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

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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 (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.   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. 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 nonempty) 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

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. In particular, we set the font size 11pt that DFG wants.

```
1 ⟨cls⟩\newif\ifgeneral\generalfalse
2 ⟨cls⟩\DeclareOption{general}{\generaltrue}
3 ⟨cls | reporting⟩\DeclareOption{german}{\PassOptionsToPackage{\CurrentOption}{dfgpdata}}
4 ⟨cls | reporting⟩\PassOptionsToClass{11pt}{article}
5 ⟨cls⟩\DeclareOption*{\PassOptionsToClass{\CurrentOption}{proposal}}
6 ⟨reporting⟩\DeclareOption*{\PassOptionsToClass{\CurrentOption}{reporting}}
7 ⟨pdata⟩\newif\ifdeutsch\deutschfalse
8 ⟨pdata⟩\DeclareOption{german}{\deutschtrue\message{Deutscher Antrag}}
9 ⟨cls | reporting | pdata⟩\ProcessOptions
```

Then we load the packages we make use of.

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

In particular, we set the font Helvetica (as a substitute for the Arial font DFG wants).

```
17 \RequirePackage[scaled=.90]{helvet}
18 \renewcommand{\familydefault}{\sfdefault}
19 ⟨/cls | reporting⟩
```

4.2 Proposal Metadata

We extend the metadata keys from the `proposal` class.

```
20 ⟨*pdata⟩
21 \define@key{prop@gen}{thema}{\def\prop@gen@thema{#1}\pdata@def{prop}{gen}{thema}{#1}}
22 \def\prop@gen@Dkeywords{kommt noch}
23 \def\prop@gen@keywords{to be added}
24 \define@key{prop@gen}{Dkeywords}{\def\prop@gen@Dkeywords{#1}}
25 ⟨/pdata⟩
```

and now the ones for the final report

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

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

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

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

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

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

sitedescription ^{2}

```
46 ⟨∗cls⟩
47 \newenvironment{sitedescription}[2][]%
48 {\def\@test{#1}\def\@@title{\ifx\@test\@empty\pdataref{site}{#2}{acronym}\else #1\fi:
49 \textsc{\pdataref{site}{#2}{name}}}
50 \@for\@I:=#2\do{\pdata@target{site}\@I{}}\subsubsection\@@title}
51 {}
```

4.3 Proposal Title Page

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

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

---
^{2}EDNOTE: this code should probably be refactored into proposal.dtx

```
88 \subsection{Schl\"usselw\"orter}\prop@gen@Dkeywords
89 \else\subsection{Keywords}\prop@gen@keywords
90 \fi
91 \ifdeutsch\subsection{Antragszeitraum}\else
92 \subsection{Application period \deu{(Antragszeitraum)}}\fi
93 \prop@gen@months\quad Months starting \prop@gen@start
94 \@ifundefined{prop@gen@fundsuntil}{}
95 { (\ifdeutsch Mittel reichen bis\else funds last until\fi\ \prop@gen@fundsuntil)}
96 \ifdeutsch\else\selectlanguage{english}\fi
97 \newpage
98 \setcounter{page}{0}%
99 \fi\fi}% ifsubmit ifgeneral
100 {}
```

We also need to translate some of the generated parts

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

\attachments ³   EdN:3

```
105 \newcommand\attachments{\ifdeutsch\section{Verzeichnis der Anlagen}\else
106 \section{List of Attachments \deu{(Verzeichnis der Anlagen)}}\fi
107 \begin{itemize}
108 \@for\@I:=\prop@gen@PIs\do{%
109  \item\ifdeutsch Lebenslauf und Publikatinsverzeichnis\else Curriculum Vitae and list of publications for \fi
110     \pdataref{PI}\@I{title}\pdataref{PI}\@I{name}}
111 \end{itemize}}
112 ⟨/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:

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

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

```
120 \newcommand\dfg@institute@table%
121 {\begin{tabular}{|l|*{\the@PIs}{l|}}\hline
122 \dfg@applicants@institute@lines\hline
123 \end{tabular}}
```

prop@report

```
124 \newcommand\prop@assoc[2]{\let\@tmpop=\relax\@for\@I:=#2\do{\@tmpop\@I\let\@tmpop=#1}}
125 \newcommand\show@prop@gen@keys{\def\@cb{, }\@ifundefined{prop@gen@keys}{??:???? ?/?}{\prop@assoc\@cb\prop@gen
126 \renewenvironment{prop@report}
127 {\selectlanguage{english}
128 \thispagestyle{empty}%
129 \begin{center}
```

---

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

```
130    {\LARGE Final Project Report}\\[.2cm]
131    {\LARGE\textbf{\prop@gen@title}}\\[.3cm]
132 \ifx\prop@gen@acronym\@empty\else{\LARGE Acronym: {\prop@gen@acronym}}\\[.2cm]\fi
133    {\large Reference number(s): \show@prop@gen@keys}\\[.2cm]
134    {\large\today}\\[1em]
135 \begin{tabular}{c*{\the@PIs}{c}}
136    \prop@tl\prop@gen@PIs{\pdataref{PI}\tl@ext{name}}\\
137    \prop@tl\prop@gen@PIs{\pdataref{PI}\tl@ext{affiliation}}}
138 \end{tabular}\\[2cm]
139 \end{center}
140 \setcounter{tocdepth}{1}\tableofcontents\newpage\setcounter{page}{1}
141 \section{General Information \deu{(Allgemeine Angaben)}}
142 \subsection{Reference Numbers \deu{(DFG Gesch\"aftszeichen)}}
143 \show@prop@gen@keys
144 \dfg@applicants
145 \subsection{Institute/Chair \deu{(Institut/Lehrstuhl)}}\dfg@institute@table
146 \dfg@topic
147 % no longer necessary
148 % \subsection{DFG-Funded Researchers \deu{(Aus DFG-Mitteln bezahlte Wissenschaftler)}}
149 % \begin{tabular}{|l|l|}\hline
150 % Partner & Employee/Period\\\hline\hline
151 % \prop@gen@employed@lines
152 % \end{tabular}
153 \subsection{Report and Funding Period \deu{(Berichts- und F\"orderzeitraum)}}
154 \prop@gen@reportperiod
155 \dfg@area@field
156 \subsection{Application Areas \deu{(Verwertungsfelder)}}\prop@gen@applareas
157 % no longer necessary
158 % \subsection{Cooperation Partners \deu{(Kooperationspartner)}}
159 % \begin{compactitem}
160 % \@for\@I:=\prop@gen@coops\do{\item \@I}
161 % \end{compactitem}
162 \dfgprojpapers\prop@gen@projpapers}
163 {\signatures{Signatures \deu{(Unterschriften)}}}
164 ⟨/reporting⟩

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

4.5 Project-Related Papers

\dfgprojpapers

```
176 ⟨∗pdata⟩
177 \newcommand\dfgprojpapers[2][]{\prop@paperlist[#1]{#2}}
178 ⟨/pdata⟩
```

4.6 German Reports

We have to redefine some macros for German reports.

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