ユーティリティ関数群

Takaaki Ishikawa

Table of Contents

- 1. org バッファを評価
- <u>2. ユーティリティ関数</u>
 - 2.1. サボっていると Kyoko さんに怒られる
 - 2.2. org-buffer を dokuwiki 形式に変換し, kill-ring に格納
 - 2.3. コンソールでカレントバッファのあるディレクトリに移動する
 - 2.4. ファイルに含まれるテーブルを使って定時にアラートを表示する
 - 2.5. 頻繁に利用するファイルを ring 形式でたどる
 - <u>2.6. 引数の org バッファを開く</u>
 - 2.7. org バッファにいつものヘッダを追加する
 - 2.8. 議事録ひな形を書き入れる
 - 2.9. ランダムの文字列を取得する
 - 2.10. Auto-install をセットアップする
 - 2.11. 行頭に" "を挿入する
 - 2.12. TODO " "と" [] "をサイクルさせる
 - 2.13. TODO リージョン内のブリッツを操作する
 - 2.14. 日付などを簡単に挿入する
 - 2.14.1. キーバインド
 - 2.15. XHTML を利用したガントチャート生成
 - 2.16. 定期実行関数
 - <u>2.17. ブラウザの設定</u>
 - 2.18. ミニバッファに日時を表示
 - 2.19. バックアップファイルの削除
 - 2.20. chomp
 - <u>2.21. iTerm2.app を呼び出す関数</u>
 - 2.22. lingr にログインする
 - 2.23. 特定のファイルを Dropbox 以下にバックアップする
 - 2.24. ゴミ箱を空にする [MAC]
 - 2.25. その他
- 3. 未設定 / テスト中
 - 3.1. byte-compile の警告を抑制する
 - 3.2. [window-resizer.el] 分割したウィンドウサイズを変更する
 - 3.3. [idle-requie]
 - 3.4. [pdf-preview]
 - 3.5. [EasyPG]
 - 3.6. [eblook]
 - 3.7. [iBuffer]

3.8. UUID をファイル名にして所定のディレクトリにコピー / 移動 3.9. キーバインド

4. provide

<u>init.el</u> に記述していた便利関数を,utility.el として分離しています.init.el では autoload を 用いて utility.el を遅延読み込みするように設定してます.このようなファイルの分離で 60[ms]ほど起動を高速化できます.

注意:コピペだけでは動かない可能性があります.

1. org バッファを評価

org-buffer を評価して Emacs の設定ファイルを生成 / 読み込みまでを自動化します.この設定では, init.org と utility.org の 2 つのバッファでのみ評価されるようになっています.

2. ユーティリティ関数

2.1. サボっていると Kyoko さんに怒られる

MacOS 用の関数です.別途,Kyoko さんの音声をインストールしておく必要があります. Mavericks だと,Otoya さんも使えます.

```
| 600 t
| '(lambda ()
| (when kyoko-mad-mode
| (shell-command-to-string
| "say -v Kyoko おいおまえ,遊んでないで,仕事しろ"))))
```

2.2. org-buffer を dokuwiki 形式に変換し, kill-ring に格納

外部プログラム org2dokuwiki.pl を使います.

2.3. コンソールでカレントバッファのあるディレクトリに移動する

Finder で開きたいだけならば, M-! でミニバッファに open . と打ち込むだけです.

```
(defcustom open-current-directory-console-program "iTerm2.app"
 "Specify a console program"
 :type 'string
 :group 'takaxp-mac)
;;;###autoload
(defun open-current-directory-in-terminal ()
 " Open Current Directory for MacOSX
 0) Put this function in your .emacs
 1) M-x open-current-directory
 2) Terminal will open automatically
 3) Type M-v to paste and move to a path to the current directory in Emacs"
 (interactive)
 (let ((file-path (buffer-file-name (current-buffer))))
    (unless (string= file-path nil)
      (let ((directory
             (substring file-path 0
                         (length file-path)
                         (length (buffer-name (current-buffer))))))
        (message "%s" directory)
        (shell-command-to-string (concat "echo cd " directory " |pbcopy"))
        (shell-command-to-string
         (concat "open -a " open-current-directory-console-program))))))
```

