# $Org\ Mode\ \textit{v=-1PN}$

リリース 9.1.14 (release 9.1.14)

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このマニュアルは、Org-mode 9.1.14 (release 9.1.14) に対応しています。

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## **1** まえがき

## 1.1 概要

Org is a mode for keeping notes, maintaining TODO lists, and project planning with a fast and effective plain-text system. It also is an authoring system with unique support for literate programming and reproducible research.

Org is implemented on top of Outline mode, which makes it possible to keep the content of large files well structured. Visibility cycling and structure editing help to work with the tree. Tables are easily created with a built-in table editor. Plain text URL-like links connect to websites, emails, Usenet messages, BBDB entries, and any files related to the projects.

Org develops organizational tasks around notes files that contain lists or information about projects as plain text. Project planning and task management makes use of metadata which is part of an outline node. Based on this data, specific entries can be extracted in queries and create dynamic agenda views that also integrate the Emacs calendar and diary. Org can be used to implement many different project planning schemes, such as David Allen's GTD system.

Org files can serve as a single source authoring system with export to many different formats such as HTML, LATEX, Open Document, and Markdown. New export backends can be derived from existing ones, or defined from scratch.

Org files can include source code blocks, which makes Org uniquely suited for authoring technical documents with code examples. Org source code blocks are fully functional; they can be evaluated in place and their results can be captured in the file. This makes it possible to create a single file reproducible research compendium.

Org keeps simple things simple. When first fired up, it should feel like a straightforward, easy to use outliner. Complexity is not imposed, but a large amount of functionality is available when needed. Org is a toolbox. Many users actually run only a (very personal) fraction of Org's capabilities, and know that there is more whenever they need it.

All of this is achieved with strictly plain text files, the most portable and future-proof file format. Org runs in Emacs. Emacs is one of the most widely ported programs, so that Org mode is available on every major platform.

There is a website for Org which provides links to the newest version of Org, as well as additional information, frequently asked questions (FAQ), links to tutorials, etc. This page is located at https://orgmode.org.

このマニュアルのバージョン 7.3 は paperback book from Network Theory Ltd. (http://www.network-theory.co.uk/org/manual/) で手に入ります。

#### **1.2** インストール

Org is part of recent distributions of GNU Emacs, so you normally don't need to install it. If, for one reason or another, you want to install Org on top of this pre-packaged version, there are three ways to do it:

- By using Emacs package system.
- アーカイブされた Org Mode をダウンロードする
- Org Mode の Git リポジトリを使用する

いずれかのうち、インストール手段を一つだけに絞って、それを使い続けることを強く推奨します。

## Emacs のパッケージシステムを使用する

最近の Emacs ディストリビューションは、Emacs lisp のライブラリをインストールするためのパッケージシステムを含んでいます。M-x package-install RET orgとすれば、Org Mode をインストールできます。

**Important**: you need to do this in a session where no .org file has been visited, i.e., where no Org built-in function have been loaded. Otherwise autoload Org functions will mess up the installation.

Then, to make sure your Org configuration is taken into account, initialize the package system with (package-initialize) in your Emacs init file before setting any Org option. If you want to use Org's package repository, check out the Org ELPA page (https://orgmode.org/elpa.html).

## Downloading Org as an archive

You can download Org latest release from Org's website (https://orgmode.org/). In this case, make sure you set the load-path correctly in your Emacs init file:

```
(add-to-list 'load-path "~/path/to/orgdir/lisp")
```

The downloaded archive contains contributed libraries that are not included in Emacs. If you want to use them, add the contrib directory to your load-path:

```
(add-to-list 'load-path "~/path/to/orgdir/contrib/lisp" t)
```

Optionally, you can compile the files and/or install them in your system. Run make help to list compilation and installation options.

## Org Mode の Git リポジトリを使用

Org Mode のリポジトリをクローンして次のようにインストールできます。

- \$ cd ~/src/
- \$ git clone https://code.orgmode.org/bzg/org-mode.git
- \$ cd org-mode/
- \$ make autoloads

Note that in this case, make autoloads is mandatory: it defines Org's version in org-version.el and Org's autoloads in org-loaddefs.el.

Remember to add the correct load-path as described in the method above.

You can also compile with make, generate the documentation with make doc, create a local configuration with make config and install Org with make install. Please run make help to get the list of compilation/installation options.

Chapter 1: まえがき

For more detailed explanations on Org's build system, please check the Org Build System page on Worg (https://orgmode.org/worg/dev/org-build-system.html).

#### **1.3** アクティベーション

Org mode buffers need font-lock to be turned on: this is the default in Emacs<sup>1</sup>.

There are compatibility issues between Org mode and some other Elisp packages, please take the time to check the list (see  $\langle$  undefined $\rangle$  [Conflicts], page  $\langle$  undefined $\rangle$ ).

The four Org commands org-store-link, org-capture, org-agenda, and org-switchb should be accessible through global keys (i.e., anywhere in Emacs, not just in Org buffers). Here are suggested bindings for these keys, please modify the keys to your own liking.

```
(global-set-key "\C-c1" 'org-store-link)
(global-set-key "\C-ca" 'org-agenda)
(global-set-key "\C-cc" 'org-capture)
(global-set-key "\C-cb" 'org-switchb)
```

Files with the .org extension use Org mode by default. To turn on Org mode in a file that does not have the extension .org, make the first line of a file look like this:

```
MY PROJECTS -*- mode: org; -*-
```

which will select Org mode for this buffer no matter what the file's name is. See also the variable org-insert-mode-line-in-empty-file.

Many commands in Org work on the region if the region is *active*. To make use of this, you need to have transient-mark-mode turned on, which is the default. If you do not like transient-mark-mode, you can create an active region by using the mouse to select a region, or pressing *C-SPC* twice before moving the cursor.

### **1.4** フィードバック

If you find problems with Org, or if you have questions, remarks, or ideas about it, please mail to the Org mailing list emacs-orgmode@gnu.org. You can subscribe to the list on this web page (https://lists.gnu.org/mailman/listinfo/emacs-orgmode). If you are not a member of the mailing list, your mail will be passed to the list after a moderator has approved it<sup>2</sup>.

For bug reports, please first try to reproduce the bug with the latest version of Org available—if you are running an outdated version, it is quite possible that the bug has been fixed already. If the bug persists, prepare a report and provide as much information as possible, including the version information of Emacs (M-x emacs-version RET) and Org (M-x org-version RET), as well as the Org related setup in the Emacs init file. The easiest way to do this is to use the command

```
M-x org-submit-bug-report RET
```

which will put all this information into an Emacs mail buffer so that you only need to add your description. If you are not sending the Email from within Emacs, please copy and paste the content into your Email program.

<sup>1</sup> If you don't use font-lock globally, turn it on in Org buffer with (add-hook 'org-mode-hook 'turn-on-font-lock)

<sup>&</sup>lt;sup>2</sup> Please consider subscribing to the mailing list, in order to minimize the work the mailing list moderators have to do.

Sometimes you might face a problem due to an error in your Emacs or Org mode setup. Before reporting a bug, it is very helpful to start Emacs with minimal customizations and reproduce the problem. Doing so often helps you determine if the problem is with your customization or with Org mode itself. You can start a typical minimal session with a command like the example below.

#### \$ emacs -Q -l /path/to/minimal-org.el

もしも Emacs と共に配布されている Org Mode を使う場合には、上記の最小設定は不要です。この場合は、emacs -Qで Emacs を起動するだけで十分です。設定ファイルの minimal-org.elには、次に示すような設定を記述できます。

;;; Minimal setup to load latest 'org-mode'

```
;; add latest org-mode to load path
(add-to-list 'load-path "/path/to/org-mode/lisp")
(add-to-list 'load-path "/path/to/org-mode/contrib/lisp" t)
```

もし Org-mode を使っていてエラーが発生したら、バックトレースがとても役立ちます(作り方は次節を参照してください)。しばしば例となる小さなファイルが問題解決の手助けになります。それらには次のような明瞭な情報を含んでいます。

- 1. 正確に何を実行したのか
- 2. 何が起きることを期待していたのか
- 3. 期待と異なり何が起こったのか

Org-mode の改善にご協力いただき感謝します。

有用なバックトレースを生成する方法

Org-mode を利用していて理解できないメッセージのエラーが発生したら、バグを発見した可能性があります。エラーを報告する最良の方法は、すでに説明したバグレポートの書式に加えて、backtraceを提供することです。バックトレースは、ビルトインされたデバッガによるエラーの発生箇所とどのように発生したかについての情報を含みます。以下に、有用なバックトレースを生成する手順を示します。

1. Reload uncompiled versions of all Org mode Lisp files. The backtrace contains much more information if it is produced with uncompiled code. To do this, use

```
C-u M-x org-reload RET
```

もしくは、Org -> Refresh/Reload -> Reload Org uncompiledをメニューから選択します。

- 2. Go to the Options menu and select Enter Debugger on Error.
- 3. エラーを再現するために必要な操作を行なってください。実行した操作を忘れずにメモしておいてください。
- 4. エラーが再現されると、\*Backtrace\*バッファが画面上に表示されます。このバッファを別のファイルとして保存し(例えば C-x C-wを使って)、バグレポートに添付します。

#### 1.5 本マニュアルで使われる植字ルール

## TODO keywords, tags, properties, etc.

Org mainly uses three types of keywords: TODO keywords, tags and property names. In this manual we use the following conventions:

TODO

WAITING TODO キーワードは、すべて大文字で記述されます。ユーザーが定義する場合も同様です。

boss

ARCHIVE ユーザー定義のタグは、小文字で記述されます。特別な意味を持つビルトインされたタグは、すべて大文字で記述されます。

Release

PRIORITY ユーザー定義のプロパティは、大文字で始めて残りが小文字で記述されます。特別な意味を持つビルトインされたプロパティは、すべて大文字で記述されます。

Moreover, Org uses option keywords (like #+TITLE to set the title) and environment keywords (like #+BEGIN\_EXPORT html to start a HTML environment). They are written in uppercase in the manual to enhance its readability, but you can use lowercase in your Org file.

#### キーバインドとコマンド

The manual suggests a few global key bindings, in particular C-c a for org-agenda and C-c c for org-capture. These are only suggestions, but the rest of the manual assumes that these key bindings are in place in order to list commands by key access.

Also, the manual lists both the keys and the corresponding commands for accessing a functionality. Org mode often uses the same key for different functions, depending on context. The command that is bound to such keys has a generic name, like org-metaright. In the manual we will, wherever possible, give the function that is internally called by the generic command. For example, in the chapter on document structure, M-RIGHT will be listed to call org-do-demote, while in the chapter on tables, it will be listed to call org-table-move-column-right. If you prefer, you can compile the manual without the command names by unsetting the flag cmdnames in org.texi.

## 2 ドキュメントの構造

Org-mode は、Outline mode をベースとしており、ドキュメントの構造を編集するためにフレキシブルなコマンドを用意しています。

#### **2.1** アウトライン

Org is implemented on top of Outline mode. Outlines allow a document to be organized in a hierarchical structure, which (at least for me) is the best representation of notes and thoughts. An overview of this structure is achieved by folding (hiding) large parts of the document to show only the general document structure and the parts currently being worked on. Org greatly simplifies the use of outlines by compressing the entire show/hide functionality into a single command, org-cycle, which is bound to the TAB key.

## **2.2** ヘッドライン

Headlines define the structure of an outline tree. The headlines in Org start with one or more stars, on the left margin<sup>12</sup>. For example:

- \* Top level headline
- \*\* Second level
- \*\*\* 3rd level
  - some text
- \*\*\* 3rd level
  - more text

#### \* Another top level headline

Note that a headline named after org-footnote-section, which defaults to 'Footnotes', is considered as special. A subtree with this headline will be silently ignored by exporting functions.

Some people find the many stars too noisy and would prefer an outline that has white-space followed by a single star as headline starters. Section 15.8 [Clean view], page 235, describes a setup to realize this.

An empty line after the end of a subtree is considered part of it and will be hidden when the subtree is folded. However, if you leave at least two empty lines, one empty line will remain visible after folding the subtree, in order to structure the collapsed view. See the variable org-cycle-separator-lines to modify this behavior.

#### 2.3 表示、非表示の切り替え

## 2.3.1 Global and local cycling

アウトラインによって、バッファの中で、テキストの一部を隠すことが可能となります。Org-mode はバッファ内での表示の状況を変更するために、TABと S-TABとに結びついた 2 つのコマンドを使用します。

<sup>&</sup>lt;sup>1</sup> See the variables org-special-ctrl-a/e, org-special-ctrl-k, and org-ctrl-k-protect-subtree to configure special behavior of C-a, C-e, and C-k in headlines.

 $<sup>^2\,</sup>$  Clocking only works with headings indented less than 30 stars.

TAB org-cycle

Subtree cycling:カレントのサブツリーの状態を順番に表示します。

```
,-> FOLDED -> CHILDREN -> SUBTREE --.
```

The cursor must be on a headline for this to work<sup>3</sup>.

S-TAB

org-global-cycle

C-u TAB Global cycling: Rotate the entire buffer among the states

```
,-> OVERVIEW -> CONTENTS -> SHOW ALL --.
```

When S-TAB is called with a numeric prefix argument N, the CONTENTS view up to headlines of level N will be shown. Note that inside tables, S-TAB jumps to the previous field.

You can run global cycling using TAB only if point is at the very beginning of the buffer, but not on a headline, and org-cycle-global-at-bob is set to a non-nil value.

C-u C-u TAB

org-set-startup-visibility

Switch back to the startup visibility of the buffer (see Section 2.3.2 [Initial visibility], page 8).

C-u C-u C-u TAB

outline-show-all

Show all, including drawers.

C-c C-r

org-reveal

Reveal context around point, showing the current entry, the following heading and the hierarchy above. Useful for working near a location that has been exposed by a sparse tree command (see  $\langle$  undefined $\rangle$ ) [Sparse trees], page  $\langle$  undefined $\rangle$ ) or an agenda command (see  $\langle$  undefined $\rangle$ ). With a prefix argument show, on each level, all sibling headings. With a double prefix argument, also show the entire subtree of the parent.

C-c C-k

outline-show-branches

Expose all the headings of the subtree, CONTENTS view for just one subtree.

C-c TAB

outline-show-children

Expose all direct children of the subtree. With a numeric prefix argument N, expose all children down to level N.

C-c C-x b

org-tree-to-indirect-buffer

Show the current subtree in an indirect buffer<sup>4</sup>. With a numeric prefix argument N, go up to level N and then take that tree. If N is negative then go up that many levels. With a C-u prefix, do not remove the previously used indirect buffer.

 $<sup>^3</sup>$  see, however, the option org-cycle-emulate-tab.

<sup>&</sup>lt;sup>4</sup> The indirect buffer (see Section "Indirect Buffers" in *GNU Emacs Manual*) will contain the entire buffer, but will be narrowed to the current tree. Editing the indirect buffer will also change the original buffer, but without affecting visibility in that buffer.

 $extit{C-c C-x v}$  org-copy-visible

Copy the *visible* text in the region into the kill ring.

## 2.3.2 Initial visibility

When Emacs first visits an Org file, the global state is set to OVERVIEW, i.e., only the top level headlines are visible<sup>5</sup>. This can be configured through the variable org-startup-folded, or on a per-file basis by adding one of the following lines anywhere in the buffer:

#+STARTUP: overview
#+STARTUP: content
#+STARTUP: showall
#+STARTUP: showeverything

Furthermore, any entries with a VISIBILITY property (see \( \) undefined \( \) [Properties and columns], page \( \) undefined \( \)) will get their visibility adapted accordingly. Allowed values for this property are folded, children, content, and all.

C-u C-u TAB org-set-startup-visibility

Switch back to the startup visibility of the buffer, i.e., whatever is requested by startup options and VISIBILITY properties in individual entries.

## 2.3.3 Catching invisible edits

Sometimes you may inadvertently edit an invisible part of the buffer and be confused on what has been edited and how to undo the mistake. Setting org-catch-invisible-edits to non-nil will help prevent this. See the docstring of this option on how Org should catch invisible edits and process them.

## 2.4 移動

以下のコマンドはバッファの中で他の見出しにジャンプするものです。

C-c C-n org-next-visible-heading

Next heading.

C-c C-p org-previous-visible-heading

Previous heading.

C-c C-f org-forward-same-level

Next heading same level.

C-c C-b org-backward-same-level

Previous heading same level.

C-c C-u outline-up-heading

Backward to higher level heading.

C-c C-j org-goto

Jump to a different place without changing the current outline visibility. Shows the document structure in a temporary buffer, where you can use the following keys to find your destination:

<sup>&</sup>lt;sup>5</sup> When org-agenda-inhibit-startup is non-nil, Org will not honor the default visibility state when first opening a file for the agenda (see Section A.9 [Speeding up your agendas], page 251).

TAB 表示を切り替える。

down / up 次の/前の表示されている見出しへ。

RET この場所を選択する。

/ ツリーの抽出による検索を実行する

もしも org-goto-auto-isearch を停止したときには以下のキーが動作する

n / p 次の/前の表示されている見出しへ。 f / b 次の/前の同じ階層の見出しへ。

u 1つ上の階層へ。 0-9 数値の変数。 q 停止

d 12TT

org-goto-interface変数も参照してください。

#### 2.5 見出し位置と階層の変更

M-RET org-meta-return

Insert a new heading, item or row.

If the command is used at the *beginning* of a line, and if there is a heading or a plain list item (see  $\langle \text{undefined} \rangle$  [Plain lists], page  $\langle \text{undefined} \rangle$ ) at point, the new heading/item is created *before* the current line. When used at the beginning of a regular line of text, turn that line into a heading.

When this command is used in the middle of a line, the line is split and the rest of the line becomes the new item or headline. If you do not want the line to be split, customize org-M-RET-may-split-line.

Calling the command with a C-u prefix unconditionally inserts a new heading at the end of the current subtree, thus preserving its contents. With a double C-u C-u prefix, the new heading is created at the end of the parent subtree instead.

C-RET org-insert-heading-respect-content

Insert a new heading at the end of the current subtree.

M-S-RET org-insert-todo-heading

Insert new TODO entry with same level as current heading. See also the variable org-treat-insert-todo-heading-as-state-change.

C-S-RET org-insert-todo-heading-respect-content

Insert new TODO entry with same level as current heading. Like C-RET, the new headline will be inserted after the current subtree.

TAB org-cycle

In a new entry with no text yet, the first TAB demotes the entry to become a child of the previous one. The next TAB makes it a parent, and so on, all the way to top level. Yet another TAB, and you are back to the initial level.

M-LEFT org-do-promote

Promote current heading by one level.

M-RIGHT org-do-demote

Demote current heading by one level.

M-S-LEFT org-promote-subtree

Promote the current subtree by one level.

M-S-RIGHT org-demote-subtree

Demote the current subtree by one level.

M-UP org-move-subtree-up

Move subtree up (swap with previous subtree of same level).

M-DOWN org-move-subtree-down

Move subtree down (swap with next subtree of same level).

M-h org-mark-element

Mark the element at point. Hitting repeatedly will mark subsequent elements of the one just marked. E.g., hitting M-h on a paragraph will mark it, hitting M-h immediately again will mark the next one.

C-c @ org-mark-subtree

Mark the subtree at point. Hitting repeatedly will mark subsequent subtrees of the same level than the marked subtree.

C-c C-x C-w org-cut-subtree

Kill subtree, i.e., remove it from buffer but save in kill ring. With a numeric prefix argument N, kill N sequential subtrees.

C-c C-x M-w org-copy-subtree

Copy subtree to kill ring. With a numeric prefix argument N, copy the N sequential subtrees.

C-c C-x C-y org-paste-subtree

Yank subtree from kill ring. This does modify the level of the subtree to make sure the tree fits in nicely at the yank position. The yank level can also be specified with a numeric prefix argument, or by yanking after a headline marker like '\*\*\*\*'.

C-y org-yank

Depending on the options org-yank-adjusted-subtrees and org-yank-folded-subtrees, Org's internal yank command will paste subtrees folded and in a clever way, using the same command as C-c C-x C-y. With the default settings, no level adjustment will take place, but the yanked tree will be folded unless doing so would swallow text previously visible. Any prefix argument to this command will force a normal yank to be executed, with the prefix passed along. A good way to force a normal yank is C-u C-y. If you use yank-pop after a yank, it will yank previous kill items plainly, without adjustment and folding.

C-c C-x c org-clone-subtree-with-time-shift

Clone a subtree by making a number of sibling copies of it. You will be prompted for the number of copies to make, and you can also specify if any timestamps in the entry should be shifted. This can be useful, for example, to create a number of tasks related to a series of lectures to prepare. For more details, see the docstring of the command org-clone-subtree-with-time-shift.

C-c C-w org-refile

Refile entry or region to a different location. See  $\langle$  undefined $\rangle$  [Refile and copy], page  $\langle$  undefined $\rangle$ .

C-c ^ org-sort

Sort same-level entries. When there is an active region, all entries in the region will be sorted. Otherwise the children of the current headline are sorted. The command prompts for the sorting method, which can be alphabetically, numerically, by time (first timestamp with active preferred, creation time, scheduled time, deadline time), by priority, by TODO keyword (in the sequence the keywords have been defined in the setup) or by the value of a property. Reverse sorting is possible as well. You can also supply your own function to extract the sorting key. With a C-u prefix, sorting will be case-sensitive.

C-x n s org-narrow-to-subtree

Narrow buffer to current subtree.

C-x n b org-narrow-to-block

Narrow buffer to current block.

C-x n w widen

Widen buffer to remove narrowing.

C-c \* org-toggle-heading

Turn a normal line or plain list item into a headline (so that it becomes a subheading at its location). Also turn a headline into a normal line by removing the stars. If there is an active region, turn all lines in the region into headlines. If the first line in the region was an item, turn only the item lines into headlines. Finally, if the first line is a headline, remove the stars from all headlines in the region.

When there is an active region (Transient Mark mode), promotion and demotion work on all headlines in the region. To select a region of headlines, it is best to place both point and mark at the beginning of a line, mark at the beginning of the first headline, and point at the line just after the last headline to change. Note that when the cursor is inside a table (see \( \)undefined \( \) [Tables], page \( \)undefined \( \)), the Meta-Cursor keys have different functionality.

#### 2.6 ツリーの抽出

An important feature of Org mode is the ability to construct *sparse trees* for selected information in an outline tree, so that the entire document is folded as much as possible, but the selected information is made visible along with the headline structure above it<sup>6</sup>. Just try it out and you will see immediately how it works.

Org mode contains several commands for creating such trees, all these commands can be accessed through a dispatcher:

C-c / org-sparse-tree

This prompts for an extra key to select a sparse-tree creating command.

 $<sup>^6</sup>$  See also the variable  ${\tt org-show-context-detail}$  to decide how much context is shown around each match.

C-c/r or C-c//

org-occur

Prompts for a regexp and shows a sparse tree with all matches. If the match is in a headline, the headline is made visible. If the match is in the body of an entry, headline and body are made visible. In order to provide minimal context, also the full hierarchy of headlines above the match is shown, as well as the headline following the match. Each match is also highlighted; the highlights disappear when the buffer is changed by an editing command<sup>7</sup>, or by pressing C-c C-c. When called with a C-u prefix argument, previous highlights are kept, so several calls to this command can be stacked.

M-g n or M-g M-n

next-error

Jump to the next sparse tree match in this buffer.

M-g p or M-g M-p

previous-error

Jump to the previous sparse tree match in this buffer.

For frequently used sparse trees of specific search strings, you can use the option org-agenda-custom-commands to define fast keyboard access to specific sparse trees. These commands will then be accessible through the agenda dispatcher (see (undefined) [Agenda dispatcher], page (undefined)). For example:

will define the key C-c a f as a shortcut for creating a sparse tree matching the string 'FIXME'.

The other sparse tree commands select headings based on TODO keywords, tags, or properties and will be discussed later in this manual.

To print a sparse tree, you can use the Emacs command ps-print-buffer-with-faces which does not print invisible parts of the document. Or you can use C-c C-e C-v to export only the visible part of the document and print the resulting file.

#### **2.7** エントリー中の階層構造

アウトラインツリーのエントリーの中に、手動でフォーマットしたリストによって、別の構造化された項目を追加することができます。そのリストを使って、チェックボックス (see Section 5.6 [チェックボックス], page 56) のリストを作成する方法が提供されています。Org-mode ではそういうリストの編集をサポートしており、そしてすべてのエクスポート機能 (see Chapter 12 [エクスポート], page 138) はそれらのリストの構文を解析しフォーマット化することができます。

Org-mode では、数字付きのリスト、順序のないリスト、そして記述リストを解釈します。

● 順序のないリストアイテムは、'-'、'+'、または箇条書きの太い中黒としての '\*'<sup>8</sup> が文頭に付きます。

 $<sup>^{7}</sup>$  This depends on the option org-remove-highlights-with-change

<sup>\*\*</sup>を箇条書きの太い中黒として使用するときは、それらの行はインデントが設定されている必要があります。そうでなければ、それらの行は見出しのトップ階層と見なされてしまいます。また、わかりやすいアウトラインビューを得るために、先頭の星印を隠しているときは、プレーンなリストアイテムの場合は、本当の見出しと区別が付かなくなります。簡単に言えば、'\*'をサポートしているもののプレーンなリストアイテムのためには使用しない方が良いかもしれません。

- 順番のあるリストアイテムは、数字のあとにピリオドか右括弧 $^9$ がついた形ではじまっています。 例えば、org-alphabetical-listsを設定することによって、'1.'や'1)' $^{10}$  のように。もしも あなたがリストをこれら以外の値 (e.g. 20) で始めたいと思ったら、そのアイテムの最初の文字  $\mathbb{C}^{20}$  のような文字で始めます。
- 説明 のリストアイテムは順序のないリストアイテムで、説明内容と用語の記述を区別するため に ':: 'といった区分するための記号を含んでいます。

同じリストに属しているアイテムは、最初の行と同じインデントでなければなりません。特に、もしも順番のついたリストが'10.'番に到達したら、その2つの数字の番号は、そのリストの中の他の番号と同じく左寄せで書かれなければなりません。アイテムは、次の行が、そのbullet /数字よりも少ないか等しいインデントの場合の前までで終わります。

A list ends whenever every item has ended, which means before any line less or equally indented than items at top level. It also ends before two blank lines. In that case, all items are closed. Here is an example:

## \*\* Lord of the Rings

My favorite scenes are (in this order)

- 1. The attack of the Rohirrim
- 2. Eowyn's fight with the witch king
  - + this was already my favorite scene in the book
  - + I really like Miranda Otto.
- 3. Peter Jackson being shot by Legolas
  - on DVD only

He makes a really funny face when it happens.

But in the end, no individual scenes matter but the film as a whole. Important actors in this film are:

- Elijah Wood :: He plays Frodo
- Sean Astin :: He plays Sam, Frodo's friend. I still remember him very well from his role as Mikey Walsh in *The Goonies*.

Org supports these lists by tuning filling and wrapping commands to deal with them correctly, and by exporting them properly (see (undefined) [Exporting], page (undefined)). Since indentation is what governs the structure of these lists, many structural constructs like #+BEGIN\_... blocks can be indented to signal that they belong to a particular item.

If you find that using a different bullet for a sub-list (than that used for the current list-level) improves readability, customize the variable org-list-demote-modify-bullet. To get a greater difference of indentation between items and their sub-items, customize org-list-indent-offset.

The following commands act on items when the cursor is in the first line of an item (the line with the bullet or number). Some of them imply the application of automatic rules to

 $<sup>^9</sup>$  org-plain-list-ordered-item-terminatorの設定によって、それらのリストをはずすことが可能です。

<sup>10 &#</sup>x27;a.'、'A.'、あるいは 'a)'といった形式も可能です。通常のテキストの混乱を最小限にするために、1つの文字のみに限定されています。この制限を超えると、数字に替えて bullet が自動的に使用されます。

<sup>&</sup>lt;sup>11</sup> そのアイテムの中にチェックボックスがある場合は、そのクッキーは、チェックボックスの前に置かれなければなりません。もしも活性化されたアルファベットのついたリストがあるならば、[@b] といったカウンターを使用することもできます。

keep list structure intact. If some of these actions get in your way, configure org-list-automatic-rules to disable them individually.

TAB org-cycle

Items can be folded just like headline levels. Normally this works only if the cursor is on a plain list item. For more details, see the variable org-cycle-include-plain-lists. If this variable is set to integrate, plain list items will be treated like low-level headlines. The level of an item is then given by the indentation of the bullet/number. Items are always subordinate to real headlines, however; the hierarchies remain completely separated. In a new item with no text yet, the first TAB demotes the item to become a child of the previous one. Subsequent TABs move the item to meaningful levels in the list and eventually get it back to its initial position.

M-RET org-insert-heading

Insert new item at current level. With a prefix argument, force a new heading (see  $\langle$  undefined $\rangle$ ) [Structure editing], page  $\langle$  undefined $\rangle$ ). If this command is used in the middle of an item, that item is *split* in two, and the second part becomes the new item<sup>12</sup>. If this command is executed *before item's body*, the new item is created *before* the current one.

 $\textit{M-S-RET} \qquad \text{Insert a new item with a checkbox (see $\langle$ undefined$\rangle$). } \\ [\text{Checkboxes}], \text{ page $\langle$ undefined$\rangle$)}.$ 

imec

S-up S-down

Jump to the previous/next item in the current list<sup>13</sup>, but only if org-support-shift-select is off. If not, you can still use paragraph jumping commands like C-UP and C-DOWN to quite similar effect.

M-up

M-down Move the item including subitems up/down<sup>14</sup> (swap with previous/next item of same indentation). If the list is ordered, renumbering is automatic.

M-left

M-right 一つのアイテムのインデントを増減します。子のアイテムを残したままで。

M-S-LEFT M-S-RIGHT

サブアイテムを含んだまま、アイテムのインデントを増減します。初期設定では、アイテムのツリーはカレントのインデントに基づいて選択されます。直接連続してこれらのコマンドが何度も実行されたときは、たとえ新しいインデントが異なる階層であるとわかっていても、初期に選択されたリージョンが使用されます。新しい階層を使用するために、カーソルを移動させるコマンドの連鎖をブレイクする必要があります。

As a special case, using this command on the very first item of a list will move the whole list. This behavior can be disabled by configuring org-list-automatic-rules. The global indentation of a list has no influence on the text after the list.

 $<sup>^{12}</sup>$  If you do not want the item to be split, customize the variable org-M-RET-may-split-line.

 $<sup>^{13}</sup>$  If you want to cycle around items that way, you may customize org-list-use-circular-motion.

<sup>&</sup>lt;sup>14</sup> See org-list-use-circular-motion for a cyclic behavior.

- C-c C-c アイテムの行にチェックボックス (see Section 5.6 [チェックボックス], page 56) がある場合には、チェックボックスの状態を切り替えます。ともかく、リスト全体について bullet とインデントの整合性を検証します。
- C-c Cycle the entire list level through the different itemize/enumerate bullets ('-', '+', '\*', '1.', '1)') or a subset of them, depending on org-plain-list-ordered-item-terminator, the type of list, and its indentation. With a numeric prefix argument N, select the Nth bullet from this list. If there is an active region when calling this, all selected lines are converted to list items. With a prefix argument, selected text is changed into a single item. If the first line already was a list item, any item marker will be removed from the list. Finally, even without an active region, a normal line will be converted into a list item.
- C-c\* Turn a plain list item into a headline (so that it becomes a subheading at its location). See  $\langle$  undefined $\rangle$  [Structure editing], page  $\langle$  undefined $\rangle$ , for a detailed explanation.
- C-c C-\* Turn the whole plain list into a subtree of the current heading. Checkboxes (see \( \text{undefined} \) [Checkboxes], page \( \text{undefined} \)) will become TODO (resp. DONE) keywords when unchecked (resp. checked).

#### S-LEFT/RIGHT

bullet 上、またはアイテムの行のどこかにカーソルが置かれているときに、このコマンドは、また、bullet のスタイルを切り替えます。詳細は org-support-shift-select に依存します。

C-c Sort the plain list. You will be prompted for the sorting method: numerically, alphabetically, by time, by checked status for check lists, or by a custom function.

## 2.8 引き出し

Sometimes you want to keep information associated with an entry, but you normally don't want to see it. For this, Org mode has *drawers*. They can contain anything but a headline and another drawer. Drawers look like this:

\*\* これは見出しです

ここはまだ引き出しの外側です

:DRAWERNAME:

これは引き出しの内側です。

:END:

引き出しの後です。

You can interactively insert drawers at point by calling org-insert-drawer, which is bound to C-c C-x d. With an active region, this command will put the region inside the drawer. With a prefix argument, this command calls org-insert-property-drawer and add a property drawer right below the current headline. Completion over drawer keywords is also possible using  $M-TAB^{15}$ .

Many desktops intercept M-TAB to switch windows. Use C-M-i or ESC TAB instead for completion (see Section 15.1 [Completion], page 229).

Visibility cycling (see (undefined) [Visibility cycling], page (undefined)) on the headline will hide and show the entry, but keep the drawer collapsed to a single line. In order to look inside the drawer, you need to move the cursor to the drawer line and press TAB there. Org mode uses the PROPERTIES drawer for storing properties (see (undefined) [Properties and columns], page (undefined)), and you can also arrange for state change notes (see (undefined) [Tracking TODO state changes], page (undefined)) and clock times (see (undefined) [Clocking work time], page (undefined)) to be stored in a drawer LOGBOOK. If you want to store a quick note in the LOGBOOK drawer, in a similar way to state changes, use

```
C-c C-z LOGBOOK のための引き出しにタイムスタンプ付きのノートを追加します。
```

You can select the name of the drawers which should be exported with org-export-with-drawers. In that case, drawer contents will appear in export output. Property drawers are not affected by this variable: configure org-export-with-properties instead.

#### **2.9** ブロック

Org mode uses begin...end blocks for various purposes from including source code examples (see (undefined) [Literal examples], page (undefined)) to capturing time logging information (see (undefined) [Clocking work time], page (undefined)). These blocks can be folded and unfolded by pressing TAB in the begin line. You can also get all blocks folded at startup by configuring the option org-hide-block-startup or on a per-file basis by using

#+STARTUP: hideblocks
#+STARTUP: nohideblocks

#### 2.10 脚注

Org Mode は脚注の生成をサポートしています。

A footnote is started by a footnote marker in square brackets in column 0, no indentation allowed. It ends at the next footnote definition, headline, or after two consecutive empty lines. The footnote reference is simply the marker in square brackets, inside text. Markers always start with fn:. For example:

```
The Org homepage[fn:1] now looks a lot better than it used to. ...

[fn:1] The link is: https://orgmode.org
```

Org mode extends the number-based syntax to named footnotes and optional inline definition. Here are the valid references:

#### [fn:name]

A named footnote reference, where name is a unique label word, or, for simplicity of automatic creation, a number.

```
[fn:: これは脚注のインラインの定義です]
参照のポイントに直接定義がなされる IATFX のような無記名の脚注。
```

#### [fn:name:a definition]

脚注のインラインでの定義、それはまた、ノートのための名前を明確に規定します。Org-mode は同じノートに対して多重の参照を許容するので、新たな参照を作成するために、[fn:name]を使用することができます。

脚注のラベルは自動的に作成することができます。そうしないならば、あなた自身で名前を作成することができます。これは org-footnote-auto-label変数で操作され、#+STARTUPキーワードに対応します。詳細については変数の説明を参照してください。

以下のコマンドはプロパティを操作する助けとなります。

#### C-c C-x f 脚注の動作のコマンド。

カーソルが脚注参照上にあるときに、定義部分にジャンプします。カーソルが定義部分にあるときに、(最初の)参照されている部分にジャンプします。

Otherwise, create a new footnote. Depending on the option org-footnote-define-inline<sup>16</sup>, the definition will be placed right into the text as part of the reference, or separately into the location determined by the option org-footnote-section.

前置引数と一緒にコマンドが呼び出された場合は、追加のオプションのメニューが提示 されます。

- s Sort the footnote definitions by reference sequence. During editing, Org makes no effort to sort footnote definitions into a particular sequence. If you want them sorted, use this command, which will also move entries according to org-footnote-section. Automatic sorting after each insertion/deletion can be configured using the option org-footnote-auto-adjust.
- r Renumber the simple fn:N footnotes. Automatic renumbering after each insertion/deletion can be configured using the option org-footnote-auto-adjust.
- S Short for first r, then s action.
- n Normalize the footnotes by collecting all definitions (including inline definitions) into a special section, and then numbering them in sequence. The references will then also be numbers.
- d Delete the footnote at point, and all definitions of and references to it.

 $org-footnote-auto-adjust^{17}$  と nofnadjustの変数に依存し、それぞれの挿入と削除のあとに、番号の振り直しと脚注の並び替えが自動的に行われます。

C-c C-c If the cursor is on a footnote reference, jump to the definition. If it is a the definition, jump back to the reference. When called at a footnote location with a prefix argument, offer the same menu as C-c C-x f.

#### C-c C-o or mouse-1/2

Footnote labels are also links to the corresponding definition/reference, and you can use the usual commands to follow these links.

C-c '

C-c' Edit the footnote definition corresponding to the reference at point in a separate window. The window can be closed by pressing C-c'.

 $<sup>^{16}</sup>$  The corresponding in-buffer setting is: #+STARTUP: fninline or #+STARTUP: nofninline

<sup>17</sup> 対応するインバッファのオプションは fnadjustと nofnadjustになります。

## 2.11 Orgstruct マイナーモード

If you like the intuitive way the Org mode structure editing and list formatting works, you might want to use these commands in other modes like Text mode or Mail mode as well. The minor mode orgstruct-mode makes this possible. Toggle the mode with M-x orgstruct-mode RET, or turn it on by default, for example in Message mode, with one of:

```
(add-hook 'message-mode-hook 'turn-on-orgstruct)
(add-hook 'message-mode-hook 'turn-on-orgstruct++)
```

When this mode is active and the cursor is on a line that looks to Org like a headline or the first line of a list item, most structure editing commands will work, even if the same keys normally have different functionality in the major mode you are using. If the cursor is not in one of those special lines, Orgstruct mode lurks silently in the shadows.

When you use orgstruct++-mode, Org will also export indentation and autofill settings into that mode, and detect item context after the first line of an item.

You can also use Org structure editing to fold and unfold headlines in *any* file, provided you defined orgstruct-heading-prefix-regexp: the regular expression must match the local prefix to use before Org's headlines. For example, if you set this variable to ";; " in Emacs Lisp files, you will be able to fold and unfold headlines in Emacs Lisp commented lines. Some commands like org-demote are disabled when the prefix is set, but folding/unfolding will work correctly.

## 2.12 プロパティの表記法

A reference document providing a formal description of Org's syntax is available as a draft on Worg (https://orgmode.org/worg/dev/org-syntax.html), written and maintained by Nicolas Goaziou. It defines Org's core internal concepts such as headlines, sections, affiliated keywords, (greater) elements and objects. Each part of an Org file falls into one of the categories above.

To explore the abstract structure of an Org buffer, run this in a buffer:

```
M-: (org-element-parse-buffer) RET
```

It will output a list containing the buffer's content represented as an abstract structure. The export engine relies on the information stored in this list. Most interactive commands (e.g., for structure editing) also rely on the syntactic meaning of the surrounding context.

You can check syntax in your documents using org-lint command.

## **3** テーブル

Org comes with a fast and intuitive table editor. Spreadsheet-like calculations are supported using the Emacs calc package (see *GNU Emacs Calculator Manual*).

#### 3.1 組み込まれたテーブルエディタ

Org makes it easy to format tables in plain ASCII. Any line with '|' as the first non-whitespace character is considered part of a table. '|' is also the column separator<sup>1</sup>. A table might look like this:

	Name				_	
-		-+-		-+-		-
	Peter	1	1234		17	
-	Anna	-	4321	-	25	

テーブルの中で、TABや RETもしくは C-c C-cを押す度に、テーブルの表示が自動的に更新されます。TABを押すとカーソルが次のフィールドに移ります(RETの場合は次の行へ)。また、テーブルの端もしくは水平ラインの直前の行で押せば、テーブルに新しい行が追加されます。テーブルのインデントは一行目で決定されます。'|-'で開始するどんな行も水平ラインとして解釈され、次にテーブルが更新される時に、水平ラインはテーブル幅いっぱいに拡張されます。つまり、上記のテーブルを作成するためには、次のように入力するだけでよかったのです。

```
|Name|Phone|Age|
|-
```

続いて TABを押してテーブルを整列し、フィールドへの入力を始めます。さらに素早いテーブルの作成方法は、|Name| Phone |Age に続いて C-c RET と入力することです。

When typing text into a field, Org treats DEL, Backspace, and all character keys in a special way, so that inserting and deleting avoids shifting other fields. Also, when typing immediately after the cursor was moved into a new field with TAB, S-TAB or RET, the field is automatically made blank. If this behavior is too unpredictable for you, configure the option org-table-auto-blank-field.

#### Creation and conversion

C-c |

## $\verb|org-table-create-or-convert-from-region||$

Convert the active region to a table. If every line contains at least one TAB character, the function assumes that the material is tab separated. If every line contains a comma, comma-separated values (CSV) are assumed. If not, lines are split at whitespace into fields. You can use a prefix argument to force a specific separator: C-u forces CSV, C-u C-u forces TAB, C-u C-u will prompt for a regular expression to match the separator, and a numeric argument N indicates that at least N consecutive spaces, or alternatively a TAB will be the separator. If there is no active region, this command creates an empty Org table. But it is easier just to start typing, like |Name|Phone|Age RET| - TAB.

## Re-aligning and field motion

C-c C-c

org-table-align

Re-align the table and don't move to another field.

<sup>&</sup>lt;sup>1</sup> To insert a vertical bar into a table field, use \vert or, inside a word abc\vert{}def.

C-c SPC org-table-blank-field

Blank the field at point.

TAB org-table-next-field

Re-align the table, move to the next field. Creates a new row if necessary.

S-TAB org-table-previous-field

Re-align, move to previous field.

RET org-table-next-row

Re-align the table and move down to next row. Creates a new row if necessary. At the beginning or end of a line, RET still does NEWLINE, so it can be used

to split a table.

M-a org-table-beginning-of-field

Move to beginning of the current table field, or on to the previous field.

 $exttt{M-e}$  org-table-end-of-field

Move to end of the current table field, or on to the next field.

Column and row editing

M-LEFT org-table-move-column-left

M-RIGHT org-table-move-column-right

Move the current column left/right.

M-S-LEFT org-table-delete-column

Kill the current column.

M-S-RIGHT org-table-insert-column

Insert a new column to the left of the cursor position.

 $extit{M-UP}$  org-table-move-row-up

M-DOWN org-table-move-row-down

Move the current row up/down.

M-S-UP org-table-kill-row

Kill the current row or horizontal line.

M-S-DOWN org-table-insert-row

Insert a new row above the current row. With a prefix argument, the line is

created below the current one.

C-c - org-table-insert-hline

Insert a horizontal line below current row. With a prefix argument, the line is created above the current line.

C-c RET org-table-hline-and-move

Insert a horizontal line below current row, and move the cursor into the row below that line.

C-c org-table-sort-lines

Sort the table lines in the region. The position of point indicates the column to be used for sorting, and the range of lines is the range between the nearest horizontal separator lines, or the entire table. If point is before the first column, you will be prompted for the sorting column. If there is an active region, the

mark specifies the first line and the sorting column, while point should be in the last line to be included into the sorting. The command prompts for the sorting type (alphabetically, numerically, or by time). You can sort in normal or reverse order. You can also supply your own key extraction and comparison functions. When called with a prefix argument, alphabetic sorting will be case-sensitive.

リージョン

#### C-c C-x M-w

org-table-copy-region

テーブルの矩形領域を特別なクリップボードにコピーします。ポイントとマークは、矩形領域を構成する末端となるフィールドを決定します。アクティブリージョンがなければ、カーソル位置のフィールドだけをコピーします。この処理は、テーブルの水平ラインを無視します。

C-c C-x C-w

org-table-cut-region

テーブルの矩形領域を特別なクリップボードにコピーし、領域内の全てのフィールドを 空にします。つまりこれは「カット」操作です。

C-c C-x C-y

org-table-paste-rectangle

テーブルに矩形領域をペーストします。領域の左上がカーソル位置のフィールドに上書きされます。ペーストする領域に重なるすべてのフィールドは上書きされます。対象とするテーブルに矩形領域が合わないならば、必要に応じてテーブルは拡張されます。この処理は、テーブルの水平ラインを無視します。

M-RET

org-table-wrap-region

カーソル位置でフィールドの文字列を分割し、カーソル以降を一つ下のフィールドの文頭に移動します。アクティブリージョンが存在し、またポイントとマークの両方が同じ列にあるとき、列に含まれるテキストは、与えられた行数を最小化するように改行されます(訳注:余計な空白が消される)。プレフィックスで指定する整数値は、希望する行数に合わせるために使われます(訳注:M 行を N 行に圧縮できます)。もし選択領域がない状態でプレフィックスを指定すると、カーソル位置のフィールドは空白になり、元々あった文字列は一つ上のフィールドの文末に付け加えられます。

計算機能

C-c +

org-table-sum

カーソル位置の列、もしくは、アクティブリージョンで定められた矩形領域に含まれる数値を合計します。計算結果はエコー領域に表示され、C-yで挿入できます。

S-RET

org-table-copy-down

When current field is empty, copy from first non-empty field above. When not empty, copy current field down to next row and move cursor along with it. Depending on the option org-table-copy-increment, integer field values will be incremented during copy. Integers that are too large will not be incremented. Also, a 0 prefix argument temporarily disables the increment. This key is also used by shift-selection and related modes (see \( \)\ undefined \( \)\ [Conflicts], page \( \)\ undefined \( \)\.

#### Miscellaneous

C-c `

org-table-edit-field

Edit the current field in a separate window. This is useful for fields that are not fully visible (see (undefined) [Column width and alignment], page (undefined)).

When called with a C-u prefix, just make the full field visible, so that it can be edited in place. When called with two C-u prefixes, make the editor window follow the cursor through the table and always show the current field. The follow mode exits automatically when the cursor leaves the table, or when you repeat this command with C-u C-u C-c `.

#### M-x org-table-import RET

ファイルをテーブルとしてインポートします。テーブルは、タブもしくは空白で区切られている必要があります。この機能は、例えば、スプレッドシートのテーブルやデータベースの情報をインポートするために利用します。というのも、一般的にこれらのプログラムが、タブ区切りのテキストフィールドを書き出せるためです。このコマンドは、ファイルの内容をバッファに挿入することで処理が始まり、その領域をテーブルに変換します。コンバータに与えられるすべてのプレフィックスは、セパレータを決定するために利用されます。

C-c | org-table-create-or-convert-from-region org-mode のバッファにテーブル状のテキスト(訳注:文字列がタブで区切られているテキスト領域など)をペーストすることでも org-mode のテーブルを作成できます。C-x C-xでバッファにペーストされているテキストを選択して、C-c |で org-mode のテーブルに変換します(前述の  $Creation\ and\ conversion\$ を参照してください)。

#### M-x org-table-export RET

Export the table, by default as a TAB-separated file. Use for data exchange with, for example, spreadsheet or database programs. The format used to export the file can be configured in the option org-table-export-default-format. You may also use properties TABLE\_EXPORT\_FILE and TABLE\_EXPORT\_FORMAT to specify the file name and the format for table export in a subtree. Org supports quite general formats for exported tables. The exporter format is the same as the format used by Orgtbl radio tables, see (undefined) [Translator functions], page (undefined), for a detailed description.

## 3.2 列幅と整列

テーブルの各列の幅はテーブルエディタによって自動的に決定されます。また、列の配置も自動的に 決定されます。具体的には、列の中で数値でないフィールド数に対する、数値(と解釈できる)フィー ルド数の割合に応じて決まります。

Sometimes a single field or a few fields need to carry more text, leading to inconveniently wide columns. Or maybe you want to make a table with several columns having a fixed width, regardless of content. To set the width of a column, one field anywhere in the column may contain just the string '<N>' where 'N' is an integer specifying the width of the column in characters. The next re-align will then set the width of this column to this value.

-	+								+	-
1	- 1							1	<6>	-
-	1	one				1		1	one	-
1	2	two				1	\	2	two	-
-	3	This	is a long	chunk	of text	1	/	3	This=>	-
-	4	four				1		4	four	
1	+					1			+	-

Fields that are wider become clipped and end in the string '=>'. Note that the full text is still in the buffer but is hidden. To see the full text, hold the mouse over the field—a tool-tip window will show the full content. To edit such a field, use the command C-c ' (that is C-c followed by the grave accent). This will open a new window with the full field. Edit it and finish with C-c C-c.

幅が狭められた列を持つテーブルが記述されているファイルを訪問する段階では、まだ文字列の隠蔽は実行されていません。見た目を良くするにはテーブルを整列する必要があります。オプションのorg-startup-align-all-tablesを設定すると、ファイルを訪問するときにファイルに記述された全てのテーブルが自動的に整列されます。ただしスタートアップが少し遅くなります。以下の設定を利用すれば、ファイルごとにこのオプションを設定することもできます。

#+STARTUP: align
#+STARTUP: noalign

If you would like to overrule the automatic alignment of number-rich columns to the right and of string-rich columns to the left, you can use '<r>', '<c>'² or '<1>' in a similar fashion. You may also combine alignment and field width like this: '<r10>'.

書式の設定情報のみを含む行は、ドキュメントをエクスポートするときに自動的に削除されます。

## 3.3 Column groups

When Org exports tables, it does so by default without vertical lines because that is visually more satisfying in general. Occasionally however, vertical lines can be useful to structure a table into groups of columns, much like horizontal lines can do for groups of rows. In order to specify column groups, you can use a special row where the first field contains only '/'. The further fields can either contain '<' to indicate that this column should start a group, '>' to indicate the end of a group, or '<>' (no space between '<' and '>') to make a column a group of its own. Boundaries between column groups will upon export be marked with vertical lines. Here is an example:

							-	~sqrt[4](N)~
1+		Τ.		-		Τ.		+
1/1	<	1			>		<	>
1	1	1	1		1		1	1
2	4	1	8		16		1.4142	1.1892
3	9	1	27		81		1.7321	1.3161
+		-+-		+-		+-		+

#+TBLFM: \$2=\$1^2::\$3=\$1^3::\$4=\$1^4::\$5=sqrt(\$1)::\$6=sqrt(\$qrt((\$1)))

表示させたいすべての垂直ラインの後ろに、列のグループ開始を指定するだけでも十分です。

#### 3.4 Orgtbl マイナーモード

org-mode のテーブルエディタが提供する直感的な編集が好みなら、テキストモードやメールモードのような別のモードで利用したくなるかもしれません。これはマイナーモードの Orgtbl モードが実現

<sup>&</sup>lt;sup>2</sup> Centering does not work inside Emacs, but it does have an effect when exporting to HTML.

してくれます。M-x orgtbl-mode RETでトグルできます。標準で Orgtbl モードを有効にするには、 たとえばメッセージモードのときに、次の設定を使います。

(add-hook 'message-mode-hook 'turn-on-orgtbl)

さらに、いくつかの特別な手順を追加することで、orgtbl モードの任意のシンタックスを使ってテーブルをメンテナンスできます。たとえば、orgtbl モードの簡単さと機能を用いて I $\Delta$ TEX のテーブルを構築できます。これは表計算機能も含んでいます。さらなる詳細は、 $\langle$ undefined $\rangle$ [任意の構文によるテーブル], page  $\langle$ undefined $\rangle$ . を参照してください。

## 3.5 The spreadsheet

org-mode のテーブルエディタは、表計算機能を実装するために Emacs の calcを利用します。異なるフィールドの値を使って様々なフィールドの値を算出するために、Emacs Lisp の書式も評価できます。十分な表計算機能が備わっていますが、org-mode の実装が他の表計算ソフトと全く同等というわけではありません。たとえば、org-mode は列の数式の概念を理解しています。これは、関連する各フィールドに数式をコピーすることなく、ヘッダーを除いた列にある全てのフィールドに適用されます。数式のデバッガもあります。また、数式に含まれる参照に対応するフィールドを、テーブル内でハイライトする機能と、それらの参照に矢印キーで移動する機能を持つ数式エディタがあります。

#### 3.5.1 References

テーブル内部のフィールドを他のフィールドの値を使って計算するに、数式は、他のフィールドか範囲を必ず参照していなければなりません。org-mode では、名前、絶対的または相対的な位置によってフィールドを参照することができます。フィールドの位置がどこかを特定するためには、そのフィールドでC-c?を押してください。もしくは、グリッド表示をトグルするためにC-c}を使用してください。

#### フィールドの参照

数式は別フィールドの値を 2 つの方法で参照できます。他の表計算ソフトと同じように、B3のような文字と数値の組み合わせでフィールドを参照できます。B3は 3 行目の第 2 フィールドを意味しています。However, Org prefers³ to use another, more general representation that looks like this:

#### @row\$column

Column specifications can be absolute like \$1, \$2,...\$N, or relative to the current column (i.e., the column of the field which is being computed) like \$+1 or \$-2. \$< and \$> are immutable references to the first and last column, respectively, and you can use \$>>> to indicate the third column from the right.

The row specification only counts data lines and ignores horizontal separator lines (hlines). Like with columns, you can use absolute row numbers @1, @2,...@N, and row numbers relative to the current row like @+3 or @-1. @< and @> are immutable references the first and last<sup>4</sup> row in the table, respectively. You may also specify the row relative to one of the hlines: @I refers to the first hline, @II to the second, etc. @-I refers to the first

<sup>&</sup>lt;sup>3</sup> Org will understand references typed by the user as 'B4', but it will not use this syntax when offering a formula for editing. You can customize this behavior using the option org-table-use-standard-references.

<sup>&</sup>lt;sup>4</sup> For backward compatibility you can also use special names like \$LR5 and \$LR12 to refer in a stable way to the 5th and 12th field in the last row of the table. However, this syntax is deprecated, it should not be used for new documents. Use @>\$ instead.

such line above the current line, @+I to the first such line below the current line. You can also write @III+2 which is the second data line after the third hline in the table.

@O and \$0 refer to the current row and column, respectively, i.e., to the row/column for the field being computed. Also, if you omit either the column or the row part of the reference, the current row/column is implied.

org-mode の符号無し数値を使った参照は、静的な参照です。つまり、二つの異なるフィールドにある数式の中で同じ参照を利用すれば、常に同じフィールドが参照されます。符号付き数値を使った参照は、動的な参照です。これは、見た目上は同じ参照であっても、数式で計算されるフィールドに依存して、異なるフィールドを参照できるためです。

#### いくつかの例を示します。

@2\$3	2nd row, 3rd column (same as C2)
\$5	column 5 in the current row (same as E&)
@2	current column, row 2
@-1\$-3	the field one row up, three columns to the left
@-I\$2	field just under hline above current row, column 2
@>\$5	field in the last row, in column 5

#### 範囲参照

複数のフィールドを集めた矩形の範囲を参照できます。この範囲は、二つの参照を二つのドット'..'で接続して指定します。二つの参照が共にカーソル位置の行にあるとき、単純に'\$2..\$7'と指定できます。しかし、一方のフィールドが異なる列にあるときは、少なくとも最初に指定するフィールドについて@row\$columnのような省略しない形式を使う必要があります(つまり、正しく解釈させるために参照を'@'で始めなければなりません)。具体例は次のようになります。

\$1\$3	first three fields in the current row
\$P\$Q	range, using column names (see under Advanced)
\$<<<\$>>	start in third column, continue to the last but one
@2\$1@4\$3	6 fields between these two fields (same as A2C4)
@-1\$-2@-1	3 fields in the row above, starting from 2 columns on the left
@III	between first and second hline, short for QIQII

Range references return a vector of values that can be fed into Calc vector functions. Empty fields in ranges are normally suppressed, so that the vector contains only the non-empty fields. For other options with the mode switches 'E', 'N' and examples see Section 3.5.2 [Formula syntax for Calc], page 26.

#### 数式中のフィールドの座標

One of the very first actions during evaluation of Calc formulas and Lisp formulas is to substitute **@#** and **\$#** in the formula with the row or column number of the field where the current result will go to. The traditional Lisp formula equivalents are **org-table-current-dline** and **org-table-current-column**. Examples:

#### if(@# % 2, \$#, string(""))

Insert column number on odd rows, set field to empty on even rows.

## \$2 = '(identity remote(FOO, @@#\$1))

Copy text or values of each row of column 1 of the table named F00 into column 2 of the current table.

### @3 = 2 \* remote(FOO, @1\$\$#)

Insert the doubled value of each column of row 1 of the table named FOO into row 3 of the current table.

For the second/third example, the table named F00 must have at least as many rows/columns as the current table. Note that this is inefficient<sup>5</sup> for large number of rows/columns.

## 名前付き参照

'\$name' is interpreted as the name of a column, parameter or constant. Constants are defined globally through the option org-table-formula-constants, and locally (for the file) through a line like

```
#+CONSTANTS: c=299792458. pi=3.14 eps=2.4e-6
```

Also properties (see \(\)\underset undefined\\) [Properties and columns], page \(\)\underset undefined\\)) can be used as constants in table formulas: for a property ':Xyz:' use the name '\(\)\underset PROP\_Xyz', and the property will be searched in the current outline entry and in the hierarchy above it. If you have the constants.el package, it will also be used to resolve constants, including natural constants like '\(\)\underset h' for Planck's constant, and units like '\(\)\underset m' for kilometers<sup>6</sup>. Column names and parameters can be specified in special table lines. These are described below, see \(\)\underset undefined\\) [Advanced features], page \(\)\underset undefined\\rangle. All names must start with a letter, and further consist of letters and numbers.

#### リモート参照

別テーブルの定数、フィールドそして範囲を参照できます。現在のファイルでも、別ファイルにある場合でも参照できます。シンタックスは、

```
remote(NAME-OR-ID, REF)
```

where NAME can be the name of a table in the current file as set by a #+NAME: Name line before the table. It can also be the ID of an entry, even in a different file, and the reference then refers to the first table in that entry. REF is an absolute field or range reference as described above for example Q3\$3 or \$somename, valid in the referenced table.

Indirection of NAME-OR-ID: When NAME-OR-ID has the format @ROW\$COLUMN it will be substituted with the name or ID found in this field of the current table. For example remote(\$1, @>\$2) => remote(year\_2013, @>\$1). The format B3 is not supported because it can not be distinguished from a plain table name or ID.

# 3.5.2 Formula syntax for Calc

A formula can be any algebraic expression understood by the Emacs Calc package. Note that calc has the non-standard convention that '/' has lower precedence than '\*', so that 'a/b\*c' is interpreted as 'a/(b\*c)'. Before evaluation by calc-eval (see Section "Calling Calc from Your Lisp Programs" in GNU Emacs Calc Manual), variable substitution takes place according to the rules described above. 範囲指定するベクトルは 'vmean'や 'vsum'のような Calc のベクトル関数に直接渡されます。

 $<sup>^{5}</sup>$  The computation time scales as  $O(N^{2})$  because the table named F00 is parsed for each field to be read.

<sup>&</sup>lt;sup>6</sup> constants.el can supply the values of constants in two different unit systems, SI and cgs. Which one is used depends on the value of the variable constants-unit-system. You can use the #+STARTUP options constSI and constcgs to set this value for the current buffer.

A formula can contain an optional mode string after a semicolon. This string consists of flags to influence Calc and other modes during execution. By default, Org uses the standard Calc modes (precision 12, angular units degrees, fraction and symbolic modes off). The display format, however, has been changed to (float 8) to keep tables compact. The default settings can be configured using the option org-calc-default-modes.

モードリスト

p20 Set the internal Calc calculation precision to 20 digits.

n3, s3, e2, f4

Normal, scientific, engineering or fixed format of the result of Calc passed back to Org. Calc formatting is unlimited in precision as long as the Calc calculation precision is greater.

- D, R Degree and radian angle modes of Calc.
- F, S Fraction and symbolic modes of Calc.
- T, t, U Duration computations in Calc or Lisp, see (undefined) [Durations and time values], page (undefined).
- E If and how to consider empty fields. Without 'E' empty fields in range references are suppressed so that the Calc vector or Lisp list contains only the non-empty fields. With 'E' the empty fields are kept. For empty fields in ranges or empty field references the value 'nan' (not a number) is used in Calc formulas and the empty string is used for Lisp formulas. Add 'N' to use 0 instead for both formula types. For the value of a field the mode 'N' has higher precedence than 'E'.
- N Interpret all fields as numbers, use 0 for non-numbers. See the next section to see how this is essential for computations with Lisp formulas. In Calc formulas it is used only occasionally because there number strings are already interpreted as numbers without 'N'.
- L Literal, for Lisp formulas only. See the next section.

Unless you use large integer numbers or high-precision-calculation and -display for floating point numbers you may alternatively provide a 'printf' format specifier to reformat the Calc result after it has been passed back to Org instead of letting Calc already do the formatting<sup>7</sup>. A few examples:

\$1+\$2	Sum of first and second field
\$1+\$2;%.2f	Same, format result to two decimals
exp(\$2)+exp(\$1)	Math functions can be used
\$0;%.1f	Reformat current cell to 1 decimal
(\$3-32)*5/9	Degrees F -> C conversion
\$c/\$1/\$cm	Hz -> cm conversion, using constants.el
tan(\$1);Dp3s1	Compute in degrees, precision 3, display SCI 1
sin(\$1);Dp3%.1e	Same, but use printf specifier for display

<sup>&</sup>lt;sup>7</sup> The 'printf' reformatting is limited in precision because the value passed to it is converted into an 'integer' or 'double'. The 'integer' is limited in size by truncating the signed value to 32 bits. The 'double' is limited in precision to 64 bits overall which leaves approximately 16 significant decimal digits.

taylor (\$3, x=7,2) Taylor series of \$3, at x=7, second degree

Calc also contains a complete set of logical operations, (see Section "Logical Operations" in *GNU Emacs Calc Manual*). For example

- if(\$1 < 20, teen, string(""))
  - "teen" if age \$1 is less than 20, else the Org table result field is set to empty with the empty string.
- if("\$1" == "nan" | | "\$2" == "nan", string(""), \$1 + \$2); E f-1
   Sum of the first two columns. When at least one of the input fields is empty
   the Org table result field is set to empty. 'E' is required to not convert empty
   fields to 0. 'f-1' is an optional Calc format string similar to '%.1f' but leaves
   empty results empty.
- if("\$1..\$7" == "[]", string(""), vmean(\$1..\$7))
   Mean value of a range with empty fields skipped. Every field in the range that
   is empty is skipped. When all fields in the range are empty the mean value is
   not defined and the Org table result field is set to empty. Use this when the
   sample set can have a variable size.
- vmean(\$1..\$7); EN

  To complete the example before: Mean value of a range with empty fields counting as samples with value 0. Use this only when incomplete sample sets should be padded with 0 to the full size.

You can add your own Calc functions defined in Emacs Lisp with defmath and use them in formula syntax for Calc.

## 3.5.3 数式としての Emacs Lisp 形式

It is also possible to write a formula in Emacs Lisp. This can be useful for string manipulation and control structures, if Calc's functionality is not enough.

If a formula starts with an apostrophe followed by an opening parenthesis, then it is evaluated as a Lisp form. The evaluation should return either a string or a number. Just as with calc formulas, you can specify modes and a printf format after a semicolon.

With Emacs Lisp forms, you need to be conscious about the way field references are interpolated into the form. By default, a reference will be interpolated as a Lisp string (in double-quotes) containing the field. If you provide the 'N' mode switch, all referenced elements will be numbers (non-number fields will be zero) and interpolated as Lisp numbers, without quotes. If you provide the 'L' flag, all fields will be interpolated literally, without quotes. I.e., if you want a reference to be interpreted as a string by the Lisp form, enclose the reference operator itself in double-quotes, like "\$3". Ranges are inserted as space-separated fields, so you can embed them in list or vector syntax.

Here are a few examples—note how the 'N' mode is used when we do computations in Lisp:

```
'(concat (substring $1 1 2) (substring $1 0 1) (substring $1 2))

Swap the first two characters of the content of column 1.
```

'(+ \$1 \$2);N

Add columns 1 and 2, equivalent to Calc's \$1+\$2.

'(apply '+ '(\$1..\$4));N

Compute the sum of columns 1 to 4, like Calc's vsum(\$1..\$4).

# 3.5.4 日付と時刻

If you want to compute time values use the T, t, or U flag, either in Calc formulas or Elisp formulas:

Input duration values must be of the form HH:MM[:SS], where seconds are optional. With the T flag, computed durations will be displayed as HH:MM:SS (see the first formula above). With the U flag, seconds will be omitted so that the result will be only HH:MM (see second formula above). Zero-padding of the hours field will depend upon the value of the variable org-table-duration-hour-zero-padding.

With the t flag, computed durations will be displayed according to the value of the option org-table-duration-custom-format, which defaults to 'hours and will display the result as a fraction of hours (see the third formula in the example above).

Negative duration values can be manipulated as well, and integers will be considered as seconds in addition and subtraction.

### 3.5.5 フィールドと範囲の数式

特定のフィールドに数式を割り当てるためには、':='に続けて、直接フィールドに書き込みます。たとえば、':=vsum(@II..III)'のようにします。カーソルがフィールドにある状態で、TABや RET、もしくは C-c C-cを押すと、入力した数式はそのフィールド専用の数式として保存され、評価された後、フィールドの表示が演算結果で置き換わります。

Formulas are stored in a special line starting with #+TBLFM: directly below the table. If you type the equation in the 4th field of the 3rd data line in the table, the formula will look like '@3\$4=\$1+\$2'. When inserting/deleting/swapping columns and rows with the appropriate commands, absolute references (but not relative ones) in stored formulas are modified in order to still reference the same field. To avoid this, in particular in range references, anchor ranges at the table borders (using @<, @>, \$<, \$>), or at hlines using the @I notation. Automatic adaptation of field references does of course not happen if you edit the table structure with normal editing commands—then you must fix the equations yourself.

Instead of typing an equation into the field, you may also use the following command

C-u C-c =

org-table-eval-formula

現在のフィールドに新しい数式をインストールします。このコマンドは、'#+TBLFM:'行から選ばれたデフォルトの数式を表示し、現在のフィールドに適用してから保存します。

多数の別フィールドに数式を割り当てるために、等式の左側は特別な表現を指定できます。範囲数式を入力するショートカットはありません。これを入力するには、数式エディタ(see Section 3.5.8 [数式の編集とデバッグ], page 31)を用いるか、#+TBLFM: 行に直接記述します。

**\$2=** 列の数式。列の全体に対して有効。よく利用されるため、org-mode はこれらの数式を 特別な方法で扱います。Section 3.5.6 [列の数式], page 30. を参照してください。

@3= Row formula, applies to all fields in the specified row. @>= means the last row.

@1\$2..@4\$3=

範囲数式、与えられた矩形領域の全てのフィールドに適用する。これはある行の全てのフィールドではなく一部に対して数式を割り当てることにも利用できます。

**\$name=** 名前付きフィールド(Section 3.5.10 [一歩進んだ機能], page 34 を参照)

## 3.5.6 列の数式

When you assign a formula to a simple column reference like \$3=, the same formula will be used in all fields of that column, with the following very convenient exceptions: (i) If the table contains horizontal separator hlines with rows above and below, everything before the first such hline is considered part of the table *header* and will not be modified by column formulas. Therefore a header is mandatory when you use column formulas and want to add hlines to group rows, like for example to separate a total row at the bottom from the summand rows above. (ii) Fields that already get a value from a field/range formula will be left alone by column formulas. These conditions make column formulas very easy to use.

To assign a formula to a column, type it directly into any field in the column, preceded by an equal sign, like '=\$1+\$2'. When you press TAB or RET or C-c With the cursor still in the field, the formula will be stored as the formula for the current column, evaluated and the current field replaced with the result. If the field contains only '=', the previously stored formula for this column is used. For each column, Org will only remember the most recently used formula. In the #+TBLFM: line, column formulas will look like '\$4=\$1+\$2'. The left-hand side of a column formula cannot be the name of column, it must be the numeric column reference or \$>.

フィールドに数式を書き入れる代わりに、次のコマンドも利用できます。

C-c =

org-table-eval-formula

Install a new formula for the current column and replace current field with the result of the formula. The command prompts for a formula, with default taken from the #+TBLFM line, applies it to the current field and stores it. With a numeric prefix argument(e.g., C-5 C-c =) the command will apply it to that many consecutive fields in the current column.

# 3.5.7 関数

Org has three predefined Emacs Lisp functions for lookups in tables.

(org-lookup-first VAL S-LIST R-LIST &optional PREDICATE)

Searches for the first element S in list S-LIST for which

### (PREDICATE VAL S)

is t; returns the value from the corresponding position in list R-LIST. The default PREDICATE is equal. Note that the parameters VAL and S are passed to PREDICATE in the same order as the corresponding parameters are in the call to org-lookup-first, where VAL precedes S-LIST. If R-LIST is nil, the matching element S of S-LIST is returned.

## (org-lookup-last VAL S-LIST R-LIST &optional PREDICATE)

Similar to org-lookup-first above, but searches for the last element for which PREDICATE is t.

