

A Personal Organizer: PocketDiary

(*a module*)

Abstract

Sometimes, a cheap personal organizer on paper can come in handy. This solution prepared in ConTeXt MKIV provides a range of options to set up such a personal organizer. The point is, that the PocketDiary is printed on a single sided A4 landscape sheet of paper and then folded into a pocket size booklet hereby preventing that unprinted/empty pages are seen. The PocketDiary is easy to make and after 1 week it is simply replaced with a subsequent booklet. A detailed description is given of the system and how to set up a production file. At the end of the article instructions are included how to fold the booklet.

Keywords

Maps, Context, module, lua

Introduction

Some time ago my brother Heinz asked me to prepare him a special page-arrangement scheme. This scheme is suitable to form a section with a single-sided printed sheet of paper. He wanted to use it for a special kind of greeting-cards. By coincidence I detected an article by U. Ziegenhagen in *de T_EXnische Kommödie* nr. 3/2010 [4]. This article deals with the preparation of a PocketMod, which is a personal organizer based on the aforementioned arranging scheme. PocketMod is available as an online version on <http://www.pocketmod.com>. – After reading the article and visiting the web-site I got intrigued by the fact that ConT_EXt has built-in arranging capabilities and due to the LuaT_EX engine it should be possible to build such a personal organizer in ConT_EXt.

The result is a module which can generate such personal organizers, called PocketDiary. I give a description of the possibilities in this article.

General Description

The PocketDiary is a personal organizer. It is like a section of a book, but very small in size. The PocketDiary is based on the idea, that it should be possible to repeatedly produce such a personal organizer during the year by altering a minimal number of variables. The diary is based on a week number and, of course, the year. – Although this is enough information for preparing a week-diary, it is not enough if you want more options such as inclusion of month-tables, a year-table, inclusion of personal data etc. To start up the PocketDiary production more information needs to be given to the system.

PocketDiary Layout

The code presented hereunder is all you need to put into your personal PocketDiary file to be able to produce a personal organizer.

First we program ConT_EXt to load the module *t-pocketdiary*

```
\usemodule[pocketdiary]
```

Without stating the font to be used PocketDiary uses Latin Modern. If you have your own favourite font set it up here:

```
\usetyescriptfile[type-seravek]
\usetyescript[Seravek]
\setupbodyfont[Seravek,ss,9pt]
```

PocketDiary has a multiple-language interface, so we need to tell it which language we use. Therefore the document should start with the definition of the main language used. Supported interfaces are English, Dutch, German, Italian and French.

```
\mainlanguage[nl]
```

The module automatically sets the layout of the PocketDiary page.

The PocketDiary's page design is based on a header and footer line and with the calendar information in the main text area. The header line will contain main information on the calendar-issue at hand i.e. Day of the month – Day name (short) – Week number – Year.

Everything which is configurable, is brought together in 5 sets of variables.

In order to be able to calculate the desired calendars, the following variables of PocketDiary should be set:

```
\setvariables
  [PocketDiary]
  [Year=2011,
   Week=17,
   Day=7,
   Month=5,
   Nextyear=yes]
```

The variables in the set 'PocketDiary' are explained in the following table. Be aware, that some of the variables change the behaviour of the PocketDiary.

Variable	Value	Comment
Year	number	Year numbers in the range 1900 and 4099. The lower limit is computer dependent (OS-timestamp), the upper limit is dependent on the Easter Sunday calculation.
Week	number	Values between 1 and 53.
Day	number	Values between 1 and 7. If this variable contains a value, then the PocketDiary will be made up according to the variable specifications given in the 'PocketDiaryLayout' section. If this variable is empty, then a PocketDiary with one page per day is made up. The content of pages 1 and 8 can be chosen freely in the section 'PocketDiaryLayout'.
Month	number	Values between 1 and 12. This variable is independent from the variables 'Year' and 'Week'. It indicates only which month should be calculated for a month table.
Nextyear	yes/no	The testing is done on 'yes'. If set to 'yes' the next year instead of the current year is used for the calculation of the year calendar. This can be practical when current year is nearly over.

The PocketDiary holds 8 (Page1 to Page8) pages. It is possible to give the organizer an individual layout according to your own wishes. It is no problem to place several pages with the same template name.

```
\setvariables
  [PocketDiaryLayout]
```

```
[Page1=Lost-Return,
Page2=Week,
Page3=Day,
Page4=Monthcurrent,
Page5=Blank,
Page6=Contact,
Page7=Caro,
Page8=Lines]
```

Variable	Comment
Day	The weekday, indicated in the variable 'Day' in the previous section, is used to make a PocketDiary page.
Week	A week calendar, based on the variable 'Week' in the previous section, is used for the presentation of a week table.
Monthcurrent	A month table based on the value in the variable 'Month' of the previous section, is typeset.
Monthnext	A month table of the next month based on the value in the variable 'Month' of the previous section is typeset.
Yearcalendar	A complete year calendar is typeset. If the 'Nextyear' variable is not 'yes', the year calendar for the year indicated in variable 'Year' of the previous section is used. Otherwise that variable is increased by 1 to typeset the year calendar of the following year.
Lost-Return	By means of the set values in the section 'PocketDiaryAddress' a lost-and-return page is composed.
Blank	This page carries a header and a footer but is otherwise empty.
Todo	A todo-list template is typeset.
Caro	A page with full-grid-paper is typeset.
Lines	A page with grid lines is typeset
Contact	A form with two sets of preprinted fields for marking down contact information is typeset.

