contextgarden.net

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Abstract

The goal of the *contextgarden.net* project is to enhance the documentation of ConTEXt. It consists of several web services that together provide the technical framework behind the documentation. A large (and growing) percentage of the supplied content is actually provided by the visitors of the interconnected web sites.

1   Introduction

Many users have tried the LATEX-alternative ConTEXt. But more than a few have given up almost right at the start, simply because they didn't know how to proceed any further. Unnecesarily so, since there is an active user group that is very helpful. And there is a vast amount of information and documentation on ConTEXt readily available. One just has to find it.

2   What is available?

The official documentation for ConTEXt is available on the web server of PRAGMA ADE[1]. There, you will find many PDF-files that can answer your questions as well as show you some interesting possibilities of typesetting with ConTEXt. There are two distinct ways to access the documentation on the web site.

The first possibility is to use PDF-based navigation. Just select *showcase* on the web site of PRAGMA ADE, and you will get a hierarchical overview of all available PDF-documents. The navigation itself shows some aspects of the vast possibilities of ConTEXt. This makes it plain to see that it will be worth having a closer look at the program, even before you have read the first document!

The second possibility is to is to select *overview* on the web page. This will present you with a rather simple listing of the available files based on their category. You can see all available manuals and some supplementary documentation at a glance.

The novice user should definitely have a look at the beginner's manual *ConTEXt, an excursion* and, after that, *ConTEXt, the manual*.

Besides these two important documents, there are different sets of manuals:

manuals This is the most important set of documentation files. Besides the beginner's manual and the main manual, there are manuals dealing with XML processing, grid-based typesetting, stepcharts, MetaFun and MathML, and more.

magazines This relatively new set describes smaller aspects of ConTEXt and typesetting. A specific volume, for example, is about formatting digits, and another volume is about hiding parts of section titles inside running heads.

qrcs quick references. Each one of these documents contains a list of all available user level commands within a language interface. For every command, its general syntax is described along with the list of allowed parameters and keywords, but nothing else.

sources sample documents with source code. Currently this set consists mainly of the presentation styles that are shipped with ConTEXt. The source of these styles is also well documented using TEX comments.

technotes At the moment there is only one article about graphic inclusion and positioning in PDF available.

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[1] http://www.pragma-ade.com

uptodate like the special documents in the section *manuals*, the *uptodate* documents are about specific issues in ConTEXt. There are manuals about flowcharts, tables, typesetting Chinese and JavaScript. Nowadays most of the *uptodate* documents are renamed and put into the *manuals* section.

3   What is missing?

Considering the great number of manuals, it may sound strange that there could be something missing. But those who look at *the manual* will probably notice that it lacks a chapter about typesetting tables. There is a section about a simple table variant (*tabulate*), but it is not explained in any detail. Another variant (*table*) appears often in the examples, but a more helpful explanation is missing. And it lacks an overview of the many different options that can be used when trying to typeset a table.

Another thing you will not find in the printed manuals are practical hints. Things like installation issues, design discussion, tricky problems that are due to misunderstanding or misconfiguration, et cetera.

Yet another problem is that the descriptions in the manuals are partly outdated. The *uptodate* (or the descendants) are, despite their name, already several years old. And because the development of ConTEXt is quite fast, the descriptions of the commands are often incomplete and in some areas, even the underlying concepts have changed. You can only keep track of these things by keeping an eye on the mailing list and watching the changes in the ConTEXt distribution.

Moreover, because there are so many documents, you can actually lose the grand picture. Where are the rules for grid typesetting? What line separators am I allowed to use in *tabulate?* The answers are spread throughout the documents. A global index would be helpful.

A specific request that frequently arises on the ConTEXt mailing list is the lack of sample documents with source code. On the web pages of PRAGMA ADE you can download a few: the magazines (ThisWay); the pdfTEX manual; and the commented sample presentation styles. But for many users this is not sufficient.

