Documentation Tools for Gaudí

by Gerrit Muller

Philips Research

IST - SWA - AmE

Abstract

The Gaudí project will produce a large number of articles and presentations about System Architecture. The first 3 months of the project were used for exploration of reader requirements, potential contents, distribution media and support tools.

This presentation shows the requirements, the choices and the underlying design of the tools to fulfil quest of making the art of system architecting more accessible and understandable.
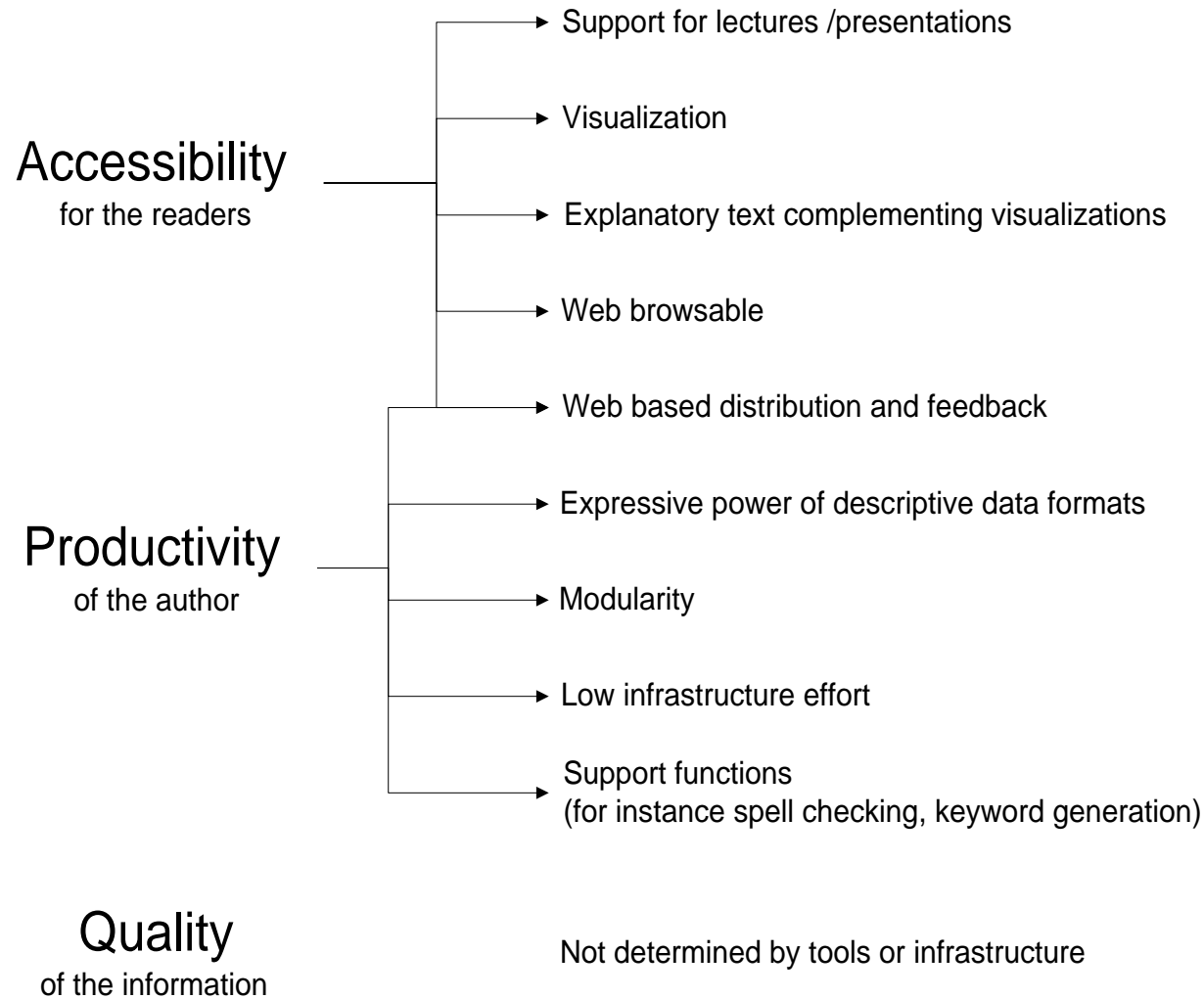
22nd December 1999   version: 1.0

Key drivers of the user of documentation tools

Accessibility
for the readers

- Support for lectures /presentations
- Visualization
- Explanatory text complementing visualizations
- Web browsable

Productivity
of the author

- Web based distribution and feedback
- Expressive power of descriptive data formats
- Modularity
- Low infrastructure effort
- Support functions
  (for instance spell checking, keyword generation)

