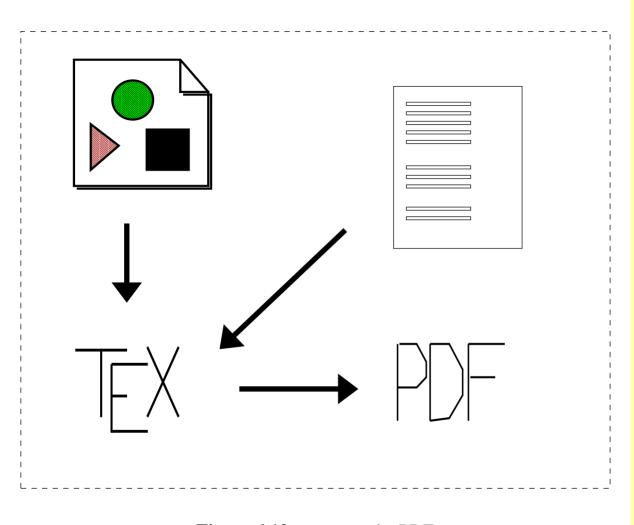


Figure 6.12 ... to make PDF

Templates

example template

In creating source code for TEX and METAPOST, we can do text substitution on templates.

Templates provide a simple and easy to maintain means for code generation.

example template

\starttext
Dear Dr. X-@professor@-X,

You have won X-@dollaramount@-X dollars.

Sincerely,

Joe

\stoptext

Examples

online letter business forms lab schedules

online letter

An early use of pdfTeX as an engine for producing PDF documents for web users was a letter.

- User fills out HTML form that looks like the letter
- The data the user just supplied is stored in a database
- The user gets a PDF version of the letter, ready to print.

business forms

The University of Georgia's business office is notoriously picky when it comes to the forms that it will accept. If the form is not exactly the way they want it, they will not accept the form.

With pdfTEX and METAPOST working behind the scenes, we are able to produce extremely accurate reproductions of the Business Office's originals.

The staff use a web interface to enter data, retrieve data, and generate documents.

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Figure 8.1 Employee Personnel Report

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Figure 8.2 Budget Amendment

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REMARKS The GNU Manifesto which app	pears below was writte	en by Richard Stal	llman.					

Figure 8.3 Student Personnel Form

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___ Check one

ACADEMIC

14

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Why PDF? Centralization The Problem The Solution The Glue The Process **Templates** Examples

Tips

Figure 8.4 Summer Employment Voucher

lab schedules

Our department manages many computer labs. A coworker made a web interface for managing the labs. His code uses a perl module I wrote that uses a ConTEXt backend to create lab schedules that we post.

The earlier solution used substitution on raw postscript. The postscript files were huge, and the results were flakey. Now everything just works!

ConTeXt was chosen to manage the interdependent text and graphics.

