The komacv-lco Package*

Richard Gay
richard.gay@t-online.de

August 30, 2017

1 Introduction

The komacv-lco package provides means for unifying the input data to a CV made with komacv and to a cover letter made with scrlttr2. Concretely:

- When the komacv-lco package is used within a document of the scrlttr2 class (e.g., a cover letter), it defines KOMA variables komacv's data fields such as `github` and `linkedin`. Values for these variables can therefore be specified in letter-class-option (LCO) files (see the KOMA manual for more on these files).
- When the komacv-lco package is used within CV of the komacv class, it provides a macro for loading LCO files and setting the komacv variables based on these macros.
- When the komacv-lco package is used with neither komacv nor scrlttr2 (e.g., a cover sheet), it provides the KOMA variables and macros for accessing them in the document.

2 Usage

The following code shows some basic usage of the komacv-lco package. The package provides the `\LoadLetterOption` macro for loading various variables. The content of the variables can be displayed, e.g., via the `\usekomavar` macro. The komacv-lco package provides these macros, whose interfaces originate from the scrlttr2 class, for use with other classes than scrlttr2 – particularly including komacv.

```
\usepackage{komacv-lco}
\LoadLetterOption{demo}

\begin{document}
\usekomavar{fromname}\\
\usekomavar*{fromphone} \usekomavar{fromphone}\\
\usekomavar*{fromgithub} \usekomavar{fromgithub}
\end{document}
```

John Doe
☎ 555 123456
github.com/JohnDoe

*This document corresponds to komacv-lco v0.9, dated 2017/08/30. The package is available online at http://www.ctan.org/pkg/komacv-rg and https://github.com/Ri-Ga/komacv-rg.

```
\ProvidesFile{demo.lco}
\KOMAoptions{fromemail=true,fromphone=false,frommobilephone=true}

\setkomavar{fromfirstname}{John}
\setkomavar{fromfamilyname}{Doe}
\setkomavar{fromaddressstreet}{Main Street 1}
\setkomavar{fromaddresscity}{12345 Springfield}

\setkomavar{fromphone}[\Telefon~]{555\ 123456}
\setkomavar{frommobilephone}[\Mobilefone~]{555\ 98765}
\setkomavar{fromemail}[\Letter~]{john.doe@example.com}
\setkomavar{place}{Springfield}

\setkomavar{fromgithub}{\httpslink{github.com/JohnDoe}}
\setkomavar{fromlinkedin}{\httpslink{linkedin.com/in/JohnDoe}}
\setkomavar{fromurl}{www.example.com/~Doe}
```

Figure 1: `demo.lco`

The content of the LCO file, `demo.lco`, is displayed in Figure 1. This file shows many of the variables defined. The remainder of this section provides the complete list of macros and variables made available by komacv-lco.

2.1 Variables

The komacv-lco package provides a set of variables that can be set in LCO files and can be used in scrlttr2 letters, komacv CVs, and other LaTeX documents. Table 2 shows the set of variables in alphabetic order.

- Most of the variables correspond to a macro that the komacv class defines and that is displayed in the second column of the table. The komacv-lco package ensures that when the value of a variable is set (via `\setkomavar`), the corresponding komacv macro is updated as well. Note that the macros are only defined in documents that use the komacv class. Documents based on another class can access the respective variables via `\usekomavar`.
- Many of the variables are also defined by the scrlttr2 class. The third column of the table shows which of the variables these are. The komacv-lco package makes all of the variables available for use in documents that use the scrlttr2 class.
- Some of the variables have a symbol assigned to them, as shown in the fourth column of the table. The symbols are those that the komacv class uses.
- Some of the variables have KOMA options of the same name. These variables can be used for disabling the display of the respective variable's content.
- Two variables (from scrlttr2) have default values that are based on other, more fine-grained variables (from komacv). These variables are marked in the rightmost column of the table. Concretely:

variable name	komacv macro	scrlttr2	symbol	option	default
fromacadtitle	`\acadtitle`	no		no	
fromaddress	`\address`	yes		no	⋆
fromaddresscity	`\addresscity`	no		no	
fromaddressstreet	`\addressstreet`	no		no	
fromemail	`\email`	yes	✉	yes	
fromextrainfo	`\extrainfo`	no		yes	
fromfax	`\faxnr`	yes	FAX	yes	
fromfacebook	`\facebook`	no		yes	
fromfamilyname	`\familyname`	no		no	
fromfirstname	`\firstname`	no		no	
fromgithub	`\github`	no		yes	
fromlinkedin	`\linkedin`	no		yes	
frommobilephone	`\mobile`	yes		yes	
fromname		yes		no	⋆⋆
fromphone	`\phonenr`	yes	☎	yes	
fromtwitter	`\twitter`	no		yes	
fromurl	`\homepage`	yes		yes	
location		yes		no	
place		yes		no	