### (org-lookup-all VAL S-LIST R-LIST &optional PREDICATE)

Similar to org-lookup-first, but searches for *all* elements for which PREDICATE is t, and returns *all* corresponding values. This function can not be used by itself in a formula, because it returns a list of values. However, powerful lookups can be built when this function is combined with other Emacs Lisp functions.

If the ranges used in these functions contain empty fields, the E mode for the formula should usually be specified: otherwise empty fields will not be included in S-LIST and/or R-LIST which can, for example, result in an incorrect mapping from an element of S-LIST to the corresponding element of R-LIST.

These three functions can be used to implement associative arrays, count matching cells, rank results, group data etc. For practical examples see this tutorial on Worg (https://orgmode.org/worg/org-tutorials/org-lookups.html).

## 3.5.8 数式の編集とデバッグ

You can edit individual formulas in the minibuffer or directly in the field. Org can also prepare a special buffer with all active formulas of a table. When offering a formula for editing, Org converts references to the standard format (like B3 or D&) if possible. If you prefer to only work with the internal format (like @3\$2 or \$4), configure the option org-table-use-standard-references.

### $C-c = \text{or} \quad C-u \quad C-c =$

org-table-eval-formula

カーソル位置の列やフィールドに結びついている数式をミニバッファで編集する。Section 3.5.6 [列の数式], page 30 と Section 3.5.5 [フィールドと範囲の数式], page 29 を参照してください。

### C-u C-u C-c =

org-table-eval-formula

カーソル位置のフィールドにアクティブな数式(フィールドの数式、もしくは列の数式)を再挿入します。これはフィールドの中でそのまま編集できるようにするためです。ミニバッファでの編集よりも有利なのは、*C-c* ?を使えることです。

- C-c? org-table-field-info テーブルのフィールド内で数式を編集するときに、数式内のカーソルが置かれている参照によって指し示されたフィールドをハイライトする。
- C-c } オーバーレイ (org-table-toggle-coordinate-overlays) を使用して、テーブル の行と列の番号を表示するようにトグルする。テーブルが整列される度に表示が変わり、 C-c C-c で強制的に表示を更新できます。

C-c { 数式のデバッガを ON / OFF する (org-table-toggle-formula-debugger)。

C-c ' org-table-edit-formulas 現在のテーブルにあるすべての数式を、特別なバッファで編集する。バッファでは数式 はラインごとに一つずつ表示される。カーソル位置のフィールドにアクティブな数式が あるとき、カーソルエディタのカーソルはその数式をマークします。この特別なバッファ の中では、org-mode は、カーソルがあるどんなフィールドや範囲参照も自動的にハイライトします。数式の編集、削除、追加が可能で、さらに次のコマンドを利用できます。

 $extit{$C$-$c}$  or  $extit{$C$-$x}$  org-table-fedit-finish

Exit the formula editor and store the modified formulas. With C-u prefix, also apply the new formulas to the entire table.

 $\emph{C-c}$   $\emph{C-q}$  org-table-fedit-abort Exit the formula editor without installing changes.

C-c C-r org-table-fedit-toggle-ref-type Toggle all references in the formula editor between standard (like B3) and internal (like @3\$2).

TAB org-table-fedit-lisp-indent

Pretty-print or indent Lisp formula at point. When in a line containing a Lisp formula, format the formula according to Emacs Lisp rules. Another TAB collapses the formula back again. In the open formula, TAB re-indents just like in Emacs Lisp mode.

M-TAB lisp-complete-symbol Complete Lisp symbols, just like in Emacs Lisp mode.<sup>8</sup>

S-UP/DOWN/LEFT/RIGHT

Shift the reference at point. For example, if the reference is B3 and you press S-RIGHT, it will become C3. This also works for relative references and for hline references.

 $M\!-\!S\!-\!U\!P$  org-table-fedit-line-up  $M\!-\!S\!-\!D\!O\!W\!N$  org-table-fedit-line-down

Move the test line for column formulas in the Org buffer up and down.

 $\mbox{\it M-UP}$  org-table-fedit-scroll-down  $\mbox{\it M-DOWN}$  org-table-fedit-scroll-up Scroll the window displaying the table.

C-c } Turn the coordinate grid in the table on and off.

Making a table field blank does not remove the formula associated with the field, because that is stored in a different line (the #+TBLFM line)—during the next recalculation the field will be filled again. To remove a formula from a field, you have to give an empty reply when prompted for the formula, or to edit the #+TBLFM line.

#+TBLFM 行は直接編集でき、変更した数式が再適用できます。これは#+TBLFM行で C-c C-cを押すか、テーブルで通常の再計算コマンドを発行することで実行できます。

<sup>&</sup>lt;sup>8</sup> Many desktops intercept M-TAB to switch windows. Use C-M-i or ESC TAB instead for completion (see Section 15.1 [Completion], page 229).

# Using multiple #+TBLFM lines

You may apply the formula temporarily. This is useful when you switch the formula. Place multiple #+TBLFM lines right after the table, and then press C-c on the formula to apply. Here is an example:

| x | y | |---+--| | 1 | | | 2 | |

#+TBLFM: \$2=\$1\*1 #+TBLFM: \$2=\$1\*2

Pressing C-c in the line of '#+TBLFM: \$2=\$1\*2' yields:

| x | y | |---+--| | 1 | 2 | | 2 | 4 |

#+TBLFM: \$2=\$1\*1 #+TBLFM: \$2=\$1\*2

Note: If you recalculate this table (with C-u C-c \*, for example), you will get the following result of applying only the first #+TBLFM line.

| x | y | |---+--| | 1 | 1 | | 2 | 2 |

#+TBLFM: \$2=\$1\*1 #+TBLFM: \$2=\$1\*2

### 数式のデバッグ

数式を評価してエラーが生じた時は、フィールドの文字列が '#ERROR'に変わります。バグを見つけるために、変数の代入と計算の過程で何が起こっているかを調べたいならば、Tblメニューにある数式のデバッグを有効にして、計算をやり直してください。たとえば、フィールド内で C-u C-u C-c = RET と押します。すると、詳細な情報が表示されます。

## 3.5.9 テーブルの更新

テーブルの再計算は、通常は自動的に行なわれず、コマンドにより実行する必要があります。Section 3.5.10 [一歩進んだ機能], page 34 を参照してください。少なくとも半自動で計算されます。

テーブルのある行もしくはテーブル全体を再計算するために、次のコマンドを使います。

C-c \* org-table-recalculate

最初に保存されている列の数式を用いて、現在行を左から右に再計算します。現在行の 全てのフィールドと範囲数式が対象です。

## C-u C-c \*

C-u C-c C-c

行ごとにテーブル全体を再計算します。最初の水平ラインの以前にあるどの行も再計算 されません。これらは、テーブルのヘッダーであると想定します。

## C-u C-u C-c \* or C-u C-u C-c C-c

org-table-iterate

計算結果の変化が生じなくなるまでテーブルの再計算を繰り返します。これは、計算の流 れにおいて後段で計算される別フィールドの値を、すでに計算の対象となっているフィー ルドで利用する場合に必要になるでしょう。

### M-x org-table-recalculate-buffer-tables RET

現在のバッファに含まれる全てのフィールドを再計算します

### M-x org-table-iterate-buffer-tables RET

テーブル間の依存関係を収束させるために、カレントバッファの全てのテーブルを反復 計算する。

## 3.5.10 一歩進んだ機能

If you want the recalculation of fields to happen automatically, or if you want to be able to assign  $names^9$  to fields and columns, you need to reserve the first column of the table for special marking characters.

## C-#

org-table-rotate-recalc-marks

第一行の計算用マーカを''、'#'、'\*'、'!'、'\$'の順番に循環します。アクティブリージョンがあれば、その領域のすべてのマーカを変更します。

例として、学生の試験結果を集めて自動再計算の機能を使うテーブルを示します。

	+   Student	+   Prob 1	Prob 2	+   Prob 3	   Total	+    Note
   !   #   ^	   Maximum 	P1     10     m1	P2 15 m2	P3     25     m3		+            10.0   
#   #	Peter   Sam	10	8	23	41	8.2
     ^   \$	+	 			   25.0   at	+  

#+TBLFM: \$6=vsum(\$P1..\$P3)::\$7=10\*\$Tot/\$max;%.1f::\$at=vmean(@-II..@-I);%.1f 重要: このような特別なテーブルについて、C-u C-c \*を使った再計算は、'#'もしくは'\*'でマークされた行、そして、自身に対して数式が適用されているフィールドだけに影響することに気をつけてください。最初のフィールドが空になっている行には、列の数式が適用されません。

マーキング文字には、次のような意味があります。

- '!' 行に含まれるフィールドが、対応する列の名前を表します。これは '\$6'ではなく '\$Tot' として列を参照可能にするためです。
- '^' 上側の列のフィールドについて名前を定義します。この定義を用いることで、テーブルのどのような数式でも、値 '10'を参照するために '\$m1'を利用できます。また、名前を定義するフィールドに数式を割り当てると、'\$name=...' として保存されます。

 $<sup>^{9}</sup>$  Such names must start by an alphabetic character and use only alphanumeric/underscore characters.

- '\_' '~'とほぼ同じだが、下側にある列のフィールドに対する名前を定義します。
- '\$' この行のフィールドは、数式のパラメータを定義します。たとえば、'\$'が指定された行で、フィールドが 'max=50'を含むならば、テーブルの数式は '\$max'を用いて値 '50'を参照できます。パラメーターは、正に定数として動作し、テーブルごとに定義されます。
- '#' 行の中で TAB、RET、または S-TABを押すと、この行のフィールドは自動的に再計算されます。また、この行は C-u C-c \*によるグローバルな再計算に利用されます。このコマンドでは、マークされていない行はそのままに維持されます。
- '\*' C-u C-c \*によるグローバルな再計算にこの行を利用します。ただし、自動的な再計算には利用されません。自動再計算が編集速度を著しく低下させる場合に利用します。
- ' ' Unmarked lines are exempt from recalculation with C-u C-c \*. All lines that should be recalculated should be marked with '#' or '\*'.
- '/' この行はエクスポートしない。表示幅を狭くする '<N>'マーカ、もしくは列のグループ マーカを含む列で使うと便利です。

最後に、素晴らしい calc.elパッケージで何ができるのかを知るという学習欲を刺激するために、一つのテーブルを示します。このテーブルは、いくつかの関数に対して、xにおけるn次のテーラー級数を計算します。

1	_+	+	L	+
İ	Func	l n	l x	Result
#   #   #   #	<pre>  exp(x)   exp(x)   exp(x)   x^2+sqrt(x)   x^2+sqrt(x)</pre>	1   2   3   2   2	x   x   x   x=0   x=1	+
	-+	+	+	+

#+TBLFM: \$5=taylor(\$2,\$4,\$3);n3

# 3.6 Org-Plot

Org-Plot can produce graphs of information stored in org tables, either graphically or in ASCII-art.

## Gnuplotを用いた図形プロット

Org-Plot produces 2D and 3D graphs using Gnuplot http://www.gnuplot.info/ and gnuplot-mode http://xafs.org/BruceRavel/GnuplotMode. To see this in action, ensure that you have both Gnuplot and Gnuplot mode installed on your system, then call C-c " g or M-x org-plot/gnuplot RET on the following table.

#+PLOT: title:"Citas"	ind:1	deps:(3)	type:2d	with:histograms	set:"yrange	[0:]"
-----------------------	-------	----------	---------	-----------------	-------------	-------

Sede					H-index	
						•
Chil	e	l	257.72		21.39	١
Leed	.s		165.77	1	19.68	
Sao	Paolo		71.00	1	11.50	-
Stoc	kholm		134.19	-	14.33	-
More	lia		257.56	1	17.67	1

Notice that Org Plot is smart enough to apply the table's headers as labels. Further control over the labels, type, content, and appearance of plots can be exercised through the #+PLOT: lines preceding a table. See below for a complete list of Org-plot options. The #+PLOT: lines are optional. For more information and examples see the Org-plot tutorial at https://orgmode.org/worg/org-tutorials/org-plot.html.

### プロットオプション

set グラフの描画時に設定されるgnuplotのオプションを指定します。

title プロットのタイトルを設定します。

ind x軸として利用するテーブルの列を指定します。

deps Lisp スタイルのリストで描画するように列を指定します。括弧で括られ、スペースで分離されます。たとえば、dep:(34)とすると、第三と第四列を描画します(デフォルトでは、indの列を除いて他の全ての列が描画されます)。

type プロットの種別 (2d、3dもしくは grid) を指定します。

with withオプションで挿入される、各プロット点の表示種別を指定します。たとえば、lines、points、boxes、implusesなどで、デフォルトは lines。

file プロット結果を外部ファイルに出力したいときに、"path/to/desired/output-file" のように指定します。

labels depsで利用されるラベルのリストを指定します。標準では列のヘッダーが使われます (存在する場合)。

line Gnuplot のスクリプトに、記述内容がそのまま挿入される行を設定します。

map プロットの種別で 3dもしくは gridを指定する場合に、このオプションを tにすると、3dの立体的な傾斜がわかる表示ではなく、平らな表示(訳注:平面に射影した状態)でプロットします。

Specify format of Org mode timestamps as they will be parsed by Gnuplot. Defaults to '%Y-%m-%d-%H:%M:%S'.

Script Gnuplot をさらに制御するために、プロットに利用されるスクリプトファイル(ファイル名をダブルクォーテーションで囲んでください)を指定できます。プロットを始める前に、指定されたスクリプトファイルに含まれるすべての\$datafileの記述は、プロット点を格納するファイル(訳注:org-plot が作る一時的なプロット点データ)へのファイルパスで置き換えられます。仮にこのオプションを指定しても、データファイルの内容に影響を与えることができるように、プロットの種別を制御したくなるかもしれません。

# **ASCII** bar plots

While the cursor is on a column, typing C-c " a or M-x or gtbl-ascii-plot RET create a new column containing an ASCII-art bars plot. The plot is implemented through a regular column formula. When the source column changes, the bar plot may be updated by refreshing the table, for example typing C-u C-c\*.

Sede	Max cites		1
	·	<b></b>	-
Chile	257.72	WWWWWWWWWW	1
Leeds	165.77	WWWWWWh	1
Sao Paolo	71.00	WWW;	1
Stockholm	134.19	WWWWW:	1
Morelia	257.56	HWWWWWWWWW	1
Rochefourchat	0.00		1
# . WDT TM		ΦΟ Ο Ο ΟΕ7	70

#+TBLFM: \$3='(orgtbl-ascii-draw \$2 0.0 257.72 12)

The formula is an elisp call:

(orgtbl-ascii-draw COLUMN MIN MAX WIDTH)

COLUMN is a reference to the source column.

MIN MAX are the minimal and maximal values displayed. Sources values outside this range are displayed as 'too small' or 'too large'.

WIDTH is the width in characters of the bar-plot. It defaults to '12'.

Like HTML, Org provides links inside a file, external links to other files, Usenet articles, emails, and much more.

## **4.1** リンクのフォーマット

Org will recognize plain URL-like links and activate them as clickable links. The general link format, however, looks like this:

Once a link in the buffer is complete (all brackets present), Org will change the display so that 'description' is displayed instead of '[[link] [description]]' and 'link' is displayed instead of '[[link]]'. Links will be highlighted in the face org-link, which by default is an underlined face. You can directly edit the visible part of a link. Note that this can be either the 'link' part (if there is no description) or the 'description' part. To edit also the invisible 'link' part, use C-c C-1 with the cursor on the link.

If you place the cursor at the beginning or just behind the end of the displayed text and press BACKSPACE, you will remove the (invisible) bracket at that location. This makes the link incomplete and the internals are again displayed as plain text. Inserting the missing bracket hides the link internals again. To show the internal structure of all links, use the menu entry Org->Hyperlinks->Literal links.

## 4.2 内部リンク

If the link does not look like a URL, it is considered to be internal in the current file. The most important case is a link like '[[#my-custom-id]]' which will link to the entry with the CUSTOM\_ID property 'my-custom-id'. You are responsible yourself to make sure these custom IDs are unique in a file.

'[[My Target]]'や'[[My Target][Find my target]]'のようなリンクは、現在使用しているファイル内でのテキスト検索になります。

The link can be followed with C-c C-o when the cursor is on the link, or with a mouse click (see  $\langle$ undefined $\rangle$  [Handling links], page  $\langle$ undefined $\rangle$ ). Links to custom IDs will point to the corresponding headline. The preferred match for a text link is a *dedicated target*: the same string in double angular brackets, like '<<My Target>>'.

If no dedicated target exists, the link will then try to match the exact name of an element within the buffer. Naming is done with the #+NAME keyword, which has to be put in the line before the element it refers to, as in the following example

```
#+NAME: My Target
| a | table |
|----+
| of | four cells |
```

If none of the above succeeds, Org will search for a headline that is exactly the link text but may also include a TODO keyword and tags<sup>1</sup>.

 $<sup>^{1}</sup>$  To insert a link targeting a headline, in-buffer completion can be used. Just type a star followed by a few optional letters into the buffer and press M-TAB. All headlines in the current buffer will be offered as completions.

During export, internal links will be used to mark objects and assign them a number. Marked objects will then be referenced by links pointing to them. In particular, links without a description will appear as the number assigned to the marked object<sup>2</sup>. In the following excerpt from an Org buffer

```
- one item
```

- <<target>>another item

Here we refer to item [[target]].

The last sentence will appear as 'Here we refer to item 2' when exported.

In non-Org files, the search will look for the words in the link text. In the above example the search would be for 'my target'.

Following a link pushes a mark onto Org's own mark ring. You can return to the previous position with C-c &. Using this command several times in direct succession goes back to positions recorded earlier.

## **4.2.1** ラジオターゲット

Org can automatically turn any occurrences of certain target names in normal text into a link. So without explicitly creating a link, the text connects to the target radioing its position. Radio targets are enclosed by triple angular brackets. For example, a target '<<My Target>>>' causes each occurrence of 'my target' in normal text to become activated as a link. The Org file is scanned automatically for radio targets only when the file is first loaded into Emacs. To update the target list during editing, press C-c with the cursor on or at a target.

## **4.3** 外部リンク

Org supports links to files, websites, Usenet and email messages, BBDB database entries and links to both IRC conversations and their logs. External links are URL-like locators. They start with a short identifying string followed by a colon. There can be no space after the colon. The following list shows examples for each link type.

http://www.astro.uva.nl/~dominik on the web doi:10.1000/182 DOI for an electronic resource file:/home/dominik/images/jupiter.jpg file, absolute path /home/dominik/images/jupiter.jpg same as above file:papers/last.pdf file, relative path ./papers/last.pdf same as above file:/ssh:myself@some.where:papers/last.pdf file, path on remote machine /ssh:myself@some.where:papers/last.pdf same as above file, jump to line number file:sometextfile::NNN another Org file file:projects.org text search in Org file<sup>3</sup> file:projects.org::some words

When targeting a #+NAME keyword, #+CAPTION keyword is mandatory in order to get proper numbering (see (undefined) [Images and tables], page (undefined)).

<sup>&</sup>lt;sup>3</sup> The actual behavior of the search will depend on the value of the option org-link-search-must-match-exact-headline. If its value is nil, then a fuzzy text search will be done. If it is t, then only the exact headline will be matched, ignoring spaces and cookies. If the value is query-to-create, then an exact headline will be searched; if it is not found, then the user will be queried to create it.

info:org#External links

heading search in Org file<sup>4</sup> file:projects.org::\*task title open in doc-view mode at page docview:papers/last.pdf::NNN id:B7423F4D-2E8A-471B-8810-C40F074717E9 Link to heading by ID Usenet link news:comp.emacs mailto:adent@galaxy.net Mail link MH-E folder link mhe:folder mhe:folder#id MH-E message link rmail:folder RMAIL folder link rmail:folder#id RMAIL message link Gnus group link gnus:group gnus:group#id Gnus article link bbdb:R.\*Stallman BBDB link (with regexp) irc:/irc.com/#emacs/bob IRC link

shell:ls \*.org A shell command
elisp:org-agenda Interactive Elisp command
elisp:(find-file-other-frame "Elisp.org") Elisp form to evaluate

Info node or index link

On top of these built-in link types, some are available through the contrib/ directory (see \(\sqrt{undefined}\) [Installation], page \(\sqrt{undefined}\)). For example, these links to VM or Wanderlust messages are available when you load the corresponding libraries from the contrib/directory:

For customizing Org to add new link types Section A.3 [Adding hyperlink types], page 242.

A link should be enclosed in double brackets and may contain a descriptive text to be displayed instead of the URL (see (undefined) [Link format], page (undefined)), for example:

```
[[https://www.gnu.org/software/emacs/][GNU Emacs]]
```

If the description is a file name or URL that points to an image, HTML export (see  $\langle$ undefined $\rangle$  [HTML export], page  $\langle$ undefined $\rangle$ ) will inline the image as a clickable button. If there is no description at all and the link points to an image, that image will be inlined into the exported HTML file.

Org also finds external links in the normal text and activates them as links. If spaces must be part of the link (for example in 'bbdb:Richard Stallman'), or if you need to remove ambiguities about the end of the link, enclose them in square brackets.

<sup>&</sup>lt;sup>4</sup> Headline searches always match the exact headline, ignoring spaces and cookies. If the headline is not found and the value of tion org-link-search-must-match-exact-headline is query-to-create, then the user will be queried to create it.

## **4.4** リンクの扱い

Org provides methods to create a link in the correct syntax, to insert it into an Org file, and to follow the link.

C-c 1 org-store-link

Store a link to the current location. This is a *global* command (you must create the key binding yourself) which can be used in any buffer to create a link. The link will be stored for later insertion into an Org buffer (see below). What kind of link will be created depends on the current buffer:

## Org mode buffers

For Org files, if there is a '<<target>>' at the cursor, the link points to the target. Otherwise it points to the current headline, which will also be the description<sup>5</sup>.

If the headline has a CUSTOM\_ID property, a link to this custom ID will be stored. In addition or alternatively (depending on the value of org-id-link-to-org-use-id), a globally unique ID property will be created and/or used to construct a link<sup>6</sup>. So using this command in Org buffers will potentially create two links: a human-readable from the custom ID, and one that is globally unique and works even if the entry is moved from file to file. Later, when inserting the link, you need to decide which one to use.

## Email/News clients: VM, Rmail, Wanderlust, MH-E, Gnus

Pretty much all Emacs mail clients are supported. The link will point to the current article, or, in some GNUS buffers, to the group. The description is constructed from the author and the subject.

## Web browsers: Eww, W3 and W3M

Here the link will be the current URL, with the page title as description.

#### Contacts: BBDB

Links created in a BBDB buffer will point to the current entry.

#### Chat: IRC

For IRC links, if you set the option org-irc-link-to-logs to t, a 'file:/' style link to the relevant point in the logs for the current conversation is created. Otherwise an 'irc:/' style link to the user/channel/server under the point will be stored.

### その他のファイル

その他のファイルの場合、リンクは、現在の行を指ししめす検索語句 (see Section 4.7 [検索オプション], page 45) を伴って作成されます。もし、アクティブなリージョンがある場合は、選択された言葉が検索語句の基本となります。自動的に作成されたリンクがうまく働かなかったり、不正確であったりする場合は、カスタム関数を書いて、検索語句を選択したり、特定のファイル形式を検索したりすることがきます。Section 4.8 [カスタム検索], page 45 を参照してください。C-c 1というキーバインディングはひとつの提案に過ぎません Section 1.2 [インストール], page 2)。

<sup>&</sup>lt;sup>5</sup> If the headline contains a timestamp, it will be removed from the link and result in a wrong link—you should avoid putting timestamp in the headline.

<sup>&</sup>lt;sup>6</sup> The library org-id.el must first be loaded, either through org-customize by enabling org-id in org-modules, or by adding (require 'org-id) in your Emacs init file.

アジェンダビュー

カーソルがアジェンダビューにあるときは、作成されたリンクは現在の行が参照するエントリーを指し示します。

C-c C-1

org-insert-link

Insert a link<sup>7</sup>. This prompts for a link to be inserted into the buffer. You can just type a link, using text for an internal link, or one of the link type prefixes mentioned in the examples above. The link will be inserted into the buffer<sup>8</sup>, along with a descriptive text. If some text was selected when this command is called, the selected text becomes the default description.

# Inserting stored links

All links stored during the current session are part of the history for this prompt, so you can access them with UP and DOWN (or M-p/n).

### Completion support

Completion with TAB will help you to insert valid link prefixes like 'https:', including the prefixes defined through link abbreviations (see  $\langle$  undefined $\rangle$  [Link abbreviations], page  $\langle$  undefined $\rangle$ ). If you press RET after inserting only the prefix, Org will offer specific completion support for some link types<sup>9</sup> For example, if you type file RET, file name completion (alternative access: C-u C-c C-1, see below) will be offered, and after bbdb RET you can complete contact names.

### C-u C-c C-1

When C-c C-1 is called with a C-u prefix argument, a link to a file will be inserted and you may use file name completion to select the name of the file. The path to the file is inserted relative to the directory of the current Org file, if the linked file is in the current directory or in a sub-directory of it, or if the path is written relative to the current directory using '../'. Otherwise an absolute path is used, if possible with ' $^{\sim}$ /' for your home directory. You can force an absolute path with two C-u prefixes.

## *C-c C-1* (with cursor on existing link)

When the cursor is on an existing link, C-c C-1 allows you to edit the link and description parts of the link.

### C-c C-o

org-open-at-point

Open link at point. This will launch a web browser for URLs (using browse-url-at-point), run VM/MH-E/Wanderlust/Rmail/Gnus/BBDB for the corresponding links, and execute the command in a shell link. When the cursor is on an internal link, this command runs the corresponding search. When the cursor is on a TAG list in a headline, it creates the corresponding

Note that you don't have to use this command to insert a link. Links in Org are plain text, and you can type or paste them straight into the buffer. By using this command, the links are automatically enclosed in double brackets, and you will be asked for the optional descriptive text.

<sup>&</sup>lt;sup>8</sup> After insertion of a stored link, the link will be removed from the list of stored links. To keep it in the list later use, use a triple *C-u* prefix argument to *C-c C-1*, or configure the option org-keep-stored-link-after-insertion.

<sup>9</sup> This works if a completion function is defined in the ':complete' property of a link in org-link-parameters.

TAGS view. If the cursor is on a timestamp, it compiles the agenda for that date. Furthermore, it will visit text and remote files in 'file:' links with Emacs and select a suitable application for local non-text files. Classification of files is based on file extension only. See option org-file-apps. If you want to override the default application and visit the file with Emacs, use a C-u prefix. If you want to avoid opening in Emacs, use a C-u prefix.

If the cursor is on a headline, but not on a link, offer all links in the headline and entry text. If you want to setup the frame configuration for following links, customize org-link-frame-setup.

RET When org-return-follows-link is set, RET will also follow the link at point.

mouse-2

mouse-1 On links, mouse-1 and mouse-2 will open the link just as C-c C-o would.

mouse-3 mouse-2と同様にリンクを開きますが、ファイルのリンクを強制的に Emacs で開き、内部リンクは別のウインドウ  $^{10}$  で開きます。

C-c C-x C-v

org-toggle-inline-images

Toggle the inline display of linked images. Normally this will only inline images that have no description part in the link, i.e., images that will also be inlined during export. When called with a prefix argument, also display images that do have a link description. You can ask for inline images to be displayed at startup by configuring the variable org-startup-with-inline-images<sup>11</sup>.

C--c~% org-mark-ring-push Push the current position onto the mark ring, to be able to return easily. Com-

mands following an internal link do this automatically.

C-c &

org-mark-ring-goto

Jump back to a recorded position. A position is recorded by the commands following internal links, and by C-c %. Using this command several times in direct succession moves through a ring of previously recorded positions.

C-c C-x C-n C-c C-x C-p

org-next-link
org-previous-link

Move forward/backward to the next link in the buffer. At the limit of the buffer, the search fails once, and then wraps around. The key bindings for this are really too long; you might want to bind this also to C-n and C-p

```
(add-hook 'org-load-hook
  (lambda ()
     (define-key org-mode-map "\C-n" 'org-next-link)
     (define-key org-mode-map "\C-p" 'org-previous-link)))
```

<sup>10</sup> org-display-internal-link-with-indirect-buffer変数を参照してください。

 $<sup>^{11}</sup>$  with corresponding #+STARTUP keywords inlineimages and noinlineimages

# **4.5 Org** 外でのリンク利用

You can insert and follow links that have Org syntax not only in Org, but in any Emacs buffer. For this, you should create two global commands, like this (please select suitable global keys yourself):

```
(global-set-key "\C-c L" 'org-insert-link-global)
(global-set-key "\C-c o" 'org-open-at-point-global)
```

## **4.6** リンクの省略記法

Long URLs can be cumbersome to type, and often many similar links are needed in a document. For this you can use link abbreviations. An abbreviated link looks like this

```
[[リンク語句:タグ][項目名]]
```

where the tag is optional. The *linkword* must be a word, starting with a letter, followed by letters, numbers, '-', and '\_'. Abbreviations are resolved according to the information in the variable org-link-abbrev-alist that relates the linkwords to replacement text. Here is an example:

```
(setq org-link-abbrev-alist
  '(("bugzilla" . "http://10.1.2.9/bugzilla/show_bug.cgi?id=")
    ("url-to-ja" . "http://translate.google.fr/translate?sl=en&tl=ja&u=%h")
    ("google" . "http://www.google.com/search?q=")
    ("gmap" . "http://maps.google.com/maps?q=%s")
    ("omap" . "http://nominatim.openstreetmap.org/search?q=%s&polygon=1")
    ("ads" . "http://adsabs.harvard.edu/cgi-bin/nph-abs_connect?author=%s&db_key=AST")))
```

If the replacement text contains the string '%s', it will be replaced with the tag. Using '%h' instead of '%s' will url-encode the tag (see the example above, where we need to encode the URL parameter.) Using '%(my-function)' will pass the tag to a custom function, and replace it by the resulting string.

If the replacement text doesn't contain any specifier, the tag will simply be appended in order to create the link.

Instead of a string, you may also specify a function that will be called with the tag as the only argument to create the link.

With the above setting, you could link to a specific bug with [[bugzilla:129]], search the web for 'OrgMode' with [[google:OrgMode]], show the map location of the Free Software Foundation [[gmap:51 Franklin Street, Boston]] or of Carsten office [[omap:Science Park 904, Amsterdam, The Netherlands]] and find out what the Org author is doing besides Emacs hacking with [[ads:Dominik,C]].

If you need special abbreviations just for a single Org buffer, you can define them in the file with

```
#+LINK: bugzilla http://10.1.2.9/bugzilla/show_bug.cgi?id=
#+LINK: google http://www.google.com/search?q=%s
```

In-buffer completion (see Section 15.1 [Completion], page 229) can be used after '[' to complete link abbreviations. You may also define a function that implements special (e.g., completion) support for inserting such a link with C-c C-1. Such a function should not accept any arguments, and return the full link with prefix. You can add a completion function to a link like this:

```
(org-link-set-parameters ``type'' :complete #'some-function)
```

# 4.7 Search options in file links

File links can contain additional information to make Emacs jump to a particular location in the file when following a link. This can be a line number or a search option after a double<sup>12</sup> colon. For example, when the command C-c 1 creates a link (see  $\langle$  undefined $\rangle$ ) [Handling links], page  $\langle$  undefined $\rangle$ ) to a file, it encodes the words in the current line as a search string that can be used to find this line back later when following the link with C-c C-o.

Here is the syntax of the different ways to attach a search to a file link, together with an explanation:

```
[[file:~/code/main.c::255]]
[[file:~/xx.org::My Target]]
[[file:~/xx.org::*My Target]]
[[file:~/xx.org::#my-custom-id]]
[[file:~/xx.org::/regexp/]]
255 255 行目へジャンプします。
```

My Target Search for a link target '<My Target>>', or do a text search for 'my target', similar to the search in internal links, see \( \)undefined\\ [Internal links], page \( \)undefined\\ . In HTML export (see \( \)undefined\\ [HTML export], page \( \)undefined\\ ), such a file link will become an HTML reference to the corresponding named anchor in the linked file.

\*My Target

In an Org file, restrict search to headlines.

#my-custom-id

Link to a heading with a CUSTOM\_ID property

/regexp/ Do a regular expression search for regexp. This uses the Emacs command occur to list all matches in a separate window. If the target file is in Org mode, org-occur is used to create a sparse tree with the matches.

As a degenerate case, a file link with an empty file name can be used to search the current file. For example, [[file:::find me]] does a search for 'find me' in the current file, just as '[[find me]]' would.

## 4.8 Custom Searches

The default mechanism for creating search strings and for doing the actual search related to a file link may not work correctly in all cases. For example, BibTEX database files have many entries like 'year="1993" which would not result in good search strings, because the only unique identification for a BibTEX entry is the citation key.

If you come across such a problem, you can write custom functions to set the right search string for a particular file type, and to do the search for the string in the file. Using add-hook, these functions need to be added to the hook variables org-create-file-search-functions and org-execute-file-search-functions. See the docstring for these variables for more information. Org actually uses this mechanism for BibTeX database files, and you can use the corresponding code as an implementation example. See the file org-bibtex.el.

 $<sup>^{12}</sup>$  For backward compatibility, line numbers can also follow a single colon.

# 5 TODO アイテム

Org mode does not maintain TODO lists as separate documents<sup>1</sup>. Instead, TODO items are an integral part of the notes file, because TODO items usually come up while taking notes! With Org mode, simply mark any entry in a tree as being a TODO item. In this way, information is not duplicated, and the entire context from which the TODO item emerged is always present.

Of course, this technique for managing TODO items scatters them throughout your notes file. Org mode compensates for this by providing methods to give you an overview of all the things that you have to do.

# **5.1** 基本的な **TODO** の機能

どの見出しでも 'TODO'という言葉を前につけることで、TODO アイテムとみなします。例えば:

\*\*\* TODO サム フォーチュンに手紙を書く。

TODO 項目を入力するときの最も重要なコマンドは以下のとおりです。

C-c C-t org-todo

現在の TODO の状態を次のように切り替えます。

```
,-> (マーク無し) -> TODO -> DONE --.
```

If TODO keywords have fast access keys (see (undefined) [Fast access to TODO states], page (undefined)), you will be prompted for a TODO keyword through the fast selection interface; this is the default behavior when org-use-fast-todo-selection is non-nil.

The same rotation can also be done "remotely" from agenda buffers with the t command key (see  $\langle undefined \rangle$  [Agenda commands], page  $\langle undefined \rangle$ ).

C-u C-c C-t

When TODO keywords have no selection keys, select a specific keyword using completion; otherwise force cycling through TODO states with no prompt. When org-use-fast-todo-selection is set to prefix, use the fast selection interface.

S-RIGHT / S-LEFT

Select the following/preceding TODO state, similar to cycling. Useful mostly if more than two TODO states are possible (see \(\sqrt{undefined}\) [TODO extensions], page \(\sqrt{undefined}\).\) See also \(\sqrt{undefined}\) [Conflicts], page \(\sqrt{undefined}\), for a discussion of the interaction with shift-selection-mode. See also the variable org-treat-S-cursor-todo-selection-as-state-change.

C-c / t org-show-todo-tree

View TODO items in a *sparse tree* (see (undefined) [Sparse trees], page (undefined)). Folds the entire buffer, but shows all TODO items (with not-DONE state) and the headings hierarchy above them. With a prefix argument (or

Of course, you can make a document that contains only long lists of TODO items, but this is not required.

by using C-c/T), search for a specific TODO. You will be prompted for the keyword, and you can also give a list of keywords like KWD1|KWD2|... to list entries that match any one of these keywords. With a numeric prefix argument N, show the tree for the Nth keyword in the option org-todo-keywords. With two prefix arguments, find all TODO states, both un-done and done.

C-c a t

org-todo-list

Show the global TODO list. Collects the TODO items (with not-DONE states) from all agenda files (see \( \)undefined \( \) [Agenda views], page \( \)undefined \( \)) into a single buffer. The new buffer will be in agenda-mode, which provides commands to examine and manipulate the TODO entries from the new buffer (see \( \)undefined \( \) [Agenda commands], page \( \)undefined \( \)). See \( \)undefined \( \) [Global TODO list], page \( \)undefined \( \), for more information.

S-M-RET

org-insert-todo-heading

Insert a new TODO entry below the current one.

Changing a TODO state can also trigger tag changes. See the docstring of the option org-todo-state-tags-triggers for details.

## 5.2 TODO キーワードの拡張的な使い方

By default, marked TODO entries have one of only two states: TODO and DONE. Org mode allows you to classify TODO items in more complex ways with *TODO keywords* (stored in org-todo-keywords). With special setup, the TODO keyword system can work differently in different files.

注記、タグは見出しと特に TODO アイテムを分類するもう一つの方法です。(see Chapter 6 [タグ], page 59).

## 5.2.1 ワークフローの状態としての TODO キーワード

You can use TODO keywords to indicate different *sequential* states in the process of working on an item, for example<sup>2</sup>:

```
(setq org-todo-keywords
  '((sequence "TODO" "FEEDBACK" "VERIFY" "|" "DONE" "DELEGATED")))
```

 $<sup>^{2}\,</sup>$  Changing this variable only becomes effective after restarting Org mode in a buffer.

## **5.2.2** 種類としての **TODO** キーワード

TODO キーワードの2つ目の使い方として、いろいろな種類のやるべき事として表す使用法です。例えば、項目を「仕事」または「家」を示すようにも使えます。もしくは、複数の人と同じプロジェクトに参加するとき、その中の何人かに彼らの名前を TODO キーワードとして使って直接やるべき事を割り当てたいかもしれません。これは、以下のように設定します。:

```
(setq org-todo-keywords '((type "Fred" "Sara" "Lucy" "|" "DONE")))
```

In this case, different keywords do not indicate a sequence, but rather different types. So the normal work flow would be to assign a task to a person, and later to mark it DONE. Org mode supports this style by adapting the workings of the command C-c  $C-t^3$ . When used several times in succession, it will still cycle through all names, in order to first select the right type for a task. But when you return to the item after some time and execute C-c C-t again, it will switch from any name directly to DONE. Use prefix arguments or completion to quickly select a specific name. You can also review the items of a specific TODO type in a sparse tree by using a numeric prefix to C-c / t. For example, to see all things Lucy has to do, you would use C-3 C-c / t. To collect Lucy's items from all agenda files into a single buffer, you would use the numeric prefix argument as well when creating the global TODO list: C-3 C-c a t.

### 5.2.3 同一ファイル内での複数のキーワードセット

時には、異なるセットのTODOキーワードを同時に使いたい場合があるかもしれません。例えば、通常のTODO/DONEを使用しつつ、バグフィックスのワークフロー、さらにアイテムがキャンセルをされたことを表すもう一つの状態を使用したい場合などです「つまり DONE ではないが、次のアクションが必要ない場合」。その場合の設定は次のようになります:

```
(setq org-todo-keywords
    '((sequence "TODO" "|" "DONE")
          (sequence "REPORT" "BUG" "KNOWNCAUSE" "|" "FIXED")
          (sequence "|" "CANCELED")))
```

The keywords should all be different, this helps Org mode to keep track of which subsequence should be used for a given entry. In this setup, C-c C-t only operates within a subsequence, so it switches from DONE to (nothing) to TODO, and from FIXED to (nothing) to REPORT. Therefore you need a mechanism to initially select the correct sequence. Besides the obvious ways like typing a keyword or using completion, you may also apply the following commands:

C-u C-u C-c C-t

C-S-RIGHT

S-RIGHT

S-LEFT and S-RIGHT and walk through all keywords from all sets, so for example S-RIGHT would switch from DONE to REPORT in the example above. See also  $\langle$ un-

 $<sup>^3\,</sup>$  This is also true for the t command in the agenda buffers.

defined (Conflicts), page (undefined), for a discussion of the interaction with shift-selection-mode.

# 5.2.4 TODO の状態への素早い対応手段

If you would like to quickly change an entry to an arbitrary TODO state instead of cycling through the states, you can set up keys for single-letter access to the states. This is done by adding the selection character after each keyword, in parentheses<sup>4</sup>. For example:

```
(setq org-todo-keywords
    '((sequence "TODO(t)" "|" "DONE(d)")
        (sequence "REPORT(r)" "BUG(b)" "KNOWNCAUSE(k)" "|" "FIXED(f)")
        (sequence "|" "CANCELED(c)")))
```

If you then press C-c C-t followed by the selection key, the entry will be switched to this state. SPC can be used to remove any TODO keyword from an entry.<sup>5</sup>

# 5.2.5 Setting up keywords for individual files

It can be very useful to use different aspects of the TODO mechanism in different files. For file-local settings, you need to add special lines to the file which set the keywords and interpretation for that file only. For example, to set one of the two examples discussed above, you need one of the following lines anywhere in the file:

```
#+TODO: TODO FEEDBACK VERIFY | DONE CANCELED
```

(解釈を明確にするために#+SEQ\_TODOと記入してもいいです。しかし、#+TODOと記入するのと同じです。)、もしくは、

```
#+TYP_TODO: Fred Sara Lucy Mike | DONE 同時に複数のキーワードグループの設定には:
```

```
#+TODO: TODO | DONE
```

#+TODO: REPORT BUG KNOWNCAUSE | FIXED

#+TODO: | CANCELED

間違いなく正しいキーワードを使うため、そのバッファ内で'#+'をタイプして、M-TABを使って補完してください。

Remember that the keywords after the vertical bar (or the last keyword if no bar is there) must always mean that the item is DONE (although you may use a different word). After changing one of these lines, use C-c with the cursor still in the line to make the changes known to Org mode<sup>6</sup>.

### **5.2.6 TODO** キーワードのフェイス

Org mode highlights TODO keywords with special faces: org-todo for keywords indicating that an item still has to be acted upon, and org-done for keywords indicating that an item

 $<sup>^4\,</sup>$  All characters are allowed except  ${\tt @^!},$  which have a special meaning here.

<sup>&</sup>lt;sup>5</sup> Check also the option org-fast-tag-selection-include-todo, it allows you to change the TODO state through the tags interface (see \( \)undefined \( \) [Setting tags], page \( \)undefined \( \)), in case you like to mingle the two concepts. Note that this means you need to come up with unique keys across both sets of keywords.

<sup>&</sup>lt;sup>6</sup> Org mode parses these lines only when Org mode is activated after visiting a file. *C-c C-c* with the cursor in a line starting with '#+' is simply restarting Org mode for the current buffer.

is finished. If you are using more than 2 different states, you might want to use special faces for some of them. This can be done using the option org-todo-keyword-faces. For example:

```
(setq org-todo-keyword-faces
    '(("TODO" . org-warning) ("STARTED" . "yellow")
          ("CANCELED" . (:foreground "blue" :weight bold))))
```

While using a list with face properties as shown for CANCELED *should* work, this does not always seem to be the case. If necessary, define a special face and use that. A string is interpreted as a color. The option org-faces-easy-properties determines if that color is interpreted as a foreground or a background color.

## **5.2.7 TODO** 間の関係

The structure of Org files (hierarchy and lists) makes it easy to define TODO dependencies. Usually, a parent TODO task should not be marked DONE until all subtasks (defined as children tasks) are marked as DONE. And sometimes there is a logical sequence to a number of (sub)tasks, so that one task cannot be acted upon before all siblings above it are done. If you customize the option org-enforce-todo-dependencies, Org will block entries from changing state to DONE while they have children that are not DONE. Furthermore, if an entry has a property ORDERED, each of its children will be blocked until all earlier siblings are marked DONE. Here is an example:

```
* TODO この TODO は、2番が終るまで変更できない。
     ** DONE 1番
     ** TODO 2番
     * Parent
       : PROPERTIES:
       :ORDERED: t
       :END:
     ** TODO a
     ** TODO b, needs to wait for (a)
     ** TODO c, needs to wait for (a) and (b)
  You can ensure an entry is never blocked by using the NOBLOCKING property:
     * This entry is never blocked
       :PROPERTIES:
       : NOBLOCKING: t
       :END:
C-c C-x o
                                                  org-toggle-ordered-property
```

Toggle the ORDERED property of the current entry. A property is used for this behavior because this should be local to the current entry, not inherited like a tag. However, if you would like to track the value of this property with a tag for better visibility, customize the option org-track-ordered-property-

with-tag.

C-u C-u C-u C-c C-t

Change TODO state, circumventing any state blocking.

If you set the option org-agenda-dim-blocked-tasks, TODO entries that cannot be closed because of such dependencies will be shown in a dimmed font or even made invisible in agenda views (see (undefined) [Agenda views], page (undefined)).

You can also block changes of TODO states by looking at checkboxes (see (undefined) [Checkboxes], page (undefined)). If you set the option org-enforce-todo-checkbox-dependencies, an entry that has unchecked checkboxes will be blocked from switching to DONE.

もし、より複雑な依存関係の構造が必要であれば、例えば、異なるツリーやファイルのエントリー同士の依存関係、付属モジュールの org-depend.elを参照してみてください。

## **5.3** 進行記録

Org mode can automatically record a timestamp and possibly a note when you mark a TODO item as DONE, or even each time you change the state of a TODO item. This system is highly configurable; settings can be on a per-keyword basis and can be localized to a file or even a subtree. For information on how to clock working time for a task, see (undefined) [Clocking work time], page (undefined).

## 5.3.1 アイテムの完了

一番基本的な時間の記録機能は、いつ TODO アイテムが完了したかを記録することです。これは、次のようにしてください  $^1$ 

```
(setq org-log-done 'time)
```

Then each time you turn an entry from a TODO (not-done) state into any of the DONE states, a line 'CLOSED: [timestamp]' will be inserted just after the headline. If you turn the entry back into a TODO item through further state cycling, that line will be removed again. If you turn the entry back to a non-TODO state (by pressing *C-c C-t SPC* for example), that line will also be removed, unless you set org-closed-keep-when-no-todo to non-nil. If you want to record a note along with the timestamp, use<sup>2</sup>

```
(setq org-log-done 'note)
```

この設定によりメモの入力を聞いてきます。そのメモは 'Closing Note'という見出しの下に挿入されます。

# 5.3.2 作業の状態変化の追跡

When TODO keywords are used as workflow states (see (undefined) [Workflow states], page (undefined)), you might want to keep track of when a state change occurred and maybe take a note about this change. You can either record just a timestamp, or a timestamped note for a change. These records will be inserted after the headline as an itemized list, newest first<sup>3</sup>. When taking a lot of notes, you might want to get the notes out of the way into a drawer (see (undefined) [Drawers], page (undefined)). Customize org-log-into-drawer to get this behavior—the recommended drawer for this is called LOGBOOK<sup>4</sup>. You can also overrule the setting of this variable for a subtree by setting a LOG\_INTO\_DRAWER property.

Since it is normally too much to record a note for every state, Org mode expects configuration on a per-keyword basis for this. This is achieved by adding special markers '!' (for a timestamp) or '@' (for a note with timestamp) in parentheses after each keyword. For example, with the setting

```
(setq org-todo-keywords
  '((sequence "TODO(t)" "WAIT(w@/!)" "|" "DONE(d!)" "CANCELED(c@)")))
```

To record a timestamp without a note for TODO keywords configured with '0', just type C-c C-c to enter a blank note when prompted.

<sup>&</sup>lt;sup>1</sup> これに対応するイン-バッファ定義は:#+STARTUP: logdone

<sup>&</sup>lt;sup>2</sup> The corresponding in-buffer setting is: #+STARTUP: lognotedone.

<sup>&</sup>lt;sup>3</sup> See the option org-log-states-order-reversed

 $<sup>^4</sup>$  Note that the LOGBOOK drawer is unfolded when pressing SPC in the agenda to show an entry—use C-u SPC to keep it folded here

You not only define global TODO keywords and fast access keys, but also request that a time is recorded when the entry is set to DONE<sup>5</sup>, and that a note is recorded when switching to WAIT or CANCELED. The setting for WAIT is even more special: the '!' after the slash means that in addition to the note taken when entering the state, a timestamp should be recorded when *leaving* the WAIT state, if and only if the *target* state does not configure logging for entering it. So it has no effect when switching from WAIT to DONE, because DONE is configured to record a timestamp only. But when switching from WAIT back to TODO, the '/!' in the WAIT setting now triggers a timestamp even though TODO has no logging configured.

まったく同じ構文を使ってバッファ内のみ有効な設定を使用できます。

```
#+TODO: TODO(t) WAIT(w@/!) | DONE(d!) CANCELED(c@)
```

In order to define logging settings that are local to a subtree or a single item, define a LOGGING property in this entry. Any non-empty LOGGING property resets all logging settings to nil. You may then turn on logging for this specific tree using #+STARTUP keywords like lognotedone or logrepeat, as well as adding state specific settings like TODO(!). For example

- \* TODO 各状態のタイムスタンプだけをログを取る
  - : PROPERTIES:
  - :LOGGING: TODO(!) WAIT(!) DONE(!) CANCELED(!)
  - · FND
- \* TODO WAITに切り替えられ、さらに繰り返されたときだけログを取る
  - :PROPERTIES:
  - :LOGGING: WAIT(@) logrepeat
  - :END:
- \* TODO 何もログを取らない
  - :PROPERTIES:
  - :LOGGING: nil
  - :END:

## 5.3.3 習慣の追跡

Org-mode には、「habits(習慣)」と呼ばれる TODO の特別なカテゴリーの一貫性を記録するための機能があります。habit には、以下の性質があります:

- 1. 変数 org-modulesをカスタマイズすることで habitsモジュールをすでに有効にしている。
- 2. The habit is a TODO item, with a TODO keyword representing an open state.
- 3. プロパティSTYLEに、habitを値として定義してある。
- 4. この TODO は、スケジュールされた日付があり、通常・+スタイルで繰り返される間隔を表します。++スタイルは、時間制限があるような場合に有効でしょう。例えば、週末にしなければいけないことなどです。+スタイルは、遅れることがあるような通常の習慣ではないような場合「例: 週次報告書」に適しています。
- 5. この TODO は、最短から最長の期間を '.+2d/3d'のようなシンタックスで指定できます。この 例の場合、このタスクを少なくともで3日ごとか、多くて2日ごとにこなすと指定しています。

<sup>&</sup>lt;sup>5</sup> It is possible that Org mode will record two timestamps when you are using both org-log-done and state change logging. However, it will never prompt for two notes—if you have configured both, the state change recording note will take precedence and cancel the 'Closing Note'.

6. You must also have state logging for the DONE state enabled (see \( \)undefined \( \) [Tracking TODO state changes], page \( \)undefined \( \)), in order for historical data to be represented in the consistency graph. If it is not enabled it is not an error, but the consistency graphs will be largely meaningless.

上記にある定義が実際にはどのようになるか分かってもらうために、ここに経過の記録情報と共に 実際の habit があります。

### \*\* TODO Shave

SCHEDULED: <2009-10-17 Sat .+2d/4d>

:PROPERTIES: :STYLE: habit

:LAST\_REPEAT: [2009-10-19 Mon 00:36]

: FND:

_	State	"DONE"	from	"TODO"	[2009-10-15	Thu]
_	State	"DONE"	from	"TODO"	[2009-10-12	Mon]
-	State	"DONE"	from	"TODO"	[2009-10-10	Sat]
-	State	"DONE"	from	"TODO"	[2009-10-04	Sun]
-	State	"DONE"	from	"TODO"	[2009-10-02	Fri]
-	State	"DONE"	from	"TODO"	[2009-09-29	Tue]
-	State	"DONE"	from	"TODO"	[2009-09-25	Fri]
-	State	"DONE"	from	"TODO"	[2009-09-19	Sat]
-	State	"DONE"	from	"TODO"	[2009-09-16	Wed]
-	State	"DONE"	from	"TODO"	[2009-09-12	Sat]

この habit が表しているのは、髭剃りを多くて2日ごとか「SCHEDULEDにより指定された日付と繰り返される間隔」、少なくとも4日ごとにする。もし、今日が15日とすると、この habit は、二日後の10月17日にアジェンダに表示されて、4日後の19日には、期限切れとして表示されます。

habits の本当に使い易いところは、定期性グラフと表示されることです。これは、過去にどれぐらいタスクが定期的に完了したかを見るためのものです。このグラフは、毎日過去3週間のタスクが完了したかを色分けして表示します。各色は、以下を表します:

青 まだ、その日までにタスクが完了してなくていい場合。

緑 その日に完了できたはずのタスクの場合。

黄 明日になると期限切れになるタスクの場合。

赤 その日に期限切れのタスクの場合。

日ごとの色分けだけでなく、その日に終わったタスクに関してはアスタリスクでマークされ、感嘆符が、グラフ中の今日の日付の部分に付きます。

アジェンダ上で habits が表示方法を変える幾つかの設定変数があります。

# $\verb|org-habit-graph-column|$

The buffer column at which the consistency graph should be drawn. This will overwrite any text in that column, so it is a good idea to keep your habits' titles brief and to the point.

## org-habit-preceding-days

今日より前に、定期的グラフに何日分の日付を表示するかの指定。

## org-habit-following-days

今日より後に、定期的グラフに何日分の日付表示するかの指定。

org-habit-show-habits-only-for-today

If non-nil, only show habits in today's agenda view. This is set to true by default.

最後に、アジェンダバッファで Kを押すことにより habits を一時的に使用不可にし、まったく表示させないようにできます。もう一度 Kを押すと元にもどります。例えば、もし特定の前後の内容によてのみ必要な habits の場合は、タグのフィルタリングの影響も受けます。

### **5.4** プロパティ

If you use Org mode extensively, you may end up with enough TODO items that it starts to make sense to prioritize them. Prioritizing can be done by placing a *priority cookie* into the headline of a TODO item, like this

\*\*\* TODO [#A] サム フォーチュンに手紙を書く。

By default, Org mode supports three priorities: 'A', 'B', and 'C'. 'A' is the highest priority. An entry without a cookie is treated just like priority 'B'. Priorities make a difference only for sorting in the agenda (see \underlined\) [Weekly/daily agenda], page \underlined\); outside the agenda, they have no inherent meaning to Org mode. The cookies can be highlighted with special faces by customizing org-priority-faces.

Priorities can be attached to any outline node; they do not need to be TODO items.

C-c , Set the priority of the current headline (org-priority). The command prompts for a priority character 'A', 'B' or 'C'. When you press SPC instead, the priority cookie is removed from the headline. The priorities can also be changed "remotely" from the agenda buffer with the , command (see  $\langle \text{undefined} \rangle$  [Agenda commands], page  $\langle \text{undefined} \rangle$ ).

S-UP S-DOWN org-priority-up org-priority-down

現在の見出し優先度を上下する。 $^6$ . これらのキーはタイムスタンプを修正するのにも使うので注意してください。「see Section 8.2 [タイムスタンプの作成], page 74」 shift-selection-modeとの相互利用に関しては次を参照してください。 Section 15.10.2 [衝突], page 239

You can change the range of allowed priorities by setting the options org-highest-priority, org-lowest-priority, and org-default-priority. For an individual buffer, you may set these values (highest, lowest, default) like this (please make sure that the highest priority is earlier in the alphabet than the lowest priority):

#+PRIORITIES: A C B

## 5.5 タスクをサブタスクに細分化する。

通常、大きなタスクは小さくて管理しやすいサブタスクに細分化することをお勧めします。これは TODO アイテムの下にアウトラインツリーをさらに詳細なサブタスクをそのツリーを付けて作成することで可能です。7 すでに完了したサブタスクの進捗状況を表示してさせておくには、'[/]'か'[%]'

 $<sup>^6</sup>$  次のオプションも参照してください。org-priority-start-cycle-with-default.

<sup>&</sup>lt;sup>7</sup> サブタスクをグローバル TODO リストに含めないようにするには、org-agenda-todo-list-sublevelsを参照してください。

ヘッドラインのどこかに挿入してください。これらのクッキーは、サブタスクの TODO の状態が変わるかクッキー上で *C-c C-c*を押すたびに更新されます。例えば:

- \* パーティーの準備をする [33%]
- \*\* TODO 出席者に電話する [1/2]
- \*\*\* TODO ピーター
- \*\*\* DONE サラ
- \*\* TODO 食べ物を買う
- \*\* DONE 近所の人と話す

もし、見出しがチェックボックスと子 TODO を両方持っていた場合、統計クッキーは、あいまいなものになります。この問題を解決するには、COOKIE\_DATAプロパティを 'checkbox'か 'todo'に設定してください。

If you would like to have the statistics cookie count any TODO entries in the subtree (not just direct children), configure org-hierarchical-todo-statistics. To do this for a single subtree, include the word 'recursive' into the value of the COOKIE\_DATA property.

- \* 親キャプチャ統計 [2/20]
  - : PROPERTIES:
  - :COOKIE\_DATA: todo recursive
  - :END:

もしすべての子タスクが終了後、TODO エントリーを自動的に DONE に切り替えたい場合は、 以下の設定を行なってください:

```
(defun org-summary-todo (n-done n-not-done)
   "すべてのサブツリーが終了すると DONE に切り替え、その他の場合は、TODO になする。"
```

```
(let (org-log-done org-log-states) ; 記録「logging」を終了
(org-todo (if (= n-not-done 0) "DONE" "TODO"))))
(add-hook 'org-after-todo-statistics-hook 'org-summary-todo)
```

その他の方法としては、チェックボックスをつかって「階層化された」多量のサブタスクがいくつあるか調べることもできます。「see Section 5.6 [チェックボックス], page 56」

### **5.6** チェックボックス

Every item in a plain list<sup>8</sup> (see  $\langle$  undefined $\rangle$  [Plain lists], page  $\langle$  undefined $\rangle$ ) can be made into a checkbox by starting it with the string '[]'. This feature is similar to TODO items (see  $\langle$  undefined $\rangle$  [TODO items], page  $\langle$  undefined $\rangle$ ), but is more lightweight. Checkboxes are not included in the global TODO list, so they are often great to split a task into a number of simple steps. Or you can use them in a shopping list. To toggle a checkbox, use C-c C-c, or use the mouse (thanks to Piotr Zielinski's org-mouse.el).

以下は、チェックボックスリストの例です:

- \* TODO パーティーの準備 [2/4]
  - [-] みんなに連絡 [1/3]
    - [] ピーター
    - [X] サラ
    - [] サム

With the exception of description lists. But you can allow it by modifying org-list-automatic-rules accordingly.

- [X] 食べ物を注文
- [] どんな音楽を掛けるか考える
- [X] 近所の人と話す

チェックボックスは、階層化に対応しています。そのため、もしあるチェックボックス下の項目が複数のチェックボックスである場合、チェックボックスが全くチェックされていないか、いくつかされているか、全てされているかによりその内の一つのチェックボックスをチェックした状態にすると親チェックボックスに影響します。

The '[2/4]' and '[1/3]' in the first and second line are cookies indicating how many checkboxes present in this entry have been checked off, and the total number of checkboxes present. This can give you an idea on how many checkboxes remain, even without opening a folded entry. The cookies can be placed into a headline or into (the first line of) a plain list item. Each cookie covers checkboxes of direct children structurally below the headline/item on which the cookie appears<sup>9</sup>. You have to insert the cookie yourself by typing either '[/]' or '[%]'. With '[/]' you get an 'n out of m' result, as in the examples above. With '[%]' you get information about the percentage of checkboxes checked (in the above example, this would be '[50%]' and '[33%]', respectively). In a headline, a cookie can count either checkboxes below the heading or TODO states of children, and it will display whatever was changed last. Set the property COOKIE\_DATA to either 'checkbox' or 'todo' to resolve this issue

アウトラインノードに ORDEREDプロパティが設定されている場合、チェックボックスは、連続でチェックされていなければなりません。上部のチェックボックスがチェックされていない状態でその下部のチェックボックスをチェックしようとするとエラーがスローされます

以下のコマンドでチェックボックスを操作できます:

# C-c C-c

## org-toggle-checkbox

Toggle checkbox status or (with prefix arg) checkbox presence at point. With a single prefix argument, add an empty checkbox or remove the current one<sup>10</sup>. With a double prefix argument, set it to '[-]', which is considered to be an intermediate state.

### C-c C-x C-b

## org-toggle-checkbox

Toggle checkbox status or (with prefix arg) checkbox presence at point. With double prefix argument, set it to '[-]', which is considered to be an intermediate state.

- アクティブなリージョンがある場合は、そのリージョンの最初のチェックボックスをトグルします。そして残りのボックスを最初のボックスと同じ状態にします。前置引数と使用すると、リージョン内のすべてのチェックボックスを作成するか削除します。
- If the cursor is in a headline, toggle the state of the first checkbox in the region between this headline and the next—so not the entire subtree—and propagate this new state to all other checkboxes in the same area.
- アクティブなリージョンがなければ、その場所のチェックボックスをトグルします。

<sup>&</sup>lt;sup>9</sup> Set the option org-checkbox-hierarchical-statistics if you want such cookies to count all checkboxes below the cookie, not just those belonging to direct children.

 $<sup>^{10}</sup>$  C-u C-c before the first bullet in a list with no checkbox will add checkboxes to the rest of the list.

### M-S-RET

## org-insert-todo-heading

新しい項目をチェックボックスと共に挿入します。これは、プレーンなリスト (see Section 2.7 [エントリー中の階層構造], page 12) 内にカーソルがすでにある場合にのみ動作します。

### C-c C-x o

## org-toggle-ordered-property

Toggle the ORDERED property of the entry, to toggle if checkboxes must be checked off in sequence. A property is used for this behavior because this should be local to the current entry, not inherited like a tag. However, if you would like to *track* the value of this property with a tag for better visibility, customize org-track-ordered-property-with-tag.

## C-c #

## org-update-statistics-cookies

Update the statistics cookie in the current outline entry. When called with a C-u prefix, update the entire file. Checkbox statistic cookies are updated automatically if you toggle checkboxes with C-c C-c and make new ones with M-S-RET. TODO statistics cookies update when changing TODO states. If you delete boxes/entries or add/change them by hand, use this command to get things back into sync.

Chapter 6: タグ

# 6 gj

An excellent way to implement labels and contexts for cross-correlating information is to assign *tags* to headlines. Org mode has extensive support for tags.

Every headline can contain a list of tags; they occur at the end of the headline. Tags are normal words containing letters, numbers, '\_', and '@'. Tags must be preceded and followed by a single colon, e.g., ':work:'. Several tags can be specified, as in ':work:urgent:'. Tags will by default be in bold face with the same color as the headline. You may specify special faces for specific tags using the option org-tag-faces, in much the same way as you can for TODO keywords (see \undefined\) [Faces for TODO keywords], page \undefined\).

# 6.1 タグの継承

Tags make use of the hierarchical structure of outline trees. If a heading has a certain tag, all subheadings will inherit the tag as well. For example, in the list

\* Meeting with the French group :work:

\*\* Summary by Frank :boss:notes:

\*\*\* TODO Prepare slides for him :action:

the final heading will have the tags ':work:', ':boss:', ':notes:', and ':action:' even though the final heading is not explicitly marked with all those tags. You can also set tags that all entries in a file should inherit just as if these tags were defined in a hypothetical level zero that surrounds the entire file. Use a line like this<sup>1</sup>:

```
#+FILETAGS: :Peter:Boss:Secret:
```

To limit tag inheritance to specific tags, use org-tags-exclude-from-inheritance. To turn it off entirely, use org-use-tag-inheritance.

When a headline matches during a tags search while tag inheritance is turned on, all the sublevels in the same tree will (for a simple match form) match as well<sup>2</sup>. The list of matches may then become very long. If you only want to see the first tags match in a subtree, configure org-tags-match-list-sublevels (not recommended).

Tag inheritance is relevant when the agenda search tries to match a tag, either in the tags or tags-todo agenda types. In other agenda types, org-use-tag-inheritance has no effect. Still, you may want to have your tags correctly set in the agenda, so that tag filtering works fine, with inherited tags. Set org-agenda-use-tag-inheritance to control this: the default value includes all agenda types, but setting this to nil can really speed up agenda generation.

## 6.2 タグの設定

簡単に見出しの最後へタグは入力することができます。コロンの次に M-TABでタグの補完をします。他にもタグの入力のための特別なコマンドが以下に続きます:

C-c C-q org-set-tags-command

Enter new tags for the current headline. Org mode will either offer completion
or a special single-key interface for setting tags, see below. After pressing RET,

 $<sup>^{1}</sup>$  As with all these in-buffer settings, pressing C-c C-c activates any changes in the line.

<sup>&</sup>lt;sup>2</sup> This is only true if the search does not involve more complex tests including properties (see \( \)undefined \( \) [Property searches], page \( \)undefined \( \)).

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the tags will be inserted and aligned to  $\operatorname{org-tags-column}$ . When called with a C-u prefix, all tags in the current buffer will be aligned to that column, just to make things look nice. TAGS are automatically realigned after promotion, demotion, and TODO state changes (see  $\langle \operatorname{undefined} \rangle$  [TODO basics], page  $\langle \operatorname{undefined} \rangle$ ).

C-c C-c

org-set-tags-command

When the cursor is in a headline, this does the same as C-c C-q.

Org supports tag insertion based on a *list of tags*. By default this list is constructed dynamically, containing all tags currently used in the buffer. You may also globally specify a hard list of tags with the variable org-tag-alist. Finally you can set the default tags for a given file with lines like

#+TAGS: @work @home @tennisclub
#+TAGS: laptop car pc sailboat

もし変数 org-tag-alistにタグを設定することでタグリストがグローバルに定義されていたとして、そのリストよりもファイルから生成された動的なタグリストを利用したければ、次のような空のTAGS オプションをファイルに指定します

### #+TAGS:

If you have a preferred set of tags that you would like to use in every file, in addition to those defined on a per-file basis by TAGS option lines, then you may specify a list of tags with the variable org-tag-persistent-alist. You may turn this off on a per-file basis by adding a #+STARTUP option line to that file:

## #+STARTUP: noptag

By default Org mode uses the standard minibuffer completion facilities for entering tags. However, it also implements another, quicker, tag selection method called *fast tag selection*. This allows you to select and deselect tags with just a single key press. For this to work well you should assign unique, case-sensitive, letters to most of your commonly used tags. You can do this globally by configuring the variable <code>org-tag-alist</code> in your Emacs init file. For example, you may find the need to tag many items in different files with ':@home:'. In this case you can set something like:

(setq org-tag-alist '(("@work" . ?w) ("@home" . ?h) ("laptop" . ?l))) もしそのタグが作業中のファイルにおいてのみふさわしいのであれば、かわりに次のように TAGS オプションを書くこともできます。

#+TAGS: @work(w) @home(h) @tennisclub(t) laptop(l) pc(p) タグインタフェースはスプラッシュウィンドウにとりうるタグを表示します。もし特定のタグの後に新しい行から始めたいのであればタグリストに'\n'を挿入します。

#+TAGS: @work(w) @home(h) @tennisclub(t) \n laptop(l) pc(p) もしくは2行に分けて書きます。

#+TAGS: @work(w) @home(h) @tennisclub(t)
#+TAGS: laptop(l) pc(p)

また次のようにブレース (波括弧 $\{\}$ ) を使うことで相互排除したグループにタグをまとめることもできます。

Chapter 6: タグ

```
#+TAGS: { @work(w) @home(h) @tennisclub(t) } laptop(l) pc(p)
```

これは '@work'、'@home'、'@tennisclub'のうち少なくとも一つは選択されることを意図しています。そのようなグループを複数持つことも可能です。

これらの変更を有効にするために、その行にカーソルを置いて C-c C-cを押すことを忘れないようにしてください。

To set these mutually exclusive groups in the variable org-tag-alist, you must use the dummy tags :startgroup and :endgroup instead of the braces. Similarly, you can use :newline to indicate a line break. The previous example would be set globally by the following configuration:

If at least one tag has a selection key then pressing C-c C-c will automatically present you with a special interface, listing inherited tags, the tags of the current headline, and a list of all valid tags with corresponding keys<sup>3</sup>.

アサインされたキーを押すことで現在の行にタグが追加または削除されます。相互排除グループのタグを選択することでそのグループの他のタグは無効になります。

In this interface, you can also use the following special keys:

TAB たとえあらかじめ定義されていないタグでも、ミニバッファでタグを入力します。バッファ内の全てのタグを補完することができます。コンマで区切ることで複数のタグを追加することも可能です。

SPC この行のタグを全てクリアします。

RET 変更された集合を確定します。

*C-g* 変更を破棄します。

q もし qがタグにアサインされていなければ C-gのように変更を破棄します。

! 相互排除しているタグのグルーピングを無効にします。これはそのグループ内のタグを (例外的に)複数個、タグづけるときに使います。

C-c Toggle auto-exit after the next change (see below). If you are using expert mode, the first C-c will display the selection window.

このメソッド (特別なインタフェース) であなたはとても少ないタイプで見出しにタグをつけられます。上記の設定で、現在のタグをクリアして、' $^{\circ}$ Chome'、' $^{\circ}$ 1aptop'、' $^{\circ}$ pc'のタグをつけるには次のように入力します:  $^{\circ}$ C- $^{$ 

If you find that most of the time you need only a single key press to modify your list of tags, set org-fast-tag-selection-single-key. Then you no longer have to press RET to exit fast tag selection—it will immediately exit after the first change. If you then occasionally need more keys, press C-c to turn off auto-exit for the current tag selection

 $<sup>^{3}</sup>$  Keys will automatically be assigned to tags which have no configured keys.