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8:00 - 8:15 am	ivioriday	EPSY 2020H	vveuriesday	EPSY 2020H	rriuay	CLOSED	CLOSED
		EPSY 2020H		EPSY 2020H		CLOSED	
8:15 - 8:30 am							CLOSED
8:30 - 8:45 am		EPSY 2020H		EPSY 2020H		CLOSED	CLOSED
8:45 - 9:00 am		EPSY 2020H		EPSY 2020H		CLOSED	CLOSED
9:00 - 9:15 am		EPSY 2020H		EPSY 2020H			CLOSED
9:15 - 9:30 am							CLOSED
9:30 - 9:45 am							CLOSED
9:45 - 10:00 am							CLOSED
10:00 - 10:15 am			ERSH 8610				CLOSED
10:15 - 10:30 am			ERSH 8610				CLOSED
10:30 - 10:45 am			ERSH 8610				CLOSED
10:45 - 11:00 am			ERSH 8610				CLOSED
11:00 - 11:15 am			ERSH 8610	ERSH 6300			CLOSED
11:15 - 11:30 am			ERSH 8610	ERSH 6300			CLOSED
11:30 - 11:45 am			ERSH 8610	ERSH 6300			CLOSED
11:45 - noon			ERSH 8610	ERSH 6300			CLOSED
noon - 12:15 pm			ERSH 8610	ERSH 6300			CLOSED
12:15 - 12:30 pm			ERSH 8610				CLOSED
12:30 - 12:45 pm		LPSL Hay	ERSH 8610				CLOSED
12:45 - 1:00 pm		LPSL Hay	ERSH 8610				CLOSED
1:00 - 1:15 pm		LPSL Hay					CLOSED
1:15 - 1:30 pm		LPSL Hay					CLOSED
1:30 - 1:45 pm		LPSL Hay					CLOSED
1:45 - 2:00 pm		LPSL Hay					CLOSED
2:00 - 2:15 pm		LPSL Hay				CLOSED	CLOSED
2:15 - 2:30 pm		LPSL Hay				CLOSED	CLOSED
2:30 - 2:45 pm	ERSH 8750	LPSL Hay	ERSH 8750			CLOSED	CLOSED
2:45 - 3:00 pm	ERSH 8750	LPSL Hay	ERSH 8750			CLOSED	CLOSED
3:00 - 3:15 pm	ERSH 8750	LPSL Hay	ERSH 8750			CLOSED	CLOSED
3:15 - 3:30 pm	ERSH 8750	LPSL Hay	ERSH 8750			CLOSED	CLOSED
3:30 - 3:45 pm	ERSH 8750		ERSH 8750	ERSH 6200		CLOSED	CLOSED
3:45 - 4:00 pm				ERSH 6200		CLOSED	CLOSED
4:00 - 4:15 pm				ERSH 6200		CLOSED	CLOSED
4:15 - 4:30 pm				ERSH 6200		CLOSED	CLOSED
4:30 - 4:45 pm				211011 0200		CLOSED	CLOSED
4:45 - 5:00 pm		ERSH 9800		ERSH 9800		CLOSED	CLOSED
5:00 - 5:15 pm		ERSH 9800		ERSH 9800		CLOSED	CLOSED
5:15 - 5:30 pm		ERSH 9800		ERSH 9800		CLOSED	CLOSED
5:30 - 5:45 pm		ERSH 9800		ERSH 9800		CLOSED	CLOSED
5:45 - 6:00 pm		ERSH 9800		ERSH 9800		CLOSED	CLOSED
6:00 - 6:15 pm		EK311 9000		FI/311 3000		CLOSED	CLOSED
6:15 - 6:30 pm						CLOSED	CLOSED
6:30 - 6:45 pm		LPSL Hay				CLOSED	CLOSED
6:45 - 7:00 pm		LPSL Hay				CLOSED	CLOSED
7:00 - 7:15 pm		LPSL Hay					
7:15 - 7:30 pm		LPSL Hay				CLOSED	CLOSED
						CLOSED	CLOSED
7:30 - 7:45 pm		LPSL Hay				CLOSED	CLOSED
7:45 - 8:00 pm		LPSL Hay				CLOSED	CLOSED
8:00 - 8:15 pm		LPSL Hay				CLOSED	CLOSED
8:15 - 8:30 pm		LPSL Hay				CLOSED	CLOSED
8:30 - 8:45 pm		LPSL Hay				CLOSED	CLOSED
8:45 - 9:00 pm		LPSL Hay				CLOSED	CLOSED
9:00 - 9:15 pm	CLOSED	LPSL Hay	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
9:15 - 9:30 pm	CLOSED	LPSL Hay	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
9:30 - 9:45 pm	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
9:45 - 10:00 pm	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED

This Computer Lab is Maintained by $\widehat{m{g}}$

For assistance with the College of Education's Computer Labs

- * Telephone the OIT Computer Help Desk at 542-HELP (542-4357).
- * Request assistance from the OIT Computer helpdesk Consultants in Room 218
- * Send email to help@coe.uga.edu.

For Questions about Lab Schedules

- * Send email to kleonard@coe.uga.edu * or call Kristi Leonard at 542-7180
- Visit the Labs Website for More Information

http://www.coe.uga.edu/labs

Computers

Operating System

Printing

The computer in room 228 print to an HP4simx laster printer. This printer is located in rom232, and printed pages may be retrieved form the OIT desk staff. Each printed page costs 5 cents.

Period	Monday Wednesday Friday	Period	Tuesday Thursday
1	8:00 am-8:50 am	1	8:00 am-8:50 am
2	9:05 am-9:55 am	2	9:30 am-10:45 am
3	10:10 am-11:00 am	3	11:00 am-12:15 am
4	11:15 am-12:05 am	4	12:30 pm-1:45 pm
5	12:20 pm-1:10 pm	5	2:00 pm-3:15 pm
6	1:25 pm-2:15 pm	6	3:30 pm-4:45 pm
7	2:30 pm-3:20 pm	7	5:00 pm-6:15 pm
8	3:35 pm-4:25 pm	8	6:30 pm-7:45 pm
9	4:40 pm-5:30 pm	9	8:00 pm-9:15 pm
10	5:45 pm-6:35 pm	10	9:30 pm-10:45 pm
11	6:50 pm-7:40 pm		
12	7:55 pm-8:45 pm		
13	9:00 pm-9:50 pm		

Why PDF? Centralization The Problem The Solution The Glue The Process **Templates** Examples Tips

Figure 8.5	computer	lab	sc	hed	ul	es
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Tips

- Redirect standard input for immediate failures ...
 pdftex foo < /dev/null
 ... instead of hanging browsers!
- Use strange markers in templates,
 e.g., X-@foobar@-X for "foobar".
- Do all work in a cleverly-named temporary directory. Use symlinks if available.
- Use plain format for documents with little structure.