2.4. ファイルに含まれるテーブルを使って定時にアラートを表示する

```
(eval-when-compile
 (require 'init nil t))
;;;###autoload
(defun my-update-alarms-from-file ()
 (interactive)
  (when (string= "trigger.org" (buffer-name))
   (my-set-alarms-from-file "~/Dropbox/org/db/trigger.org")))
(defun my-set-alarms-from-file (file)
 "Make alarms from org-mode tables. If you have an org-mode file
    with tables with the following format:
    |-----|
    | Flag | Time | Content
    |-----|
          | 07:00 | Wakeup
          | Read papers
    When it is 7:00 and 12:00, Growl notify with a message which is specified
    content column from the table. \"Read papers\" will be ignored.
    \"Clean up your desk\" will be shown by sticky mode"
     ((lines (read-line file)))
   (cancel-function-timers 'my-desktop-notify) ;; clear existing timers
   (while lines
     (set-alarm-from-line (decode-coding-string (car lines) 'utf-8))
     (setq lines (cdr lines)))))
(defun set-alarm-from-line (line)
     ((hour nil)
      (min nil)
      (current-hour nil)
      (current-min nil)
      (action nil))
   (when (string-match "\\([0-2]?[0-9]\\):\\([0-5][0-9]\\)" line)
     (setq hour (substring line (match-beginning 1) (match-end 1)))
     (setq min (substring line (match-beginning 2) (match-end 2)))
     (when (string-match
            "\|\s^*\([^\|]+[^]\)\s^*\|$" line (match-end 2))
       (setq action
             (substring line (match-beginning 1) (match-end 1)))))
   (when (and (and hour min) action)
               (message "[%s:%s] => %s" hour min action)
     (setg current-hour (format-time-string "%H" (current-time)))
     (setq current-min (format-time-string "%M" (current-time)))
     (when (> (+ (* (string-to-number hour) 60)
                 (string-to-number min))
              (+ (* (string-to-number current-hour) 60)
                 (string-to-number current-min)))
       (let ((s nil))
         (when (string-match "^{\}\ \\s-*X\\s-*\|" line)
           (setq s 'sticky))
         (set-notify-macos hour min action s))))))
(defun set-notify-macos (hour min action sticky)
 "`alerter' is required."
 (run-at-time (format "%s:%s" hour min) nil
              'my-desktop-notify
```

```
"macos" "Trigger.org" hour min action sticky))

(defun my-desktop-notify (type title hour min action sticky)
   "An interface to `my-desktop-notificaton'."
   (cond
        ((string= type "macos")
            (my-desktop-notification
            title (format "%s:%s %s" hour min action) sticky))))

(defun read-line (file)
   "Make a list from a file, which is divided by LF code"
   (with-temp-buffer
        (insert-file-contents-literally file)
        (split-string
        (buffer-string) "\n" t)))
```

2.5. 頻繁に利用するファイルを ring 形式でたどる

http://d.hatena.ne.jp/rubikitch/20111120/elispbook

```
(defvar my-file-ring nil)
;;;###autoload
(defun my-make-file-ring (files)
  (setq my-file-ring (copy-sequence files)))
      (setf (cdr (last my-file-ring)) my-file-ring))
(my-make-file-ring
 '("~/Dropbox/org/tr/work.org" "~/Dropbox/org/db/daily.org"
   "~/Dropbox/org/minutes/wg1.org" "~/Dropbox/org/tr/work.org"
   "~/Dropbox/org/academic.org" "~/Dropbox/org/org2ja.org"
   "~/Dropbox/org/db/article.org" "~/Dropbox/emacs.d/config/init.org"))
;;;###autoload
(defun my-open-file-ring ()
  (interactive)
  (find-file (car my-file-ring))
  (setq my-file-ring
        (append (cdr my-file-ring)
                (list (car my-file-ring)))))
      (setq my-file-ring (cdr my-file-ring)))
;;
```

2.6. 引数の org バッファを開く

2.7. org バッファにいつものヘッダを追加する

2.8. 議事録ひな形を書き入れる

2.9. ランダムの文字列を取得する

引数で桁数を渡すと,ランダムな数値の文字列を取得できます.org-mode で適当なタイトルのツリーを生成したい時に使っています.

```
(defun get-random-string (length)
 "Get a string contain the length digit number with random selection"
  (interactive)
  (random t)
  (cond ((> length 0)
         (let
             ((count length)
              (string nil)
              (tmp nil))
           (while (< 0 count)</pre>
             (setq count (1- count))
             (setq tmp string)
             (setq string
                    (concat tmp (number-to-string (random 10)))))
           (message "%s" string)))
        (t "0")))
```

2.10. Auto-install をセットアップする

いつも auto-install を使うわけではないので,必要時に init-auto-install を実行して パラメータを設定してから auto-install でパッケージを取得するようにしています. cask+pallet 環境に移行してからは使っていません.

