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THE JAPANESE TYPESETTING EXPRESSIONS MANUAL

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1. Characters

1-1.Typeface

Typeface can be changed.

1-2.Mixed Text composition

Font can be used in the range of Unicode.
For example,following specifying is possible.Katakana and hiragana are set with Mincho typeface, while the other characters are set with such as Japanese gothic.

◆ Sample:
In case katakana and hiragana are set with Mincho typeface , the other characters are set with Japanese gothic.

混植セットのサンプルです。

1-3. Character Size

The character size can be specified.
The character size should be specified by the numerical specification or the ratio of the size to the previous character.
The numerical specification is adopted the unit for pixel, inch,cm,mm,point,and pica(1 pica=12point).

1-4. Henbai(Cho-tai, Hei-tai)

The character width can be specified.
Relative to the width of the standard(100%), the character width should be specified by more wide 4 phases, or more narrow 4 phases.

Cho-tai means that the character height greater than the character width.
Hei-tai means that the character width greater than the character height.

1-5. Character Colour

The character colour can be specified.
The character colour should be specified by RGB or colour name (such as red, orange, green, lime).

1-6. Character Weight(Including Bold)

The character weight can be specified.

There are three method for setting.
1. Specifying thick or thin in comparison with the previous character.
2. Specifying bold.
3. Specifying thickness from 9 phases(100-900).

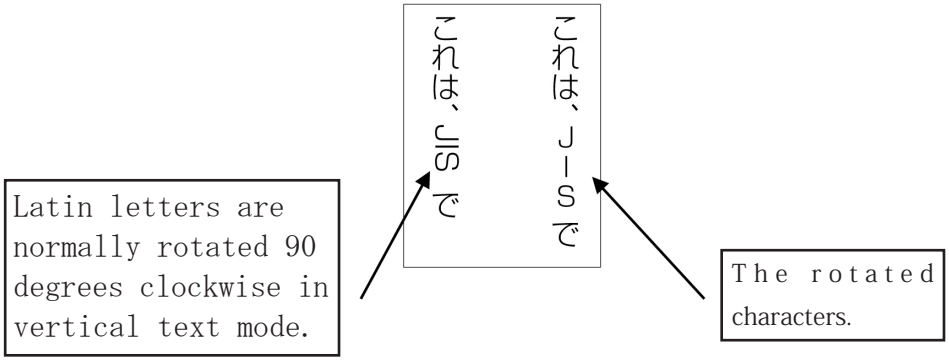
1-7. Italic

The font that has been designed to look fine when it is slanted at an angle can be specified.(italic specified)
Specified to slant upright font is also possible.(oblique specified)

1-8. Character Rotation

It is possible to rotate the characters in the vertical.

◆ Sample:



1-9. All Caps

All characters can be capitalized.

◆ Sample:

これは、Windows7 です。 ← Normal

これは、WINDOWS7 です。 ← All Caps specified

1-10. Small Caps

Small caps is applied for such as running head in Western Texts.
It is also known as Small capital.
Without reducing character size, a font that was designed small is used.

◆ Sample:

これは、Windows です。 ← Normal

これは、WINDOWS です。 ← Small caps (Small capital)

1-11.Outline Character /Shadow Text

Outline character:The thickness and the colour of the outline of the character can be specified.
Shadow text:Adding a shadow to the character can be specified.
The direction, the range and the colour of the shadow can be specified.

◆ Sample:

Outline character

Shadow text

1-12. Ornament Characters

Superscript or subscript can be specified.

◆ Sample:

Superscript : x^2 Subscript : H_2O

1-13. Encircled Character, Character In Parenthesis

The character (including numbers) which enclosed with ○,□,or () can be specified.
The specified character is counted as one character.

◆ Sample:

① 1 ㈱ ㊟

1-14.Combining Characters

The character combined by multiple characters can be specified.

Ligature:The character combined by two characters or more characters that are adjacent. Basically, the characters are provided between characters so as not to hit.
The characters may also be provided for decoration.
Diphthong:a single glyph with two or more adjoined graphemes.

◆ Sample:

大正　pH　　fl　fi　　œ　æ　Œ

Ligature　　Diphthong

1-15. Kanji Variants

The characters which has a glyph different from the standard whereas has the same meaning and sound.

◆ Sample:

高　髙　　蝉　蟬　　辺　邊　邉

1-16. Inter-Character Space

Space between characters can be specified.

◆ Sample:

あいうえお　　あ い う え お　　あ　い　う　え　お

1-17. Even Tsumegumi(Tracking)

「1-16. inter-character space」(see p4)
Tracking means specifying the distance between the characters uniformly.

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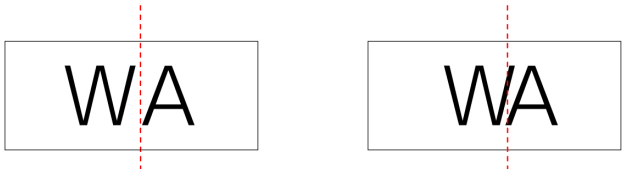
1-18. Kerning

kerning is the function which adjusts the spacing between the characters. The space is decided by the combination of the characters adjoined.

◆ Sample:



Not applied　　Kerning applied

2. Word

2-1. Bousen (sideline)

The characters with underline, overbar and the negation line can be specified.
Style, thickness and colour of the line can be specified.
Specifying multiple kind of line with same characters is possible.

◆ Sample:

あい 上線 うえ 下線 おか ~~打ち消し線~~ きく 上下線 けこ

overline　underline　negation

2-2. Emphasis Dots

To emphasis the words, emphasis dots can be specified.
There are kinds of the dot as follows.
The colour of the dots can be specified.