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process (in effect: start selection with C-c C-c instead of C-c C-c). If you set the variable to the value **expert**, the special window is not even shown for single-key tag selection, it comes up only when you press an extra C-c.

### **6.3** タグの階層

Tags can be defined in hierarchies. A tag can be defined as a *group tag* for a set of other tags. The group tag can be seen as the "broader term" for its set of tags. Defining multiple *group tags* and nesting them creates a tag hierarchy.

One use-case is to create a taxonomy of terms (tags) that can be used to classify nodes in a document or set of documents.

When you search for a group tag, it will return matches for all members in the group and its subgroups. In an agenda view, filtering by a group tag will display or hide headlines tagged with at least one of the members of the group or any of its subgroups. This makes tag searches and filters even more flexible.

You can set group tags by using brackets and inserting a colon between the group tag and its related tags—beware that all whitespaces are mandatory so that Org can parse this line correctly:

```
#+TAGS: [ GTD : Control Persp ]
```

In this example, 'GTD' is the *group tag* and it is related to two other tags: 'Control', 'Persp'. Defining 'Control' and 'Persp' as group tags creates a hierarchy of tags:

```
#+TAGS: [ Control : Context Task ]
#+TAGS: [ Persp : Vision Goal AOF Project ]
```

That can conceptually be seen as a hierarchy of tags:

- GTD
  - Persp
    - Vision
    - Goal
    - AOF
    - Project
  - Control
    - Context
    - Task

You can use the :startgrouptag, :grouptags and :endgrouptag keyword directly when setting org-tag-alist directly:

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```
("Task")
(:endgrouptag)))
```

The tags in a group can be mutually exclusive if using the same group syntax as is used for grouping mutually exclusive tags together; using curly brackets.

```
#+TAGS: { Context : @Home @Work @Call }
```

When setting org-tag-alist you can use :startgroup & :endgroup instead of :startgrouptag & :endgrouptag to make the tags mutually exclusive.

Furthermore, the members of a group tag can also be regular expressions, creating the possibility of a more dynamic and rule-based tag structure. The regular expressions in the group must be specified within  $\{\ \}$ . Here is an expanded example:

```
#+TAGS: [ Vision : {V@.+} ]
#+TAGS: [ Goal : {G@.+} ]
#+TAGS: [ AOF : {AOF@.+} ]
#+TAGS: [ Project : {P@.+} ]
```

Searching for the tag 'Project' will now list all tags also including regular expression matches for 'P@.+', and similarly for tag searches on 'Vision', 'Goal' and 'AOF'. For example, this would work well for a project tagged with a common project-identifier, e.g. 'P@2014\_OrgTags'.

If you want to ignore group tags temporarily, toggle group tags support with org-toggle-tags-groups, bound to C-c C-x q. If you want to disable tag groups completely, set org-group-tags to nil.

### 6.4 タグの検索

一度タグシステムが設定されると、関連する情報を特殊なリストに集めるのに使われます。

 $C-c / m \text{ or } C-c \setminus$ 

org-match-sparse-tree

タグ検索にマッチした全てのツリーを抽出する。C-uのプレフィックスをつけて呼び出すことで、TODO の見出しのみに限定する。

C-c a m org-tags-view 全てのアジェンダファイルにおいてタグにマッチしたものの一覧を作成する。See Section 10.3.3 [タグとプロパティとのマッチング], page 107.

C-c a M org-tags-view

Create a global list of tag matches from all agenda files, but check only TODO items and force checking subitems (see the option org-tags-match-list-sublevels).

These commands all prompt for a match string which allows basic Boolean logic like '+boss+urgent-project1', to find entries with tags 'boss' and 'urgent', but not 'project1', or 'Kathy|Sally' to find entries tagged as 'Kathy' or 'Sally'. The full syntax of the search string is rich and allows also matching against TODO keywords, entry levels and properties. For a complete description with many examples, see (undefined) [Matching tags and properties], page (undefined).

# 7 プロパティ (属性) とカラム (列)

A property is a key-value pair associated with an entry. Properties can be set so they are associated with a single entry, with every entry in a tree, or with every entry in an Org mode file.

プロパティはエントリーに関連付けられたキーと値を持つペアのあつまりです。Org-modeでは、プロパティのための主要なアプリケーションが2つあります。1つ目は、プロパティはタグのようですが値を持つことです。2つ目は、Org-modeのバッファで(とても基本的な)データベース機能を実装するためにプロパティを使えることです。1つ目のアプリケーションの例に、ソフトウェアのリリース計画とバグを文章化するファイルを管理することを想像して下さい。:release\_1:、:release\_2:のようなタグを使う代わりに、:Release:というプロパティを使い、異なるサブツリーの中に1.0や2.0のような異なる値を持たせれば良いのです。プロパティの2つ目のアプリケーションの例に、音楽CDのトラックを管理する事を想像して下さい。そこではアルバム名、アーティスト名、リリース日、トラックの数などがプロパティとなるでしょう。

プロパティはカラムビューで便利に編集、閲覧できます (see Section 7.5 [カラムビュー], page 67)。

# **7.1** プロパティの表記法

Properties are key-value pairs. When they are associated with a single entry or with a tree they need to be inserted into a special drawer (see \( \)undefined \( \) [Drawers], page \( \)undefined \( \)) with the name PROPERTIES, which has to be located right below a headline, and its planning line (see \( \)undefined \( \) [Deadlines and scheduling], page \( \)undefined \( \)) when applicable. Each property is specified on a single line, with the key (surrounded by colons) first, and the value after it. Keys are case-insensitive. Here is an example:

- \* CD collection
- \*\* Classic
- \*\*\* Goldberg Variations
  - :PROPERTIES:
  - :Title: Goldberg Variations
  - :Composer: J.S. Bach :Artist: Glen Gould
  - :Publisher: Deutsche Grammophon
  - :NDisks: 1
  - :END:

Depending on the value of org-use-property-inheritance, a property set this way will either be associated with a single entry, or the subtree defined by the entry, see (undefined) [Property inheritance], page (undefined).

プロパティ': Xyz\_ALL:'のように設定する事で、特定なプロパティ': Xyz:'の許容値を定義できます。この特別なプロパティは、もしレベル1のエントリに設定されたならば全てのツリーに適用されるように継承されます。許容値を定義すると、対応するプロパティの設定が簡単になり、入力ミスを防ぐ事ができます。CD コレクションの例では、以下のように1つのボックスの中に発売元とディスクの数をあらかじめ定義できます。

- \* CD collection
  - : PROPERTIES:
  - :NDisks\_ALL: 1 2 3 4
  - :Publisher\_ALL: "Deutsche Grammophon" Philips EMI

#### :END:

1つのファイル全体で継承されるプロパティを設定したいならば、以下の行のようにします。

```
#+PROPERTY: NDisks_ALL 1 2 3 4
```

Contrary to properties set from a special drawer, you have to refresh the buffer with C-c C-c to activate this change.

If you want to add to the value of an existing property, append a + to the property name. The following results in the property var having the value "foo=1 bar=2".

```
#+PROPERTY: var foo=1
#+PROPERTY: var+ bar=2
```

It is also possible to add to the values of inherited properties. The following results in the genres property having the value "Classic Baroque" under the Goldberg Variations subtree.

\* CD collection

\*\* Classic

:PROPERTIES:

:GENRES: Classic

:END:

\*\*\* Goldberg Variations

:PROPERTIES:

:Title: Goldberg Variations

:Composer: J.S. Bach :Artist: Glen Gould

:Publisher: Deutsche Grammophon

:NDisks: 1

:GENRES+: Baroque

:END:

Note that a property can only have one entry per Drawer.

グローバル変数 org-global-propertiesに設定するプロパティの値は全ての Org-mode のファイルに継承されます。

以下のコマンドはプロパティを操作する助けとなります。

M-TAB pcomplete

After an initial colon in a line, complete property keys. All keys used in the current file will be offered as possible completions.

C-c C-x p org-set-property

Set a property. This prompts for a property name and a value. If necessary, the property drawer is created as well.

# C-u M-x org-insert-drawer RET

Insert a property drawer into the current entry. The drawer will be inserted early in the entry, but after the lines with planning information like deadlines.

C-c C-c org-property-action

With the cursor in a property drawer, this executes property commands.

C-c C-c s

org-set-property

Set a property in the current entry. Both the property and the value can be inserted using completion.

S-RIGHT org-property-next-allowed-value S-LEFT org-property-previous-allowed-value

Switch property at point to the next/previous allowed value.

C-c C-c d org-delete-property Remove a property from the current entry.

C-c C-c D org-delete-property-globally Globally remove a property, from all entries in the current file.

C-c C-c c org-compute-property-at-point Compute the property at point, using the operator and scope from the nearest column format definition.

# **7.2** スペシャルプロパティ

Special properties provide an alternative access method to Org mode features, like the TODO state or the priority of an entry, discussed in the previous chapters. This interface exists so that you can include these states in a column view (see (undefined) [Column view], page (undefined)), or to use them in queries. The following property names are special and should not be used as keys in the properties drawer:

ALLTAGS All tags, including inherited ones.

BLOCKED "t" if task is currently blocked by children or siblings.

CLOCKSUM The sum of CLOCK intervals in the subtree. org-clock-sum

must be run first to compute the values in the current buffer.

CLOCKSUM\_T The sum of CLOCK intervals in the subtree for today.

org-clock-sum-today must be run first to compute the

values in the current buffer.

CLOSED When was this entry closed?

DEADLINE The deadline time string, without the angular brackets.

FILE The filename the entry is located in.

The headline of the entry.

PRIORITY The priority of the entry, a string with a single letter.

SCHEDULED The scheduling timestamp, without the angular brackets.

TAGS The tags defined directly in the headline.

TIMESTAMP The first keyword-less timestamp in the entry.

TIMESTAMP\_IA The first inactive timestamp in the entry.

TODO The TODO keyword of the entry.

#### 7.3 プロパティの検索

プロパティに基づいて選択した特別なリストやツリーの抽出を作成するために、タグ検索 (see Section 6.4 [タグの検索], page 63) の場合と同じコマンドが使えます。

 $C-c / m \text{ or } C-c \setminus$ 

org-match-sparse-tree

全てのマッチしたエントリについて抽出したツリーを作成します。前置引数 C-uをつけると、TODO 行でない見出しは無視します。

C-c a m org-tags-view 全てのアジェンダファイルからマッチするタグ・プロパティのグローバルなリストを作成します。See Section 10.3.3 [タグとプロパティとのマッチング], page 107.

C-c a M org-tags-view Create a global list of tag matches from all agenda files, but check only TODO items and force checking of subitems (see the option org-tags-match-list-sublevels).

検索文字列のための文法は、Section 10.3.3 [タグとプロパティとのマッチング], page 107 で説明されています。

1つのプロパティに基いて抽出したツリーを作成するための特別なコマンドもあります。

C-c / p プロパティの値に基づいて抽出したツリーを作成します。これは最初にプロパティ名、次にその値の入力を促します。抽出したツリーは与えられた値でこのプロパティを定義する全てのエントリで作られます。その値を大括弧で括っていたならば正規表現として解釈され、プロパティ値に対してマッチします。

# **7.4** プロパティの継承

The outline structure of Org mode documents lends itself to an inheritance model of properties: if the parent in a tree has a certain property, the children can inherit this property. Org mode does not turn this on by default, because it can slow down property searches significantly and is often not needed. However, if you find inheritance useful, you can turn it on by setting the variable org-use-property-inheritance. It may be set to t to make all properties inherited from the parent, to a list of properties that should be inherited, or to a regular expression that matches inherited properties. If a property has the value nil, this is interpreted as an explicit undefine of the property, so that inheritance search will stop at this value and return nil.

Org mode has a few properties for which inheritance is hard-coded, at least for the special applications for which they are used:

COLUMNS:プロパティは、カラムビュー (see Section 7.5 [カラムビュー], page 67) のフォーマットを定義します。:COLUMNS:プロパティが定義されているレベルがカラム ビューテーブルの開始地点として使われるという意味で継承されます。そして、列表示 が有効である場所とサブツリーの場所とは無関係です。

CATEGORY アジェンダビュー用です。: CATEGORY: プロパティを通して設定されたカテゴリがサブッリー全体に適用されます。

ARCHIVE アーカイブ用です。: ARCHIVE: プロパティは、サブツリー全体のアーカイブ位置を定義します (see Section 9.6.1 [サブツリーを移動する], page 100)。

LOGGING COUNTER LOGGING プロパティは、エントリやサブツリーのログ取得設定について定義します (see Section 5.3.2 [作業の状態変化の追跡], page 52)。

# **7.5** カラムビュー

A great way to view and edit properties in an outline tree is *column view*. In column view, each outline node is turned into a table row. Columns in this table provide access to properties of the entries. Org mode implements columns by overlaying a tabular structure

over the headline of each item. While the headlines have been turned into a table row, you can still change the visibility of the outline tree. For example, you get a compact table by switching to CONTENTS view (S-TAB S-TAB, or simply c while column view is active), but you can still open, read, and edit the entry below each headline. Or, you can switch to column view after executing a sparse tree command and in this way get a table only for the selected items. Column view also works in agenda buffers (see  $\langle$ undefined $\rangle$ ) [Agenda views], page  $\langle$ undefined $\rangle$ ) where queries have collected selected items, possibly from a number of files.

# 7.5.1 カラムの定義

最初にカラムビューを設定するために、カラムを定義する必要があります。これはカラムフォーマット行を定義する事によってなされます。

#### **7.5.1.1** カラム定義の有効範囲

カラムフォーマットを定義するために、次のように行を記載します。

#+COLUMNS: %25ITEM %TAGS %PRIORITY %TODO

指定したツリーに適用するだけのフォーマットを指定するために、: COLUMNS: プロパティをそのツリーの一番上のノードに追加します。例えば、

\*\* カラムビューの最初のノード

: PROPERTIES:

:COLUMNS: %25ITEM %TAGS %PRIORITY %TODO

: FND:

もし: COLUMNS: プロパティがエントリに現れると、そのエントリ自身とそれ以下のサブツリー全体の列を定義します。列定義は文章の階層構造の一部なので、全てのサブレベルに十分一般的なレベル1の列を定義でき、また、ツリーのより深い部分を編集するとき、より下位の指定された列を定義できます。

# **7.5.1.2** カラム・アトリビュート

列定義は、列の属性の集りです。一般的な定義は以下のようになります。

#### %[width]property[(title)][{summary-type}]

Except for the percent sign and the property name, all items are optional. The individual parts have the following meaning:

width An integer specifying the width of the column in characters.

If omitted, the width will be determined automatically.

property The property that should be edited in this column.

Special properties representing meta data are allowed here as well (see  $\langle$  undefined $\rangle$ ) [Special properties], page  $\langle$  undefined $\rangle$ )

title The header text for the column. If omitted, the property

name is used.

{summary-type} The summary type. If specified, the column values for

parent nodes are computed from the children<sup>1</sup>.

Supported summary types are:

<sup>&</sup>lt;sup>1</sup> If more than one summary type apply to the property, the parent values are computed according to the first of them.

'3d 1h'. If any v

```
{+}
            Sum numbers in this column.
           Like '+', but format result with '%.1f'.
{+;%.1f}
            Currency, short for '+; %. 2f'.
{$}
{min}
            Smallest number in column.
\{max\}
           Largest number.
            Arithmetic mean of numbers.
{mean}
            Checkbox status, '[X]' if all children are '[X]'.
{X}
            Checkbox status, '[n/m]'.
\{X/\}
            Checkbox status, '[n%]'.
{X%}
{:}
           Sum times, HH:MM, plain numbers are
                                                          hours^2.
{:min}
           Smallest time value in column.
{:max}
           Largest time value.
{:mean}
            Arithmetic mean of time values.
{@min}
           Minimum age<sup>3</sup> (in
                                      days/hours/mins/seconds).
{@max}
           Maximum age (in days/hours/mins/seconds).
{@mean}
           Arithmetic mean of ages (in days/hours/mins/seconds).
{est+}
           Add 'low-high' estimates.
```

The est+ summary type requires further explanation. It is used for combining estimates, expressed as 'low-high' ranges or plain numbers. For example, instead of estimating a particular task will take 5 days, you might estimate it as 5–6 days if you're fairly confident you know how much work is required, or 1–10 days if you don't really know what needs to be done. Both ranges average at 5.5 days, but the first represents a more predictable delivery.

When combining a set of such estimates, simply adding the lows and highs produces an unrealistically wide result. Instead, est+ adds the statistical mean and variance of the sub-tasks, generating a final estimate from the sum. For example, suppose you had ten tasks, each of which was estimated at 0.5 to 2 days of work. Straight addition produces an estimate of 5 to 20 days, representing what to expect if everything goes either extremely well or extremely poorly. In contrast, est+ estimates the full job more realistically, at 10–15 days.

Numbers are right-aligned when a format specifier with an explicit width like %5d or %5.1f is used.

You can also define custom summary types by setting org-columns-summary-types, which see.

以下は許可値にそって列定義を計算する例です。

```
:COLUMNS: %25ITEM %9Approved(Approved?){X} %Owner %11Status \4 %10Time_Estimate{:} %CLOCKSUM
```

:Owner\_ALL: Tammy Mark Karl Lisa Don

A time can also be a duration, using effort modifiers defined in org-effort-durations, e.g., umn is as such, the summary will also be an effort duration.

An age is defined as a duration since a given time stamp (see /undefined) [Timestam

<sup>3</sup> An age is defined as a duration since a given time-stamp (see (undefined) [Timestamps], page (undefined)). It can also be expressed as days, hours, minutes and seconds, identified by 'd', 'h', 'm' and 's' suffixes, all mandatory, e.g., '0d 13h 0m 10s'.

<sup>4</sup> COLUMNS 定義 は1行でなければならないことに注意して下さい。書式の制約のためここでラップされます。

```
:Status_ALL: "In progress" "Not started yet" "Finished" ""
:Approved_ALL: "[]" "[X]"
```

The first column, '%25ITEM', means the first 25 characters of the item itself, i.e., of the head-line. You probably always should start the column definition with the 'ITEM' specifier. The other specifiers create columns 'Owner' with a list of names as allowed values, for 'Status' with four different possible values, and for a checkbox field 'Approved'. When no width is given after the '%' character, the column will be exactly as wide as it needs to be in order to fully display all values. The 'Approved' column does have a modified title ('Approved?', with a question mark). Summaries will be created for the 'Time\_Estimate' column by adding time duration expressions like HH:MM, and for the 'Approved' column, by providing an '[X]' status if all children have been checked. The 'CLOCKSUM' and 'CLOCKSUM\_T' columns are special, they lists the sums of CLOCK intervals in the subtree, either for all clocks or just for today.

#### 7.5.2 カラムビューの利用

カラムビューのオン・オフ

C-c C-x C-c org-columns

Turn on column view. If the cursor is before the first headline in the file, or the function called with the universal prefix argument, column view is turned on for the entire file, using the #+COLUMNS definition. If the cursor is somewhere inside the outline, this command searches the hierarchy, up from point, for a :COLUMNS: property that defines a format. When one is found, the column view table is established for the tree starting at the entry that contains the :COLUMNS: property. If no such property is found, the format is taken from the #+COLUMNS line or from the variable org-columns-default-format, and column view is established for the current entry and its subtree.

r org-columns-redo Recreate the column view, to include recent changes made in the buffer.

g org-columns-redo

Same as r.

q org-columns-quit

Exit column view.

# **Editing values**

LEFT RIGHT UP DOWN

フィールドからフィールドへカラムビューを通じて移動します。

#### S-LEFT/RIGHT

フィールドの次と前の許可値を切り替えます。このために、プロパティの指定された許可値を持つ必要があります。

1..9,0 Directly select the Nth allowed value, 0 selects the 10th value.

Same as S-LEFT/RIGHT

e

org-columns-edit-value

Edit the property at point. For the special properties, this will invoke the same interface that you normally use to change that property. For example, when editing a TAGS property, the tag completion or fast selection interface will pop up.

C-c C-c

org-columns-set-tags-or-toggle

When there is a checkbox at point, toggle it.

V

org-columns-show-value

View the full value of this property. This is useful if the width of the column is smaller than that of the value.

а

org-columns-edit-allowed

Edit the list of allowed values for this property. If the list is found in the hierarchy, the modified value is stored there. If no list is found, the new value is stored in the first entry that is part of the current column view.

# Modifying the table structure

< > org-columns-narrow

org-columns-widen

Make the column narrower/wider by one character.

S-M-RIGHT

org-columns-new

Insert a new column, to the left of the current column.

S-M-LEFT

org-columns-delete

Delete the current column.

# 7.5.3 カラム表示の保存

カラムビューはバッファへのオーバレイのみなので、直接にエクスポートや印字ができません。カラムビューをキャプチャしたいならば、columnviewダイナミックビュー (see (undefined)) [ダイナミックブロック], page (undefined)) を使って下さい。このブロックのフレームは以下のように見えます。

\* The column view

#+BEGIN: columnview :hlines 1 :id "label"

#### #+END:

ダイナミックブロックを更新するには以下のコマンドを使用します。

:id This is the most important parameter. Column view is a feature that is often localized to a certain (sub)tree, and the capture block might be at a different location in the file. To identify the tree whose view to capture, you can use 4 values:

run column view at the top of this file

"ID" call column view in the tree that has an :ID: property with the value label. You can use

M-x org-id-copy RET to create a globally unique ID for the current entry and copy it to the kill-ring.

:hlines tのとき、全ての行の後に横線を挿入します。数値 Nのとき、レベル<= Nを持つ各見出しの前に縦線を挿入します。

:vlines When set to t, force column groups to get vertical lines.

:maxlevel

数値を設定すると、そのレベル以下のエントリをキャプチャしません。

:skip-empty-rows

tに設定すると、カラムビューの空でない指定子が ITEMのみである行をスキップします。

:indent When non-nil, indent each ITEM field according to its level.

次のコマンドはダイナミックブロックを挿入、更新します。

scope or ID of the view.

C-c C-x i

org-insert-columns-dblock Insert a dynamic block capturing a column view. You will be prompted for the

C-c C-c or C-c C-x C-u

org-dblock-update

Update dynamic block at point.

C-u C-c C-x C-u

 $\verb|org-update-all-dblocks||$ 

Update all dynamic blocks (see Section A.7 [Dynamic blocks], page 248). This is useful if you have several clock table blocks, column-capturing blocks or other dynamic blocks in a buffer.

カラムビューテーブルに計算式を追加し、テーブルの前にプロットする命令を追加できます。これらはブロックの更新があっても生き残ります。テーブルの後に#+TBLFM:があるならば、テーブルは実際に更新の後に自動的に実際に再計算されます。

An alternative way to capture and process property values into a table is provided by Eric Schulte's org-collector.el which is a contributed package<sup>5</sup>. It provides a general API to collect properties from entries in a certain scope, and arbitrary Lisp expressions to process these values before inserting them into a table or a dynamic block.

# **7.6** プロパティ**API**

プロパティにアクセス、変更するための完全な API があります。この API はプロパティと共に動作するために、また、それらを元とした機能を実装するために Emacs Lisp プログラムから使われます。詳細な情報は Section A.11 [プロパティAPI を使う], page 253 を参照して下さい。

<sup>&</sup>lt;sup>5</sup> Contributed packages are not part of Emacs, but are distributed with the main distribution of Org (visit https://orgmode.org).

# 8 日付と時刻

To assist project planning, TODO items can be labeled with a date and/or a time. The specially formatted string carrying the date and time information is called a *timestamp* in Org mode. This may be a little confusing because timestamp is often used to indicate when something was created or last changed. However, in Org mode this term is used in a much wider sense.

# 8.1 9+4+4+5+

A timestamp is a specification of a date (possibly with a time or a range of times) in a special format, either '<2003-09-16 Tue>'¹ or '<2003-09-16 Tue 09:39>' or '<2003-09-16 Tue 12:00-12:30>'². A timestamp can appear anywhere in the headline or body of an Org tree entry. Its presence causes entries to be shown on specific dates in the agenda (see \( \text{undefined} \) [Weekly/daily agenda], page \( \text{undefined} \)). We distinguish:

# プレーンなタイムスタンプ、イベント、アポイント

A simple timestamp just assigns a date/time to an item. This is just like writing down an appointment or event in a paper agenda. In the agenda display, the headline of an entry associated with a plain timestamp will be shown exactly on that date.

- \* ピーターと映画を見に行く <2006-11-01 Wed 19:15>
- \* 気候変動についてのディスカッション <2006-11-02 Thu 20:00-22:00>

# リピート間隔を指定したタイムスタンプ

タイムスタンプにはリピート間隔を含めることができます。すなわち単一の日時だけでなく、 $N \to (d)$ 、 $N \to (w)$ 、 $N \to (m)$  あるいは  $N \to (y)$  といった一定の間隔で繰り返すようなケースに対応しています。例えば、毎週水曜日のアジェンダに表示する場合は以下のようになります。

\* 学校までサムを迎えに行く <2007-05-16 Wed 12:30 +1w>

### ダイアリー形式のS式項目

For more complex date specifications, Org mode supports using the special sexp diary entries implemented in the Emacs calendar/diary package<sup>3</sup>. For example with optional time

<sup>&</sup>lt;sup>1</sup> In this simplest form, the day name is optional when you type the date yourself. However, any dates inserted or modified by Org will add that day name, for reading convenience.

<sup>&</sup>lt;sup>2</sup> This is inspired by the standard ISO 8601 date/time format. To use an alternative format, see (undefined) [Custom time format], page (undefined).

When working with the standard diary sexp functions, you need to be very careful with the order of the arguments. That order depends evilly on the variable calendar-date-style (or, for older Emacs versions, european-calendar-style). For example, to specify a date December 1, 2005, the call might look like (diary-date 12 1 2005) or (diary-date 1 12 2005) or (diary-date 2005 12 1), depending on the settings. This has been the source of much confusion. Org mode users can resort to special versions of these functions like org-date or org-anniversary. These work just like the corresponding diary-functions, but with stable ISO order of arguments (year, month, day) wherever applicable, independent of the value of calendar-date-style.

\* 22:00-23:00 The nerd meeting on every 2nd Thursday of the month <%%(diary-float t 4 2)>

#### 日付または時刻の間隔

2つのタイムスタンプを '--'でつなげることにより、時間間隔を表現できます。時間間隔の指定されたヘッドラインは、間隔の始めと終わりの日、およびその間の現在表示されている日付の項目に表示されます。以下のような形です。

\*\* アムステルダムでのミーティング <2004-08-23 Mon>--<2004-08-26 Thu>

#### アクティブでないタイムスタンプ

プレーンなタイムスタンプと同様ですが、<>ではなく[]で囲むことによりアクティブでないタイムスタンプとなります。このようなタイムスタンプが指定されたエントリーは、アジェンダに表示されません。

\* ジリアンが5度目の遅刻 [2006-11-01 Wed]

### **8.2** タイムスタンプの作成

For Org mode to recognize timestamps, they need to be in the specific format. All commands listed below produce timestamps in the correct format.

C-c . org-time-stamp 日付を入力して、それに対応するタイムスタンプを挿入します。既にバッファ内に存在 するタイムスタンプにカーソルが置かれている場合は、このコマンドは新たなタイムスタンプを挿入する代わりに、既にあるタイムスタンプを変更します。このコマンドを 2 回連続で使用すると、時間間隔を指定することができます。

C-c! org-time-stamp-inactive コマンド C-c . と同様ですが、アクティブでない(アジェンダのエントリーに反映されない)タイムスタンプを生成します。

C-u C-c .

C-u C-c! Like C-c. and C-c!, but use the alternative format which contains date and time. The default time can be rounded to multiples of 5 minutes, see the option org-time-stamp-rounding-minutes.

C-c C-c Normalize timestamp, insert/fix day name if missing or wrong.

 ${\it C-c}$  org-date-from-calendar Insert a timestamp corresponding to the cursor date in the Calendar.

C-c > org-goto-calendar
Access the Emacs calendar for the current date. If there is a timestamp in the current line, go to the corresponding date instead.

C-c C-o org-open-at-point Access the agenda for the date given by the timestamp or -range at point (see \(\sqrt{undefined}\) [Weekly/daily agenda], page \(\sqrt{undefined}\)).

S-LEFT org-timestamp-down-day
S-RIGHT org-timestamp-up-day
Change data at gursor by one day. These key bindings conflict with shift

Change date at cursor by one day. These key bindings conflict with shift-selection and related modes (see  $\langle undefined \rangle$  [Conflicts], page  $\langle undefined \rangle$ ).

S-UP S-DOWN org-timestamp-up org-timestamp-down-down

Change the item under the cursor in a timestamp. The cursor can be on a year, month, day, hour or minute. When the timestamp contains a time range like '15:30-16:30', modifying the first time will also shift the second, shifting the time block with constant length. To change the length, modify the second time. Note that if the cursor is in a headline and not at a timestamp, these same keys modify the priority of an item. (see \(\cupsilon\) undefined\(\rangle\) [Priorities], page \(\cupsilon\) undefined\(\rangle\)). The key bindings also conflict with shift-selection and related modes (see \(\cupsilon\) undefined\(\rangle\)).

С-с С-у

org-evaluate-time-range

開始日時と終了日時の差を計算することにより、時間間隔を計算します。前置引数を指定することにより、計算結果をタイムスタンプの後に挿入できます(テーブルの中では 隣の列に挿入されます)。

# 8.2.1 日付/時間プロンプト

When Org mode prompts for a date/time, the default is shown in default date/time format, and the prompt therefore seems to ask for a specific format. But it will in fact accept date/time information in a variety of formats. Generally, the information should start at the beginning of the string. Org mode will find whatever information is in there and derive anything you have not specified from the default date and time. The default is usually the current date and time, but when modifying an existing timestamp, or when entering the second stamp of a range, it is taken from the stamp in the buffer. When filling in information, Org mode assumes that most of the time you will want to enter a date in the future: if you omit the month/year and the given day/month is before today, it will assume that you mean a future date<sup>4</sup>. If the date has been automatically shifted into the future, the time prompt will show this with '(=>F).'

例えば、今日が **2006** 年 **6** 月 **13** 日であるとしたとき、以下の左ような入力は右のように解釈されます。Org-mode により推定された部分を太字で示します。

```
3-2-5
                   \Rightarrow 2003-02-05
2/5/3
                   \Rightarrow 2003-02-05
14
                   \Rightarrow 2006-06-14
12
                   \Rightarrow 2006-07-12
2/5
                   \Rightarrow 2007-02-05
Fri
                   \Rightarrow nearest Friday after the default date
sep 15
                   \Rightarrow 2006-09-15
                   \Rightarrow 2007-02-15
feb 15
sep 12 9
                   \Rightarrow 2009-09-12
                   \Rightarrow 2006-06-13 12:45
12:45
22 sept 0:34
                   \Rightarrow 2006-09-22 00:34
w4
                   \Rightarrow ISO week four of the current year 2006
                   \Rightarrow Friday of ISO week 4 in 2012
2012 w4 fri
                   \Rightarrow Same as above
2012-w04-5
```

<sup>&</sup>lt;sup>4</sup> See the variable org-read-date-prefer-future. You may set that variable to the symbol time to even make a time before now shift the date to tomorrow.

Furthermore you can specify a relative date by giving, as the *first* thing in the input: a plus/minus sign, a number and a letter ([hdwmy]) to indicate change in hours, days, weeks, months, or years. With a single plus or minus, the date is always relative to today. With a double plus or minus, it is relative to the default date. If instead of a single letter, you use the abbreviation of day name, the date will be the Nth such day, e.g.:

```
\begin{array}{lll} +0 & \Rightarrow \  \, \mathrm{today} \\ . & \Rightarrow \  \, \mathrm{today} \\ +4\mathrm{d} & \Rightarrow \  \, \mathrm{four} \  \, \mathrm{days} \  \, \mathrm{from} \  \, \mathrm{today} \\ +4 & \Rightarrow \  \, \mathrm{same} \  \, \mathrm{as} \  \, \mathrm{above} \\ +2\mathrm{w} & \Rightarrow \  \, \mathrm{two} \  \, \mathrm{weeks} \  \, \mathrm{from} \  \, \mathrm{today} \\ ++5 & \Rightarrow \  \, \mathrm{five} \  \, \mathrm{days} \  \, \mathrm{from} \  \, \mathrm{default} \  \, \mathrm{date} \\ +2\mathrm{tue} & \Rightarrow \  \, \mathrm{second} \  \, \mathrm{Tuesday} \  \, \mathrm{from} \  \, \mathrm{now} \\ -\mathrm{wed} & \Rightarrow \  \, \mathrm{last} \  \, \mathrm{Wednesday} \end{array}
```

この機能では、英語の月および曜日の省略記法に対応しています。省略しない記法や他の言語の記法を使用したい場合には、変数 parse-time-monthsおよび parse-time-weekdaysを変更して下さい。

Not all dates can be represented in a given Emacs implementation. By default Org mode forces dates into the compatibility range 1970–2037 which works on all Emacs implementations. If you want to use dates outside of this range, read the docstring of the variable org-read-date-force-compatible-dates.

You can specify a time range by giving start and end times or by giving a start time and a duration (in HH:MM format). Use one or two dash(es) as the separator in the former case and use '+' as the separator in the latter case, e.g.:

```
11am-1:15pm ⇒ 11:00-13:15
11am--1:15pm ⇒ 上と同様
11am+2:15 ⇒ 上と同様
```

RET

ミニバッファのプロンプトと並行して、カレンダーがポップアップします<sup>5</sup>。カレンダー内の日付をクリックするか、RETを入力することにより日付のプロンプトを抜けると、カレンダーで選択した日付とプロンプトで入力された情報が組み合わされます。カレンダーはミニバッファから自由に操作することがきます。

Choose date at cursor in calendar.

```
mouse-1 Select date by clicking on it.

S-RIGHT/LEFT One day forward/backward.

S-DOWN/UP One week forward/backward.

M-S-RIGHT/LEFT One month forward/backward.

> / < Scroll calendar forward/backward by one month.

M-v / C-v Scroll calendar forward/backward by 3 months.

M-S-DOWN/UP Scroll calendar forward/backward by one year.
```

The actions of the date/time prompt may seem complex, but I assure you they will grow on you, and you will start getting annoyed by pretty much any other way of entering a date/time out there. To help you understand what is going on, the current interpretation of your input will be displayed live in the minibuffer<sup>6</sup>.

<sup>&</sup>lt;sup>5</sup> カレンダーの表示が不要の場合、変数 org-popup-calendar-for-date-promptを変更して下さい。

<sup>&</sup>lt;sup>6</sup> If you find this distracting, turn the display off with org-read-date-display-live.

#### **8.2.2** カスタムタイムフォーマット

Org mode uses the standard ISO notation for dates and times as it is defined in ISO 8601. If you cannot get used to this and require another representation of date and time to keep you happy, you can get it by customizing the options org-display-custom-times and org-time-stamp-custom-formats.

C-c C-x C-t org-toggle-time-stamp-overlays カスタムフォーマットの日付および時間の表示をトグルします。

Org mode needs the default format for scanning, so the custom date/time format does not replace the default format—instead it is put over the default format using text properties. This has the following consequences:

- タイムスタンプの上にカーソルを置くことはできなくなり、その前後にしかカーソルが移動しなくなります。
- The S-UP/DOWN keys can no longer be used to adjust each component of a timestamp. If the cursor is at the beginning of the stamp, S-UP/DOWN will change the stamp by one day, just like S-LEFT/RIGHT. At the end of the stamp, the time will be changed by one minute.
- タイムスタンプが時間間隔や繰り返し時刻を含む場合、これらは上書きされずに元の形式のままバッファに表示されます。
- タイムスタンプを一文字ずつ消去した場合、(隠れた)ISO 標準フォーマット文字列の全てを削除 した場合のみカスタムフォーマットのタイムスタンプが消去されます。
- もし、カスタムフォーマットのタイムスタンプが標準フォーマットより長く、テーブル内で用いられている場合、テーブルの整形が崩れます。標準フォーマットより短い場合には、期待通りに動作します。

#### 8.3 デッドラインとスケジュール

A timestamp may be preceded by special keywords to facilitate planning. Both the timestamp and the keyword have to be positioned immediately after the task they refer to.

#### DEADLINE.

意味:タスク (多くの場合は TODO アイテムですが、それに限りません) はタイムスタンプで示された日のうちに終了するものと見なされます。

On the deadline date, the task will be listed in the agenda. In addition, the agenda for *today* will carry a warning about the approaching or missed deadline, starting org-deadline-warning-days before the due date, and continuing until the entry is marked DONE. An example:

\*\*\* TODO write article about the Earth for the Guide DEADLINE: <2004-02-29 Sun>
The editor in charge is [[bbdb:Ford Prefect]]

You can specify a different lead time for warnings for a specific deadline using the following syntax. Here is an example with a warning period of 5 days DEADLINE: <2004-02-29 Sun -5d>. This warning is deactivated if the task gets scheduled and you set org-agenda-skip-deadline-prewarning-if-scheduled to t.

#### **SCHEDULED**

意味:指定された日に、そのタスクに取りかかる予定であることを示します。

The headline will be listed under the given date<sup>7</sup>. In addition, a reminder that the scheduled date has passed will be present in the compilation for *today*, until the entry is marked DONE, i.e., the task will automatically be forwarded until completed.

\*\*\* TODO トリリアンに大晦日のデートについて電話する。 SCHEDULED: <2004-12-25 Sat>

If you want to *delay* the display of this task in the agenda, use SCHEDULED: <2004-12-25 Sat -2d>: the task is still scheduled on the 25th but will appear two days later. In case the task contains a repeater, the delay is considered to affect all occurrences; if you want the delay to only affect the first scheduled occurrence of the task, use --2d instead. See org-scheduled-delay-days and org-agenda-skip-scheduled-delay-if-deadline for details on how to control this globally or per agenda.

**Important:** Scheduling an item in Org mode should *not* be understood in the same way that we understand *scheduling a meeting*. Setting a date for a meeting is just a simple appointment, you should mark this entry with a simple plain timestamp, to get this item shown on the date where it applies. This is a frequent misunderstanding by Org users. In Org mode, *scheduling* means setting a date when you want to start working on an action item.

You may use timestamps with repeaters in scheduling and deadline entries. Org mode will issue early and late warnings based on the assumption that the timestamp represents the nearest instance of the repeater. However, the use of diary sexp entries like <\%(diary-float t 42)> in scheduling and deadline timestamps is limited. Org mode does not know enough about the internals of each sexp function to issue early and late warnings. However, it will show the item on each day where the sexp entry matches.

### 8.3.1 デッドラインおよびスケジュールの挿入

The following commands allow you to quickly insert a deadline or to schedule an item:

C-c C-d org-deadline

Insert DEADLINE keyword along with a stamp. Any CLOSED timestamp will be removed. When called with a prefix arg, an existing deadline will be removed from the entry. Depending on the variable org-log-redeadline<sup>8</sup>, a note will be taken when changing an existing deadline.

C-c C-s org-schedule

Insert SCHEDULED keyword along with a stamp. Any CLOSED timestamp will be removed. When called with a prefix argument, remove the scheduling date from the entry. Depending on the variable org-log-reschedule<sup>9</sup>, a note will be taken when changing an existing scheduling time.

<sup>&</sup>lt;sup>7</sup> It will still be listed on that date after it has been marked DONE. If you don't like this, set the variable org-agenda-skip-scheduled-if-done.

 $<sup>^8</sup>$  with corresponding #+STARTUP keywords logredeadline, lognoteredeadline, and nologredeadline

 $<sup>^9</sup>$  with corresponding #+STARTUP keywords logreschedule, lognotereschedule, and nologreschedule

C-c / d

org-check-deadlines

全てのデッドラインのうち、既に過ぎているものと org-deadline-warning-days以内に期限となるものを抽出したツリーを作成します。前置引数 C-uにより、ファイル内の全てのデッドラインを表示します。前置引数で数値を指定すると、指定した分だけ先のデッドラインを表示します。例えば、C-1 C-c / dとすると明日期限となる全てのデッドラインを表示します。

C-c / b org-check-before-date 指定された日より前のデッドラインを抽出したツリーを作成します。

C-c / a org-check-after-date 指定された日より後のデッドラインを抽出したツリーを作成します。

Note that org-schedule and org-deadline supports setting the date by indicating a relative time: e.g., +1d will set the date to the next day after today, and -1w will set the date to the previous week before any current timestamp.

# 8.3.2 繰り返されるタスク

Some tasks need to be repeated again and again. Org mode helps to organize such tasks using a so-called repeater in a <code>DEADLINE</code>, <code>SCHEDULED</code>, or plain timestamp. In the following example

\*\* TODO 家賃の支払い
DEADLINE: <2005-10-01 Sat +1m>

the +1m is a repeater; the intended interpretation is that the task has a deadline on <2005-10-01> and repeats itself every (one) month starting from that time. You can use yearly, monthly, weekly, daily and hourly repeat cookies by using the y/w/m/d/h letters. If you need both a repeater and a special warning period in a deadline entry, the repeater should come first and the warning period last: DEADLINE: <2005-10-01 Sat +1m -3d>.

Deadlines and scheduled items produce entries in the agenda when they are over-due, so it is important to be able to mark such an entry as completed once you have done so. When you mark a DEADLINE or a SCHEDULED with the TODO keyword DONE, it will no longer produce entries in the agenda. The problem with this is, however, that then also the *next* instance of the repeated entry will not be active. Org mode deals with this in the following way: When you try to mark such an entry DONE (using C-c C-t), it will shift the base date of the repeating timestamp by the repeater interval, and immediately set the entry state back to TODO<sup>10</sup>. In the example above, setting the state to DONE would actually switch the date like this:

\*\* TODO 家賃の支払い DEADLINE: <2005-11-01 Tue +1m>

To mark a task with a repeater as DONE, use C--1 C-c C-t (i.e., org-todo with a numeric prefix argument of -1.)

<sup>&</sup>lt;sup>10</sup> In fact, the target state is taken from, in this sequence, the REPEAT\_TO\_STATE property or the variable org-todo-repeat-to-state. If neither of these is specified, the target state defaults to the first state of the TODO state sequence.

デッドラインの下にタイムスタンプが追加され $^{11}$ 、これにより前の時刻のデッドラインについて 実際に行動したことが記録されます。

日付がシフトされた結果として、このエントリーはアジェンダ上の過去の日付からは見えなくなりますが、将来の日付はアジェンダ上で確認することができます。

'+1m'の繰り返し指定により、日付は常に1ヶ月きっちりシフトされます。そのため、例えば家賃を3ヶ月支払っていない場合には、一度このエントリーをDONEにしたとしても、相変わらず期限を過ぎたデッドラインと判断されます。タスクの性質によって、この方法が常に適切な処理方法とは限りません。例えば、父親と連絡をとるのを3週間忘れてしまった場合、それを埋め合わせるために一日に3回電話をすることはないでしょう。さらに、バッテリーの充電のように、最後に行ってから一定時間経過後に常に繰り返す必要がある場合もあります。このようなタスクについてはOrg-modeは専用の反復演算子++および.+を用意しています。例えば以下の通りです。

#### \*\* TODO Call Father

DEADLINE: <2008-02-10 Sun ++1w>

Marking this DONE will shift the date by at least one week, but also by as many weeks as it takes to get this date into the future. However, it stays on a Sunday, even if you called and marked it done on Saturday.

\*\* TODO Empty kitchen trash

DEADLINE: <2008-02-08 Fri 20:00 ++1d>

Marking this DONE will shift the date by at least one day, and also by as many days as it takes to get the timestamp into the future. Since there is a time in the timestamp, the next deadline in the future will be on today's date if you complete the task before 20:00.

\*\* TODO Check the batteries in the smoke detectors
DEADLINE: <2005-11-01 Tue .+1m>
Marking this DONE will shift the date to one month after
today.

You may have both scheduling and deadline information for a specific task. If the repeater is set for the scheduling information only, you probably want the repeater to be ignored after the deadline. If so, set the variable org-agenda-skip-scheduled-if-deadline-is-shown to repeated-after-deadline. However, any scheduling information without a repeater is no longer relevant once the task is done, and thus, removed upon repeating the task. If you want both scheduling and deadline information to repeat after the same interval, set the same repeater for both timestamps.

<sup>11</sup> この部分の動作は、オプション org-log-repeat、あるいは#+STARTUPオプションの logrepeat、lognoterepeat、nologrepeatにより変更することができます。lognoterepeat を指定した場合には、メモを入力するように促されます。

# 8.4 作業に費やした時間の計測

Org mode allows you to clock the time you spend on specific tasks in a project. When you start working on an item, you can start the clock. When you stop working on that task, or when you mark the task done, the clock is stopped and the corresponding time interval is recorded. It also computes the total time spent on each subtree<sup>12</sup> of a project. And it remembers a history or tasks recently clocked, so that you can jump quickly between a number of tasks absorbing your time.

Emacs セッションでの経過時間の履歴を保存するためには、以下のコマンドを使います。

(setq org-clock-persist 'history)
(org-clock-persistence-insinuate)

Emacs の再開後に新しいタスクの計測を始めると、不完全な時計  $^{13}$  が表示され (see Section 8.4.3 [空き時間の解決], page 85)、それについて何をするかを入力するように促されます。

### 8.4.1 計測コマンド

C-c C-x C-i org-clock-in

!Start the clock on the current item (clock-in). This inserts the CLOCK keyword together with a timestamp. If this is not the first clocking of this item, the multiple CLOCK lines will be wrapped into a :LOGBOOK: drawer (see also the variable org-clock-into-drawer). You can also overrule the setting of this variable for a subtree by setting a CLOCK\_INTO\_DRAWER or LOG\_INTO\_DRAWER property. When called with a C-u prefix argument, select the task from a list of recently clocked tasks. With two C-u C-u prefixes, clock into the task at point and mark it as the default task; the default task will then always be available with letter d when selecting a clocking task. With three C-u C-u prefixes, force continuous clocking by starting the clock when the last clock stopped. While the clock is running, the current clocking time is shown in the mode line,

While the clock is running, the current clocking time is shown in the mode line, along with the title of the task. The clock time shown will be all time ever clocked for this task and its children. If the task has an effort estimate (see \(\text{undefined}\)\) [Effort estimates], page \(\text{undefined}\)\), the mode line displays the current clocking time against it \(^{14}\) If the task is a repeating one (see \(\text{undefined}\)\) [Repeated tasks], page \(\text{undefined}\)\), only the time since the last reset of the task \(^{15}\) will be shown. More control over what time is shown can be exercised with the CLOCK\_MODELINE\_TOTAL property. It may have the values current to show only the current clocking instance, today to show all time clocked on this task today (see also the variable org-extend-today-until), all to include all time, or auto which is the default \(^{16}\).

Clicking with mouse-1 onto the mode line entry will pop up a menu with clocking options.

<sup>&</sup>lt;sup>12</sup> Clocking only works if all headings are indented with less than 30 stars. This is a hardcoded limitation of lmax in org-clock-sum.

<sup>13</sup> Emacs の外でタスクに取りかかっていたという想定で時計を再開する場合は、(setq org-clock-persist t)を使用して下さい。

To add an effort estimate "on the fly", hook a function doing this to org-clock-in-prepare-hook.

 $<sup>^{15}\,</sup>$  as recorded by the LAST\_REPEAT property

 $<sup>^{16}</sup>$  See also the variable org-clock-modeline-total.

C-c C-x C-o org-clock-out

Stop the clock (clock-out). This inserts another timestamp at the same location where the clock was last started. It also directly computes the resulting time and inserts it after the time range as '=> HH:MM'. See the variable org-log-note-clock-out for the possibility to record an additional note together with the clock-out timestamp<sup>17</sup>.

C-c C-x C-x org-clock-in-last

Reclock the last clocked task. With one C-u prefix argument, select the task from the clock history. With two C-u prefixes, force continuous clocking by starting the clock when the last clock stopped.

 $\emph{C-c}$   $\emph{C-x}$   $\emph{C-e}$  org-clock-modify-effort-estimate Update the effort estimate for the current clock task.

C-c C-c or C-c C-y org-evaluate-time-range タイムスタンプの一つを変更した後で、時間間隔を更新します。これはタイムスタンプを手動で変更した場合にのみ必要です。S-cursorキーにより変更した場合には、自動的に再計算されます。

C-c C-t org-todo TODO の項目を DONE に変更することにより、その項目で時間が計測されている場合 には自動的に停止します。

C-c C-x C-x org-clock-cancel 現在の時間計測をキャンセルします。これは間違って時間を計り始めてしまった場合や、 結果的に意図したタスク以外を行ってしまった場合に便利です。

C-c C-x C-j org-clock-goto 現在クロックイン中のタスクの見出しにジャンプします。前置引数 C-uにより、最近時間が計測されたタスクから目的のタスクを選択します。

C-c C-x C-d org-clock-display

Display time summaries for each subtree in the current buffer. This puts overlays at the end of each headline, showing the total time recorded under that heading, including the time of any subheadings. You can use visibility cycling to study the tree, but the overlays disappear when you change the buffer (see variable org-remove-highlights-with-change) or press C-c C-c.

The 1 key may be used the agenda (see \( \)undefined \( \) [Weekly/daily agenda], page \( \)undefined \( \)) to show which tasks have been worked on or closed during a day.

Important: note that both org-clock-out and org-clock-in-last can have a global key binding and will not modify the window disposition.

### **8.4.2** クロックテーブル

Org-mode は、時間計測の情報をもとにかなり詳細なレポートを作成することができます。このようなレポートはクロックテーブルと呼ばれており、その名の通り Org-mode のテーブルまたはその組み合わせにより作成されます。

 $<sup>^{17}\,</sup>$  The corresponding in-buffer setting is: #+STARTUP: lognoteclock-out

C-c C-x C-r

org-clock-report

現在のファイルに Org-mode テーブル形式の計測時間レポートを含む動的ブロック (see  $\langle \text{undefined} \rangle$  [ダイナミックブロック], page  $\langle \text{undefined} \rangle$ ) を挿入します。前置引数とともに呼ばれた場合は、現在の文書の最初のクロックテーブルに移動し、それを更新します。

C-c C-c or C-c C-x C-u

org-dblock-update

現在位置の動的ブロックを更新します。カーソル位置は動的ブロックの#+BEGIN行の中に位置している必要があります。

C-u C-c C-x C-u

:block

全ての動的ブロックを更新します (see  $\langle undefined \rangle$  [ダイナミックブロック], page  $\langle undefined \rangle$ )。この機能はバッファ内で複数のクロックテーブルが存在する場合に有用です。

S-left S-right

org-clocktable-try-shift

現在の:blockの時間間隔を変更し、テーブルを更新します。このコマンドを使用するには、カーソルが#+BEGIN: clocktable行にある必要があります。例えば:blockがtodayの場合、このコマンドによりtoday-1にシフトされます。

以下に、C-c C-x C-rコマンドによりバッファに挿入されるクロックテーブルのフレームの例を示します。

#+BEGIN: clocktable :maxlevel 2 :emphasize nil :scope file
#+END: clocktable

'BEGIN'行には、レポートの対象範囲、構造およびフォーマットを定めるオプションを指定します。これらのデフォルト値は変数 org-clocktable-defaultsにより変更することができます。

まず、時間が計測されたエントリのうちどれが選択されるかを定めるオプションがあります。

:maxlevel Maximum level depth to which times are listed in the table.

Clocks at deeper levels will be summed into the upper level.

:scope The scope to consider. This can be any of the following:

nil the current buffer or narrowed region

file the full current buffer

treeN the subtree where the clocktable is located the surrounding level N tree, for example tree3

tree the surrounding level 1 tree

agenda all agenda files ("file"...) scan these files

function the list of files returned by a function of no argument

file-with-archives current file and its archives

 ${\tt agenda-with-archives} \quad {\rm all \ agenda \ files, \ including \ archives}$ 

The time block to consider. This block is specified either absolutely, or relative to the current time and may be any of

these formats:

 2007-12-31
 New year eve 2007

 2007-12
 December 2007

 2007-W50
 ISO-week 50 in 2007

 2007-Q2
 2nd quarter in 2007

today, yesterday, today-N a relative day thisweek, lastweek, thisweek-N a relative week thismonth, lastmonth, thismonth-N a relative month thisyear, lastyear, thisyear-N a relative year untilnow

Use S-LEFT/RIGHT keys to shift the time interval.

:tstart A time string specifying when to start considering times.

Relative times like "<-2w>" can also be used. See

(undefined) [Matching tags and properties], page (undefined) for rel-

ative time syntax.

:tend A time string specifying when to stop considering times.

Relative times like "<now>" can also be used. See

(undefined) [Matching tags and properties], page (undefined) for rel-

ative time syntax.

:wstart The starting day of the week. The default is 1 for monday.

The starting day of the month. The default 1 is for the first day of the month.

:step week or day, to split the table into chunks.

To use this, :block or :tstart, :tend are needed.

:stepskip0 Do not show steps that have zero time.

 $\verb|:fileskip0| Do not show table sections from files which did not contribute.$ 

:tags A tags match to select entries that should contribute. See

(undefined) [Matching tags and properties], page (undefined) for the match syntax.

Then there are options which determine the formatting of the table. These options are interpreted by the function org-clocktable-write-default, but you can specify your own function using the :formatter parameter.

:emphasize When t, emphasize level one and level two items.
:lang Language<sup>18</sup> to use for descriptive cells like "Task".
:link Link the item headlines in the table to their origins.
:narrow An integer to limit the width of the headline column in the org table. If you write it like '50!', then the

the org table. If you write it like 50:, then

headline will also be shortened in export.

:indent Indent each headline field according to its level.

than :maxlevel, lower levels will be lumped into one column.

:level Should a level number column be included?

:sort A cons cell like containing the column to sort and a sorting type.

E.g., :sort (1 . ?a) sorts the first column alphabetically.

:compact Abbreviation for :level nil :indent t :narrow 40! :tcolumns 1

All are overwritten except if there is an explicit :narrow

:timestamp A timestamp for the entry, when available. Look for SCHEDULED,

DEADLINE, TIMESTAMP and TIMESTAMP\_IA, in this order.

:properties List of properties that should be shown in the table. Each

property will get its own column.

<sup>&</sup>lt;sup>18</sup> Language terms can be set through the variable org-clock-clocktable-language-setup.

:inherit-props When this flag is t, the values for :properties will be inherited.

:formula Content of a #+TBLFM line to be added and evaluated.

As a special case, ':formula %' adds a column with % time. If you do not specify a formula here, any existing formula below the clock table will survive updates and be evaluated.

:formatter A function to format clock data and insert it into the buffer.

現在のレベル1のツリーについて、当日分の時間サマリーを得る場合は以下のように指定します。

#+BEGIN: clocktable :maxlevel 2 :block today :scope tree1 :link t

#+END: clocktable

明示的に時間間隔を指定する場合には、以下のように記述します <sup>19</sup>。

#+BEGIN: clocktable :tstart "<2006-08-10 Thu 10:00>" :tend "<2006-08-10 Thu 12:00>"

#+END: clocktable

A range starting a week ago and ending right now could be written as

#+BEGIN: clocktable :tstart "<-1w>" :tend "<now>"

#+END: clocktable

現在のサブツリーでの経過時間のまとめを%表示するには、以下のように記述します。

#+BEGIN: clocktable :scope subtree :link t :formula %

#+END: clocktable

ここ1週間で計測された時間をコンパクトな幅で表示するには、以下のようにします。

#+BEGIN: clocktable :scope agenda :block lastweek :compact t

#+END: clocktable

# 8.4.3 Resolving idle time and continuous clocking

空き時間の解決

ある項目について作業を開始したあとで、例えば電話を取る場合などで一時的にコンピュータの前を離れると、その時間について現在の経過時間から差し引いたり、他の項目に加えたりして「解決」する必要が生じます。

By customizing the variable org-clock-idle-time to some integer, such as 10 or 15, Emacs can alert you when you get back to your computer after being idle for that many minutes<sup>20</sup>, and ask what you want to do with the idle time. There will be a question waiting for you when you get back, indicating how much idle time has passed (constantly updated with the current amount), as well as a set of choices to correct the discrepancy:

k 休止時間として計測された時間の一部または全てをタスクの計測時間として保持する場合には、kを押します。Org-mode は何分間保持するか尋ねます。RETキーを押すことにより全ての時間が保持され、タスクの計測時間は変更されません。数値を指定すると、指定した分数だけ時間が保持されます。

<sup>&</sup>lt;sup>19</sup> 全てのパラメーターは単一行で指定する必要があるので注意して下さい。この例ではマニュアルの 文字幅の制約のために改行が入っています。

On computers using macOS, idleness is based on actual user idleness, not just Emacs' idle time. For X11, you can install a utility program x11idle.c, available in the contrib/scripts directory of the Org git distribution, or install the xprintidle package and set it to the variable org-clock-x11idle-programname if you are running Debian, to get the same general treatment of idleness. On other systems, idle time refers to Emacs idle time only.

- K シフトキーと共に Kを押した場合、入力された分数だけ時間を保持すると同時にただち に現在のタスクの計測を中止します。全ての休止時間を保持する場合、これは単にタス クの計測を中止したのと同じことになります。
- s 休止時間を保持しない場合には、sを押すことにより計測時間から全ての休止時間が差し引かれ、戻ってきた時点から再開されます。
- S 休止時間を保持せず、休止開始時の時刻で時間の計測を止める場合には、シフトキーと 共に Sを押して下さい。シフトキーを使うと、いずれのオプションでも時間の計測が中 止されるということを覚えておいて下さい。
- C 時間計測そのものをキャンセルする場合は、Cを押して下さい。キャンセルしない場合でも、時間が引かれた結果の残り時間が1分未満である場合には、中身の無いエントリでログが見づらくなるのを防ぐため、時間計測はやはりキャンセルされますので注意して下さい。

空き時間について、現在の計測時間から差し引いたあとで別の計測項目に追加したい場合にはどうすれば良いでしょうか。その場合は、差し引いたあとに単純に次のタスクの計測を開始して下さい。Org-mode は差し引かれた時間があることを記憶していて、次の時間計測を始める際にその時間を足し込むかを尋ねます。

次のようなケースでも、時間解決機能が魔法のような働きをします。あなたがタスクの時間計測をしながらご機嫌に作業をすすめていると、突然飼い猫がネズミを追いかけて、それを見たハムスターが驚いて UPS の電源装置に衝突してしまったとしましょう!あなたは全てのバッファを失うことになりますが、オートセーブ機能のおかげで Org-mode で行った最近の変更は保持され、途中であった時間計測の時間も保持されています。

If you restart Emacs and clock into any task, Org will notice that you have a dangling clock which was never clocked out from your last session. Using that clock's starting time as the beginning of the unaccounted-for period, Org will ask how you want to resolve that time. The logic and behavior is identical to dealing with away time due to idleness; it is just happening due to a recovery event rather than a set amount of idle time.

You can also check all the files visited by your Org agenda for dangling clocks at any time using M-x org-resolve-clocks RET (or C-c C-x C-z).

# Continuous clocking

You may want to start clocking from the time when you clocked out the previous task. To enable this systematically, set org-clock-continuously to t. Each time you clock in, Org retrieves the clock-out time of the last clocked entry for this session, and start the new clock from there.

If you only want this from time to time, use three universal prefix arguments with org-clock-in and two C-u C-u with org-clock-in-last.

# 8.5 工数の見積もり

If you want to plan your work in a very detailed way, or if you need to produce offers with quotations of the estimated work effort, you may want to assign effort estimates to entries. If you are also clocking your work, you may later want to compare the planned effort with the actual working time, a great way to improve planning estimates. Effort estimates are stored in a special property EFFORT. You can set the effort for an entry with the following commands:

C-c C-x e

org-set-effort

現在のエントリについて工数の見積もりを行います。前置引数に数値を指定することにより、N番目の数値に指定します (下記の例を参照)。このコマンドはアジェンダからも eキーを押すことによりアクセスできます。

С-с С-х С-е

org-clock-modify-effort-estimate

現在時間が計測されている項目の工数見積もりを変更します。

明らかなように、工数見積もりを行う最善の方法はカラムビュー (see Section 7.5 [カラムビュー], page 67) を用いることです。個別の項目についての工数見積もりから始めて、COLUMNSフォーマットによりこれらの値と実際の計測時間 (時間の計測を行いたい場合) を同時に表示します。例えば、あるバッファについて以下のように指定できます。

#+PROPERTY: Effort\_ALL 0 0:10 0:30 1:00 2:00 3:00 4:00 5:00 6:00 7:00 #+COLUMNS: %40ITEM(Task) %17Effort(Estimated Effort){:} %CLOCKSUM

さらに良い方法としては、変数 org-global-propertiesあるいは org-columns-default-formatをカスタマイズすることにより、これらの数値をグローバルに指定できます。特にこの指定をアジェンダで使用したい場合には、グローバルな指定を行うことが推奨されます。

The way to assign estimates to individual items is then to switch to column mode, and to use S-RIGHT and S-LEFT to change the value. The values you enter will immediately be summed up in the hierarchy. In the column next to it, any clocked time will be displayed.

日別あるいは週別のアジェンダでカラムビューに移行すると、工数の列は各日についての工数見積もりを足し合わせて表示され $^{21}$ 、これを用いてスケジュールの空きを見つけることができます。その日の作業について全体像をつかみたい場合には、オプション org-agenda-columns-add-appointments-to-effort-sumを指定することができます。時間間隔が指定されているアポイントで、その日に発生するものについても負荷見積もりに加算して表示されます。

工数見積もりは、アジェンダ内で/を押すことによりアジェンダの 2 次的なフィルタリングに用いることができます (see Section 10.5 [アジェンダのコマンド], page 116)。このような見積もりを確実に行えば、2、3 回キーを押すことにより空いている時間間隔に合うように項目を絞り込むことができます。

# 8.6 Taking notes with a timer

Org provides two types of timers. There is a relative timer that counts up, which can be useful when taking notes during, for example, a meeting or a video viewing. There is also a countdown timer.

The relative and countdown are started with separate commands.

C-c C-x 0

org-timer-start

Start or reset the relative timer. By default, the timer is set to 0. When called with a C-u prefix, prompt the user for a starting offset. If there is a timer string at point, this is taken as the default, providing a convenient way to restart taking notes after a break in the process. When called with a double prefix argument C-u C-u, change all timer strings in the active region by a certain amount. This can be used to fix timer strings if the timer was not started at exactly the right moment.

 $<sup>^{21}</sup>$  単準なリストを階層的に足し合わせる際には落とし穴があります (see Section 10.8 [アジェンダのカラム表示], page 129)。

C-c C-x ;

org-timer-set-timer

Start a countdown timer. The user is prompted for a duration. org-timer-default-timer sets the default countdown value. Giving a numeric prefix argument overrides this default value. This command is available as; in agenda buffers.

Once started, relative and countdown timers are controlled with the same commands.

- C-c C-x . org-timer Insert the value of the current relative or countdown timer into the buffer. If no timer is running, the relative timer will be started. When called with a prefix argument, the relative timer is restarted.
- C-c C-x org-timer-item

  Insert a description list item with the value of the current relative or countdown timer. With a prefix argument, first reset the relative timer to 0.
- M-RET org-insert-heading
  Once the timer list is started, you can also use M-RET to insert new timer items.
- $\emph{C-c C-x}$  , org-timer-pause-or-continue Pause the timer, or continue it if it is already paused.
- C-c C-x \_ org-timer-stop Stop the timer. After this, you can only start a new timer, not continue the old one. This command also removes the timer from the mode line.

# 9 キャプチャ/再配置/アーカイブ

管理システムにおける重要な点の一つとして、新しいアイディアやタスクを素早くキャプチャし、それらを参考資料と連携する能力があることです。Org-mode ではキャプチャと呼ばれるプロセスを用いて行います。また、タスクに関係するファイル (attachments) を特別なディレクトリに保存することがも可能です。一度システムへ取り込むと、タスクとプロジェクトを移動させる必要があります。完了したプロジェクトツリーをアーカイブファイルへ移動することで、システムをコンパクトで速く保つことが可能です。

### 9.1 **+**+プチャ

Capture lets you quickly store notes with little interruption of your work flow. Org's method for capturing new items is heavily inspired by John Wiegley excellent remember.el package. Up to version 6.36, Org used a special setup for remember.el, then replaced it with org-remember.el. As of version 8.0, org-remember.el has been completely replaced by org-capture.el.

If your configuration depends on org-remember.el, you need to update it and use the setup described below. To convert your org-remember-templates, run the command

M-x org-capture-import-remember-templates RET

and then customize the new variable with M-x customize-variable org-capture-templates, check the result, and save the customization.

#### 9.1.1 キャプチャの設定

以下のカスタマイズはノートを取るデフォルトのファイルと新しい素材をキャプチャするためのグローバルなキー  $^1$ 

(setq org-default-notes-file (concat org-directory "/notes.org"))
(define-key global-map "\C-cc" 'org-capture)

### 9.1.2 キャプチャの使用

C-c c org-capture

org-caputreコマンドを呼びます。このキーバインドはグローバルで、デフォルトではアクティブになっておらず、インストールする必要があることに注意が必要です。もしテンプレートがあるならば defined see  $\langle$  undefined $\rangle$  [Capture templates], page  $\langle$  undefined $\rangle$ , it will offer these templates for selection or use a new Org outline node as the default template. It will insert the template into the target file and switch to an indirect buffer narrowed to this new node. You may then insert the information you want.

 $extit{${\it C-c}$ ${\it C-c}$}$  org-capture-finalize

Once you have finished entering information into the capture buffer, C-c will return you to the window configuration before the capture process, so that you can resume your work without further distraction. When called with a prefix arg, finalize and then jump to the captured item.

<sup>&</sup>lt;sup>1</sup> 自分のキーを選択して下さい。*C-c c*はただの提案です。

#### C-c C-w

org-capture-refile

Finalize the capture process by refiling (see (undefined) [Refile and copy], page (undefined)) the note to a different place. Please realize that this is a normal refiling command that will be executed—so the cursor position at the moment you run this command is important. If you have inserted a tree with a parent and children, first move the cursor back to the parent. Any prefix argument given to this command will be passed on to the org-refile command.

C-c C-k

org-capture-kill

Abort the capture process and return to the previous state.

org-captureをアジェンダから k cキーの組合せを用いた特別な方法で呼ぶこともできます。この方法では、選択されたキャプチャテンプレートに挿入されるタイムスタンプは、現在の日付ではなくアジェンダ内のカーソルがある位置の日付がデフォルトになります。

最後にキャプチャが保存された場所を探すには、org-captureをプレフィックスコマンドと一緒に使用します。

С-и С-с с

Visit the target location of a capture template. You get to select the template in the usual way.

С-и С-и С-с с

Visit the last stored capture item in its buffer.

You can also jump to the bookmark org-capture-last-stored, which will automatically be created unless you set org-capture-bookmark to nil.

To insert the capture at point in an Org buffer, call  $\operatorname{\sf org-capture}$  with a C-O prefix argument.

# 9.1.3 キャプチャテンプレート

テンプレートは異なる種類のキャプチャアイテムや、異なる場所へ使用することができます。最も簡単にそのようなテンプレートを作る方法、カスタマイズインターフェースを通じて行うことです。

C-c c C Customize the variable org-capture-templates.

テンプレート定義の正式な説明の前に、例を挙げます。一般的な TODO エントリーを作成する場合を考えます。また、これらのエントリーは"/org/gtd.orgの中にある見出し'Tasks'の下に作成され、journal.org内のデートツリーはジャーナルエントリーがキャプチャされます。このような場合の設定は以下のようになります。

(setq org-capture-templates

ここで C-c c tを押すと、Org-mode はこのようなテンプレートを用意します。

\* TOD0

[[file:lint to where you initiated capture]]

During expansion of the template, %a has been replaced by a link to the location from where you called the capture command. This can be extremely useful for deriving tasks from emails, for example. You fill in the task definition, press C-c and Org returns you to the same place where you started the capture process.

特定のテンプレートを対話的な選択なしに用いてキャプチャする特別なキーを定義するには、以下のようにキーバインドを作成できます。

(define-key global-map "\C-cx\n"
 (lambda () (interactive) (org-capture nil "x")))

### 9.1.3.1 テンプレートの要素

それではテンプレートを定義するための要素について述べています。org-capture-templates中にあるそれぞれのエントリーは以下の項目から構成されるリストです。

keys キーは文字列で示されるテンプレートを文字だけで選択します。例えば、"a"は a キーだけで選択するテンプレートであり、"bt"は 2 つのキーで選択します。幾つかのキーを使う場合、同じ接頭辞キーを持つキーはリストの中で連続している必要があり、以下に例をあげるような、接頭辞キーを表す 2 つの要素を持つエントリーをその前に置きます。("b" "買い物リストのためのテンプレート")

もし Cキーにテンプレートを定義していなければ、このキーでこの複雑な変数のカスタマイズバッファを開きます。

description

選択時に表示されるテンプレートの短い説明文。

type エントリーの種類をシンボルで表します。正しい値は以下の通りです。

An Org mode node, with a headline. Will be filed as the child of the target entry or as a top-level entry. The target file should be an Org mode file.

item 対象の場所の最初にある単純なリストへ書き込まれる単純なリストの項目。 対象のファイルは Org-mode のファイルでなければならなりません。

checkitem

チェックボックス項目。これは単純なリストとデフォルトのテンプレートが異なるだけです。

table-line

対象の場所にある最初のテーブルへ追加する新しい行。行が追加される場所は:prependと:table-line-posプロパティに依存します。(下記参照)

plain そのまま挿入される文章

Specification of where the captured item should be placed. In Org mode files, targets usually define a node. Entries will become children of this node. Other types will be added to the table or list in the body of this node. Most target specifications contain a file name. If that file name is the empty string, it defaults to org-default-notes-file. A file can also be given as a variable or as a function called with no argument. When an absolute path is not specified for a target, it is taken as relative to org-directory.

正しい値は以下の通りです。

(file "path/to/file")

文章はこのファイルの先頭か最後に挿入されます。

(id "現存する org エントリーの id")

このエントリーの子として、もしくはこのエントリの本文として記入します。

(file+headline "path/to/file" "node headline")

対象の見出しがファイル中で一つしか無い場合の速い設定。

(file+olp "path/to/file" "Leval 1 heading" "Leval 2" ...) 唯一でない見出しの場合、フルパスの方が安全です。

(file+regexp "path/to/file" "regexp to find location") カーソルの位置に正規表現を使った場合。

(file+olp+datetree "path/to/file" [ "Level 1 heading" ....])

This target<sup>2</sup> will create a heading in a date tree<sup>3</sup> for today's date. If the optional outline path is given, the tree will be built under the node it is pointing to, instead of at top level. Check out the :time-prompt and :tree-type properties below for additional options.

(file+function "path/to/file" function-finding-location) ファイルの中で正しい場所を見つける関数

(clock) ファイル中で現在時間を測っているエントリー。

(function function-finding-location)

Most general way: write your own function which both visits the file and moves point to the right location.

template キャプチャする項目を作るテンプレート。もし空にした場合、デフォルトのテンプレートを使用します。もしエスケープコードを付加した文字列の場合、キャプチャされた時の時間と状況に依存して置換されます。エスケープされた文字列はテンプレートファイルからロードされ、特別な構文 (file "path/to/template")を使用します。詳細をいかに示します。

# properties

エントリーの残りは追加オプションのプロパティリストです。理解できるプロパティは

:prepend 通常新しくキャプチャされた情報は対象の場所 (最後の子、最後のテーブル、最後のリスト項目…) に追加されます。このプロパティを設定することで変更します。

:immediate-finish

セットされると情報の編集を行わなず、追加だけを直ちに行います。テンプレートが自動的に追加できる情報だけを必要とする場合だけ意味を成します。

:empty-lines

新しい項目の前後に挿入する行の数をこれに設定します。デフォルトは0で、通常の他の値は1です。

<sup>&</sup>lt;sup>2</sup> Org used to offer four different targets for date/week tree capture. Now, Org automatically translates these to use file+olp+datetree, applying the :time-prompt and :tree-type properties. Please rewrite your date/week-tree targets using file+olp+datetree since the older targets are now deprecated.

<sup>&</sup>lt;sup>3</sup> A date tree is an outline structure with years on the highest level, months or ISO-weeks as sublevels and then dates on the lowest level. Tags are allowed in the tree structure.

#### :clock-in

この項目の時計を開始します。

### :clock-keep

キャプチャしたエントリーを追加しても時計を動かし続けます。

#### :clock-resume

もし時計を割り込むキャプチャを始めた場合、キャプチャ終了時に時計を 再開します。:clock-keepは:clock-resumeより優先されることに注意 が必要です。もしどちらの設定もtに設定された場合、現在の時計が動き、 一つ前の時計は再開されません。

# :time-prompt

Prompt for a date/time to be used for date/week trees and when filling the template. Without this property, capture uses the current date and time. Even if this property has not been set, you can force the same behavior by calling org-capture with a C-1 prefix argument.

#### :tree-type

When 'week', make a week tree instead of the month tree, i.e. place the headings for each day under a heading with the current iso week.

#### :unnarrowed

対象とするバッファの幅を狭めず、単純にフルバッファで表示します。デフォルトでは幅を狭くし、新しい内容だけが表示されます。

#### :table-line-pos

Specification of the location in the table where the new line should be inserted. It can be a string, a variable holding a string or a function returning a string. The string should look like "II-3" meaning that the new line should become the third line before the second horizontal separator line.

### :kill-buffer

対象のファイルがキャプチャ時にまだ読み込まれていなかった場合、キャプチャ終了時に再びバッファを閉じます。

# 9.1.3.2 テンプレートの拡張

In the template itself, special %-escapes<sup>4</sup> allow dynamic insertion of content. The templates are expanded in the order given here:

%[file]	Insert the contents of the file given by file.
%(sexp)	Evaluate Elisp sexp and replace with the result.
	For convenience, %:keyword (see below) placeholders
	within the expression will be expanded prior to this.
	The sexp must return a string.
%<>	The result of format-time-string on the format specification.
%t	Timestamp, date only.
%Т	Timestamp, with date and time.
%u, %U	Like the above, but inactive timestamps.
%i	Initial content, the region when capture is called while the

 $<sup>^4\,</sup>$  If you need one of these sequences literally, escape the % with a backslash.