2.11. 行頭に" - "を挿入する

```
;;;###autoload
(defun add-itemize-head (arg)
 "Insert \" - \" at the head of line.
 If the cursor is already at the head of line, it is NOT returned back to the
 original position again. Otherwise, the cursor is moved to the right of the
 inserted string. \" - [ ] \" will be inserted using C-u prefix."
 (interactive "P")
 (let ((item-string " - "))
    (when arg
      (setq item-string " - [ ] "))
    (cond ((= (point) (line-beginning-position))
           (insert item-string))
          (t (save-excursion
               (move-beginning-of-line 1)
               (insert item-string))))))
(defconst item-string "" nil)
;;;###autoload
(defun add-itemize-head-checkbox ()
 "Insert \" - [ ] \" at the head of line.
 If the cursor is already at the head of line, it is NOT returned back to the
 original position again. Otherwise, the cursor is moved to the right of the
 inserted string."
 (interactive)
 (let ((item-string " - [ ] "))
    (cond ((= (point) (line-beginning-position))
           (insert item-string))
          (t (save-excursion
               (move-beginning-of-line 1)
               (insert item-string))))))
```

2.12. TODO " - "と" - [] "をサイクルさせる

- ブリッツ行でないときは、ブリッツ化する。
- ブリッツ行の場合は、チェックボックス付きに変更する。
- チェックボックス付きブリッツ行の場合は、チェックボックスを取る、
- 引数付きで呼び出すと、チェックボックスの有無に依らずブリッツを取る、

```
;;;###autoload
(defun my-cycle-bullet-at-heading (arg)
 "Add a bullet of \" - \" if the line is NOT a bullet line."
  (interactive "P")
  (save-excursion
    (beginning-of-line)
    (let ((bullet "- ")
          (point-at-eol (point-at-eol)))
      (cond
       ((re-search-forward
         (concat "\(^[ \t]*\)" bullet "\[.\][ \t]+") point-at-eol t)
        (replace-match (if arg "" (concat "\\1" bullet)) nil nil))
       ((re-search-forward
         (concat "\\(^[ \t]*\\)" bullet) point-at-eol t)
        (replace-match (if arg "" (concat "\\1" bullet "[] ")) nil nil))
       ((re-search-forward
         (concat "\(^[ \t] *\\)") point-at-eol t)
        (replace-match
         (concat "\\1 " bullet) nil nil))
       (t nil)))))
```

2.13. TODO リージョン内のブリッツを操作する

```
;;;###autoload
(defun my-org-list-insert-items (begin end)
  (interactive "r")
  (when mark-active
    (let* ((bullet " - ")
           (len (string-width bullet)))
      (goto-char begin)
      (while (and (re-search-forward (concat "\\(^[ \t]*\\)") end t)
                  (not (equal (point) end)))
        (replace-match (concat "\\1" bullet) nil nil)
        (setg end (+ end len)))
      (goto-char begin))))
;;;###autoload
(defun my-org-list-delete-items (begin end)
  (interactive "r")
  (when mark-active
    (let* ((bullet "- ")
           (len (string-width bullet)))
      (goto-char begin)
      (while (re-search-forward
              (concat "\(^[ \t] *\\)" bullet) end t)
```

```
(replace-match "" nil nil)
        (setq end (- end len)))
      (goto-char begin))))
;;;###autoload
(defun my-org-list-insert-checkbox-into-items (begin end)
  (interactive "r")
  (when mark-active
    (let* ((bullet "- ")
           (checkbox "[ ] ")
           (len (string-width checkbox)))
      (goto-char begin)
      (while (re-search-forward (concat "\\(^[ \t]*\\)" bullet) end t)
        (replace-match (concat "\\1" bullet checkbox) nil nil)
        (setq end (+ end len)))
      (goto-char begin))))
;;;###autoload
(defun my-org-list-delete-checkbox-from-items (begin end)
  (interactive "r")
  (when mark-active
    (let ((bullet "- ")
          (len (string-width "[ ] ")))
      (goto-char begin)
      (while (re-search-forward
              (concat "\(^{ \t}^*\)" bullet "\(.\)[ \t]+") end t)
        (replace-match (concat "\\1" bullet) nil nil)
        (setq end (- end len)))
      (goto-char begin))))
;;;###autoload
(defun my-org-list-insert-itms-with-checkbox (begin end)
  (interactive "r")
  (when mark-active
    (let* ((bullet " - ")
           (checkbox "[ ] ")
           (blen (string-width bullet))
           (clen (string-width checkbox)))
      (goto-char begin)
      (while (and (re-search-forward (concat "\\(^[ \t]*\\)") end t)
                  (not (equal (point) end)))
        (replace-match (concat "\\1" bullet checkbox) nil nil)
        (setq end (+ end blen clen)))
      (goto-char begin))))
;;;###autoload
(defun my-org-list-delete-items-with-checkbox (begin end)
  (interactive "r")
  (when mark-active
    (let* ((bullet "- ")
           (checkbox "[ ] ")
           (blen (string-width bullet))
           (clen (string-width checkbox)))
      (goto-char begin)
      (while (re-search-forward
              (concat "\\(^[ \t]*\\)" bullet "\\[.\\][ \t]+") end t)
        (replace-match "" nil nil)
        (setq end (- end blen clen)))
      (goto-char begin))))
```