	FILLED	HOLLOW
Dot	●	○
Circle	⬤	◯
Double circle	◉	◎
Triangle	▲	△
Punctuation mark(Sesame)	、	、

◆ Sample:

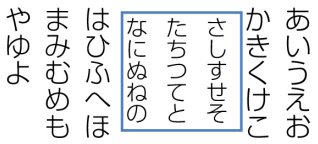
日本は美しい、

日本は美しい

2-3. Rectangular Ruled Lines

The rectangular ruled line which enclosed by letter unit or a word unit can be specified.
Style, thickness and colour of the ruled lines can be specified.
Specifying multiple kind of line with same characters is possible.
Each of the ruled lines as head, foot, and each side can be separately specified.
◆ Sample:

あい サンプル うえお
かき サンプル くけこ
さし サンプル すせそ



2-4. Group Ruby

The texts of ruby to the whole word can be specified.

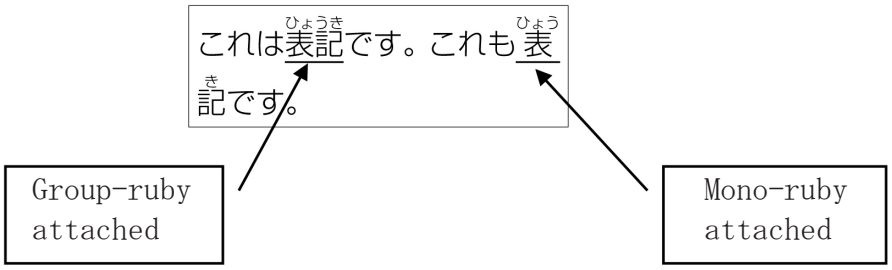
◆ Sample:

これは表記(ひょうき)です。これも表記(ひょうき)です。

2-5. Compound Word Ruby(reference)

First, ruby texts should be specified to set in connection with each base character.
Then, group ruby should be specified when three or more ruby texts need to be attached to one or more base character.
Mono-ruby should be specified on other case.
And if group-ruby reached to the end of the line, it handled as mono ruby.

◆ Sample:



◆Notes
There is no description of the following specification of EPUB.

First, ruby texts should be specified to set in connection with each base character.
Then, group ruby should be specified when three or more ruby texts need to be attached to one or more base character.
Mono-ruby should be specified on other case.
And if group-ruby reached to the end of the line, it handled as mono ruby.

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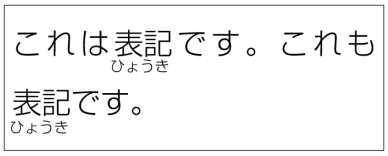
2-6. Sitatsuki Ruby

Sitatsuki ruby is attached to a lower side of the base character in the horizontal writing mode and attached to a left side of the base character in the vertical writing mode.

◆ Sample:



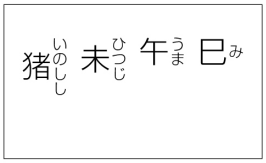
Group ruby and shitatsuki ruby

Compound word ruby and shitatsuki ruby

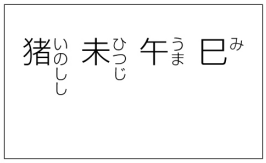
2-7. Nakatsuki/Katatsuki

Nakatsuki: Attach the ruby character so that the center matches that of the base character.
Katatsuki: Attach the ruby character so that aligned with top of the base character.

◆ Sample:



Nakatsuki



Katatsuki

2-8. Rubykake

Rubykake is a method that ruby text to hang over the anteroposterior letter when the length of ruby text is longer than the base characters.
However, the letter which overhanged limited to hiragana or katakana.

◆ Sample:

Not specified

Rubykake is specified

2-9. Tate-Chu-Yoko

Two or more character can be put into a single character space. By using this, the layout called Tate-Chu-Yoko is possible.(However, there is no guarantee on composition when three or more character set in.)
The combination of Tate-Chu-Yoko, superscript and subscript is possible, too.

◆ Sample:

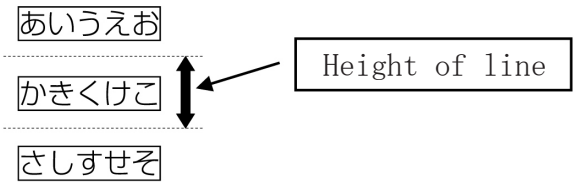
平成24年吉日　　水素はH_2です

3. Line/Paragraph

3-1. Line Space

Height of line space can be specified.

◆ Sample:



3-2. Line Head Alignment

To specify a run of text to align the line head.

3-3. Line Center Alignment

To specify a run of text to align the center of a line.

3-4. Line End Alignment

To specify a run of text to align the line end.

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3-5. Even Inter-Character Spacing

To specify each line to aligned on the same line-head and line-end.

◆ Sample:

【Vertical writing mode】

あいう	かきく	さしす	たちつ
Line head alignment	Line end alignment	Line center alignment	Even-inter-character spacing

【Horizontal writing mode】

あいう	Line head alignment
かきく	Line end alignment
さしす	Line center alignment
た　ち　つ	Even-inter-character spacing

3-6. Align Text At Both Ends

Alignment of the last line end so that it align text at both ends.

◆ Sample:

【Vertical writing mode】

あいうえおかきく	まみむめもやゆよ
Line head alignment	Even-inter-character spacing

3-7. Particular Alignment Method

decimal alignment:alignment by decimal point.
equal alignment:alignment by equal sign.
alignment by any appointed character:alignment by any appointed character such as ¥.