```
region is active.
               The entire text will be indented like %i itself.
%a
               Annotation, normally the link created with org-store-link.
%A
               Like %a, but prompt for the description part.
%1
               Like %a, but only insert the literal link.
%с
               Current kill ring head.
%x
               Content of the X clipboard.
               Title of the currently clocked task.
%k
%K
               Link to the currently clocked task.
               User name (taken from user-full-name).
%n
%f
               File visited by current buffer when org-capture was called.
               Full path of the file or directory visited by current buffer.
%F
%:keyword
               Specific information for certain link types, see below.
%^g
               Prompt for tags, with completion on tags in target file.
%^G
               Prompt for tags, with completion all tags in all agenda files.
%^t
               Like %t, but prompt for date. Similarly %T, %u, %U.
               You may define a prompt like %^{Birthday}t.
%^C
               Interactive selection of which kill or clip to use.
%^L
               Like %^C, but insert as link.
%^{prop}p
               Prompt the user for a value for property prop.
%^{prompt}
               prompt the user for a string and replace this sequence with it.
               You may specify a default value and a completion table with
               \%^{\text{regret}} \cdot \{\text{prompt} \mid \text{default} \mid \text{completion 2} \mid \text{completion 3} \dots \}.
               The arrow keys access a prompt-specific history.
1 \dots N Insert the text entered at the Nth ^{r}{prompt}, where N is
               a number, starting from 1.<sup>5</sup>
%?
               After completing the template, position cursor here.
```

リンクのタイプを指定するため、以下のキーワードが定義<sup>6</sup>されています。

Link type		Available keywords
bbdb	-+- 	%:name %:company
irc	İ	%:server %:port %:nick
vm, vm-imap, wl, mh, mew, rmail,	Τ	
gnus, notmuch	1	%:from %:fromname %:fromaddress
_	1	<pre>%:to %:toname %:toaddress</pre>
	1	%:date (message date header field)
	1	<pre>%:date-timestamp (date as active timestamp)</pre>
	1	<pre>%:date-timestamp-inactive (date as inactive timestamp)</pre>
	1	%:fromto (either "to NAME" or "from NAME") <sup>7</sup>
gnus	1	%:group, for messages also all email fields
eww, w3, w3m	1	%:url
info	1	%:file %:node
calendar	1	%:date
org-protocol	1	%:link %:description %:annotation

テンプレート展開後のカーソル位置のために以下を用います。

%? テンプレートを完了したあと、カーソル位置をここに移動します。

<sup>5</sup> As required in Emacs Lisp, it is necessary to escape any backslash character in other backslash. So, in order to use '%\1' placeholder, you need to write '%\\1' in the template.

<sup>&</sup>lt;sup>6</sup> もしあなたが自分のリンクタイプを定義しているならば (see ⟨undefined⟩ [ハイパーリンクのタイプ の追加], page ⟨undefined⟩)、org-store-link-propsに保存されているいずれのプロパティもキャプ チャテンプレート中に同じ方法でアクセス可能です。

 $<sup>^{7}</sup>$  This will always be the other, not the user. See the variable org-from-is-user-regexp.

#### **9.1.3.3** コンテクストにおけるノート

To control whether a capture template should be accessible from a specific context, you can customize org-capture-templates-contexts. Let's say for example that you have a capture template "p" for storing Gnus emails containing patches. Then you would configure this option like this:

You can also tell that the command key "p" should refer to another template. In that case, add this command key like this:

```
(setq org-capture-templates-contexts
    '(("p" "q" (in-mode . "message-mode"))))
```

See the docstring of the variable for more information.

### 9.2 添付

参照すべきものをアウトラインノートやタスクと連携させることは大抵役立ちます。小さなプレーンテキストの塊は単純にプロジェクトのサブツリーとして保存可能です。ハイパーリンク (see Chapter 4 [ハイパーリンク], page 38) はあなたのコンピュータやクラウドなどにあるファイル、例えばプロジェクトに関連する email やソースコードファイルとの連携を確立します。その他の方法として、attachmentsがあります。これはアウトラインノードの属するディレクトリにあるファイルです。これらのディレクトリは dataディレクトリの中に位置し、あなたの Org ファイルが保存されているディレクトリと同じディレクトリの中にある  $^8$ 。もしこのディレクトリを git initで初期化した場合、Org-mode は変更点を見つけた時に自動的にそれらをコミットします。添付システムは John Wiegley の貢献によって Org-mode へ追加されました。

もしそれがより良い方法に思える場合は、エントリーへディレクトリを添付することも自身の選択で可能です。子エントリーは親から添付ディレクトリを受け継ぐため、サブツリー全体が同じ添付ディレクトリを使うことになります。

以下のコマンドはプロパティを操作する助けとなります。

C-c C-a org-attach

添付システムに関連するコマンドのコマンド選択画面。これらのキーのあとに、コマンドのリストが表示され、コマンドを選択するために更にキーを押す必要があります。

a org-attach-attach

ファイルを選択してそれをタスクの添付ディレクトリへ移動します。ファイルは org-attach-methodによって複製、移動、リンクされます。ハードリンクはすべてのシステムでサポートされていないことに注意が必要です。

c/m/1 コピー/移動/リンクメソッドを使ってファイルを添付します。ハードリンクはすべてのシステムでサポートされていないことに注意が必要です。

u org-attach-url

Attach a file from URL

n org-attach-new

Emacs のバッファとして新しい添付を作成します。

<sup>&</sup>lt;sup>8</sup> もしエントリーや Org ファイルを他のディレクトリに移動した場合、org-attach-directoryが絶対パスを含むように設定する必要があります。

Z	org-attach-sync あなた自身で添付を追加した場合に、現在のタスクをその添付ディレクト リと同期します。
o	org-attach-open 現在のタスクに関する添付を開きます。もし $1$ つ以上ある場合は、まずファイル名を入力させます。開き方は org-file-appsに従います。詳細は、ハイパーリンクを辿るための情報 (see Section 4.4 [リンクの扱い], page 41) を参照してください。
0	org-attach-open-in-emacs これも添付を開きますが、強制的にファイルを Emacs を用います。
f	org-attach-reveal 現在のタスクの添付ディレクトリを開きます。
F	org-attach-reveal-in-emacs これもディレクトリを開きますが、強制的に Emacs 内で diredを用います。
d	org-attach-delete-one 添付の1つを選択し削除します。
D	org-attach-delete-all タスクに関連する添付をすべて削除します。安全な方法は diredを用いて ディレクトリを開き、そこから削除する方法です。
s	org-attach-set-directory 特定のディレクトリをエントリーの添付ディレクトリーに指定します。こ れはディレクトリのパスを ATTAH_DIRプロパティに代入することで動作し ます。
i	org-attach-set-inherit ATTACH_DIR_INHERITプロパティをセットします。これによって子も親と 同じディレクトリを添付として使用します。

# 9.3 RSS フィード

Org-mode はエントリーの追加や変更を RSS フィードと Atom フィードの情報を元に行うことができます。この機能を使ってプロダクトフィードのなかからそれぞれの新しいプロダクトに対してタスクを作ることも可能です。もしくは、携帯電話を対象とした Web 上のノート作成サービスを Org-mode のタスクにインポートできます。フィードにアクセスするには、org-feed-alistを設定します。この変数のドキュメント文字列に詳細はあります。以下に例をしまします。

この例は、以下のコマンドが使われるたびに、rss.slashdot.orgで提供されているフィードの新しいアイテムから、~/org/feeds.orgファイル内に 'Slashdot Entries'をヘッダーにもつ新しいエントリーを生成します。

C-c C-x g org-feed-update-all C-c C-x g org-feed-alistに設定されたフィードからアイテムを収集し、上記のように振る舞う。

C-c C-x G org-feed-goto-inbox はフィード名を入力し、そのフィードに設定されたインボックスへ移動します。

Under the same headline, Org will create a drawer 'FEEDSTATUS' in which it will store information about the status of items in the feed, to avoid adding the same item several times.

Atom フィードの読み方などのより詳しい情報は、org-feed.elを御覧ください。また、org-feed-alistのドキュメント文字列もあります。

## 9.4 外部アクセスのためのプロトコル

Org protocol is a mean to trigger custom actions in Emacs from external applications. Any application that supports calling external programs with an URL as argument may be used with this functionality. For example, you can configure bookmarks in your web browser to send a link to the current page to Org and create a note from it using capture (see \( \)\ undefined \( \) [Capture], page \( \)\ undefined \( \)). You can also create a bookmark that tells Emacs to open the local source file of a remote website you are browsing.

In order to use Org protocol from an application, you need to register 'org-protocol://' as a valid scheme-handler. External calls are passed to Emacs through the emacsclient command, so you also need to ensure an Emacs server is running. More precisely, when the application calls

emacsclient org-protocol://PROTOCOL?key1=val1&key2=val2

Emacs calls the handler associated to 'PROTOCOL' with argument '(:key1 val1 :key2 val2)'.

Org protocol comes with three predefined protocols, detailed in the following sections. Configure org-protocol-protocol-alist to define your own.

# 9.4.1 store-link $\mathcal{I}$ $\square$ $\vdash$ $\square$ $\square$

Using store-link handler, you can copy links, insertable through M-x org-insert-link or yanking thereafter. More precisely, the command

emacsclient org-protocol://store-link?url=URL&title=TITLE
stores the following link:

[[URL][TITLE]]

In addition, 'URL' is pushed on the kill-ring for yanking. You need to encode 'URL' and 'TITLE' if they contain slashes, and probably quote those for the shell.

To use this feature from a browser, add a bookmark with an arbitrary name, e.g., 'Org: store-link' and enter this as *Location*:

# 9.4.2 capture $\mathcal{I}$ $\square$ $\square$ $\square$

Activating capture handler pops up a 'Capture' buffer and fills the capture template associated to the 'X' key with them.

emacsclient org-protocol://capture?template=X?url=URL?title=TITLE?body=BODY

To use this feature, add a bookmark with an arbitrary name, e.g. 'Org: capture' and enter this as 'Location':

```
javascript:location.href='org-protocol://capture?template=x'+
    '&url='+encodeURIComponent(window.location.href)+
    '&title='+encodeURIComponent(document.title)+
    '&body='+encodeURIComponent(window.getSelection());
```

The result depends on the capture template used, which is set in the bookmark itself, as in the example above, or in org-protocol-default-template-key.

The following template placeholders are available:

```
%:link The URL
%:description The webpage title
%:annotation Equivalent to [[%:link][%:description]]
%i The selected text
```

## 9.4.3 open-sourceプロトコル

The open-source handler is designed to help with editing local sources when reading a document. To that effect, you can use a bookmark with the following location:

```
javascript:location.href='org-protocol://open-source?&url='+
    encodeURIComponent(location.href)
```

The variable org-protocol-project-alist maps URLs to local file names, by stripping URL parameters from the end and replacing the :base-url with :working-directory and :online-suffix with :working-suffix. For example, assuming you own a local copy of https://orgmode.org/worg/contents at /home/user/worg, you can set org-protocol-project-alist to the following

If you are now browsing https://orgmode.org/worg/org-contrib/org-protocol.html and find a typo or have an idea about how to enhance the documentation, simply click the bookmark and start editing.

However, such mapping may not yield the desired results. Suppose you maintain an online store located at http://example.com/. The local sources reside in /home/user/example/. It is common practice to serve all products in such a store through one file and rewrite URLs that do not match an existing file on the server. That way, a request to http://example.com/print/posters.html might be rewritten on the server to something like http://example.com/shop/products.php/posters.html.php. The open-source handler probably cannot find a file named /home/user/example/print/posters.html.php and fails.

Such an entry in org-protocol-project-alist may hold an additional property :rewrites. This property is a list of cons cells, each of which maps a regular expression to a path relative to the :working-directory.

Now map the URL to the path /home/user/example/products.php by adding :rewrites rules like this:

Since 'example.com/\$' is used as a regular expression, it maps http://example.com/, https://example.com/, https://example.com/ and similar to/home/user/example/index.php.

The :rewrites rules are searched as a last resort if and only if no existing file name is matched.

Two functions can help you filling org-protocol-project-alist with valid contents: org-protocol-create and org-protocol-create-for-org. The latter is of use if you're editing an Org file that is part of a publishing project.

## 9.5 移動と複製

When reviewing the captured data, you may want to refile or to copy some of the entries into a different list, for example into a project. Cutting, finding the right location, and then pasting the note is cumbersome. To simplify this process, you can use the following special command:

 $C\text{--}c\ M\text{--}w$  or g-copy Copying works like refiling, except that the original note is not deleted.

C-c C-w

org-refile エントリーや現在のリージョンをリファイルします。このコマンドはエントリーをリファイルする場所を求め、補完とともに1つ選択させます。アイテム(またはリージョン内のアイテム)は対象の見出しの下にサブアイテムとして挿入されます。org-reverse-note-orderに依存して、サブアイテムの先頭か最後のどちらかに挿入されます。デフォルトでは、現在のバッファのレベル1の見出しすべては対象と考えられますが、いくつものファイルにまたがった複雑な定義もすることが可能です。詳細はorg-refile-targets変数をご覧ください。もし場所をアウトラインのパスをファイルパスのような補完で選択したければ、org-refile-use-outline-pathと org-outline-path-complete-in-steps変数をご覧ください。もしリファイルするノードの親ノードをその場で作れるようにしたいときは、org-refile-allow-creating-parent-nodes変数をご覧ください。org-log-refile変数<sup>9</sup>がセットされている場合、タイムスタンプやノートがエントリーがリファイルされたときに記録されます。

C-u C-c C-w

リファイルのインターフェースを見出しのジャンプに使います。

C-u C-u C-c C-w

·c C-w org-refile-goto-last-stored org-refileが最後に木を移動させた場所に移動します。

<sup>&</sup>lt;sup>9</sup> #+STARTUPキーワード、logfile、lognoterefile、そしてnologrefileに対応している。

C-2 C-c C-w

現在計時しているアイテムの子としてリファイルします。

C-3 C-c C-w

Refile and keep the entry in place. Also see org-refile-keep to make this the default behavior, and beware that this may result in duplicated ID properties.

C-O C-c C-w or C-u C-u C-u C-c C-w

org-refile-cache-clear

Clear the target cache. Caching of refile targets can be turned on by setting org-refile-use-cache. To make the command see new possible targets, you have to clear the cache with this command.

#### **9.6** アーカイブ

(サブ) ツリーとして表現されたプロジェクトが終わった時、ツリーを外に移動し、それがアジェンダ に現れない様にしたいでしょう。アーカイブは活動中のファイルをコンパクトにし、アジェンダビュー を作るようなグローバルな検索を早くするために重要です。

C-c C-x C-a

org-archive-subtree-default

現在のエントリーを org-archive-default-command変数で指定されたコマンドを使ってアーカイブします。

### 9.6.1 ツリーをアーカイブファイルへ移動

もっとも一般的なアーカイブアクションはプロジェクトを他のファイル、アーカイブファイル、へ移動させることです。

C-c C-x C-s or short C-c \$

org-archive-subtree

Archive the subtree starting at the cursor position to the location given by org-archive-location.

C-u C-c C-x C-s

Check if any direct children of the current headline could be moved to the archive. To do this, each subtree is checked for open TODO entries. If none are found, the command offers to move it to the archive location. If the cursor is *not* on a headline when this command is invoked, the level 1 trees will be checked.

C-u C-u C-c C-x C-s

As above, but check subtree for timestamps instead of TODO entries. The command will offer to archive the subtree if it *does* contain a timestamp, and that timestamp is in the past.

The default archive location is a file in the same directory as the current file, with the name derived by appending \_archive to the current file name. You can also choose what heading to file archived items under, with the possibility to add them to a datetree in a file. For information and examples on how to specify the file and the heading, see the documentation string of the variable org-archive-location.

There is also an in-buffer option for setting this variable, for example:

#+ARCHIVE: %s\_done::

もしあるエントリー又は (サブ) ツリーに対して特別なアーカイブ場所を指定したいときには、エントリーに: ARCHIVE: プロパティを場所を値として与えてください (see  $\langle$  undefined $\rangle$ )。

もしサブツリーが移動した場合、エントリーが移動してきたファイル、アーカイブしたときのアウトラインパスなどのコンテクスト情報が記録されます。org-archive-save-context-info変数を設定することで追加される情報の量を調整します。

#### 9.6.2 ファイル内部でのアーカイブ

If you want to just switch off—for agenda views—certain subtrees without moving them to a different file, you can use the archive tag.

A headline that is marked with the ':ARCHIVE:' tag (see \( \)undefined \( \) [Tags], page \( \)undefined \( \)) stays at its location in the outline tree, but behaves in the following way:

- 表示を切り替えるコマンド (see Section 2.3 [表示、非表示の切り替え], page 6) では開くことは できません。アーカイブしたサブツリーを強制的に切り替えるには C-TABを使うか、org-cycle-open-archived-treesオプションを設定します。また、show-allなどの通常のアウトライン コマンドはアーカイブしたサブツリーも開きます。
- ツリーの抽出を行う過程で (see Section 2.6 [ツリーの抽出], page 11)、アーカイブしたサブツリー内でマッチしたものは org-suparse-tree-open-archived-treesオプションを設定しない限り現れません。
- During agenda view construction (see (undefined) [Agenda views], page (undefined)), the content of archived trees is ignored unless you configure the option org-agenda-skip-archived-trees, in which case these trees will always be included. In the agenda you can press v a to get archives temporarily included.
- Archived trees are not exported (see (undefined) [Exporting], page (undefined)), only
  the headline is. Configure the details using the variable org-export-with-archivedtrees.
- アーカイブしたツリーは org-columns-skip-archived-trees変数が nilに設定されない限りカラムビューから除外されます。

以下に示すコマンドが ARCHIVE タグの編集に役立ちます。

### C-c C-x a

org-toggle-archive-tag

Toggle the ARCHIVE tag for the current headline. When the tag is set, the headline changes to a shadowed face, and the subtree below it is hidden.

#### C-u C-c C-x a

Check if any direct children of the current headline should be archived. To do this, each subtree is checked for open TODO entries. If none are found, the command offers to set the ARCHIVE tag for the child. If the cursor is *not* on a headline when this command is invoked, the level 1 trees will be checked.

C-TAB

org-force-cycle-archived

Cycle a tree even if it is tagged with ARCHIVE.

#### C-c C-x A

org-archive-to-archive-sibling

Move the current entry to the *Archive Sibling*. This is a sibling of the entry with the heading 'Archive' and the tag 'ARCHIVE'. The entry becomes a child of that sibling and in this way retains a lot of its original context, including inherited tags and approximate position in the outline.

# 10 アジェンダビュー

Due to the way Org works, TODO items, time-stamped items, and tagged headlines can be scattered throughout a file or even a number of files. To get an overview of open action items, or of events that are important for a particular date, this information must be collected, sorted and displayed in an organized way.

Org can select items based on various criteria and display them in a separate buffer. Six different view types are provided:

- アジェンダ カレンダーのように指定した日付の情報を表示します、
- TODOリスト 未完了のアクションアイテムをカバーします、
- マッチビュー 関連づけられているタグやプロパティ、TODO の状態に基づいて見出しを表示します、
- a text search view that shows all entries from multiple files that contain specified keywords,
- a stuck projects view showing projects that currently don't move along, and
- custom views that are special searches and combinations of different views.

抽出された情報は特別なアジェンダバッファに表示されます。このバッファはリードオンリーですが、オリジナルの Org-mode ファイルにジャンプしたり、オリジナルのファイルを間接的に編集することができます。

By default, the report ignores commented (see (undefined) [Comment lines], page (undefined)) and archived (see (undefined) [Internal archiving], page (undefined)) entries. You can override this by setting org-agenda-skip-comment-trees and org-agenda-skip-archived-trees to nil.

Two variables control how the agenda buffer is displayed and whether the window configuration is restored when the agenda exits: org-agenda-window-setup and org-agenda-restore-windows-after-quit.

#### **10.1** アジェンダファイル

The information to be shown is normally collected from all agenda files, the files listed in the variable org-agenda-files<sup>1</sup>. If a directory is part of this list, all files with the extension .org in this directory will be part of the list.

Thus, even if you only work with a single Org file, that file should be put into the list<sup>2</sup>. You can customize org-agenda-files, but the easiest way to maintain it is through the following commands

C-c [ org-agenda-file-to-front

アジェンダファイルのリストに編集中のファイルを追加する。そのファイルは、リストの先頭に追加される。もしも既にリストに存在していたら、先頭に移動する。前置引数をつけることで、リストの最後に追加/移動する。

<sup>&</sup>lt;sup>1</sup> If the value of that variable is not a list, but a single file name, then the list of agenda files will be maintained in that external file.

When using the dispatcher, pressing < before selecting a command will actually limit the command to the current file, and ignore org-agenda-files until the next dispatcher command.

C-c ] org-remove-file 編集中のファイルをアジェンダファイルのリストから削除する。

C-' org-cycle-agenda-files

C-, アジェンダファイルのリストに従って、1つのファイルから次のファイルへと切り替える。

M-x org-switchb RET

iswitchbと似たようなインターフェースで Org-mode のバッファの間を切り替えるコマンド。

The Org menu contains the current list of files and can be used to visit any of them.

If you would like to focus the agenda temporarily on a file not in this list, or on just one file in the list, or even on only a subtree in a file, then this can be done in different ways. For a single agenda command, you may press < once or several times in the dispatcher (see  $\langle$  undefined $\rangle$  [Agenda dispatcher], page  $\langle$  undefined $\rangle$ ). To restrict the agenda scope for an extended period, use the following commands:

C-c C-x < org-agenda-set-restriction-lock

Permanently restrict the agenda to the current subtree. When with a prefix argument, or with the cursor before the first headline in a file, the agenda scope is set to the entire file. This restriction remains in effect until removed with C-c C-x >, or by typing either < or > in the agenda dispatcher. If there is a window displaying an agenda view, the new restriction takes effect immediately.

C-c C-x > org-agenda-remove-restriction-lock Remove the permanent restriction created by C-c C-x <.

speedbar.elを併用しているときは、Speedbarのフレームの中で以下のコマンドを使用することができます。

Permanently restrict the agenda to the item—either an Org file or a subtree in such a file—at the cursor in the Speedbar frame. If there is a window displaying an agenda view, the new restriction takes effect immediately.

> in the speedbar frame

org-agenda-remove-restriction-lock

Lift the restriction.

#### **10.2** アジェンダのコマンド選択画面

The views are created through a dispatcher, which should be bound to a global key—for example C-c a (see  $\langle$  undefined $\rangle$  [Activation], page  $\langle$  undefined $\rangle$ ). In the following we will assume that C-c a is indeed how the dispatcher is accessed and list keyboard access to commands accordingly. After pressing C-c a, an additional letter is required to execute a command. The dispatcher offers the following default commands:

- a カレンダーのようなアジェンダを作成します。(see Section 10.3.1 [毎週/毎日のアジェンダ], page 104)
- t/T すべての TODO アイテムのリストを作成します。 (see Section 10.3.2 [グローバルな TODO リスト], page 107)
- $m \mid M$  タグの表記にマッチした見出しのリストを作成します。(see Section 10.3.3 [タグとプロパティとのマッチング], page 107)

- s Create a list of entries selected by a boolean expression of keywords and/or regular expressions that must or must not occur in the entry.
- / Search for a regular expression in all agenda files and additionally in the files listed in org-agenda-text-search-extra-files. This uses the Emacs command multi-occur. A prefix argument can be used to specify the number of context lines for each match, default is 1.
- # / ! Create a list of stuck projects (see Section 10.3.5 [Stuck projects], page 110).
- Restrict an agenda command to the current buffer<sup>3</sup>. After pressing <, you still need to press the character selecting the command.</p>
- < If there is an active region, restrict the following agenda command to the region. Otherwise, restrict it to the current subtree<sup>4</sup>. After pressing < <, you still need to press the character selecting the command.</p>
- \* Toggle sticky agenda views. By default, Org maintains only a single agenda buffer and rebuilds it each time you change the view, to make sure everything is always up to date. If you often switch between agenda views and the build time bothers you, you can turn on sticky agenda buffers or make this the default by customizing the variable org-agenda-sticky. With sticky agendas, the agenda dispatcher will not recreate agenda views from scratch, it will only switch to the selected one, and you need to update the agenda by hand with r or g when needed. You can toggle sticky agenda view any time with org-toggle-sticky-agenda.

You can also define custom commands that will be accessible through the dispatcher, just like the default commands. This includes the possibility to create extended agenda buffers that contain several blocks together, for example the weekly agenda, the global TODO list and a number of special tags matches. See (undefined) [Custom agenda views], page (undefined).

## 10.3 アジェンダに組み込まれているビュー

このセクションではビルトインビューについて説明します。

#### 10.3.1 毎週/毎日のアジェンダ

The purpose of the weekly/daily *agenda* is to act like a page of a paper agenda, showing all the tasks for the current week or day.

 $extit{C-c}$  a a org-agenda-list

Org-mode のファイルのリストの中からその週の予定を収集するものです。予定はそれぞれの日に表示されます。 (C-u 2 1 C-c a aのように) 前置引数に数字をつけて  $^5$  表示する日数を設定することができます。 C-u 2 1 C-c a aのように、表示される日数を指定するかもしれません。

 $<sup>^3</sup>$  For backward compatibility, you can also press 1 to restrict to the current buffer.

<sup>&</sup>lt;sup>4</sup> For backward compatibility, you can also press 0 to restrict to the current region/subtree.

<sup>&</sup>lt;sup>5</sup> 逆方向の互換性のために、普遍的な前置引数 c-uをつけることでアジェンダ(予定表)より上に、TODO リストを書き出すことができます。この機能は軽視されており、専用の TODO リストやブロックアジェンダ (see  $\langle$  undefined $\rangle$  [ブロックアジェンダ], page  $\langle$  undefined $\rangle$ ) をその代わりに利用することが多いです。

The default number of days displayed in the agenda is set by the variable org-agenda-span (or the obsolete org-agenda-ndays). This variable can be set to any number of days you want to see by default in the agenda, or to a span name, such as day, week, month or year. For weekly agendas, the default is to start on the previous monday (see org-agenda-start-on-weekday). You can also set the start date using a date shift: (setq org-agenda-start-day "+10d") will start the agenda ten days from today in the future.

Remote editing from the agenda buffer means, for example, that you can change the dates of deadlines and appointments from the agenda buffer. The commands available in the Agenda buffer are listed in \( \text{undefined} \) [Agenda commands], page \( \text{undefined} \).

```
カレンダー/日記の統合
```

Emacs contains the calendar and diary by Edward M. Reingold. The calendar displays a three-month calendar with holidays from different countries and cultures. The diary allows you to keep track of anniversaries, lunar phases, sunrise/set, recurrent appointments (weekly, monthly) and more. In this way, it is quite complementary to Org. It can be very useful to combine output from Org with the diary.

In order to include entries from the Emacs diary into Org mode's agenda, you only need to customize the variable

```
(setq org-agenda-include-diary t)
```

After that, everything will happen automatically. All diary entries including holidays, anniversaries, etc., will be included in the agenda buffer created by Org mode. SPC, TAB, and RET can be used from the agenda buffer to jump to the diary file in order to edit existing diary entries. The i command to insert new entries for the current date works in the agenda buffer, as well as the commands S, M, and C to display Sunrise/Sunset times, show lunar phases and to convert to other calendars, respectively. c can be used to switch back and forth between calendar and agenda.

If you are using the diary only for sexp entries and holidays, it is faster to not use the above setting, but instead to copy or even move the entries into an Org file. Org mode evaluates diary-style sexp entries, and does it faster because there is no overhead for first creating the diary display. Note that the sexp entries must start at the left margin, no whitespace is allowed before them. For example, the following segment of an Org file will be processed and entries will be made in the agenda:

```
* Holidays
:PROPERTIES:
:CATEGORY: Holiday
:END:

%%(org-calendar-holiday) ; special function for holiday names

* Birthdays
:PROPERTIES:
:CATEGORY: Ann
:END:

%%(org-anniversary 1956 5 14)<sup>6</sup> Arthur Dent is %d years old
```

<sup>&</sup>lt;sup>6</sup> org-anniversary is just like diary-anniversary, but the argument order is always according to ISO and therefore independent of the value of calendar-date-style.

%%(org-anniversary 1869 10 2) Mahatma Gandhi would be %d years old

#### Anniversaries from BBDB

If you are using the Big Brothers Database to store your contacts, you will very likely prefer to store anniversaries in BBDB rather than in a separate Org or diary file. Org supports this and will show BBDB anniversaries as part of the agenda. All you need to do is to add the following to one of your agenda files:

\* Anniversaries
:PROPERTIES:
:CATEGORY: Anniv
:END:

%%(org-bbdb-anniversaries)

それから BBDB のデータレコードのための記念日の定義に取り掛かることができます。基本的には、BBDB のレコードの中にカーソルを置いて、C-o anniversary RETを実行し、それから日付を YYYY-MM-DDまたは MM-DDの形式で記入し、半角スペースに続けて記念日の種類 ('birthday'、'wedding'、または定型句) のクラスを記入します。もしもクラスを省略した場合は、デフォルトでは'birthday'であるとみなします。いくつかの例を書いてみました。org-bbdb.elファイルの先頭のところにもう少し詳しい説明が書いてあります。

1973-06-22 06-22 1955-08-02 wedding 2008-04-14 %s released version 6.01 of org mode, %d years ago

BBDBを変更したり、Emacs のセッションで最初にアジェンダを表示したとき後は、アジェンダの表示が少し遅くなるかもしれません。というのは Org-mode が記念日のハッシュデータを更新するからです。しかしながら、そのことについていうと非常に早いといえます。実際 Org-mode の日記ファイルに '%(diary-anniversary)'のエントリーを長々と書き連ねた場合よりもずっと早いと言えるでしょう。

もしすべての子タスクが終了後、TODO エントリーを自動的に DONE に切り替えたい場合は、 以下の設定を行なってください:

\* Anniversaries
 :PROPERTIES:
 :CATEGORY: Anniv
 :END:
%%(org-bbdb-anniversaries-future 3)

That will give you three days' warning: on the anniversary date itself and the two days prior. The argument is optional: if omitted, it defaults to 7.

## Appointment reminders

Org can interact with Emacs appointments notification facility. To add the appointments of your agenda files, use the command org-agenda-to-appt. This command lets you filter through the list of your appointments and add only those belonging to a specific category or matching a regular expression. It also reads a APPT\_WARNTIME property which will then override the value of appt-message-warning-time for this appointment. See the docstring for details.

## 10.3.2 The global TODO list

グローバルな TODO リストには、形式を整えられ、1 つの場所に集められたすべての未完了の TODO アイテムが含まれています。

C-c a t org-todo-list

グローバルな TODO リストを表示します。これはすべてのアジェンダファイル (see Chapter 10 [アジェンダビュー], page 102) から TODO アイテムを 1 つのバッファに 集約します。デフォルトでは、このアイテムのリストは DONE という状態ではないアイテムです。そのバッファは agenda-mode となり、そのバッファから TODO アイテム を直接調べたり操作したりするコマンドが用意されています (see Section 10.5 [アジェンダのコマンド], page 116)。

C-c a T org-todo-list

Like the above, but allows selection of a specific TODO keyword. You can also do this by specifying a prefix argument to C-c a t. You are prompted for a keyword, and you may also specify several keywords by separating them with 'l' as the boolean OR operator. With a numeric prefix, the Nth keyword in org-todo-keywords is selected. r+- をアジェンダバッファで使用するとバッファの再構成が行われます。たとえば 3 rというように、前置引数をつけてこのコマンドを実行すると選択した TODO + - 0 - 0 +

特定の TODO キーワードと合致するものを検索するのは、タグ検索の 1 機能として行うこともできます (see Section 6.4 [タグの検索], page 63)。

リモートで TODO アイテムを編集するということの意味は、1つのキーを入力することで TODO エントリーの状態を変更できるということです。 TODO リストの中で利用できるコマンドは Section 10.5 [アジェンダのコマンド], page 116 の記述を参考にしてください。

Normally the global TODO list simply shows all headlines with TODO keywords. This list can become very long. There are two ways to keep it more compact:

- Some people view a TODO item that has been *scheduled* for execution or have a *deadline* (see \(\sqrt{undefined}\)\) [Timestamps], page \(\sqrt{undefined}\)\) as no longer *open*. Configure the variables org-agenda-todo-ignore-scheduled, org-agenda-todo-ignore-deadlines, org-agenda-todo-ignore-timestamp and/or org-agenda-todo-ignore-with-date to exclude such items from the global TODO list.
- TODO アイテムがサブタスクにブレイクダウンされた下位のレベルを持っているかもしれません。そういった場合は、最上位の TODO の見出しを表示すれば十分で、グローバルなリストからは下位のレベルの項目は省略してもよい場合があります。そういったときは org-agendatodo-list-sublevels変数を設定することで可能となります。

#### 10.3.3 タグとプロパティとのマッチング

If headlines in the agenda files are marked with tags (see  $\langle undefined \rangle$ ), or have properties (see  $\langle undefined \rangle$ ) [Properties and columns], page  $\langle undefined \rangle$ ), you can select headlines based on this metadata and collect them into an agenda buffer. The match syntax described here also applies when creating sparse trees with  $C-c \neq m$ .

C-c a m

org-tags-view

Produce a list of all headlines that match a given set of tags. The command prompts for a selection criterion, which is a boolean logic expression with tags, like '+work+urgent-withboss' or 'work|home' (see \(\lambda\) undefined\\) [Tags], page \(\lambda\) undefined\\)). If you often need a specific search, define a custom command for it (see \(\lambda\) undefined\\) [Agenda dispatcher], page \(\lambda\) undefined\\)).

C-c a M

org-tags-view

Like *C-c a m*, but only select headlines that are also TODO items in a not-DONE state and force checking subitems (see variable org-tags-match-list-sublevels). To exclude scheduled/deadline items, see the variable org-agenda-tags-todo-honor-ignore-options. Matching specific TODO keywords together with a tags match is also possible, see (undefined) [Tag searches], page (undefined).

タグのリストで利用できるコマンドは Section 10.5 [アジェンダのコマンド], page 116 のところで説明しています。

# Match syntax

A search string can use Boolean operators '&' for AND and '|' for OR. '&' binds more strongly than '|'. Parentheses are not implemented. Each element in the search is either a tag, a regular expression matching tags, or an expression like PROPERTY OPERATOR VALUE with a comparison operator, accessing a property value. Each element may be preceded by '-', to select against it, and '+' is syntactic sugar for positive selection. The AND operator '&' is optional when '+' or '-' is present. Here are some examples, using only tags.

'work' Select headlines tagged ':work:'.

'work&boss'

Select headlines tagged ':work:' and ':boss:'.

'+work-boss'

Select headlines tagged ':work:', but discard those also tagged ':boss:'.

'work|laptop'

Selects lines tagged ':work:' or ':laptop:'.

'work|laptop+night'

Like before, but require the ':laptop:' lines to be tagged also ':night:'.

タグの代わりに、大括弧でくくられた正規表現により指定をすることもできます。例えば、'work+{^boss.\*}'と指定すると、':work:'というタグのついた見出しで 'boss'という単語で starting するタグがついているものに一致します。

Group tags (see \(\)\underlined\\\) [Tag hierarchy], page \(\)\underlined\\\)) are expanded as regular expressions. E.g., if ':\underlined\':\

You may also test for properties (see \( \)undefined \( \) [Properties and columns], page \( \)undefined \( \)) at the same time as matching tags. The properties may be real properties, or special

properties that represent other metadata (see (undefined) [Special properties], page (undefined)). For example, the "property" TODO represents the TODO keyword of the entry and the "property" PRIORITY represents the PRIORITY keyword of the entry.

In addition to the properties mentioned above, LEVEL represents the level of an entry. So a search '+LEVEL=3+boss-TODO="DONE" lists all level three headlines that have the tag 'boss' and are *not* marked with the TODO keyword DONE. In buffers with org-odd-levels-only set, 'LEVEL' does not count the number of stars, but 'LEVEL=2' will correspond to 3 stars etc.

いくつかの例を紹介します。

'work+TODO="WAITING"'

':work:'というタグがある TODO 行のうち、特に TODO キーワードが 'WAITING' となっている行を選択します。

'work+TODO="WAITING" | home+TODO="WAITING"'

Waiting tasks both at work and at home.

When matching properties, a number of different operators can be used to test the value of a property. Here is a complex example:

比較のタイプは比較の値がどのように書かれているかによります。

- If the comparison value is a plain number, a numerical comparison is done, and the allowed operators are '<', '=', '>', '<=', '>=', and '<>'.
- If the comparison value is enclosed in double-quotes, a string comparison is done, and the same operators are allowed.
- If the comparison value is enclosed in double-quotes and angular brackets (like 'DEADLINE<="<2008-12-24 18:30>"'), both values are assumed to be date/time specifications in the standard Org way, and the comparison will be done accordingly. Special values that will be recognized are "<now>" for now (including time), and "<today>", and "<tomorrow>" for these days at 00:00 hours, i.e., without a time specification. Also strings like "<+5d>" or "<-2m>" with units d, w, m, and y for day, week, month, and year, respectively, can be used.
- If the comparison value is enclosed in curly braces, a regexp match is performed, with
   '=' meaning that the regexp matches the property value, and '<>' meaning that it does
   not match.

So the search string in the example finds entries tagged ':work:' but not ':boss:', which also have a priority value 'A', a ':Coffee:' property with the value 'unlimited', an 'Effort' property that is numerically smaller than 2, a ':With:' property that is matched by the regular expression 'Sarah\|Denny', and that are scheduled on or after October 11, 2008.

You can configure Org mode to use property inheritance during a search, but beware that this can slow down searches considerably. See \( \)undefined \( \) [Property inheritance], page \( \) undefined \( \), for details.

For backward compatibility, and also for typing speed, there is also a different way to test TODO states in a search. For this, terminate the tags/property part of the search string (which may include several terms connected with 'I') with a '/' and then specify a Boolean

expression just for TODO keywords. The syntax is then similar to that for tags, but should be applied with care: for example, a positive selection on several TODO keywords cannot meaningfully be combined with boolean AND. However, negative selection combined with AND can be meaningful. To make sure that only lines are checked that actually have any TODO keyword (resulting in a speed-up), use C-c a M, or equivalently start the TODO part after the slash with '!'. Using C-c a M or '/!' will not match TODO keywords in a DONE state. Examples:

'work/WAITING'

'work+TODO="WAITING"'と同じ

'work/!-WAITING-NEXT'

':work:'を選択。ただし TODO 行では 'WAITING'と 'NEXT'のどちらのタグもついていないもの

'work/!+WAITING|+NEXT'

Select ':work:'-tagged TODO lines that are either 'WAITING' or 'NEXT'.

## 10.3.4 検索ビュー

This agenda view is a general text search facility for Org mode entries. It is particularly useful to find notes.

C-c a s org-search-view

このコマンドは特別な検索のためのもので、論理式を使って、文字列または特定の単語 に合致するエントリーを選択します。

For example, the search string 'computer equipment' will find entries that contain 'computer equipment' as a substring. If the two words are separated by more space or a line break, the search will still match. Search view can also search for specific keywords in the entry, using Boolean logic. The search string '+computer +wifi -ethernet -{8\.11[bg]}' will search for note entries that contain the keywords computer and wifi, but not the keyword ethernet, and which are also not matched by the regular expression 8\.11[bg], meaning to exclude both 8.11b and 8.11g. The first '+' is necessary to turn on word search, other '+' characters are optional. For more details, see the docstring of the command org-search-view.

アジェンダファイルに加えて、このコマンドは org-agenda-text-search-extra-filesの中で一覧になっているファイルもまた検索するということに注意してください。

## 10.3.5 Stuck projects

If you are following a system like David Allen's GTD to organize your work, one of the "duties" you have is a regular review to make sure that all projects move along. A *stuck* project is a project that has no defined next actions, so it will never show up in the TODO lists Org mode produces. During the review, you need to identify such projects and define next actions for them.

 ${\it C-c}$  a # org-agenda-list-stuck-projects List projects that are stuck.

C-c a ! Customize the variable org-stuck-projects to define what a stuck project is and how to find it.

You almost certainly will have to configure this view before it will work for you. The built-in default assumes that all your projects are level-2 headlines, and that a project is not stuck if it has at least one entry marked with a TODO keyword TODO or NEXT or NEXTACTION.

Let's assume that you, in your own way of using Org mode, identify projects with a tag PROJECT, and that you use a TODO keyword MAYBE to indicate a project that should not be considered yet. Let's further assume that the TODO keyword DONE marks finished projects, and that NEXT and TODO indicate next actions. The tag @SHOP indicates shopping and is a next action even without the NEXT tag. Finally, if the project contains the special word IGNORE anywhere, it should not be listed either. In this case you would start by identifying eligible projects with a tags/todo match<sup>7</sup> '+PROJECT/-MAYBE-DONE', and then check for TODO, NEXT, @SHOP, and IGNORE in the subtree to identify projects that are not stuck. The correct customization for this is

Note that if a project is identified as non-stuck, the subtree of this entry will still be searched for stuck projects.

#### 10.4 表示とソート

Before displaying items in an agenda view, Org mode visually prepares the items and sorts them. Each item occupies a single line. The line starts with a *prefix* that contains the *category* (see (undefined) [Categories], page (undefined)) of the item and other important information. You can customize in which column tags will be displayed through org-agenda-tags-column. You can also customize the prefix using the option org-agenda-prefix-format. This prefix is followed by a cleaned-up version of the outline headline associated with the item.

#### 10.4.1 カテゴリ

The category is a broad label assigned to each agenda item. By default, the category is simply derived from the file name, but you can also specify it with a special line in the buffer, like this:

```
#+CATEGORY: Thesis
```

If you would like to have a special CATEGORY for a single entry or a (sub)tree, give the entry a :CATEGORY: property with the special category you want to apply as the value.

The display in the agenda buffer looks best if the category is not longer than 10 characters. あなたは org-agenda-category-icon-alist変数をカスタマイズすることで、カテゴリーにアイコンを設定することができます。

# 10.4.2 時刻の仕様

Org mode checks each agenda item for a time-of-day specification. The time can be part of the timestamp that triggered inclusion into the agenda, for example as in

<sup>&</sup>lt;sup>7</sup> See (undefined) [Tag searches], page (undefined).

'<2005-05-10 Tue 19:00>'. Time ranges can be specified with two timestamps, like '<2005-05-10 Tue 20:30>--<2005-05-10 Tue 22:15>'.

In the headline of the entry itself, a time(range) may also appear as plain text (like '12:45' or a '8:30-1pm') $^8$ .

If the agenda integrates the Emacs diary (see \(\sqrt{undefined}\)\) [Weekly/daily agenda], page \(\sqrt{undefined}\)\), time specifications in diary entries are recognized as well.

For agenda display, Org mode extracts the time and displays it in a standard 24 hour format as part of the prefix. The example times in the previous paragraphs would end up in the agenda like this:

```
8:30-13:00 Arthur Dent lies in front of the bulldozer 12:45..... Ford Prefect arrives and takes Arthur to the pub 19:00..... The Vogon reads his poem 20:30-22:15 Marvin escorts the Hitchhikers to the bridge
```

もしもアジェンダが一日モードであるならば、あるいは今日を表示しているならば、時間設定されたエントリーは、次のような時間のグリッドに埋め込まれます。

時間のグリッドは、org-agenda-use-time-grid変数で表示したりしなかったさせることができます。そしてまた org-agenda-time-gridで設定をすることができます。

## **10.4.3** アジェンダの項目をソートする

ビューに書き出される前に、各アイテムは並び替えられます。この並び替えはビューのタイプによって決まります。

- For the daily/weekly agenda, the items for each day are sorted. The default order is to first collect all items containing an explicit time-of-day specification. These entries will be shown at the beginning of the list, as a *schedule* for the day. After that, items remain grouped in categories, in the sequence given by org-agenda-files. Within each category, items are sorted by priority (see \( \text{undefined} \) [Priorities], page \( \text{undefined} \)), which is composed of the base priority (2000 for priority 'A', 1000 for 'B', and 0 for 'C'), plus additional increments for overdue scheduled or deadline items.
- For the TODO list, items remain in the order of categories, but within each category, sorting takes place according to priority (see \( \)undefined \( \) [Priorities], page \( \)undefined \( \)). The priority used for sorting derives from the priority cookie, with additions depending on how close an item is to its due or scheduled date.

<sup>&</sup>lt;sup>8</sup> You can, however, disable this by setting org-agenda-search-headline-for-time variable to a nil value.

• For tags matches, items are not sorted at all, but just appear in the sequence in which they are found in the agenda files.

並び替えは、org-agenda-sorting-strategy変数でカスタマイズすることができます。そして、並び替えはそのエントリーの工数の見積りに基づく評価も含まれます (see ⟨undefined⟩ [Effort estimates], page ⟨undefined⟩)。

# 10.4.4 Filtering/limiting agenda items

Agenda built-in or customized commands are statically defined. Agenda filters and limits provide two ways of dynamically narrowing down the list of agenda entries: *filters* and *limits*. Filters only act on the display of the items, while limits take effect before the list of agenda entries is built. Filters are more often used interactively, while limits are mostly useful when defined as local variables within custom agenda commands.

## Filtering in the agenda

/ org-agenda-filter-by-tag

Filter the agenda view with respect to a tag and/or effort estimates. The difference between this and a custom agenda command is that filtering is very fast, so that you can switch quickly between different filters without having to recreate the agenda.<sup>9</sup>

You will be prompted for a tag selection letter; SPC will mean any tag at all. Pressing TAB at that prompt will offer use completion to select a tag (including any tags that do not have a selection character). The command then hides all entries that do not contain or inherit this tag. When called with prefix arg, remove the entries that do have the tag. A second / at the prompt will turn off the filter and unhide any hidden entries. Pressing + or - switches between filtering and excluding the next tag.

Org also supports automatic, context-aware tag filtering. If the variable org-agenda-auto-exclude-function is set to a user-defined function, that function can decide which tags should be excluded from the agenda automatically. Once this is set, the / command then accepts RET as a sub-option key and runs the auto exclusion logic. For example, let's say you use a Net tag to identify tasks which need network access, an Errand tag for errands in town, and a Call tag for making phone calls. You could auto-exclude these tags based on the availability of the Internet, and outside of business hours, with something like this:

<sup>&</sup>lt;sup>9</sup> Custom commands can preset a filter by binding the variable org-agenda-tag-filter-preset as an option. This filter will then be applied to the view and persist as a basic filter through refreshes and more secondary filtering. The filter is a global property of the entire agenda view—in a block agenda, you should only set this in the global options section, not in the section of an individual block.

```
(defun org-my-auto-exclude-function (tag)
  (and (cond
        ((string= tag "Net")
         (/= 0 (call-process "/sbin/ping" nil nil nil
                             "-c1" "-q" "-t1" "mail.gnu.org")))
        ((or (string= tag "Errand") (string= tag "Call"))
         (let ((hour (nth 2 (decode-time))))
           (or (< hour 8) (> hour 21)))))
       (concat "-" tag)))
```

(setq org-agenda-auto-exclude-function 'org-my-auto-exclude-function)

### []{}

in search view

add new search words ([ and ]) or new regular expressions ({ and }) to the query string. The opening bracket/brace will add a positive search term prefixed by '+', indicating that this search term must occur/match in the entry. The closing bracket/brace will add a negative search term which must not occur/match in the entry for it to be selected.

<

## org-agenda-filter-by-category

Filter the current agenda view with respect to the category of the item at point. Pressing < another time will remove this filter. When called with a prefix argument exclude the category of the item at point from the agenda.

You can add a filter preset in custom agenda commands through the option org-agenda-category-filter-preset. See (undefined) [Setting options], page  $\langle undefined \rangle$ .

## org-agenda-filter-by-top-headline

Filter the current agenda view and only display the siblings and the parent headline of the one at point.

## org-agenda-filter-by-regexp

Filter the agenda view by a regular expression: only show agenda entries matching the regular expression the user entered. When called with a prefix argument, it will filter out entries matching the regexp. With two universal prefix arguments, it will remove all the regexp filters, which can be accumulated.

You can add a filter preset in custom agenda commands through the option org-agenda-regexp-filter-preset. See (undefined) [Setting options], page  $\langle undefined \rangle$ .

org-agenda-filter-by-effort

Filter the agenda view with respect to effort estimates. You first need to set up allowed efforts globally, for example

```
(setq org-global-properties
    '(("Effort_ALL". "0 0:10 0:30 1:00 2:00 3:00 4:00")))
```

You can then filter for an effort by first typing an operator, one of <, >, and =, and then the one-digit index of an effort estimate in your array of allowed values, where 0 means the 10th value. The filter will then restrict to entries

with effort smaller-or-equal, equal, or larger-or-equal than the selected value. For application of the operator, entries without a defined effort will be treated according to the value of org-sort-agenda-noeffort-is-high.

When called with a prefix argument, it will remove entries matching the condition. With two universal prefix arguments, it will clear effort filters, which can be accumulated.

You can add a filter preset in custom agenda commands through the option org-agenda-effort-filter-preset. See (undefined) [Setting options], page (undefined).

org-agenda-filter-remove-all

Remove all filters in the current agenda view.

# Setting limits for the agenda

Here is a list of options that you can set, either globally, or locally in your custom agenda views (see  $\langle undefined \rangle$  [Custom agenda views], page  $\langle undefined \rangle$ ).

```
org-agenda-max-entries
エントリ数の制約
```

org-agenda-max-effort

Limit the duration of accumulated efforts (as minutes).

org-agenda-max-todos

Limit the number of entries with TODO keywords.

```
org-agenda-max-tags
タグ付きエントリ数の制約
```

When set to a positive integer, each option will exclude entries from other categories: for example, (setq org-agenda-max-effort 100) will limit the agenda to 100 minutes of effort and exclude any entry that has no effort property. If you want to include entries with no effort property, use a negative value for org-agenda-max-effort.

One useful setup is to use org-agenda-max-entries locally in a custom command. For example, this custom command will display the next five entries with a NEXT TODO keyword.

Once you mark one of these five entry as DONE, rebuilding the agenda will again the next five entries again, including the first entry that was excluded so far.

You can also dynamically set temporary limits, which will be lost when rebuilding the agenda:

org-agenda-limit-interactively

This prompts for the type of limit to apply and its value.

# 10.5 Commands in the agenda buffer

アジェンダバッファでのエントリーは、その項目が作成された Org-mode ファイルと日記ファイルの間でリンクされます。アジェンダバッファでは編集することはできませんが、コマンドを使って、そのエントリーがある場所を表示したり、ジャンプして、アジェンダバッファから「遠隔的に」Org-modeファイルを編集することができます。この方法で、すべての情報は1度書き込めばよく、あなたがアジェンダとノートのファイルが別の情報になるというリスクを避けることができます。

いくつかのコマンドはアジェンダの行上でマウスをクリックすることで実行されます。それ以外のコマンドは、必要とされる行の中にカーソルが置かれている必要があります。

#### Motion

n

org-agenda-next-line

次の行へ(up及び C-pと同じ)。

р

org-agenda-previous-line

次の行へ (down及び *C-n*と同じ)。

## View/Go to Org file

SPC or mouse-3

org-agenda-show-and-scroll-up

そのアイテムのオリジナルの場所を別のウインドウで表示する。前置引数を使うことで、見出しだけでなく、アウトライン上にエントリー全体を明確に表示する。

L

org-agenda-recenter

オリジナルの場所を表示し、ウインドウのセンターに再配置する。

TAB or mouse-2

org-agenda-goto

別のウインドウでそのアイテムのオリジナルの場所に移動する。

RET

org-agenda-switch-to

そのアイテムのオリジナルの場所に移動し、他のウインドウは削除する。

F

org-agenda-follow-mode

Toggle Follow mode. In Follow mode, as you move the cursor through the agenda buffer, the other window always shows the corresponding location in the Org file. The initial setting for this mode in new agenda buffers can be set with the variable org-agenda-start-with-follow-mode.

C-c C-x b

org-agenda-tree-to-indirect-buffer

Display the entire subtree of the current item in an indirect buffer. With a numeric prefix argument N, go up to level N and then take that tree. If N is negative, go up that many levels. With a C-u prefix, do not remove the previously used indirect buffer.

C-c C-o

org-agenda-open-link

Follow a link in the entry. This will offer a selection of any links in the text belonging to the referenced Org node. If there is only one link, it will be followed without a selection prompt.

#### Change display

- A Interactively select another agenda view and append it to the current view.
- o Delete other windows.

v d c v w c v t v m v y v SPC or short or short

org-agenda-day-view org-agenda-week-view -agenda-fortnight-view org-agenda-month-view org-agenda-year-view org-agenda-reset-view

日/週/月/年のビューを切り替えます。日または週にビューを切り替えたときは、こ の設定は、それに続くアジェンダの更新ついてのデフォルトの設定となります。月およ び年のビューは、作成するために時間を要するので、デフォルトとはしていません。数 字の付いた前置引数をつけると、その年、ISOの週、月、年の指定した日に直接ジャン プします。例えば 32 dと書いたときは 2 月 1 日、9 wと書いたら ISO の週番号が 9 を 指します。日、週あるいは月のビューを設定したときは、1年は同様に前置引数の中で コード化されます。例えば、200712 wと書いたときは2007年の第12週にジャンプする でしょう。もしもそのような年の指定を、1桁もしくは2桁の数字で行いたいたときは、 1938 年から 2037 年の間に位置づけられます。v SPCによって、org-agenda-spanで の設定をリセットすることができます。

f org-agenda-later

時間を前の日付の表示へと遡ります。

org-agenda-goto-today

今日へ移動します。

org-agenda-goto-date j

日付の選択画面でその日に移動します。

J org-agenda-clock-goto アジェンダバッファの中で現在時間を計測中のタスクに移動します。

D org-agenda-toggle-diary 日記のエントリーに含めるかどうかトグルします。参照 Section 10.3.1 [毎週/毎日 のアジェンダ], page 104.

v 1 or short 1

org-agenda-log-mode Toggle Logbook mode. In Logbook mode, entries that were marked DONE while logging was on (variable org-log-done) are shown in the agenda, as are entries that have been clocked on that day. You can configure the entry types that should be included in log mode using the variable org-agenda-logmode-items. When called with a C-u prefix, show all possible logbook entries, including state changes. When called with two prefix arguments C-u C-u, show only logging information, nothing else. v L is equivalent to C-u v 1.

v [ or short [ org-agenda-manipulate-query-add Include inactive timestamps into the current view. Only for weekly/daily agenda.

org-agenda-archives-mode org-agenda-archives-mode 'files v A

> Toggle Archives mode. In Archives mode, trees that are marked ARCHIVED are also scanned when producing the agenda. When you use the capital A, even all archive files are included. To exit archives mode, press v a again.

#### v R or short R

#### org-agenda-clockreport-mode

Toggle Clockreport mode. In Clockreport mode, the daily/weekly agenda will always show a table with the clocked times for the time span and file scope covered by the current agenda view. The initial setting for this mode in new agenda buffers can be set with the variable org-agenda-start-with-clockreport-mode. By using a prefix argument when toggling this mode (i.e., C-uR), the clock table will not show contributions from entries that are hidden by agenda filtering<sup>10</sup>. See also the variable org-clock-report-include-clocking-task.

v c Show overlapping clock entries, clocking gaps, and other clocking problems in the current agenda range. You can then visit clocking lines and fix them manually. See the variable org-agenda-clock-consistency-checks for information on how to customize the definition of what constituted a clocking problem. To return to normal agenda display, press 1 to exit Logbook mode.

#### $v E ext{ or short } E$

#### org-agenda-entry-text-mode

Toggle entry text mode. In entry text mode, a number of lines from the Org outline node referenced by an agenda line will be displayed below the line. The maximum number of lines is given by the variable org-agenda-entry-text-maxlines. Calling this command with a numeric prefix argument will temporarily modify that number to the prefix value.

G

org-agenda-toggle-time-grid

Toggle the time grid on and off. See also the variables org-agenda-use-time-grid and org-agenda-time-grid.

r

org-agenda-redo

Recreate the agenda buffer, for example to reflect the changes after modification of the timestamps of items with *S-LEFT* and *S-RIGHT*. When the buffer is the global TODO list, a prefix argument is interpreted to create a selective list for a specific TODO keyword.

g

org-agenda-redo

Same as r.

C-x C-s or short s

org-save-all-org-buffers

Save all Org buffers in the current Emacs session, and also the locations of IDs.

#### C-c C-x C-c

#### org-agenda-columns

Invoke column view (see (undefined) [Column view], page (undefined)) in the agenda buffer. The column view format is taken from the entry at point, or (if there is no entry at point), from the first entry in the agenda view. So whatever the format for that entry would be in the original buffer (taken from a property, from a #+COLUMNS line, or from the default variable org-columns-default-format), will be used in the agenda.

#### C-c C-x >

org-agenda-remove-restriction-lock

もしもファイルまたはサブツリーをその時点で制限しているならば、アジェンダをロックする制限を取り除きます。(see Section 10.1 [アジェンダファイル], page 102).

 $<sup>^{\</sup>rm 10}\,$  Only tags filtering will be respected here, effort filtering is ignored.

# Secondary filtering and query editing

For a detailed description of these commands, see Section 10.4.4 [Filtering/limiting agenda items], page 113.

/ org-agenda-filter-by-tag
Filter the agenda view with respect to a tag and/or effort estimates.

Some org-agenda-filter-by-category of the item at point.

org-agenda-filter-by-top-headline Filter the current agenda view and only display the siblings and the parent headline of the one at point.

= org-agenda-filter-by-regexp Filter the agenda view by a regular expression.

\_ org-agenda-filter-by-effort Filter the agenda view with respect to effort estimates.

 $\label{eq:constraint} {\it org-agenda-filter-remove-all}$  Remove all filters in the current agenda view.

## Remote editing

0--9 Digit argument.

C-\_ org-agenda-undo
Undo a change due to a remote editing command. The change is undone both in the agenda buffer and in the remote buffer.

t org-agenda-todo Change the TODO state of the item, both in the agenda and in the original org file.

C-S-RIGHT org-agenda-todo-nextset
C-S-LEFT org-agenda-todo-previousset
Switch to the next/previous set of TODO keywords.

C-k org-agenda-kill
Delete the current agenda item along with the entire subtree belonging to it in
the original Org file. If the text to be deleted remotely is longer than one line,
the kill needs to be confirmed by the user. See variable org-agenda-confirmkill.

C-c C-w org-agenda-refile Refile the entry at point.

C-c C-x C-a or short a org-agenda-archive-default-with-confirmation Archive the subtree corresponding to the entry at point using the default archiving command set in org-archive-default-command. When using the a key, confirmation will be required.

 $\emph{C-c}$   $\emph{C-x}$  a org-agenda-toggle-archive-tag Toggle the ARCHIVE tag for the current headline.

C-c C-x A org-agenda-archive-to-archive-sibling
Move the subtree corresponding to the current entry to its archive sibling.

#### C-c C-x C-s or short \$

org-agenda-archive

Archive the subtree corresponding to the current headline. This means the entry will be moved to the configured archive location, most likely a different file.

T

org-agenda-show-tags

Show all tags associated with the current item. This is useful if you have turned off org-agenda-show-inherited-tags, but still want to see all tags of a headline occasionally.

:

org-agenda-set-tags

Set tags for the current headline. If there is an active region in the agenda, change a tag for all headings in the region.

カレントアイテムに優先順位を設定する。(org-agenda-priority) Org-mode は優先順位を表す文字を指示します。もしも、SPCを使って返答すると、優先順位のクッキーがそのエントリーから取り除かれる。

Ρ

org-agenda-show-priority

カレントアイテムの優先順位の重み付けを表示する。

+ or S-up

org-agenda-priority-up

カレントアイテムの優先順位を高くする。優先順位はオリジナルのバッファで変更される。しかしアジェンダ上では並び替えの更新は行われない。このためには、**r**キーを使用する。

- or S-down

org-agenda-priority-down

カレントアイテムの優先順位を低くする。

z or C-c C-z

org-agenda-add-note

Add a note to the entry. This note will be recorded, and then filed to the same location where state change notes are put. Depending on org-log-into-drawer, this may be inside a drawer.

C-c C-a org-attach Dispatcher for all command related to attachments.

Dispatcher for all command related to attachments. C-c C-s

org-agenda-schedule

Schedule this item. With prefix arg remove the scheduling timestamp

C-c C-d org-agenda-deadline Set a deadline for this item. With prefix arg remove the deadline.

S-RIGHT

org-agenda-do-date-later

Change the timestamp associated with the current line by one day into the future. If the date is in the past, the first call to this command will move it to today.

With a numeric prefix argument, change it by that many days. For example, 3 6 5 S-RIGHT will change it by a year. With a C-u prefix, change the time by one hour. If you immediately repeat the command, it will continue to change hours even without the prefix arg. With a double C-u C-u prefix, do the same

for changing minutes.

The stamp is changed in the original Org file, but the change is not directly reflected in the agenda buffer. Use r or g to update the buffer.

S-LEFT

org-agenda-do-date-earlier

Change the timestamp associated with the current line by one day into the past.

>

org-agenda-date-prompt

Change the timestamp associated with the current line. The key > has been chosen, because it is the same as S-. on my keyboard.

Ι

org-agenda-clock-in

Start the clock on the current item. If a clock is running already, it is stopped first.

0

org-agenda-clock-out

Stop the previously started clock.

Χ

org-agenda-clock-cancel

Cancel the currently running clock.

J

org-agenda-clock-goto

Jump to the running clock in another window.

k

org-agenda-capture Like org-capture, but use the date at point as the default date for the cap-

ture template. See org-capture-use-agenda-date to make this the default behavior of org-capture.

## Dragging agenda lines forward/backward

M-<up>

org-agenda-drag-line-backward

Drag the line at point backward one line<sup>11</sup>. With a numeric prefix argument, drag backward by that many lines.

M-<down>

org-agenda-drag-line-forward

Drag the line at point forward one line. With a numeric prefix argument, drag forward by that many lines.

#### Bulk remote editing selected entries

m

org-agenda-bulk-mark

Mark the entry at point for bulk action. With numeric prefix argument, mark that many successive entries.

u

org-agenda-bulk-mark-all

Mark all visible agenda entries for bulk action.

org-agenda-bulk-unmark

Unmark entry at point for bulk action.

U

org-agenda-bulk-remove-all-marks

Unmark all marked entries for bulk action.

Moving agenda lines does not persist after an agenda refresh and does not modify the contributing .org files

M-m		org-agenda-bulk-toggle
	Toggle mark of the entry at point for bulk action.	

- M-\* org-agenda-bulk-toggle-all Toggle marks of all visible entries for bulk action.
- % org-agenda-bulk-mark-regexp Mark entries matching a regular expression for bulk action.

Bulk action: act on all marked entries in the agenda. This will prompt for another key to select the action to be applied. The prefix arg to B will be passed through to the s and d commands, to bulk-remove these special timestamps. By default, marks are removed after the bulk. If you want them to persist, set org-agenda-persistent-marks to t or hit p at the prompt.

- \* Toggle persistent marks.
- \$ Archive all selected entries.
- A Archive entries by moving them to their respective archive siblings.
- t Change TODO state. This prompts for a single TODO keyword and changes the state of all selected entries, bypassing blocking and suppressing logging notes (but not timestamps).
- + Add a tag to all selected entries.
- Remove a tag from all selected entries.
- s Schedule all items to a new date. To shift existing schedule dates by a fixed number of days, use something starting with double plus at the prompt, for example '++8d' or '++2w'.
- d Set deadline to a specific date.
- Prompt for a single refile target and move all entries. The entries will no longer be in the agenda; refresh (g) to bring them back.
- S Reschedule randomly into the coming N days. N will be prompted for. With prefix arg (*C*-u *B S*), scatter only across weekdays.
- Apply a function<sup>12</sup> to marked entries. For example, the function below sets the CATEGORY property of the entries to web.

 $<sup>^{12}</sup>$  You can also create persistent custom functions through  ${\tt org-agenda-bulk-custom-functions}$ .

