# Unified English Braille for South-East Asian Countries

Bill Jolley

wjolley@bigpond.com

+61419 526173

WBU-AP board member and former treasurer International Council on English Braille

## Background

Despite the widespread use of synthetic speech, braille remains the bedrock of literacy for blind people. English is a living language with new words introduced constantly, and to be most useful—especially for school students—braille needs to be adaptable and including the addition of new signs when necessary. Unified English Braille updates braille for the multimedia and multilingual environment of integrated education, digitalisation and globalisation.

Unified English Braille (UEB) has been developed by the International Council on English Braille (ICEB). UEB was developed in the 1990s, recognising that the braille code needed greater flexibility and updating so that braille would be cheaper to produce, more robust and easier to learn.

The UEB code was judged sufficiently complete by the ICEB in April 2004 for consideration by member countries as their national standard for braille. ICEB’s members are countries where English is widely spoken and that have standards-setting bodies for Braille. The transition to UEB became unstoppable in recent years with its adoption by the United Kingdom and the United States joining countries such as Australia, New Zealand and south Africa where UEB has been used for over a decade.

UEB is two-dimensional: the integration and harmonisation of literary and technical braille codes into one code suitable for beginner and advanced braille users; and the reconciliation of differences in the braille codes used in the United Kingdom and the United States. UEB accommodates both uncontracted braille and contracted braille; and, in either case, UEB is adaptable to English-language texts containing phrases or passages in foreign languages written using uncontracted braille.

UEB simplifies some rules of Standard English Braille (SEB), making braille faster to learn by transcribers and teachers, and easier to learn for blind students coping with the full curriculum in a specialist or integrated educational setting. UEB has braille signs for most print symbols, and UEB’s code for primary school maths is much easier to learn and use than the current maths codes of British and American braille.

## About SEB and UEB

Following its public release in 1829 it took a century for braille to dominate as the tactile system of reading and writing for blind people. Braille has enjoyed a period of stability since 1932, when the United States adopted British braille, although there were some minor differences between the British and American literary codes and their technical codes diverged significantly. These literary codes were known as Standard English Braille (SEB).

A major difference between the American and British versions of SEB has been the use by the Americans and non-use by the British of capital letter signs in braille. The Americans favoured capitals in braille because of their earlier adoption of integrated education for blind students, whereas the British retained special schools for much longer. Another difference due largely to differences between British and American pronunciation was the rules for braille contractions that bridged syllable boundaries. The British allowed contractions in words like ‘renew’, ‘redress’ and ‘professor’, but the Americans did not. These differences between the British and American editions of SEB were minor compared with the differences between British and American braille codes for mathematics and computer science which were profound.

Countries where English is a second language, such as in south-East Asia, the South Pacific, Commonwealth Africa and the Indian sub-continent, have used American or British braille depending on arbitrary historical factors such as the braille codes used by braille teachers or transcribers and the origin of books donated to the country. UEB has removed these variations, making way for one code for English-language braille to be used everywhere.

## Main Features of UEB

UEB is designed to make only a few changes to the contractions system of Grade II braille, to harmonise literary and technical codes and to be useable by beginner and advanced users. Three other principles were important: follow the print, reduce ambiguity and simplify the rules. The two most important UEB decisions were the abolition of sequencing and the use of upper numbers.

* UEB abolished sequencing. Sequencing is the special braille rule that allows words including and, for, of, the and with to be written close together with their intervening space omitted. This rule was enjoyed by fluent braille readers as a good space-saver, but was of concern to teachers as one of the most difficult concepts to teach to students learning braille.
* UEB uses upper numbers, whereas American maths braille has used lower numbers. so this means a major change for the Americans and some other countries who have become used to lower numbers as used in the Nemeth code for braille mathematics.

There are other features of UEB worth noting.