◆ Sample:

62.32	3x＝x+2	¥280円
100.00	3x-x＝2	¥98円
83.7	2x＝2	¥198円
1.25	x＝1	¥1280円
Decimal alignment	Equal alignment	Alignment by appointed character

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3-8. Jidori Processing

Characters can be aligned with uniform spacing at the defined length.

◆ Sample:

足立区	あきる野市	昭島市	青ヶ島村

3-9. Line Head Indent

Line head indent can be specified.

3-10. Line End Indent

Top line end indent can be specified.

3-11. Line Head Indent At The Beginning Of Paragraphs

Line head indent at the beginning of paragraphs can be specified.

3-12. Line Head Hanging("questions and answer") Indent

The method that indents the second and following lines of the paragraph can be specified.

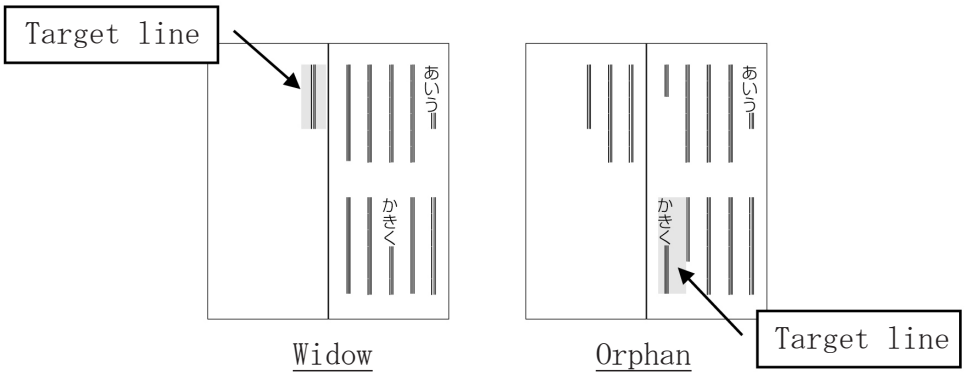
◆ Sample:

あいうえおかきくけこさしすせそ	あいうえおかきくけこさしすせそ	あいうえおかきくけこさしすせそ	あいうえおかきくけこさしすせそ
Line head indent	Line end indent	Top line head indent	Line head hanging indent

3-13. Prohibition Of Widow And Orphan

Widow:The term in text layout to describe that the last few lines of a paragraph appears at the top of a new page.
Orphan:The term in text layout to describe that the first few lines of a paragraph appears at the bottom of a page.
Prohibition of widow and orphan can be specified.

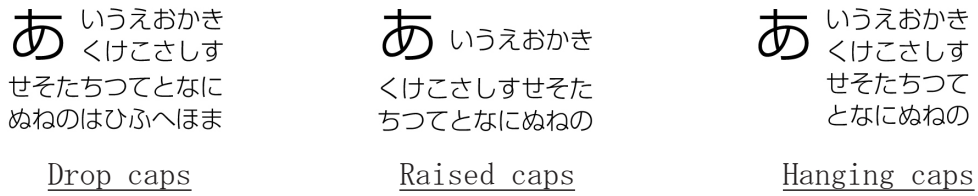
◆ Sample:



3-14. Initial Caps

Initial caps designed on drawing reader's attention, by enlarging the first character of a paragraph. There are methods which are called drop caps, raised caps and hanging caps by the difference in how to flow the following characters.

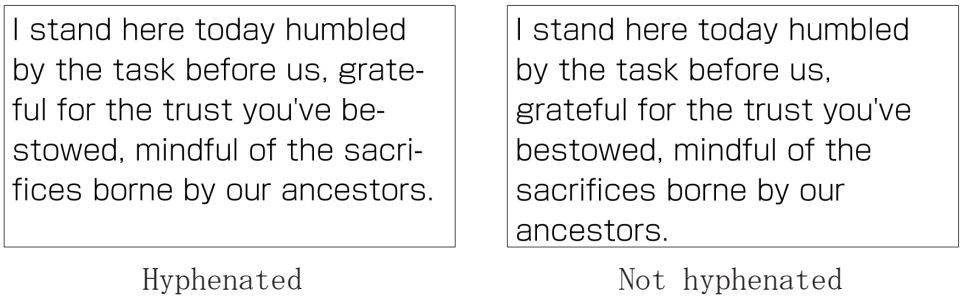
◆ Sample:



3-15. Hyphenation

Hyphenation is a method of breaking a line by dividing a Western word by adding hyphen at the end of the line.This function can be specified.

◆ Sample:



3-16. List

Entries can be listed.
Design of the mark of list can be specified. Examples are shown below.

filled circle	●	Roman numerals (Small)	i	Numerals with 0	01
circle	○	Roman numerals (Capital)	I	Greece characters (Small)	α
Square	■	Alphabet (Small)	a	Chinese numerals	一
Numerals	1	Alphabet (Capital)	A	Hiragana	あ

As well as the above, there are Armenian numerals, Georgia numerals, Hebrew numerals, I-Ro-Ha order (Japanese syllabary order) (Hiragana and Katakana).

