Preparing DFG Proposals and Reports in LaTeX with `dfgproposal.cls`

Michael Kohlhase
Computer Science, Jacobs University Bremen
http://kwarc.info/kohlhase

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Abstract

The `dfgproposal` class supports many of the specific elements of a DFG Proposal. It is optimized towards collaborative projects. The package comes with an extensive example (a fake DFG proposal) that shows all elements in action.

Contents

1 Introduction

Writing grant proposals is a collaborative effort that requires the integration of contributions from many individuals. The use of an ASCII-based format like LaTeX allows to coordinate the process via a source code control system like SUBVERSION, allowing the proposal writing team to concentrate on the contents rather than the mechanics of wrangling with text fragments and revisions.

The `dfgproposal` class extends the `proposal` class [**Kohlhase:pplp:svn**] and supports many of the specific elements of a DFG Proposal. The package documentation is still preliminary, fragmented and incomplete and only dwells on the particulars of DFG proposals, so we treat [**Kohlhase:pplp:svn**] as a prerequisite. Please consult the example proposal `dfg/proposal.tex`, which comes with the package and shows the usage of the class in action. It is intended as a template for your proposal, but please bear in mind that the DFG guidelines may change, if in doubt, please consult the DFG guide for proposers [**DFG:102e**].

The `dfgreporting` class supports most of the specific elements of the final project reports to the DFG. The example report `dfg/finalreport.tex` is intended as a template for your final report, the DFG guide [**DFG:2012e**] gives details (the German Version [**DFG:201**] has more).

The `dfgproposal` and `dfgreporting` classes and the `dfgpdata` package are distributed under the terms of the LaTeX Project Public License from CTAN archives in directory `macros/latex/base/lppl.txt`. Either version 1.0 or, at your option, any later version. The CTAN archive always contains the latest stable version, the development version can be found at https://github.com/KWARC/LaTeX-proposal. For bug reports please use the sTeX TRAC at https://github.com/KWARC/LaTeX-proposal/issues.

2 The User Interface

In this section we will describe the functionality offered by the `dfgproposal` class along the lines of the macros and environments the class provides. Much of the functionality can better be understood by studying the functional example `proposal.tex` (and its dependents) that comes with the `dfgproposal` package in conjunction with the proposer's leaflet of the DFG [**DFG:102e**] (we have included it as `1_02e.pdf` for convenience into the package distribution).[1]   EdN:1

2.1 Package Options

As usual in LaTeX, the package is loaded by `\documentclass[⟨options⟩]{dfgproposal}`, where `[⟨options⟩]` is optional and gives a comma separated list of options specified in [**Kohlhase:pplp:svn**]. The `dfgproposal` class adds the two options

1. `general`, which allows generates a first section with general proposal metadata (as the old form proposals required). This is useful to check all the data (and have a place to copy/paste from).   general
2. `german`, which makes all the generated parts in German.   german

2.2 Proposal Metadata and Title page

The metadata of the proposal is specified in the `proposal` environment, which also generates   proposal
the title page and the first section of the proposal as well as the last pages of the proposal with the signatures, enclosures, and references. The `proposal` environment should contain all the mandatory parts of the proposal text. The `proposal` environment uses the following DFG-specific keys to specify metadata.

- `thema` for a concise (up to 140 characters) description of the topic of the proposal. This has   thema
to be in German and will be used by the DFG in internal communications and publications.

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[1] EDNOTE: talk about reporting as well.

2.3 Project-Related Papers

Since August 2010, DFG requests list of "project-related papers" as section 2.2. We use the `\dfgprojpapers` biblatex package to automate this. We only need to use `\dfgprojpapers{⟨keys⟩}`, where ⟨keys⟩ is a comma-separated list of keys from the bibTeX database used in the proposal. Note that you will have to run `bibtex -min-crossrefs=999 proposal1-blx.aux` to generate file `proposal1.bbl` that generates the bibliography list. To automate this (at least on Unix systems), we have added the field `Makefile.template`, which allows you do do any necessary steps by just typing `make`.

