Environment for collating marks

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1 \startmodule[collatingmarks]

2 \writestatus{loading}{Context Module for Collating Marks}
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Introduction

This code is based on the work of Thomas A. Schmitz, who created the module for different crop marks.

If a book consists of multiple sections, each section should be marked along the spine with a collating mark. This mark moves down along the spine according to the number of the section. After collating the book it becomes easy to check whether the sequence of the sections is correct. One should see a “stair case” on the spine of the book.
Environment for collating marks
Using the module

If the collating marks should be placed, then the system should be setup with \setupMPvariables[pages=8,sheets=2,shift=0mm,frenchdoors=false,wickel=false] Note that the collating marks-setup needs to know how many pages are placed on a doublesided printed sheet of paper and how many such sheets result in a section i.e. these values depend on the \setuparranging command. The shift-option is 0mm if no horizontal page shifting is issued during imposition. If a horizontal page shifting is used, then the shift option is used to position the collating mark precisely on the spine.

The two keys “frenchdoors” and “wickel” are used for special purposes. These are not intended for general use. For the preparation of a binding called French doors, where there is a left (normal) and a right book, which opens from left to right the MPvariable “frenchdoors” must be set to true (boolean). For preparing a section with parallelfolding/letterfolding/Wickelfalz the MPvariable “wickel” must be set to true (boolean).
Environment for collating marks
Vocabulary
EN: Collating mark, DE: Kollationiermarke, NL: collationeerblokje

\unprotect
\setupmodule[Collatingmarks=yes]
\setupMPvariables
[Collatingmarks]
[pages=16, %pages per sheet doublesided
  sheets=1, % number of sheets forming one section
  horpageshift=0,
  frenchdoors=false,
  wickel=false]

We prepare collating marks:
\processaction[\currentmoduleparameter{Collatingmarks}]
  [yes=>\def\Collatingmarks{Collatingmarks},
   no=>\def\Collatingmarks{},
   \v!unknown=>\def\Collatingmarks{},
   \v!default=>\def\Collatingmarks{}]

The newly prepared macros go into the page background:
\setupbackgrounds[page][state=repeat,background=\Collatingmarks]

We define an overlay for the collating marks.
\defineoverlay[Collatingmarks][\useMPgraphic{Collatingmarks}]

We let METAPOST do the calculations and draw the collating marks.
\startusableMPgraphic[Collatingmarks]
StartPage;
numeric offset, sectionno, pages, sheets, factor, correction, offset, pageshift;
path p,q;
boolean frenchdoors,wickel;
pages := \MPvar{pages};
sheets := \MPvar{sheets};
pageshift := \MPvar{horpageshift};
frenchdoors := \MPvar{frenchdoors};
wickel := \MPvar{wickel};

z5colm = ulcorner Page;
z6colm = (x5colm, y5colm-10mm);
p := unitsquare xscaled 1mm yscaled 7mm;
if \realpageminus mod 2 = 1 : % on uneven pages only
  sectionno := \realpageminus div (sheets*pages)+1;
Environment for collating marks

\begin{verbatim}
\label{\textext{"\switchtobodyfont{\[5pt\]}\white\decimal sectionno \^\vrule}]
\if \realpagenumber \mod (sheets*pages) = 1
\section only:
\nofmarkings := \y6colm \div 7mm;
\offset := \y6colm \div \sectionno*7mm;
\correction := \sectionno \div \nofmarkings;
\offset := \y6colm \div \sectionno \div \correction \div \nofmarkings;\footnote{\protect\stopmodule \protect\doifnotmode\{\demo\}\{\endinput\}}
\fi;
\if \frenchdoors \or \wickel 
\p := \p shifted (PaperWidth, \offset);
\else 
\p := \p shifted (-1mm \twopageshift, \offset);
\fi;
\fill \p withcolor black;
\if \sectionno < 9 
\label{\textext{"\switchtobodyfont{\[3pt\]}\white\decimal sectionno \^\vrule}, \center \p shifted (-1.3mm,0)}
\else 
\label{\textext{"\switchtobodyfont{\[3pt\]}\white\decimal sectionno \^\vrule}, \center \p shifted (-1.5mm,0)}
\fi;
\end{verbatim}

Example:
We thrive in information-thick worlds because of our marvelous and everyday capacity to select, edit, single out, structure, highlight, group, pair, merge, harmonize, synthesize, focus, organize, condense, reduce, boil down, choose, categorize, catalog, classify, list, abstract, scan, look into, idealize, discriminate, distinguish, screen, pigeonhole, pick over, sort, integrate, blend, inspect, filter, lump, skip, smooth, chunk, average, approximate, cluster, aggregate, outline, summarize, itemize, review, dip into, flip through, browse, glance into, leaf through, skin, refine, enumerate, gloss, synthesize, winnow the wheat from the chaff and separate the sheep from the goats.
The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence is like the effect of an old-age patient who smokes many packs of cigarettes per day—and we humans are the cigarettes.
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Ward

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\usemodule{collatingmarks}
\collatingmarks=\yes
\setuppapersize=A5,A2
\setuplayout[location=middle,marking=on]
\setuppagenumbering[alternative=doublesided]
\setuparranging[2\times4\times2]
\setupMPvariables
\pages=8, % pages per sheet of paper
doublesided
\sheetsv=2, % sheets of paper used per section
\horpageshift=0mm, % used for correction
\frenchdoors=false, % if horizontal page-shifting is used
\wickel=false
\setstartext
\dorecurse{10}{\section{Text
\recurselevel}
\input tufte
\subject{Ward}
\input ward
\par}
\setstoptext