Quality
of the information

Not determined by tools or infrastructure

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KeyDrivers

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Requirements

Output:

- Platform independent   (1)
- Web enabled   (2)
- High quality on paper   (3)
- Fast scrolling enabled if viewed on monitor   (4)
- Presentations enabled for electronic projection   (5)

Management:

- Modularity of information   (6)
- Minimal redundancy, limited use of copy paste   (7)
- Separation of information and presentation   (8)
- Low effort to create and maintain the tools   (9)

Requirements continued

Source:

- Standard Format (10)
- Enabling version management, a.o. by supporting differencing (11)
- Platform Independence (12)
- Support for Rich Graphics, i.e. maintaining the structure of the infor-
mation (13)
- Bibliography support, including symbolic citation support (14)
- Automatic generation of figure, table and page numbering with symbolic
reference support (15)

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Requirements continued

Use:

- Easy (16)
- User actions should have an intuitive and predictable result (17)
- Customizable, f.i. minimize user actions for frequent operations (18)
- Support for Graphics (19)

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Requirements continued

Design:

- Platform Independent   (20)
- Extendability   (21)
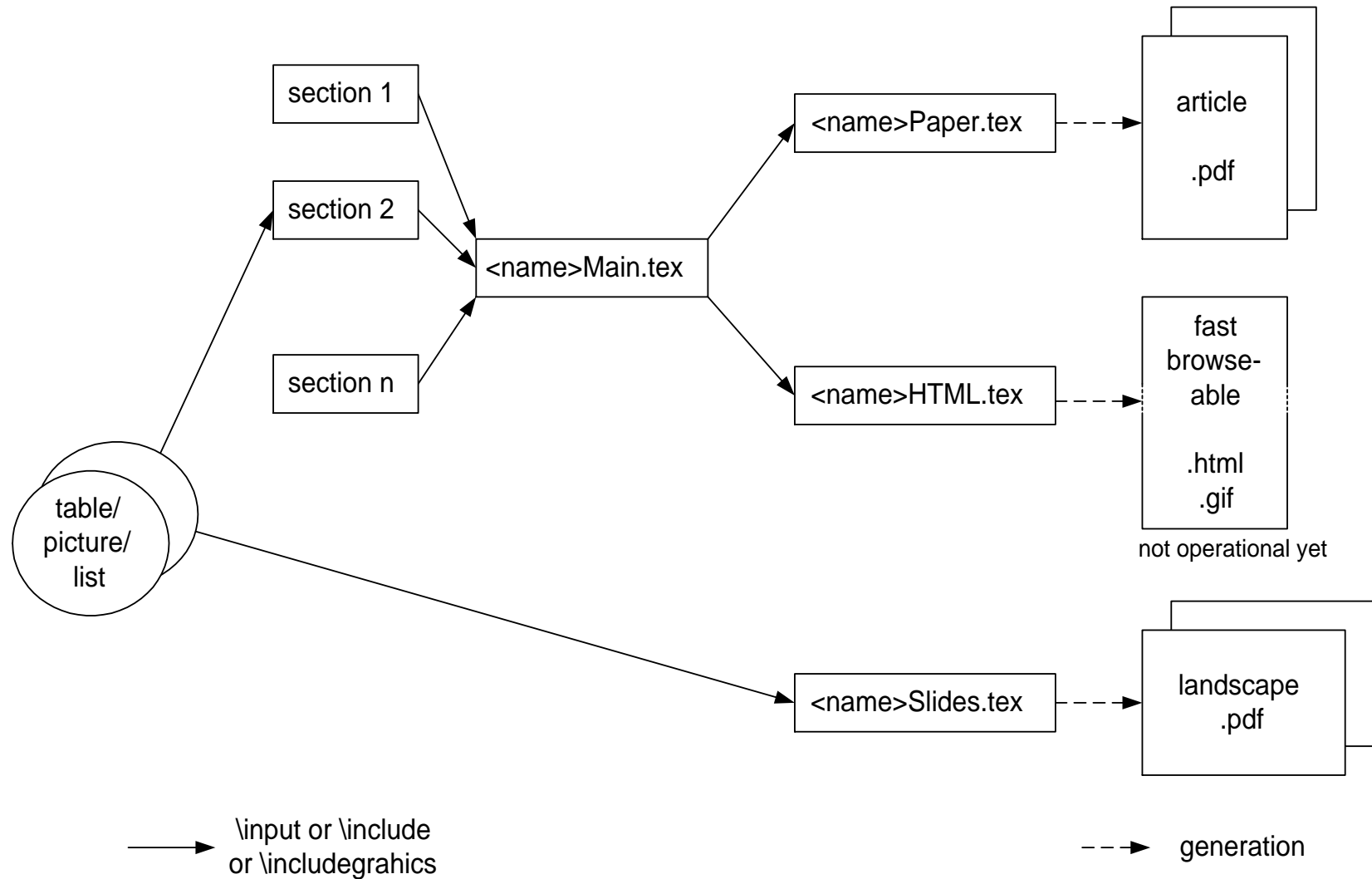- Scaleability   (22)