`featured`   The papers listed in `\dfgprojpapers` are put into a special bibLaTeX category `featured`, and can thus be excluded from the general bibliography by adding `notcategory=featured` to the final `\printbibliography`.

2.4 Final Report Infrastructure

The `dfgreporting` class gives an infrastructure for writing final reports of completed projects `finalreport` (see the file `finalreport.tex` in the package distribution). The `finalreport` environment has functionality analogous to the `proposal` environment. It takes the same metadata keys — making `reportperiod` it easy to generate by copy/paste from the proposal — but adds the keys `reportperiod` for `applareas` specifying the funded period, `applareas` for the application areas, and ⟨site⟩`employed` for all sites `*employed` ⟨site⟩. The latter allow to specify the employee and their employment times. Furthermore, the `key` key `key` can be used to specify the reference key (something like `KO 2428 47-11`) given to the project by DFG. Note that in the case of multiple proposers, you can use multiple instances of `key` to specify more than one reference key.

3 Limitations and Enhancements

The `dfgproposal` is relatively early in its development, and many enhancements are conceivable. We will list them here.

1. Some people still want to write their proposal and reports in German, for that it would be nice to have a localized version.

2. it would be nice if we could count the characters in the places where lengths are restricted (`Abriss`, and `thema`). Then we could warn the authors.

If you have other enhancements to propose or feel you can alleviate some limitation, please feel free to contact the author.

Acknowledgements

The following persons have contributed suggestions and fixes to the `dfgproposal` class: Florian Rabe, Christoph Lange, Andrea Kohlhase, Jens Lehmann.

4 The Implementation

In this section we describe the implementation of the functionality of the dfgproposal and dfgreporting classes and the dfgpdata package.

4.1 Package Options and Format Initialization

We first set up the options for the package.

```
 1 ⟨cls⟩\newif\ifgeneral\generalfalse
 2 ⟨cls⟩\DeclareOption{general}{\generaltrue}
 3 ⟨cls | reporting⟩\DeclareOption{german}{\PassOptionsToPackage{\CurrentOption}{dfgpdata}}
 4 ⟨cls⟩\DeclareOption*{\PassOptionsToClass{\CurrentOption}{proposal}}
 5 ⟨reporting⟩\DeclareOption*{\PassOptionsToClass{\CurrentOption}{reporting}}
 6 ⟨pdata⟩\newif\ifdeutsch\deutschfalse
 7 ⟨pdata⟩\DeclareOption{german}{\deutschtrue\message{Deutscher Antrag}}
 8 ⟨cls | reporting | pdata⟩\ProcessOptions
```

Then we load the packages we make use of

```
 9 ⟨cls⟩\LoadClass{proposal}
10 ⟨reporting⟩\LoadClass{reporting}
11 ⟨∗cls | reporting⟩
12 \RequirePackage{eurosym}
13 \RequirePackage{dfgpdata}
14 \ifdeutsch\RequirePackage[ngerman]{babel}
15 \else\RequirePackage[ngerman,USenglish]{babel}\fi
16 ⟨/cls | reporting⟩
```

4.2 Proposal Metadata

We extend the metadata keys from the proposal class.

```
17 ⟨∗pdata⟩
18 \define@key{prop@gen}{thema}{\def\prop@gen@thema{#1}\pdata@def{prop}{gen}{thema}{#1}}
19 ⟨/pdata⟩
```

and now the ones for the final report

```
20 ⟨∗reporting⟩
21 \define@key{prop@gen}{reportperiod}{\def\prop@gen@reportperiod{#1}}
22 \define@key{prop@gen}{applareas}{\def\prop@gen@applareas{#1}}
23 \define@key{prop@gen}{key}{\@dmp{key=#1}%
24 \@ifundefined{prop@gen@keys}{\xdef\prop@gen@keys{#1}}{\xdef\prop@gen@keys{\prop@gen@keys,#1}}}
25 \define@key{prop@gen}{coop}{\@dmp{coop=#1}%
26 \@ifundefined{prop@gen@coops}{\xdef\prop@gen@coops{{#1}}}{\xdef\prop@gen@coops{\prop@gen@coops,{#1}}}}
27 \define@key{prop@gen}{projpapers}{\def\prop@gen@projpapers{#1}}
28 ⟨/reporting⟩
```

and the default values, these will be used, if the author does not specify something better.

```
29 ⟨∗pdata⟩
30 \renewcommand\prop@gen@instrument{Neuantrag auf Sachbeihilfe}
31 \newcommand\prop@gen@thema{??? Thema ???}
32 \newcommand\deu[1]{#1}
```

Now, we can build the title page and general information, we first start with the applicants table. The following macros build up the lines to be used in the table eventually.