◆ Sample:

・バナナ
・みかん
・リンゴ

1. カレー
2. シチュー
3. ハンバーグ

A. カレー
B. シチュー
C. ハンバーグ

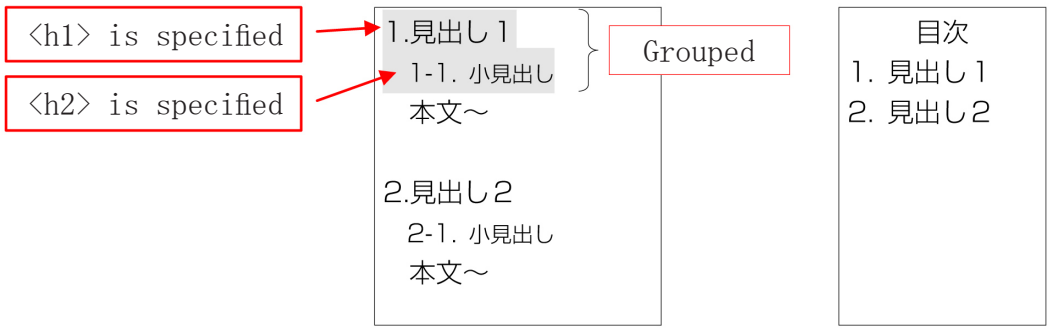
3-17. Grouping of Headings

Headings can be grouped when the headings are composed of different styles such as third level headings, subtitle, catchphrase and so on.

In the group, heading command (<h1> to <h6>. <h1> is the highest level of the headlines.) can be specified.

The highest level of the heading is referred when grouped headings reflected in the table of contents.

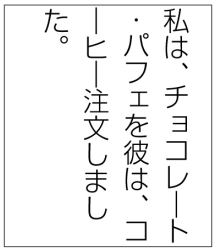
◆ Sample:



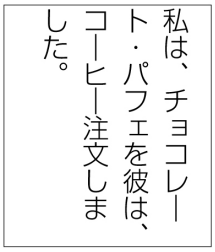
3-18. Line Breaking Rules

There are lax prohibition rule and strict prohibition rule.In lax prohibition rule, small kana, prolonged sound marks, iteration marks, horizontal ellipsis and katakana middle dots are allowed to be the top of the line.

◆ Sample:



Lax prohibition rule



Strict prohibition rule

3-19. Unbreakable Character Sequence

「 」(no—break space)is a space which placed between words.
Around the end of the line,it prohibit paragraph to break at that point..
The alphabetical word around the end of the line can be splitted by specifying(Normally it won't be splitted in the middle of the words).

◆ Sample:

  is used

Half-width em space is used

line break is allowed in the middle of the word

line break is not allowed in the middle of the word(Normal)

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3-20. Line Adjustment By Hanging Punctuation

The hanging punctuation is a method which places full stops and commas to the previous line end to avoid the line head wrap of full stop and comma regardless of lapping over the hanmen(page content area).
When Line adjustment by hanging punctuation is not specified, there are two method following.Wrapping full stop or comma with previous character(line adjustment by inter character space expansion), and including full stop or comma in hanmen forcibly(line adjustment by inter character space reduction).

◆ Sample:

句読点が行頭に来るとき、版面を超えてでも	句読点が行頭に来るとき、版面を超えてでも	句読点が行頭に来るとき、版面を超えてでも
Line adjustment by hanging punctuation	Line adjustment by inter character space expansion	Line adjustment by inter character space reduction

3-21.Quarter Em Space Between Japanese And Western Characters

When Japanese and Western texts are mixed,quarter em space(quarter of character advance) is added between Japanese character and Western character to make texts readable.

◆ Sample:

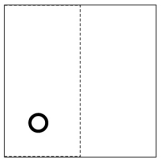
「今日」は today と書きます。	Quarter em spaces added
「今日」はtodayと書きます。	Quarter em spaces are not added

3-22. Reducing Of Half Em Space Of Brackets, Full Stops And Commas

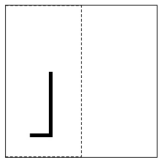
The character size of brackets , full stops and commas are designed in less than half of the size of the basic character. The blank of the character frame can be packed automatically.

◆ Sample:

「はい」と答えた。そして、立ち	Specified
「はい」と答えた。そして、立	Not specified



Full stop



Bracket

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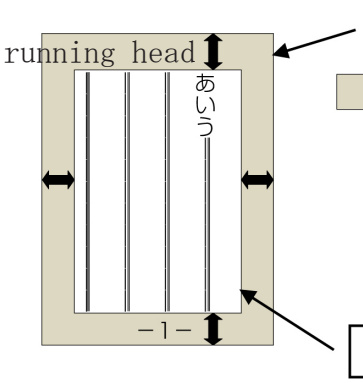
4. Composition of the page

4-1.Margin

A position of hanmen(page content area) for trim size can be specified.

◆ Sample:

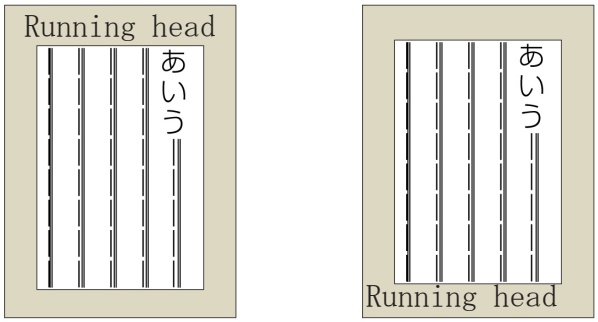


: Following space can be specified.
Head(The head margin between the edge of a trimmed page and the hanmen),foot(The bottom margin between the edge of a trimmed page and the hanmen), left(Margin between the edge of a trimmed page and the hanmen) and right (Margin between the edge of a trimmed page and the hanmen.)

4-2.Running Head

The position of running head can be specified.