Table 2: Variables for use in letter options

⋆ The 'fromaddress' variable by default is set to a two-line combination of the contents of the 'fromaddressstreet' and 'fromaddresscity' variables.

⋆⋆ The 'fromname' variable by default is set to the concatenation of the contents of the 'fromfirstname' and the 'fromfamilyname' variables.

2.2 Macros

The following macros imitate the behavior of scrlttr2. For a documentation of the macros, we refer to the KOMA manual.

- `\newkomavar[`⟨*description*⟩`]{`⟨*name*⟩`}`
  `\newkomavar*[`⟨*description*⟩`]{`⟨*name*⟩`}`
- `\setkomavar{`⟨*name*⟩`}[`⟨*description*⟩`]{`⟨*content*⟩`}`
  `\setkomavar*{`⟨*name*⟩`}{`⟨*description*⟩`}`
- `\usekomavar[`⟨*command*⟩`]{`⟨*name*⟩`}`
  `\usekomavar*[`⟨*command*⟩`]{`⟨*name*⟩`}`
- `\ifkomavarempty{`⟨*name*⟩`}{`⟨*true-code*⟩`}{`⟨*false-code*⟩`}`
  `\ifkomavarempty*{`⟨*name*⟩`}{`⟨*true-code*⟩`}{`⟨*false-code*⟩`}`

- `\ifkomavar{`⟨*name*⟩`}{`⟨*true-code*⟩`}{`⟨*false-code*⟩`}`
- `\LoadLetterOption{`⟨*name*⟩`}` `\LoadLetterOptions{`⟨*names*⟩`}`

The following macros of the komacv class are provided by komacv-lco.

- `\emaillink[`⟨*link-text*⟩`]{`⟨*link*⟩`}`
- `\httplink[`⟨*link-text*⟩`]{`⟨*link*⟩`}`

The following additional macros are defined by komacv-lco.

- `\ifkomavarenabled{`⟨*name*⟩`}{`⟨*true-code*⟩`}{`⟨*false-code*⟩`}`
  This macro executes ⟨*true-code*⟩ if the variable with name ⟨*name*⟩ is enabled (through the KOMA option of the same name) and executes ⟨*false-code*⟩ otherwise.
- `\httpslink[`⟨*link-text*⟩`]{`⟨*link*⟩`}`
  This macro is analogous to `\httplink`, just for HTTPS links.

3 Limitations

The current version of komacv-lco has the following known limitations. Some of them might be eliminated in future versions.

- Enabled variables that are not already defined by scrlttr2 are *not* displayed in the head of the letter. If you want the additional variables to be displayed, you currently have to set the `firsthead` variable manually (see the scrlttr2 documentation).
- In a document based on the komacv class, KOMA options for enabling/disabling a variable must be set *before* the content of the variable is set. Only then the respective komacv macro is set appropriately (i.e., set empty if the variable is disabled and set to the respective content when enabled). In short, as shown also in Figure 1: First use `\KOMAoptions` and afterwards use `\setkomavar`.

4 Implementation

We use the etoolbox package for simplifying the code and use the scrkbase package for KOMA options and related macros. The marvosym and fontawesome packages provide the symbols for some of the variables defined by this package.

```
\RequirePackage{etoolbox}
\RequirePackage{scrkbase}
\RequirePackage{marvosym,fontawesome}
```

4.1 KOMA Variables Interface

The "public" interface consists of the macros `\newkomavar`, `\setkomavar`, and `\usekomavar`, which we define to have the same arguments as the counterparts defined by scrlttr2.

