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:ctan**] 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:ctan**] 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:ctan**]. The `dfgproposal` class adds the two options

1. `general`, which allows generates a title page and first section with general proposal metadata   general
   (as the old form proposals required). This is useful to check all the data (and have a place to copy/paste from). Also this should be used together with the `public` option (see in [**Kohlhase:pplp:ctan**]) to generate public versions of the proposal.
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. of the proposal.

`\dfgprojpapers` We use the `biblatex` package to automate this. We only need to use `\dfgprojpapers[`⟨*keys*⟩`]{`⟨*refs*⟩`}`, ⟨*refs*⟩ is a comma-separated list of bibTeX keys from the bibTeX database used in the proposal. The ⟨*keys*⟩ that specify whether sub-bibliographies are generated (if ⟨*keys*⟩ is non-empty) and which, and in which order. The ⟨*keys*⟩ includes any of the following: `articles`, `chapters`, `confpapers`, `confpapers`, `wspapers`, `theses`, `submitted`, `books`, and `techreports`. Both `confpapers` and `wspapers` correspond to the bibTeX entry type `@inproceedings`, but the first have the additional specification `keywords = {conference},` somewhere in the entry to specify that this entry is in the archival literature.

So `\dfgprojpapers[books,articles,confpapers]{`⟨*keys*⟩`}` splits the generate bibliography in to three sub-bibliographies with the titles: "Articles" , "Monographs", and "Conference Papers". The headings can be customized – e.g. to another language by adding `\def\prop@`⟨*key*⟩`@heading{`⟨*Heading*⟩`}` in the preamble.

`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

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,english]{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 \def\prop@gen@Dkeywords{kommt noch}
20 \def\prop@gen@keywords{to be added}
21 \define@key{prop@gen}{Dkeywords}{\def\prop@gen@Dkeywords{#1}}
22 ⟨/pdata⟩
```

and now the ones for the final report

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

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

```
32 ⟨*pdata⟩
33 \renewcommand\prop@gen@instrument{Neuantrag auf Sachbeihilfe}
34 \newcommand\prop@gen@thema{??? Thema ???}
35 \newcommand\deu[1]{#1}
```

Now, we can build the title page and general information.

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

```
37 \newcommand\dfg@area@field{%
38 \ifdeutsch\subsection{Fachgebiet und Arbeitsrichtung}\else
39 \subsection{Research area and field of work \deu{(Fachgebiet und Arbeitsrichtung)}}\fi
40 \ifdeutsch Disziplin\else Scientific discipline\fi:  \prop@gen@discipline\\
41 \ifdeutsch Arbeitsgebiet\else Fields of work\fi:  \prop@gen@areas}
42 ⟨/pdata⟩
```

sitedescription ²

```
43 ⟨*cls⟩
44 \newenvironment{sitedescription}[2][]%
45 {\def\@test{#1}\def\@@title{\ifx\@test\@empty\pdataref{site}{#2}{acronym}\else #1\fi:
46 \textsc{\pdataref{site}{#2}{name}}}
47 \@for\@I:=#2\do{\pdata@target{site}\@I{}}\subsubsection\@@title}
48 {}
```

4.3 Proposal Title Page

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

```
49 \renewenvironment{prop@proposal}
50 {\ifsubmit\setcounter{page}{1}\else\thispagestyle{empty}\fi
51 \begin{center}
52 {\LARGE \prop@gen@instrument}\\[.2cm]
53 {\LARGE\textbf{\prop@gen@title}}\\[.3cm]
54 \ifx\prop@gen@acronym\@empty\else{\LARGE Acronym: {\prop@gen@acronym}}\\[.2cm]\fi
55 {\large\today}\\[1em]
56 \begin{tabular}{c*{\the@PIs}{c}}
57 \prop@tl\prop@gen@PIs{\pdataref@safe{PI}\tl@ext{name}}\\
58 \prop@tl\prop@gen@PIs{\pdataref@safe{PI}\tl@ext{affiliation}}\\
59 \prop@tl\prop@gen@PIs{\pdataref@safe{PI}\tl@ext{dept}}\\
60 \end{tabular}\\[2cm]
61 \end{center}
62 \ifgeneral
63 \ifsubmit\else
64 \setcounter{section}{-1}
65 \edef\keep@tocdepth{\value{tocdepth}}
66 \setcounter{tocdepth}{2}\tableofcontents
67 \setcounter{tocdepth}{\keep@tocdepth}
68 \newpage\thispagestyle{empty}
69 \ifdeutsch\section{Allgemeine Angaben (nur f\"ur ELAN)}\else
70 \section{General Information (for the ELAN system only)}\fi
71 \dfg@topic
72 \dfg@area@field
73 \ifdeutsch\subsection{Voraussichtliche Gesamtdauer}\else
74 \subsection{Anticipated total duration \deu{(Voraussichtliche Gesamtdauer)}}
75 \fi% ifdeutsch
76 \@ifundefined{prop@gen@totalduration}{????}{\prop@gen@totalduration};
77 \ifdeutsch
78 \@ifundefined{prop@gen@since}{Erstantrag}{Fortsetungsantrag, das Project l\"auft seit
79   \prop@gen@since.}
80 \else
81 \@ifundefined{prop@gen@since}{initial proposal}{continuation proposal, the project started
82   \prop@gen@since.}
83 \fi%ifdeutsch
84 \ifdeutsch
85 \subsection{Schl\"usselw\"orter}\prop@gen@Dkeywords
86 \else\subsection{Keywords}\prop@gen@keywords
```

---

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