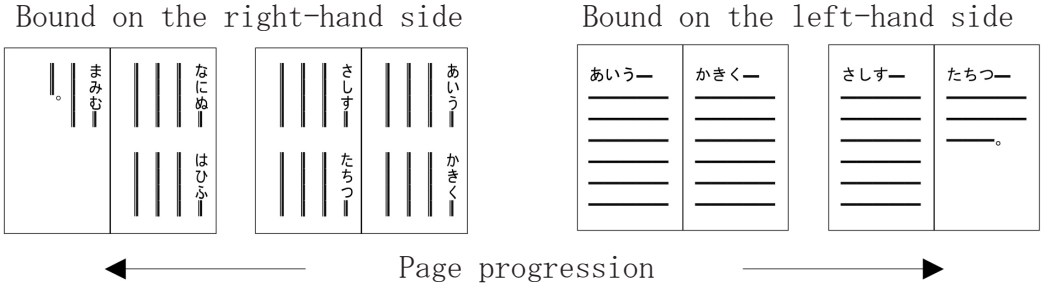
◆ Sample:



4-3. Direction Of Page Progression

Direction of page progression such as bound on the right-hand side or bound on the left-hand side can be specified.

◆ Sample:



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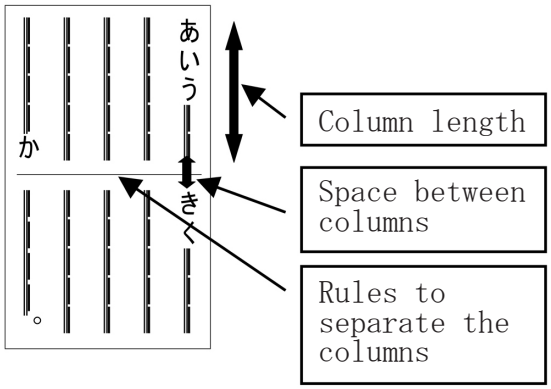
4-4.Multi-Column Format

Number of columns, column length, space between columns, rules to separate the columns and the balance of the columns can be specified. Style(see 「5-1 "Rules"」), thickness and colour of the rules can be specified.
New column, page break, prohibition of page break and new column could be specified regardless of which side of the page to begin with, or which side of the page to end the paragraph.
To begin paragraph with a different side of page is called new recto.

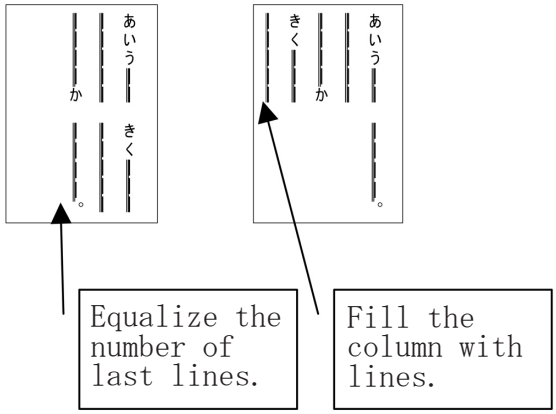
◆ Sample:

In case of two columned text

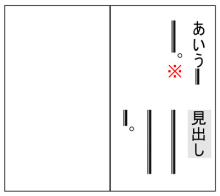


(1)The balance of the columns 1

The balance of the columns 2

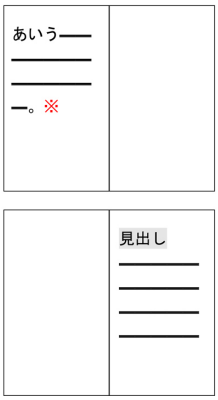


(2)New column



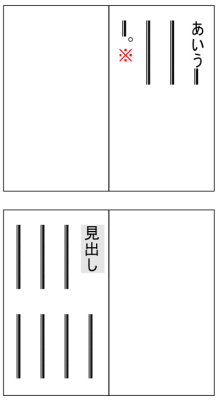
※:New column is specified.

(3)Begin with right page



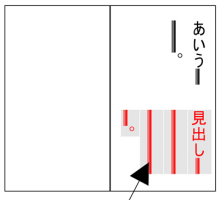
※:New page is specified.

(4)Begin with left page



※:New page is specified.

(5)Prohibition of new column



Prohibition of new column is specified.

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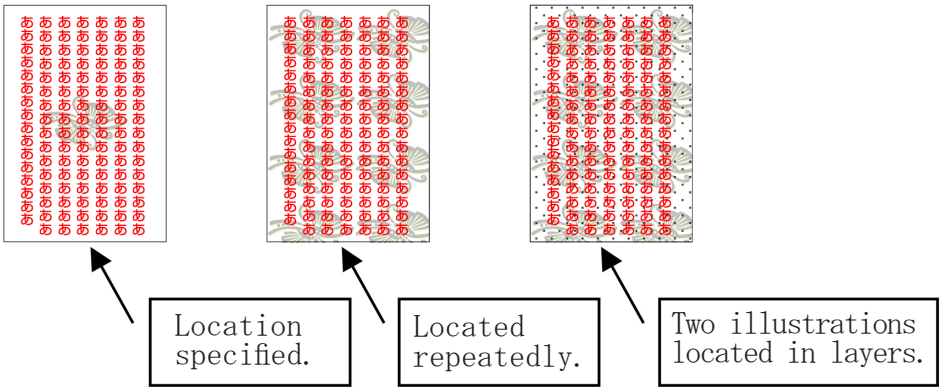
4-5 Pattern(Background)

Illustration(background) can be located on page.
Illustration can be located repeatedly in vertical or horizontal direction of the page.
Location of the illustration can be specified by the value such as pixel, percentage and so on.
Illustrations can be laid over the other illustration.