The third block of variables contains information used for the footer and the lost-return form.

```
\setvariables
[PocketDiaryAddress]
[Familyname=Egger,
Forename=Willi,
Street=Townstreet 3B,
Zipcode=5000,
City=New CONTEXT,
Country=TEX-world,
Phone=+22 444 55 88 66,
Mobile=+22 6 19 19 1717,
E-mail=info at pocketdiary.org,
Web=www.pocketdiary.org]
```

The footer line contains three fields which can be customized with the 'PocketDiaryFooter' variables.

```
\setvariables
[PocketDiaryFooter]
[Lefttext=PocketDiary,
Centertext=\pagenumber,
```

```
Righttext={\getvariable{PocketDiaryAddress}{Forename},~{\currentdate[year]}}
```

The main text is separated from the header and footer with a line. This line can be given a custom color. The standard color is blue. For those who wish grid lines in another color than light-gray, they can give 'Gridline' another value.

```
\setvariables
[PocketDiaryColors]
[Separatorline=blue,
Gridline={s=.75}]
```

The last block of code states:

```
\starttext
\setup{PocketDiary}
\stoptext
```

The result: Day-Calendar with a Year Calendar

Todo

PocketDiary 8 Willi,2011

Week calendar Week 16 2011

18 Mon
19 Tue
20 Wed
21 Thu
22 Fri Good Friday
23 Sat
24 Sun Easter Sunday

PocketDiary 2 Willi,2011

22 Fri Good Friday April 2011

20 Sat	21 Sun
22 Fri Good Friday	23 Sat
24 Sun Easter Sunday	25 Mon
26 Tue	27 Wed
28 Thu	29 Fri
30 Sat	1 Sun

PocketDiary 3 Willi,2011

Week calendar Week 17 2011

25 Tue	26 Wed	27 Thu	28 Fri	29 Sat	30 Sun
1 Mon	2 Tue	3 Wed	4 Thu	5 Fri	6 Sat
7 Sun	8 Mon	9 Tue	10 Wed	11 Thu	12 Fri
13 Sat	14 Sun	15 Mon	16 Tue	17 Wed	18 Thu
19 Fri	20 Sat	21 Sun	22 Mon	23 Tue	24 Wed
25 Thu	26 Fri	27 Sat	28 Sun	29 Mon	30 Tue
31 Wed					

PocketDiary 5 Willi,2011

25 Mon Easter Monday April 2011

23 Tue	24 Wed	25 Mon Easter Monday	26 Tue	27 Wed	28 Thu	29 Fri	30 Sat	1 Sun
2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28
29	30	31						

PocketDiary 7 Willi,2011

Year Calendar 2011

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31					

PocketDiary 9 Willi,2011

Year Calendar 2011

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31					

PocketDiary 1 Willi,2011

The result: Week Calendar with Two Custom Pages



Available templates

Day. The day calendar is shown in figure 1.

The weekend calendar shows Saturday and Sunday on one page (see figure 2)

Week Calendar. The week calendar looks as shown in the example figure 3.

Month Calendar. The month calendar is shown in figure 4.

Year Calendar. An example of the current year calendar you can find in figure 5.

Templates Unrelated to Calendar Calculations. The PocketDiary comes with a couple of templates for writing down information. They are shown in figure 6.

22 Fri Good Friday April 2011

PocketDiary Example page Willi,2011

23 Sat April 2011

PocketDiary Example page Willi,2011

24 Sun Easter Sunday April 2011

Week calendar Week 16 2011

18 Mon
19 Tue
20 Wed
21 Thu
22 Fri Good Friday
23 Sat
24 Sun Easter Sunday

PocketDiary Example page Willi,2011

Figure 1. The day calendar

Figure 2. The weekend calendar

Figure 3. The week calendar

get a production file, which would be easy to maintain and there should not be too many changes during repeated cycles of making such a personal organizer. This implies however, that the background machinery must be able to calculate everything based on a year, week number, month and a day number. – Soon I detected that there are more and less difficult areas in the year's calendar. The easier things comprise leap-year calculations and calculations which do not involve January and December. The beginning of the year and the end of the year are quite tricky moments. Think e.g. whether the last days of December are in week 52 or 53 and whether the first days of the next year belong to week 52, 53 or are representing the first week of the new year.