```
87 \fi
88 \ifdeutsch\subsection{Antragszeitraum}\else
89 \subsection{Application period \deu{(Antragszeitraum)}}\fi
90 \prop@gen@months\quad Months starting \prop@gen@start
91 \@ifundefined{prop@gen@fundsuntil}{}
92 { (\ifdeutsch Mittel reichen bis\else funds last until\fi\ \prop@gen@fundsuntil)}
93 \ifdeutsch\else\selectlanguage{english}\fi
94 \newpage
95 \setcounter{page}{0}%
96 \fi\fi}% ifsubmit ifgeneral
97 {}
```

We also need to translate some of the generated parts

```
98 \ifdeutsch
99 \def\prop@warnpubs@message{Viele der Publikationen der Antragsteller sind verf\"ugbar unter folgenden URLs:}
100 \def\prop@warnpubs@title{Literatur}
101 \fi
```

\attachments ³   EdN:3

```
102 \newcommand\attachments{\ifdeutsch\section{Verzeichnis der Anlagen}\else
103 \section{List of Attachments \deu{(Verzeichnis der Anlagen)}}\fi
104 \begin{itemize}
105 \@for\@I:=\prop@gen@PIs\do{%
106  \item\ifdeutsch Lebenslauf und Publikatinsverzeichnis\else Curriculum Vitae and list of publications for \fi
107     \pdataref{PI}\@I{title}\pdataref{PI}\@I{name}}
108 \end{itemize}}
109 ⟨/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:

```
110 ⟨∗reporting⟩
111 \newcommand\dfg@applicants@table%
112 {\begin{tabular}{|l|*{\the@PIs}{l|}}\hline
113 \dfg@applicants@lines\hline
114 &\multicolumn{\the@PIs}{|l|}{\textbf{Private Address\deu{ (Privatanschrift)}:}}\\\hline
115 \dfg@applicants@private@lines\hline
116 \end{tabular}}
```

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

```
117 \newcommand\dfg@institute@table%
118 {\begin{tabular}{|l|*{\the@PIs}{l|}}\hline
119 \dfg@applicants@institute@lines\hline
120 \end{tabular}}
```

prop@report

```
121 \newcommand\prop@assoc[2]{\let\@tmpop=\relax\@for\@I:=#2\do{\@tmpop\@I\let\@tmpop=#1}}
122 \newcommand\show@prop@gen@keys{\def\@cb{, }\@ifundefined{prop@gen@keys}{??:???? ?/?}{\prop@assoc\@cb\prop@gen
123 \renewenvironment{prop@report}
124 {\selectlanguage{english}
125 \thispagestyle{empty}%
126 \begin{center}
127   {\LARGE Final Project Report}\\[.2cm]
128   {\LARGE\textbf{\prop@gen@title}}\\[.3cm]
```

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

```
129 \ifx\prop@gen@acronym\@empty\else{\LARGE Acronym: {\prop@gen@acronym}}\\[.2cm]\fi
130   {\large Reference number(s): \show@prop@gen@keys}\\[.2cm]
131   {\large\today}\\[1em]
132 \begin{tabular}{c*{\the@PIs}{c}}
133     \prop@tl\prop@gen@PIs{\pdataref{PI}\tl@ext{name}}\\
134     \prop@tl\prop@gen@PIs{\pdataref{PI}\tl@ext{affiliation}}}
135 \end{tabular}\\[2cm]
136 \end{center}
137 \setcounter{tocdepth}{1}\tableofcontents\newpage\setcounter{page}{1}
138 \section{General Information \deu{(Allgemeine Angaben)}}
139 \subsection{Reference Numbers \deu{(DFG Gesch\"aftszeichen)}}
140 \show@prop@gen@keys
141 \dfg@applicants
142 \subsection{Institute/Chair \deu{(Institut/Lehrstuhl)}}\dfg@institute@table
143 \dfg@topic
144 % no longer necessary
145 % \subsection{DFG-Funded Researchers \deu{(Aus DFG-Mitteln bezahlte Wissenschaftler)}}
146 % \begin{tabular}{|l|l|}\hline
147 % Partner & Employee/Period\\\hline\hline
148 % \prop@gen@employed@lines
149 % \end{tabular}
150 \subsection{Report and Funding Period \deu{(Berichts- und F\"orderzeitraum)}}
151 \prop@gen@reportperiod
152 \dfg@area@field
153 \subsection{Application Areas \deu{(Verwertungsfelder)}}\prop@gen@applareas
154 % no longer necessary
155 % \subsection{Cooperation Partners \deu{(Kooperationspartner)}}
156 % \begin{compactitem}
157 % \@for\@I:=\prop@gen@coops\do{\item \@I}
158 % \end{compactitem}
159 \dfgprojpapers\prop@gen@projpapers}
160 {\signatures{Signatures \deu{(Unterschriften)}}}
161 ⟨/reporting⟩

162 ⟨*cls⟩
163 \ifgeneral
164 \newenvironment{Zusammenfassung}{\thispagestyle{empty}\subsection{Zusammenfassung}\begin{otherlanguage}{ngerm
165 {\end{otherlanguage}\newpage\setcounter{page}1}
166 \newenvironment{Summary}{\thispagestyle{empty}\subsection{Summary}}
167 {\newpage\setcounter{page}1}
168 \else
169 \excludecomment{Summary}
170 \excludecomment{Zusammenfassung}
171 \fi
172 ⟨/cls⟩
```