\dfg@applicants@* the macros use the \prop@tl macro from the base proposal package which iterates over the first argument (the PIs here) building up lines with the material from the second argument (where \tl@ext is the current PI).

```
33 \newcommand\dfg@applicants@lines{%
```

```
34 \prop@tl\prop@gen@PIs{\wa@ref{person}\tl@ext{personaltitle} \wa@ref{person}\tl@ext{name}}}\\
35 \prop@tl\prop@gen@PIs{\wa@ref{person}\tl@ext{academictitle}}}\\
36 \prop@tl\prop@gen@PIs{\wa@ref{person}\tl@ext{birthdate}}}\\}
37 \newcommand\dfg@applicants@institute@lines{%
38 \prop@tl\prop@gen@PIs{\wa@ref{institution}{\wa@ref{person}\tl@ext{affiliation}}{shortname}}}\\
39 \prop@tl\prop@gen@PIs{\wa@ref{person}\tl@ext{workaddress}}}\\
40 \prop@tl\prop@gen@PIs{Tel: \wa@ref{person}\tl@ext{worktel}}}\\
41 \prop@tl\prop@gen@PIs{Fax: \wa@ref{person}\tl@ext{workfax}}}\\
42 \prop@tl\prop@gen@PIs{\wa@ref{person}\tl@ext{email}}}\\}
43 \newcommand\dfg@applicants@private@lines{%
44 \prop@tl\prop@gen@PIs{\wa@ref{person}\tl@ext{privaddress}}}\\
45 \prop@tl\prop@gen@PIs{Tel: \wa@ref{person}\tl@ext{privtel}}}\\}
```

\dfg@applicants We automatically make it plurals if there is more than one PI and we indicate a joint proposal if there is more than one site.

```
46 \newcommand\dfg@applicants{%
47 \subsection{\if@sites\ifnum\the@sites>1 Joint Proposal; \fi\fi%
48 Applicant\if@sites\ifnum\the@PIs>1{s}\fi\fi\ \deu{(Antragsteller)}}}%
49 \dfg@applicants@table}

50 \newcommand\dfg@topic{\subsection{\ifdeutsch Thema\else Topic \deu{(Thema)}\fi}\prop@gen@thema}

51 \newcommand\dfg@area@field{%
52 \ifdeutsch\subsection{Fachgebiet und Arbeitsrichtung}\else
53 \subsection{Research area and field of work \deu{(Fachgebiet und Arbeitsrichtung)}}\fi
54 \ifdeutsch Disziplin\else Scientific discipline\fi:  \prop@gen@discipline\\
55 \ifdeutsch Arbeitsgebiet\else Fields of work\fi:  \prop@gen@areas}
56 ⟨/pdata⟩
```

sitedescription EdN:2 [2]

```
57 ⟨*cls⟩
58 \newenvironment{sitedescription}[2][]%
59 {\def\@test{#1}\def\@@title{\ifx\@test\@empty\wa@ref{institution}{#2}{acronym}\else #1\fi:
60 \textsc{\wa@ref{institution}{#2}{name}}}}
61 \@for\@I:=#2\do{\pdata@target{site}\@I{}}\subsubsection\@@title}
62 {}
```