`\newkomavar` The `\newkomavar[`⟨*description*⟩`]{`⟨*name*⟩`}` macro defines a new KOMA variable with name ⟨*name*⟩ and description ⟨*description*⟩. If ⟨*description*⟩ is omitted, no description is set. The `\newkomavar*[`⟨*description*⟩`]{`⟨*name*⟩`}` macro is defined equivalent to the un-starred macro.

```
\providecommand{\newkomavar}{%
  \@ifstar{\kcvlco@newkomavar}{\kcvlco@newkomavar}}
\newcommand{\kcvlco@newkomavar}[2][\relax]{%
  \ifkomavar{#2}%
    {\kcvlco@error{KOMA variable `#2' already defined}}%
    {\csdef{kcvlco@@var@#2}{\empty}%
     \begingroup\def\@tempa{#1}\def\@tempb{\relax}%
     \ifx\@tempa\@tempb\endgroup\else
     \endgroup\csdef{kcvlco@@desc@#2}{#1}\fi}}
```

`\setkomavar` The `\setkomavar{`⟨*name*⟩`}[`⟨*description*⟩`]{`⟨*content*⟩`}` macro sets the content of the variable with name ⟨*name*⟩ to content ⟨*content*⟩ and sets the description of the variable to ⟨*description*⟩. The `\setkomavar*{`⟨*name*⟩`}{`⟨*description*⟩`}` sets only the description of the variable with name ⟨*name*⟩ and sets it to ⟨*description*⟩.

```
\providecommand{\setkomavar}{%
  \@ifstar{\kcvlco@setkomadesc}{\kcvlco@setkomavar}}
\newcommand{\kcvlco@setkomavar}[1]{\kcvlco@onlyifdef{#1}{\@ifnextchar[%
  {\kcvlco@setkomavar@i{#1}}{\kcvlco@setkomavar@i{#1}[\relax]}}}
\long\def\kcvlco@setkomavar@i#1[#2]#3{%
  \csdef{kcvlco@@value@#1}{#3}%
  \csuse{scr@#1@postsetvar}%
  \begingroup\def\@tempa{#2}\def\@tempb{\relax}%
  \ifx\@tempa\@tempb\endgroup\else
  \endgroup\csdef{kcvlco@@desc@#1}{#2}\fi}
\newcommand{\kcvlco@setkomadesc}[2]{%
  \csdef{kcvlco@@desc@#1}{#2}}
```

`\usekomavar` The `\usekomavar[`⟨*command*⟩`]{`⟨*name*⟩`}` macro expands to the ⟨*command*⟩ applied to the content of the KOMA variable ⟨*name*⟩. If omitted, ⟨*command*⟩ is

the identity. The `\usekomavar*[`⟨*command*⟩`]{`⟨*name*⟩`}` macro is analogous to `\usekomavar` except that the description of the variable is used rather than the content.

```
\providecommand{\usekomavar}{%
  \@ifstar{\kcvlco@usekomadesc}{\kcvlco@usekomavar}}
\newcommand{\kcvlco@usekomavar}[2][\@firstofone]{%
  \kcvlco@onlyifdef{#2}{#1{\csuse{kcvlco@@value@#2}}}}
\newcommand{\kcvlco@usekomadesc}[2][\@firstofone]{%
  \kcvlco@onlyifdef{#2}{#1{\csuse{kcvlco@@desc@#2}}}}
```

`\ifkomavarempty` The `\ifkomavarempty{`⟨*name*⟩`}{`⟨*true-code*⟩`}{`⟨*false-code*⟩`}` expands to ⟨*true-code*⟩ if the content of the KOMA variable ⟨*name*⟩ is empty, and expands to ⟨*false-code*⟩ otherwise. The `\ifkomavarempty*{`⟨*name*⟩`}{`⟨*true-code*⟩`}{`⟨*false-code*⟩`}` is analogous to `\ifkomavarempty`, except that the description of the variable is checked for emptiness rather than the content.

```
\providecommand{\ifkomavarempty}{%
  \@ifstar{\kcvlco@ifemptydesc}{\kcvlco@ifemptyvar}}
\newcommand{\kcvlco@ifemptyvar}[1]{\ifcsvoid{kcvlco@@value@#1}}
\newcommand{\kcvlco@ifemptydesc}[1]{\ifcsvoid{kcvlco@@desc@#1}}
```

`\ifkomavar` The `\ifkomavar{`⟨*name*⟩`}{`⟨*true-code*⟩`}{`⟨*false-code*⟩`}` macro checks whether the KOMA variable ⟨*name*⟩ is defined and expands to ⟨*true-code*⟩ (positive case) or ⟨*false-code*⟩ (negative case) respectively.

```
\providecommand{\ifkomavar}[1]{\ifcsdef{kcvlco@@var@#1}}
```