4.5   Project-Related Papers

\dfgprojpapers

```
173 ⟨*pdata⟩
174 \newcommand\dfgprojpapers[2][]{\prop@paperlist[#1]{#2}}
175 ⟨/pdata⟩
```

4.6   German Reports

We have to redefine some macros for German reports.

```
176 ⟨*pdata⟩
177 \ifdeutsch
```

```latex
178 \renewcommand\prop@count[1]{\ifcase #1 null\or ein\or zwei\or drei\or vier\or f"unf\or sechs\or sieben\or
179   acht\or neun\or zehn\or elf\or zw"olf\else#1\fi}
180 \renewcommand\prop@of@pages[2]{Seite~#1\ifofpage~von~#2\fi}
181 \renewcommand\wp@mk@title[1]{Arbeitspaket {#1}}
182 \renewcommand\wp@label[1]{AP{#1}}
183 \ifwork@areas
184 \renewcommand\wa@label[1]{AB{#1}}
185 \renewcommand\wa@mk@title[1]{Arbeitsbereich {#1}}
186 \fi
187 \renewcommand\prop@legend@totals{\textbf{Summen}}
188 \renewcommand\prop@legend@intendedtotals{\textbf{intendierte Summen}}
189 \renewcommand\wpfig@legend@wap{\textbf{\ifwork@areas{Arbeitsbereiche}\else{AP}\fi}}
190 \renewcommand\wpfig@legend@title{\textbf{Titel}}
191 \renewcommand\wpfig@legend@type{\textbf{Typ}}
192 \renewcommand\wpfig@legend@page{\textbf{Seite}}
193 \renewcommand\wpfig@legend@start{\textbf{Start}}
194 \renewcommand\wpfig@legend@length{\textbf{Dauer}}
195 \renewcommand\wpfig@legend@end{\textbf{Ende}}
196 \renewcommand\wpfig@legend@siteRM[1]{\site{#1}\if@RAM\ PM\fi}
197 \renewcommand\wpfig@legend@siteRAM[1]{\site{#1}\ HM}
198 \renewcommand\wpfig@legend@totalRM{Summe\if@RAM\ PM\fi}
199 \renewcommand\wpfig@legend@totalRAM{Summe HM}
200 \renewcommand\wpfig@legend@RM{PM}
201 \renewcommand\wpfig@legend@RAM{HM}
202 \renewcommand\wpfig@legend@RAM@expl{\if@RAM P/HM $\widehat=$ Personen/Hilfskraft Monate\else\ Aufw\"ande in F
203 \renewcommand\wpfig@legend@lead@expl{Arbeitspaketleiter sind \wp@lead@style@explained}
204 \renewcommand\wp@lead@style@explained{grau und kursiv markiert}
205 \renewcommand\wpfig@legend@caption{{\ifwork@areas Arbeitsbereiche und \fi}Arbeitspakete}
206 \renewcommand\wp@legend@site{Partner}
207 \renewcommand\wp@legend@effort{Aufwand\if@RAM{ (PM+HM)}\fi}
208 \renewcommand\wp@legend@all{\textbf{Summe}}
209 \renewcommand\wprm{\pdataref@safe{wp}\wp@id{RM}\if@RAM\ PM+\pdataref{wp}\wp@id{RAM} HM\fi}
210 \renewcommand\gantt@footnote{Balken mit reduzierter H\"ohe (z.B. 50\%) bedeuten reduzierte Arbeitslast in die
211 \renewcommand\gantt@caption@main{Zeitliche Verteilung der Arbeitspakete}
212 \renewcommand\gantt@caption@lower{draft: unten die Lastverteilung}
213 \renewcommand\coherence@caption{Bisherige Kollaboration der {\pn} Partner}
214 \renewcommand\objective@label[1]{Z#1}
215 \renewcommand\task@label[2]{S#1.#2}
216 % \renewcommand\month@label[1]{M#1}
217 \renewcommand\legend@partners{Partner}
218 \renewcommand\legend@lead{Leiter}
219 \renewcommand\task@label@long{Schritt}
220 \renewcommand\task@legend@partners{MA: }
221 \renewcommand\task@legend@PM{PM}
222 \fi%ifdeutsch
223 ⟨/pdata⟩
```