4.3 Proposal Title Page

@applicants@table Now, we can build the title page and general information, we first start with the applicants table: We first compute the width of the columns for the case where we have more than two PIs. Then we add the lines we compute with the auxiliary macros \dfg@applicants@lines, \dfg@applicants@institute@lines and \dfg@applicants@private@lines

```
63 \newlength\applicants@table@columnwidth
64 \newcommand\dfg@applicants@table%
65 {\setlength\applicants@table@columnwidth\textwidth
66 \advance\applicants@table@columnwidth by -6em
67 \divide\applicants@table@columnwidth by \the@PIs
68 \ifnum\the@PIs>2\begin{tabular}{|l|*{\the@PIs}{p{\applicants@table@columnwidth}|}}
69 \else\begin{tabular}{|l|*{\the@PIs}{l|}}\fi
70 \hline
71 \dfg@applicants@lines\hline
72 &\multicolumn{\the@PIs}{|l|}{\textbf{Work Address\deu{ (Dienstanschrift)}:}}\\\hline
73 \dfg@applicants@institute@lines\hline
74 &\multicolumn{\the@PIs}{|l|}{\textbf{Private Address\deu{ (Privatanschrift)}:}}\\\hline
75 \dfg@applicants@private@lines\hline
76 \end{tabular}}
```

---

[2]EdNote: this code should probably be refactored into proposal.dtx

prop@proposal This internal environment is called in the `proposal` environment from the `proposal` class.

```
77 \renewenvironment{prop@proposal}
78 {\thispagestyle{empty}%
79 \begin{center}
80 {\LARGE \prop@gen@instrument}\\[.2cm]
81 {\LARGE\textbf{\prop@gen@title}}\\[.3cm]
82 {\LARGE Acronym: {\prop@gen@acronym}}\\[.2cm]
83 {\large\today}\\[1em]
84 \WAauthorblock[aff]\prop@gen@PIs\\[2cm]
85 \end{center}
86 \edef\keep@tocdepth{\value{tocdepth}}
87 \setcounter{tocdepth}{2}\tableofcontents
88 \setcounter{tocdepth}{\keep@tocdepth}
89 \ifgeneral\setcounter{section}{-1}
90 \newpage\thispagestyle{empty}
91 \ifdeutsch\section{Allgemeine Angaben (nur f\"ur ELAN)}\else
92 \section{General Information (for the ELAN system only)}\fi
93 \dfg@applicants
94 \dfg@topic
95 \dfg@area@field
96 \ifdeutsch\subsection{Voraussichtliche Gesamtdauer}\else
97 \subsection{Anticipated total duration \deu{(Voraussichtliche Gesamtdauer)}}
98 \fi
99 \@ifundefined{prop@gen@totalduration}{????}{\prop@gen@totalduration};
100 \ifdeutsch
101 \@ifundefined{prop@gen@since}{Erstantrag}{Fortsetungsantrag, das Project l\"auft seit
102   \prop@gen@since.}
103 \else
104 \@ifundefined{prop@gen@since}{initial proposal}{continuation proposal, the project started
105   \prop@gen@since.}
106 \fi
107 \ifdeutsch\subsection{Antragszeitraum}\else
108 \subsection{Application period \deu{(Antragszeitraum)}}\fi
109 \prop@gen@months\quad Months starting \prop@gen@start
110 \@ifundefined{prop@gen@fundsuntil}{}
111 { (\ifdeutsch Mittel reichen bis\else funds last until\fi\ \prop@gen@fundsuntil)}
112 \ifdeutsch\else\selectlanguage{USenglish}\fi
113 \newpage\fi%ifgeneral
114 \setcounter{page}{0}}
115 {}
```

We also need to translate some of the generated parts

```
116 \ifdeutsch
117 \def\prop@warnpubs@message{Viele der Publikationen der Antragsteller sind verf\"ugbar unter folgenden URLs:}
118 \def\prop@warnpubs@title{Literatur}
119 \fi
```

\attachments [3]   EdN:3

```
120 \newcommand\attachments{\ifdeutsch\section{Verzeichnis der Anlagen}\else
121 \section{List of Attachments \deu{(Verzeichnis der Anlagen)}}\fi
122 \begin{itemize}
123 \@for\@I:=\prop@gen@PIs\do{%
124  \item\ifdeutsch Lebenslauf und Publikatinsverzeichnis\else
125  Curriculum Vitae and list of publications for \fi
126    \@nameuse{wa@person@\@I @personaltitle}
127    \@nameuse{wa@person@\@I @name}
```

---

[3]EDNOTE: MK: this is deprecated (no longer useful with the ELAN system), delete at some time

```
128    (CD + \ifdeutsch Ausdruck\else printed version\fi)}
129 \ifdeutsch
130 \item Publications either cited in section~\ref{sec:ourpubs} or occurring in one of the
131    curricula vitae (CD only)\else
132 \item Zitierte Publikationen aus Abschnitt~\ref{sec:ourpubs} oder einem der Lebensl\"aufe
133    (nur CD)\fi
134 \end{itemize}}
135 ⟨/cls⟩
```

4.4   Reporting Title Page

The `prop@report` environment is similar, but somewhat simpler.