```
(defun set-category ()
                         (interactive "P")
                         (let* ((marker (or (org-get-at-bol 'org-hd-marker)
                                           (org-agenda-error)))
                               (buffer (marker-buffer marker)))
                           (with-current-buffer buffer
                             (save-excursion
                              (save-restriction
                                (widen)
                                (goto-char marker)
                                (org-back-to-heading t)
                                (org-set-property "CATEGORY" "web")))))
Calendar commands
                                               org-agenda-goto-calendar
           Emacs のカレンダーを開き、アジェンダのカーソルの置かれている日付に移動します。
                                               org-calendar-goto-agenda
С
           すでにカレンダーの中にあるときは、カーソルの置かれている日付で計算し、Org-
         mode のアジェンダを表示します。
i
                                                 org-agenda-diary-entry
```

Insert a new entry into the diary, using the date at the cursor and (for block entries) the date at the mark. This will add to the Emacs diary file  $^{13}$ , in a way similar to the i command in the calendar. The diary file will pop up in another

window, where you can add the entry.

If you configure org-agenda-diary-file to point to an Org mode file, Org will create entries (in Org mode syntax) in that file instead. Most entries will be stored in a date-based outline tree that will later make it easy to archive appointments from previous months/years. The tree will be built under an entry with a DATE\_TREE property, or else with years as top-level entries. Emacs will prompt you for the entry text—if you specify it, the entry will be created in org-agenda-diary-file without further interaction. If you directly press RET at the prompt without typing text, the target file will be shown in another window for you to finish the entry there. See also the k r command.

M org-agenda-phases-of-moon Show the phases of the moon for the three months around current date.

Show sunrise and sunset times. The geographical location must be set with calendar variables, see the documentation for the Emacs calendar.

C org-agenda-convert-date Convert the date at cursor into many other cultural and historic calendars.

H org-agenda-holidays Show holidays for three months around the cursor date.

 $<sup>^{13}\,</sup>$  This file is parsed for the agenda when  ${\tt org-agenda-include-diary}$  is set.

## M-x org-icalendar-combine-agenda-files RET

Export a single iCalendar file containing entries from all agenda files. This is a globally available command, and also available in the agenda menu.

#### Exporting to a file

C-x C-w

org-agenda-write

Write the agenda view to a file. Depending on the extension of the selected file name, the view will be exported as HTML (.html or .htm), Postscript (.ps), PDF (.pdf), Org (.org) and plain text (any other extension). When exporting to Org, only the body of original headlines are exported, not subtrees or inherited tags. When called with a C-u prefix argument, immediately open the newly created file. Use the variable org-agenda-exporter-settings to set options for ps-print and for htmlize to be used during export.

#### Quit and Exit

q org-agenda-quit アジェンダを終了し、アジェンダバッファを削除します s 。

x org-agenda-exit アジェンダを終了し、アジェンダバッファとアジェンダを編集するために Emacs で 読み込まれたすべてのバッファを削除する。Org-mode ファイルを読み込むためにユーザーによって作成されたバッファは削除されない。

#### **10.6** カスタムアジェンダビュー

Custom agenda commands serve two purposes: to store and quickly access frequently used TODO and tags searches, and to create special composite agenda buffers. Custom agenda commands will be accessible through the dispatcher (see \undefined\) [Agenda dispatcher], page \undefined\), just like the default commands.

## 10.6.1 Storing searches

The first application of custom searches is the definition of keyboard shortcuts for frequently used searches, either creating an agenda buffer, or a sparse tree (the latter covering of course only the current buffer).

Custom commands are configured in the variable org-agenda-custom-commands. You can customize this variable, for example by pressing C-c a C. You can also directly set it with Emacs Lisp in the Emacs init file. The following example contains all valid agenda views:

```
(setq org-agenda-custom-commands
   '(("x" agenda)
      ("y" agenda*)
      ("w" todo "WAITING")
      ("w" todo-tree "WAITING")
      ("u" tags "+boss-urgent")
      ("v" tags-todo "+boss-urgent")
      ("U" tags-tree "+boss-urgent")
      ("f" occur-tree "\\<FIXME\\>")
      ("h" . "HOME+Name tags searches") ; description for "h" prefix
      ("hl" tags "+home+Lisa")
      ("hp" tags "+home+Peter")
      ("hk" tags "+home+Peter")
```

The initial string in each entry defines the keys you have to press after the dispatcher command C-c a in order to access the command. Usually this will be just a single character, but if you have many similar commands, you can also define two-letter combinations where the first character is the same in several combinations and serves as a prefix key<sup>14</sup>. The second parameter is the search type, followed by the string or regular expression to be used for the matching. The example above will therefore define:

- C-c a x as a global search for agenda entries planned<sup>15</sup> this week/day.
- *C-c a y* as a global search for agenda entries planned this week/day, but only those with an hour specification like [h]h:mm—think of them as appointments.
- C-c a w as a global search for TODO entries with 'WAITING' as the TODO keyword
- C-c a W as the same search, but only in the current buffer and displaying the results as a sparse tree
- C-c a u as a global tags search for headlines marked ':boss:' but not ':urgent:'
- $C-c \ a \ v$  as the same search as  $C-c \ a \ u$ , but limiting the search to headlines that are also TODO items
- $C-c \ a \ U$  as the same search as  $C-c \ a \ u$ , but only in the current buffer and displaying the result as a sparse tree
- **C-c a f** すべてのエントリーのうちで 'FIXME' という言葉を含んでいるものを検索してツリーの 抽出を行う (くどいかもしれませんが、カレントバッファだけが対象です)。
- C-c a h as a prefix command for a HOME tags search where you have to press an additional key (1, p or k) to select a name (Lisa, Peter, or Kim) as additional tag to match.

Note that the \*-tree agenda views need to be called from an Org buffer as they operate on the current buffer only.

 $<sup>^{14}</sup>$  You can provide a description for a prefix key by inserting a cons cell with the prefix and the description.

Planned means here that these entries have some planning information attached to them, like a time-stamp, a scheduled or a deadline string. See org-agenda-entry-types on how to set what planning information will be taken into account.

## 10.6.2 Block agenda

Another possibility is the construction of agenda views that comprise the results of *several* commands, each of which creates a block in the agenda buffer. The available commands include agenda for the daily or weekly agenda (as created with C-c a a), alltodo for the global TODO list (as constructed with C-c a t), and the matching commands discussed above: todo, tags, and tags-todo. Here are two examples:

This will define C-c a h to create a multi-block view for stuff you need to attend to at home. The resulting agenda buffer will contain your agenda for the current week, all TODO items that carry the tag 'home', and also all lines tagged with 'garden'. Finally the command C-c a o provides a similar view for office tasks.

## 10.6.3 Setting options for custom commands

Org mode contains a number of variables regulating agenda construction and display. The global variables define the behavior for all agenda commands, including the custom commands. However, if you want to change some settings just for a single custom view, you can do so. Setting options requires inserting a list of variable names and values at the right spot in org-agenda-custom-commands. For example:

Now the C-c a w command will sort the collected entries only by priority, and the prefix format is modified to just say 'Mixed: 'instead of giving the category of the entry. The sparse tags tree of C-c a U will now turn out ultra-compact, because neither the headline hierarchy above the match, nor the headline following the match will be shown. The command C-c a N will do a text search limited to only a single file.

For command sets creating a block agenda, org-agenda-custom-commands has two separate spots for setting options. You can add options that should be valid for just a single command in the set, and options that should be valid for all commands in the set. The former are just added to the command entry; the latter must come after the list of command entries. Going back to the block agenda example (see Section 10.6.2 [Block agenda],

page 126), let's change the sorting strategy for the C-c a h commands to priority-down, but let's sort the results for GARDEN tags query in the opposite order, priority-up. This would look like this:

As you see, the values and parentheses setting is a little complex. When in doubt, use the customize interface to set this variable—it fully supports its structure. Just one caveat: when setting options in this interface, the *values* are just Lisp expressions. So if the value is a string, you need to add the double-quotes around the value yourself.

To control whether an agenda command should be accessible from a specific context, you can customize org-agenda-custom-commands-contexts. Let's say for example that you have an agenda command "o" displaying a view that you only need when reading emails. Then you would configure this option like this:

You can also tell that the command key "o" should refer to another command key "r". In that case, add this command key like this:

See the docstring of the variable for more information.

#### **10.7** アジェンダビューのエクスポート

If you are away from your computer, it can be very useful to have a printed version of some agenda views to carry around. Org mode can export custom agenda views as plain text, HTML<sup>16</sup>, Postscript, PDF<sup>17</sup>, and iCalendar files. If you want to do this only occasionally, use the command

C-x C-w

org-agenda-write

Write the agenda view to a file. Depending on the extension of the selected file name, the view will be exported as HTML (extension .html or .htm), Postscript (extension .ps), iCalendar (extension .ics), or plain text (any other extension).

You need to install htmlize.el from Hrvoje Niksic's repository. (https://github.com/hniksic/emacs-htmlize)

<sup>17</sup> To create PDF output, the ghostscript ps2pdf utility must be installed on the system. Selecting a PDF file will also create the postscript file.

Use the variable org-agenda-exporter-settings to set options for ps-print and for htmlize to be used during export, for example

```
(setq org-agenda-exporter-settings
   '((ps-number-of-columns 2)
        (ps-landscape-mode t)
        (org-agenda-add-entry-text-maxlines 5)
        (htmlize-output-type 'css)))
```

If you need to export certain agenda views frequently, you can associate any custom agenda command with a list of output file names<sup>18</sup>. Here is an example that first defines custom commands for the agenda and the global TODO list, together with a number of files to which to export them. Then we define two block agenda commands and specify file names for them as well. File names can be relative to the current working directory, or absolute.

The extension of the file name determines the type of export. If it is .html, Org mode will try to use the htmlize.el package to convert the buffer to HTML and save it to this file name. If the extension is .ps, ps-print-buffer-with-faces is used to produce Postscript output. If the extension is .ics, iCalendar export is run export over all files that were used to construct the agenda, and limit the export to entries listed in the agenda. Any other extension produces a plain ASCII file.

The export files are not created when you use one of those commands interactively because this might use too much overhead. Instead, there is a special command to produce all specified files in one step:

```
C-c a e org-store-agenda-views アジェンダに関連するエクスポートファイル名を持つすべてのアジェンダビューをエクスポートします。
```

You can use the options section of the custom agenda commands to also set options for the export commands. For example:

<sup>&</sup>lt;sup>18</sup> If you want to store standard views like the weekly agenda or the global TODO list as well, you need to define custom commands for them in order to be able to specify file names.

This command sets two options for the Postscript exporter, to make it print in two columns in landscape format—the resulting page can be cut in two and then used in a paper agenda. The remaining settings modify the agenda prefix to omit category and scheduling information, and instead include a checkbox to check off items. We also remove the tags to make the lines compact, and we don't want to use colors for the black-and-white printer. Settings specified in org-agenda-exporter-settings will also apply, but the settings in org-agenda-custom-commands take precedence.

From the command line you may also use

which will create the agenda views restricted to the file ~/org/project.org, without diary entries and with a 30-day extent.

You can also extract agenda information in a way that allows further processing by other programs. See Section A.10 [Extracting agenda information], page 251, for more information.

# 10.8 Using column view in the agenda

カラムビュー (see Section 7.5 [カラムビュー], page 67) は、Org-mode ファイルの階層構造の中に 組み込まれている属性を見たり編集したりするために通常は使われます。エントリーがある評価基準 で収集されているアジェンダから、カラムビューを使用することは大変便利です。

```
C-c C-x C-c org-agenda-columns アジェンダの中でカラムビューに切り替えます。
```

To understand how to use this properly, it is important to realize that the entries in the agenda are no longer in their proper outline environment. This causes the following issues:

1. Org-modeでは、どのCOLUMNSのフォーマットを使用するか、決定する必要があります。アジェンダの中のエントリーは、異なるファイルから集められるということと、ファイルが異なるとCOLUMNSのフォーマットも異なるということから、このことは些細な問題であるとはいえないのです。Org-modeは最初に、org-overriding-columns-format変数がカレントで設定され

 $<sup>^{\</sup>rm 19}$  Quoting depends on the system you use, please check the FAQ for examples.

ているかどうか、またそこからフォーマットを取り出すことができるかどうかチェックします。一方、アジェンダの最初のアイテムに関連したフォーマットを使用するか、もしもそのアイテムが特別なフォーマット(属性もしくはファイルの中で定義された)を持たないならば、org-columns-default-formatを使用します。

- 2. If any of the columns has a summary type defined (see (undefined) [Column attributes], page (undefined)), turning on column view in the agenda will visit all relevant agenda files and make sure that the computations of this property are up to date. This is also true for the special CLOCKSUM property. Org will then sum the values displayed in the agenda. In the daily/weekly agenda, the sums will cover a single day; in all other views they cover the entire block. It is vital to realize that the agenda may show the same entry twice—for example as scheduled and as a deadline—and it may show two entries from the same hierarchy—for example a parent and its child. In these cases, the summation in the agenda will lead to incorrect results because some values will count double.
- 3. When the column view in the agenda shows the CLOCKSUM, that is always the entire clocked time for this item. So even in the daily/weekly agenda, the clocksum listed in column view may originate from times outside the current view. This has the advantage that you can compare these values with a column listing the planned total effort for a task—one of the major applications for column view in the agenda. If you want information about clocked time in the displayed period use clock table mode (press R in the agenda).
- 4. When the column view in the agenda shows the CLOCKSUM\_T, that is always today's clocked time for this item. So even in the weekly agenda, the clocksum listed in column view only originates from today. This lets you compare the time you spent on a task for today, with the time already spent —via CLOCKSUM—and with the planned total effort for it.

# 11 Markup for rich export

When exporting Org mode documents, the exporter tries to reflect the structure of the document as accurately as possible in the back-end. Since export targets like HTML and LATEX allow much richer formatting, Org mode has rules on how to prepare text for rich export. This section summarizes the markup rules used in an Org mode buffer.

## 11.1 段落、改行、引用

段落は最低1つの空白行で区切られます。もしあなたが強制的に段落の中で改行しないなら、'\\'を 行の末尾に書いてください。

To preserve the line breaks, indentation and blank lines in a region, but otherwise use normal formatting, you can use this construct, which can also be used to format poetry.

```
#+BEGIN_VERSE
Great clouds overhead
Tiny black birds rise and fall
Snow covers Emacs
-- AlexSchroeder
#+END_VERSE
```

When quoting a passage from another document, it is customary to format this as a paragraph that is indented on both the left and the right margin. You can include quotations in Org mode documents like this:

```
#+BEGIN_QUOTE
Everything should be made as simple as possible,
but not any simpler -- Albert Einstein
#+END_QUOTE
もしあなたがテキストを中央寄せにしたいなら、以下を使うことができます:
#+BEGIN_CENTER
Everything should be made as simple as possible, \\
but not any simpler
#+END_CENTER
```

# 11.2 強調と等幅

You can make words \*bold\*, /italic/, \_underlined\_, =verbatim= and ~code~, and, if you must, '+strike-through+'. Text in the code and verbatim string is not processed for Org mode specific syntax, it is exported verbatim.

To turn off fontification for marked up text, you can set org-fontify-emphasized-text to nil. To narrow down the list of available markup syntax, you can customize org-emphasis-alist. To fine tune what characters are allowed before and after the markup characters, you can tweak org-emphasis-regexp-components. Beware that changing one of the above variables will not take effect until you reload Org, for which you may need to restart Emacs.

# 11.3 水平線のルール

A line consisting of only dashes, and at least 5 of them, will be exported as a horizontal line.

## 11.4 画像と表

Both the native Org mode tables (see \(\sqrt{undefined}\) [Tables], page \(\sqrt{undefined}\)) and tables formatted with the table.el package will be exported properly. For Org mode tables, the lines before the first horizontal separator line will become table header lines. You can use the following lines somewhere before the table to assign a caption and a label for cross references, and in the text you can refer to the object with [[tab:basic-data]] (see \(\sqrt{undefined}\) [Internal links], page \(\sqrt{undefined}\)):

```
#+CAPTION: This is the caption for the next table (or link)
#+NAME: tab:basic-data
| ... | ... |
|-----|
```

Optionally, the caption can take the form:

```
#+CAPTION[Caption for list of tables]: Caption for table.
```

Some back-ends allow you to directly include images into the exported document. Org does this, if a link to an image files does not have a description part, for example [[./img/a.jpg]]. If you wish to define a caption for the image and maybe a label for internal cross references, make sure that the link is on a line by itself and precede it with #+CAPTION and #+NAME as follows:

```
#+CAPTION: This is the caption for the next figure link (or table)
#+NAME: fig:SED-HR4049
[[./img/a.jpg]]
```

Such images can be displayed within the buffer. See  $\langle$ undefined $\rangle$  [Handling links], page  $\langle$ undefined $\rangle$ .

Even though images and tables are prominent examples of captioned structures, the same caption mechanism can apply to many others (e.g., LATEX equations, source code blocks). Depending on the export back-end, those may or may not be handled.

## 11.5 リテラルの例

あなたはマークアップに依存しないリテラルの例を含めることができます。そのような例に等幅のタイプセットがあり、それはソースコードやそれに似た例向きです。

```
#+BEGIN_EXAMPLE
テキストファイルからの例。
#+END_EXAMPLE
```

そのようなブロックは、インデントされたテキストや、特にプレーンリスト構造 (See Section 2.7 [エントリー中の階層構造], page 12.) をうまく整列させるためにインデントされるでしょう。小さな例を使う時、それを簡単にするために、あなたはコロンとそれに続く空白からなる例の行を使うことができる。それらはコロンの前に空白を追加することもできます。

```
Here is an example
    : Some example from a text file.
```

If the example is source code from a programming language, or any other text that can be marked up by font-lock in Emacs, you can ask for the example to look like the fontified Emacs buffer<sup>1</sup>. This is done with the 'src' block, where you also need to specify the name of the major mode that should be used to fontify the example<sup>2</sup>, see Section 15.2 [Easy templates], page 229 for shortcuts to easily insert code blocks.

```
#+BEGIN_SRC emacs-lisp
  (defun org-xor (a b)
    "Exclusive or."
    (if a (not b) b))
#+END_SRC
```

Both in example and in src snippets, you can add a -n switch to the end of the BEGIN line, to get the lines of the example numbered. The -n takes an optional numeric argument specifying the starting line number of the block. If you use a +n switch, the numbering from the previous numbered snippet will be continued in the current one. The +n can also take a numeric argument. The value of the argument will be added to the last line of the previous block to determine the starting line number.

```
#+BEGIN_SRC emacs-lisp -n 20
;; this will export with line number 20
(message "This is line 21")
#+END_SRC
#+BEGIN_SRC emacs-lisp +n 10
;; This will be listed as line 31
(message "This is line 32")
#+END_SRC
```

In literal examples, Org will interpret strings like '(ref:name)' as labels, and use them as targets for special hyperlinks like [[(name)]] (i.e., the reference name enclosed in single parenthesis). In HTML, hovering the mouse over such a link will remote-highlight the corresponding code line, which is kind of cool.

You can also add a -r switch which removes the labels from the source code<sup>3</sup>. With the -n switch, links to these references will be labeled by the line numbers from the code listing, otherwise links will use the labels with no parentheses. Here is an example:

This works automatically for the HTML back-end (it requires version 1.34 of the htmlize.el package, which you need to install). Fontified code chunks in IATEX can be achieved using either the listings (https://www.ctan.org/tex-archive/macros/latex/contrib/listings/?lang=en) or the minted (https://github.com/gpoore/minted) package. If you use minted or listing, you must load the packages manually, for example by adding the desired package to org-latex-packages-alist. Refer to org-latex-listings for details.

<sup>&</sup>lt;sup>2</sup> Code in 'src' blocks may also be evaluated either interactively or on export. See (undefined) [Working with source code], page (undefined), for more information on evaluating code blocks.

<sup>&</sup>lt;sup>3</sup> Adding -k to -n -r will *keep* the labels in the source code while using line numbers for the links, which might be useful to explain those in an Org mode example code.

jumps to point-min.

Finally, you can use -i to preserve the indentation of a specific code block (see Section 14.2 [Editing source code], page 201).

もし、ラベルの構文が言語の構文と衝突した場合、-1スイッチを例えば '#+BEGIN\_SRC pascal -n -r -l "((%s))"'と使ってフォーマットを変更できます。変数 org-coderef-label-formatも見てください。

HTML export also allows examples to be published as text areas (see Section 12.9.10 [Text areas in HTML export], page 155).

Because the #+BEGIN\_... and #+END\_... patterns need to be added so often, shortcuts are provided using the Easy templates facility (see Section 15.2 [Easy templates], page 229).

- C-c ' Edit the source code example at point in its native mode. This works by switching to a temporary buffer with the source code. You need to exit by pressing C-c ' again<sup>4</sup>. The edited version will then replace the old version in the Org buffer. Fixed-width regions (where each line starts with a colon followed by a space) will be edited using artist-mode<sup>5</sup> to allow creating ASCII drawings easily. Using this command in an empty line will create a new fixed-width region.
- C-c 1 Calling org-store-link while editing a source code example in a temporary buffer created with C-c ' will prompt for a label. Make sure that it is unique in the current buffer, and insert it with the proper formatting like '(ref:label)' at the end of the current line. Then the label is stored as a link '(label)', for retrieval with C-c C-1.

### 11.6 特殊記号

You can use LATEX-like syntax to insert special symbols—named entities—like '\alpha' to indicate the Greek letter, or '\to' to indicate an arrow. Completion for these symbols is available, just type '\' and maybe a few letters, and press M-TAB to see possible completions. If you need such a symbol inside a word, terminate it with a pair of curly brackets. For example

Pro tip: Given a circle \Gamma of diameter d, the length of its circumference is \pi{}d.

A large number of entities is provided, with names taken from both HTML and LATEX; you can comfortably browse the complete list from a dedicated buffer using the command org-entities-help. It is also possible to provide your own special symbols in the variable org-entities-user.

During export, these symbols are transformed into the native format of the exporter back-end. Strings like \alpha are exported as α in the HTML output, and as \(\alpha\) in the LATEX output. Similarly, \nbsp becomes in HTML and ~ in LATEX.

<sup>&</sup>lt;sup>4</sup> Upon exit, lines starting with '\*', ',\*', '#+' and ',#+' will get a comma prepended, to keep them from being interpreted by Org as outline nodes or special syntax. These commas will be stripped for editing with C-c', and also for export.

 $<sup>^{5}</sup>$  You may select a different-mode with the variable  ${\tt org-edit-fixed-width-region-mode}.$ 

Entities may also be used as a may to escape markup in an Org document, e.g., '\under{}not underlined\under' exports as '\_not underlined\_'.

If you would like to see entities displayed as UTF-8 characters, use the following command<sup>6</sup>:

C-c C-x \ エンティティの UTF-8 での表示をトグルします。これは単純な ASCII 文字のままである バッファの内容を変更せず、表示のみを目的として UTF-8 の文字で重ね書き (overlay) します。

In addition to regular entities defined above, Org exports in a special way<sup>7</sup> the following commonly used character combinations: '\-' is treated as a shy hyphen, '--' and '---' are converted into dashes, and '...' becomes a compact set of dots.

## 11.7 下付き文字と上付き文字

IFTEX と同じように、'^'と'\_'が下付き文字と上付き文字を示しています。さらに、これらは mathmode の区切り文字に組込まずに使うことができます。ASCII テキストの可読性の向上のため、複数文字の下付き文字と上付き文字を波括弧で囲む必要はありません (囲んでもかまいませんが)。例

The radius of the sun is  $R_{sun} = 6.96 \times 10^8 \text{ m}$ . On the other hand, the radius of Alpha Centauri is  $R_{sun} = 1.28 \times R_{sun}$ .

If you write a text where the underscore is often used in a different context, Org's convention to always interpret these as subscripts can get in your way. Configure the variable org-use-sub-superscripts to change this convention. For example, when setting this variable to {}, 'a\_b' will not be interpreted as a subscript, but 'a\_{b}' will.

C-c C-x \ エンティティを UTF-8 の文字として表示することに加えて、このコマンドは下付き文字と上付き文字を WYSIWYM 方式で書式を整えます。

# **11.8** 組み込まれた **LAT**<sub>E</sub>X

Plain ASCII is normally sufficient for almost all note taking. Exceptions include scientific notes, which often require mathematical symbols and the occasional formula. LATEX is widely used to typeset scientific documents. Org mode supports embedding LATEX code into its files, because many academics are used to writing and reading LATEX source code, and because it can be readily processed to produce pretty output for a number of export back-ends.

## 11.8.1 **LATEX** の断片的なコード

Org mode can contain LATEX math fragments, and it supports ways to process these for several export back-ends. When exporting to LATEX, the code is left as it is. When exporting to HTML, Org can use either MathJax (http://www.mathjax.org) (see Section 12.9.9 [Math formatting in HTML export], page 155) or transcode the math into images (see see Section 11.8.2 [Previewing LATEX fragments], page 136).

<sup>&</sup>lt;sup>6</sup> You can turn this on by default by setting the variable org-pretty-entities, or on a per-file base with the #+STARTUP option entitiespretty.

<sup>&</sup>lt;sup>7</sup> This behavior can be disabled with – export setting (see  $\langle \text{undefined} \rangle$  [Export settings], page  $\langle \text{undefined} \rangle$ ).

<sup>&</sup>lt;sup>8</sup> IATEX is a macro system based on Donald E. Knuth's TEX system. Many of the features described here as "IATEX" are really from TEX, but for simplicity I am blurring this distinction.

LATEX のコード片は、特別なマークは全く必要ありません。以下のコードはLATEX のソースコードと見なされます。

- Environments of any kind<sup>9</sup>. The only requirement is that the \begin statement appears on a new line, at the beginning of the line or after whitespaces only.
- 通常の LATEX の数学の区切り文字内部のテキスト。通貨の仕様との衝突を避けるため、'\$'文字が数学の区切り文字のみとして認識されるのは、囲まれたテキストに最大 2 つの改行が含まれている場合、囲まれたテキストが'\$'文字に空白文字なく挟まれている場合、そして閉じ'\$'に続いてが空白スペース、句読点、もしくはダッシュがある場合です。他の区切り文字についてはそのような制限がありませんので、判別がつかない時は、インラインの数学の区切り文字として'\(...\)'を使ってください。

#### 例:

\begin{equation}
x=\sqrt{b}
\end{equation}

If  $a^2=b\$  and  $(b=2\)$ , then the solution must be either  $\$  a=+\sqrt{2}  $\$  or  $[a=-\sqrt{2}\]$ .

LATEX processing can be configured with the variable org-export-with-latex. The default setting is t which means MathJax for HTML, and no processing for ASCII and LATEX back-ends. You can also set this variable on a per-file basis using one of these lines:

#+OPTIONS: tex:t 自動的にうまく処理する (MathJax)

#+OPTIONS: tex:nil IATEX 断片を全く処理しない

#+OPTIONS: tex:verbatim 逐語的なエクスポート, jsMath のため

# 11.8.2 Previewing LaTeX fragments

If you have a working IATEX installation and dvipng, dvisvgm or convert installed 10, IATEX fragments can be processed to produce images of the typeset expressions to be used for inclusion while exporting to HTML (see see \(\lambda\) undefined\(\rangle\)), or for inline previewing within Org mode.

You can customize the variables org-format-latex-options and org-format-latex-header to influence some aspects of the preview. In particular, the :scale (and for HTML export, :html-scale) property of the former can be used to adjust the size of the preview images.

### C-c C-x C-1

ポイント位置の I4 $T_E$ X コード片のプレビュー画像を作成し、ソースコード上に重ねて表示します。もしポイント位置にコード片がないのであれば、現在のエントリ (2 つの見出しの間) の全てのコード片を処理します。前置引数を付けて呼ばれた時は、サブツリー全体を処理します。前置引数を 2 つ付けて呼ばれた時、またはカーソルが最初の見出しの前にある時は、バッファ全体を処理します。

<sup>&</sup>lt;sup>9</sup> When MathJax is used, only the environments recognized by MathJax will be processed. When dvipng program, dvisvgm program or imagemagick suite is used to create images, any IATEX environment will be handled.

These are respectively available at http://sourceforge.net/projects/dvipng/, http://dvisvgm.bplaced.net/ and from the imagemagick suite. Choose the converter by setting the variable org-preview-latex-default-process accordingly.

C-c C-c オーバレイされたプレビュー画像を消去します。

You can turn on the previewing of all LATEX fragments in a file with

#+STARTUP: latexpreview

To disable it, simply use

#+STARTUP: nolatexpreview

## 11.8.3 Using CDLTEX to enter math

CDIATEX mode is a minor mode that is normally used in combination with a major IATEX mode like AUCTEX in order to speed-up insertion of environments and math templates. Inside Org mode, you can make use of some of the features of CDIATEX mode. You need to install cdlatex.el and texmathp.el (the latter comes also with AUCTEX) from https://staff.fnwi.uva.nl/c.dominik/Tools/cdlatex. Don't use CDIATEX mode itself under Org mode, but use the light version org-cdlatex-mode that comes as part of Org mode. Turn it on for the current buffer with M-x org-cdlatex-mode RET, or for all Org files with

(add-hook 'org-mode-hook 'turn-on-org-cdlatex)

When this mode is enabled, the following features are present (for more details see the documentation of CDIATEX mode):

- C-c {により環境のテンプレートを挿入できます。
- The TAB key will do template expansion if the cursor is inside a LATEX fragment<sup>11</sup>. For example, TAB will expand fr to \frac{}{} and position the cursor correctly inside the first brace. Another TAB will get you into the second brace. Even outside fragments, TAB will expand environment abbreviations at the beginning of a line. For example, if you write 'equ' at the beginning of a line and press TAB, this abbreviation will be expanded to an equation environment. To get a list of all abbreviations, type M-x cdlatex-command-help RET.
- I $\Delta T_{EX}$  コード片の中で\_や^を押すと、それらの文字が一対の波括弧と一緒に挿入されます。もしあなたが TABを括弧から抜け出すために使うなら、また括弧が 1 文字の文字かマクロのみを囲っているなら、それらは再び消去されます (cdlatex-simplify-sub-super-script変数に依存します)。
- Pressing the grave accent `followed by a character inserts math macros, also outside LATEX fragments. If you wait more than 1.5 seconds after the grave accent, a help window will pop up.
- シングルクォート 'に続いて別の文字を押すと、ポイント位置前の記号をアクセントやフォントで強調します。もしシングルクォートを入力した後 1.5 秒以上待つと、ヘルプウィンドウがポップアップします。文字の変更は I₄TEX コード片の中でのみ働きます; それ以外ではクォートは通常通りの働きをします。

Org mode has a method to test if the cursor is inside such a fragment, see the documentation of the function org-inside-LaTeX-fragment-p.

# **12** エクスポート

Sometimes, you may want to pretty print your notes, publish them on the web or even share them with people not using Org. In these cases, the Org export facilities can be used to convert your documents to a variety of other formats, while retaining as much structure (see \( \)undefined \( \) [Document structure], page \( \)undefined \( \)) and markup (see \( \)undefined \( \) [Markup], page \( \)undefined \( \)) as possible.

Libraries responsible for such translation are called back-ends. Org ships with the following ones

- ascii (ASCII 形式)
- beamer (LATEX Beamer 形式)
- html (HTML 形式)
- icalendar (iCalendar 形式)
- latex (LATEX 形式)
- md (Markdown 形式)
- odt (OpenDocument Text 形式)
- org (Org 形式)
- texinfo (Texinfo 形式)
- man (Man page 形式)

Org also uses additional libraries located in contrib/ directory (see \(\sqrt{undefined}\) [Installation], page \(\sqrt{undefined}\)). Users can install additional export libraries for additional formats from the Emacs packaging system. For easy discovery, these packages have a common naming scheme: ox-NAME, where NAME is one of the formats. For example, ox-koma-letter for koma-letter back-end.

Org loads back-ends for the following formats by default: ascii, html, icalendar, latex and odt.

Org can load additional back-ends either of two ways: through the org-export-backends variable configuration; or, by requiring the library in the Emacs init file like this:

(require 'ox-md)

# 12.1 The export dispatcher

The export dispatcher is the main interface for Org's exports. A hierarchical menu presents the currently configured export formats. Options are shown as easy toggle switches on the same screen.

Org also has a minimal prompt interface for the export dispatcher. When the variable org-export-dispatch-use-expert-ui is set to a non-nil value, Org prompts in the minibuffer. To switch back to the hierarchical menu, press?

C-c C-e org-export-dispatch

Invokes the export dispatcher interface. The options show default settings. The C-u prefix argument preserves options from the previous export, including any sub-tree selections.

Org exports the entire buffer by default. If the Org buffer has an active region, then Org exports just that region.

These are the export options, the key combinations that toggle them (see \(\sqrt{undefined}\) [Export settings], page \(\sqrt{undefined}\):

C-a Toggles asynchronous export. Asynchronous export uses an external Emacs process with a specially configured initialization file to complete the exporting process in the background thereby releasing the current interface. This is particularly useful when exporting long documents.

Output from an asynchronous export is saved on the "the export stack". To view this stack, call the export dispatcher with a double C-u prefix argument. If already in the export dispatcher menu, & displays the stack.

To make the background export process the default, customize the variable, org-export-in-background.

C-b Toggle body-only export. Useful for excluding headers and footers in the export. Affects only those back-end formats that have such sections—like <head>...</head> in HTML.

C-s Toggle sub-tree export. When turned on, Org exports only the sub-tree starting from the cursor position at the time the export dispatcher was invoked. Org uses the top heading of this sub-tree as the document's title. If the cursor is not on a heading, Org uses the nearest enclosing header. If the cursor is in the document preamble, Org signals an error and aborts export.

To make the sub-tree export the default, customize the variable, org-export-initial-scope.

C-v Toggle visible-only export. Useful for exporting only visible parts of an Org document by adjusting outline visibility settings.

#### 12.2 エクスポート設定

Export options can be set: globally with variables; for an individual file by making variables buffer-local with in-buffer settings (see Section 15.6 [In-buffer settings], page 231), by setting individual keywords, or by specifying them in a compact form with the #+0PTIONS keyword; or for a tree by setting properties (see \( \)\ undefined \( \)\ [Properties and columns], page \( \)\ undefined \( \)). Options set at a specific level override options set at a more general level.

In-buffer settings may appear anywhere in the file, either directly or indirectly through a file included using '#+SETUPFILE: filename or URL' syntax. Option keyword sets tailored to a particular back-end can be inserted from the export dispatcher (see Section 12.1 [The export dispatcher], page 138) using the Insert template command by pressing #. To insert keywords individually, a good way to make sure the keyword is correct is to type #+ and then to use M-TAB¹ for completion.

The export keywords available for every back-end, and their equivalent global variables, include:

'AUTHOR' 文書の著者 (user-full-name).

 $<sup>^{1}\,</sup>$  Many desktops intercept M-TAB to switch windows. Use C-M-i or  $ESC\ TAB$  instead.

'CREATOR' Entity responsible for output generation (org-export-creator-string).

'DATE' A date or a time-stamp $^2$ .

'EMAIL' メールアドレス (user-mail-address).

#### 'LANGUAGE'

Language to use for translating certain strings (org-export-default-language). With '#+LANGUAGE: fr', for example, Org translates Table of contents to the French Table des mati^^c3^^a8res.

#### 'SELECT\_TAGS'

The default value is :export:. When a tree is tagged with :export: (org-export-select-tags), Org selects that tree and its sub-trees for export. Org excludes trees with :noexport: tags, see below. When selectively exporting files with :export: tags set, Org does not export any text that appears before the first headline.

#### 'EXCLUDE\_TAGS'

The default value is :noexport:. When a tree is tagged with :noexport: (org-export-exclude-tags), Org excludes that tree and its sub-trees from export. Entries tagged with :noexport: will be unconditionally excluded from the export, even if they have an :export: tag. Even if a sub-tree is not exported, Org will execute any code blocks contained in them.

'TITLE' Org displays this title. For long titles, use multiple #+TITLE lines.

#### 'EXPORT\_FILE\_NAME'

The name of the output file to be generated. Otherwise, Org generates the file name based on the buffer name and the extension based on the back-end format.

The #+OPTIONS keyword is a compact form. To configure multiple options, use several #+OPTIONS lines. #+OPTIONS recognizes the following arguments.

- ': Toggle smart quotes (org-export-with-smart-quotes). Depending on the language used, when activated, Org treats pairs of double quotes as primary quotes, pairs of single quotes as secondary quotes, and single quote marks as apostrophes.
- \*: Toggle emphasized text (org-export-with-emphasize).
- -: Toggle conversion of special strings (org-export-with-special-strings).
- :: Toggle fixed-width sections (org-export-with-fixed-width).
- Toggle inclusion of time/date active/inactive stamps (org-export-with-timestamps).
- \n: Toggles whether to preserve line breaks (org-export-preserve-breaks).
- ^: Toggle TEX-like syntax for sub- and superscripts. If you write "^:{}", 'a\_{b}' will be interpreted, but the simple 'a\_b' will be left as it is (org-export-with-sub-superscripts).

 $<sup>^2</sup>$  The variable org-export-date-timestamp-format defines how this time-stamp will be exported.

arch: Configure how archived trees are exported. When set to headline, the export process skips the contents and processes only the headlines (org-export-with-archived-trees).

著者 Toggle inclusion of author name into exported file (org-export-with-author).

#### broken-links:

Toggles if Org should continue exporting upon finding a broken internal link. When set to mark, Org clearly marks the problem link in the output (org-export-with-broken-links).

c: Toggle inclusion of CLOCK keywords (org-export-with-clocks).

creator: Toggle inclusion of creator information in the exported file (org-export-with-creator).

d: Toggles inclusion of drawers, or list of drawers to include, or list of drawers to exclude (org-export-with-drawers).

日付 Toggle inclusion of a date into exported file (org-export-with-date).

e: Toggle inclusion of entities (org-export-with-entities).

email: Toggle inclusion of the author's e-mail into exported file (org-export-with-email).

f: Toggle the inclusion of footnotes (org-export-with-footnotes).

H: Set the number of headline levels for export (org-export-headline-levels). Below that level, headlines are treated differently. In most back-ends, they become list items.

inline: Toggle inclusion of inlinetasks (org-export-with-inlinetasks).

num: Toggle section-numbers (org-export-with-section-numbers). When set to number 'n', Org numbers only those headlines at level 'n' or above. Setting UNNUMBERED property to non-nil disables numbering of a heading. Since subheadings inherit from this property, it affects their numbering, too.

p: Toggle export of planning information (org-export-with-planning). "Planning information" comes from lines located right after the headline and contain any combination of these cookies: SCHEDULED:, DEADLINE:, or CLOSED:.

pri: Toggle inclusion of priority cookies (org-export-with-priority).

prop: Toggle inclusion of property drawers, or list the properties to include (org-export-with-properties).

stat: Toggle inclusion of statistics cookies (org-export-with-statistics-cookies).

タグ Toggle inclusion of tags, may also be not-in-toc (org-export-with-tags).

Toggle inclusion of tasks (TODO items); or nil to remove all tasks; or todo to remove DONE tasks; or list the keywords to keep (org-export-with-tasks).

tex: nil does not export; t exports; verbatim keeps everything in verbatim (org-export-with-latex).

タイムスタンプ

Toggle inclusion of the creation time in the exported file (org-export-time-stamp-file).

title: Toggle inclusion of title (org-export-with-title).

Toggle inclusion of the table of contents, or set the level limit (org-export-

with-toc).

todo: Toggle inclusion of TODO keywords into exported text (org-export-with-

todo-keywords).

1: Toggle inclusion of tables (org-export-with-tables).

When exporting sub-trees, special node properties in them can override the above keywords. They are special because they have an 'EXPORT\_' prefix. For example, 'DATE' and 'EXPORT\_FILE\_NAME' keywords become, respectively, 'EXPORT\_DATE' and 'EXPORT\_FILE\_NAME'. Except for 'SETUPFILE', all other keywords listed above have an 'EXPORT\_' equivalent.

If org-export-allow-bind-keywords is non-nil, Emacs variables can become buffer-local during export by using the BIND keyword. Its syntax is '#+BIND: variable value'. This is particularly useful for in-buffer settings that cannot be changed using keywords.

#### 12.3 目次

Org normally inserts the table of contents directly before the first headline of the file. Org sets the TOC depth the same as the headline levels in the file. Use a lower number for lower TOC depth. To turn off TOC entirely, use nil. This is configured in the org-export-withtoc variable or as keywords in an Org file as:

```
#+OPTIONS: toc:2 (目次に表示するレベルを2までとする)
#+OPTIONS: toc:nil (目次を表示しない)
```

To move the table of contents to a different location, first turn off the default with org-export-with-toc variable or with #+OPTIONS: toc:nil. Then insert #+TOC: headlines N at the desired location(s).

```
#+OPTIONS: toc:nil no default TOC
...
#+TOC: headlines 2 insert TOC here, with two headline levels
```

To adjust the TOC depth for a specific section of the Org document, append an additional 'local' parameter. This parameter becomes a relative depth for the current level.

Note that for this feature to work properly in LATEX export, the Org file requires the inclusion of the titletoc package. Because of compatibility issues, titletoc has to be loaded *before* hyperref. Customize the org-latex-default-packages-alist variable.

\* Section #+TOC: headlines 1 local insert local TOC, with direct children only Use the TOC keyword to generate list of tables (resp. all listings) with captions.

```
#+TOC: listings build a list of listings build a list of tables
```

Normally Org uses the headline for its entry in the table of contents. But with ALT\_TITLE property, a different entry can be specified for the table of contents.

### 12.4 ファイルの挿入

Include other files during export. For example, to include your .emacs file, you could use:

```
#+INCLUDE: "~/.emacs" src emacs-lisp
```

The first parameter is the file name to include. The optional second parameter specifies the block type: 'example', 'export' or 'src'. The optional third parameter specifies the source code language to use for formatting the contents. This is relevant to both 'export' and 'src' block types.

If an include file is specified as having a markup language, Org neither checks for valid syntax nor changes the contents in any way. For 'example' and 'src' blocks, Org code-escapes the contents before inclusion.

If an include file is not specified as having any markup language, Org assumes it be in Org format and proceeds as usual with a few exceptions. Org makes the footnote labels (see \( \)undefined \( \) [Footnotes], page \( \)undefined \( \)) in the included file local to that file. The contents of the included file will belong to the same structure—headline, item—containing the INCLUDE keyword. In particular, headlines within the file will become children of the current section. That behavior can be changed by providing an additional keyword parameter, :minlevel. It shifts the headlines in the included file to become the lowest level. For example, this syntax makes the included file a sibling of the current top-level headline:

```
#+INCLUDE: "~/my-book/chapter2.org" :minlevel 1
```

Inclusion of only portions of files are specified using ranges parameter with :lines keyword. The line at the upper end of the range will not be included. The start and/or the end of the range may be omitted to use the obvious defaults.

```
#+INCLUDE: "~/.emacs":lines "5-10" 5行目から10行目までを含みます。10行目を除きます。
#+INCLUDE: "~/.emacs":lines "-10" 1行目から10行目までを含みます。10行目を除きます。
#+INCLUDE: "~/.emacs":lines "10-" 10行目からEOFまでを含みます。
```

Inclusions may specify a file-link to extract an object matched by org-link-search<sup>3</sup> (see (undefined) [Search options], page (undefined)).

To extract only the contents of the matched object, set :only-contents property to non-nil. This will omit any planning lines or property drawers. The ranges for :lines keyword are relative to the requested element. Some examples:

```
#+INCLUDE: "./paper.org::#theory" :only-contents t
    Include the body of the heading with the custom id 'theory'
#+INCLUDE: "./paper.org::mytable" Include named element.
#+INCLUDE: "./paper.org::*conclusion" :lines 1-20
    Include the first 20 lines of the headline named 'conclusion'.
```

C-c ' Visit the include file at point.

Note that org-link-search-must-match-exact-headline is locally bound to non-nil. Therefore, org-link-search only matches headlines and named elements.

### 12.5 マクロ置換

Macros replace text snippets during export. Macros are defined globally in org-export-global-macros, or document-wise with the following syntax:

```
#+MACRO: name replacement text $1, $2 are arguments which can be referenced using \{\{\{name(arg1, arg2)\}\}\}^4.
```

Org recognizes macro references in following Org markup areas: paragraphs, headlines, verse blocks, tables cells and lists. Org also recognizes macro references in keywords, such as #+CAPTION, #+TITLE, #+AUTHOR, #+DATE, and for some back-end specific export options.

Org comes with following pre-defined macros:

```
{{{title}}}
{{{author}}}
{{{email}}}
```

Org replaces these macro references with available information at the time of export.

```
{{{date}}}
{{{date(FORMAT)}}}
```

This macro refers to the #+DATE keyword. FORMAT is an optional argument to the {{{date}}} macro that will be used only if #+DATE is a single timestamp. FORMAT should be a format string understood by format-time-string.

```
{{{time(FORMAT)}}}
{{{modification-time(FORMAT, VC)}}}
```

These macros refer to the document's date and time of export and date and time of modification. FORMAT is a string understood by format-time-string. If the second argument to the modification-time macro is non-nil, Org uses vc.el to retrieve the document's modification time from the version control system. Otherwise Org reads the file attributes.

```
{{{input-file}}}
```

This macro refers to the filename of the exported file.

```
{{{property(PROPERTY-NAME)}}}
{{{property(PROPERTY-NAME, SEARCH-OPTION)}}}
```

This macro returns the value of property PROPERTY-NAME in the current entry. If SEARCH-OPTION (see  $\langle undefined \rangle$  [Search options], page  $\langle undefined \rangle$ ) refers to a remote entry, that will be used instead.

```
{{{n}}}}
{{{n(NAME)}}}
{{{n(NAME, ACTION)}}}
```

This macro implements custom counters by returning the number of times the macro has been expanded so far while exporting the buffer. You can create more than one counter using different NAME values. If ACTION is  $\neg$ , previous value

<sup>&</sup>lt;sup>4</sup> Since commas separate the arguments, commas within arguments have to be escaped with the backslash character. So only those backslash characters before a comma need escaping with another backslash character.

of the counter is held, i.e. the specified counter is not incremented. If the value is a number, the specified counter is set to that value. If it is any other non-empty string, the specified counter is reset to 1. You may leave *NAME* empty to reset the default counter.

The surrounding brackets can be made invisible by setting org-hide-macro-markers non-nil.

Org expands macros at the very beginning of the export process.

#### 12.6 コメント行

Lines starting with zero or more whitespace characters followed by one '#' and a whitespace are treated as comments and, as such, are not exported.

Likewise, regions surrounded by #+BEGIN\_COMMENT ... #+END\_COMMENT are not exported.

Finally, a 'COMMENT' keyword at the beginning of an entry, but after any other keyword or priority cookie, comments out the entire subtree. In this case, the subtree is not exported and no code block within it is executed either<sup>5</sup>. The command below helps changing the comment status of a headline.

$$C-c$$
; エントリー先頭の 'COMMENT' キーワードをトグルします。

# 12.7 ASCII/Latin-1/UTF-8 エクスポート

ASCII export produces an output file containing only plain ASCII characters. This is the most simplest and direct text output. It does not contain any Org markup either. Latin-1 and UTF-8 export use additional characters and symbols available in these encoding standards. All three of these export formats offer the most basic of text output for maximum portability.

On export, Org fills and justifies text according to the text width set in org-asciitext-width.

Org exports links using a footnote-like style where the descriptive part is in the text and the link is in a note before the next heading. See the variable org-ascii-links-to-notes for details.

C-c C-e t a/1/u

org-ascii-export-to-ascii

Export as an ASCII file with a .txt extension. For myfile.org, Org exports to myfile.txt, overwriting without warning. For myfile.txt, Org exports to myfile.txt.txt in order to prevent data loss.

C-c C-e t A/L/U

org-ascii-export-as-ascii

Export to a temporary buffer. Does not create a file.

<sup>&</sup>lt;sup>5</sup> For a less drastic behavior, consider using a select tag (see \( \)undefined \( \) [Export settings], page \( \)undefined \( \) instead.

#### 特定の **ASCII** エクスポート設定

The ASCII export back-end has one extra keyword for customizing ASCII output. Setting this keyword works similar to the general options (see \( \)undefined \( \) [Export settings], page \( \)undefined \( \)).

#### 'SUBTITLE'

The document subtitle. For long subtitles, use multiple #+SUBTITLE lines in the Org file. Org prints them on one continuous line, wrapping into multiple lines if necessary.

## Header and sectioning structure

Org converts the first three outline levels into headlines for ASCII export. The remaining levels are turned into lists. To change this cut-off point where levels become lists, see \( \text{undefined} \) [Export settings], page \( \text{undefined} \).

## Quoting ASCII text

To insert text within the Org file by the ASCII back-end, use one the following constructs, inline, keyword, or export block:

```
Inline text @@ascii:and additional text@@ within a paragraph.
#+ASCII: Some text
#+BEGIN_EXPORT ascii
Org exports text in this block only when using ASCII back-end.
#+END_EXPORT
```

#### ASCII specific attributes

ASCII back-end recognizes only one attribute, :width, which specifies the width of a horizontal rule in number of characters. The keyword and syntax for specifying widths is:

```
#+ATTR_ASCII: :width 10
```

# **ASCII** special blocks

Besides #+BEGIN\_CENTER blocks (see \(\sqrt{undefined}\) [Paragraphs], page \(\sqrt{undefined}\)), ASCII back-end has these two left and right justification blocks:

```
#+BEGIN_JUSTIFYLEFT
It's just a jump to the left...
#+END_JUSTIFYLEFT
#+BEGIN_JUSTIFYRIGHT
...and then a step to the right.
#+END_JUSTIFYRIGHT
```

### 12.8 Beamer クラスのエクスポート

Org uses Beamer export to convert an Org file tree structure into a high-quality interactive slides for presentations. Beamer is a LATEX document class for creating presentations in PDF, HTML, and other popular display formats.

## 12.8.1 Beamer export commands

C-c C-e 1 b org-beamer-export-to-latex Export as LATEX file with a .tex extension. For myfile.org, Org exports to myfile.tex, overwriting without warning.

C--c C--e 1 B org-beamer-export-as-latex Export to a temporary buffer. Does not create a file.

C-c C-e 1 P org-beamer-export-to-pdf Export as LATEX file and then convert it to PDF format.

C-c C-e 1 0

Export as LATEX file, convert it to PDF format, and then open the PDF file.

### 12.8.2 Beamer specific export settings

Beamer export back-end has several additional keywords for customizing Beamer output. These keywords work similar to the general options settings (see  $\langle undefined \rangle$  [Export settings], page  $\langle undefined \rangle$ ).

#### 'BEAMER\_THEME'

The Beamer layout theme (org-beamer-theme). Use square brackets for options. For example:

#+BEAMER\_THEME: Rochester [height=20pt]

'BEAMER\_FONT\_THEME'

Beamer のフォントテーマ

'BEAMER\_INNER\_THEME'

The Beamer inner theme.

'BEAMER\_OUTER\_THEME'

The Beamer outer theme.

'BEAMER\_HEADER'

Arbitrary lines inserted in the preamble, just before the 'hyperref' settings.

#### 'DESCRIPTION'

The document description. For long descriptions, use multiple #+DESCRIPTION keywords. By default, 'hyperref' inserts #+DESCRIPTION as metadata. Use org-latex-hyperref-template to configure document metadata. Use org-latex-title-command to configure typesetting of description as part of front matter.

#### 'KEYWORDS'

The keywords for defining the contents of the document. Use multiple #+KEYWORDS lines if necessary. By default, 'hyperref' inserts #+KEYWORDS

as metadata. Use org-latex-hyperref-template to configure document metadata. Use org-latex-title-command to configure typesetting of keywords as part of front matter.

#### 'SUBTITLE'

Document's subtitle. For typesetting, use org-beamer-subtitle-format string. Use org-latex-hyperref-template to configure document metadata. Use org-latex-title-command to configure typesetting of subtitle as part of front matter.

### 12.8.3 Sectioning, Frames and Blocks in Beamer

Org transforms heading levels into Beamer's sectioning elements, frames and blocks. Any Org tree with a not-too-deep-level nesting should in principle be exportable as a Beamer presentation.

- Org headlines become Beamer frames when the heading level in Org is equal to org-beamer-frame-level or H value in an OPTIONS line (see \(\sqrt{undefined}\)\) [Export settings], page \(\sqrt{undefined}\)).
  - Org overrides headlines to frames conversion for the current tree of an Org file if it encounters the BEAMER\_ENV property set to frame or fullframe. Org ignores whatever org-beamer-frame-level happens to be for that headline level in the Org tree. In Beamer terminology, a fullframe is a frame without its title.
- Org exports a Beamer frame's objects as block environments. Org can enforce wrapping in special block types when BEAMER\_ENV property is set<sup>6</sup>. For valid values see org-beamer-environments-default. To add more values, see org-beamer-environments-extra.
- If BEAMER\_ENV is set to appendix, Org exports the entry as an appendix. When set to note, Org exports the entry as a note within the frame or between frames, depending on the entry's heading level. When set to noteNH, Org exports the entry as a note without its title. When set to againframe, Org exports the entry with \againframe command, which makes setting the BEAMER\_REF property mandatory because \againframe needs frame to resume.

When ignoreheading is set, Org export ignores the entry's headline but not its content. This is useful for inserting content between frames. It is also useful for properly closing a column environment.

When BEAMER\_ACT is set for a headline, Org export translates that headline as an overlay or action specification. When enclosed in square brackets, Org export makes the overlay specification a default. Use BEAMER\_OPT to set any options applicable to the current Beamer frame or block. The Beamer export back-end wraps with appropriate angular or square brackets. It also adds the fragile option for any code that may require a verbatim block.

To create a column on the Beamer slide, use the BEAMER\_COL property for its headline in the Org file. Set the value of BEAMER\_COL to a decimal number representing the fraction of the total text width. Beamer export uses this value to set the column's width and fills the column with the contents of the Org entry. If the Org entry has no specific environment

<sup>&</sup>lt;sup>6</sup> If BEAMER\_ENV is set, Org export adds :B\_environment: tag to make it visible. The tag serves as a visual aid and has no semantic relevance.

defined, Beamer export ignores the heading. If the Org entry has a defined environment, Beamer export uses the heading as title. Behind the scenes, Beamer export automatically handles LATEX column separations for contiguous headlines. To manually adjust them for any unique configurations needs, use the BEAMER\_ENV property.

## 12.8.4 Beamer specific syntax

Since Org's Beamer export back-end is an extension of the LATEX back-end, it recognizes other LATEX specific syntax—for example, #+LATEX: or #+ATTR\_LATEX:. See \( \)\( \text{Undefined} \)\( \text{LATEX} \)\( \text{export} \], page \( \text{undefined} \)\( \text{for details}. \)

Beamer export wraps the table of contents generated with toc:t OPTION keyword in a frame environment. Beamer export does not wrap the table of contents generated with TOC keyword (see (undefined) [Table of contents], page (undefined)). Use square brackets for specifying options.

```
#+TOC: headlines [currentsection]
Insert Beamer-specific code using the following constructs:
    #+BEAMER: \pause

#+BEGIN_EXPORT beamer
Only Beamer export back-end will export this line.
    #+END_BEAMER

Text @@beamer:some code@@ within a paragraph.
```

Inline constructs, such as the last one above, are useful for adding overlay specifications to objects with bold, item, link, radio-target and target types. Enclose the value in angular brackets and place the specification at the beginning the object as shown in this example:

```
A *@@beamer:<2->@@useful* feature
```

Beamer export recognizes the ATTR\_BEAMER keyword with the following attributes from Beamer configurations: :environment for changing local Beamer environment, :overlay for specifying Beamer overlays in angular or square brackets, and :options for inserting optional arguments.

```
#+ATTR_BEAMER: :environment nonindentlist
- item 1, not indented
- item 2, not indented
- item 3, not indented
#+ATTR_BEAMER: :overlay <+->
- item 1
- item 2
#+ATTR_BEAMER: :options [Lagrange]
Let $G$ be a finite group, and let $H$ be
a subgroup of $G$. Then the order of $H$ divides the order of $G$.
```

#### 12.8.5 Editing support

The org-beamer-mode is a special minor mode for faster editing of Beamer documents.

#+STARTUP: beamer

C-c C-b

org-beamer-select-environment

The org-beamer-mode provides this key for quicker selections in Beamer normal environments, and for selecting the BEAMER\_COL property.

### **12.8.6** Beamer の例

Here is an example of an Org document ready for Beamer export.

#+TITLE: Example Presentation
#+AUTHOR: Carsten Dominik
#+OPTIONS: H:2 toc:t num:t

#+LATEX\_CLASS: beamer

#+LATEX\_CLASS\_OPTIONS: [presentation]

#+BEAMER\_THEME: Madrid

#+COLUMNS: %45ITEM %10BEAMER\_ENV(Env) %10BEAMER\_ACT(Act) %4BEAMER\_COL(Col) %8BEAMER

\* This is the first structural section

\*\* Frame 1

\*\*\* Thanks to Eric Fraga

:B\_block:

:PROPERTIES: :BEAMER\_COL: 0.48

:BEAMER\_ENV: block

:END:

for the first viable Beamer setup in Org

\*\*\* Thanks to everyone else

:B\_block:

:PROPERTIES:

:BEAMER\_COL: 0.48 :BEAMER\_ACT: <2->

:BEAMER\_ENV: block

:END:

for contributing to the discussion

\*\*\*\* This will be formatted as a beamer note

:B\_note:

:PROPERTIES:

:BEAMER\_env: note

:END:

\*\* Frame 2 (where we will not use columns)

\*\*\* Request

Please test this stuff!

### 12.9 HTML のエクスポート

Org mode contains an HTML exporter with extensive HTML formatting compatible with XHTML 1.0 strict standard.

#### 12.9.1 HTML エクスポートのコマンド

#### C-c C-e h h

org-html-export-to-html

Export as HTML file with a .html extension. For myfile.org, Org exports to myfile.html, overwriting without warning. C-c C-e h o Exports to HTML and opens it in a web browser.

C-c C-e h H

org-html-export-as-html

Exports to a temporary buffer. Does not create a file.

# 12.9.2 HTML Specific export settings

HTML export has a number of keywords, similar to the general options settings described in (undefined) [Export settings], page (undefined).

#### 'DESCRIPTION'

This is the document's description, which the HTML exporter inserts it as a HTML meta tag in the HTML file. For long descriptions, use multiple #+DESCRIPTION lines. The exporter takes care of wrapping the lines properly.

#### 'HTML\_DOCTYPE'

Specify the document type, for example: HTML5 (org-html-doctype).

#### 'HTML\_CONTAINER'

Specify the HTML container, such as 'div', for wrapping sections and elements (org-html-container-element).

#### 'HTML\_LINK\_HOME'

The URL for home link (org-html-link-home).

#### 'HTML\_LINK\_UP'

The URL for the up link of exported HTML pages (org-html-link-up).

#### 'HTML\_MATHJAX'

Options for MathJax (org-html-mathjax-options). MathJax is used to type-set LaTeX math in HTML documents. See Section 12.9.9 [Math formatting in HTML export], page 155, for an example.

#### 'HTML\_HEAD'

Arbitrary lines for appending to the HTML document's head (org-html-head).

#### 'HTML\_HEAD\_EXTRA'

More arbitrary lines for appending to the HTML document's head (org-html-head-extra).

### 'KEYWORDS'

Keywords to describe the document's content. HTML exporter inserts these keywords as HTML meta tags. For long keywords, use multiple #+KEYWORDS lines.

#### 'LATEX\_HEADER'

Arbitrary lines for appending to the preamble; HTML exporter appends when transcoding LATEX fragments to images (see Section 12.9.9 [Math formatting in HTML export], page 155).

#### 'SUBTITLE'

The document's subtitle. HTML exporter formats subtitle if document type is 'HTML5' and the CSS has a 'subtitle' class.

Some of these keywords are explained in more detail in the following sections of the manual.

# 12.9.3 HTML doctypes

Org can export to various (X)HTML flavors.

Set the org-html-doctype variable for different (X)HTML variants. Depending on the variant, the HTML exporter adjusts the syntax of HTML conversion accordingly. Org includes the following ready-made variants:

- "html4-strict"
- "html4-transitional"
- "html4-frameset"
- "xhtml-strict"
- "xhtml-transitional"
- "xhtml-frameset"
- "xhtml-11"
- "html5"
- "xhtml5"

See the variable org-html-doctype-alist for details. The default is "xhtml-strict".

Org's HTML exporter does not by default enable new block elements introduced with the HTML5 standard. To enable them, set org-html-html5-fancy to non-nil. Or use an OPTIONS line in the file to set html5-fancy. HTML5 documents can now have arbitrary #+BEGIN and #+END blocks. For example:

```
#+BEGIN_aside
  Lorem ipsum
  #+END_aside
Will export to:
  <aside>
    Lorem ipsum
  </aside>
While this:
  #+ATTR_HTML: :controls controls :width 350
  #+BEGIN_video
  #+HTML: <source src="movie.mp4" type="video/mp4">
  #+HTML: <source src="movie.ogg" type="video/ogg">
  お使いのブラウザはビデオタグをサポートしていません。
  #+END_video
Exports to:
  <video controls="controls" width="350">
    <source src="movie.mp4" type="video/mp4">
```

```
<source src="movie.ogg" type="video/ogg">
  お使いのブラウザはビデオタグをサポートしていません。
</video>
```

When special blocks do not have a corresponding HTML5 element, the HTML exporter reverts to standard translation (see org-html-html5-elements). For example, #+BEGIN\_lederhosen exports to '<div class="lederhosen">'.

Special blocks cannot have headlines. For the HTML exporter to wrap the headline and its contents in '<section>' or '<article>' tags, set the HTML\_CONTAINER property for the headline.

## 12.9.4 HTML preamble and postamble

The HTML exporter has delineations for preamble and postamble. The default value for org-html-preamble is t, which makes the HTML exporter insert the preamble. See the variable org-html-preamble-format for the format string.

Set org-html-preamble to a string to override the default format string. If the string is a function, the HTML exporter expects the function to return a string upon execution. The HTML exporter inserts this string in the preamble. The HTML exporter will not insert a preamble if org-html-preamble is set nil.

The default value for org-html-postamble is auto, which makes the HTML exporter build a postamble from looking up author's name, email address, creator's name, and date. Set org-html-postamble to t to insert the postamble in the format specified in the org-html-postamble-format variable. The HTML exporter will not insert a postamble if org-html-postamble is set to nil.

# 12.9.5 Quoting HTML tags

The HTML export back-end transforms '<' and '>' to '&lt;' and '&gt;'. To include raw HTML code in the Org file so the HTML export back-end can insert that HTML code in the output, use this inline syntax: '@@html:'. For example: '@@html:<b>@@bold text@@html:</b>@@'. For larger raw HTML code blocks, use these HTML export code blocks:

```
#+HTML: Literal HTML code for export
or
#+BEGIN_EXPORT html
All lines between these markers are exported literally
#+END_EXPORT
```

#### 12.9.6 Links in HTML export

The HTML export back-end transforms Org's internal links (see (undefined) [Internal links], page (undefined)) to equivalent HTML links in the output. The back-end similarly handles Org's automatic links created by radio targets (see (undefined) [Radio targets], page (undefined)) similarly. For Org links to external files, the back-end transforms the links to relative paths.

For Org links to other .org files, the back-end automatically changes the file extension to .html and makes file paths relative. If the .org files have an equivalent .html version at the same location, then the converted links should work without any further manual

intervention. However, to disable this automatic path translation, set org-html-link-org-files-as-html to nil. When disabled, the HTML export back-end substitutes the 'id:'-based links in the HTML output. For more about linking files when publishing to a directory, see Section 13.1.6 [Publishing links], page 194.

Org files can also have special directives to the HTML export back-end. For example, by using #+ATTR\_HTML lines to specify new format attributes to <a> or <img> tags. This example shows changing the link's title and style:

```
#+ATTR_HTML: :title The Org mode homepage :style color:red;
[[https://orgmode.org]]
```

## 12.9.7 Tables in HTML export

The HTML export back-end uses org-html-table-default-attributes when exporting Org tables to HTML. By default, the exporter does not draw frames and cell borders. To change for this for a table, use the following lines before the table in the Org file:

```
#+CAPTION: This is a table with lines around and between cells
#+ATTR_HTML: :border 2 :rules all :frame border
```

The HTML export back-end preserves column groupings in Org tables (see Section 3.3 [Column groups], page 23) when exporting to HTML.

Additional options for customizing tables for HTML export.

```
org-html-table-align-individual-fields
```

Non-nil attaches style attributes for alignment to each table field.

```
org-html-table-caption-above
```

Non-nil places caption string at the beginning of the table.

```
org-html-table-data-tags
```

Opening and ending tags for table data fields.

```
org-html-table-default-attributes
```

Default attributes and values for table tags.

```
org-html-table-header-tags
```

Opening and ending tags for table's header fields.

```
org-html-table-row-tags
```

Opening and ending tags for table rows.

```
org-html-table-use-header-tags-for-first-column
```

Non-nil formats column one in tables with header tags.

### 12.9.8 Images in HTML export

The HTML export back-end has features to convert Org image links to HTML inline images and HTML clickable image links.

When the link in the Org file has no description, the HTML export back-end by default in-lines that image. For example: '[[file:myimg.jpg]]' is in-lined, while '[[file:myimg.jpg][the image]]' links to the text, 'the image'.

For more details, see the variable org-html-inline-images.

On the other hand, if the description part of the Org link is itself another link, such as file: or http: URL pointing to an image, the HTML export back-end in-lines this image and links to the main image. This Org syntax enables the back-end to link low-resolution thumbnail to the high-resolution version of the image, as shown in this example:

```
[[file:highres.jpg][file:thumb.jpg]]
```

To change attributes of in-lined images, use #+ATTR\_HTML lines in the Org file. This example shows realignment to right, and adds alt and title attributes in support of text viewers and modern web accessibility standards.

```
#+CAPTION: A black cat stalking a spider
#+ATTR_HTML: :alt cat/spider image :title Action! :align right
[[./img/a.jpg]]
```

The HTML export back-end copies the http links from the Org file as is.

## 12.9.9 Math formatting in HTML export

LATEX math snippets (see (undefined) [LATEX fragments], page (undefined)) can be displayed in two different ways on HTML pages. The default is to use MathJax (http://www.mathjax.org) which should work out of the box with Org<sup>7</sup>. Some MathJax display options can be configured via org-html-mathjax-options, or in the buffer. For example, with the following settings,

```
#+HTML_MATHJAX: align: left indent: 5em tagside: left font: Neo-Euler
```

equation labels will be displayed on the left margin and equations will be five ems from the left margin.

See the docstring of org-html-mathjax-options for all supported variables. The MathJax template can be configure via org-html-mathjax-template.

If you prefer, you can also request that LATEX fragments are processed into small images that will be inserted into the browser page. Before the availability of MathJax, this was the default method for Org files. This method requires that the dvipng program, dvisvgm or imagemagick suite is available on your system. You can still get this processing with

```
#+OPTIONS: tex:dvipng
#+OPTIONS: tex:dvisvgm
もしくは
#+OPTIONS: tex:imagemagick
```

### 12.9.10 Text areas in HTML export

Before Org mode's Babel, one popular approach to publishing code in HTML was by using :textarea. The advantage of this approach was that copying and pasting was built into browsers with simple JavaScript commands. Even editing before pasting was made simple.

The HTML export back-end can create such text areas. It requires an #+ATTR\_HTML: line as shown in the example below with the :textarea option. This must be followed by either an example or a src code block. Other Org block types will not honor the :textarea option.

<sup>&</sup>lt;sup>7</sup> By default Org loads MathJax from cdnjs.com (https://cdnjs.com) as recommended by MathJax (http://www.mathjax.org).

By default, the HTML export back-end creates a text area 80 characters wide and height just enough to fit the content. Override these defaults with :width and :height options on the #+ATTR\_HTML: line.

```
#+ATTR_HTML: :textarea t :width 40
#+BEGIN_EXAMPLE
  (defun org-xor (a b)
    "Exclusive or."
    (if a (not b) b))
#+END_EXAMPLE
```

### 12.9.11 CSS サポート

You can modify the CSS style definitions for the exported file. The HTML exporter assigns the following special CSS classes<sup>8</sup> to appropriate parts of the document—your style specifications may change these, in addition to any of the standard classes like for headlines, tables, etc.

p.author	author information, including email			
p.date	publishing date			
p.creator	creator info, about org mode version			
.title	document title			
.subtitle	document subtitle			
.todo	TODO keywords, all not-done states			
.done	the DONE keywords, all states that count as done			
.WAITING	each TODO keyword also uses a class named after itself			
.timestamp	timestamp			
.timestamp-kwd	keyword associated with a timestamp, like SCHEDULED			
$. \verb timestamp-wrapper $	span around keyword plus timestamp			
.tag	tag in a headline			
HOME	each tag uses itself as a class, "@" replaced by "_"			
.target	target for links			
.linenr	the line number in a code example			
.code-highlighted	for highlighting referenced code lines			
div.outline-N	div for outline level N (headline plus text))			
${\tt div.outline-text-N}$	extra div for text at outline level N			
$.\mathtt{section} ext{-}\mathtt{number} ext{-}\mathtt{N}$	section number in headlines, different for each level			
.figure-number	label like "Figure 1:"			
.table-number	label like "Table 1:"			
.listing-number	label like "Listing 1:"			
div.figure	how to format an in-lined image			
pre.src	formatted source code			
<pre>pre.example</pre>	normal example			
p.verse	verse paragraph			
div.footnotes	footnote section headline			
p.footnote	footnote definition paragraph, containing a footnote			
.footref	a footnote reference number (always a <sup>)</sup>			
	<u></u>			

<sup>8</sup> If the classes on TODO keywords and tags lead to conflicts, use the variables org-html-todo-kwd-class-prefix and org-html-tag-class-prefix to make them unique.