Yet another issue that some users are unhappy about has nothing to do with documentation. ConTEXt is not perfectly supported by the TEX-distributions, although the situation has greatly improved over the last years. "Just" trying out ConTEXt sometimes fails because the local distribution lacks some files or because it contains a way too old version of ConTEXt. At present there is a change in the TEX directory structure in *web2c* and accordingly a change of the directory layout of ConTEXt. This brings a whole new set of compatibility problems.

4   In the garden

With the project *contextgarden.net*, I provide some applications and web services that jointly try to address the problems mentioned above. Right now, the following services are available: the wiki, texshow-web, live ConTEXt, source browser and archive. The services are all linked from the main page.[2] *contextgarden.net* is kindly sponsored by DANTE e.V., the German TEX user group.

4.1   Wiki

A wiki is a service, where the visitors of the web page create content. Every visitor can add, change and delete the web pages. The following definition is taken from the wikipedia, a free encyclopedia that is based on the same principle:[3]

> A Wiki or wiki (pronounced "wicky" or "weekee") is a web site (or other hypertext document collection) that allows a user to add content, as on an Internet forum, but also allows that content to be edited by any other user [. . .] Wiki wiki comes from the Hawaiian term for "quick" or "super-fast".

On every wiki page there is a button labeled "edit", that lets you modify the page content. The wiki syntax is simple, plain ascii text with some extensions for mark-up, such as = for heading and *, # for items in an unordered and ordered list respectively. The following example should be easy to understand for all LATEX and ConTEXt users.

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[2]http://contextgarden.net
[3]http://en.wikipedia.org/wiki/Wiki

```
1   == This is the main title ==
2   Every page should begin with an introductory
3   paragraph.
4
5   * first item in an unordered list
6   * and the second
7
8   <code>
9   an environment like verbatim or \starttyping ...
10  \stoptyping
11  </code>
```

A table of contents is inserted automatically if there are enough headings on a page.

The main application on *contextgarden* is a wiki especially for ConTeXt. Its content is mainly filled by only a few, but quite active, users of the site. There are about 100 pages on the different topics that cannot be (easily) found in the manuals. One of the most obvious differences between the wiki and the manuals is that in the wiki, you *can* find practical texts like installation experiences and overviews such as a list of text editors with ConTeXt support. Every user can upload TeX and PDF files to the site, and therefore the wiki is a good platform for the publication of sample documents.

One of the important features in a wiki is that you can get a list of recent changes. This leads to a pragmatic way of editing content: one user creates a page on a specific subject, that is not perfectly worded nor 100% complete yet. Afterwards, other users complete this page by supplying their own knowledge on the subject. As a result, the quality of the page increases over time.

Even news items are put into the wiki. For example, the users can see the list of included changes whenever a new ConTeXt distribution is released. The wiki was started around July 2004. In the long term it should be a full complement to the official manuals.

The wiki on *contextgarden* has several features that makes it well suited for ConTeXt documentation. One extension is the direct rendering of ConTeXt input. Taking the following input:

```
1   <context>
2   \defineoverlay
3       [tea]
4       [{\green \ss \bf GREEN TEA }]
5   \framed [height=40pt,
6           background=tea,
7           align=middle]%
8       {\em today \blank for sale}
9   </context>
```

you get

today
GREEN TEA
for sale

The wiki internally passes the text to ConTeXt to be typeset. This creates a PDF file from the input, and then the wiki calls on ghostscript to convert this PDF file to a PNG image. The end result is that you can view the typeset example directly from within your web browser.

Also included is a pretty printer for TeX and XML source. This formats and colors source code for readability. Perhaps you are familiar with this behaviour from your text editor. The final extension to the wiki is the ability to create hyperlinks to *texshow-web* (see below). With

```
1   <cmd>adaptlayout</cmd>
```

a link will be created. When that link is clicked, the page that contains the definition of the command *adaptlayout* within *texshow-web* will be opened.

4.2   texshow-web

texshow-web is an alternative implementation of the perl/Tk program *texshow* that comes with every ConTEXt distribution.