@applicants@table   Now, we can build the title page and general information, we first start with the applicants table:

```
136 ⟨∗reporting⟩
137 \newcommand\dfg@applicants@table%
138 {\begin{tabular}{|l|*{\the@PIs}{l|}}\hline
139 \dfg@applicants@lines\hline
140 &\multicolumn{\the@PIs}{|l|}{\textbf{Private Address\deu{ (Privatanschrift)}:}}\\\hline
141 \dfg@applicants@private@lines\hline
142 \end{tabular}}
```

g@institute@table   Now, we can build the title page and general information, we first start with the applicants table:

```
143 \newcommand\dfg@institute@table%
144 {\begin{tabular}{|l|*{\the@PIs}{l|}}\hline
145 \dfg@applicants@institute@lines\hline
146 \end{tabular}}
```

prop@report

```
147 \newcommand\prop@assoc[2]{\let\@tmpop=\relax\@for\@I:=#2\do{\@tmpop\@I\let\@tmpop=#1}}
148 \newcommand\show@prop@gen@keys{\def\@cb{, }\@ifundefined{prop@gen@keys}{??:???? ?/?}{\prop@assoc\@cb\prop@gen
149 \renewenvironment{prop@report}
150 {\selectlanguage{USenglish}
151 \thispagestyle{empty}%
152 \begin{center}
153   {\LARGE Final Project Report}\\[.2cm]
154   {\LARGE\textbf{\prop@gen@title}}\\[.3cm]
155   {\LARGE Acronym: {\prop@gen@acronym}}\\[.2cm]
156   {\large Reference number(s): \show@prop@gen@keys}\\[.2cm]
157   {\large\today}\\[1em]
158 \begin{tabular}{c*{\the@PIs}{c}}
159   \prop@tl\prop@gen@PIs{\wa@ref{person}\tl@ext{name}}\\
160   \prop@tl\prop@gen@PIs{\wa@ref{institution}{\wa@ref{person}\tl@ext{affiliation}}{name}}
161 \end{tabular}\\[2cm]
162 \end{center}
163 \setcounter{tocdepth}{1}\tableofcontents\newpage\setcounter{page}{1}
164 \section{General Information \deu{(Allgemeine Angaben)}}
165 \subsection{Reference Numbers \deu{(DFG Gesch\"aftszeichen)}}
166 \show@prop@gen@keys
167 \dfg@applicants
168 \subsection{Institute/Chair \deu{(Institut/Lehrstuhl)}}\dfg@institute@table
169 \dfg@topic
170 % no longer necessary
171 % \subsection{DFG-Funded Researchers \deu{(Aus DFG-Mitteln bezahlte Wissenschaftler)}}
172 % \begin{tabular}{|l|l|}\hline
173 % Partner & Employee/Period\\\hline\hline
174 % \prop@gen@employed@lines
175 % \end{tabular}
```

```
176 \subsection{Report and Funding Period \deu{(Berichts- und F\"orderzeitraum)}}
177 \prop@gen@reportperiod
178 \dfg@area@field
179 \subsection{Application Areas \deu{(Verwertungsfelder)}}\prop@gen@applareas
180 % no longer necessary
181 % \subsection{Cooperation Partners \deu{(Kooperationspartner)}}
182 % \begin{compactitem}
183 % \@for\@I:=\prop@gen@coops\do{\item \@I}
184 % \end{compactitem}
185 \dfgprojpapers\prop@gen@projpapers}
186 {\signatures{Signatures \deu{(Unterschriften)}}}
187 ⟨/reporting⟩

188 ⟨∗cls⟩
189 \ifgeneral
190 \newenvironment{Zusammenfassung}{\thispagestyle{empty}\subsection{Zusammenfassung}\begin{otherlanguage}{ngerm
191 {\end{otherlanguage}\newpage\setcounter{page}1}
192 \newenvironment{Summary}{\thispagestyle{empty}\subsection{Summary}}
193 {\newpage\setcounter{page}1}
194 \else
195 \excludecomment{Summary}
196 \excludecomment{Zusammenfassung}
197 \fi
198 ⟨/cls⟩
```