2.14. 日付などを簡単に挿入する

http://www.fan.gr.jp/~ring/doc/elisp 20/elisp 38.html#SEC608

2.14.1. キーバインド

```
(global-set-key (kbd "C-c 0") 'insert-formatted-current-date) (global-set-key (kbd "C-c 9") 'insert-formatted-current-time)
```

2.15. XHTML を利用したガントチャート生成

最近使っていません.

```
(defcustom my-auto-install-batch-list-el-url nil
 "URL of a auto-install-batch-list.el"
 :type 'string
 :group 'takaxp-utility)
;; Publish an xml file to show a Gantt Chart
(defcustom default-timeline-csv-file nil
 "source.csv"
 :type 'string
 :group 'takaxp-utility)
(defcustom default-timeline-xml-business-file nil
 "XML file for business schedule"
 :type 'string
 :group 'takaxp-utility)
(defcustom default-timeline-xml-private-file nil
 "XML file for private schedule"
 :type 'string
 :group 'takaxp-utility)
(defcustom default-timeline nil
 "a template index.html"
 :type 'string
 :group 'takaxp-utility)
(with-eval-after-load "org"
```

```
(defun export-timeline-business ()
   "Export schedule table as an XML source to create an web page"
    (interactive)
    (when (and default-timeline
               (and default-timeline-csv-file
                    default-timeline-xml-business-file))
      (shell-command-to-string (concat "rm -f " default-timeline-csv-file))
      (org-table-export default-timeline-csv-file "orgtbl-to-csv")
      (shell-command-to-string (concat "org2gantt.pl > "
                                       default-timeline-xml-business-file))
      (shell-command-to-string (concat "open " default-timeline)))))
(defun export-timeline-private ()
 "Export schedule table as an XML source to create an web page"
 (interactive)
  (when (and default-timeline
             (and default-timeline-csv-file
                  default-timeline-xml-private-file))
    (shell-command-to-string (concat "rm -f " default-timeline-csv-file))
    (org-table-export default-timeline-csv-file "orgtbl-to-csv")
    (shell-command-to-string (concat "org2gantt.pl > "
                                     default-timeline-xml-private-file))
    (shell-command-to-string (concat "open " default-timeline))))
```

2.16. 定期実行関数

org バッファからカレンダーを生成し,外部サーバに投げます.また,MobileOrg に最新情報を流しています.