Future:

- Spell Checking   (23)
- Keyword Generation to support web search engines   (24)

Structure of Source; Relation with Output

section 1

section 2

section n

table/
picture/
list

<name>Main.tex

<name>Paper.tex

<name>HTML.tex

<name>Slides.tex

article

.pdf

fast
browse-
able

.html
.gif

not operational yet

landscape
.pdf

→ \input or \include
   or \includegrahics

- - → generation

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GenerationFlow

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Typical Layout of an article on paper

Title

name
organization
address
e-mail
version
date

distribution note

1 Introduction

Section 2
to
Section n

[acknowledgements]
[bibliograhy]
History
Version n, date, author
change 1
change 2

Version n-1, date, author
change 1
change 2

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TypicalPaperLayout

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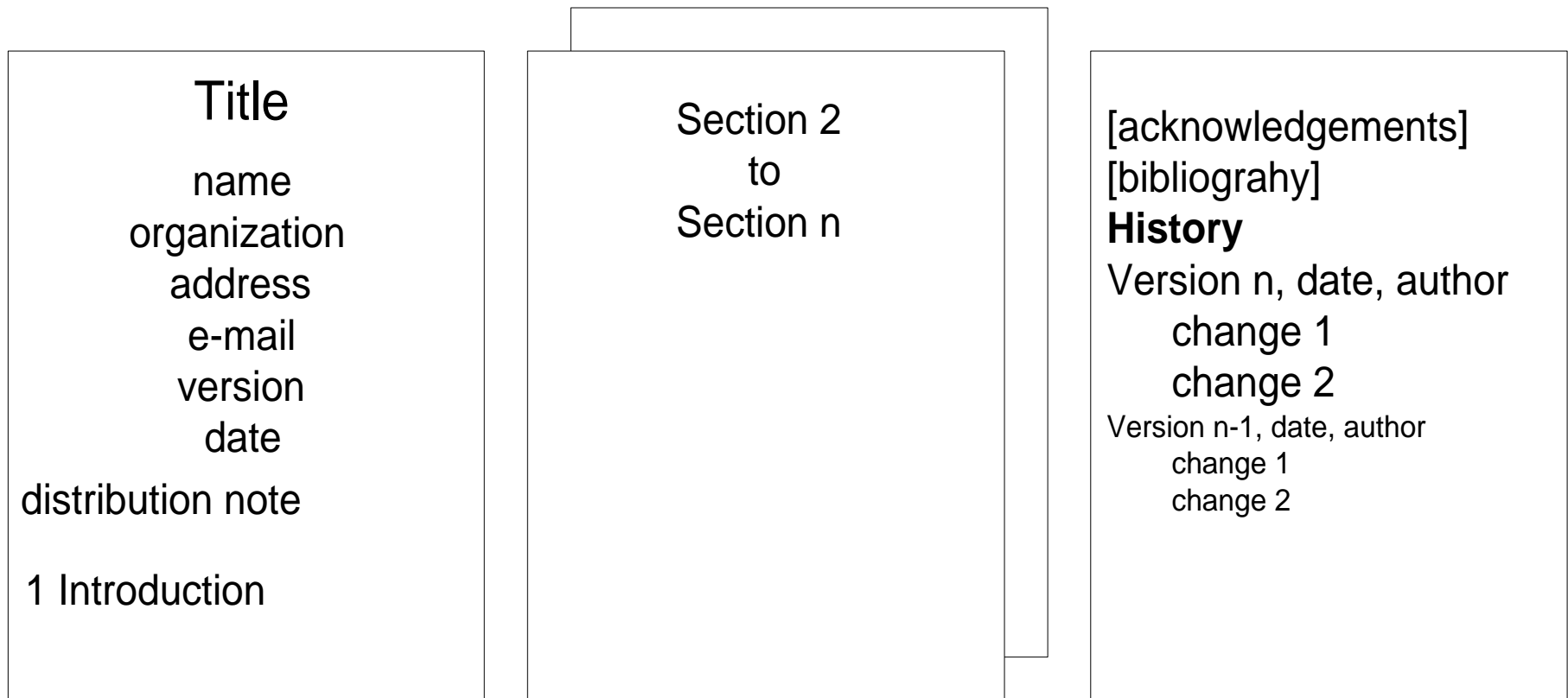
Typical layout of a presentation on slides