4.5 Project-Related Papers

\dfgprojpapers

```
199 ⟨∗pdata⟩
200 \newcommand\dfgprojpapers[2][]{\prop@paperlist[#1]{#2}}
201 ⟨/pdata⟩
```

4.6 German Reports

We have to redefine some macros for German reports.

```
202 ⟨∗pdata⟩
203 \ifdeutsch
204 \renewcommand\prop@of@pages[2]{Seite~#1\ifofpage~von~#2\fi}
205 \renewcommand\wp@mk@title[1]{Arbeitspaket {#1}}
206 \renewcommand\wp@label[1]{AP{#1}}
207 \ifwork@areas
208 \renewcommand\wa@label[1]{AB{#1}}
209 \renewcommand\wa@mk@title[1]{Arbeitsbereich {#1}}
210 \fi
211 \renewcommand\prop@legend@totals{\textbf{Summen}}
212 \renewcommand\prop@legend@intendedtotals{\textbf{intendierte Summen}}
213 \renewcommand\wpfig@legend@wap{\textbf{\ifwork@areas{Arbeitsbereiche}\else{AP}\fi}}
214 \renewcommand\wpfig@legend@title{\textbf{Titel}}
215 \renewcommand\wpfig@legend@type{\textbf{Typ}}
216 \renewcommand\wpfig@legend@page{\textbf{Seite}}
217 \renewcommand\wpfig@legend@start{\textbf{Start}}
218 \renewcommand\wpfig@legend@length{\textbf{Dauer}}
219 \renewcommand\wpfig@legend@end{\textbf{Ende}}
220 \renewcommand\wpfig@legend@siteRM[1]{\site{#1}\if@RAM\ PM\fi}
221 \renewcommand\wpfig@legend@siteRAM[1]{\site{#1}\ HM}
222 \renewcommand\wpfig@legend@totalRM{Summe\if@RAM\ PM\fi}
223 \renewcommand\wpfig@legend@totalRAM{Summe HM}
224 \renewcommand\wpfig@legend@RM{PM}
```

```
225 \renewcommand\wpfig@legend@RAM{HM}
226 \renewcommand\wpfig@legend@RAM@expl{\if@RAM P/HM $\widehat=$ Personen/Hilfskraft Monate;\else\ Aufw\"ande in
227 \renewcommand\wpfig@legend@lead@expl{(Arbeitspaketleiter sind \wp@lead@style@explained}
228 \renewcommand\wp@lead@style@explained{grau und kursiv markiert)}
229 \renewcommand\wpfig@legend@caption{{\ifwork@areas Arbeitsbereiche und \fi}Arbeitspakete}
230 \renewcommand\wp@legend@site{Partner}
231 \renewcommand\wp@legend@effort{Aufwand\if@RAM{ (PM+HM)}\fi}
232 \renewcommand\wp@legend@all{\textbf{Summe}}
233 \renewcommand\gantt@caption@main{Zeitliche Verteilung der Arbeitspakete}
234 \renewcommand\gantt@caption@lower{draft: unten die Lastverteilung}
235 \renewcommand\coherence@caption{Bisherige Kollaboration der {\pn} Partner}
236 \renewcommand\objective@label[1]{Z#1}
237 \renewcommand\task@label[1]{S#1}
238 % \renewcommand\month@label[1]{M#1}
239 \renewcommand\legend@partners{Partner}
240 \renewcommand\legend@lead{Leiter}
241 \renewcommand\task@label@long{Schritt}
242 \fi
243 ⟨/pdata⟩
```