`\ifkomavarenabled` The `\ifkomavarenabled{`⟨*name*⟩`}{`⟨*true-code*⟩`}{`⟨*false-code*⟩`}` macro checks whether the corresponding KOMA option for ⟨*name*⟩ exists and is set to `false`. In this case, the macro expands to ⟨*false-code*⟩ and otherwise expands to ⟨*true-code*⟩.

```
\providecommand{\ifkomavarenabled}[1]{\csuse{kcvlco@@enab@#1}}
```

4.2 Letter Options Interface

`\LoadLetterOption` The `\LoadLetterOption{`⟨*name*⟩`}` loads options from the file with filename ⟨*name*⟩ (an "lco"-file, but without the file extension).

`\LoadLetterOptions` The `\LoadLetterOptions{`⟨*names*⟩`}` loads options from the files in the comma-separated list ⟨*names*⟩ of file names (again without "lco" extension).

```
\providecommand\LoadLetterOption[1]{\input{#1.lco}}
\providecommand\LoadLetterOptions[1]{\forcsvlist{\LoadLetterOption}{#1}}
```

4.3 URL Formatting

`\emaillink` The `\emaillink[`⟨*text*⟩`]{`⟨*link*⟩`}` macro, analogously to komacv's `\emaillink` macro, provides a means for typesetting a "mailto" link.

```
\providecommand*{\emaillink}[2][]{%
  \ifstrempty{#1}{%
    \href{mailto:#2}{\usefontofkomafont{emaillinkfont}#2}}{%
```

```
    \href{mailto:#2}{\usefontofkomafont{emaillinkfont}#1}}}
\IfExistskomafont{emaillinkfont}{}{\newkomafont{emaillinkfont}{}}
```

`\httplink` The `\httplink[`⟨*text*⟩`]{`⟨*link*⟩`}` macro, analogously to komacv's `\httplink` macro, provides a means for typesetting an HTTP link.

```
\providecommand*{\httplink}[2][]{%
  \ifstrempty{#1}{%
    \href{http://#2}{\usefontofkomafont{httplinkfont}#2}}{%
    \href{http://#2}{\usefontofkomafont{httplinkfont}#1}}}
\IfExistskomafont{httplinkfont}{}{\newkomafont{httplinkfont}{}}
```

`\httpslink` The `\httpslink[`⟨*text*⟩`]{`⟨*link*⟩`}` macro, analogously to komacv's `\httplink` macro, provides a means for typesetting an HTTPS link.

```
\providecommand*{\httpslink}[2][]{%
  \ifstrempty{#1}{%
    \href{https://#2}{\usefontofkomafont{httplinkfont}#2}}{%
    \href{https://#2}{\usefontofkomafont{httplinkfont}#1}}}
```

4.4 Registering KOMA Variables with komacv Macros

`\kcvlco@newvar` The `\kcvlco@newvar[`⟨*description*⟩`]{`⟨*KOMAvar*⟩`}{`⟨*CVmacro*⟩`}{`⟨*conditional*⟩`}` macro provides the KOMA variable ⟨*KOMAvar*⟩. If ⟨*conditional*⟩ is provided, a Boolean `\KOMAoptions` variable named ⟨*KOMAvar*⟩ is registered. This Boolean is stored in `if`⟨*conditional*⟩ (as registered with `\newif`). The macro connects ⟨*KOMAvar*⟩ with the komacv macro ⟨*CVmacro*⟩. The connection establishes that when ⟨*KOMAvar*⟩ is changed, the ⟨*CVmacro*⟩ is updated (though *not* vice versa).

```
\newcommand\kcvlco@newvar[4][\relax]{%
  \ifkomavar{#2}%
    {\begingroup\def\@tempa{#1}\def\@tempb{\relax}%
     \ifx\@tempa\@tempb\endgroup\else
     \endgroup\setkomavar*{#2}{#1}\fi}
    {\newkomavar[{#1}]{#2}}%
  \ifstrempty{#4}%
    {\csdef{kcvlco@@enab@#2}{\ifbool{true}}}%
    {\csdef{kcvlco@@enab@#2}{\ifbool{#4}}\KOMA@ifkey{#2}{#4}}%
```