Title
Author

Organization

Abstract

date version   Note on distribution

Header
_____

Body
_____

Footer

Footer layout:

| Author | slidecount | date version filename | Logo | Organization |
| Title | | | | |

$\longleftarrow$ \LeftFooterWidth $\longrightarrow$ $\longleftrightarrow$ \RightFooterWidth

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TypicalSlideLayout

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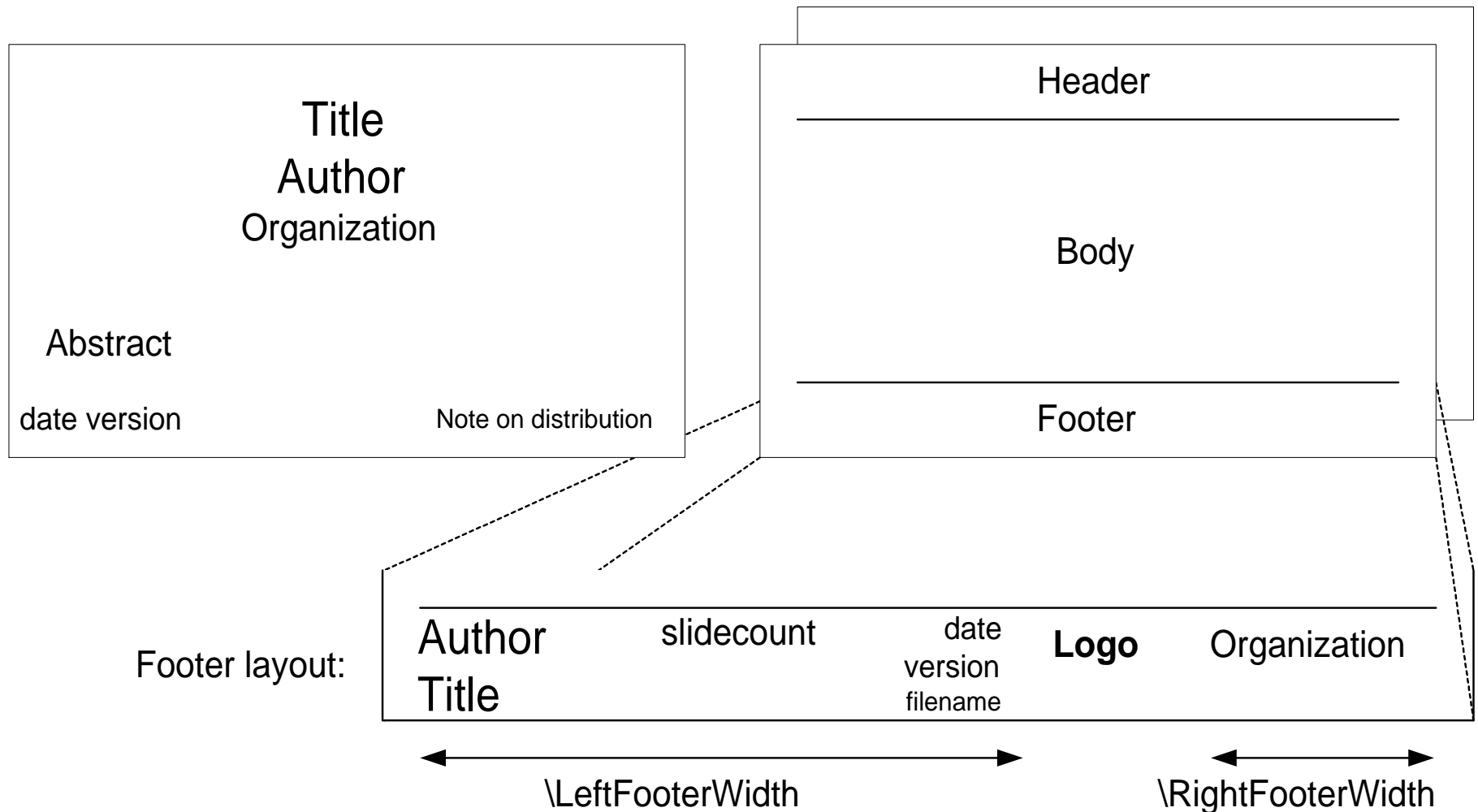
Filetypes and transformation from source to output