```
.footnum footnote number in footnote definition (always <sup>)
.org-svg default class for a linked .svg image
```

The HTML export back-end includes a compact default style in each exported HTML file. To override the default style with another style, use these keywords in the Org file. They will replace the global defaults the HTML exporter uses.

```
#+HTML_HEAD: <link rel="stylesheet" type="text/css" href="style1.css" />
#+HTML_HEAD_EXTRA: <link rel="alternate stylesheet" type="text/css" href="style2.cs"</pre>
```

To just turn off the default style, customize org-html-head-include-default-style variable, or use this option line in the Org file.

```
#+OPTIONS: html-style:nil
```

For longer style definitions, either use several #+HTML\_HEAD and #+HTML\_HEAD\_EXTRA lines, or use <style> </style> blocks around them. Both of these approaches can avoid referring to an external file.

In order to add styles to a sub-tree, use the :HTML\_CONTAINER\_CLASS: property to assign a class to the tree. In order to specify CSS styles for a particular headline, you can use the id specified in a :CUSTOM\_ID: property.

Never change the org-html-style-default constant. Instead use other simpler ways of customizing as described above.

### 12.9.12 ウェブページの表示に関する JavaScript のサポート

Sebastian Rose has written a JavaScript program especially designed to enhance the web viewing experience of HTML files created with Org. This program enhances large files in two different ways of viewing. One is an *Info*-like mode where each section is displayed separately and navigation can be done with the n and p keys (and some other keys as well, press ? for an overview of the available keys). The second one has a *folding* view, much like Org provides inside Emacs. The script is available at https://orgmode.org/org-info-js/ and the documentation at https://orgmode.org/worg/code/org-info-js/. The script is hosted on https://orgmode.org, but for reliability, prefer installing it on your own web server.

To use this program, just add this line to the Org file:

```
#+INFOJS OPT: view:info toc:nil
```

The HTML header now has the code needed to automatically invoke the script. For setting options, use the syntax from the above line for options described below:

path: The path to the script. The default grabs the script from

https://orgmode.org/org-info.js, but you might want to have

a local copy and use a path like '../scripts/org-info.js'.

view: Initial view when the website is first shown. Possible values are:

info
 overview
 content
 showall
 Info-like interface with one section per page.
 Folding interface, initially showing only top-level.
 starting with all headlines visible.

sdepth: Maximum headline level that will still become an independent

section for info and folding modes. The default is taken from org-export-headline-levels (= the H switch in #+OPTIONS).

If this is smaller than in org-export-headline-levels, each

info/folding section can still contain child headlines.

toc: Should the table of contents *initially* be visible?

Even when nil, you can always get to the "toc" with i.

tdepth: The depth of the table of contents. The defaults are taken from

the variables org-export-headline-levels and org-export-with-toc.

ftoc: Does the CSS of the page specify a fixed position for the "toc"?

If yes, the toc will never be displayed as a section.

1toc: Should there be short contents (children) in each section?

Make this above if the section should be above initial text.

mouse: Headings are highlighted when the mouse is over them. Should be

'underline' (default) or a background color like '#ccccc'.

buttons: Should view-toggle buttons be everywhere? When nil (the

default), only one such button will be present.

org-infojs-optionsを変更することで、これらのオプションの初期値を変更することができます。このスクリプトを常にページに適用させたい場合は、org-export-html-use-infojsを変更してください。

# **12.10 PT<sub>E</sub>X** のエクスポート

The LATEX export back-end can handle complex documents, incorporate standard or custom LATEX document classes, generate documents using alternate LATEX engines, and produce fully linked PDF files with indexes, bibliographies, and tables of contents, destined for interactive online viewing or high-quality print publication.

While the details are covered in-depth in this section, here are some quick references to variables for the impatient: for engines, see org-latex-compiler; for build sequences, see org-latex-pdf-process; for packages, see org-latex-default-packages-alist and org-latex-packages-alist.

An important note about the LATEX export back-end: it is sensitive to blank lines in the Org document. That's because LATEX itself depends on blank lines to tell apart syntactical elements, such as paragraphs.

### 12.10.1 LTFX エクスポートのコマンド

C-c C-e 1 1 org-latex-export-to-latex Export as LATEX file with a .tex extension. For myfile.org, Org exports to myfile.tex, overwriting without warning. C-c C-e 1 1 Exports to LATEX file.

C--c C--e 1 L org-latex-export-as-latex Export to a temporary buffer. Do not create a file.

C-c C-e 1 p org-latex-export-to-pdf Export as LATEX file and convert it to PDF file.

C-c C-e 1 o

Export as LATEX file and convert it to PDF, then open the PDF using the default viewer.

The LATEX export back-end can use any of these LATEX engines: 'pdflatex', 'xelatex', and 'lualatex'. These engines compile LATEX files with different compilers, packages,

and output options. The LATEX export back-end finds the compiler version to use from org-latex-compiler variable or the #+LATEX\_COMPILER keyword in the Org file. See the docstring for the org-latex-default-packages-alist for loading packages with certain compilers. Also see org-latex-bibtex-compiler to set the bibliography compiler.

# 12.10.2 LaTeX specific export settings

The LATEX export back-end has several additional keywords for customizing LATEX output. Setting these keywords works similar to the general options (see \(\lambda\) undefined\(\rangle\) [Export settings], page \(\lambda\) undefined\(\rangle\)).

#### 'DESCRIPTION'

The document's description. The description along with author name, keywords, and related file metadata are inserted in the output file by the 'hyperref' package. See org-latex-hyperref-template for customizing metadata items. See org-latex-title-command for typesetting description into the document's front matter. Use multiple #+DESCRIPTION lines for long descriptions.

#### 'LATEX\_CLASS'

This is IATEX document class, such as article, report, book, and so on, which contain predefined preamble and headline level mapping that the IATEX export back-end needs. The back-end reads the default class name from the org-latex-default-class variable. Org has article as the default class. A valid default class must be an element of org-latex-classes.

#### 'LATEX\_CLASS\_OPTIONS'

Options the LATEX export back-end uses when calling the LATEX document class.

#### 'LATEX\_COMPILER'

The compiler, such as 'pdflatex', 'xelatex', 'lualatex', for producing the PDF (org-latex-compiler).

#### 'LATEX\_HEADER'

Arbitrary lines to add to the document's preamble, before the 'hyperref' settings. See org-latex-classes for adjusting the structure and order of the LATEX headers.

#### 'LATEX\_HEADER\_EXTRA'

Arbitrary lines to add to the document's preamble, before the 'hyperref' settings. See org-latex-classes for adjusting the structure and order of the LATEX headers.

#### 'KEYWORDS'

The keywords for the document. The description along with author name, keywords, and related file metadata are inserted in the output file by the 'hyperref' package. See org-latex-hyperref-template for customizing metadata items. See org-latex-title-command for typesetting description into the document's front matter. Use multiple #+KEYWORDS lines if necessary.

<sup>&</sup>lt;sup>9</sup> This does not allow setting different bibliography compilers for different files. However, "smart" IATEX compilation systems, such as 'latexmk', can select the correct bibliography compiler.

#### 'SUBTITLE'

The document's subtitle. It is typeset as per org-latex-subtitle-format. If org-latex-subtitle-separate is non-nil, it is typed as part of the '\title'-macro. See org-latex-hyperref-template for customizing metadata items. See org-latex-title-command for typesetting description into the document's front matter.

The following sections have further details.

# 12.10.3 LATEX 見出しと構造の分割

The LATEX export back-end converts the first three of Org's outline levels into LATEX headlines. The remaining Org levels are exported as itemize or enumerate lists. To change this globally for the cut-off point between levels and lists, (see \( \)undefined \( \) [Export settings], page \( \)undefined \( \)).

By default, the LATEX export back-end uses the article class.

To change the default class globally, edit org-latex-default-class. To change the default class locally in an Org file, add option lines #+LATEX\_CLASS: myclass. To change the default class for just a part of the Org file, set a sub-tree property, EXPORT\_LATEX\_CLASS. The class name entered here must be valid member of org-latex-classes. This variable defines a header template for each class into which the exporter splices the values of org-latex-default-packages-alist and org-latex-packages-alist. Use the same three variables to define custom sectioning or custom classes.

The LATEX\_CLASS\_OPTIONS keyword and EXPORT\_LATEX\_CLASS\_OPTIONS property as options to the LATEX\_ \documentclass macro. The options and the syntax for specifying them, including enclosing them in square brackets, follow LATEX conventions.

```
#+LATEX_CLASS_OPTIONS: [a4paper,11pt,twoside,twocolumn]
```

The LATEX\_READER and LATEX\_HEADER and LATEX\_HEADER\_EXTRA keywords to the LATEX header. The docstring for org-latex-classes explains in more detail. Also note that LATEX export back-end does not append LATEX\_HEADER\_EXTRA to the header when previewing LATEX snippets (see Section 11.8.2 [Previewing LATEX fragments], page 136).

A sample Org file with the above headers:

```
#+LATEX_CLASS: article
#+LATEX_CLASS_OPTIONS: [a4paper]
#+LATEX_HEADER: \usepackage{xyz}
```

\* Headline 1
some text
\* Headline 2
some more text

### 12.10.4 Quoting ⊮T<sub>F</sub>X code

The LATEX export back-end can insert any arbitrary LATEX code, see  $\langle \text{undefined} \rangle$  [Embedded LATEX], page  $\langle \text{undefined} \rangle$ . There are three ways to embed such code in the Org file and they all use different quoting syntax.

Inserting in-line quoted with symbols:

Code embedded in-line @@latex:any arbitrary LaTeX code@@ in a paragraph. Inserting as one or more keyword lines in the Org file:

```
#+LATEX: any arbitrary LaTeX code
```

Inserting as an export block in the Org file, where the back-end exports any code between begin and end markers:

```
#+BEGIN_EXPORT latex
任意の LaTeX コード
#+END_EXPORT
```

# **12.10.5 L⁴TrX** エクスポートにおけるテーブル

The LaTeX export back-end can pass several LaTeX attributes for table contents and layout. Besides specifying label and caption (see  $\langle$  undefined $\rangle$  [Images and tables], page  $\langle$  undefined $\rangle$ ), the other valid LaTeX attributes include:

:mode

The LATEX export back-end wraps the table differently depending on the mode for accurate rendering of math symbols. Mode is either table, math, inline-math or verbatim. For math or inline-math mode, LATEX export back-end wraps the table in a math environment, but every cell in it is exported as-is. The LATEX export back-end determines the default mode from org-latex-default-table-mode. For , The LATEX export back-end merges contiguous tables in the same mode into a single environment.

#### :environment

Set the default LATEX table environment for the LATEX export back-end to use when exporting Org tables. Common LATEX table environments are provided by these packages: tabularx, longtable, array, tabu, and bmatrix. For packages, such as tabularx and tabu, or any newer replacements, include them in the org-latex-packages-alist variable so the LATEX export back-end can insert the appropriate load package headers in the converted LATEX file. Look in the docstring for the org-latex-packages-alist variable for configuring these packages for LATEX snippet previews, if any.

:caption

Use #+CAPTION keyword to set a simple caption for a table (see (undefined) [Images and tables], page (undefined)). For custom captions, use :caption attribute, which accepts raw IATEX code. :caption value overrides #+CAPTION value.

### :float :placement

The table environments by default are not floats in LATEX. To make them floating objects use :float with one of the following options: sideways, multicolumn, t, and nil. Note that sidewaystable has been deprecated since Org 8.3. LATEX floats can also have additional layout :placement attributes. These are the usual [h t b p ! H] permissions specified in square brackets. Note that for :float sideways tables, the LATEX export back-end ignores :placement attributes.

:align :font

:width The LATEX export back-end uses these attributes for regular tables to set their alignments, fonts, and widths.

:spread When :spread is non-nil, the LATEX export back-end spreads or shrinks the table by the :width for tabu and longtabu environments. :spread has no effect if :width is not set.

:booktabs :center

:rmlines All three commands are toggles. :booktabs brings in modern typesetting enhancements to regular tables. The booktabs package has to be loaded through org-latex-packages-alist. :center is for centering the table. :rmlines removes all but the very first horizontal line made of ASCII characters from

:math-prefix
:math-suffix
:math-arguments

"table.el" tables only.

The LATEX export back-end inserts :math-prefix string value in a math environment before the table. The LATEX export back-end inserts :math-suffix string value in a math environment after the table. The LATEX export back-end inserts :math-arguments string value between the macro name and the table's contents. :math-arguments comes in use for matrix macros that require more than one argument, such as qbordermatrix.

LATEX table attributes help formatting tables for a wide range of situations, such as matrix product or spanning multiple pages:

```
#+ATTR_LATEX: :environment longtable :align l|lp{3cm}r|l
| ..... | ..... |
| ..... | ..... |
#+ATTR_LATEX: :mode math :environment bmatrix :math-suffix \times
| a | b |
| c | d |
#+ATTR_LATEX: :mode math :environment bmatrix
| 1 | 2 |
| 3 | 4 |
```

Set the caption with the LATEX command \bicaption{HeadingA}{HeadingB}:

```
#+ATTR_LATEX: :caption \bicaption{HeadingA}{HeadingB}
| ..... | ..... |
| ..... |
```

### **12.10.6 IATeX** エクスポートにおける画像

The LATEX export back-end processes image links in Org files that do not have descriptions, such as these links '[[file:img.jpg]]' or '[[./img.jpg]]', as direct image insertions in the final PDF output. In the PDF, they are no longer links but actual images embedded on

the page. The  $\LaTeX$  export back-end uses  $\char`$ includegraphics macro to insert the image. But for  $\Tau$ ik $\Tau$ <sup>10</sup> images, the back-end uses an  $\char`$ input macro wrapped within a tikzpicture environment.

For specifying image :width, :height, and other :options, use this syntax:

```
#+ATTR_LATEX: :width 5cm :options angle=90
[[./img/sed-hr4049.pdf]]
```

For custom commands for captions, use the :caption attribute. It will override the default #+CAPTION value:

```
#+ATTR_LATEX: :caption \bicaption{HeadingA}{HeadingB}
[[./img/sed-hr4049.pdf]]
```

When captions follow the method as described in \( \)undefined\( \) [Images and tables], page \( \)undefined\( \), the LATEX export back-end wraps the picture in a floating figure environment. To float an image without specifying a caption, set the :float attribute to one of the following:

- t: for a standard 'figure' environment; used by default whenever an image has a caption.
- multicolumn: to span the image across multiple columns of a page; the back-end wraps the image in a figure\* environment.
- wrap: for text to flow around the image on the right; the figure occupies the left half of the page.
- sideways: for a new page with the image sideways, rotated ninety degrees, in a sidewaysfigure environment; overrides:placement setting.
- nil: to avoid a :float even if using a caption.

Use the placement attribute to modify a floating environment's placement.

```
#+ATTR_LATEX: :float wrap :width 0.38\textwidth :placement
{r}{0.4\textwidth} [[./img/hst.png]]
```

The LATEX export back-end centers all images by default. Setting :center attribute to nil disables centering. To disable centering globally, set org-latex-images-centered to t.

Set the :comment-include attribute to non-nil value for the  $\LaTeX$  export back-end to comment out the  $\char`$ includegraphics macro.

# 12.10.7 Plain lists in LaTeX export

The LATEX export back-end accepts the :environment and :options attributes for plain lists. Both attributes work together for customizing lists, as shown in the examples:

```
#+LATEX_HEADER: \usepackage[inline]{enumitem}
Some ways to say "Hello":
#+ATTR_LATEX: :environment itemize*
#+ATTR_LATEX: :options [label={}, itemjoin={,}, itemjoin*={, and}]
- Hola
- Bonjour
```

 $<sup>^{10}</sup>$  http://sourceforge.net/projects/pgf/

- Guten Tag.

Since LATEX supports only four levels of nesting for lists, use an external package, such as 'enumitem' in LATEX, for levels deeper than four:

```
#+LATEX_HEADER: \usepackage{enumitem}
#+LATEX_HEADER: \renewlist{itemize}{itemize}{9}
#+LATEX_HEADER: \setlist[itemize]{label=$\circ$}
- One
    - Two
    - Three
    - Four
    - Five
```

# 12.10.8 Source blocks in LaTeX export

The LATEX export back-end can make source code blocks into floating objects through the attributes :float and :options. For :float:

- t: makes a source block float; by default floats any source block with a caption.
- multicolumn: spans the source block across multiple columns of a page.
- nil: avoids a :float even if using a caption; useful for source code blocks that may not fit on a page.

```
#+ATTR_LATEX: :float nil
#+BEGIN_SRC emacs-lisp
Lisp code that may not fit in a single page.
#+END_SRC
```

The LATEX export back-end passes string values in :options to LATEX packages for customization of that specific source block. In the example below, the :options are set for Minted. Minted is a source code highlighting LATEX package with many configurable options.

```
#+ATTR_LATEX: :options commentstyle=\bfseries
#+BEGIN_SRC emacs-lisp
  (defun Fib (n)
      (if (< n 2) n (+ (Fib (- n 1)) (Fib (- n 2)))))
#+END_SRC</pre>
```

To apply similar configuration options for all source blocks in a file, use the org-latex-listings-options and org-latex-minted-options variables.

### 12.10.9 Example blocks in Lagrange export

The LATEX export back-end wraps the contents of example blocks in a 'verbatim' environment. To change this behavior to use another environment globally, specify an appropriate export filter (see Section 12.17 [Advanced configuration], page 184). To change this behavior to use another environment for each block, use the :environment parameter to specify a custom environment.

```
#+ATTR_LATEX: :environment myverbatim
#+BEGIN_EXAMPLE
This sentence is false.
#+END_EXAMPLE
```

# 12.10.10 Special blocks in LaTeX export

For other special blocks in the Org file, the LATEX export back-end makes a special environment of the same name. The back-end also takes :options, if any, and appends as-is to that environment's opening string. For example:

```
#+BEGIN_abstract
We demonstrate how to solve the Syracuse problem.
#+END_abstract

#+ATTR_LATEX: :options [Proof of important theorem]
#+BEGIN_proof
...
Therefore, any even number greater than 2 is the sum of two primes.
#+END_proof

exports to

\begin{abstract}
We demonstrate how to solve the Syracuse problem.
\end{abstract}
\begin{proof} [Proof of important theorem]
...
Therefore, any even number greater than 2 is the sum of two primes.
\end{proof}

If you need to insert a specific caption command, use :caption attribute. It will overri
```

If you need to insert a specific caption command, use :caption attribute. It will override standard #+CAPTION value, if any. For example:

```
#+ATTR_LATEX: :caption \MyCaption{HeadingA}
#+BEGIN_proof
...
#+END_proof
```

## 12.10.11 Horizontal rules in LaTeX export

The LATEX export back-end converts horizontal rules by the specified :width and :thickness attributes. For example:

```
#+ATTR_LATEX: :width .6\textwidth :thickness 0.8pt
----
```

# 12.11 Markdown export

The Markdown export back-end, md, converts an Org file to Markdown format, as defined at http://daringfireball.net/projects/markdown/.

The md back-end is built on top of the HTML back-end (see  $\langle undefined \rangle$  [HTML export], page  $\langle undefined \rangle$ ). As a consequence, it converts every Org construct not supported by Markdown syntax, such as tables, to HTML.

## Markdown export commands

C-c C-e m m

org-md-export-to-markdown

Export to a text file with Markdown syntax. For myfile.org, Org exports to myfile.md, overwritten without warning.

C-c C-e m M

org-md-export-as-markdown

Export to a temporary buffer. Does not create a file.

C-c C-e m o

Export as a text file with Markdown syntax, then open it.

### Header and sectioning structure

Based on org-md-headline-style, markdown export can generate headlines of both atx and setext types. atx limits headline levels to two. setext limits headline levels to six. Beyond these limits, the export back-end converts headlines to lists. To set a limit to a level before the absolute limit (see (undefined) [Export settings], page (undefined)).

# 12.12 OpenDocument Text export

The ODT export back-end handles creating of OpenDocument Text (ODT) format files. The format complies with *OpenDocument-v1.2 specification*<sup>11</sup> and is compatible with LibreOffice 3.4.

## 12.12.1 Pre-requisites for ODT export

The ODT export back-end relies on the zip program to create the final compressed ODT output. Check if zip is locally available and executable. Without zip, export cannot finish.

# 12.12.2 ODT export commands

С-с С-е о о

org-odt-export-to-odt

Export as OpenDocument Text file.

If org-odt-preferred-output-format is specified, the ODT export back-end automatically converts the exported file to that format. See [Automatically exporting to other formats], page 167.

For myfile.org, Org exports to myfile.odt, overwriting without warning. The ODT export back-end exports a region only if a region was active. Note for exporting active regions, the transient-mark-mode has to be turned on.

If the selected region is a single tree, the ODT export back-end makes the tree head the document title. Incidentally, C-c @ selects the current sub-tree. If the tree head entry has, or inherits, an <code>EXPORT\_FILE\_NAME</code> property, the ODT export back-end uses that for file name.

C-c C-e o D Export to an OpenDocument Text file format and open it.

When org-odt-preferred-output-format is specified, open the converted file instead. See [Automatically exporting to other formats], page 167.

Open Document Format for Office Applications (OpenDocument) Version 1.2 (http://docs.oasis-open.org/office/v1.2/OpenDocument-v1.2.html)

### 12.12.3 ODT specific export settings

The ODT export back-end has several additional keywords for customizing ODT output. Setting these keywords works similar to the general options (see  $\langle undefined \rangle$  [Export settings], page  $\langle undefined \rangle$ ).

#### 'DESCRIPTION'

This is the document's description, which the ODT export back-end inserts as document metadata. For long descriptions, use multiple #+DESCRIPTION lines.

#### 'KEYWORDS'

The keywords for the document. The ODT export back-end inserts the description along with author name, keywords, and related file metadata as metadata in the output file. Use multiple #+KEYWORDS lines if necessary.

#### 'ODT\_STYLES\_FILE'

The ODT export back-end uses the org-odt-styles-file by default. See Section 12.12.5 [Applying custom styles], page 168 for details.

#### 'SUBTITLE'

ドキュメントのサブタイトル

## 12.12.4 Extending ODT export

The ODT export back-end can produce documents in other formats besides ODT using a specialized ODT converter process. Its common interface works with popular converters to produce formats such as 'doc', or convert a document from one format, say 'csv', to another format, say 'xls'.

Customize org-odt-convert-process variable to point to unoconv, which is the ODT's preferred converter. Working installations of LibreOffice would already have unoconv installed. Alternatively, other converters may be substituted here. See [Configuring a document converter], page 172.

### Automatically exporting to other formats

If ODT format is just an intermediate step to get to other formats, such as 'doc', 'docx', 'rtf', or 'pdf', etc., then extend the ODT export back-end to directly produce that format. Specify the final format in the org-odt-preferred-output-format variable. This is one way to extend (see [Exporting to ODT], page 166).

### Converting between document formats

The Org export back-end is made to be inter-operable with a wide range of text document format converters. Newer generation converters, such as LibreOffice and Pandoc, can handle hundreds of formats at once. Org provides a consistent interaction with whatever converter is installed. Here are some generic commands:

#### M-x org-odt-convert RET

Convert an existing document from one format to another. With a prefix argument, opens the newly produced file.

## 12.12.5 Applying custom styles

The ODT export back-end comes with many OpenDocument styles (see [Working with OpenDocument style files], page 173). To expand or further customize these built-in style sheets, either edit the style sheets directly or generate them using an application such as LibreOffice. The example here shows creating a style using LibreOffice.

## Applying custom styles: the easy way

1. Create a sample example.org file with settings as shown below, and export it to ODT format.

```
#+OPTIONS: H:10 num:t
```

- 2. Open the above example.odt using LibreOffice. Use the Stylist to locate the target styles, which typically have the 'Org' prefix. Open one, modify, and save as either OpenDocument Text (.odt) or OpenDocument Template (.ott) file.
- 3. Customize the variable org-odt-styles-file and point it to the newly created file. For additional configuration options see [Overriding factory styles], page 173.

To apply and ODT style to a particular file, use the #+ODT\_STYLES\_FILE option as shown in the example below:

```
#+ODT_STYLES_FILE: "/path/to/example.ott"

5 \( \lambda \) t

#+ODT_STYLES_FILE: ("/path/to/file.ott" ("styles.xml" "image/hdr.png"))
```

## Using third-party styles and templates

The ODT export back-end relies on many templates and style names. Using third-party styles and templates can lead to mismatches. Templates derived from built in ODT templates and styles seem to have fewer problems.

### 12.12.6 Links in ODT export

ODT export back-end creates native cross-references for internal links and Internet-style links for all other link types.

A link with no description and pointing to a regular—un-itemized—outline heading is replaced with a cross-reference and section number of the heading.

A '\ref{label}'-style reference to an image, table etc. is replaced with a cross-reference and sequence number of the labeled entity. See Section 12.12.10 [Labels and captions in ODT export], page 171.

### 12.12.7 Tables in ODT export

The ODT export back-end handles native Org mode tables (see (undefined) [Tables], page (undefined)) and simple table.el tables. Complex table.el tables having column or row spans are not supported. Such tables are stripped from the exported document.

By default, the ODT export back-end exports a table with top and bottom frames and with ruled lines separating row and column groups (see Section 3.3 [Column groups], page 23). All tables are typeset to occupy the same width. The ODT export back-end honors any table alignments and relative widths for columns (see \(\sqrt{undefined}\)) [Column width and alignment], page \(\sqrt{undefined}\)).

Note that the ODT export back-end interprets column widths as weighted ratios, the default weight being 1.

Specifying :rel-width property on an #+ATTR\_ODT line controls the width of the table. For example:

#+ATTR_ODT: :rel	-width 5	50		
Area/Month	Jan	Feb	Mar	Sum
	+	+	+	+
1 /	<	1	1	<
<113>	<r5></r5>	<r5></r5>	<r5></r5>	<r6>  </r6>
North America	1	21	926	948
Middle East	6	75	844	925
Asia Pacific	9	27	790	826
	+	+	+	+
Sum	16	123	2560	2699

On export, the above table takes 50% of text width area. The exporter sizes the columns in the ratio: 13:5:5:5:6. The first column is left-aligned and rest of the columns, right-aligned. Vertical rules separate the header and the last column. Horizontal rules separate the header and the last row.

For even more customization, create custom table styles and associate them with a table using the #+ATTR\_ODT line. See [Customizing tables in ODT export], page 174.

# 12.12.8 Images in ODT export

#### インライン画像

The ODT export back-end processes image links in Org files that do not have descriptions, such as these links '[[file:img.jpg]]' or '[[./img.jpg]]', as direct image insertions in the final output. Either of these examples works:

```
[[file:img.png]]
[[./img.png]]
```

### Embedding clickable images

For clickable images, provide a link whose description is another link to an image file. For example, to embed an image org-mode-unicorn.png which when clicked jumps to https://orgmode.org website, do the following

```
[[https://orgmode.org][./org-mode-unicorn.png]]
```

# Sizing and scaling of embedded images

Control the size and scale of the embedded images with the #+ATTR\_ODT attribute.

The ODT export back-end starts with establishing the size of the image in the final document. The dimensions of this size is measured in centimeters. The back-end then queries the image file for its dimensions measured in pixels. For this measurement, the back-end relies on ImageMagick's identify program or Emacs create-image and image-size API. ImageMagick is the preferred choice for large file sizes or frequent batch operations. The back-end then converts the pixel dimensions using org-odt-pixels-per-inch into the familiar 72 dpi or 96 dpi. The default value for this is in display-pixels-per-inch, which

can be tweaked for better results based on the capabilities of the output device. Here are some common image scaling operations:

Explicitly size the image

To embed img.png as a 10 cm x 10 cm image, do the following:

```
#+ATTR_ODT: :width 10 :height 10
[[./img.png]]
```

Scale the image

To embed img.png at half its size, do the following:

```
#+ATTR_ODT: :scale 0.5
[[./img.png]]
```

Scale the image to a specific width

To embed img.png with a width of 10 cm while retaining the original height:width ratio, do the following:

```
#+ATTR_ODT: :width 10
[[./img.png]]
```

Scale the image to a specific height

To embed img.png with a height of 10 cm while retaining the original height:width ratio, do the following

```
#+ATTR_ODT: :height 10
[[./img.png]]
```

# Anchoring of images

The ODT export back-end can anchor images to "as-char", "paragraph", or "page". Set the preferred anchor using the :anchor property of the #+ATTR\_ODT line.

To create an image that is anchored to a page:

```
#+ATTR_ODT: :anchor "page"
[[./img.png]]
```

### 12.12.9 Math formatting in ODT export

The ODT export back-end has special support built-in for handling math.

# Working with LaTeX math snippets

LATEX math snippets (see \(\sqrt{undefined}\) [LATEX fragments], page \(\sqrt{undefined}\)) can be embedded in an ODT document in one of the following ways:

#### 1. MathML

Add this line to the Org file. This option is activated on a per-file basis.

```
#+OPTIONS: LaTeX:t
```

With this option, IATEX fragments are first converted into MathML fragments using an external IATEX-to-MathML converter program. The resulting MathML fragments are then embedded as an OpenDocument Formula in the exported document.

To specify the IATEX-to-MathML converter, customize the variables org-latex-to-mathml-convert-command and org-latex-to-mathml-jar-file.

To use MathToWeb<sup>12</sup> as the preferred converter, configure the above variables as

```
(setq org-latex-to-mathml-convert-command
   "java -jar %j -unicode -force -df %o %I"
   org-latex-to-mathml-jar-file
   "/path/to/mathtoweb.jar")
```

To use  $\LaTeX XML^{13}$  use

To quickly verify the reliability of the LATEX-to-MathML converter, use the following commands:

```
M-x org-odt-export-as-odf RET
```

Convert a LATEX math snippet to an OpenDocument formula (.odf) file.

```
M-x org-odt-export-as-odf-and-open RET
```

Convert a LATEX math snippet to an OpenDocument formula (.odf) file and open the formula file with the system-registered application.

#### 2. PNG 画像

Add this line to the Org file. This option is activated on a per-file basis.

```
#+OPTIONS: tex:dvipng
#+OPTIONS: tex:dvisvgm
もしくは
#+OPTIONS: tex:imagemagick
```

Under this option, IATEX fragments are processed into PNG or SVG images and the resulting images are embedded in the exported document. This method requires dvipng program, dvisvgm or imagemagick programs.

# Working with MathML or OpenDocument formula files

When embedding IATEX math snippets in ODT documents is not reliable, there is one more option to try. Embed an equation by linking to its MathML (.mml) source or its OpenDocument formula (.odf) file as shown below:

```
[[./equation.mml]]
もしくは
[[./equation.odf]]
```

# 12.12.10 Labels and captions in ODT export

ODT format handles labeling and captioning of objects based on their types. Inline images, tables, LATEX fragments, and Math formulas are numbered and captioned separately. Each object also gets a unique sequence number based on its order of first appearance in the Org file. Each category has its own sequence. A caption is just a label applied to these objects.

```
#+CAPTION: これは次の画像 (または表) のリンクのキャプションです。
#+LABEL: fig:SED-HR4049
```

<sup>12</sup> See MathToWeb (http://www.mathtoweb.com/cgi-bin/mathtoweb\_home.pl).

<sup>13</sup> See http://dlmf.nist.gov/LaTeXML/.

```
[[./img/a.png]]
```

When rendered, it may show as follows in the exported document:

```
Figure 2: Bell curve
```

To modify the category component of the caption, customize the option org-odt-category-map-alist. For example, to tag embedded images with the string 'Illustration' instead of the default string 'Figure', use the following setting:

With the above modification, the previous example changes to:

Illustration 2: Bell curve

# 12.12.11 Literal examples in ODT export

The ODT export back-end supports literal examples (see (undefined) [Literal examples], page (undefined)) with full fontification. Internally, the ODT export back-end relies on htmlfontify.el to generate the style definitions needed for fancy listings. The auto-generated styles get 'OrgSrc' prefix and inherit colors from the faces used by Emacs font-lock library for that source language.

For custom fontification styles, customize the org-odt-create-custom-styles-for-srcblocks option.

To turn off fontification of literal examples, customize the org-odt-fontify-srcblocks option.

# 12.12.12 Advanced topics in ODT export

The ODT export back-end has extensive features useful for power users and frequent uses of ODT formats.

### Configuring a document converter

The ODT export back-end works with popular converters with little or no extra configuration. See Section 12.12.4 [Extending ODT export], page 167. The following is for unsupported converters or tweaking existing defaults.

#### 1. Register the converter

Add the name of the converter to the org-odt-convert-processes variable. Note that it also requires how the converter is invoked on the command line. See the variable's docstring for details.

#### 2. 表計算機能

Specify which formats the converter can handle by customizing the variable org-odt-convert-capabilities. Use the entry for the default values in this variable for configuring the new converter. Also see its docstring for details.

#### 3. Choose the converter

Select the newly added converter as the preferred one by customizing the option org-odt-convert-process.

# Working with OpenDocument style files

This section explores the internals of the ODT exporter; the means by which it produces styled documents; the use of automatic and custom OpenDocument styles.

# a) Factory styles

The ODT exporter relies on two files for generating its output. These files are bundled with the distribution under the directory pointed to by the variable org-odt-styles-dir. The two files are:

# • OrgOdtStyles.xml

This file contributes to the styles.xml file of the final 'ODT' document. This file gets modified for the following purposes:

- 1. To control outline numbering based on user settings.
- 2. To add styles generated by htmlfontify.el for fontification of code blocks.

# • OrgOdtContentTemplate.xml

This file contributes to the content.xml file of the final 'ODT' document. The contents of the Org outline are inserted between the '<office:text>'...'</office:text>' elements of this file.

Apart from serving as a template file for the final content.xml, the file serves the following purposes:

- 1. It contains automatic styles for formatting of tables which are referenced by the exporter.
- 2. It contains '<text:sequence-decl>'...'</text:sequence-decl>' elements that control numbering of tables, images, equations, and similar entities.

# b) Overriding factory styles

The following two variables control the location from where the ODT exporter picks up the custom styles and content template files. Customize these variables to override the factory styles used by the exporter.

#### • org-odt-styles-file

The ODT export back-end uses the file pointed to by this variable, such as styles.xml, for the final output. It can take one of the following values:

1. styles.xml ファイル

Use this file instead of the default styles.xml

2. .odt または .ott ファイル

Use the styles.xml contained in the specified OpenDocument Text or Template file

3. A .odt or .ott file and a subset of files contained within them

Use the styles.xml contained in the specified OpenDocument Text or Template file. Additionally extract the specified member files and embed those within the final 'ODT' document.

Use this option if the styles.xml file references additional files like header and footer images.

4. nil

Use the default styles.xml

• org-odt-content-template-file

Use this variable to specify the blank content.xml that will be used in the final output.

# Creating one-off styles

The ODT export back-end can read embedded raw OpenDocument XML from the Org file. Such direct formatting are useful for one-off instances.

1. Embedding ODT tags as part of regular text

Enclose OpenDocument syntax in '@@odt:...@@' for inline markup. For example, to highlight a region of text do the following:

```
@@odt:<text:span text:style-name="Highlight">This is highlighted
text</text:span>@@. But this is regular text.
```

**Hint:** To see the above example in action, edit the styles.xml (see [Factory styles], page 173) and add a custom 'Highlight' style as shown below:

```
<style:style style:name="Highlight" style:family="text">
    <style:text-properties fo:background-color="#ff0000"/>
</style:style>
```

2. Embedding a one-line OpenDocument XML

The ODT export back-end can read one-liner options with #+ODT: in the Org file. For example, to force a page break:

```
#+ODT: <text:p text:style-name="PageBreak"/>
```

**Hint:** To see the above example in action, edit your styles.xml (see [Factory styles], page 173) and add a custom 'PageBreak' style as shown below.

3. Embedding a block of OpenDocument XML

The ODT export back-end can also read ODT export blocks for OpenDocument XML. Such blocks use the #+BEGIN\_EXPORT odt...#+END\_EXPORT constructs.

For example, to create a one-off paragraph that uses bold text, do the following:

```
#+BEGIN_EXPORT odt
<text:p text:style-name="Text_20_body_20_bold">
This paragraph is specially formatted and uses bold text.
</text:p>
#+END_EXPORT
```

### Customizing tables in ODT export

Override the default table format by specifying a custom table style with the #+ATTR\_ODT line. For a discussion on default formatting of tables see Section 12.12.7 [Tables in ODT export], page 168.

This feature closely mimics the way table templates are defined in the OpenDocument-v1.2 specification. $^{14}$ 

For quick preview of this feature, install the settings below and export the table that follows:

```
(setq org-odt-table-styles
      (append org-odt-table-styles
            '(("TableWithHeaderRowAndColumn" "Custom"
                ((use-first-row-styles . t)
                 (use-first-column-styles . t)))
                ("TableWithFirstRowandLastRow" "Custom"
                 ((use-first-row-styles . t)
                 (use-last-row-styles . t))))))
#+ATTR_ODT: :style TableWithHeaderRowAndColumn
| Name | Phone | Age |
| Peter |
           1234
                   17 |
| Anna
       4321
                   25 I
```

The example above used 'Custom' template and installed two table styles 'TableWithHeaderRowAndColumn' and 'TableWithFirstRowandLastRow'. Important: The OpenDocument styles needed for producing the above template were pre-defined. They are available in the section marked 'Custom Table Template' in OrgOdtContentTemplate.xml (see [Factory styles], page 173. For adding new templates, define new styles here.

To use this feature proceed as follows:

1. Create a table template<sup>15</sup>

A table template is set of 'table-cell' and 'paragraph' styles for each of the following table cell categories:

- Body
- First column
- Last column
- First row
- Last row
- Even row
- Odd row
- Even column
- Odd Column

The names for the above styles must be chosen based on the name of the table template using a well-defined convention.

The naming convention is better illustrated with an example. For a table template with the name 'Custom', the needed style names are listed in the following table.

OpenDocument-v1.2 Specification (http://docs.oasis-open.org/office/v1.2/OpenDocument-v1.2. html)

 $<sup>^{15}</sup>$  See the <table:table-template> element of the OpenDocument-v1.2 specification

### Table cell type table-cell style paragraph style

Body	'CustomTableCell'	'CustomTableParagraph'
First column	'CustomFirstColumnTableCell'	'CustomFirstColumnTableParagraph'
Last column	`CustomLastColumnTableCell'	'CustomLastColumnTableParagraph'
First row	'CustomFirstRowTableCell'	'CustomFirstRowTableParagraph'
Last row	'CustomLastRowTableCell'	'CustomLastRowTableParagraph'
Even row	'CustomEvenRowTableCell'	'CustomEvenRowTableParagraph'
Odd row	'CustomOddRowTableCell'	'CustomOddRowTableParagraph'
Even column	'CustomEvenColumnTableCell'	'CustomEvenColumnTableParagraph'
Odd column	'CustomOddColumnTableCell'	'CustomOddColumnTableParagraph'

To create a table template with the name 'Custom', define the above styles in the <office:automatic-styles>...</office:automatic-styles> element of the content template file (see [Factory styles], page 173).

### 2. Define a table $style^{16}$

To define a table style, create an entry for the style in the variable org-odt-table-styles and specify the following:

- the name of the table template created in step (1)
- the set of cell styles in that template that are to be activated

For example, the entry below defines two different table styles 'TableWithHeaderRowAndColumn' and 'TableWithFirstRowandLastRow' based on the same template 'Custom'. The styles achieve their intended effect by selectively activating the individual cell styles in that template.

#### 3. Associate a table with the table style

To do this, specify the table style created in step (2) as part of the ATTR\_ODT line as shown below.

See the attributes table:template-name, table:use-first-row-styles, table:use-last-row-styles, table:use-first-column-styles, table:use-last-column-styles, table:use-banding-rows-styles, and table:use-banding-column-styles of the <table:table> element in the OpenDocument-v1.2 specification

# Validating OpenDocument XML

Sometimes ODT format files may not open due to .odt file corruption. To verify if the .odt file is corrupt, validate it against the OpenDocument RELAX NG Compact Syntax—RNC—schema. But first the .odt files have to be decompressed using 'zip'. Note that .odt files are 'zip' archives: See Info file emacs, node 'File Archives'. The contents of .odt files are in .xml. For general help with validation—and schema-sensitive editing—of XML files: See Info file nxml-mode, node 'Introduction'.

Customize org-odt-schema-dir to point to a directory with OpenDocument .rnc files and the needed schema-locating rules. The ODT export back-end takes care of updating the rng-schema-locating-files.

# 12.13 Org export

org export back-end creates a normalized version of the Org document in current buffer. The exporter evaluates Babel code (see Section 14.5 [Evaluating code blocks], page 204) and removes content specific to other back-ends.

エクスポートコマンド

C-c C-e O o

org-org-export-to-org

Export as an Org file with a .org extension. For myfile.org, Org exports to myfile.org.org, overwriting without warning.

C-c C-e O O org-org-export-as-org 一時的なバッファにエクスポートします。ファイルを作りません。

C-c C-e O v

Export to an Org file, then open it.

# 12.14 Texinfo export

The 'texinfo' export back-end generates documents with Texinfo code that can compile to Info format.

# 12.14.1 Texinfo export commands

C-c C-e i t org-texinfo-export-to-texinfo
Export as a Texinfo file with .texi extension. For myfile.org, Org exports to myfile.texi, overwriting without warning.

C-c C-e i i org-texinfo-export-to-info
Export to Texinfo format first and then process it to make an Info file. To
generate other formats, such as DocBook, customize the org-texinfo-infoprocess variable.

### 12.14.2 Texinfo specific export settings

The Texinfo export back-end has several additional keywords for customizing Texinfo output. Setting these keywords works similar to the general options (see  $\langle$  undefined $\rangle$ ). [Export settings], page  $\langle$  undefined $\rangle$ ).

'SUBTITLE'

ドキュメントのサブタイトル

'SUBAUTHOR'

The document subauthor.

'TEXINFO\_FILENAME'

The Texinfo filename.

'TEXINFO\_CLASS'

The default document class (org-texinfo-default-class), which must be a member of org-texinfo-classes.

'TEXINFO\_HEADER'

Arbitrary lines inserted at the end of the header.

'TEXINFO\_POST\_HEADER'

Arbitrary lines inserted after the end of the header.

'TEXINFO\_DIR\_CATEGORY'

The directory category of the document.

'TEXINFO\_DIR\_TITLE'

The directory title of the document.

'TEXINFO\_DIR\_DESC'

The directory description of the document.

'TEXINFO\_PRINTED\_TITLE'

The printed title of the document.

### 12.14.3 Texinfo file header

After creating the header for a Texinfo file, the Texinfo back-end automatically generates a name and destination path for the Info file. To override this default with a more sensible path and name, specify the #+TEXINFO\_FILENAME keyword.

Along with the output's file name, the Texinfo header also contains language details (see \( \)undefined \( \) [Export settings], page \( \)undefined \( \)) and encoding system as set in the \( \)org-texinfo-coding-system variable. Insert #+TEXINFO\_HEADER keywords for each additional command in the header, for example: \( \)@code{\( \)@synindex}.

Instead of repeatedly installing the same set of commands, define a class in org-texinfo-classes once, and then activate it in the document by setting the #+TEXINFO\_CLASS keyword to that class.

### 12.14.4 Texinfo title and copyright page

The default template for hard copy output has a title page with #+TITLE and #+AUTHOR (see \( \)undefined \( \) [Export settings], page \( \)undefined \( \)). To replace the regular #+TITLE with something different for the printed version, use the #+TEXINFO\_PRINTED\_TITLE and #+SUBTITLE keywords. Both expect raw Texinfo code for setting their values.

If one #+AUTHOR is not sufficient, add multiple #+SUBAUTHOR keywords. They have to be set in raw Texinfo code.

```
#+AUTHOR: Jane Smith
#+SUBAUTHOR: John Doe
#+TEXINFO_PRINTED_TITLE: This Long Title@inlinefmt{tex,@*} Is Broken in @TeX{}
```

Copying material is defined in a dedicated headline with a non-nil: COPYING: property. The back-end inserts the contents within a @copying command at the beginning of the document. The heading itself does not appear in the structure of the document.

Copyright information is printed on the back of the title page.

```
* Legalese
:PROPERTIES:
:COPYING: t
:END:
```

This is a short example of a complete Texinfo file, version 1.0.

Copyright \copy 2018 Free Software Foundation, Inc.

### 12.14.5 Info directory file

The end result of the Texinfo export process is the creation of an Info file. This Info file's metadata has variables for category, title, and description: #+TEXINFO\_DIR\_CATEGORY, #+TEXINFO\_DIR\_TITLE, and #+TEXINFO\_DIR\_DESC that establish where in the Info hierarchy the file fits.

Here is an example that writes to the Info directory file:

```
#+TEXINFO_DIR_CATEGORY: Emacs
#+TEXINFO_DIR_TITLE: Org Mode: (org-ja)
#+TEXINFO_DIR_DESC: Outline-based notes management and organizer
```

# 12.14.6 Headings and sectioning structure

The Texinfo export back-end uses a pre-defined scheme to convert Org headlines to an equivalent Texinfo structuring commands. A scheme like this maps top-level headlines to numbered chapters tagged as <code>@chapter</code> and lower-level headlines to unnumbered chapters tagged as <code>@unnumbered</code>. To override such mappings to introduce <code>@part</code> or other Texinfo structuring commands, define a new class in <code>org-texinfo-classes</code>. Activate the new class with the <code>#+TEXINFO\_CLASS</code> keyword. When no new class is defined and activated, the Texinfo export back-end defaults to the <code>org-texinfo-default-class</code>.

If an Org headline's level has no associated Texinfo structuring command, or is below a certain threshold (see  $\langle undefined \rangle$  [Export settings], page  $\langle undefined \rangle$ ), then the Texinfo export back-end makes it into a list item.

The Texinfo export back-end makes any headline with a non-nil:APPENDIX: property into an appendix. This happens independent of the Org headline level or the #+TEXINFO\_CLASS.

The Texinfo export back-end creates a menu entry after the Org headline for each regular sectioning structure. To override this with a shorter menu entry, use the :ALT\_TITLE: property (see \( \text{undefined} \) [Table of contents], page \( \text{undefined} \)). Texinfo menu entries also have an option for a longer :DESCRIPTION: property. Here's an example that uses both to override the default menu entry:

```
* Controlling Screen Display
:PROPERTIES:
:ALT_TITLE: Display
:DESCRIPTION: Controlling Screen Display
.END:
```

The text before the first headline belongs to the 'Top' node, i.e., the node in which a reader enters an Info manual. As such, it is expected not to appear in printed output generated from the .texi file. See Info file texinfo, node 'The Top Node', for more information.

#### 12.14.7 Indices

The Texinfo export back-end recognizes these indexing keywords if used in the Org file: #+CINDEX, #+FINDEX, #+FINDEX, #+FINDEX, #+FINDEX, and #+VINDEX. Write their value as verbatim Texinfo code; in particular, '{', '}' and '@' characters need to be escaped with '@' if they not belong to a Texinfo command.

```
#+CINDEX: Defining indexing entries
```

For the back-end to generate an index entry for a headline, set the :INDEX: property to 'cp' or 'vr'. These abbreviations come from Texinfo that stand for concept index and variable index. The Texinfo manual has abbreviations for all other kinds of indexes. The back-end exports the headline as an unnumbered chapter or section command, and then inserts the index after its contents.

```
* Concept Index :PROPERTIES: :INDEX: cp :END:
```

### 12.14.8 Quoting Texinfo code

Use any of the following three methods to insert or escape raw Texinfo code:

Richard @@texinfo:@sc{@@Stallman@@texinfo:}@@ commence' GNU.

```
#+TEXINFO: @need800
This paragraph is preceded by...
#+BEGIN_EXPORT texinfo
@auindex Johnson, Mark
@auindex Lakoff, George
#+END_EXPORT
```

### 12.14.9 Plain lists in Texinfo export

The Texinfo export back-end by default converts description lists in the Org file using the default command @table, which results in a table with two columns. To change this behavior, specify :table-type with ftable or vtable attributes. For more information, See Info file texinfo, node 'Two-column Tables'.

The Texinfo export back-end by default also applies a text highlight based on the defaults stored in org-texinfo-table-default-markup. To override the default highlight command, specify another one with the :indic attribute.

Org syntax is limited to one entry per list item. Nevertheless, the Texinfo export backend can split that entry according to any text provided through the :sep attribute. Each part then becomes a new entry in the first column of the table.

The following example illustrates all the attributes above:

```
#+ATTR_TEXINFO: :table-type vtable :sep , :indic asis
  - foo, bar :: This is the common text for variables foo and bar.
becomes
  @vtable @asis
```

```
@vtable @asis
@item foo
@itemx bar
This is the common text for variables foo and bar.
@end table
```

### 12.14.10 Tables in Texinfo export

When exporting tables, the Texinfo export back-end uses the widest cell width in each column. To override this and instead specify as fractions of line length, use the :columns attribute. See example below.

```
#+ATTR_TEXINFO: :columns .5 .5
| a cell | another cell |
```

# 12.14.11 Images in Texinfo export

Insert a file link to the image in the Org file, and the Texinfo export back-end inserts the image. These links must have the usual supported image extensions and no descriptions. To scale the image, use :width and :height attributes. For alternate text, use :alt and specify the text using Texinfo code, as shown in the example:

```
#+ATTR_TEXINFO: :width 1in :alt Alternate @i{text}
[[ridt.pdf]]
```

#### 12.14.12 特別なブロック

@end defun

The Texinfo export back-end converts special blocks to commands with the same name. It also adds any :options attributes to the end of the command, as shown in this example:

```
#+ATTR_TEXINFO: :options org-org-export-to-org ...
#+begin_defun
A somewhat obsessive function.
#+end_defun
becomes
@defun org-org-export-to-org ...
A somewhat obsessive function.
```

### 12.14.13 A Texinfo example

Here is a more detailed example Org file. See Section "GNU Sample Texts" in *GNU Texinfo Manual* for an equivalent example using Texinfo code.

```
#+TITLE: GNU Sample {{{version}}}
#+SUBTITLE: for version {{{version}}}, {{{updated}}}
#+AUTHOR: A.U. Thor
#+EMAIL: bug-sample@gnu.org
#+OPTIONS: ':t toc:t author:t email:t
#+I.ANGUAGE: en
#+MACRO: version 2.0
#+MACRO: updated last updated 4 March 2014
#+TEXINFO_FILENAME: sample.info
#+TEXINFO_HEADER: @syncodeindex pg cp
#+TEXINFO_DIR_CATEGORY: Texinfo documentation system
#+TEXINFO_DIR_TITLE: sample: (sample)
#+TEXINFO_DIR_DESC: Invoking sample
#+TEXINFO_PRINTED_TITLE: GNU Sample
This manual is for GNU Sample (version {{{version}}}},
{{{updated}}}).
* Copying
  :PROPERTIES:
  :COPYING: t
  :END:
  This manual is for GNU Sample (version {{{version}}}},
  {{{updated}}}), which is an example in the Texinfo documentation.
  Copyright \copy 2018 Free Software Foundation, Inc.
  #+BEGIN_QUOTE
  Permission is granted to copy, distribute and/or modify this
  document under the terms of the GNU Free Documentation License,
  Version 1.3 or any later version published by the Free Software
  Foundation; with no Invariant Sections, with no Front-Cover Texts,
  and with no Back-Cover Texts. A copy of the license is included in
  the section entitled "GNU Free Documentation License".
  #+END_QUOTE
* Invoking sample
  #+PINDEX: sample
  #+CINDEX: invoking @command{sample}
```

This is a sample manual. There is no sample program to invoke, but if there were, you could see its basic usage and command line options here.

\* GNU Free Documentation License :PROPERTIES: :APPENDIX: t

:END:

#+TEXINFO: @include fdl.texi

\* Index

:PROPERTIES: :INDEX: cr

:END:

# 12.15 iCalendar export

A large part of Org mode's inter-operability success is its ability to easily export to or import from external applications. The iCalendar export back-end takes calendar data from Org files and exports to the standard iCalendar format.

The iCalendar export back-end can also incorporate TODO entries based on the configuration of the org-icalendar-include-todo variable. The back-end exports plain time-stamps as VEVENT, TODO items as VTODO, and also create events from deadlines that are in non-TODO items. The back-end uses the deadlines and scheduling dates in Org TODO items for setting the start and due dates for the iCalendar TODO entry. Consult the org-icalendar-use-deadline and org-icalendar-use-scheduled variables for more details.

For tags on the headline, the iCalendar export back-end makes them into iCalendar categories. To tweak the inheritance of tags and TODO states, configure the variable org-icalendar-categories. To assign clock alarms based on time, configure the org-icalendar-alarm-time variable.

The iCalendar format standard requires globally unique identifier—UID—for each entry. The iCalendar export back-end creates UIDs during export. To save a copy of the UID in the Org file set the variable org-icalendar-store-UID. The back-end looks for the :ID: property of the entry for re-using the same UID for subsequent exports.

Since a single Org entry can result in multiple iCalendar entries—as timestamp, deadline, scheduled item, or TODO item—Org adds prefixes to the UID, depending on which part of the Org entry triggered the creation of the iCalendar entry. Prefixing ensures UIDs remains unique, yet enable synchronization programs trace the connections.

C-c C-e c f org-icalendar-export-to-ics Create iCalendar entries from the current Org buffer and store them in the same directory, using a file extension .ics.

 $\it C-c$   $\it C-e$   $\it c$  a org-icalendar-export-agenda-files  $\it C-c$   $\it C-e$   $\it i$ に似ていますが、org-agenda-filesで指定された全てのファイルで実行されます。それぞれのファイルで iCalendar 形式のファイルが作成されます。

C-c C-e c org-export-icalendar-combine-agenda-files org-agenda-files で指定されたファイルから単一のiCalendar形式のファイルを生成し、org-icalendar-combined-agenda-fileで指定されたファイルに出力します。

The iCalendar export back-end includes SUMMARY, DESCRIPTION, LOCATION and TIMEZONE properties from the Org entries when exporting. To force the back-end to inherit the LOCATION and TIMEZONE properties, configure the org-use-property-inheritance variable.

When Org entries do not have SUMMARY, DESCRIPTION and LOCATION properties, the iCalendar export back-end derives the summary from the headline, and derives the description from the body of the Org item. The org-icalendar-include-body variable limits the maximum number of characters of the content are turned into its description.

The TIMEZONE property can be used to specify a per-entry time zone, and will be applied to any entry with timestamp information. Time zones should be specified as per the IANA time zone database format, e.g. "Asia/Almaty". Alternately, the property value can be "UTC", to force UTC time for this entry only.

Exporting to iCalendar format depends in large part on the capabilities of the destination application. Some are more lenient than others. Consult the Org mode FAQ for advice on specific applications.

### 12.16 Other built-in back-ends

その他に次のようなエクスポートバックエンドが Org Mode に含まれます。

• ox-man.el: man ページへのエクスポート

To activate such back-ends, either customize org-export-backends or load directly with (require 'ox-man). On successful load, the back-end adds new keys in the export dispatcher (see Section 12.1 [The export dispatcher], page 138).

Follow the comment section of such files, for example, ox-man.el, for usage and configuration details.

# 12.17 Advanced configuration

フック

The export process executes two hooks before the actual exporting begins. The first hook, org-export-before-processing-hook, runs before any expansions of macros, Babel code, and include keywords in the buffer. The second hook, org-export-before-parsing-hook, runs before the buffer is parsed. Both hooks are specified as functions, see example below. Their main use is for heavy duty structural modifications of the Org content. For example, removing every headline in the buffer during export:

```
(defun my-headline-removal (backend)
  "Remove all headlines in the current buffer.

BACKEND is the export back-end being used, as a symbol."
  (org-map-entries
    (lambda () (delete-region (point) (progn (forward-line) (point))))))
(add-hook 'org-export-before-parsing-hook 'my-headline-removal)
```

Note that the hook function must have a mandatory argument that is a symbol for the back-end.

#### フィルター

The Org export process relies on filters to process specific parts of conversion process. Filters are just lists of functions to be applied to certain parts for a given back-end. The output from the first function in the filter is passed on to the next function in the filter. The final output is the output from the final function in the filter.

The Org export process has many filter sets applicable to different types of objects, plain text, parse trees, export options, and final output formats. The filters are named after the element type or object type: org-export-filter-TYPE-functions, where TYPE is the type targeted by the filter. Valid types are:

body bold babel-call center-block clock code diary-sexp drawer dynamic-block entity example-block :exports both export-snippet final-output 固定幅 footnote-definition footnote-reference 見出し inline-babel-call horizontal-rule inline-src-block inlinetask italic item キーワードオプション latex-fragment latex-environment line-break link node-property パラグラフ オプション parse-tree plain-list plain-text 計画項目 property-drawer quote-block ラジオターゲット special-block src-block section statistics-cookie strike-through 下付き文字 上付き文字 table table-cell table-row target timestamp 下線 verbatim verse-block

Here is an example filter that replaces non-breaking spaces ~ in the Org buffer with \_ for the LATEX back-end.

A filter requires three arguments: the code to be transformed, the name of the back-end, and some optional information about the export process. The third argument can be safely ignored. Note the use of org-export-derived-backend-p predicate that tests for latex back-end or any other back-end, such as beamer, derived from latex.

# Defining filters for individual files

The Org export can filter not just for back-ends, but also for specific files through the #+BIND keyword. Here is an example with two filters; one removes brackets from time stamps, and the other removes strike-through text. The filter functions are defined in a 'src' code block in the same Org file, which is a handy location for debugging.

既存のバックエンドを拡張する

Some parts of the conversion process can be extended for certain elements so as to introduce a new or revised translation. That is how the HTML export back-end was extended to handle Markdown format. The extensions work seamlessly so any aspect of filtering not done by the extended back-end is handled by the original back-end. Of all the export customization in Org, extending is very powerful as it operates at the parser level.

For this example, make the ascii back-end display the language used in a source code block. Also make it display only when some attribute is non-nil, like the following:

```
#+ATTR_ASCII: :language t
Then extend ascii back-end with a custom my-ascii back-end.
  (defun my-ascii-src-block (src-block contents info)
    "Transcode a SRC-BLOCK element from Org to ASCII.
  CONTENTS is nil. INFO is a plist used as a communication
  channel."
    (if (not (org-export-read-attribute :attr_ascii src-block :language))
      (org-export-with-backend 'ascii src-block contents info)
     (format ",--[ %s ]--\n%s`----"
              (org-element-property :language src-block)
              (replace-regexp-in-string
              11 ~ 11 | 11
               (org-element-normalize-string
                (org-export-format-code-default src-block info))))))
  (org-export-define-derived-backend 'my-ascii 'ascii
    :translate-alist '((src-block . my-ascii-src-block)))
```

The my-ascii-src-block function looks at the attribute above the current element. If not true, hands over to ascii back-end. If true, which it is in this example, it creates a box around the code and leaves room for the inserting a string for language. The last form creates the new back-end that springs to action only when translating src-block type elements.

To use the newly defined back-end, call the following from an Org buffer:

```
(org-export-to-buffer 'my-ascii "*Org MY-ASCII Export*")
```

Further steps to consider would be an interactive function, self-installing an item in the export dispatcher menu, and other user-friendly improvements.

# 12.18 Export in foreign buffers

The export back-ends in Org often include commands to convert selected regions. A convenient feature of this in-place conversion is that the exported output replaces the original source. Here are such functions:

org-html-convert-region-to-html

Convert the selected region into HTML.

org-latex-convert-region-to-latex

Convert the selected region into LATEX.

org-texinfo-convert-region-to-texinfo

Convert the selected region into Texinfo.

org-md-convert-region-to-md

Convert the selected region into MarkDown.

In-place conversions are particularly handy for quick conversion of tables and lists in foreign buffers. For example, turn on the minor mode M-x orgstruct-mode in an HTML buffer, then use the convenient Org keyboard commands to create a list, select it, and covert it to HTML with M-x org-html-convert-region-to-html RET.

### 13 公開

Org includes a publishing management system that allows you to configure automatic HTML conversion of *projects* composed of interlinked org files. You can also configure Org to automatically upload your exported HTML pages and related attachments, such as images and source code files, to a web server.

あなたはまた、Org-mode から PDF へ変換することもでき、さらに、サーバ上で両方のファイルを利用できるように HTML と PDF への変換を組み合わせることも可能です。

公開機能は David O'Toole によって Org-mode にコントリビュートされました。

# 13.1 Configuration

公開機能の利用にはプロジェクトのはファイルや公開先、その他多くのプロパティを指定する重要な 設定を必要とします。

# 13.1.1 org-publishing-alist変数

Publishing is configured almost entirely through setting the value of one variable, called org-publish-project-alist. Each element of the list configures one project, and may be in one of the two following forms:

```
("project-name" :property value :property value ...)
    i.e., a well-formed property list with alternating keys and values
or
    ("project-name" :components ("project-name" "project-name" ...))
```

どちらの場合もプロパティと値の指定によって設定されます。プロジェクトは公開されるファイルのセットと、それらが公開される時に使用する設定を定義します。上記の2番目の形式を取る場合、:componentsプロパティの個々のメンバは異なる公開設定を持つファイルをまとめたサブプロジェクトとして扱われます。あなたが"メタプロジェクト"を公開する時、全てのコンポーネントは特定の順序で公開されます。

### 13.1.2 ファイルの送り元と送り先

Most properties are optional, but some should always be set. In particular, Org needs to know where to look for source files, and where to put published files.

:base-directory 公開するソースファイルを含むディレクトリ

:publishing-directory Directory where output files will be published. You can di-

rectly publish to a web server using a file name syntax appropriate for the Emacs tramp package. Or you can publish to a local directory and use external tools to upload your website

(see Section 13.2 [Uploading files], page 196).

:preparation-function Function or list of functions to be called before starting the

publishing process, for example, to run  ${\tt make}$  for updating files to be published. Each preparation function is called with a

single argument, the project property list.

:completion-function

Function or list of functions called after finishing the publishing process, for example, to change permissions of the resulting files. Each completion function is called with a single argument, the project property list.

### 13.1.3 Selecting files

デフォルトでは、ベースディレクトリの中の拡張子が.orgである全てのファイルはプロジェクトの一部であるとみなされます。これはプロパティの設定により変更することができます:

:base-extension ソースファイルの拡張子 (. を除きます!) です。これは実際は正規表現で

す。もしあなたが:base-directoryの中の全てのファイルを取得したい

のであれば、anyシンボルをセットします。

:exclude そのファイルの拡張子が選択されていたとしても、公開したくないファイ

ル名にマッチする正規表現。

:include :base-extensionと:excludeにかかわらずインクルードするファイル

のリスト。

:recursive non-nil means, check base-directory recursively for files to

publish.

# 13.1.4 Publishing action

Publishing means that a file is copied to the destination directory and possibly transformed in the process. The default transformation is to export Org files as HTML files, and this is done by the function org-html-publish-to-html, which calls the HTML exporter (see \( \) undefined \( \) [HTML export], page \( \) undefined \( \)). But you also can publish your content as PDF files using org-latex-publish-to-pdf or as ascii, Texinfo, etc., using the corresponding functions.

If you want to publish the Org file as an .org file but with the *archived*, *commented* and *tag-excluded* trees removed, use the function org-org-publish-to-org. This will produce file.org and put it in the publishing directory. If you want a htmlized version of this file, set the parameter:htmlized-source to t, it will produce file.org.html in the publishing directory.

Other files like images only need to be copied to the publishing destination. For this you can use org-publish-attachment. For non-org files, you always need to specify the publishing function:

:publishing-function ファイルの公開を実行する関数です。これは、順番に呼び出される

関数のリストにすることもできます。

:htmlized-source non-nil means, publish htmlized source.

The function must accept three arguments: a property list containing at least a :publishing-directory property, the name of the file to be published and the path to the publishing directory of the output file. It should take the specified file, make the necessary transformation (if any) and place the result into the destination folder.

<sup>&</sup>lt;sup>1</sup> If the publishing directory is the same than the source directory, file.org will be exported as file.org.org, so probably don't want to do this.

# 13.1.5 Options for the exporters

The property list can be used to set export options during the publishing process. In most cases, these properties correspond to user variables in Org. While some properties are available for all export back-ends, most of them are back-end specific. The following sections list properties along with the variable they belong to. See the documentation string of these options for details.

When a property is given a value in org-publish-project-alist, its setting overrides the value of the corresponding user variable (if any) during publishing. Options set within a file (see (undefined) [Export settings], page (undefined)), however, override everything.

# Generic properties

:archived-trees org-export-with-archived-trees :exclude-tags org-export-exclude-tags :headline-levels org-export-headline-levels :language org-export-default-language org-export-preserve-breaks :preserve-breaks :section-numbers org-export-with-section-numbers org-export-select-tags :select-tags :with-author org-export-with-author :with-broken-links org-export-with-broken-links :with-clocks org-export-with-clocks :with-creator org-export-with-creator :with-date org-export-with-date :with-drawers org-export-with-drawers :with-email org-export-with-email :with-emphasize org-export-with-emphasize :with-fixed-width org-export-with-fixed-width :with-footnotes org-export-with-footnotes :with-latex org-export-with-latex :with-planning org-export-with-planning :with-priority org-export-with-priority :with-properties org-export-with-properties :with-special-strings org-export-with-special-strings :with-sub-superscript org-export-with-sub-superscripts :with-tables org-export-with-tables :with-tags org-export-with-tags :with-tasks org-export-with-tasks org-export-with-timestamps :with-timestamps :with-title org-export-with-title :with-toc org-export-with-toc :with-todo-keywords org-export-with-todo-keywords

### ASCII specific properties

:ascii-global-margin org-ascii-global-margin :ascii-format-drawer-function org-ascii-format-drawer-function :ascii-format-inlinetask-function org-ascii-format-inlinetask-function org-ascii-headline-spacing :ascii-headline-spacing :ascii-indented-line-width org-ascii-indented-line-width :ascii-inlinetask-width org-ascii-inlinetask-width :ascii-inner-margin org-ascii-inner-margin :ascii-links-to-notes org-ascii-links-to-notes org-ascii-list-margin :ascii-list-margin :ascii-paragraph-spacing org-ascii-paragraph-spacing :ascii-quote-margin org-ascii-quote-margin org-ascii-table-keep-all-vertical-lines :ascii-table-keep-all-vertical-lines :ascii-table-use-ascii-art org-ascii-table-use-ascii-art :ascii-table-widen-columns org-ascii-table-widen-columns :ascii-text-width org-ascii-text-width :ascii-underline org-ascii-underline :ascii-verbatim-format org-ascii-verbatim-format

### Beamer specific properties

:beamer-theme
:beamer-column-view-format
:beamer-environments-extra
:beamer-frame-default-options
:beamer-outline-frame-options
:beamer-outline-frame-title
:beamer-subtitle-format

org-beamer-column-view-format
org-beamer-environments-extra
org-beamer-environments-extra
org-beamer-outline-frame-options
org-beamer-outline-frame-title
org-beamer-subtitle-format

### HTML specific properties

:html-allow-name-attribute-in-anchors org-html-allow-name-attribute-in-anchors :html-checkbox-type org-html-checkbox-type :html-container org-html-container-element :html-divs org-html-divs :html-doctype org-html-doctype :html-extension org-html-extension :html-footnote-format org-html-footnote-format :html-footnote-separator org-html-footnote-separator :html-footnotes-section org-html-footnotes-section :html-format-drawer-function org-html-format-drawer-function :html-format-headline-function org-html-format-headline-function :html-format-inlinetask-function  $\verb|org-html-format-inline task-function| \\$ :html-head-extra org-html-head-extra :html-head-include-default-style org-html-head-include-default-style :html-head-include-scripts org-html-head-include-scripts :html-head org-html-head org-html-home/up-format :html-home/up-format :html-html5-fancy org-html-html5-fancy

:html-indent org-html-indent :html-infojs-options org-html-infojs-options :html-infojs-template org-html-infojs-template :html-inline-image-rules org-html-inline-image-rules :html-inline-images org-html-inline-images :html-link-home org-html-link-home :html-link-org-files-as-html org-html-link-org-files-as-html org-html-link-up :html-link-up :html-link-use-abs-url org-html-link-use-abs-url :html-mathjax-options org-html-mathjax-options org-html-mathjax-template :html-mathjax-template :html-metadata-timestamp-format org-html-metadata-timestamp-format :html-postamble-format org-html-postamble-format :html-postamble org-html-postamble :html-preamble-format org-html-preamble-format org-html-preamble :html-preamble :html-table-align-individual-fields org-html-table-align-individual-fields :html-table-attributes org-html-table-default-attributes :html-table-caption-above org-html-table-caption-above :html-table-data-tags org-html-table-data-tags :html-table-header-tags org-html-table-header-tags org-html-table-row-tags :html-table-row-tags :html-table-use-header-tags-for-first-column org-html-table-use-header-tags-for-first-o org-html-tag-class-prefix :html-tag-class-prefix org-html-text-markup-alist :html-text-markup-alist :html-todo-kwd-class-prefix org-html-todo-kwd-class-prefix org-html-toplevel-hlevel :html-toplevel-hlevel :html-use-infojs org-html-use-infojs :html-validation-link org-html-validation-link :html-viewport org-html-viewport :html-xml-declaration org-html-xml-declaration

### LATEX specific properties

:latex-active-timestamp-format org-latex-active-timestamp-format :latex-caption-above org-latex-caption-above :latex-classes org-latex-classes :latex-class org-latex-default-class org-latex-compiler :latex-compiler :latex-default-figure-position org-latex-default-figure-position :latex-default-table-environment org-latex-default-table-environment :latex-default-table-mode org-latex-default-table-mode org-latex-diary-timestamp-format :latex-diary-timestamp-format :latex-footnote-defined-format org-latex-footnote-defined-format :latex-footnote-separator org-latex-footnote-separator :latex-format-drawer-function org-latex-format-drawer-function org-latex-format-headline-function :latex-format-headline-function

:latex-format-inlinetask-function org-latex-format-inlinetask-function :latex-hyperref-template org-latex-hyperref-template :latex-image-default-height org-latex-image-default-height org-latex-image-default-option :latex-image-default-option :latex-image-default-width org-latex-image-default-width :latex-images-centered org-latex-images-centered :latex-inactive-timestamp-format org-latex-inactive-timestamp-format :latex-inline-image-rules org-latex-inline-image-rules :latex-link-with-unknown-path-format org-latex-link-with-unknown-path-format :latex-listings-langs org-latex-listings-langs :latex-listings-options org-latex-listings-options :latex-listings org-latex-listings :latex-minted-langs org-latex-minted-langs org-latex-minted-options :latex-minted-options :latex-prefer-user-labels org-latex-prefer-user-labels :latex-subtitle-format org-latex-subtitle-format :latex-subtitle-separate org-latex-subtitle-separate :latex-table-scientific-notation org-latex-table-scientific-notation :latex-tables-booktabs org-latex-tables-booktabs :latex-tables-centered org-latex-tables-centered :latex-text-markup-alist org-latex-text-markup-alist org-latex-title-command :latex-title-command :latex-toc-command org-latex-toc-command

### Markdown specific properties

:md-footnote-format org-md-footnote-format
:md-footnotes-section org-md-footnotes-section
:md-headline-style org-md-headline-style

### ODT specific properties

:odt-content-template-file org-odt-content-template-file :odt-display-outline-level org-odt-display-outline-level :odt-fontify-srcblocks org-odt-fontify-srcblocks :odt-format-drawer-function org-odt-format-drawer-function :odt-format-headline-function org-odt-format-headline-function :odt-format-inlinetask-function org-odt-format-inlinetask-function :odt-inline-formula-rules org-odt-inline-formula-rules :odt-inline-image-rules org-odt-inline-image-rules org-odt-pixels-per-inch :odt-pixels-per-inch :odt-styles-file org-odt-styles-file :odt-table-styles org-odt-table-styles :odt-use-date-fields org-odt-use-date-fields

### Texinfo specific properties

:texinfo-active-timestamp-format org-texinfo-active-timestamp-format :texinfo-classes org-texinfo-classes

:texinfo-class org-texinfo-default-class :texinfo-table-default-markup org-texinfo-table-default-markup :texinfo-diary-timestamp-format org-texinfo-diary-timestamp-format org-texinfo-filename :texinfo-filename :texinfo-format-drawer-function org-texinfo-format-drawer-function :texinfo-format-headline-function org-texinfo-format-headline-function :texinfo-format-inlinetask-function org-texinfo-format-inlinetask-function :texinfo-inactive-timestamp-format org-texinfo-inactive-timestamp-format :texinfo-link-with-unknown-path-format org-texinfo-link-with-unknown-path-format :texinfo-node-description-column org-texinfo-node-description-column :texinfo-table-scientific-notation org-texinfo-table-scientific-notation org-texinfo-tables-verbatim :texinfo-tables-verbatim :texinfo-text-markup-alist org-texinfo-text-markup-alist

### 13.1.6 公開ファイル間のリンク

To create a link from one Org file to another, you would use something like '[[file:foo.org] [The foo]]' or simply 'file:foo.org' (see \(\)\underset undefined\) [External links], page \(\)\underset undefined\)). When published, this link becomes a link to foo.html. You can thus interlink the pages of your "org web" project and the links will work as expected when you publish them to HTML. If you also publish the Org source file and want to link to it, use an http: link instead of a file: link, because file: links are converted to link to the corresponding html file.

You may also link to related files, such as images. Provided you are careful with relative file names, and provided you have also configured Org to upload the related files, these links will work too. See Section 13.3.2 [Complex example], page 197, for an example of this usage.

Eventually, links between published documents can contain some search options (see \(\lambda\) undefined [Search options], page \(\lambda\) undefined), which will be resolved to the appropriate location in the linked file. For example, once published to HTML, the following links all point to a dedicated anchor in foo.html.

[[file:foo.org::\*heading]]
[[file:foo.org::#custom-id]]
[[file:foo.org::target]]

#### 13.1.7 サイトマップの生成

以下のプロパティはプロジェクトのファイルのマップの公開を制御するために使うことができます。

:auto-sitemap nilでないとき、org-publish-current-projectもしくは

org-publish-allの実行中にサイトマップを公開します。

:sitemap-filename Filename for output of sitemap. Defaults to sitemap.org

(which becomes sitemap.html).

:sitemap-title Title of sitemap page. Defaults to name of file.

:sitemap-format-entry

With this option one can tell how a site-map entry is formatted in the site-map. It is a function called with three arguments: the file or directory name relative to base directory of the project, the site-map style and the current project. It is expected to return a string. Default value turns file names into links and use document titles as descriptions. For specific formatting needs, one can use org-publish-find-date, org-publish-find-title and org-publish-find-property, to retrieve additional information about published documents.

:sitemap-function

Plug-in function to use for generation of the sitemap. It is called with two arguments: the title of the site-map and a representation of the files and directories involved in the project as a radio list (see Section A.6.4 [Radio lists], page 247). The latter can further be transformed using org-list-to-generic, org-list-to-subtree and alike. Default value generates a plain list of links to all files in the project.

:sitemap-sort-folders

Where folders should appear in the sitemap. Set this to first (default) or last to display folders first or last, respectively. When set to ignore, folders are ignored altogether. Any other value will mix files and folders. This variable has no effect when site-map style is tree.

:sitemap-sort-files

How the files are sorted in the site map. Set this to alphabetically (default), chronologically or anti-chronologically. chronologically sorts the files with older date first while anti-chronologically sorts the files with newer date first. alphabetically sorts the files alphabetically. The date of a file is retrieved with org-publish-find-date.

 $: \verb|sitemap-ignore-case||$ 

ソート時に大文字と小文字を区別するかどうかです。デフォルトでは nilです。

:sitemap-date-format

Format string for the format-time-string function that tells how a sitemap entry's date is to be formatted. This property bypasses org-publish-sitemap-date-format which defaults to %Y-%m-%d.

# 13.1.8 Generating an index

Org mode can generate an index across the files of a publishing project.

:makeindex

When non-nil, generate in index in the file theindex.org and publish it as theindex.html.

The file will be created when first publishing a project with the :makeindex set. The file only contains a statement #+INCLUDE: "theindex.inc". You can then build around this include statement by adding a title, style information, etc.

Index entries are specified with #+INDEX keyword. An entry that contains an exclamation mark will create a sub item.

\* Curriculum Vitae #+INDEX: CV

#+INDEX: Application!CV

# 13.2 Uploading files

For those people already utilizing third party sync tools such as rsync or unison, it might be preferable not to use the built in *remote* publishing facilities of Org mode which rely heavily on Tramp. Tramp, while very useful and powerful, tends not to be so efficient for multiple file transfer and has been known to cause problems under heavy usage.

Specialized synchronization utilities offer several advantages. In addition to timestamp comparison, they also do content and permissions/attribute checks. For this reason you might prefer to publish your web to a local directory (possibly even *in place* with your Org files) and then use unison or rsync to do the synchronization with the remote host.

Since Unison (for example) can be configured as to which files to transfer to a certain remote destination, it can greatly simplify the project publishing definition. Simply keep all files in the correct location, process your Org files with org-publish and let the synchronization tool do the rest. You do not need, in this scenario, to include attachments such as jpg, css or gif files in the project definition since the 3rd party tool syncs them.

Publishing to a local directory is also much faster than to a remote one, so that you can afford more easily to republish entire projects. If you set org-publish-use-timestamps-flag to nil, you gain the main benefit of re-including any changed external files such as source example files you might include with #+INCLUDE:. The timestamp mechanism in Org is not smart enough to detect if included files have been modified.

# 13.3 Sample configuration

私達は2つの設定の例を以下に示します。1つ目の設定はOrg-modeファイルのみのシンプルなプロジェクトの公開です。2つ目の設定は複数のコンポーネントを持つプロジェクトで、少し複雑な例です。

#### 13.3.1 例:シンプルな公開用の設定

This example publishes a set of Org files to the public\_html directory on the local machine.

#### 13.3.2 例:複雑な公開用の設定

This more complicated example publishes an entire website, including Org files converted to HTML, image files, Emacs Lisp source code, and style sheets. The publishing directory is remote and private files are excluded.

To ensure that links are preserved, care should be taken to replicate your directory structure on the web server, and to use relative file paths. For example, if your Org files are kept in ~/org and your publishable images in ~/images, you would link to an image with

```
file:../images/myimage.png
```

On the web server, the relative path to the image should be the same. You can accomplish this by setting up an "images" folder in the right place on the web server, and publishing images to it.