2.17. ブラウザの設定

2.18. ミニバッファに日時を表示

2.19. バックアップファイルの削除

```
;; find ~/.emacs.d/backup -type f -name '*15-04-24 *' -print0 | while read -r
-d '' file; do echo -n " \"$file\""; done | xargs -0
(defun recursive-delete-backup-files (days)
  (if (= days 1)
      1
    (recursive-delete-backup-files (1- days)))
  (delete-backup-files days))
;;;###autoload
(defun delete-backup-files (&optional day-shift)
  "Delete backup files created in yesterday.
 > find \sim/.emacs.d/backup -type f -name '*YY-MM-DD *' -print0 | xargs -0"
  (interactive)
  (unless day-shift
    (setq day-shift 1))
  (let* ((backup-dir "~/.emacs.d/backup")
         (cmd (concat "find " backup-dir " -type f -name \'*"
                       (format-time-string
                       "%y-%m-%d "
                       (time-subtract (current-time)
                                       (seconds-to-time
                                        (* day-shift (* 24 3600)))))
                      "*\' -print0 | while read -r -d \'\' file; "
                      " do echo -n \" \\\"$file\\\"\"; done | xargs -0"))
         (files (shell-command-to-string cmd)))
    ;; (message "%s" cmd)
    (unless (string= files "")
      (message "%s" (chomp files))
```

```
(shell-command-to-string (concat "mv -v " (chomp files) " ~/.Trash")))))
```

2.20. chomp

改行コードを削除した文字列を返す.

2.21. iTerm2.app を呼び出す関数

```
;;;###autoload
(defun my-cmd-to-open-iterm2 ()
  (interactive)
  (shell-command-to-string "open -a iTerm2.app"))
```

2.22. lingr にログインする

```
(defun my-lingr-login ()
  (when (string= "Sat" (format-time-string "%a"))
    (lingr-login)))
```

2.23. 特定のファイルを Dropbox 以下にバックアップする

```
(defun my-backup (files &optional dropbox)
 "Backup a file to `Dropbox/backup' directory.
If `dropbox' option is provided then the value is uased as a root directory."
  (interactive "P")
  (let ((system (system-name))
        (rootdir (or dropbox "~/Dropbox")))
    (if (and system
             (stringp rootdir)
             (file-directory-p (or rootdir (expand-file-name rootdir))))
        (mapc
         (lambda (file)
           (if (and (stringp file)
                    (file-readable-p (or file (expand-file-name file))))
               (shell-command-to-string
                (concat "cp -f " file " " rootdir "/backup/" system "/"))
             (message (format "--- backup failure: %s" file))))
         (if (listp files)
             files
           (list files)))
      (message (format "--- backup-dir does not exist: %s" rootdir)))))
```

2.24. ゴミ箱を空にする

[MAC]

```
(defun mac:delete-files-in-trash-bin ()
  (interactive)
  (do-applescript
```

```
(concat
  "tell application \"Finder\"\n"
  "set itemCount to count of items in the trash\n"
  "if itemCount > 0 then\n"
  "empty the trash\n"
  "end if\n"
  "end tell\n"))
(my-desktop-notification "Emacs" "Empty the trash, done."))
```

2.25. その他

```
;;; Test function from GNU Emacs (O'REILLY, P.328)
;;;###autoload
(defun count-words-buffer ()
 "Count the number of words in the current buffer"
  (interactive)
  (save-excursion
    (let ((count 0))
      (goto-char (point-min))
      (while (< (point) (point-max))</pre>
       (forward-word 1)
        (setq count (1+ count)))
      (message "buffer contains %d words." count))))
;;; Test function for AppleScript
;;; Cite: http://sakito.jp/emacs/emacsobjectivec.html
(defun do-test-applescript ()
 (interactive)
 (do-applescript
  (format
    (concat
    "display dialog \"Hello world!\" \r"))))
;;;###autoload
(defun describe-timer ()
 "see http://masutaka.net/chalow/2009-12-05-1.html"
  (interactive)
  (let ((tl timer-list) time
        (timer nil))
    (pop-to-buffer (get-buffer-create "*timer*"))
    (erase-buffer)
    (insert
    "TIME
                   FUNCTION\n"
    "----\n")
    (while tl
      (setq timer (car tl))
      (insert
      (concat
        (format-time-string "%m/%d %T"
                            (list (aref timer 1)
                                  (aref timer 2)
                                  (aref timer 3)))
       **
        (symbol-name (aref timer 5))
       "\n"))
      (setq tl (cdr tl)))
    (read-only-mode 1)))
```

3. 未設定 / テスト中

3.1. byte-compile の警告を抑制する

```
;; Avoid warning (for sense-region)
;; Warning: 'mapcar' called for effect; use 'mapc' or 'dolist' insted
(setq byte-compile-warnings
    '(free-vars unresolved callargs redefine obsolete noruntime
    cl-functions interactive-only make-local))
```

