The ncccropmark package*

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1 User Interface

`cropmark` The package implements the command

`\cropmark[`⟨*fields*⟩`]{`⟨*left*⟩`}{`⟨*right*⟩`}{`⟨*top*⟩`}{`⟨*bottom*⟩`}{`⟨*length*⟩`}`

useful as a watermark. The command was desired for use together with the `watermark` package. It must be called inside the picture environment (a watermark content is prepared in such a way).

The optional ⟨*fields*⟩ parameter contains a combination of letters `h` (header), `f` (footer), and `m` (marginal notes). It determines the additional fields of paper area to be taken into account in crop area when the crop-mark is typed out. If the optional parameter is omitted, the crop area coincides with the text area only.

Next four parameters mean padding values for crop-mark corners with respect to the crop area and the last parameter is equal to crop lines length. Its positive value means crop-mark corners looking on the crop area. Otherwise, the corners look outside of the crop area. To prepare crosses, you need to use the crop-mark twice with positive and negative values.

In two-side mode the left and right padding are swapped for every even page.

For example, `\watermark{\cropmark[f]{10mm}{10mm}{10mm}{10mm}{5mm}}` means a crop-mark indented on 10mm in all directions from the crop area containing the text area and the page footer. You can see the result on this page. The crosses on the next page were prepared with the following command:

```
\watermark{\cropmark[f]{10mm}{10mm}{10mm}{10mm}{5mm}
           \cropmark[f]{10mm}{10mm}{10mm}{10mm}{-5mm}}
```

2 The Implementation

This package requires the `ncccropbox` package to prepare a crop-mark and the `tocenter` package to calculate crop-area dimensions.

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```
⟨*package⟩
\RequirePackage{ncccropbox,tocenter}
```

`\cropmark` We suppose here that the `\cropmark` will be used at the beginning of header. The `\NCC@pos` command from the `tocenter` package parses the ⟨*fields*⟩ parameter and prepares `\NCC@h{`⟨*register*⟩`}`, `\NCC@f{`⟨*register*⟩`}`, and `\NCC@m{`⟨*register*⟩`}` commands to adjust values of skip registers. See the `tocenter` package for more details.

```
\newcommand*{\cropmark}[6][]{\NCC@pos{#1}%
```

At the first, we calculate the width of crop-box and the left skip from the beginning of header. The `\@tempswatrue` means reverse left and right paddings.

```
  \@tempswafalse
  \if@twoside \ifodd\c@page \else \@tempswatrue \fi\fi
```

Set `\@tempdima` to the left padding and `\@tempdimb` to the right padding.

```
  \if@tempswa
    \setlength{\@tempdima}{#3}%
    \setlength{\@tempdimb}{#2}%
  \else
    \setlength{\@tempdima}{#2}%
    \setlength{\@tempdimb}{#3}%
  \fi
```

Adjust values of `\@tempdima` and `\@tempdimb` with margin widths:

```
  \if@twocolumn
    \NCC@m\@tempdima \NCC@m\@tempdimb
  \else
    \if@tempswa
      \if@reversemargin \NCC@m\@tempdimb \else \NCC@m\@tempdima \fi
    \else
      \if@reversemargin \NCC@m\@tempdima \else \NCC@m\@tempdimb \fi
    \fi
  \fi
```

Calculate the left skip in `\@tempskipa` and the crop-box width in `\@tempdima`:

```
  \@tempskipa -\@tempdima
  \advance\@tempdima\@tempdimb
  \advance\@tempdima\textwidth
```

Now we calculate the height of crop-box in the `\@tempdimb` register and the bottom skip in the `\@tempskipb` register:

```
  \@tempdimb\headsep
  \advance\@tempdimb\textheight
  \NCC@f\@tempdimb
  \addtolength{\@tempdimb}{#5}%
  \@tempskipb -\@tempdimb
  \advance\@tempdimb -\headsep
  \NCC@h\@tempdimb
  \addtolength{\@tempdimb}{#4}%
```

All necessary calculations are done. Put the crop-box at the relative position `\@tempskipa,\@tempskipb`:

```
  \begingroup
    \croplinelength{#6}%
    \lineskip\z@
    \@killglue\raise\@tempskipb
      \hb@xt@\z@{\kern\@tempskipa
        \cropbox[\@tempdima][\@tempdimb]{}\hss}\hss%
  \endgroup
}
```

⟨/package⟩