```
(setq org-publish-project-alist
      '(("orgfiles"
          :base-directory "~/org/"
          :base-extension "org"
          :publishing-directory "/ssh:user@host:~/html/notebook/"
          :publishing-function org-html-publish-to-html
          :exclude "PrivatePage.org" ;; regexp
          :headline-levels 3
          :section-numbers nil
          :with-toc nil
          :html-head "<link rel=\"stylesheet\"
                  href=\"../other/mystyle.css\" type=\"text/css\"/>"
          :html-preamble t)
         ("images"
          :base-directory "~/images/"
          :base-extension "jpg\\|gif\\|png"
          :publishing-directory "/ssh:user@host:~/html/images/"
          :publishing-function org-publish-attachment)
         ("other"
          :base-directory "~/other/"
          :base-extension "css\\|el"
          :publishing-directory "/ssh:user@host:~/html/other/"
          :publishing-function org-publish-attachment)
         ("website" :components ("orgfiles" "images" "other"))))
```

# 13.4 Triggering publication

```
一度適切に設定すると、Org-mode は以下のコマンドを使うことで公開することができます。

C-c C-e P x org-publish プロンプトでプロジェクトを指定し、プロジェクトの全てのファイルを公開します。

C-c C-e P p org-publish-current-project 現在のファイルを含むプロジェクトを公開します。
```

C-c C-e P f 現在のファイルのみ公開します。 org-publish-current-file

C-c C-e P a

org-publish-all

全てのプロジェクトを公開します。

Org uses timestamps to track when a file has changed. The above functions normally only publish changed files. You can override this and force publishing of all files by giving a prefix argument to any of the commands above, or by customizing the variable org-publish-use-timestamps-flag. This may be necessary in particular if files include other files via #+SETUPFILE: or #+INCLUDE:.

# **14** ソースコードとの連携

Source code here refers to any code typed in Org mode documents. Org can manage source code in any Org file once such code is tagged with begin and end markers. Working with source code begins with tagging source code blocks. Tagged 'src' code blocks are not restricted to the preamble or the end of an Org document; they can go anywhere—with a few exceptions, such as not inside comments and fixed width areas. Here's a sample 'src' code block in emacs-lisp:

```
#+BEGIN_SRC emacs-lisp
  (defun org-xor (a b)
    "Exclusive or."
    (if a (not b) b))
#+END_SRC
```

Org can take the code in the block between the #+BEGIN\_SRC and #+END\_SRC tags, and format, compile, execute, and show the results. Org can simplify many housekeeping tasks essential to modern code maintenance. That's why these blocks in Org mode literature are sometimes referred to as 'live code' blocks (as compared to the static text and documentation around it). Users can control how 'live' they want each block by tweaking the headers for compiling, execution, extraction.

Org's 'src' code block type is one of many block types, such as quote, export, verse, latex, example, and verbatim. This section pertains to src code blocks between #+BEGIN\_SRC and #+END\_SRC

For editing 'src' code blocks, Org provides native Emacs major-modes. That leverages the latest Emacs features for that source code language mode.

For exporting, Org can then extract 'src' code blocks into compilable source files (in a conversion process known as *tangling* in literate programming terminology).

For publishing, Org's back-ends can handle the 'src' code blocks and the text for output to a variety of formats with native syntax highlighting.

For executing the source code in the 'src' code blocks, Org provides facilities that glue the tasks of compiling, collecting the results of the execution, and inserting them back to the Org file. Besides text output, results may include links to other data types that Emacs can handle: audio, video, and graphics.

An important feature of Org's execution of the 'src' code blocks is passing variables, functions, and results between 'src' blocks. Such interoperability uses a common syntax even if these 'src' blocks are in different source code languages. The integration extends to linking the debugger's error messages to the line in the 'src' code block in the Org file. That should partly explain why this functionality by the original contributors, Eric Schulte and Dan Davison, was called 'Org Babel'.

In literate programming, the main appeal is code and documentation co-existing in one file. Org mode takes this several steps further. First by enabling execution, and then by inserting results of that execution back into the Org file. Along the way, Org provides extensive formatting features, including handling tables. Org handles multiple source code languages in one file, and provides a common syntax for passing variables, functions, and results between 'src' code blocks.

Org mode fulfills the promise of easy verification and maintenance of publishing reproducible research by keeping all these in the same file: text, data, code, configuration settings of the execution environment, the results of the execution, and associated narratives, claims, references, and internal and external links.

Details of Org's facilities for working with source code are shown next.

### 14.1 Structure of code blocks

Org offers two ways to structure source code in Org documents: in a 'src' block, and directly inline. Both specifications are shown below.

A 'src' block conforms to this structure:

Org mode's templates system (see Section 15.2 [Easy templates], page 229) speeds up creating 'src' code blocks with just three keystrokes. Do not be put-off by having to remember the source block syntax. Org also works with other completion systems in Emacs, some of which predate Org and have custom domain-specific languages for defining templates. Regular use of templates reduces errors, increases accuracy, and maintains consistency.

An inline code block conforms to this structure:

```
src_<language>{<body>}
もしくは
src_<language>[<header arguments>]{<body>}
```

#### #+NAME: <name>

Optional. Names the 'src' block so it can be called, like a function, from other 'src' blocks or inline blocks to evaluate or to capture the results. Code from other blocks, other files, and from table formulas (see Section 3.5 [The spreadsheet], page 24) can use the name to reference a 'src' block. This naming serves the same purpose as naming Org tables. Org mode requires unique names. For duplicate names, Org mode's behavior is undefined.

```
#+BEGIN_SRC
#+END_SRC
```

Mandatory. They mark the start and end of a block that Org requires. The #+BEGIN\_SRC line takes additional arguments, as described next.

### <language>

Mandatory for live code blocks. It is the identifier of the source code language in the block. See Section 14.7 [Languages], page 205, for identifiers of supported languages.

#### <switches>

Optional. Switches provide finer control of the code execution, export, and format (see the discussion of switches in  $\langle undefined \rangle$  [Literal examples], page  $\langle undefined \rangle$ )

### <header arguments>

Optional. Heading arguments control many aspects of evaluation, export and tangling of code blocks (see Section 14.8 [Header arguments], page 206). Using Org's properties feature, header arguments can be selectively applied to the entire buffer or specific sub-trees of the Org document.

source code, ヘッダー引数

**Source** code in the dialect of the specified language identifier.

# 14.2 Editing source code

C-c ' for editing the current code block. It opens a new major-mode edit buffer containing the body of the 'src' code block, ready for any edits. C-c ' again to close the buffer and return to the Org buffer.

C-x C-s saves the buffer and updates the contents of the Org buffer.

Set org-edit-src-auto-save-idle-delay to save the base buffer after a certain idle delay time.

Set org-edit-src-turn-on-auto-save to auto-save this buffer into a separate file using auto-save-mode.

C-c ' to close the major-mode buffer and return back to the Org buffer.

While editing the source code in the major-mode, the org-src-mode minor mode remains active. It provides these customization variables as described below. For even more variables, look in the customization group org-edit-structure.

#### org-src-lang-modes

If an Emacs major-mode named <lamp>-mode exists, where <lamp> is the language identifier from code block's header line, then the edit buffer uses that major-mode. Use this variable to arbitrarily map language identifiers to major modes.

#### org-src-window-setup

For specifying Emacs window arrangement when the new edit buffer is created.

### org-src-preserve-indentation

Default is nil. Source code is indented. This indentation applies during export or tangling, and depending on the context, may alter leading spaces and tabs. When non-nil, source code is aligned with the leftmost column. No lines are modified during export or tangling, which is very useful for white-space sensitive languages, such as Python.

### org-src-ask-before-returning-to-edit-buffer

When nil, Org returns to the edit buffer without further prompts. The default prompts for a confirmation.

Set org-src-fontify-natively to non-nil to turn on native code fontification in the Org buffer. Fontification of 'src' code blocks can give visual separation of text and code on the display page. To further customize the appearance of org-block for specific languages, customize org-src-block-faces. The following example shades the background of regular blocks, and colors source blocks only for Python and Emacs-Lisp languages.

# 14.3 Exporting code blocks

Org can flexibly export just the *code* from the code blocks, just the *results* of evaluation of the code block, *both* the code and the results of the code block evaluation, or *none*. Org defaults to exporting *code* for most languages. For some languages, such as **ditaa**, Org defaults to *results*. To export just the body of code blocks, see  $\langle$  undefined $\rangle$  [Literal examples], page  $\langle$  undefined $\rangle$ . To selectively export sub-trees of an Org document, see  $\langle$  undefined $\rangle$  [Exporting], page  $\langle$  undefined $\rangle$ .

The :exports header arguments control exporting code blocks only and not inline code:

```
ヘッダー引数:
```

#### :exports code

This is the default for most languages where the body of the code block is exported. See (undefined) [Literal examples], page (undefined) for more.

#### :exports results

On export, Org includes only the results and not the code block. After each evaluation, Org inserts the results after the end of code block in the Org buffer. By default, Org replaces any previous results. Org can also append results.

#### :exports both

Org exports both the code block and the results.

#### :exports none

Org does not export the code block nor the results.

To stop Org from evaluating code blocks to speed exports, use the header argument :eval never-export (see Section 14.8.2.25 [eval], page 223). To stop Org from evaluating code blocks for greater security, set the org-export-use-babel variable to nil, but understand that header arguments will have no effect.

Turning off evaluation comes in handy when batch processing. For example, markup languages for wikis, which have a high risk of untrusted code. Stopping code block evaluation also stops evaluation of all header arguments of the code block. This may not be desirable in some circumstances. So during export, to allow evaluation of just the header arguments but not any code evaluation in the source block, set :eval never-export (see Section 14.8.2.25 [eval], page 223).

Org never evaluates code blocks in commented sub-trees when exporting (see  $\langle \text{undefined} \rangle$  [Comment lines], page  $\langle \text{undefined} \rangle$ ). On the other hand, Org does evaluate code blocks in sub-trees excluded from export (see  $\langle \text{undefined} \rangle$  [Export settings], page  $\langle \text{undefined} \rangle$ ).

# 14.4 Extracting source code

Extracting source code from code blocks is a basic task in literate programming. Org has features to make this easy. In literate programming parlance, documents on creation are woven with code and documentation, and on export, the code is tangled for execution by a computer. Org facilitates weaving and tangling for producing, maintaining, sharing, and exporting literate programming documents. Org provides extensive customization options for extracting source code.

When Org tangles 'src' code blocks, it expands, merges, and transforms them. Then Org recomposes them into one or more separate files, as configured through the options. During this *tangling* process, Org expands variables in the source code, and resolves any Noweb style references (see Section 14.10 [Noweb reference syntax], page 226).

# Header arguments

:tangle no

By default, Org does not tangle the 'src' code block on export.

:tangle yes

Org extracts the contents of the code block for the tangled output. By default, the output file name is the same as the Org file but with a file extension derived from the language identifier of the 'src' code block.

:tangle filename

Override the default file name with this one for the tangled output.

関数

org-babel-tangle

現在のファイルを tangle します。キーバインドは C-c C-v tです。

With prefix argument only tangle the current 'src' code block.

org-babel-tangle-file

tangle するファイルを選びます。キーバインドは C-c C-v fです。

フック

org-babel-post-tangle-hook

This hook runs from within code tangled by org-babel-tangle, making it suitable for post-processing, compilation, and evaluation of code in the tangled files.

### Jumping between code and Org

Debuggers normally link errors and messages back to the source code. But for tangled files, we want to link back to the Org file, not to the tangled source file. To make this extra jump, Org uses org-babel-tangle-jump-to-org function with two additional source code block header arguments: One, set padline (see Section 14.8.2.12 [padline], page 216) to true (the default setting). Two, set comments (see Section 14.8.2.11 [comments], page 216) to link, which makes Org insert links to the Org file.

# 14.5 Evaluating code blocks

A note about security: With code evaluation comes the risk of harm. Org safeguards by prompting for user's permission before executing any code in the source block. To customize this safeguard (or disable it) see Section 15.4 [Code evaluation security], page 230.

Org captures the results of the 'src' code block evaluation and inserts them in the Org file, right after the 'src' code block. The insertion point is after a newline and the #+RESULTS label. Org creates the #+RESULTS label if one is not already there.

By default, Org enables only emacs-lisp 'src' code blocks for execution. See Section 14.7 [Languages], page 205 for identifiers to enable other languages.

Org provides many ways to execute 'src' code blocks. *C-c C-c* or *C-c C-v* e with the point on a 'src' code block¹ calls the org-babel-execute-src-block function, which executes the code in the block, collects the results, and inserts them in the buffer.

By calling a named code block<sup>2</sup> from an Org mode buffer or a table. Org can call the named 'src' code blocks from the current Org mode buffer or from the "Library of Babel" (see Section 14.6 [Library of Babel], page 205). Whether inline syntax or the #+CALL: syntax is used, the result is wrapped based on the variable org-babel-inline-result-wrap, which by default is set to "=%s=" to produce verbatim text suitable for markup.

The syntax for #+CALL: is

```
#+CALL: <name>(<arguments>)
```

#+CALL: <name>[<inside header arguments>] (<arguments>) <end header arguments>

... call\_<name>[<inside header arguments>] (<arguments>) [<end header arguments>] ...

The syntax for inline named code block is

```
... call_<name>(<arguments>) ...
```

<name> This is the name of the code block to be evaluated (see Section 14.1 [Structure of code blocks], page 200).

#### <arguments>

Org passes arguments to the code block using standard function call syntax. For example, a #+CALL: line that passes '4' to a code block named double, which declares the header argument :var n=2, would be written as #+CALL: double(n=4). Note how this function call syntax is different from the header argument syntax.

#### <inside header arguments>

Org passes inside header arguments to the named 'src' code block using the header argument syntax. Inside header arguments apply to code block evaluation. For example, [:results output] collects results printed to STDOUT during code execution of that block. Note how this header argument syntax is different from the function call syntax.

<sup>&</sup>lt;sup>1</sup> The option org-babel-no-eval-on-ctrl-c-ctrl-c can be used to remove code evaluation from the *C-c C-c* key binding.

<sup>&</sup>lt;sup>2</sup> Actually, the constructs call\_<name>() and src\_<lang>{} are not evaluated when they appear in a keyword line (i.e. lines starting with #+KEYWORD:, see Section 15.6 [In-buffer settings], page 231).

### <end header arguments>

End header arguments affect the results returned by the code block. For example, :results html wraps the results in a BEGIN\_EXPORT html block before inserting the results in the Org buffer.

For more examples of header arguments for #+CALL: lines, see [Arguments in function calls], page 208.

# 14.6 Library of Babel

The "Library of Babel" is a collection of code blocks. Like a function library, these code blocks can be called from other Org files. A collection of useful code blocks is available on Worg (https://orgmode.org/worg/library-of-babel.html). For remote code block evaluation syntax, see Section 14.5 [Evaluating code blocks], page 204.

For any user to add code to the library, first save the code in regular 'src' code blocks of an Org file, and then load the Org file with org-babel-lob-ingest, which is bound to C-c C-v i.

# 14.7 Languages

Org supports the following languages for the 'src' code blocks:

Language	Identifier	Language	Identifier
Asymptote	asymptote	Awk	awk
$\mathbf{C}$	C	C++	C++
Clojure	clojure	CSS	css
D	d	ditaa	ditaa
Graphviz	dot	Emacs Calc	calc
Emacs Lisp	emacs-lisp	Fortran	fortran
gnuplot	gnuplot	Haskell	haskell
Java	java	Javascript	js
LaTeX	latex	Ledger	ledger
Lisp	lisp	Lilypond	lilypond
Lua	lua	MATLAB	matlab
Mscgen	mscgen	Objective Caml	ocaml
Octave	octave	Org mode	org
Oz	OZ	Perl	perl
Plantuml	plantuml	Processing.js	processing
Python	python	$\mathbf{R}$	R
Ruby	ruby	Sass	sass
Scheme	scheme	GNU Screen	screen
Sed	sed	shell	$\operatorname{sh}$
$\operatorname{SQL}$	sql	SQLite	sqlite
Vala	vala		

Additional documentation for some languages are at https://orgmode.org/worg/org-contrib/babel/languages.html.

By default, only emacs-lisp is enabled for evaluation. To enable or disable other languages, customize the org-babel-load-languages variable either through the Emacs customization interface, or by adding code to the init file as shown next:

In this example, evaluation is disabled for emacs-lisp, and enabled for R.

```
(org-babel-do-load-languages
'org-babel-load-languages
'((emacs-lisp . nil)
          (R . t)))
```

Note that this is not the only way to enable a language. Org also enables languages when loaded with require statement. For example, the following enables execution of clojure code blocks:

```
(require 'ob-clojure)
```

# 14.8 Header arguments

Details of configuring header arguments are shown here.

# 14.8.1 Using header arguments

Since header arguments can be set in several ways, Org prioritizes them in case of overlaps or conflicts by giving local settings a higher priority. Header values in function calls, for example, override header values from global defaults.

# System-wide header arguments

System-wide values of header arguments can be specified by adapting the org-babel-default-header-args variable:

例えば、次の例ではヘッダー引数: nowebの初期値を yesと設定できます。この設定は、ソースコードブロックを評価する時にデフォルトの設定として: nowebの参照記号を展開します。

```
(setq org-babel-default-header-args
          (cons '(:noweb . "yes")
                (assq-delete-all :noweb org-babel-default-header-args)))
```

# Language-specific header arguments

Each language can have separate default header arguments by customizing the variable org-babel-default-header-args:<lamp>, where <lamp> is the name of the language. For details, see the language-specific online documentation at https://orgmode.org/worg/org-contrib/babel/.

# Header arguments in Org mode properties

For header arguments applicable to the buffer, use #+PROPERTY: lines anywhere in the Org mode file (see \(\lambda\) [Property syntax], page \(\lambda\) undefined\(\rangle\).

The following example sets only for 'R' code blocks to session, making all the 'R' code blocks execute in the same session. Setting results to silent ignores the results of executions for all blocks, not just 'R' code blocks; no results inserted for any block.

```
#+PROPERTY: header-args:R :session *R*
#+PROPERTY: header-args :results silent
```

Header arguments set through Org's property drawers (see (undefined) [Property syntax], page (undefined)) apply at the sub-tree level on down. Since these property drawers can appear anywhere in the file hierarchy, Org uses outermost call or source block to resolve the values. Org ignores org-use-property-inheritance setting.

In this example, :cache defaults to yes for all code blocks in the sub-tree starting with 'sample header'.

```
* sample header
:PROPERTIES:
:header-args: :cache yes
:END:
```

Properties defined through org-set-property function, bound to C-c C-x p, apply to all active languages. They override properties set in org-babel-default-header-args.

# Language-specific mode properties

Language-specific header arguments are also read from properties header-args:<lang> where <lang> is the language identifier. For example,

would force separate sessions for clojure blocks in Heading and Subheading, but use the same session for all 'R' blocks. Blocks in Subheading inherit settings from Heading.

# Code block specific header arguments

Header arguments are most commonly set at the 'src' code block level, on the #+BEGIN\_SRC line. Arguments set at this level take precedence over those set in the org-babel-default-header-args variable, and also those set as header properties.

In the following example, setting results to silent makes it ignore results of the code execution. Setting :exports to code exports only the body of the 'src' code block to HTML or IATEX.:

```
#+NAME: factorial
#+BEGIN_SRC haskell :results silent :exports code :var n=0
fac 0 = 1
fac n = n * fac (n-1)
#+END_SRC
```

The same header arguments in an inline 'src' code block:

```
src_haskell[:exports both]{fac 5}
```

Code block header arguments can span multiple lines using #+HEADER: on each line. Note that Org currently accepts the plural spelling of #+HEADER: only as a convenience for backward-compatibility. It may be removed at some point.

Multi-line header arguments on an unnamed 'src' code block:

```
#+HEADER: :var data1=1
#+BEGIN_SRC emacs-lisp :var data2=2
        (message "data1:%S, data2:%S" data1 data2)
#+END_SRC

#+RESULTS:
        : data1:1, data2:2

Multi-line header arguments on a named 'src' code block:
        #+NAME: named-block
        #+HEADER: :var data=2
        #+BEGIN_SRC emacs-lisp
        (message "data:%S" data)
        #+END_SRC

#+RESULTS: named-block
        : data:2
```

### Arguments in function calls

Header arguments in function calls are the most specific and override all other settings in case of an overlap. They get the highest priority. Two #+CALL: examples are shown below. For the complete syntax of #+CALL: lines, see Section 14.5 [Evaluating code blocks], page 204.

In this example, :exports results header argument is applied to the evaluation of the #+CALL: line.

```
#+CALL: factorial(n=5) :exports results
```

In this example, :session special header argument is applied to the evaluation of factorial code block.

```
#+CALL: factorial[:session special](n=5)
```

# 14.8.2 Specific header arguments

Org comes with many header arguments common to all languages. New header arguments are added for specific languages as they become available for use in 'src' code blocks. A header argument is specified with an initial colon followed by the argument's name in lowercase. Common header arguments are:

For language-specific header arguments, see Section 14.7 [Languages], page 205.

### 14.8.2.1 :var

Use :var for passing arguments to 'src' code blocks. The specifics of variables in 'src' code blocks vary by the source language and are covered in the language-specific documentation. The syntax for :var, however, is the same for all languages. This includes declaring a variable, and assigning a default value.

Arguments can take values as literals, or as references, or even as Emacs Lisp code (see Section 14.8.2.1 [var], page 209). References are names from the Org file from the lines #+NAME: or #+RESULTS:. References can also refer to tables, lists, #+BEGIN\_EXAMPLE blocks, other types of 'src' code blocks, or the results of execution of 'src' code blocks.

For better performance, Org can cache results of evaluations. But caching comes with severe limitations (see Section 14.8.2.18 [cache], page 219).

Argument values are indexed like arrays (see Section 14.8.2.1 [var], page 209).

The following syntax is used to pass arguments to 'src' code blocks using the :var header argument.

```
:var name=assign
```

The assign is a literal value, such as a string ""string", a number '9', a reference to a table, a list, a literal example, another code block (with or without arguments), or the results from evaluating a code block.

Here are examples of passing values by reference:

table an Org mode table named with either a #+NAME: line

```
#+NAME: example-table
| 1 |
| 2 |
| 3 |
| 4 |

#+NAME: table-length
#+BEGIN_SRC emacs-lisp :var table=example-table
(length table)
#+END_SRC

#+RESULTS: table-length
: 4
```

list

a simple list named with a #+NAME: line. Note that only the top level list items are passed along. Nested list items are ignored.

```
#+NAME: example-list
  - simple
  - not
  - nested
  - list

#+BEGIN_SRC emacs-lisp :var x=example-list
  (print x)
#+END_SRC
```

```
#+RESULTS:
                | simple | list |
ヘッダー引数がないコードブロック
          a code block name (from the example above), as assigned by #+NAME:, optionally
          followed by parentheses
                #+BEGIN_SRC emacs-lisp :var length=table-length()
                (* 2 length)
                #+END_SRC
               #+RESULTS:
                : 8
ヘッダー引数があるコードブロック
          a 'src' code block name, as assigned by #+NAME:, followed by parentheses and
          optional arguments passed within the parentheses following the 'src' code block
          name using standard function call syntax
                #+NAME: double
               #+BEGIN_SRC emacs-lisp :var input=8
                (* 2 input)
                #+END_SRC
                #+RESULTS: double
                : 16
               #+NAME: squared
               #+BEGIN_SRC emacs-lisp :var input=double(input=2)
                (* input input)
                #+END_SRC
               #+RESULTS: squared
                : 4
リテラルの例
          a literal example block named with a #+NAME: line
                #+NAME: literal-example
               #+BEGIN_EXAMPLE
               A literal example
                on two lines
                #+END_EXAMPLE
               #+NAME: read-literal-example
               #+BEGIN_SRC emacs-lisp :var x=literal-example
                  (concatenate 'string x " for you.")
                #+END_SRC
               #+RESULTS: read-literal-example
```

```
: A literal example
: on two lines for you.
```

### インデックスを用いた変数の指定

Indexing variable values enables referencing portions of a variable. Indexes are 0 based with negative values counting backwards from the end. If an index is separated by ,s then each subsequent section will index as the next dimension. Note that this indexing occurs before other table-related header arguments are applied, such as :hlines, :colnames and :rownames. The following example assigns the last cell of the first row the table example-table to the variable data:

```
#+NAME: example-table
| 1 | a |
| 2 | b |
| 3 | c |
| 4 | d |
#+BEGIN_SRC emacs-lisp :var data=example-table[0,-1]
  data
#+END_SRC
#+RESULTS:
```

:で区切られた2つの整数を使うことで、変数の範囲を参照できます。この場合、包括的な範囲を 参照します。例えば、以下では example-tableの中央3行を dataに割り当てています。

```
| 1 | a |
| 2 | b |
13 l c l
| 4 | d |
| 5 | 3 |
#+BEGIN_SRC emacs-lisp :var data=example-table[1:3]
 data
#+END_SRC
#+RESULTS:
| 2 | b |
| 3 | c |
| 4 | d |
```

To pick the entire range, use an empty index, or the single character \*. 0:-1 does the same thing. Example below shows how to reference the first column only.

```
#+NAME: example-table
| 1 | a |
1 2 | b |
| 3 | c |
```

#+NAME: example-table

```
| 4 | d |
#+BEGIN_SRC emacs-lisp :var data=example-table[,0]
   data
#+END_SRC
#+RESULTS:
| 1 | 2 | 3 | 4 |
```

Index referencing can be used for tables and code blocks. Index referencing can handle any number of dimensions. Commas delimit multiple dimensions, as shown below.

```
#+NAME: 3D
#+BEGIN_SRC emacs-lisp
  '(((1 2 3) (4 5 6) (7 8 9))
      ((10 11 12) (13 14 15) (16 17 18))
      ((19 20 21) (22 23 24) (25 26 27)))
#+END_SRC
#+BEGIN_SRC emacs-lisp :var data=3D[1,,1]
    data
#+END_SRC
#+RESULTS:
  | 11 | 14 | 17 |
```

# Emacs Lisp による変数の評価

Emacs lisp code can set the values for variables. To differentiate a value from lisp code, Org interprets any value starting with (, [, ' or ` as Emacs Lisp code. The result of evaluating that code is then assigned to the value of that variable. The following example shows how to reliably query and pass file name of the Org mode buffer to a code block using headers. We need reliability here because the file's name could change once the code in the block starts executing.

```
#+BEGIN_SRC sh :var filename=(buffer-file-name) :exports both
  wc -w $filename
#+END_SRC
```

Note that values read from tables and lists will not be mistakenly evaluated as Emacs Lisp code, as illustrated in the following example.

#### 14.8.2.2 :results

There are four classes of :results header arguments. Each 'src' code block can take only one option per class.

- collection for how the results should be collected from the 'src' code block
- **type** for which type of result the code block will return; affects how Org processes and inserts results in the Org buffer
- format for the result; affects how Org processes and inserts results in the Org buffer
- handling for processing results after evaluation of the 'src' code block

#### Collection

Collection options specify the results. Choose one of the options; they are mutually exclusive.

- value Default. Functional mode. Result is the value returned by the last statement in the 'src' code block. Languages like Python may require an explicit return statement in the 'src' code block. Usage example: :results value.
- output Scripting mode. Result is collected from STDOUT during execution of the code in the 'src' code block. Usage example: :results output.

# Type

Type tells what result types to expect from the execution of the code block. Choose one of the options; they are mutually exclusive. The default behavior is to automatically determine the result type.

- table, vector 結果は、Org Mode のテーブルとして解釈されます。単一の値が返された場合、 結果は 1 行 1 列のテーブルへと変換されます。例えば、:results value tableのように記述 します。
- list Interpret the results as an Org list. If the result is a single value, create a list of one element.
- scalar, verbatim Interpret literally and insert as quoted text. Do not create a table. Usage example: :results value verbatim.
- file Interpret as path to a file. Inserts a link to the file. Usage example: :results value file.

### **Format**

Format pertains to the type of the result returned by the 'src' code block. Choose one of the options; they are mutually exclusive. The default follows from the type specified above.

- raw Interpreted as raw Org mode. Inserted directly into the buffer. Aligned if it is a table. Usage example: :results value raw.
- org Results enclosed in a BEGIN\_SRC org block. For comma-escape, either TAB in the block, or export the file. Usage example: :results value org.
- html Results enclosed in a BEGIN\_EXPORT html block. Usage example: :results value html.
- latex Results enclosed in a BEGIN\_EXPORT latex block. Usage example: :results value latex.

- code Result enclosed in a 'src' code block. Useful for parsing. Usage example: :results value code.
- pp Result converted to pretty-print source code. Enclosed in a 'src' code block. Languages supported: Emacs Lisp, Python, and Ruby. Usage example: :results value pp.
- drawer Result wrapped in a RESULTS drawer. Useful for containing raw or org results for later scripting and automated processing. Usage example: :results value drawer.

# Handling

Handling options after collecting the results.

- silent Do not insert results in the Org mode buffer, but echo them in the minibuffer. Usage example: :results output silent.
- replace Default. Insert results in the Org buffer. Remove previous results. Usage example: :results output replace.
- append Append results to the Org buffer. Latest results are at the bottom. Does not remove previous results. Usage example: :results output append.
- prepend Prepend results to the Org buffer. Latest results are at the top. Does not remove previous results. Usage example: :results output prepend.

### 14.8.2.3 :file

An external :file that saves the results of execution of the code block. The :file is either a file name or two strings, where the first is the file name and the second is the description. A link to the file is inserted. It uses an Org mode style [[file:]] link (see \( \)undefined\\) [Link format], page \( \)undefined\\)). Some languages, such as 'R', 'dot', 'ditaa', and 'gnuplot', automatically wrap the source code in additional boilerplate code. Such code wrapping helps recreate the output, especially graphics output, by executing just the :file contents.

### 14.8.2.4 :file-desc

A description of the results file. Org uses this description for the link (see \(\)\underset undefined\\) [Link format], page \(\)\underset undefined\\)) it inserts in the Org file. If the :file-desc has no value, Org will use file name for both the "link" and the "description" portion of the Org mode link.

#### 14.8.2.5 :file-ext

File name extension for the output file. Org generates the file's complete name, and extension by combining :file-ext, #+NAME: of the source block, and the Section 14.8.2.6 [output-dir], page 214 header argument. To override this auto generated file name, use the :file header argument.

# 14.8.2.6 :output-dir

Specifies the :output-dir for the results file. Org accepts an absolute path (beginning with /) or a relative directory (without /). The value can be combined with #+NAME: of the source block and Section 14.8.2.3 [file], page 214 or Section 14.8.2.5 [file-ext], page 214 header arguments.

### 14.8.2.7 :dirとリモートでの実行

While the :file header argument can be used to specify the path to the output file, :dir specifies the default directory during 'src' code block execution. If it is absent, then the directory associated with the current buffer is used. In other words, supplying :dir path temporarily has the same effect as changing the current directory with M-x cd path RET, and then not supplying :dir. Under the surface, :dir simply sets the value of the Emacs variable default-directory.

When using :dir, relative paths (for example, :file myfile.jpg or :file results/myfile.jpg) become relative to the default directory.

For example, to save the plot file in the 'Work' folder of the home directory (notice tilde is expanded):

```
#+BEGIN_SRC R :file myplot.png :dir ~/Work
matplot(matrix(rnorm(100), 10), type="l")
#+END_SRC
```

```
リモートでの実行
```

To evaluate the 'src' code block on a remote machine, supply a remote s directory name using 'Tramp' syntax. For example:

```
#+BEGIN_SRC R :file plot.png :dir /scp:dand@yakuba.princeton.edu:
plot(1:10, main=system("hostname", intern=TRUE))
#+END_SRC
```

Org first captures the text results as usual for insertion in the Org file. Then Org also inserts a link to the remote file, thanks to Emacs 'Tramp'. Org constructs the remote path to the file name from :dir and default-directory, as illustrated here:

[[file:/scp:dand@yakuba.princeton.edu:/home/dand/plot.png][plot.png]]

### Some more warnings

- When :dir is used with :session, Org sets the starting directory for a new session. But Org will not alter the directory of an already existing session.
- Do not use :dir with :exports results or with :exports both to avoid Org inserting incorrect links to remote files. That is because Org does not expand default directory to avoid some underlying portability issues.

## 14.8.2.8 :exports

The :exports header argument is to specify if that part of the Org file is exported to, say, HTML or LATEX formats. Note that :exports affects only 'src' code blocks and not inline code.

- code The default. The body of code is included into the exported file. Example: :exports code.
- results The results of evaluation of the code is included in the exported file. Example: :exports results.
- both Both the code and results of evaluation are included in the exported file. Example: :exports both.

• none Neither the code nor the results of evaluation is included in the exported file. Whether the code is evaluated at all depends on other options. Example: :exports none.

# 14.8.2.9 :tangle

The :tangle header argument specifies if the 'src' code block is exported to source file(s).

- tangle Export the 'src' code block to source file. The file name for the source file is derived from the name of the Org file, and the file extension is derived from the source code language identifier. Example: :tangle yes.
- no The default. Do not extract the code a source code file. Example: :tangle no.
- other Export the 'src' code block to source file whose file name is derived from any string passed to the :tangle header argument. Org derives the file name as being relative to the directory of the Org file's location. Example: :tangle path.

# 14.8.2.10 :mkdirp

The :mkdirp header argument creates parent directories for tangled files if the directory does not exist. yes enables directory creation and no inhibits directory creation.

### 14.8.2.11 :comments

Controls inserting comments into tangled files. These are above and beyond whatever comments may already exist in the 'src' code block.

- no The default. Do not insert any extra comments during tangling.
- link Wrap the 'src' code block in comments. Include links pointing back to the place in the Org file from where the code was tangled.
- yes Kept for backward compatibility; same as "link".
- org Nearest headline text from Org file is inserted as comment. The exact text that is inserted is picked from the leading context of the source block.
- both Includes both "link" and "org" comment options.
- noweb Includes "link" comment option, expands noweb references, and wraps them in link comments inside the body of the 'src' code block.

# 14.8.2.12 :padline

Control insertion of newlines to pad 'src' code blocks in the tangled file.

- yes Default. Insert a newline before and after each 'src' code block in the tangled file.
- no Do not insert newlines to pad the tangled 'src' code blocks.

# 14.8.2.13 :no-expand

By default Org expands 'src' code blocks during tangling. The :no-expand header argument turns off such expansions. Note that one side-effect of expansion by org-babel-expand-src-block also assigns values to :var (see Section 14.8.2.1 [var], page 209) variables. Expansions also replace Noweb references with their targets (see Section 14.10 [Noweb reference syntax], page 226). Some of these expansions may cause premature assignment, hence this option. This option makes a difference only for tangling. It has no effect when exporting since 'src' code blocks for execution have to be expanded anyway.

#### 14.8.2.14 :session

The :session header argument is for running multiple source code blocks under one session. Org runs 'src' code blocks with the same session name in the same interpreter process.

- none Default. Each 'src' code block gets a new interpreter process to execute. The process terminates once the block is evaluated.
- other Any string besides none turns that string into the name of that session. For example, :session mysession names it 'mysession'. If :session has no argument, then the session name is derived from the source language identifier. Subsequent blocks with the same source code language use the same session. Depending on the language, state variables, code from other blocks, and the overall interpreted environment may be shared. Some interpreted languages support concurrent sessions when subsequent source code language blocks change session names.

### 14.8.2.15 :noweb

The :noweb header argument controls expansion of Noweb syntax references (see Section 14.10 [Noweb reference syntax], page 226). Expansions occur when source code blocks are evaluated, tangled, or exported.

- no Default. No expansion of Noweb syntax references in the body of the code when evaluating, tangling, or exporting.
- yes Expansion of Noweb syntax references in the body of the 'src' code block when evaluating, tangling, or exporting.
- tangle Expansion of Noweb syntax references in the body of the 'src' code block when tangling. No expansion when evaluating or exporting.
- no-export Expansion of Noweb syntax references in the body of the 'src' code block when evaluating or tangling. No expansion when exporting.
- strip-export Expansion of Noweb syntax references in the body of the 'src' code block when expanding prior to evaluating or tangling. Removes Noweb syntax references when exporting.
- eval Expansion of Noweb syntax references in the body of the 'src' code block only before evaluating.

### Noweb の行頭部分

Noweb insertions now honor prefix characters that appear before the Noweb syntax reference.

This behavior is illustrated in the following example. Because the <<example>> noweb reference appears behind the SQL comment syntax, each line of the expanded noweb reference will be commented.

#### With:

```
#+NAME: example
#+BEGIN_SRC text
this is the
multi-line body of example
#+END_SRC
この'src'コードブロックは:
```

```
#+BEGIN_SRC sql :noweb yes
-- <<example>>
#+END_SRC
次のように展開されます:
-- これは
-- exampleの複数行の本文です
```

Since this change will not affect noweb replacement text without newlines in them, inline noweb references are acceptable.

This feature can also be used for management of indentation in exported code snippets. With:

```
#+NAME: if-true
  #+BEGIN_SRC python :exports none
  print('Do things when True')
  #+END_SRC
  #+NAME: if-false
  #+BEGIN_SRC python :exports none
  print('Do things when False')
  #+END_SRC
この 'src' コードブロックは:
  #+BEGIN_SRC python :noweb yes :results output
  if True:
      <<if-true>>
  else:
      <<if-false>>
  #+END_SRC
次のように展開されます:
  if True:
      print('Do things when True')
  else:
      print('Do things when False')
and evaluates to:
  Do things when True
```

### 14.8.2.16 :noweb-ref

When expanding Noweb style references, Org concatenates 'src' code blocks by matching the reference name to either the code block name or the :noweb-ref header argument.

For simple concatenation, set this :noweb-ref header argument at the sub-tree or file level. In the example Org file shown next, the body of the source code in each block is extracted for concatenation to a pure code file when tangled.

```
:PROPERTIES:
    :header-args: :noweb-ref fullest-disk
    :END:

** query all mounted disks
#+BEGIN_SRC sh
    df \
#+END_SRC

** strip the header row
#+BEGIN_SRC sh
    |sed '1d' \
#+END_SRC

** output mount point of fullest disk
#+BEGIN_SRC sh
    |awk '{if (u < +$5) {u = +$5; m = $6}} END {print m}'
#+END_SRC</pre>
```

# 14.8.2.17 :noweb-sep

By default a newline separates each noweb reference concatenation. To change this new-line separator, edit the :noweb-sep (see Section 14.8.2.17 [noweb-sep], page 219) header argument.

#### 14.8.2.18 : cache

The :cache header argument is for caching results of evaluating code blocks. Caching results can avoid re-evaluating 'src' code blocks that have not changed since the previous run. To benefit from the cache and avoid redundant evaluations, the source block must have a result already present in the buffer, and neither the header arguments (including the value of :var references) nor the text of the block itself has changed since the result was last computed. This feature greatly helps avoid long-running calculations. For some edge cases, however, the cached results may not be reliable.

The caching feature is best for when 'src' blocks are pure functions, that is functions that return the same value for the same input arguments (see Section 14.8.2.1 [var], page 209), and that do not have side effects, and do not rely on external variables other than the input arguments. Functions that depend on a timer, file system objects, and random number generators are clearly unsuitable for caching.

A note of warning: when :cache is used for a :session, caching may cause unexpected results.

When the caching mechanism tests for any source code changes, it will not expand Noweb style references (see Section 14.10 [Noweb reference syntax], page 226). For reasons why, see http://thread.gmane.org/gmane.emacs.orgmode/79046.

The :cache header argument can have one of two values: yes or no.

- no Default. No caching of results; 'src' code block evaluated every time.
- yes Whether to run the code or return the cached results is determined by comparing the SHA1 hash value of the combined 'src' code block and arguments passed to it.

This hash value is packed on the #+RESULTS: line from previous evaluation. When hash values match, Org does not evaluate the 'src' code block. When hash values mismatch, Org evaluates the 'src' code block, inserts the results, recalculates the hash value, and updates #+RESULTS: line.

In this example, both functions are cached. But caller runs only if the result from random has changed since the last run.

```
#+NAME: random
#+BEGIN_SRC R :cache yes
runif(1)
#+END_SRC

#+RESULTS[a2a72cd647ad44515fab62e144796432793d68e1]: random
0.4659510825295

#+NAME: caller
#+BEGIN_SRC emacs-lisp :var x=random :cache yes
x
#+END_SRC

#+RESULTS[bec9c8724e397d5df3b696502df3ed7892fc4f5f]: caller
0.254227238707244
```

# 14.8.2.19 :sep

The :sep header argument is the delimiter for saving results as tables to files (see Section 14.8.2.3 [file], page 214) external to Org mode. Org defaults to tab delimited output. The function, org-open-at-point, which is bound to C-c C-o, also uses :sep for opening tabular results.

### 14.8.2.20 :hlines

In-between each table row or below the table headings, sometimes results have horizontal lines, which are also known as hlines. The :hlines argument with the value yes accepts such lines. The default is no.

• no Strips horizontal lines from the input table. For most code, this is desirable, or else those hline symbols raise unbound variable errors.

The default is :hlines no. The example shows hlines removed from the input table.

```
#+NAME: many-cols
| a | b | c |
|---+---|
| d | e | f |
|---+---+---|
| g | h | i |

#+NAME: echo-table
#+BEGIN_SRC python :var tab=many-cols
return tab
```

```
#+END_SRC

#+RESULTS: echo-table
| a | b | c |
| d | e | f |
| g | h | i |
```

• yes For :hlines yes, the example shows hlines unchanged.

```
#+NAME: many-cols
| a | b | c |
|---+---|
| d | e | f |
|---+---|
| g | h | i |
#+NAME: echo-table
#+BEGIN_SRC python :var tab=many-cols :hlines yes
 return tab
#+END_SRC
#+RESULTS: echo-table
la | b | c |
|---+---|
| d | e | f |
|---+---|
|g|h|i|
```

#### 14.8.2.21 :colnames

The :colnames header argument accepts yes, no, or nil values. The default value is nil, which is unassigned. But this header argument behaves differently depending on the source code language.

• nil If an input table has column names (because the second row is an hline), then Org removes the column names, processes the table, puts back the column names, and then writes the table to the results block.

```
#+NAME: less-cols
| a |
|---|
| b |
| c |

#+NAME: echo-table-again
#+BEGIN_SRC python :var tab=less-cols
   return [[val + '*' for val in row] for row in tab]
#+END_SRC

#+RESULTS: echo-table-again
| a |
```

Note that column names have to accounted for when using variable indexing (see Section 14.8.2.1 [var], page 209) because column names are not removed for indexing.

- no Do not pre-process column names.
- yes For an input table that has no hlines, process it like the nil value. That is, Org removes the column names, processes the table, puts back the column names, and then writes the table to the results block.

# 14.8.2.22 :rownames

The :rownames header argument can take on values yes or no values. The default is no. Note that emacs-lisp code blocks ignore :rownames header argument because of the ease of table-handling in Emacs.

- no Org will not pre-process row names.
- yes If an input table has row names, then Org removes the row names, processes the table, puts back the row names, and then writes the table to the results block.

```
#+NAME: with-rownames
| one | 1 | 2 | 3 | 4 | 5 |
| two | 6 | 7 | 8 | 9 | 10 |

#+NAME: echo-table-once-again
#+BEGIN_SRC python :var tab=with-rownames :rownames yes
return [[val + 10 for val in row] for row in tab]

#+END_SRC

#+RESULTS: echo-table-once-again
| one | 11 | 12 | 13 | 14 | 15 |
| two | 16 | 17 | 18 | 19 | 20 |
```

Note that row names have to accounted for when using variable indexing (see Section 14.8.2.1 [var], page 209) because row names are not removed for indexing.

### 14.8.2.23 : shebang

This header argument can turn results into executable script files. By setting the :shebang header argument to a string value (for example, :shebang "#!/bin/bash"), Org inserts that string as the first line of the tangled file that the 'src' code block is extracted to. Org then turns on the tangled file's executable permission.

# 14.8.2.24 :tangle-mode

The tangle-mode header argument specifies what permissions to set for tangled files by set-file-modes. For example, to make read-only tangled file, use :tangle-mode (identity #0444). To make it executable, use :tangle-mode (identity #0755).

On 'src' code blocks with shebang (see Section 14.8.2.23 [shebang], page 222) header argument, Org will automatically set the tangled file to executable permissions. But this can be overridden with custom permissions using tangle-mode header argument.

When multiple 'src' code blocks tangle to a single file with different and conflicting tangle-mode header arguments, Org's behavior is undefined.

#### 14.8.2.25 :eval

The :eval header argument can limit evaluation of specific code blocks. It is useful for protection against evaluating untrusted 'src' code blocks by prompting for a confirmation. This protection is independent of the org-confirm-babel-evaluate setting.

#### never or no

Org will never evaluate this 'src' code block.

query Org prompts the user for permission to evaluate this 'src' code block.

#### never-export or no-export

Org will not evaluate this 'src' code block when exporting, yet the user can evaluate this source block interactively.

### query-export

Org prompts the user for permission to export this 'src' code block.

If :eval header argument is not set for a source block, then Org determines whether to evaluate from the org-confirm-babel-evaluate variable (see Section 15.4 [Code evaluation security], page 230).

# 14.8.2.26 :wrap

The :wrap header argument marks the results block by appending strings to #+BEGIN\_ and #+END\_. If no string is specified, Org wraps the results in a #+BEGIN/END\_RESULTS block.

# 14.8.2.27 :post

The :post header argument is for post-processing results from 'src' block evaluation. When :post has any value, Org binds the results to \*this\* variable for easy passing to Section 14.8.2.1 [var], page 209 header argument specifications. That makes results available to other 'src' code blocks, or for even direct Emacs Lisp code execution.

The following two examples illustrate :post header argument in action. The first one shows how to attach #+ATTR\_LATEX: line using :post.

```
#+name: attr_wrap
#+begin_src sh :var data="" :var width="\\textwidth" :results output
    echo "#+ATTR_LATEX: :width $width"
    echo "$data"
#+end_src

#+header: :file /tmp/it.png
#+begin_src dot :post attr_wrap(width="5cm", data=*this*) :results drawer
    digraph{
        a -> b;
        b -> c;
        c -> a;
    }
#+end_src
```

```
#+RESULTS:
:RESULTS:
#+ATTR_LATEX :width 5cm
[[file:/tmp/it.png]]
:END:
```

The second example shows use of :colnames in :post to pass data between 'src' code blocks.

```
#+name: round-tbl
#+begin_src emacs-lisp :var tbl="" fmt="%.3f"
  (mapcar (lambda (row)
            (mapcar (lambda (cell)
                       (if (numberp cell)
                           (format fmt cell)
                         cell))
                    row))
          tbl)
#+end src
#+begin_src R :colnames yes :post round-tbl[:colnames yes](*this*)
set.seed(42)
data.frame(foo=rnorm(1))
#+end_src
#+RESULTS:
   foo l
|----|
| 1.371 |
```

# 14.8.2.28 :prologue

The prologue header argument is for appending to the top of the code block for execution. For example, a clear or reset code at the start of new execution of a 'src' code block. A reset for 'gnuplot': :prologue "reset". See also (undefined) [epilogue], page (undefined).

# 14.8.2.29 :epilogue

The value of the epilogue header argument is for appending to the end of the code block for execution. See also (undefined) [prologue], page (undefined).

# 14.9 Results of evaluation

How Org handles results of a code block execution depends on many header arguments working together. Here is only a summary of these. For an enumeration of all the header arguments that affect results, see Section 14.8.2.2 [results], page 213.

The primary determinant is the execution context. Is it in a :session or not? Orthogonal to that is if the expected result is a :results value or :results output, which is a concatenation of output from start to finish of the 'src' code block's evaluation.

	Non-session	Session	
:results value	最後の式の値	最後の式の値	
:results output	STDOUT の内容	インタプリタの出力をつなげたもの	

For :session and non-session, the :results value turns the results into an Org mode table format. Single values are wrapped in a one dimensional vector. Rows and columns of a table are wrapped in a two-dimensional vector.

## 14.9.1 Non-session

#### 14.9.1.1 :results value

Default. Org gets the value by wrapping the code in a function definition in the language of the 'src' block. That is why when using :results value, code should execute like a function and return a value. For languages like Python, an explicit return statement is mandatory when using :results value.

This is one of four evaluation contexts where Org automatically wraps the code in a function definition.

# 14.9.1.2 :results output

For :results output, the code is passed to an external process running the interpreter. Org returns the contents of the standard output stream as as text results.

#### 14.9.2 Session

#### 14.9.2.1 :results value

For :results value from a :session, Org passes the code to an interpreter running as an interactive Emacs inferior process. So only languages that provide interactive evaluation can have session support. Not all languages provide this support, such as 'C' and 'ditaa'. Even those that do support, such as 'Python' and 'Haskell', they impose limitations on allowable language constructs that can run interactively. Org inherits those limitations for those 'src' code blocks running in a :session.

Org gets the value from the source code interpreter's last statement output. Org has to use language-specific methods to obtain the value. For example, from the variable \_ in 'Python' and 'Ruby', and the value of .Last.value in 'R').

### 14.9.2.2 :results output

For :results output, Org passes the code to the interpreter running as an interactive Emacs inferior process. Org concatenates whatever text output emitted by the interpreter to return the collection as a result. Note that this collection is not the same as collected from STDOUT of a non-interactive interpreter running as an external process. Compare for example these two blocks:

```
#+BEGIN_SRC python :results output
print "hello"
```

```
print "bye"
#+END_SRC

#+RESULTS:
: hello
: bye

In the above non-session mode, the "2" is not printed; so does not appear in results.
#+BEGIN_SRC python :results output :session
print "hello"
2
print "bye"
#+END_SRC

#+RESULTS:
: hello
: 2
: bye
```

しかし: sessionモードでは、インタラクティブなインタープリタは入力 '2' を受け取り、その値 '2' を表示します。(実際には、ここでは他の print 文は不要です)。

# 14.10 Noweb reference syntax

Org supports named blocks in Noweb style syntax. For Noweb literate programming details, see http://www.cs.tufts.edu/~nr/noweb/).

```
<<code-block-name>>
```

For the header argument :noweb yes, Org expands Noweb style references in the 'src' code block before evaluation.

For the header argument :noweb no, Org does not expand Noweb style references in the 'src' code block before evaluation.

The default is :noweb no. Org defaults to :noweb no so as not to cause errors in languages where Noweb syntax is ambiguous. Change Org's default to :noweb yes for languages where there is no risk of confusion.

Org offers a more flexible way to resolve Noweb style references (see Section 14.8.2.16 [noweb-ref], page 218).

Org can include the *results* of a code block rather than its body. To that effect, append parentheses, possibly including arguments, to the code block name, as show below.

```
<<code-block-name(optional arguments)>>
```

Note that when using the above approach to a code block's results, the code block name set by #+NAME keyword is required; the reference set by :noweb-ref will not work.

Here is an example that demonstrates how the exported content changes when Noweb style references are used with parentheses versus without.

With:

```
#+NAME: some-code
#+BEGIN_SRC python :var num=0 :results output :exports none
print(num*10)
#+END_SRC

このコードブロックは:
#+BEGIN_SRC text :noweb yes
<<some-code>>
#+END_SRC

次のように展開されます:
print(num*10)
```

Below, a similar Noweb style reference is used, but with parentheses, while setting a variable num to 10:

```
#+BEGIN_SRC text :noweb yes
<<some-code(num=10)>>
#+END_SRC
```

Note that now the expansion contains the *results* of the code block <code>some-code</code>, not the code block itself:

100

For faster tangling of large Org mode files, set org-babel-use-quick-and-dirty-noweb-expansion variable to t. The speedup comes at the expense of not correctly resolving inherited values of the :noweb-ref header argument.

# 14.11 Key bindings and useful functions

多くの一般の Org-mode のキー操作が、コンテクストに応じて再定義されています。 コードブロックの中で有効なキーバインディング:

```
 \begin{array}{lll} \textit{C-c C-c} & & \text{org-babel-execute-src-block} \\ \textit{C-c C-o} & & \text{org-babel-open-src-block-result} \\ \textit{M-UP} & & \text{org-babel-load-in-session} \\ \textit{M-DOWN} & & \text{org-babel-switch-to-session} \\ \end{array}
```

Active key bindings in Org mode buffer:

C-c C-v p	もしくは	C-c C-v C-p	org-babel-previous-src-block
C-c $C-v$ $n$	もしくは	C-c $C-v$ $C-n$	org-babel-next-src-block
C-c $C-v$ $e$	もしくは	С-с С-v С-е	org-babel-execute-maybe
C-c C-v o	もしくは	C-c C-v C-o	org-babel-open-src-block-result
C-c $C-v$ $v$	もしくは	C-c $C-v$ $C-v$	org-babel-expand-src-block
C-c C-v u	もしくは	C-c C-v C-u	org-babel-goto-src-block-head
C-c C-v g	もしくは	C-c C-v C-g	org-babel-goto-named-src-block
C-c C-v r	もしくは	C- $c$ $C$ - $v$ $C$ - $r$	org-babel-goto-named-result
C-c C-v b	もしくは	C-c $C-v$ $C-b$	org-babel-execute-buffer
C-c C-v s	もしくは	C- $c$ $C$ - $v$ $C$ - $s$	org-babel-execute-subtree
C-c $C-v$ $d$	もしくは	C-c $C-v$ $C-d$	org-babel-demarcate-block

```
C-c C-v t もしくは C-c C-v C-t
                                      org-babel-tangle
C-c C-v f もしくは C-c C-v C-f
                                      org-babel-tangle-file
C-c C-v c もしくは C-c C-v C-c
                                      org-babel-check-src-block
C-c C-v j もしくは C-c C-v C-j
                                      org-babel-insert-header-arg
C-c C-v 1 もしくは C-c C-v C-1
                                      org-babel-load-in-session
C-c C-v i もしくは C-c C-v C-i
                                      org-babel-lob-ingest
C-c C-v I もしくは C-c C-v C-I
                                      org-babel-view-src-block-info
C-c C-v z もしくは C-c C-v C-z
                                      org-babel-switch-to-session-with-
                                      code
C-c C-v a もしくは C-c C-v C-a
                                      org-babel-sha1-hash
C-c C-v h もしくは C-c C-v C-h
                                      org-babel-describe-bindings
C-c C-v x もしくは C-c C-v C-x
                                      org-babel-do-key-sequence-in-edit-
                                      buffer
```

# 14.12 Batch execution

Org mode features, including working with source code facilities can be invoked from the command line. This enables building shell scripts for batch processing, running automated system tasks, and expanding Org mode's usefulness.

The sample script shows batch processing of multiple files using org-babel-tangle.

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# **15** その他

# 15.1 Completion

Org has in-buffer completions. Unlike minibuffer completions, which are useful for quick command interactions, Org's in-buffer completions are more suitable for content creation in Org documents. Type one or more letters and invoke the hot key to complete the text in-place. Depending on the context and the keys, Org will offer different types of completions. No minibuffer is involved. Such mode-specific hot keys have become an integral part of Emacs and Org provides several shortcuts.

M-TAB ポイント位置での補完

- 見出しの先頭では、TODO キーワードを補完します。
- '\'の後では、エクスポート機能によりサポートされる TeX のシンボルを補完します。
- '\*'の後では、'[[\*find this headline]]'のようにリンクを検索できるように、 カレントバッファで見出しを補完します。
- After ':' in a headline, complete tags. The list of tags is taken from the variable org-tag-alist (possibly set through the #+TAGS in-buffer option, see (undefined) [Setting tags], page (undefined)), or it is created dynamically from all tags used in the current buffer.
- 見出しの外にある ':'の後では、プロパティキーを補完します。キーのリストは現在 のバッファで使われている全てのキーから動的に構築されます。
- '['の後では、リンクの省略記法を補完します (see Section 4.6 [リンクの省略記法], page 44)。
- After '#+', complete the special keywords like 'TYP\_TODO' or file-specific 'OPTIONS'. After option keyword is complete, pressing M-TAB again will insert example settings for that option.
- '#+STARTUP: 'の後の行の中では、STARTUP キーワードを補完します。
- When the point is anywhere else, complete dictionary words using Ispell.

If your desktop intercepts the combo M-TAB to switch windows, use C-M-i or  $ESC\ TAB$  as an alternative or customize your environment.

# 15.2 Easy templates

With just a few keystrokes, Org's easy templates inserts empty pairs of structural elements, such as #+BEGIN\_SRC and #+END\_SRC. Easy templates use an expansion mechanism, which is native to Org, in a process similar to yasnippet and other Emacs template expansion packages.

- < s TAB expands to a 'src' code block.
- < 1 TAB expands to:

#+BEGIN\_EXPORT latex

#+END\_EXPORT

Org comes with these pre-defined easy templates:

```
#+BEGIN_SRC ... #+END_SRC
S
          #+BEGIN_EXAMPLE ... #+END_EXAMPLE
е
          #+BEGIN_QUOTE ... #+END_QUOTE
q
          #+BEGIN_VERSE ... #+END_VERSE
V
С
          #+BEGIN_CENTER ... #+END_CENTER
C
          #+BEGIN_COMMENT ... #+END_COMMENT
7
          #+BEGIN_EXPORT latex ... #+END_EXPORT
L
          #+LATEX:
          #+BEGIN_EXPORT html ... #+END_EXPORT
h
Η
          #+HTML:
          #+BEGIN_EXPORT ascii ... #+END_EXPORT
а
Α
          #+ASCII:
          #+INDEX: line
i
Ι
          #+INCLUDE: line
```

More templates can added by customizing the variable org-structure-templatealist, whose docstring has additional details.

# 15.3 Speed keys

Single keystrokes can execute custom commands in an Org file when the cursor is on a headline. Without the extra burden of a meta or modifier key, Speed Keys can speed navigation or execute custom commands. Besides faster navigation, Speed Keys may come in handy on small mobile devices that do not have full keyboards. Speed Keys may also work on TTY devices known for their problems when entering Emacs keychords.

By default, Org has Speed Keys disabled. To activate Speed Keys, set the variable org-use-speed-commands to a non-nil value. To trigger a Speed Key, the cursor must be at the beginning of an Org headline, before any of the stars.

Org comes with a pre-defined list of Speed Keys. To add or modify Speed Keys, customize the variable, org-speed-commands-user. For more details, see the variable's docstring. With Speed Keys activated, M-x org-speed-command-help, or ? when cursor is at the beginning of an Org headline, shows currently active Speed Keys, including the user-defined ones.

# 15.4 コードの評価とセキュリティの問題

Unlike plain text, running code comes with risk. Each 'src' code block, in terms of risk, is equivalent to an executable file. Org therefore puts a few confirmation prompts by default. This is to alert the casual user from accidentally running untrusted code.

For users who do not run code blocks or write code regularly, Org's default settings should suffice. However, some users may want to tweak the prompts for fewer interruptions. To weigh the risks of automatic execution of code blocks, here are some details about code evaluation.