What follows is a quick summary for those of you who are unfamiliar with *texshow*: This program gives an overview of all user commands. The full set of the parameters and arguments belonging to a specific command can be shown in a syntactical overview, like this one:

```
\adaptlayout[...,...,...][...,...=...,...]


[...,...,...]     number
height            dimension max
lines             number
```

The output is colored, so that you can easily see what parameters you can use in each argument. In this example the first parameter accepts a list of numbers whereas the second parameter takes a list of assignments. Allowed keywords for the assignment are *height* and *lines*, and the allowed values for height are a *dimension* or the word *max* and for lines a *number* (within TEX's limits of course).

The new web-based variant, *texshow-web* makes it possible to add a comment, a description and any number of examples to the a specific command. Of course *texshow-web* also offers a full-text search, so that you can find the command you need with more ease. As with the wiki, all users have the possibility to complete missing information or to correct pages when needed.

ConTEXt users often struggle because one not only has to know all of the possible parameters for a command by name, but one also has to understand their effects on typesetting. In the manuals the parameters are only partly described. For example, there is no explanation of the parameter *beforehead* in an *itemize* environment. That is why *texshow-web* has a field *description* where this kind of information can be stored. Currently, there are only a few entries with that additional content, but progress is slowly being made.

The original *texshow* program from the distribution has recently been adapted to show all the comments, descriptions and examples from *texshow-web* as well, but does not allow editing.

Features currently in development are: a way of categorizing commands into logical units (graphic inclusion, section and headers, typographic commands), a multi-lingual user interface, and documentation for ConTEXt's programming interface (API). The API documentation will cooperate with the *source browser* (see below) that shows the definition of the commands within ConTEXt's source code.

Until now, *texshow-web* has only been used for ConTEXt documentation. But it should be possible to use it for LATEX documentation without big difficulties.

4.3   Archive

There were already several searchable archives for the ConTEXt mailing list: the NTG has one and the news-mail portal Gmane has one as well. Slavek Zak used to host one, too. There are some other, less popular, archives as well. But none of the those is complete as well as easily searchable. Therefore I have installed yet another mailing list archive at *contextgarden.net*. This one is almost complete, very quick and searchable. The two new lists are also archived on this server: the ConTEXt developer list and the *foxet* (a ConTEXt based XML-FO processor) list.

4.4   Live

Live ConTEXt is an on-line ConTEXt typesetting service. You type your document into a web-form and after you submit the form to the server, your source gets processed by *texexec* and typeset. The resulting pdf document as well *texexec*'s screen output can be viewed online or saved to your harddisk. This makes it possible to use ConTEXt without actually installing it. The underlying TEX system uses the latest teTEX beta and ConTEXt distribution. *Live ConTEXt* is also used as a sort of reference installation. Errors that do occur on a local system but cannot be reproduced on *Live ConTEXt* are most likely a local problem only.

4.5   Source

With the *source browser* you can view ConTEXt's source code. Using a simple navigation system you have access to the almost 600 files from the current distribution. This is especially interesting to the programmers that

need to see the definition of the commands. The included full-text search helps finding commands. You can access the definition of the commands via hyperlinks: `http://source.contextgarden.net/tex/context/base/core-pos.tex#setpositions` and `http://source.contextgarden.net/core-pos.tex#setpositions` points to the definition of *setpositions*, without having to know the line number in advance.

5   Future work

The services mentioned here are provided by *contextgarden.net*. The most important one is certainly the *wiki*. Until now it was not necessary to structure the information in the wiki. If it continues to grow as it did in the past, a more formal structure will be necessary. *texshow-web* should become the preferred reference for the ConTeXt commands. The resources provided by *texshow-web* will be used by the existing tools (*texshow*) and documentation in future releases. Because the number of descriptions, comments and examples is still low, the ConTeXt community is asked to fill in the missing information.

Currently a search engine is in development that allows the user to search *texshow-web*, the *wiki*, the manuals and the mailing list archive all from one place. This should provide an even more powerful tool in your quest to find the necessary information.