◆ Sample:

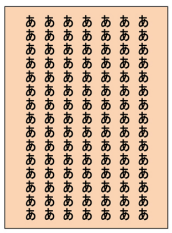
Illustrations to be located.:



4-6. Colour Of Background

The colour of the page can be specified.

◆ Sample:

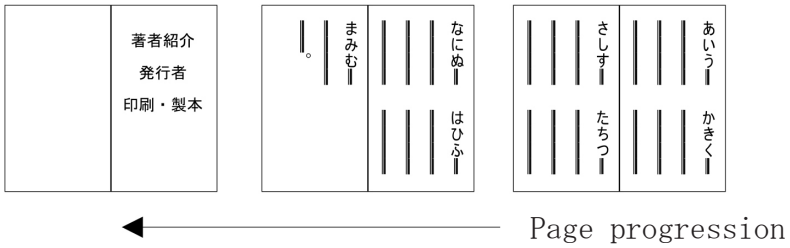


4-7.Different Writing Mode On Each Page

Different writing mode can be specified on each page.

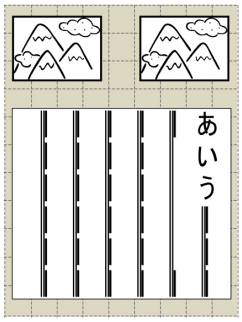
◆ Sample:

In case colophon of the vertical writing mode contents specified to horizontal writing mode



4-8. Grid System/Grid Layout

Objects can be laid out along virtual grid which drew on hanmen.



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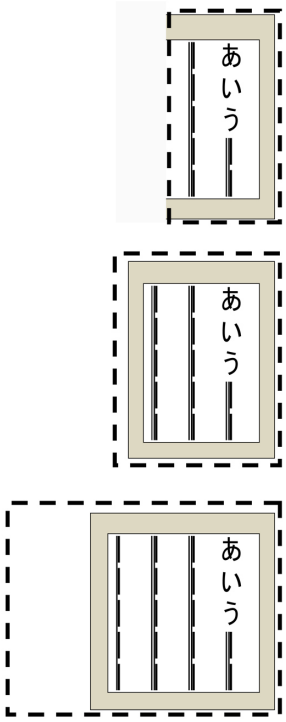
4-9. Longest/Shortest Line Length

Maximum and minimum width(height) of box(of hanmen , image box etc.)can be specified.

◆ Sample:
In case maximum and minimum size of the box is defined to the size of devices.



: Device

When minimum size of box defined, box can't be smaller than defined size. so lacking of indication occurs.

When maximum size of box defined, box can't spread than defined size.

5. Rules

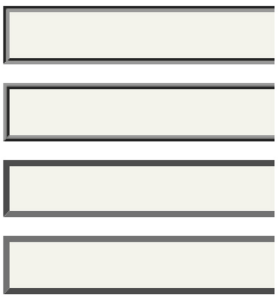
5-1. Rules

There are dotted line, dashed line, solid line, double line and three-dimensional frame.
The colour and thickness of the rules can be specified.

◆ Sample:

Dotted line :
Dashed line :
Solid line :
Double line :

Three-dimensional:



Tani-Gata border
Yama-Gata border
Caved border
Convex border

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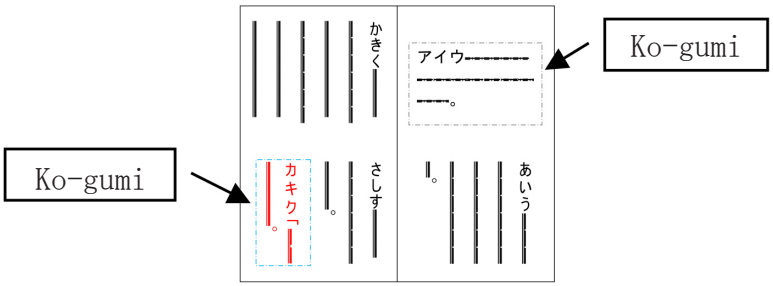
6. Ko-Gumi,Hako-Gumi,illustrations and images.

6-1. Ko-Gumi,Hako-Gumi

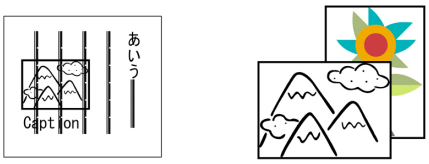
Composition different from main text is possible by specifying box.

◆ Sample:



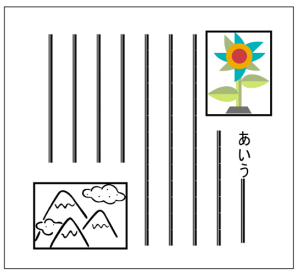
6-2. Order Of Layers

Stacking order of text boxes and illustration boxes can be specified.



6-3. Mawarikomi Of Square Images

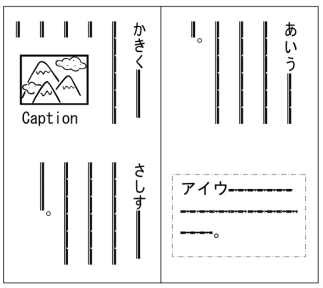
Square images can be located at the left or right(top or bottom)of the page, and on the opposite side of the images, the contents are laid around.



6-4.Mixed Writing Mode In A Same Page

Different writing mode can be mixed in a page.