The decision has been made, that this module would use the European standard for date calculations. The Gregorian calendar is used exclusively. The module is based on the ISO-8061 standard, which defines that the first week of a year is the week having the year's first Thursday in it. Furthermore it states that the week starts on Monday which is different from what Lua does, where day 1 is Sunday. The os-library coming with lua can do a lot for date calculations. So, where possible this library is used.

Googling helps a lot to gain insight in the date-calculations. The work of Sohael Babwani [5] is an interesting source. I wanted the PocketDiary to indicate also the main Christian feast days. I found the web-site of Ron Mallen [6], which was a big help. He developed an Easter Sunday calculation based on three tables. He also presents a BASIC programme on his web-site which calculates the date automatically. This programme is then transcribed into Lua.

There are more questions to be answered e.g. how to calculate a week number from a certain date. Thanks to Ferry van Schaik [7] I got a Java snippet, which I have converted to Lua.

How to Fold the PocketDiary

The eight printed pages are folded in such a way that the PocketDiary presents itself as a small booklet. There are no empty pages visible.

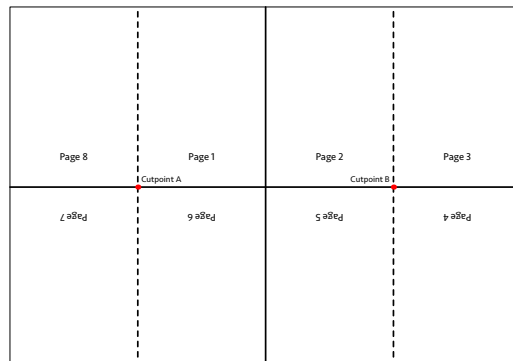


Figure 7. The basic folding scheme

First make two mountain-folds as indicated with the straight lines in figure 7. Unfold the paper and turn it face up and 90° to the left. Make a valley-fold with the lower part of the sheet onto the previously made mountain-fold. Unfold and turn the sheet 180° . Make another valley-fold as described before. Unfold the sheet.

Take a sharp knife and a ruler. Cut the paper open between cutting point A and B (see figure 7).

Now we can fold the booklet. First, fold the paper again lengthwise. Then hold the double folded paper with the mountain-fold up. Push from both sides towards

the center in order to get a form similar to figure 8. Then fold the upper double-page in direction B, the lower double-page in direction C and finally the lefthand double-sided page in direction D.

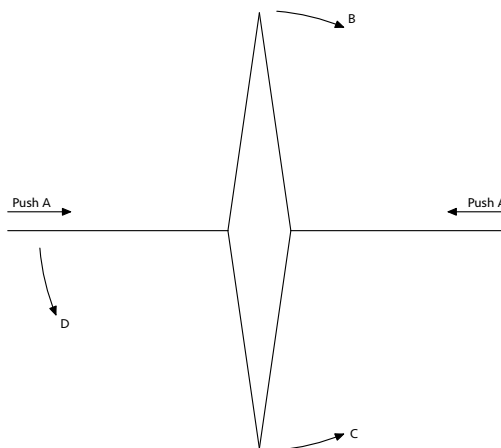


Figure 8. The basic folding scheme

Before creasing the booklet at the spine it is worthwhile to put the section down on the table and adjust folds where needed. Finally the spine is creased preferably with a bone-folder.

The Module

The module is available on the Con $\text{T}_{\text{E}}\text{X}$ t wiki and it can be downloaded from <http://modules.contextgarden.net/>.

References

1. Programming in Lua. Roberto Ierusalimsky. Lua.org, Rio de Janeiro. 2nd ed. 2006.
2. Metafun. Hans Hagen. PRAGMA ade, Hasselt. Version 2. 2010.
3. Con $\text{T}_{\text{E}}\text{X}$ t Lua documents. Hans Hagen. PRAGMA ade, Hasselt. prelim. version. 2010.
4. Pocketmods mit $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ erstellen. Uwe Ziegenhagen. In $\text{T}_{\text{E}}\text{X}$ nische Kommödie 3/2010, Dante e.V, Heidelberg. pp. 27-32. 2010.
5. An extended Approach to the Julian and Gregorian Calendar. Sohael Babwani. 2010. From:<http://www.babwani-congruence.blogspot.com/>
6. Easter Dating Method. Ron W. Mallen. Astronomical Society of Southern Australia. 2002. Web-site: <http://www.assa.org.au/edm.html>.
7. How can I calculate the week number of the current date?. Ferry van Schaik. 2001. From:<http://www.irt.org/script/914.htm>

Thanks

I would like to thank Hans Hagen, Taco Hoekwater and Hartmut Henkel for the great $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ machinery and Wolfgang Schuster for supporting me in tackling the multi-lingual interface. Silvan, thank you for proofreading this text.

Willi Egger
w.egger@boede.nl