

“FOSI is for service information. APP is for magazines.”

The FOSI formatting language is a structured markup application designed for the express purpose of formatting technical documents, including service information. FOSI is Arbortext Editor's native formatting language, and it is tightly integrated with the software. FOSI has been used in many industries, including automotive, aerospace, defense, and heavy equipment, for database-driven publishing of owner's manuals, operator's manuals, maintenance manuals, service bulletins, recall bulletins, parts manuals, technical manuals, and more for better than twenty years.

Advanced Print Publisher™ (APP) is not a stylesheet language. It is an interactive, template-based desktop publishing system specializing in fancy page layouts and special text effects. If you want to publish a consumer magazine, check out APP. However, for top speed, top quality, database-driven, “lights-out” batch publishing of technical documents and service information, FOSI is the right tool for the job, as evidenced by this comparison of APP and FOSI.

Formatting Support

APP specializes in elaborate page layouts that technical documentation and service information documents generally do not require. FOSI is designed for documents with consistent page layouts, with built-in support for change marks, blank page backs, security classification, L-paging, and more. Some formatting features not directly supported by FOSI, such as the hanging quotes in this document, can be accomplished with supplementation by a scripting language.

Output Quality

The APP formatting engine creates each paragraph one line at a time. Each line is filled to capacity, with a hyphen inserted when it helps fill the line. This approach can result in short last lines and short next-to-last lines as well as a lot of hyphenated lines. And APP hyphenation is not always correct, which makes it unsuitable for “lights out” batch formatting.

The T_EX formatting engine builds a paragraph by evaluating all possible break points for the paragraph content and choosing the most aesthetically pleasing set of line breaks. FOSI settings control “raggedness” and establish hyphenation parameters. NOTE: T_EX hyphenation is well known for its accuracy.

Interface

PTC Arbortext recommends using the Styler interface with APP source edits in Javascript, although source edits prevent further changes to Styler coding. If more than half a dozen source edits are needed, PTC Arbortext recommends purchasing the APP Desktop publishing system. Note that APP Desktop requires custom integration to work with Arbortext Editor.

Arbortext Editor has two powerful FOSI interfaces that are tightly integrated in the product. One of the interfaces is geared toward helping newbies get started. The interfaces complement each other, and each has its own useful features to aid development and maintenance. Please see www.FOSIexpert.com/FOSI-interfaces.html for details.

FOSI

The right tool for the job

Learning Curve

Using Styler with APP source edits requires learning about Styler, APP, and Javascript. APP is known to have a steep learning curve, taking years to master.

How difficult is it to use APP and Styler? Consider the documentation for Styler with APP source edits, which consists of the manuals listed below.

- 1 *Styler User's Guide* (1,094 pages), which "describes, and uses examples to illustrate how the key tools and functions of Arbortext Styler help you create simple to complex stylesheets for publishing to multiple outputs."
- 2 *Arbortext Advanced Print Publisher for Styler Users* manual (190 pages), which is about "how to extend a stylesheet beyond Arbortext Styler, thus providing APP functionality that is not immediately accessible via the Arbortext Styler UI."
- 3 *Arbortext Advanced Print Publisher Stylesheet Developer's Guide* (88 pages), which "describes how to extend your PTC Arbortext Styler stylesheet with code that will access the additional formatting options provided by PTC Arbortext Advanced Print Publisher (APP). The code is based on APP's Formatting Object Model (FOM) and written in JavaScript. The guide provides an overview of FOM and JavaScript, and describes the objects and object groups included in the FOM. It also details the ways in which you can incorporate the additional code in your stylesheet and provides samples."
- 4 *Arbortext Advanced Print Publisher Formatting Object Model Reference*, a 616-page manual that contains "descriptions of all the objects included in the APP Formatting Object Model (FOM), and any constants, properties, and methods that make up an object's definition."