◆ Sample:

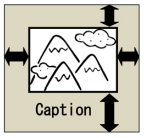


6-5. Padding(Interior Blanc Space)

Space between edge of the frame and other items can be specified.

◆ Sample:

Square Rules



Image

: Following space can be specified.
Head(The head margin between the edge of a trimmed page and the hanmen),foot(The bottom margin between the edge of a trimmed page and the hanmen), left(Margin between the edge of a trimmed page and the hanmen) and right (Margin between the edge of a trimmed page and the hanmen.)

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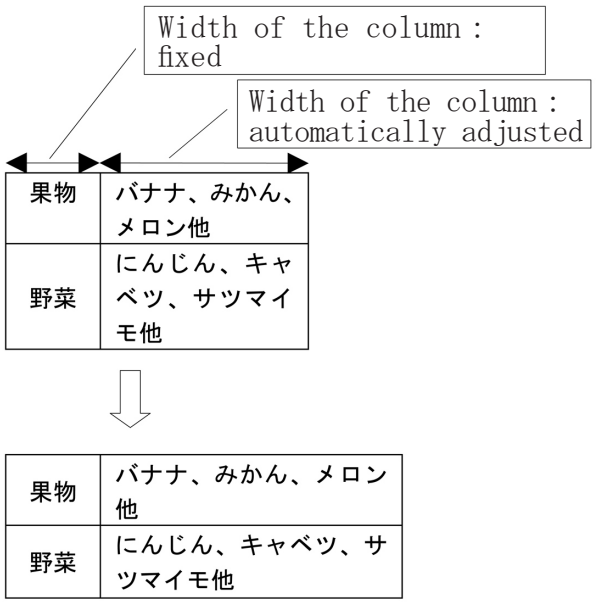
7. Tables

7-1. Tables

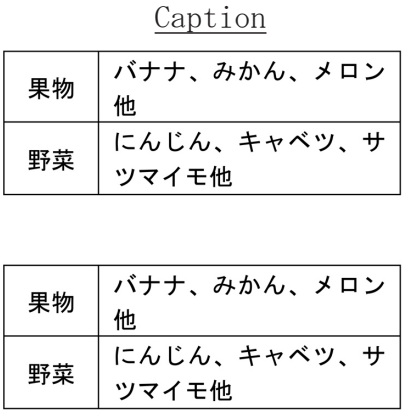
Width of the column can be specified as fixed, or automatically adjusted according to the size of the table.(Sample ①)
The Caption can be added.(Sample ②)
Style, thickness and colour of the rules can be specified. (Sample ③)
Rules can be lapped over. And if the rules were not lapped over, the space between the rules can be specified.(Sample ④)
If a table ranged over the page, it will divided.(Sample ⑤)

◆ Sample:

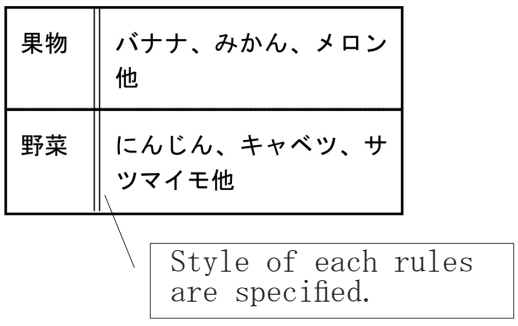
①



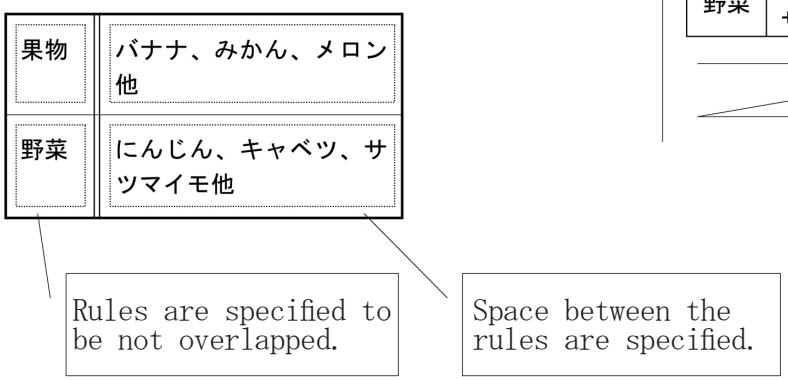
②



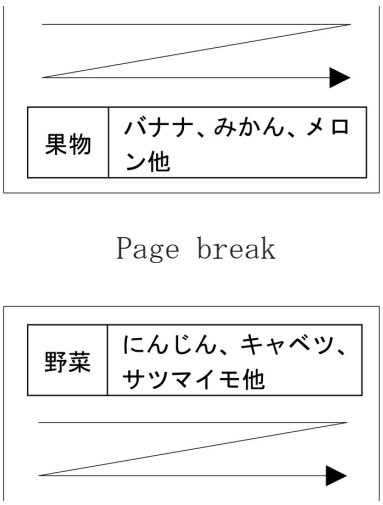
③



④



⑤



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8. Mathematical Formula

8-1. MathML

MathML is an abbreviations of Mathematical Markup Language.
MathML is a mark up language which enables numerical formula expression digitized. These complex formula can be digitized such as matrixes, roots, fractions, differential equations, integrals.