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FilesAndTools

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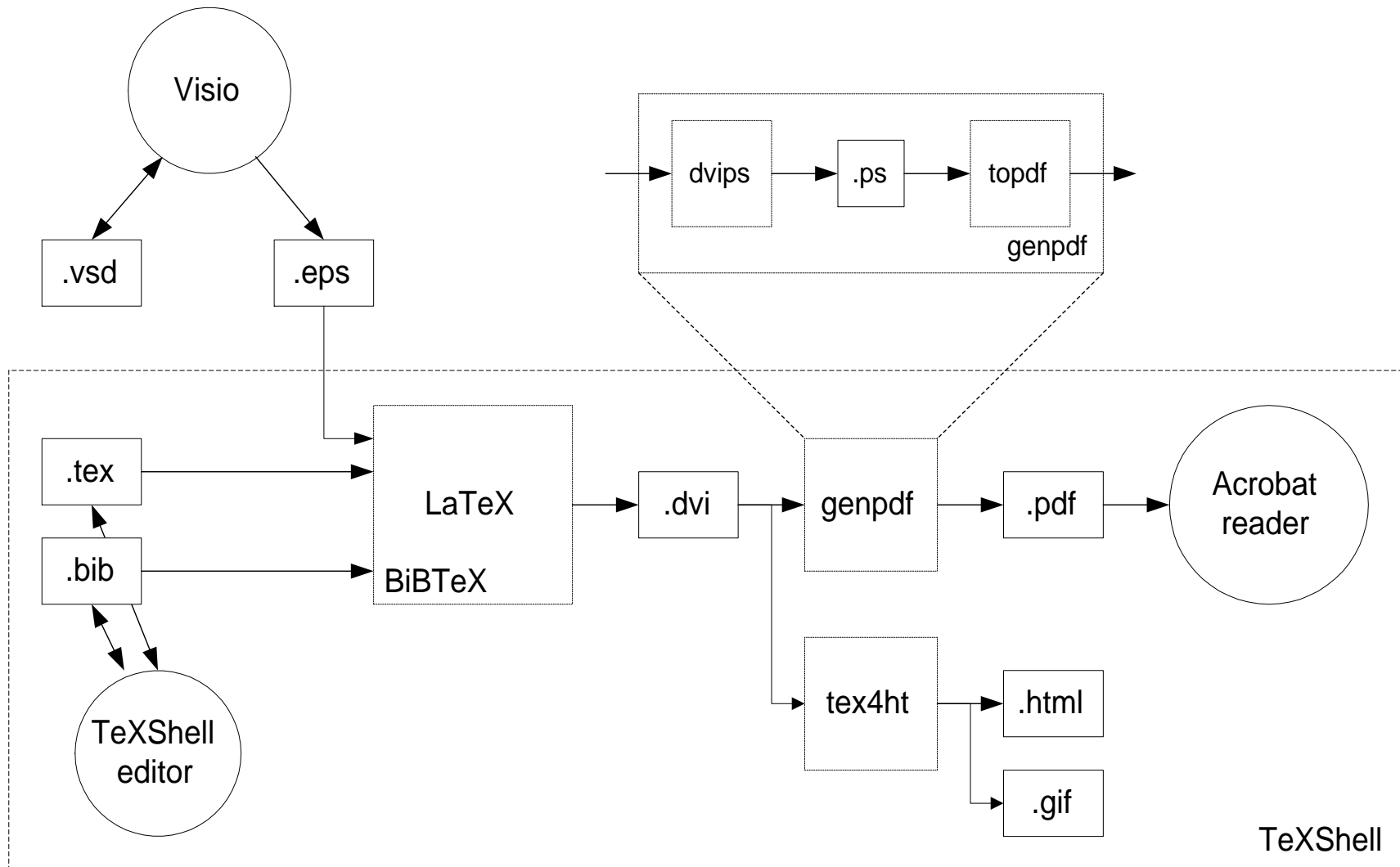
Example, the source structure of this presentation

MyDocumentationToolsPaper

MyDocumentationToolsMain

MyDocumentationToolsHTML

/LatexShared/Distribution
Introduction

Requirements

design

Justification

history

KeyDrivers   .eps

RequirementsOutput
RequirementsManagement
Requirements continued
RequirementsSource
Requirements continued}
RequirementsUse
Requirements continued
RequirementsDesign   .tex
RequirementsFuture   files

GenerationFlow
TypicalPaperLayout
TypicalSlideLayout
FilesAndTools
ExampleSourceStructure   .eps
                              files

LaTeXvsWord   .eps

MyDocumentationToolsSlides

Productivity of LaTeX vs Word/Powerpoint