* UEB is one code covering literary text and science notation. UEB has a one to one correspondence between print and braille symbols. So, for example, there is just one dollar sign in UEB, not different signs for different braille codes. UEB writes web links and email addresses in contracted braille, not using a separate computer code.
* UEB abolishes nine braille contractions to simplify rules, and introduces no new ones. They are: ally, ation, ble, com, dd, o’clock, to, into and by.
* UEB’s rich symbols set makes it worth considering as the basis for braille codes other than English. Especially, when extending foreign-language codes to accommodate mathematics notation, the UEB symbols set is worth considering.
* UEB introduces the concept of character, word and passage. UEB has passage indicators for numeric mode, Grade I mode and capital letters.
* UEB has different signs to show bold, underline and italics, but leaves it to the transcriber to decide when these signs should be used so that the braille does not become too cluttered. For example, bolding and italics should not be shown when heading styles are being used.
* UEB is much better than previous codes for back-translation from braille to print. With many students in mainstream schools using braille input devices to generate printed documents, accurate back translation is critically important; and UEB was designed with this in mind by removing ambiguity for a one-to-one correspondence between print and braille characters.

## UEB for South East Asian Nations

**Why UEB:** I believe that it is desirable for South East Asian countries when using English-language braille to use the same braille code that is used in the UK, the USA and other English-speaking countries. That code is Unified English Braille. UEB is good for beginners, quite suitable for advanced users, and adapts well to books that include English-language and foreign-language passages of text. Students who have learned UEB will still be able to read non-mathematics books produced in today’s Standard English Braille, so no wastage will result from the transition.

**Deciding to adopt UEB:** Each country has the right to decide what braille codes it will use for English-language braille, and that decision should be made with the involvement of all stakeholders: adult and senior student braille users; education authorities; transcribers and teachers.

The ICEB member countries all have standards-setting bodies known as braille authorities. Mary Schnackenberg, a former ICEB President, has written a paper giving guidelines for the establishment and role of braille authorities. The paper is under revision and will soon be published on the [ICEB website](http://www.iceb.org/ueb-training.html). Alternatively, national associations of the blind can take the initiative to determine braille codes, have them endorsed by the government (typically the Ministry of Education) and then promote these as the national standard for braille. This approach was taken by the Thailand Association for the Blind, and in November 2016 the Thai government endorsed UEB as the national standard for English-language braille in Thailand.

**Switching to UEB:** It is easy for transcribers to switch to UEB. Manual transcribers will quickly find that, apart from the maths code, there are not many differences between UEB and SEB. There are no new contractions; there are a few contractions deleted; there are some new UEB signs for printed symbols; and there is less ambiguity in UEB. Transcribers using a computer program such as the Duxbury Braille Translator (DBT) can start producing UEB in minutes. All that is needed is to choose UEB as the translation table and to make this the default setting. The translator will then take care of most things, including simple formatting—especially if Microsoft Word is used for data entry and Word styles are used.

**Implementing UEB:** The critical issue with UEB implementation is timing for school students, so that any disruption by the transition is kept to a minimum. This may be achieved by a phased implementation: start with the youngest children first, and then spread the implementation to the senior classes over the next few years. Ensure familiarity with UEB for transcribers and teachers ahead of each implementation phase.

**Reference and training materials:** These are available from the [training page on the ICEB website](http://www.iceb.org/ueb-training.html), and are mostly free of charge. One resource worth mentioning is [UEB Online](http://uebonline.org/). It is an online training course designed for sighted people to learn UEB. This free course offers self-paced learning without the need for a braille machine or software. Based on the [UEB Australian Training Manual](http://brailleaustralia.org/unified-english-braille/unified-english-braille-australian-training-manual-2013/), UEB Online was created by the Royal Institute for Deaf and Blind Children’s [Renwick Centre](http://www.ridbc.org.au/renwick/).

**Workshops and seminars:** It should be possible to organise within country and between country workshops and seminars to transfer knowledge and skills in the use of UEB for teachers and transcribers. The biggest hurdle is harnessing funds to cover the travel and accommodation costs of presenters and participants, but this challenge is by no means impossible.

## Summary and Conclusions

I have summarised the key elements of Unified English Braille, confirming its relevance for South East Asian countries. It refreshes the braille code for use with mainstream education in the digital age, and should be easier to learn for teachers, transcribers and students alike. UEB is cheaper to produce through less training time for production staff or volunteers and through greater computer-translation reliability. Finally, and most importantly, UEB is easier to read for people with additional disabilities or students learning elementary mathematics. Adoption of UEB by donor agencies, education authorities and national associations of the blind will gradually reduce the variety of flavours of English-language braille being used.