PTC Arbortext's FOSI documentation consists of one 437-page *Arbortext FOSI Reference* manual* that describes FOSI stylesheet development for publishing SGML and XML documents. The Table of Contents illustrates its completeness:

- ◇ FOSI Concepts
- ◇ FOSI Methodology
- ◇ FOSI Components
- ◇ FOSI Testing
- ◇ Formatting Support
- ◇ Coding a FOSI stylesheet
- ◇ Using the FOSI Editor
- ◇ Basic FOSI Coding Techniques
- ◇ Advanced FOSI Coding Techniques

Just about everything related to FOSI in Arbortext Editor is included in the **FOSI QuickStart Tutorials**. Detailed information about the tutorials can be found at www.FOSIexpert.com/tutorials.html.

Practical FOSI, which contains complete reference information and more than 400 examples, is expected to be available in 2015. In the meantime, excerpts are at www.FOSIexpert.com/Practical-fosi.html.

*The same FOSI information is available as Help topics.

FOSI

The right tool for the job

Prerequisites

The prerequisites for learning APP for Styler are daunting. From *Arbortext Advanced Print Publisher Stylesheet Developer's Guide*:

“For an introduction to the integration of PTC Arbortext Advanced Print Publisher (APP) in PTC Arbortext Styler, please refer to *PTC Arbortext Advanced Print Publisher in PTC Arbortext Styler* in PTC Arbortext Styler help. This describes the functionality of APP included with PTC Arbortext Styler. You will also find an overview of how to access APP print engine functionality for publishing and incorporate APP code in your PTC Arbortext Styler stylesheet.

“The following knowledge is prerequisite to the content in this document:

- ◇ “Familiarity with PTC Arbortext Styler, its UI and the formatting options it provides
- ◇ “Familiarity with the formatting options provided by PTC Arbortext Advanced Print Publisher
- ◇ “Proficiency in the use of the JavaScript scripting language, which provides access to the functionality described in the FOM
- ◇ “Basic knowledge of concepts such as object based coding and scripting”

No organization has someone on staff with this skill set. Yet PTC Arbortext offers no APP training courses, and there are few APP experts. In addition, JavaScript is a difficult language to master.

FOSI prerequisites are dramatically different: “The FOSI developer should have a background in desktop publishing, document preparation, and layout.” Note this does not include programming training or experience because knowledge of software languages, data structures, algorithms, etc., does not apply to the declarative FOSI language.

Most organizations already have publishing staff who are well equipped to learn FOSI. And there are numerous outside consultants with extensive FOSI experience.

Formatting Speed

PTC Arbortext acknowledges that FOSI's formatting speed is faster than APP's formatting speed. With APP, however, the formatting speed ultimately depends on the skill of the developer. Only an APP expert can maximize APP's speed. Only an APP expert can determine if APP is running at top speed or at a needlessly slow pace that wastes server time and delays distribution.

Unlike APP, FOSI formatting speed does not depend on the skill of the developer. FOSI formatting always runs at top speed, which is faster than APP's top speed. In addition, a FOSI stylesheet can easily be coded to utilize a feature that formats documents two to four times faster than usual.

Reliability and Stability

Approximately 135 publishing bugfixes specifically related to APP are listed in *SPR Fixes* for Arbortext Editor 6.1 to date. In addition, release notes for APP 11.0 through M070 list approximately 250 bugfixes. It is not clear how much overlaps exists between the two documents. In any case, more than 250 APP-related bugs were fixed, with many involving unexpected termination of the software.

FOSI













The right tool for the job

SPR Fixes for 6.1 to date list 42 bugfixes for Styler. Six of them involved software crashes. However, just 10 bugfixes related to FOSI/T_EX are listed, and none of them involved software failures.

The numbers speak for themselves. Clearly, FOSI and the T_EX formatting engine provide the reliability and stability organizations require.

Bottom Line

The following table shows FOSI's advantages over APP.

	APP	FOSI
Output Quality		
Learning Curve		
Prerequisites		
Interface		
Formatting Speed		
Reliability and Stability		

APP is suitable for interactive formatting, which allows for correction of bad line breaks and inaccurate hyphenation. But for top speed, top quality, database-driven, “lights-out” batch publishing of technical documentation and service information, FOSI is the right tool for the job.