We use the ⟨*postsetvar*⟩ hook of KOMA, which we also implement in our `\setkomavar` surrogate.

```
  \@ifclassloaded{komacv}{%
    \ifstrempty{#4}%
      {\csappto{scr@#2@postsetvar}{\ifkomavarempty{#2}%
          {\let#3=\empty}%
          {\kcvlco@storekomavar{#2}{#3}}}}%
      {\csappto{scr@#2@postsetvar}{\ifkomavarempty{#2}%
          {\let#3=\empty}%
          {\ifbool{#4}{\kcvlco@storekomavar{#2}{#3}}{\let#3=\empty}}}}%
    \csuse{scr@#2@postsetvar}}{}}
```

4.5 Internal Helper Macros

`\kcvlco@error` The `\kcvlco@error{`⟨*message*⟩`}` macro displays the given error ⟨*message*⟩.

```
\providecommand{\kcvlco@error}[1]{%
  \PackageError{komacv-lco}{#1}{}}
```

`\kcvlco@errundef` The `\kcvlco@errundef{`⟨*name*⟩`}` macro displays an error message for KOMA variable ⟨*name*⟩ not being defined. ⟨*message*⟩.

```
\providecommand{\kcvlco@errundef}[1]{%
  \kcvlco@error{KOMA variable `#1' undefined}}
```

`\kcvlco@onlyifdef` The `\kcvlco@onlyifdef{`⟨*name*⟩`}{`⟨*code*⟩`}` macro displays an error message if KOMA variable ⟨*name*⟩ is undefined and expands to ⟨*code*⟩ otherwise. ⟨*message*⟩.

```
\providecommand{\kcvlco@onlyifdef}[2]{%
  \ifkomavar{#1}{#2}{\kcvlco@errundef{#1}}}
```

`\kcvlco@storekomavar` The `\kcvlco@storekomavar{`⟨*name*⟩`}{`⟨*macro*⟩`}` macro stores the content of the KOMA variable ⟨*name*⟩ into the macro ⟨*macro*⟩.

```
\newcommand{\kcvlco@storekomavar}[2]{\letcs#2{kcvlco@@value@#1}}
```

4.6 Declaration of Concrete Variables

Shared variables The following variables are shared by scrlttr2 and komacv. The conditionals used in the last argument to `\kcvlco@newvar` are taken over from scrlttr2.

```
\kcvlco@newvar[\Telefon]{fromphone}{\phonenr}{@phone}
\kcvlco@newvar[\Mobilefone]{frommobilephone}{\mobile}{@mobilephone}
\kcvlco@newvar[\FAX]{fromfax}{\faxnr}{@fax}
\kcvlco@newvar[\Letter]{fromemail}{\email}{@email}
\kcvlco@newvar{fromurl}{\homepage}{@www}
```

scrlttr2 variables The following variables are scrlttr2-only.

```
\ifkomavar{fromname}{}{\newkomavar{fromname}}
\setkomavar{fromname}{%
  \usekomavar{fromfirstname}~\usekomavar{fromfamilyname}}
\ifkomavar{fromaddress}{}{\newkomavar{fromaddress}}
\setkomavar{fromaddress}{%
  \usekomavar{fromaddressstreet}\\ \usekomavar{fromaddresscity}}
\ifkomavar{place}{}{\newkomavar{place}}
\ifkomavar{location}{}{\newkomavar{location}}
```

komacv variables The following variables are komacv-only.

```
\kcvlco@newvar{fromfirstname}{\firstname}{}
\kcvlco@newvar{fromfamilyname}{\familyname}{}
\kcvlco@newvar{fromacadtitle}{\acadtitle}{}
\kcvlco@newvar{fromaddressstreet}{\addressstreet}{}
\kcvlco@newvar{fromaddresscity}{\addresscity}{}
```

```
\kcvlco@newvar[\faTwitter]{fromtwitter}{\twitter}{kcvlco@@twitter}
\kcvlco@newvar[\faGithub]{fromgithub}{\github}{kcvlco@@github}
\kcvlco@newvar[\faFacebook]{fromfacebook}{\facebook}{kcvlco@@facebook}
\kcvlco@newvar[\faLinkedin]{fromlinkedin}{\linkedin}{kcvlco@@linkedin}
\kcvlco@newvar{fromextrainfo}{\extrainfo}{kcvlco@@extrainfo}
```

Change History

v0.9

General: Initial version 1

Index