◆ Sample:

$$\begin{pmatrix} X^* & Y^* \end{pmatrix} = \begin{pmatrix} x^* & y^* \end{pmatrix} \begin{pmatrix} a^* & c^* \\ b^* & d^* \end{pmatrix}$$

$$1 \simeq -\frac{1}{2}(1-x)^{-\frac{1}{2}}\Big|_{x=0} x^2 = 1 - \frac{1}{2}x^2$$

$$\int_0^{z\max} z\,dz = \int_0^{\frac{\pi}{m}} \left(-\frac{b_0 r_s q_s}{q' B_{\theta s}} \right) \sin(m\theta) d\theta$$

$$\sqrt{1 - \frac{v^2}{c^2}} \approx 1 - \frac{1}{2}\frac{v^2}{c^2}$$

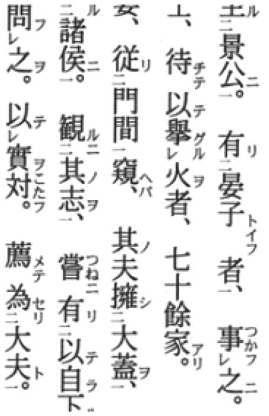
9.Kanbun Composition

9-1. Kun-Ten(Guiding Marks For Rendering Chinese Into Japanese)

Kun-Ten is used in kanbun composition.

Kanbun composition is expressed with ideographic characters, Kun-Ten, emphasis dots, and bousen (sideline).There are following kinds of Kun-Ten such as punctuation marks, katakana middle dots, brackets, return marks(Re-Ten, Ichi-ni-Ten, Jyo-Ge-Ten, Ko-Otsu-Ten, Ten-Chi-Ten), Okuri-Gana, ruby and Tate-Ten.

◆ Sample:



Example of Kanbun composition

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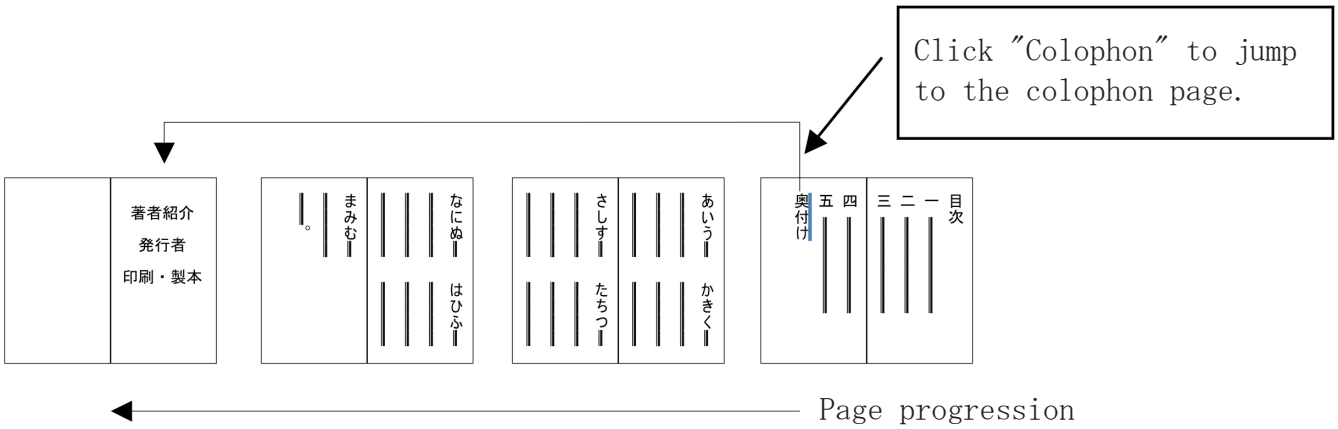
10.Hyperlink

10-1. Jumping To The Linked Location In Documents

By Clicking(tapping) the text which specified to link, the browser will jump to the linked location of the documents. For example, jumping from table of contents to the linked chapter is possible.

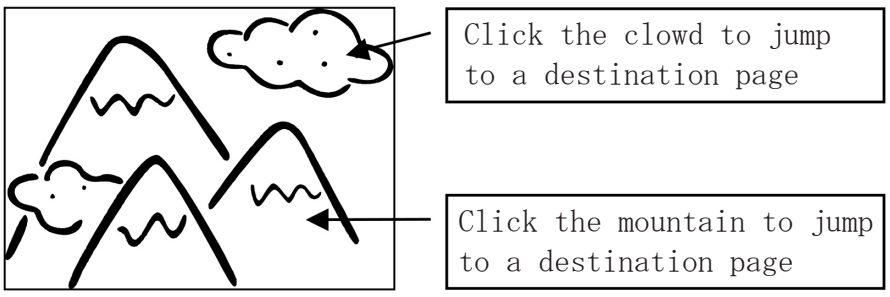
◆ Sample:



10-2. Image Map

By clicking(tapping) on image, browser will jump to the other location of the documents.
A part of the image could be specified as the clickable(tappable) area of the link. Also, several areas could be specified as clickable(tappable) area in a image.

◆ Sample:



11. Multimedia

11-1. Javascript

Javascript is a low level programing language.
By using Javascript, page with movement can be composed. Also, by placing input form, such as various calculations and retrieval of information can be used.

11-2. canvas

By using Programing language, drawing lines and shapes, and paintings are possible.

11-3. SVG

SVG is an abbreviations of Scalable Vector Graphics.
Representing images by a fixed set of vectors,therefore quality of images won't be deteriorated even if they enlarged.

11-4. SMIL

SMIL is an abbreviations of Synchronized Multimedia Integration Language.Mainly called "Smile".
SMIL is a language to integrate movies, pictures, text and sound files into one file.
By using SMIL, Text-to-speech facilities could be used.

12. Meta Data

12-1. Meta Data

The informations of published matter can be added to Epub file.

◆ Sample:

Such as "title", "Publisher", "Author" and so on.