Beezer's FCLA

[Front matter

[Chapter A

[Chapter B

  ⋮

[Appendices

  [Appendix A

  [Appendix B

    ⋮

At the top level, the book is mostly a succession of chapters. All you need to do is add or rearrange chapters.

These brackets indicate blocks which contain multiple components. Each block is described on a separate sheet.
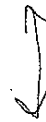
Implicit dependencies ✳   How to write down the dependency graph in advance?

Chapter | Acronym | | Chapter title |

Intro

The "components" of a Chapter.

Other blocks contained within a chapter.

[Section

[Section

Except for some identifying material and an introduction, a Chapter is just a succession of Sections.

Rob puts exercises at the end of each Section, not at the end of the Chapter.

~~Exercises~~

belongs to the book

Section [Acronym] [Section title]

```
+-------------------------------------------+
| Intro                                     |
|                                           |
|                                           |
|                                           |
|                                           |
+-------------------------------------------+
```

[Theorem || Definition | Example || Textblock || Subsection

⋮

[Reading Questions

[Exercises

All sections start in a particular way and end in a particular way. In between there are 5 types of blocks which can occur -- any number of them in any order.

A block exists as a unit. When you move or rearrange items in a document, it is a block that you are moving. It makes no sense to move only one component of a block, or to export part of a block to another document (unless it is a block itself).

However, edit-in-place for each component would be nice.

belongs to a chapter

| Preamble

Optional

Theorem | Acronym | | Theorem Title

| Statement

Proof

| The proof

| Postscript   Optional

In Rob's book, proofs always immediately follow
the statement of a theorem. Other books (at least
occasionally) separate the proof from the statement.
Also, other books tend to have lemmas, propositions,
and corollaries. Allowing other theorem-like blocks
is easy: just have theorem/lemma/proposition/corollary
as one of the parameters of the block.
Separating the proof from the theorem takes more thought.

| belongs to a section or
subsection

Preamble   Optional

Definition

Definition [Acronym] | Definition title

The definition.
(use \term{ the term })

Postscript   Optional

belongs to a section
or subsection

Preamble

Optional

Example [Acronym] Example title

The example

postscript

Optional

belongs to a section
or subsection

Hidden title/name

Textblock

A block of text

This is not really part of Rob's structure, but I have attached a hidden property to a block of text. The idea is that a several pages of straight text may actually cover a few different ideas. By grouping the material into a few separate text blocks (which have descriptive names), organizing, editing, and rearranging is easier. So, a text block could contain more than one paragraph.

If you look at Rob's Section PEE, after the Proof of Theorem HMRE there is a postscript followed by two paragraphs. Those are TWO text blocks. I leave it as an exercise to determine reasonable descriptions for them.

Maybe at first we just consider each paragraph separately?

Hidden title/name

A block of text

belongs to a section, subsection, ---

Subsection | Acronym | Subsection title | Subsection

Intro

[Theorem || Definition || Example || Textblock

belongs to a section

Reading questions

[question
[question
[question
⋮

[question

[number] | Statement

Exercises

[Exercise || Textblock

le.,

Exercises

Exercise
Exercise
Exercise
Text
Exercise

⋮

Rob actually has something like subsections in his exercise section, for exercises with a similar theme. I haven't actually processed Rob's exercise sections yet, so I got that wrong when I wrote this page.

belongs to a section

Type : [C | M | T]   Number : ☐

Contributed by : ☐

☐ Me

Statement

~~Answer~~ Solution

~~Answer~~ Solution

Rob has 3 types of exercises: C, M, and T.
He numbers them with human-generated numbers
(not sequentially) because he wants permanent
numbers across editions. So there are gaps which
can be filled later.

Note also that he has "solutions," not "answers."

I don't know if Rob uses identifiers or name-strings
for the "contributed by" field. Identifiers would be
better.

belongs to a section