

# eBooks & i18n: Richer Internationalization for eBooks:

## Position paper

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### Our Interest

ACCESS Co., LTD. has been developing browser engine over ten years for mobile phone, tv and other embedded devices. In recent years, ACCESS is developing WebKit based browsers. Besides that, ACCESS is improving Japanese typography for eBooks, provides EPUB solutions including WebKit based EPUB engine, and is contributing to WebKit and Radium.

Japanese EPUB3 market was successfully launched in 2012. However it is still necessary to improve typography for further development of EPUB and eBooks. ACCESS is interested in improving this area.

### Point of View and Suggestions

The current Ruby specification[1] works for Japanese novels in most cases, but still there are following problems:

#### **Ruby Nakiwakare (Ruby line-break opportunities):**

Ruby is used for various purpose, e.g. comment, translation, expression of concurrent event and so on. In such cases, the body characters may have a long ruby characters. Please see Fig 1.1.1. This case could be a problem because ruby-text may extend beyond the page-height. Fig 1.2 has line-breaks in the ruby-text. This is current webkit behavior but it may feel uncomfortable for Japanese speakers. However, the expected behavior is not less certain. Thus, we believe it is necessary to discuss and make consensus for the behavior of Nakiwakare.

「ルビ文字が著しく長い場合などに問題が生じる可能性があります」  
親文字に対して

Fig. 1.1 Example

「ルビ文字が著しく長い場合などに問題が生じる可能性があまりありません」  
親文字に対して

Fig. 1.2 Reflowed to page-height

「ルビ文字が著しく長い場合などに問題が生じる可能性があります」  
親文字に対して

Fig. 1.3 Example of expected behavior

「ルビ文字が著しく長い場合などに問題が生じる可能性があります」  
親文字

Fig. 1.4 Example of expected behavior

We suggest two discussion points for it.

- Behavior of the second line of line-braked ruby (See Fig. 1.3)
- Behavior of line-break opportunity with Ruby (See Fig. 1.4)

[1] <http://www.w3.org/TR/2011/WD-css3-ruby-20110630/>

### Japanese Kanbun Ideographic Annotation:

Kanbun is a name of "Traditional Chinese text" in Japanese. Traditionally, Japanese people uses Ideographic Annotation to read Chinese text because Japanese Kanji has the same or similar form with Chinese characters, so they can understand a meaning of Chinese characters. However, a grammar of Chinese is different from Japanese, thus they need some changes to read a text, e.g. changing a sequence of characters to read and adding an extra text. Kanbun Ideographic Annotation is an annotation for these changes.

A textbook of Japanese uses Ideographic Annotation to learn traditional Kanbun. Thus, we believe this feature is necessary for electronic textbook, as well.

We suggest that it is necessary for a document like a JLREQ for Kanbun.

春  
眠  
不<sup>ず</sup>  
レ  
覚<sup>エ</sup>  
レ  
曉<sup>ヲ</sup>

Fig. 2 Example of Kanbun with annotations