3.2. [window-resizer.el] 分割したウィンドウサイズを変更する

http://d.hatena.ne.jp/khiker/20100119/window resize

以下の警告を参考に書き換えた.

```
In my-window-resizer:
utility.el:333:23:Warning: `last-command-char' is an obsolete variable (as of
    Emacs at least 19.34); use `last-command-event' instead.
;;;###autoload
(defun my-window-resizer ()
  "Control separated window size and position.
  Type {j,k,l,m} to adjust windows size."
  (interactive)
  (let ((window-obj (selected-window))
        (current-width (window-width))
        (current-height (window-height))
        (dx (if (= (nth 0 (window-edges)) 0) 1
        (dy (if (= (nth 1 (window-edges)) 0) 1
              -1))
        action c)
    (catch 'end-flag
      (while t
        (setq action
              (read-key-sequence-vector (format "size[%dx%d]"
                                                  (window-width)
                                                  (window-height))))
        (setq c (aref action 0))
        (cond ((= c ?1)
               (enlarge-window-horizontally dx))
              ((= c ?h)
               (shrink-window-horizontally dx))
              ((= c ?j)
               (enlarge-window dy))
              ((= c ?k)
               (shrink-window dy))
              ;; otherwise
               (let ((last-command-event (aref action 0))
                      (command (key-binding action)))
                  (when command
                   (call-interactively command)))
               (message "Quit")
               (throw 'end-flag t))))))
```

3.3. [idle-requie]

```
(require 'idle-require)
(idle-require-mode 1)
```

3.4. [pdf-preview]

```
(require 'pdf-preview)
```

3.5. [EasyPG]

```
(when (require 'epa-setup nil t)
  (epa-file-enable))
```

3.6. [eblook]

```
;; eblook
(when (require 'eblook nil t)
  (autoload 'edict-search-english "edic"
    "Search for a translation of an English word" t)
  (autoload 'edict-search-kanji "edict"
    "Search for a translation of a Kanji sequence" t)
  (setq *edict-files* '("/Users/taka/Dropbox/Dic/LDOCE4"))
  (setq *edict-files* '("/Users/taka/Downloads/edict/edict")))
```

3.7. [iBuffer]

iBuffer で list-buffers をオーバーライド (C-x C-b で表示)

```
(defalias 'list-buffers 'ibuffer)
```

3.8. UUID をファイル名にして所定のディレクトリにコピー / 移動

• すでに org-attach が存在するので用途が微妙に . . .

```
(defvar org-att-global-directory "~/Dropbox/org/attachment/")
(defun copy-file-with-uuid (input)
 (interactive "FFile name: ")
  (if (file-exists-p input)
      (let* ((id (org-id-uuid))
             (filename (expand-file-name input))
             (directory (file-name-directory filename))
             (extension (file-name-extension filename))
             (output (concat org-att-global-directory id "." extension)))
        (copy-file filename output)
        (message "--- Copied as %s " output)
        output)
    (message "--- %s does NOT exist." input)
   nil))
(defun rename-file-with-uuid (input)
 (interactive "FFile name: ")
  (if (file-exists-p input)
      (let* ((id (org-id-uuid))
```

```
(filename (expand-file-name input))
             (directory (file-name-directory filename))
             (extension (file-name-extension filename))
             (output (concat directory id "." extension)))
        (rename-file filename output)
        (message "--- Renamed as %s " output)
       output)
    (message "--- %s does NOT exist." input)
   nil))
(defun org-link-uuid (input &optional overwrite)
 (interactive "FFile name: ")
 (let ((output
         (if overwrite
             (rename-file-with-uuid input)
           (copy-file-with-uuid input))))
    (when output
     (insert (concat "[[file+sys:" output
                      "][" (file-name-base input) "]]\n")))))
```

3.9. キーバインド

```
;; Multiple combination
; Editing with a rectangle region
(global-set-key (kbd "C-x r C-SPC") 'rm-set-mark)
(global-set-key (kbd "C-x r C-x") 'rm-exchange-point-and-mark)
(global-set-key (kbd "C-x r C-w") 'rm-kill-region)
(global-set-key (kbd "C-x r M-w") 'rm-kill-ring-save)
```

4. provide

以上です.