```
コードの評価は以下に挙げる状況を引き起こします:
```

```
ソースコードブロック
```

Org evaluates 'src' code blocks in an Org file during export. Org also evaluates a 'src' code block with the *C-c C-c* key chord. Users exporting or running

code blocks must load files only from trusted sources. Be wary of customizing variables that remove or alter default security measures.

# $\verb|org-confirm-babel-evaluate|\\$

[User Option]

When t, Org prompts the user for confirmation before executing each code block. When nil, Org executes code blocks without prompting the user for confirmation. When this option is set to a custom function, Org invokes the function with these two arguments: the source code language and the body of the code block. The custom function must return either a t or nil, which determines if the user is prompted. Each source code language can be handled separately through this function argument.

For example, this function enables execution of 'ditaa' code +blocks without prompting:

```
(defun my-org-confirm-babel-evaluate (lang body)
  (not (string= lang "ditaa"))) ; don't ask for ditaa
(setq org-confirm-babel-evaluate 'my-org-confirm-babel-evaluate)
```

以下の shell と elispはリンクしています。

Org has two link types that can also directly evaluate code (see (undefined) [External links], page (undefined)). Because such code is not visible, these links have a potential risk. Org therefore prompts the user when it encounters such links. The customization variables are:

```
org-confirm-shell-link-function [User Option] シェルへのリンクを実行するための問い合わせを行う関数。
```

```
org-confirm-elisp-link-function [User Option] Emacs Lisp へのリンクを実行するための問い合わせを行う関数。
```

表中の式 表中の式 (see  $\langle \text{undefined} \rangle$  [スプレッドシート], page  $\langle \text{undefined} \rangle$ ) は calc インタプリタでも  $Emacs\ Lisp$  インタプリタでも実行できるコードです。

# 15.5 Customization

Org has more than 500 variables for customization. They can be accessed through the usual M-x org-customize RET command. Or through the Org menu, Org->Customization->Browse Org Group. Org also has per-file settings for some variables (see Section 15.6 [In-buffer settings], page 231).

### **15.6** バッファ中での設定の要約

In-buffer settings start with '#+', followed by a keyword, a colon, and then a word for each setting. Org accepts multiple settings on the same line. Org also accepts multiple lines for a keyword. This manual describes these settings throughout. A summary follows here.

C-c C-c activates any changes to the in-buffer settings. Closing and reopening the Org file in Emacs also activates the changes.

# #+ARCHIVE: %s\_done::

Sets the archive location of the agenda file. This location applies to the lines until the next #+ARCHIVE line, if any, in the Org file. The first archive location

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in the Org file also applies to any entries before it. The corresponding variable is org-archive-location.

#### #+CATEGORY:

Sets the category of the agenda file, which applies to the entire document.

### #+COLUMNS: %25ITEM ...

Sets the default format for columns view. Org uses this format for column views where there is no COLUMNS property.

#### #+CONSTANTS: name1=value1 ...

Set file-local values for constants that table formulas can use. This line sets the local variable org-table-formula-constants-local. The global version of this variable is org-table-formula-constants.

### #+FILETAGS: :tag1:tag2:tag3:

Set tags that all entries in the file will inherit from here, including the top-level entries.

### #+LINK: linkword replace

Each line specifies one abbreviation for one link. Use multiple #+LINK: lines for more, see \( \)undefined \( \) [Link abbreviations], page \( \)undefined \( \). The corresponding variable is \( \)org-link-abbrev-alist.

#### #+PRIORITIES: highest lowest default

This line sets the limits and the default for the priorities. All three must be either letters A–Z or numbers 0–9. The highest priority must have a lower ASCII number than the lowest priority.

### #+PROPERTY: Property\_Name Value

この行は現在のバッファ中のエントリがデフォルトで引き継ぐ値を設定します。与えられたプロパティの値を指定するのに、最も便利です。

# #+SETUPFILE: file or URL

The setup file or a URL pointing to such file is for additional in-buffer settings. Org loads this file and parses it for any settings in it only when Org opens the main file. If URL is specified, the contents are downloaded and stored in a temporary file cache. C-c C-c on the settings line will parse and load the file, and also reset the temporary file cache. Org also parses and loads the document during normal exporting process. Org parses the contents of this document as if it was included in the buffer. It can be another Org file. To visit the file (not a URL), C-c ' while the cursor is on the line with the file name.

#### #+STARTUP:

Startup options Org uses when first visiting a file.

The first set of options deals with the initial visibility of the outline tree. The corresponding variable for global default settings is org-startup-folded with a default value of t, which is the same as overview.

overview トップレベルの見出しのみ content 全ての見出し

showall 全てのエントリを畳み込まない

showeverything コンテンツの引き出しも表示する

Dynamic virtual indentation is controlled by the variable org-startup-indented

indent start with org-indent-mode turned on noindent start with org-indent-mode turned off

Aligns tables consistently upon visiting a file; useful for restoring narrowed table columns. The corresponding variable is org-startup-align-all-tables with nil as default value.

align align all tables

noalign donfit align tables on startup

Whether Org should automatically display inline images. The corresponding variable is org-startup-with-inline-images, with a default value nil to avoid delays when visiting a file.

inlineimages show inline images noinlineimages donfit show inline images on startup

Whether Org should automatically convert LATEX fragments to images. The variable org-startup-with-latex-preview, which controls this setting, is set to nil by default to avoid startup delays.

latexpreview preview LATEX fragments nolatexpreview donft preview LATEX fragments

TODO アイテムの完了と再開のログを取ることとその感覚はこれらのオプションによって設定することが可能です (変数 org-log-doneと org-log-note-clock-out、org-log-repeatを参照してください)。

logdone record a timestamp when an item is marked DONE record timestamp and a note when DONE donft record when items are marked DONE record a time when reinstating a repeating item record a note when reinstating a repeating item do not record when reinstating repeating item

lognoteclock-out record a note when clocking out nolognoteclock-out donft record a note when clocking out

logreschedule record a timestamp when scheduling time changes record a note when scheduling time changes do not record when a scheduling date changes record a timestamp when deadline changes

lognoteredeadline record a note when deadline changes

nologredeadline do not record when a deadline date changes

logrefilerecord a timestamp when refilinglognoterefilerecord a note when refilingnologrefiledo not record when refilinglogdrawerstore log into drawer

nologdrawer store log outside of drawer store log outside of drawer reverse the order of states notes

nologstatesreversed do not reverse the order of states notes

These options hide leading stars in outline headings, and indent outlines. The corresponding variables are org-hide-leading-stars and org-odd-levels-only, both with a default setting of nil (meaning showstars and oddeven).

hidestars hide all stars on the headline except one.

showstars show all stars on the headline

indent virtual indents according to the outline level

noindent no virtual indents

odd show odd outline levels only (1,3,...)

oddeven show all outline levels

タイムスタンプ (org-put-time-stamp-overlaysと org-time-stamp-overlay-formats変数) のカスタムフォーマットオーバレイを切り替えます、

customtime カスタマイズされたタイムフォーマットで覆います

以下のオプションは表計算 (constants-unit-system変数) に影響を与えます。

constcgs constants.el should use the c-g-s unit system constSI constants.el should use the SI unit system

For footnote settings, use the following keywords. The corresponding variables are org-footnote-define-inline, org-footnote-auto-label, and org-footnote-auto-adjust.

fninline 脚注のインラインを定義します

fnnoinline 分割されたセクションでの脚注を定義します

fnlocal 最初の言及元の近くの脚注を定義しますが、インラインではあり

ません

fnprompt 脚注ラベルのプロンプト

fnauto [fn:1]のようなラベルを自動的に作成します(これがデフォルト

です)

fnconfirm編集と確認用の自動ラベルを用意しますfnplain[1]のようなラベルを自動的に作成しますfnadjust自動的に脚注の番号を振り直し、ソートしますnofnadjust自動的に番号の振り直しとソートを行いません

To hide blocks on startup, use these keywords. The corresponding variable is org-hide-block-startup.

hideblocks 開始時に全ての開始/終了ブロックを見えなくします nohideblocks 開始時にブロックを見えなくしません

UTF-8の文字の表示は変数 org-pretty-entitiesと以下のキーワードにより制御されます。

entitiespretty 可能な時、UTF-8の文字を表示します entitiesplain 空白にします

#+TAGS: TAG1(c1) TAG2(c2)

These lines specify valid tags for this file. Org accepts multiple tags lines. Tags could correspond to the *fast tag selection* keys. The corresponding variable is org-tag-alist.

#+TBLFM: This line is for formulas for the table directly above. A table can have multiple #+TBLFM: lines. On table recalculation, Org applies only the first #+TBLFM:

line. For details see [Using multiple #+TBLFM lines], page 32 in \( \)undefined \( \) [Editing and debugging formulas], page \( \)undefined \( \).

#+TITLE:, #+AUTHOR:, #+EMAIL:, #+LANGUAGE:, #+DATE:,
#+OPTIONS:, #+BIND:,

#+SELECT\_TAGS:, #+EXCLUDE\_TAGS:

These lines provide settings for exporting files. For more details see (undefined) [Export settings], page (undefined).

#+TODO: #+SEQ\_TODO: #+TYP\_TODO:

These lines set the TODO keywords and their significance to the current file. The corresponding variable is org-todo-keywords.

# 15.7 The very busy C-c C-c key

The C-c key in Org serves many purposes depending on the context. It is probably the most over-worked, multi-purpose key combination in Org. Its uses are well-documented through out this manual, but here is a consolidated list for easy reference.

- If any highlights shown in the buffer from the creation of a sparse tree, or from clock display, remove such highlights.
- If the cursor is in one of the special #+KEYWORD lines, scan the buffer for these lines and update the information. Also reset the Org file cache used to temporary store the contents of URLs used as values for keywords like #+SETUPFILE.
- If the cursor is inside a table, realign the table. The table realigns even if automatic table editor is turned off.
- カーソルが#+TBLFM行にあるなら、全ての表に式を再適用します。
- If the current buffer is a capture buffer, close the note and file it. With a prefix argument, also jump to the target location after saving the note.
- カーソルが<<<target>>>上にあるなら、ラジオターゲットとバッファ中の関係するリンクを更新します。
- If the cursor is on a property line or at the start or end of a property drawer, offer property commands.
- If the cursor is at a footnote reference, go to the corresponding definition, and *vice* versa.
- カーソルが統計データクッキー上にあるなら、それを更新します。
- カーソルがチェックボックス付きのプレーンリスト上にあるなら、チェックボックスのステータスをトグルします。
- カーソルが数字付きリスト上にあるなら、順序を整理しなおします。
- カーソルが動的なブロックの#+BEGIN行上にあるなら、ブロックを更新します。
- カーソルが統計データクッキー上にあるなら、それを更新します。

# **15.8** より見やすいアウトラインビュー

Org's default outline with stars and no indents can become too cluttered for short documents. For *book-like* long documents, the effect is not as noticeable. Org provides an alternate stars and indentation scheme, as shown on the right in the following table. It uses only one star and indents text to line with the heading:

```
* Top level headline
                                  * Top level headline
** Second level
                                         * Second level
*** 3rd level
                                           * 3rd level
some text
                                             some text
*** 3rd level
                                            3rd level
more text
                                             more text
                                       * Another top level headline
* Another top level headline
```

To turn this mode on, use the minor mode, org-indent-mode. Text lines that are not headlines are prefixed with spaces to vertically align with the headline text<sup>1</sup>.

To make more horizontal space, the headlines are shifted by two stars. This can be configured by the org-indent-indentation-per-level variable. Only one star on each headline is visible, the rest are masked with the same font color as the background. This font face can be configured with the org-hide variable.

Note that turning on org-indent-mode sets org-hide-leading-stars to t and org-adapt-indentation to nil; '2.' below shows how this works.

To globally turn on org-indent-mode for all files, customize the variable org-startup-indented.

To turn on indenting for individual files, use #+STARTUP option as follows:

```
#+STARTUP: indent
```

Indent on startup makes Org use hard spaces to align text with headings as shown in examples below.

1. Indentation of text below headlines

Indent text to align with the headline.

```
*** 3rd level more text, now indented
```

Org adapts indentations with paragraph filling, line wrapping, and structure editing<sup>2</sup>.

2. Hiding leading stars

Org can make leading stars invisible. For global preference, configure the variable org-hide-leading-stars. For per-file preference, use these file #+STARTUP options:

```
#+STARTUP: hidestars
#+STARTUP: showstars
「*」を隠した状態だと、ツリーはこうなります:
* Top level headline
* Second level
* 3rd level
```

Because Org makes the font color same as the background color to hide to stars, sometimes org-hide face may need tweaking to get the effect right. For some black and white combinations, grey90 on a white background might mask the stars better.

The org-indent-mode also sets the wrap-prefix correctly for indenting and wrapping long lines of headlines or text. This minor mode handles visual-line-mode and directly applied settings through word-wrap.

<sup>&</sup>lt;sup>2</sup> Also see the variable org-adapt-indentation.

3. Using stars for only odd levels, 1, 3, 5, ..., can also clean up the clutter. This removes two stars from each level<sup>3</sup>. For Org to properly handle this cleaner structure during edits and exports, configure the variable org-odd-levels-only. To set this per-file, use either one of the following lines:

#+STARTUP: odd
#+STARTUP: oddeven

To switch between single and double stars layouts, use M-x org-convert-to-odd-levels RET and M-x org-convert-to-oddeven-levels RET.

# 15.9 Using Org on a tty

Org provides alternative key bindings for TTY and modern mobile devices that cannot handle cursor keys and complex modifier key chords. Some of these workarounds may be more cumbersome than necessary. Users should look into customizing these further based on their usage needs. For example, the normal S-cursor for editing timestamp might be better with C-c. chord.

デフォルト	代替 1	スピー	代替 2
		ドキー	
S-TAB	C-u TAB	C	
M- $LEFT$	C-c C-x 1	1	Esc LEFT
M- $S$ - $LEFT$	C-c $C-x$ $L$	L	
M-RIGHT	C- $c$ $C$ - $x$ $r$	r	Esc RIGHT
M- $S$ - $RIGHT$	C-c $C-x$ $R$	R	
M-UP	С-с С-х и		Esc UP
M– $S$ – $UP$	C-c $C-x$ $U$	U	
M-DOWN	C-c $C-x$ $d$		Esc DOWN
M– $S$ – $DOWN$	C-c $C-x$ $D$	D	
S-RET	C-c $C-x$ $c$		
M- $RET$	C-c $C-x$ $m$		Esc RET
M- $S$ - $RET$	C-c $C-x$ $M$		
S-LEFT	C- $c$ $LEFT$		
S-RIGHT	C-c $RIGHT$		
S-UP	C-c UP		
S-DOWN	C-c DOWN		
C– $S$ – $LEFT$	C-c $C-x$ $LEFT$		
C-S-RIGHT	C-c $C-x$ $RIGHT$		

# 15.10 Interaction with other packages

Org's compatibility and the level of interaction with other Emacs packages are documented here.

 $<sup>^3</sup>$  Because 'LEVEL=2' has 3 stars, 'LEVEL=3' has 4 stars, and so on

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# **15.10.1 Org-mode** と協調して動くパッケージ

### calc.el by Dave Gillespie

Org uses the Calc package for tables to implement spreadsheet functionality (see Section 3.5 [The spreadsheet], page 24). Org also uses Calc for embedded calculations. See Section "Embedded Mode" in *GNU Emacs Calc Manual*.

#### constants.el by Carsten Dominik

Org can use names for constants in formulas in tables. Org can also use calculation suffixes for units, such as 'M' for 'Mega'. For a standard collection of such constants, install the constants package. Install version 2.0 of this package, available at https://staff.fnwi.uva.nl/c.dominik/Tools/. Org checks if the function constants-get has been autoloaded. Installation instructions are in the file, constants.el.

### cdlatex.el by Carsten Dominik

Org mode can use CDLATEX package to efficiently enter LATEX fragments into Org files (see Section 11.8.3 [CDLaTeX mode], page 137).

### imenu.el by Ake Stenhoff and Lars Lindberg

Imenu creates dynamic menus based on an index of items in a file. Org mode supports Imenu menus. Enable it with a mode hook as follows:

By default the Imenu index is two levels deep. Change the index depth using thes variable, org-imenu-depth.

# speedbar.el by Eric M. Ludlam

Speedbar package creates a special Emacs frame for displaying files and index items in files. Org mode supports Speedbar; users can drill into Org files directly from the Speedbar. The < in the Speedbar frame tweaks the agenda commands to that file or to a subtree.

# table.el by Takaaki Ota

Complex ASCII tables with automatic line wrapping, column- and row-spanning, and alignment can be created using the Emacs table package by Takaaki Ota. Org mode recognizes such tables and export them properly. C-c ' to edit these tables in a special buffer, much like Org's 'src' code blocks. Because of interference with other Org mode functionality, Takaaki Ota tables cannot be edited directly in the Org buffer.

C-c ' org-edit-special

Edit a table.el table. Works when the cursor is in a table.el table.

C-c ~ org-table-create-with-table.el

Insert a table.el table. If there is already a table at point, this command converts it between the table.el format and the Org mode format. See the documentation string of the command org-convert-table for details.

# **15.10.2 Org-mode** との衝突に繋がるパッケージ

In Emacs, shift-selection-mode combines cursor motions with shift key to enlarge regions. Emacs sets this mode by default. This conflicts with Org's use of *S-cursor* commands to change timestamps, TODO keywords, priorities, and item bullet types, etc. Since *S-cursor* commands outside of specific contexts don't do anything, Org offers the variable org-support-shift-select for customization. Org mode accommodates shift selection by (i) making it available outside of the special contexts where special commands apply, and (ii) extending an existing active region even if the cursor moves across a special context.

### CUA.el by Kim. F. Storm

Org key bindings conflict with *S*-<*cursor*> keys used by CUA mode. For Org to relinquish these bindings to CUA mode, configure the variable org-replace-disputed-keys. When set, Org moves the following key bindings in Org files, and in the agenda buffer (but not during date selection).

Yes, these are unfortunately more difficult to remember. To define a different replacement keys, look at the variable org-disputed-keys.

### ecomplete.el by Lars Magne Ingebrigtsen larsi@gnus.org

Ecomplete provides "electric" address completion in address header lines in message buffers. Sadly Orgtbl mode cuts ecompletes power supply: No completion happens when Orgtbl mode is enabled in message buffers while entering text in address header lines. If one wants to use ecomplete one should *not* follow the advice to automagically turn on Orgtbl mode in message buffers (see Section 3.4 [Orgtbl mode], page 23), but instead—after filling in the message headers—turn on Orgtbl mode manually when needed in the messages body.

### filladapt.el by Kyle Jones

Org mode tries to do the right thing when filling paragraphs, list items and other elements. Many users reported problems using both filladapt.el and Org mode, so a safe thing to do is to disable filladapt like this:

```
(add-hook 'org-mode-hook 'turn-off-filladapt-mode)
```

#### yasnippet.el

The way Org mode binds the TAB key (binding to [tab] instead of "\t") overrules YASnippet's access to this key. The following code fixed this problem:

The latest version of yasnippet doesn't play well with Org mode. If the above code does not fix the conflict, first define the following function:

```
(defun yas/org-very-safe-expand ()
```

```
(let ((yas/fallback-behavior 'return-nil)) (yas/expand)))
          それから、Org Mode に実行するべき新しい関数を伝えます:
               (add-hook 'org-mode-hook
                         (lambda ()
                           (make-variable-buffer-local 'yas/trigger-key)
                           (setq yas/trigger-key [tab])
                           (add-to-list 'org-tab-first-hook 'yas/org-very-safe-expand)
                           (define-key yas/keymap [tab] 'yas/next-field)))
windmove.el by Hovav Shacham
          This package also uses the S-<cursor> keys, so everything written in the para-
          graph above about CUA mode also applies here. If you want make the wind-
          move function active in locations where Org mode does not have special func-
          tionality on S-cursor, add this to your configuration:
               ;; Make windmove work in org-mode:
               (add-hook 'org-shiftup-final-hook 'windmove-up)
               (add-hook 'org-shiftleft-final-hook 'windmove-left)
               (add-hook 'org-shiftdown-final-hook 'windmove-down)
               (add-hook 'org-shiftright-final-hook 'windmove-right)
viper.el by Michael Kifer
          Viper は C-c /を使い、それゆえ Org Mode の org-sparse-treeコマンドに対応し
          ているキーを使えないようにします。あなたはこのコマンドに別のキーを割り当てるか、
          viper-vi-global-user-mapでキーを上書きする必要があります:
               (define-key viper-vi-global-user-map "C-c /" 'org-sparse-tree)
```

# 15.11 org-crypt.el

Org crypt encrypts the text of an Org entry, but not the headline, or properties. Org crypt uses the Emacs EasyPG library to encrypt and decrypt.

Any text below a headline that has a ':crypt:' tag will be automatically be encrypted when the file is saved. To use a different tag, customize the org-crypt-tag-matcher variable.

Suggested Org crypt settings in Emacs init file:

```
(require 'org-crypt)
(org-crypt-use-before-save-magic)
(setq org-tags-exclude-from-inheritance (quote ("crypt")))

(setq org-crypt-key nil)
   ;; GPG key to use for encryption
   ;; Either the Key ID or set to nil to use symmetric encryption.

(setq auto-save-default nil)
   ;; Auto-saving does not cooperate with org-crypt.el: so you need
   ;; to turn it off if you plan to use org-crypt.el quite often.
   ;; Otherwise, you'll get an (annoying) message each time you
   ;; start Org.
```

```
;; To turn it off only locally, you can insert this:
;;
;; # -*- buffer-auto-save-file-name: nil; -*-
Excluding the crypt tag from inheritance prevents encrypting previously encrypted text.
```

## Appendix A ハッキング

This appendix covers some areas where users can extend the functionality of Org.

## **A.1** フック

Org has a large number of hook variables for adding functionality. This appendix illustrates using a few. A complete list of hooks with documentation is maintained by the Worg project at https://orgmode.org/worg/doc.html#hooks.

## A.2 アドオンパッケージ

Various authors wrote a large number of add-on packages for Org.

These packages are not part of Emacs, but they are distributed as contributed packages with the separate release available at https://orgmode.org. See the contrib/README file in the source code directory for a list of contributed files. Worg page with more information is at: https://orgmode.org/worg/org-contrib/.

## A.3 Adding hyperlink types

Org has many built-in hyperlink types (see (undefined) [Hyperlinks], page (undefined)), and an interface for adding new link types. The example file, org-man.el, shows the process of adding Org links to Unix man pages, which look like this: '[[man:printf][The printf manpage]]':

```
;;; org-man.el - Org-mode で man ページのリンクをサポートする
(require 'org)
(org-add-link-type "man" 'org-man-open)
(add-hook 'org-store-link-functions 'org-man-store-link)
(defcustom org-man-command 'man
  "man のページを表示するための Emacs のコマンド。"
  :group 'org-link
  :type '(choice (const man) (const woman)))
(defun org-man-open (path)
  "パス (PATH) にある manpage を開きます。
パスはコマンド man に渡せる内容でなければなりません。"
  (funcall org-man-command path))
(defun org-man-store-link ()
 "man ページへのリンクを保存します。"
  (when (memq major-mode '(Man-mode woman-mode))
   ;; これは man ページなので、リンクを作成します。
   (let* ((page (org-man-get-page-name))
          (link (concat "man: " page))
          (description (format "Manpage for %s" page)))
```

```
(org-store-link-props
      :type "man"
      :link link
      :description description))))
(defun org-man-get-page-name ()
 "バッファ名からページ名を抽出します。"
 ;; `Man-mode' と `woman-mode' の両方で動作します。
 (if (string-match " \\(\\S-+\\)\\*" (buffer-name))
     (match-string 1 (buffer-name))
   (error "この man ページへのリンクを作成できません")))
(provide 'org-man)
;;; org-man.el ends here
```

To activate links to man pages in Org, enter this in the init file:

```
(require 'org-man)
```

A review of org-man.el:

- 1. まず (require 'org)を実行して org.elが読み込まれたことを確認します。
- 2. The org-add-link-type defines a new link type with 'man' prefix. The call contains the function to call that follows the link type.
- 3. The next line adds a function to org-store-link-functions that records a useful link with the command C-c 1 in a buffer displaying a man page.

The rest of the file defines necessary variables and functions. First is the customization variable org-man-command. It has two options, man and woman. Next is a function whose argument is the link path, which for man pages is the topic of the man command. To follow the link, the function calls the org-man-command to display the man page.

C-c 1 constructs and stores the link.

C-c 1 calls the function org-man-store-link, which first checks if the major-mode is appropriate. If check fails, the function returns nil. Otherwise the function makes a link string by combining the 'man:' prefix with the man topic. The function then calls org-store-link-props with :type and :link properties. A :description property is an optional string that is displayed when the function inserts the link in the Org buffer.

```
C-c C-1 保存済みのリンクを挿入する
```

To define new link types, define a function that implements completion support with C-c C-1. This function should not accept any arguments but return the appropriate prefix and complete link string.

# A.4 Adding export back-ends

Org's export engine makes it easy for writing new back-ends. The framework on which the engine was built makes it easy to derive new back-ends from existing ones.

The two main entry points to the export engine are: org-export-define-backend and org-export-define-derived-backend. To grok these functions, see ox-latex.el for an

example of defining a new back-end from scratch, and ox-beamer.el for an example of deriving from an existing engine.

For creating a new back-end from scratch, first set its name as a symbol in an alist consisting of elements and export functions. To make the back-end visible to the export dispatcher, set :menu-entry keyword. For export options specific to this back-end, set the :options-alist.

For creating a new back-end from an existing one, set :translate-alist to an alist of export functions. This alist replaces the parent back-end functions.

For complete documentation, see the Org Export Reference on Worg (https://orgmode.org/worg/dev/org-export-reference.html).

## A.5 Context-sensitive commands

Org has facilities for building context sensitive commands. Authors of Org add-ons can tap into this functionality.

These context sensitive commands work by providing a function that detects special context for that add-on and executes functionality appropriate for that context.

## A.6 Tables and lists in arbitrary syntax

Because of Org's success in handling tables with Orgtbl, a frequently asked feature is to Org's usability functions to other table formats native to other modem's, such as IATEX. This would be hard to do in a general way without complicated customization nightmares. Moreover, that would take Org away from its simplicity roots that Orgtbl has proven. There is, however, an alternate approach to accomplishing the same.

This approach involves implementing a custom translate function that operates on a native Org source table to produce a table in another format. This strategy would keep the excellently working Orgtbl simple and isolate complications, if any, confined to the translate function. To add more alien table formats, we just add more translate functions. Also the burden of developing custom translate functions for new table formats will be in the hands of those who know those formats best.

For an example of how this strategy works, see Orgstruct mode. In that mode, Bastien added the ability to use Org's facilities to edit and re-structure lists. He did by turning orgstruct-mode on, and then exporting the list locally to another format, such as HTML, LATEX or Texinfo.

#### **A.6.1** ラジオテーブル

Radio tables are target locations for translated tables that are not near their source. Org finds the target location and inserts the translated table.

The key to finding the target location are the magic words BEGIN/END RECEIVE ORGTBL. They have to appear as comments in the current mode. If the mode is C, then:

```
/* BEGIN RECEIVE ORGTBL table_name */
/* END RECEIVE ORGTBL table_name */
```

At the location of source, Org needs a special line to direct Orgtbl to translate and to find the target for inserting the translated table. For example:

```
#+ORGTBL: SEND table_name translation_function arguments...
```

table\_name is the table's reference name, which is also used in the receiver lines, and the translation\_function is the Lisp function that translates. This line, in addition, may also contain alternating key and value arguments at the end. The translation function gets these values as a property list. A few standard parameters are already recognized and acted upon before the translation function is called:

:skip N Skip the first N lines of the table. Hlines do count; include them if they are to be skipped.

```
:skipcols (n1 n2 ...)
```

List of columns to be skipped. First Org automatically discards columns with calculation marks and then sends the table to the translator function, which then skips columns as specified in 'skipcols'.

To keep the source table intact in the buffer without being disturbed when the source file is compiled or otherwise being worked on, use one of these strategies:

- Place the table in a block comment. For example, in C mode you could wrap the table between '/\*' and '\*/' lines.
- Put the table after an 'END' statement. For example '\bye' in TEX and '\end{document}' in LATEX.
- Comment and uncomment each line of the table during edits. The M-x orgtbl-toggle-comment RET command makes toggling easy.

## A.6.2 LATeX でのラジオテーブルの例

To wrap a source table in IATEX, use the comment environment provided by comment.sty. To activate it, put \usepackage{comment} in the document header. Orgtbl mode inserts a radio table skeleton<sup>1</sup> with the command M-x orgtbl-insert-radio-table RET, which prompts for a table name. For example, if 'salesfigures' is the name, the template inserts:

The line #+ORGTBL: SEND tells Orgtbl mode to use the function orgtbl-to-latex to convert the table to LATEX format, then insert the table at the target (receive) location named salesfigures. Now the table is ready for data entry. It can even use spreadsheet features<sup>2</sup>:

By default this works only for LATEX, HTML, and Texinfo. Configure the variable orgtbl-radio-table-templates to install templates for other export formats.

<sup>&</sup>lt;sup>2</sup> If the #+TBLFM line contains an odd number of dollar characters, this may cause problems with font-lock in IATEX mode. As shown in the example you can fix this by adding an extra line inside the comment environment that is used to balance the dollar expressions. If you are using AUCTEX with the font-latex library, a much better solution is to add the comment environment to the variable LaTeX-verbatim-environments.

```
% BEGIN RECEIVE ORGTBL salesfigures
% END RECEIVE ORGTBL salesfigures
\begin{comment}
#+ORGTBL: SEND salesfigures orgtbl-to-latex
| 月 | 日数 | 販売数 | 一日あたり |
|-----|
| 1月|
        23 |
               55 |
                          2.4 |
| 2月 |
        21 |
               16 l
                          0.8
|3月|
        22 |
                         12.6
               278
#+TBLFM: $4=$3/$2;%.1f
% $ (font-lock 色分けをうまく動作させるための余分なドル記号、脚注参照)
\end{comment}
```

After editing, C-c C-c inserts translated table at the target location, between the two marker lines.

For hand-made custom tables, note that the translator needs to skip the first two lines of the source table. Also the command has to *splice* out the target table without the header and footer.

```
\begin{tabular}{lrrr}
月 & \multicolumn{1}{c}{日数} & 販売数 & 一日あたり \\
% BEGIN RECEIVE ORGTBL salesfigures
1月 & 23 & 55 & 2.4 \\
2月 & 21 & 16 & 0.8 \\
3月 & 22 & 278 & 12.6 \\
% END RECEIVE ORGTBL salesfigures
\end{tabular}
\begin{comment}
#+ORGTBL: SEND salesfigures orgtbl-to-latex :splice t :skip 2
| 月 | 日数 | 販売数 | 1日あたり |
|-----|
| 1月 |
        23 |
                 55 |
                          2.4
12月1
        21 l
                16 l
                          0.8 |
|3月|
        22 |
                278
                          12.6
#+TBLFM: $4=$3/$2;%.1f
\end{comment}
```

The LATEX translator function orgtbl-to-latex is already part of Orgtbl mode and uses tabular environment by default to typeset the table and mark the horizontal lines with hline. For additional parameters to control output, see (undefined) [Translator functions], page (undefined):

## :splice nil/t

When non-nil, returns only table body lines; not wrapped in tabular environment. Default is nil.

:fmt fmt Format to warp each field. It should contain %s for the original field value. For example, to wrap each field value in dollar symbol, you could use :fmt "\$%s\$". Format can also wrap a property list with column numbers and formats, for

example :fmt (2 "\$%s\$" 4 "%s\\%"). In place of a string, a function of one argument can be used; the function must return a formatted string.

:efmt efmt

Format numbers as exponentials. The spec should have %s twice for inserting mantissa and exponent, for example "%s\\times10^{%s}". This may also be a property list with column numbers and formats, for example :efmt (2 "\$%s\\times10^{%s}\$" 4 "\$%s\\cdot10^{%s}\$"). After efmt has been applied to a value, fmt will also be applied. Functions with two arguments can be supplied instead of strings. By default, no special formatting is applied.

## **A.6.3** 変換関数

Orgtbl mode has built-in translator functions: orgtbl-to-csv (comma-separated values), orgtbl-to-tsv (TAB-separated values), orgtbl-to-latex, orgtbl-to-html, orgtbl-to-texinfo, orgtbl-to-unicode and orgtbl-to-orgtbl. They use the generic translator, orgtbl-to-generic, which delegates translations to various export back-ends.

Properties passed to the function through the 'ORGTBL SEND' line take precedence over properties defined inside the function. For example, this overrides the default  $\LaTeX$  line endings, '\\', with '\\[2mm]':

```
#+ORGTBL: SEND test orgtbl-to-latex :lend " \\\[2mm]"
```

For a new language translator, define a converter function. It can be a generic function, such as shown in this example. It marks a beginning and ending of a table with '!BTBL!' and '!ETBL!'; a beginning and ending of lines with '!BL!' and '!EL!'; and uses a TAB for a field separator:

```
(defun orgtbl-to-language (table params)
  "Convert the orgtbl-mode TABLE to language."
  (orgtbl-to-generic
  table
   (org-combine-plists
   '(:tstart "!BTBL!" :tend "!ETBL!" :lstart "!BL!" :lend "!EL!" :sep "\t")
    params)))
```

The documentation for the orgtbl-to-generic function shows a complete list of parameters, each of which can be passed through to orgtbl-to-latex, orgtbl-to-texinfo, and any other function using that generic function.

For complicated translations the generic translator function could be replaced by a custom translator function. Such a custom function must take two arguments and return a single string containing the formatted table. The first argument is the table whose lines are a list of fields or the symbol hline. The second argument is the property list consisting of parameters specified in the '#+ORGTBL: SEND' line. Please share your translator functions by posting them to the Org users mailing list, emacs-orgmode@gnu.org.

## A.6.4 Radio lists

Call the org-list-insert-radio-list function to insert a radio list template in HTML, LATEX, and Texinfo mode documents. Sending and receiving radio lists works is the same as for radio tables (see  $\langle undefined \rangle$  [Radio tables], page  $\langle undefined \rangle$ ) except for these differences:

- Orgstruct モードが有効でなければなりません。
- ORGTBLの代わりに、キーワード ORGLSTを使います。
- リストの1つ目の項目で C-c C-cと押すと、動作します。

Built-in translators functions are: org-list-to-latex, org-list-to-html and org-list-to-texinfo. They use the org-list-to-generic translator function. See its documentation for parameters for accurate customizations of lists. Here is a LATEX example:

```
% BEGIN RECEIVE ORGLST to-buy
```

% END RECEIVE ORGLST to-buy

\begin{comment}

#+ORGLST: SEND to-buy org-list-to-latex

- 新しい家
- 新しいコンピュータ
  - + 新しいキーボード
  - + 新しいマウス
- 新しい生活

\end{comment}

C-c C-c on 'a new house' inserts the translated LATEX list in-between the BEGIN and END marker lines.

## A.7 Dynamic blocks

Org supports dynamic blocks in Org documents. They are inserted with begin and end markers like any other 'src' code block, but the contents are updated automatically by a user function. For example, C-c C-x C-r inserts a dynamic table that updates the work time (see (undefined) [Clocking work time], page (undefined)).

Dynamic blocks can have names and function parameters. The syntax is similar to 'src' code block specifications:

```
#+BEGIN: myblock :parameter1 value1 :parameter2 value2 ...
```

#+END:

次のコマンドはダイナミックブロックを挿入、更新します。

C-c C-x C-u その場所での動的なブロックを更新します。

org-dblock-update

C-u C-c C-x C-u

現在のファイルの全ての動的なブロックを更新します。

Before updating a dynamic block, Org removes content between the BEGIN and END markers. Org then reads the parameters on the BEGIN line for passing to the writer function. If the function expects to access the removed content, then Org expects an extra parameter, :content, on the BEGIN line.

To syntax for calling a writer function with a named block, myblock is: org-dblock-write:myblock. Parameters come from the BEGIN line.

The following is an example of a dynamic block and a block writer function that updates the time when the function was last run:

```
#+BEGIN: block-update-time :format "on %m/%d/%Y at %H:%M"
#+END:
```

The dynamic block's writer function:

To keep dynamic blocks up-to-date in an Org file, use the function, org-update-all-dblocks in hook, such as before-save-hook. The org-update-all-dblocks function does not run if the file is not in Org mode.

Dynamic blocks, like any other block, can be narrowed with org-narrow-to-block.

## A.8 Special agenda views

Org provides a special hook to further limit items in agenda views: agenda, agenda\*³, todo, alltodo, tags, tags-todo, tags-tree. Specify a custom function that tests inclusion of every matched item in the view. This function can also skip as much as is needed.

For a global condition applicable to agenda views, use the org-agenda-skip-function-global variable. Org uses a global condition with org-agenda-skip-function for custom searching.

This example defines a function for a custom view showing TODO items with WAITING status. Manually this is a multi step search process, but with a custom view, this can be automated as follows:

The custom function searches the subtree for the WAITING tag and returns nil on match. Otherwise it gives the location from where the search continues.

```
(defun my-skip-unless-waiting ()
  "waiting でないツリーをスキップします"
  (let ((subtree-end (save-excursion (org-end-of-subtree t))))
    (if (re-search-forward ":waiting:" subtree-end t)
        nil ; タグが見つかったので、スキップしません
        subtree-end))); タグが見つからないので、サブツリーの最後から検索を再開します
```

To use this custom function in a custom agenda command:

```
(org-add-agenda-custom-command '("b" todo "PROJECT" ((org-agenda-skip-function 'my-skip-unless-waiting) (org-agenda-overriding-header "waiting (待ち) 状態のプロジェクト: "))))
```

関数 org-agenda-overriding-headerを使って、アジェンダビューで意味のある見出しに変更したことにも注意して下さい。

<sup>&</sup>lt;sup>3</sup> The agenda\* view is the same as agenda except that it only considers *appointments*, i.e., scheduled and deadline items that have a time specification '[h]h:mm' in their time-stamps.

Search for entries with a limit set on levels for the custom search. This is a general approach to creating custom searches in Org. To include all levels, use 'LEVEL>0'4. Then to selectively pick the matched entries, use org-agenda-skip-function, which also accepts Lisp forms, such as org-agenda-skip-entry-if and org-agenda-skip-subtree-if. For example:

(org-agenda-skip-entry-if 'scheduled)

現在のエントリがスケジューリングされている場合、それをスキップします。

(org-agenda-skip-entry-if 'notscheduled)

現在のエントリがスケジューリングされていない場合、それをスキップします。

(org-agenda-skip-entry-if 'deadline)

現在のエントリがデッドラインを設定されている場合、それをスキップします。

(org-agenda-skip-entry-if 'scheduled 'deadline)

現在のエントリがデッドラインを設定されているかもしくはスケジューリングされている場合、それをスキップします

(org-agenda-skip-entry-if 'todo '("TODO" "WAITING"))

現在のエントリの TODO のキーワードが TODO もしくは WAITING の場合、それをスキップします。

(org-agenda-skip-entry-if 'todo 'done)

現在のエントリの TODO のキーワードが DONE とマークされている場合、それをスキップします。

(org-agenda-skip-entry-if 'timestamp)

現在のエントリが何かしらのタイムスタンプを持っている場合、それをスキップします。 タイムスタンプはデッドラインかスケジューリングが考えられます。

(org-agenda-skip-entry-if 'regexp "regular expression")

現在のエントリの中で正規表現「regular expression」にマッチした場合、それをスキップします。

(org-agenda-skip-entry-if 'notregexp "regular expression")

現在のエントリの中で正規表現「regular expression」にマッチしない場合、それをスキップします。

(org-agenda-skip-subtree-if 'regexp "regular expression")

2つ上と同じですが、サブツリー全体をチェックしてスキップします。

The following is an example of a search for 'WAITING' without the special function:

```
(org-add-agenda-custom-command
```

'("b" todo "PROJECT"

(org-agenda-overriding-header "waiting (待ち) 状態のプロジェクト: "))))

<sup>&</sup>lt;sup>4</sup> Note that, for org-odd-levels-only, a level number corresponds to order in the hierarchy, not to the number of stars.

## A.9 Speeding up your agendas

Some agenda commands slow down when the Org files grow in size or number. Here are tips to speed up:

- 1. Reduce the number of Org agenda files to avoid slowdowns due to hard drive accesses.
- 2. Reduce the number of 'DONE' and archived headlines so agenda operations that skip over these can finish faster.
- 3. Do not dim blocked tasks:

```
(setq org-agenda-dim-blocked-tasks nil)
```

4. Stop preparing agenda buffers on startup:

```
(setq org-agenda-inhibit-startup nil)
```

5. Disable tag inheritance for agendas:

```
(setq org-agenda-use-tag-inheritance nil)
```

These options can be applied to selected agenda views. For more details about generation of agenda views, see the docstrings for the relevant variables, and this dedicated Worg page (https://orgmode.org/worg/agenda-optimization.html) for agenda optimization.

## A.10 Extracting agenda information

Org provides commands to access agendas through Emacs batch mode. Through this command-line interface, agendas are automated for further processing or printing.

org-batch-agenda creates an agenda view in ASCII and outputs to STDOUT. This command takes one string parameter. When string length=1, Org uses it as a key to org-agenda-custom-commands. These are the same ones available through C-c a.

This example command line directly prints the TODO list to the printer:

```
emacs -batch -l ~/.emacs -eval '(org-batch-agenda "t")' | lpr
```

When the string parameter length is two or more characters, Org matches it with tags/TODO strings. For example, this example command line prints items tagged with 'shop', but excludes items tagged with 'NewYork':

An example showing on-the-fly parameter modifications:

これは向こう 30 日間のアジェンダを作成します。情報源は、~/org/projects.orgだけに制限されます。

For structured processing of agenda output, use org-batch-agenda-csv with the following fields:

```
アイテムのカテゴリーです
category
          TODO キーワード、TAGS そして PRIORITY を除いた見出しです
head
          アジェンダのタイプは、以下が考えられます
type
                          TODO 検索で選ばれた
            todo
            tagsmatch
                          tags 検索で選ばれた
                          diary からインポートされた
            diary
                           デッドラインを設定された
            deadline
                           スケジューリングされた
            scheduled
                          タイムスタンプで選ばれたアポイントメント
            timestamp
                          その日付に close されたエントリ
            closed
            upcoming-deadline デッドラインが近づいていると警告している
                          その日付より前にスケジューリングされたアイ
            past-scheduled
テム, 原文:forwarded scheduled item.
                          エントリが日付のブロックを持っていて日付を
            block
含む
          もしあれば、TODO のキーワード
todo
          継承したものも含めた全ての tags。コロンで区切られている。
tags
date
         2007-2-14 のような基準日
         15:00-16:50 のような時間
time
         追加のプラニング情報の文字列
extra
priority-l
         もし与えられていれば優先順位の文字
         計算された数字の優先度
priority-n
```

If the selection of the agenda item was based on a timestamp, including those items with DEADLINE and SCHEDULED keywords, then Org includes date and time in the output.

If the selection of the agenda item was based on a timestamp (or deadline/scheduled), then Org includes date and time in the output.

Here is an example of a post-processing script in Perl. It takes the CSV output from Emacs and prints with a checkbox:

## **A.11** プロパティ**API**を使う

以下のコマンドはプロパティを操作する助けとなります。

## org-entry-properties &optional pom which

[Function]

Get all properties of the entry at point-or-marker POM.

This includes the TODO keyword, the tags, time strings for deadline, scheduled, and clocking, and any additional properties defined in the entry. The return value is an alist. Keys may occur multiple times if the property key was used several times. POM may also be nil, in which case the current entry is used. If WHICH is nil or all, get all properties. If WHICH is special or standard, only get that subclass.

## org-entry-get pom property & optional inherit

[Function]

Get value of PROPERTY for entry at point-or-marker POM. By default, this only looks at properties defined locally in the entry. If INHERIT is non-nil and the entry does not have the property, then also check higher levels of the hierarchy. If INHERIT is the symbol selective, use inheritance if and only if the setting of org-use-property-inheritance selects PROPERTY for inheritance.

## org-entry-delete pom property

[Function]

Delete the property PROPERTY from entry at point-or-marker POM.

## org-entry-put pom property value

[Function]

Set PROPERTY to VALUE for entry at point-or-marker POM.

# org-buffer-property-keys &optional include-specials

[Function]

カレントバッファにある全てのプロパティのキーを取得します。

## org-insert-property-drawer

[Function]

Insert a property drawer for the current entry.

org-entry-put-multivalued-property pom property &rest values [Function] Set PROPERTY at point-or-marker POM to VALUES. VALUES should be a list of strings. They will be concatenated, with spaces as separators.

# org-entry-get-multivalued-property pom property [Function] プロパティPROPERTYの値を、値がスペースで区切られたリストとして扱い、文字列のリストを返します。

- org-entry-add-to-multivalued-property pom property value [Function] プロパティPROPERTYの値を、値がスペースで区切られたリストとして扱い、このリストの中に値 VALUEがあることを確認します。
- org-entry-remove-from-multivalued-property pom property value [Function] プロパティPROPERTYの値を、値がスペースで区切られたリストとして扱い、このリストの中に値 VALUEがないことを確認します。
- org-entry-member-in-multivalued-property pom property value [Function] プロパティPROPERTYの値を、値がスペースで区切られたリストとして扱い、このリストの中に値 VALUEがあるかをチェックします。

## org-property-allowed-value-functions

[User Option]

特定のプロパティに許可された値を提供する関数へのフックです。その関数はプロパティの名前を単一の引数として受け取り、許可された値の単純なリストを返します。':ETC'がその値の1つである場合、その値を補完の候補として使いますが、他の値も入力することができます。もし関数がプロパティと関係無い場合には、関数はnilを返します。

## **A.12** マッピング **API** を使う

Org Mode は一定の基準を満たす全てのエントリーを探すために、洗練されたマッピング機能を持っています。アジェンダビューを作成するために内部でこの機能を使われていますが、エントリのそれぞれもしくは選択されたエントリに対して任意の関数を実行するために API も使われます。API の主要なエントリポイント:

org-map-entries func & optional match scope & rest skip

[Function]

範囲 SCOPEの内で MATCHにマッチして選択された各見出しで関数 'FUNC'を呼び出します。

'FUNC'は関数か Lisp のフォームです。関数は引数なしですが、見出しの始まりと終わりのカーソル位置とともに呼び出されます。関数への全ての返り値は、リストとして集められて返されます。

To avoid preserving point, Org wraps the call to FUNC in save-excursion form. After evaluation, Org moves the cursor to the end of the line that was just processed. Search continues from that point forward. This may not always work as expected under some conditions, such as if the current sub-tree was removed by a previous archiving operation. In such rare circumstances, Org skips the next entry entirely when it should not. To stop Org from such skips, make 'FUNC' set the variable org-map-continue-from to a specific buffer position.

'MATCH' is a tags/property/TODO match. Org iterates only matched headlines. Org iterates over all headlines when MATCH is nil or t.

'SCOPE'はこのコマンドのスコープ (対象とする範囲) を決定します。以下のどれかになり得ます:

nil カレントバッファ、制限があればそれに従う

tree 現在位置のエントリから始まるサブツリー

file カレントバッファ、制限なしで

file-with-archives

カレントバッファ、関連したアーカイブも含む

agenda 全てのアジェンダファイル

agenda-with-archives

全てのアジェンダフィル、関連したアーカイブファイルも含む

(file1 file2 ...)

ファイルがリスト形式の場合、リスト内の全てのファイルをスキャンします 残りの引数は、スキャナー (読み取る関数?) のスキップ機能の設定として取り扱われます。以 下のアイテムをとることができます。

archive アーカイブタグ (archive tag) があるツリーをスキップします

comment キーワード COMMENT があるツリーをスキップします

function or Lisp form

org-agenda-skip-functionの値として使われます。

関数であればいつもtを返します、

FUNC はは呼び出されません、

関数がポイントを置いたままにした位置から検索は続きます

The mapping routine can call any arbitrary function, even functions that change meta data or query the property API (see \( \)undefined \( \) [Using the property API], page \( \)undefined \( \)). Here are some handy functions:

## org-todo &optional arg

[Function]

エントリの TODO 状態を変更します。引数 ARG が取り得る多くの値については、関数のドキュメント文字列を見て下さい。

## org-priority &optional action

[Function]

エントリのプライオリティを変更します。ACTION が取り得る値についてはこの関数のドキュメント文字列を見て下さい。

## org-toggle-tag tag &optional onoff

[Function]

Toggle the tag TAG in the current entry. Setting ONOFF to either on or off will not toggle tag, but ensure that it is either on or off.

org-promote

[Function]

現在のエントリを一階層上に引き上げます。

org-demote

[Function]

現在のエントリを一階層下へ引き下げます。

This example turns all entries tagged with TOMORROW into TODO entries with keyword UPCOMING. Org ignores entries in comment trees and archive trees.

(org-map-entries

'(org-todo "UPCOMING")

"+TOMORROW" 'file 'archive 'comment)

以下の例では、全てのアジェンダファイルに渡って、TODO のキーワードに WAITING があるエントリの数をカウントします。

(length (org-map-entries t "/+WAITING" 'agenda))

# Appendix B MobileOrg

MobileOrg is a companion mobile app that runs on iOS and Android devices. MobileOrg enables offline-views and capture support for an Org mode system that is rooted on a "real" computer. MobileOrg can record changes to existing entries.

iOS アプリ (https://github.com/MobileOrg/) は Richard Moreland よって開発された *iPhone/iPod Touch/iPad* シリーズの携帯端末のためのアプリケーションです。Android のユーザーは Matt Jones よって作成された MobileOrg Android (http://wiki.github.com/matburt/mobileorg-android/) のアプリをチェックしてください。

This appendix describes Org's support for agenda view formats compatible with Mobile-Org. It also describes synchronizing changes, such as to notes, between Mobile-Org and the computer.

To change tags and TODO states in MobileOrg, first customize the variables org-todo-keywords and org-tag-alist. These should cover all the important tags and TODO keywords, even if Org files use only some of them. Though MobileOrg has in-buffer settings, it understands TODO states sets (see  $\langle undefined \rangle$  [Per-file keywords], page  $\langle undefined \rangle$ ) and  $mutually\ exclusive\ tags$  (see  $\langle undefined \rangle$  [Setting tags], page  $\langle undefined \rangle$ ) only for those set in these variables.

## B.1 Setting up the staging area

MobileOrg needs access to a file directory on a server to interact with Emacs. With a public server, consider encrypting the files. MobileOrg version 1.5 supports encryption for the iPhone. Org also requires openss1 installed on the local computer. To turn on encryption, set the same password in MobileOrg and in Emacs. Set the password in the variable org-mobile-use-encryption<sup>1</sup>. Note that even after MobileOrg encrypts the file contents, the file names will remain visible on the file systems of the local computer, the server, and the mobile device.

For a server to host files, consider options like Dropbox.com (http://dropbox.com) account<sup>2</sup>. On first connection, MobileOrg creates a directory MobileOrg/ on Dropbox. Pass its location to Emacs through an init file variable as follows:

(setq org-mobile-directory "~/Dropbox/MobileOrg")

Org copies files to the above directory for MobileOrg. Org also uses the same directory for sharing notes between Org and MobileOrg.

# B.2 Pushing to MobileOrg

Org pushes files listed in org-mobile-files to org-mobile-directory. Files include agenda files (as listed in org-agenda-files). Customize org-mobile-files to add other files. File names will be staged with paths relative to org-directory, so all files should be inside this directory<sup>3</sup>.

<sup>&</sup>lt;sup>1</sup> If Emacs is configured for safe storing of passwords, then configure the variable, org-mobile-encryption-password; please read the docstring of that variable.

An alternative is to use webday server. MobileOrg documentation has details of webday server configuration. Additional help is at FAQ entry (https://orgmode.org/worg/org-faq.html#mobileorg\_webday).

 $<sup>^3</sup>$  Symbolic links in  $\operatorname{\sf org-directory}$  should have the same name as their targets.

Push creates a special Org file agendas.org with custom agenda views defined by the user<sup>4</sup>.

Org writes the file index.org, containing links to other files. MobileOrg reads this file first from the server to determine what other files to download for agendas. For faster downloads, MobileOrg will read only those files whose checksums<sup>5</sup> have changed.

## B.3 Pulling from MobileOrg

When MobileOrg synchronizes with the server, it pulls the Org files for viewing. It then appends to the file mobileorg.org on the server the captured entries, pointers to flagged and changed entries. Org integrates its data in an inbox file format.

- 1. Org-mode は、mobileorg.org<sup>6</sup> の中で発見した全てのエントリーを移動し、org-mobile-inbox-for-pull変数によって、ポインタが付けられたファイルに追加します。記録されたエントリと編集されたイベントは、それぞれ InBox ファイル中でトップレベルのエントリーとして位置づけられるでしょう。
- 2. After moving the entries, Org attempts changes to MobileOrg. Some changes are applied directly and without user interaction. Examples include changes to tags, TODO state, headline and body text. Entries for further action are tagged as :FLAGGED:. Org marks entries with problems with an error message in the inbox. They have to be resolved manually.
- 3. Org-mode では、その際にフラグがつけられたすべてのエントリーとともに、アジェンダビューを作成できます。そしてユーザーはそれらの項目をやり終えたり、必要な行動を実行するでしょう。 Mobile Org のエントリーにフラグが付けられている間に、ノートが保存されていたら、そのノートは、カーソルがアジェンダの行の上に置かれた時に、エコーエリア上に表示されるでしょう。
  - ? そういう特別なアジェンダの中で、?が入力されたときには、別のウインドウでフラグの付けられたノートの全てが表示され、キルリング上に内容がコピーされます。そして、? z C-y C-c C-cを使用することで、フラグのつけられたノートを、そのエントリーの通常のノートとして保存することができます。?を2度続けて入力すると、(プロパティの中に保存されていた)記録されているフラグの付いたノートと一緒に、:FLAGGED:というタグを削除するよう指示したことになります。この方法で、あなたはこのフラグの付けられたエントリーを意図したプロセスで完了させるという指示をすることになります。

C-c a ? returns to the agenda view to finish processing flagged entries. Note that these entries may not be the most recent since MobileOrg searches files that were last pulled. To get an updated agenda view with changes since the last pull, pull again.

<sup>&</sup>lt;sup>4</sup> While creating the agendas, Org mode will force ID properties on all referenced entries, so that these entries can be uniquely identified if MobileOrg flags them for further action. To avoid setting properties configure the variable org-mobile-force-id-on-agenda-items to nil. Org mode will then rely on outline paths, assuming they are unique.

<sup>&</sup>lt;sup>5</sup> Checksums are stored automatically in the file checksums.dat.

<sup>&</sup>lt;sup>6</sup> mobileorg.orgはこの操作のあとで空になります。

# Appendix C 歴史と謝辞

## C.1 From Carsten

Org-mode は 2003 年に誕生しました。Emacs Outline モードのユーザーインターフェイスに対するフラストレーションから自由になるためでした。私(Carsten Dominik)は、自分のノートとプロジェクトを整理しようと試みていて、Emacs 使うことが自然なやり方に思えました。ところが、アウトラインツリーの一部を隠したり表示したりするだけでも、2?3 個のキーを組み合わせたコマンドを、7種類も覚えなければならず、これは全く受け入れがたいことでした(訳注:org-mode では TABだけでよい)。また、アウトラインでノートを取るとき、私は絶えずツリーの構造を変更して、自分の考えや計画に合わせて整理しておきたかったのです。 Visibility cycling と structure editing は、当初 outline-magic.elパッケージに実装されていましたが、すぐにより一般的な org.elに移しました。プロジェクトを計画するための心地良い環境になったので、次の段階は TODO リスト、基本的なタイムスタンプそしてテーブル機能を追加することでした。これらの機能は、org-mode が今日も追求している 2 つの主要なゴールを明らかにしました。すなわち、現代的で、アウトラインベースの、革新的かつ直感的な編集機能を持ったプレーンテキストモードになること。そして、ノートファイルに、プロジェクトプランイングの機能を直接組み込むことです。

Since the first release, literally thousands of emails to me or to emacs-orgmode@gnu.org have provided a constant stream of bug reports, feedback, new ideas, and sometimes patches and add-on code. Many thanks to everyone who has helped to improve this package. I am trying to keep here a list of the people who had significant influence in shaping one or more aspects of Org. The list may not be complete, if I have forgotten someone, please accept my apologies and let me know.

リストを記す前に、何名かについてアルファベット順で特別に紹介します。

## Bastien Guerry

Bastien has written a large number of extensions to Org (most of them integrated into the core by now), including the LATEX exporter and the plain list parser. His support during the early days was central to the success of this project. Bastien also invented Worg, helped establishing the Web presence of Org, and sponsored hosting costs for the orgmode.org website. Bastien stepped in as maintainer of Org between 2011 and 2013, at a time when I desperately needed a break.

#### Eric Schulte and Dan Davison

Eric and Dan are jointly responsible for the Org-babel system, which turns Org into a multi-language environment for evaluating code and doing literate programming and reproducible research. This has become one of Org's killer features that define what Org is today.

#### John Wiegley

John は、数々の素晴らしいアイディアとパッチを直接的に org-mode に提供してくれました。具体的には、ファイル添付システム(org-attach.el)、AppleMail との一体化(org-mac-message.el)、TODO リストの階層的な依存関係、習慣のトラッキング(org-habits.el)そして、暗号化(org-crypt.el)です。そして実は、org-modeのキャプチャシステムは、彼の素晴らしい remember.elを拡張したものです。

#### Sebastian Rose

Sebastian がいなければ、org-mode の HTML/XHTML エクスポートは、無知なアマチュアによる痛ましい機能になっていたでしょう。彼は org-mode の該当部分をより高いレベルに押し上げました。また、org-info.jsの作者でもあります。この JavaScript は、org-mode から生成されたウェブページを info のように表示したり、単一キーによるナビゲーションでツリーを折り畳むインターフェイスを提供します。

さて!いよいよ貢献してくれた方々のリストに移ります。繰り返しますが、忘れているところがあれば教えてください。

## C.2 From Bastien

I (Bastien) have been maintaining Org between 2011 and 2013. This appendix would not be complete without adding a few more acknowledgments and thanks.

I am first grateful to Carsten for his trust while handing me over the maintainership of Org. His unremitting support is what really helped me getting more confident over time, with both the community and the code.

When I took over maintainership, I knew I would have to make Org more collaborative than ever, as I would have to rely on people that are more knowledgeable than I am on many parts of the code. Here is a list of the persons I could rely on, they should really be considered co-maintainers, either of the code or the community:

#### Eric Schulte

Eric is maintaining the Babel parts of Org. His reactivity here kept me away from worrying about possible bugs here and let me focus on other parts.

## Nicolas Goaziou

Nicolas is maintaining the consistency of the deepest parts of Org. His work on org-element.el and ox.el has been outstanding, and it opened the doors for many new ideas and features. He rewrote many of the old exporters to use the new export engine, and helped with documenting this major change. More importantly (if that's possible), he has been more than reliable during all the work done for Org 8.0, and always very reactive on the mailing list.

#### Achim Gratz

Achim rewrote the building process of Org, turning some *ad hoc* tools into a flexible and conceptually clean process. He patiently coped with the many hiccups that such a change can create for users.

#### Nick Dokos

The Org mode mailing list would not be such a nice place without Nick, who patiently helped users so many times. It is impossible to overestimate such a great help, and the list would not be so active without him.

I received support from so many users that it is clearly impossible to be fair when shortlisting a few of them, but Org's history would not be complete if the ones above were not mentioned in this manual.

## **C.3** 貢献者リスト

- Russel Adams は、引き出しのアイディアを思いつきました。
- Suvayu Ali has steadily helped on the mailing list, providing useful feedback on many features and several patches.
- Luis Anaya は ox-man.el を書きました。
- Thomas Baumann は、org-bbdb.elとorg-mhe.elを作成しました
- *Michael Brand* helped by reporting many bugs and testing many features. He also implemented the distinction between empty fields and 0-value fields in Org's spreadsheets.
- *Christophe Bataillon* は、Org Mode のウェブサイトで使われているユニコーンの素晴らしい ロゴを作成しました。
- *Alex Bochannek* は、タイムスタンプの丸め込みのためのパッチを提供しました。
- Jan Bocker は、org-docview.elを作成しました。
- Brad Bozarth は、org-mode のファイルに RSS フィードの情報を引き込む方法を示しました。
- Tom Breton は、org-choose.elを作成しました。
- *Charles Cave* の提案は、Remember のためのテンプレートの実装を活性化しました。現在は Capture のテンプレートになっています。
- Pavel Chalmoviansky は、時間指定したアイテムについてアジェンダの扱いに影響を与えました。
- Gregory Chernov は、テーブルの計算で Lisp 形式をサポートするパッチを作成し、XEmacs との互換性を改善しました。特に、XEmacs へ nouline.elを移植しました。
- *Sacha Chua* は、Planner からのいくつかのリンクコードをコピーすることを提案しました。さらに、ブログを通じて Org Mode の普及の手助けをしました。
- Toby S. Cubitt は時刻フォーマットのためのコードに貢献しました。
- Baoqiu Cui contributed the first DocBook exporter. In Org 8.0, we go a different route: you can now export to Texinfo and export the .texi file to DocBook using makeinfo.
- Eddward DeVilla は、チェックボックスの統計を提案し、テストしました。また、プロパティのアイディアを思いつきました。しかも、そのための API があります。
- Nick Dokos は、いくつもの扱いにくいバグを見つけ出しました。
- Kees Dullemond は、HTML にあるプロジェクトのリストを直接編集していました。そのため、HTML エクスポートを含む初期の開発の一部をとても活性化しました。彼は、テーブルの列を狭めたり広げたりする手段を求めました。
- Jason Dunsmore has been maintaining the Org-Mode server at Rackspace for several years now. He also sponsored the hosting costs until Rackspace started to host us for free.
- *Thomas S. Dye* は、Worg にドキュメントを寄稿し、マニュアルに Org-babel のドキュメント を組み込む手助けをしました。
- Christian Egli は、ドキュメントを Texinfo 形式に変換し、アジェンダを呼び起こし、HTML エクスポートに CSS フォーマットのパッチを生成しました。さらに、org-taskjuggler.elを 作成しました。
- $David\ Emery\$ は、エクスポートされた HTML のアジェンダでカスタムな CSS をサポートするパッチを提供しました。

- Sean Escriva took over MobileOrg development on the iPhone platform.
- Nic Ferrier は、mailcap と XOXO サポートに貢献しました。
- Miguel A. Figueroa-Villanueva は、階層的なチェックボックスを実装しました。
- John Foerch は、隠されたアウトラインツリーで、どうすればインクリメンタルサーチが検索結果の周辺にコンテクストを表示するようになるかを明らかにしました。
- Raimar Finken は、org-git-line.elを作成しました。
- Mikael Fornius は、メーリングリストを管理しています。
- Austin Frank は、メーリングリストを管理しています。
- *Eric Fraga* は、アイディアを出しテストを行ない、BEAMER エクスポートの開発を進めました。
- Barry Gidden は、Network Theory Ltd. を通した本の出版のための準備で、マニュアルを校正してくれました。
- Niels Giesen は、DONE としたツリーを自動的にアーカイブするアイディアを提供しました。
- Nicolas Goaziou rewrote much of the plain list code. He also wrote org-element.el and org-export.el, which was a huge step forward in implementing a clean framework for Org exporters.
- Kai Grossjohann は、他のパッケージとのキーバインディングの衝突を指摘しました。
- Network Theory Ltd. の *Brian Gough* は、org-mode のマニュアルを書籍として出版しました。
- Bernt Hansen は、タスクの自動リピート、タスクの状態遷移ログ、クロックテーブルのサポートで、多くの部分を担当しました。彼の明瞭な説明は、Git のバージョン管理システムを採用した時にとても重要でした。
- *Manuel Hermenegildo* は、いくつものアイディア、いくつかのバグフィックスとパッチを提出しました。
- Phil Jackson は、org-irc.elを作成しました。
- Scott Jaderholm は、フットノート、折り畳んだエントリー間の空行の制御、そしてプロパティの列表示を提案しました。
- Matt Jones は、MobileOrg Android を作成しました。
- Tokuya Kameshima は、org-wl.elとorg-mew.elを作成しました。
- Jonathan Leech-Pepin は ox-texinfo.el を作りました。
- *Shidai Liu* ("Leo") は、IAT<sub>E</sub>X の組み込みを探求し検証しました。また彼は頻繁なフィードバックといくつかのパッチを提供しました。
- Matt Lundin は、テーブルの数式と名前付きの非表示アンカーへの参照をテーブルの最終行に置くことを提案しました。また、FAQで多くの質問に答えています。
- *David Maus* は、org-atom.elを作成し、Org Mode に関する git のチケットを管理しています。またメーリングリストに、有益な返信といくつかのバグフィックス、そして多数のパッチを提出する貢献者です。
- Jason F. McBrayer は、アジェンダの CSV 形式のエクスポートを提案しました。
- Max Mikhanosha は、ノートの再配置のアイディアを思いつきました。
- Dmitri Minaev は、ファイルごとに優先順位の制限を設定するパッチを提供しました。
- Stefan Monnier は、Emacs Lisp コンパイラの出力を快適に保つためのパッチを 提供しました。

- Richard Moreland は、iPhone 向けに MobileOrg を作成しました。
- Rick Moynihan は、一つのファイルで複数の TODO の連なりを扱うことを可能にし、アジェンダをサブツリーに素早く制限可能にしました。
- Todd Neal は、INFO ファイルと Elisp 形式へのリンクについてパッチを提供しました。
- Greg Newman は、ユニコーンのロゴを現在の形にリフレッシュしました。
- *Tim O'Callaghan* は、ファイル内リンク、一般的なファイルリンクのための検索オプション、 そしてタグを提案しました。
- *Osamu Okano* は、orgcard2ref.plを作成しました。リファレンスカードのテキスト版を作るための Perl スクリプトです。
- *Takeshi Okano* は、Org Mode のマニュアルと、David O'Toole's のチュートリアルを日本語 に翻訳しました。
- Oliver Oppitz は、TODO アイテムが複数の状態を持つことを提案しました。
- Scott Otterson は、他の要素とのリンクに説明文を導入するきっかけを作りました。
- Pete Phillips は、タグの開発をする際に助力しました。また、頻繁にフィードバックを提供しました。
- Francesco Pizzolante provided patches that helped speeding up the agenda generation.
- $Martin\ Pohlack$  は、文字列の挿入をアンドゥのために使いやすい束にするコードスニペットを 提供しました。
- Rackspace.com is hosting our website for free. Thank you Rackspace!
- T.V. Raman は、バグをレポートして改善を提案しました。
- Matthias Rempe (Oelde) は、アイディアと Windows サポート、品質制御を提供しました。
- Paul Rivier は、名前付き注釈の基本的な実装を提供しました。また彼は、しばらくメーリングリストの管理者でした。
- $Kevin\ Rogers$  は、リモートホストの VM ファイルにアクセスするコードを提出しました。
- Frank Ruell は、keymapp nilのミステリアスなバグ (allout.elとの衝突) を解消しました。
- Jason Riedy は、拡張パッチによって orgtbl テーブルのための送受信の仕組みを汎用化しました。
- *Philip Rooke* は、org-mode のリファレンスカードを作成しました。数多くのフィードバックを提供し、Org Mode の文書化の基準を作成し適用しました。
- Christian Schlauer は、特に、リンクで利用するカギ括弧(<,>) について提案しました。
- Christopher Schmidt reworked orgstruct-mode so that users can enjoy folding in nonorg buffers by using Org headlines in comments.
- Paul Sexton は、org-ctags.elを作成しました。
- VM、BBDB、Gnus ヘリンクすることの最初のアイディアは、Tom Shannon の organizer-mode.elによってもたらされました。
- *Ilya Shlyakhter* は、同一階層内でのアーカイブ、リテラルの例での行番号、そして、参照されたコード行のリモートハイライトを提案しました。
- Stathis Sideris は、ASCII を PNG に変換する ditaa.jarを作成しました。現在これは、org-mode の contribディレクトリに格納されています。
- $Daniel\ Sinder\$ は、サブツリーのロックによる内部的なアーカイブ機能のアイディアを思いつきました。

- Dale Smith は、リンクの省略記法を提案しました。
- James TD Smith は、便利なカスタマイズと機能のための数多くのパッチを提供しました。
- Adam Spiers は、グローバルなリンクコマンドを求めました。これはリンクの拡張システムの 構築のきっかけとなり、行列のサポートを追加し、さらにマッピング API を提案しました。
- *Ulf Stegemann* は、特別な記号を HTML、LaTeX、UTF-8、Latin-1、そして ASCII に変換 するための表を作成しました。
- *Andy Stewart* は、org-w3m.elにコードを提供しました。Org Mode のシンタックスにリンクを変換した HTML コンテンツをコピーする機能です。
- *David O'Toole* は、org-publish.elを作成しました。また、マニュアルにおける公開の章のドラフトを執筆しました。
- $Jambunathan\ K$  は ODT エクスポーターの作成に貢献し、さらに HTML エクスポーターを 書き換えました。
- Sebastien Vauban は、LaTeX と BEAMER エクスポートについての多くの問題をレポートしました。また、GNUS のソースコードをハイライトする機能を有効にしました。
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