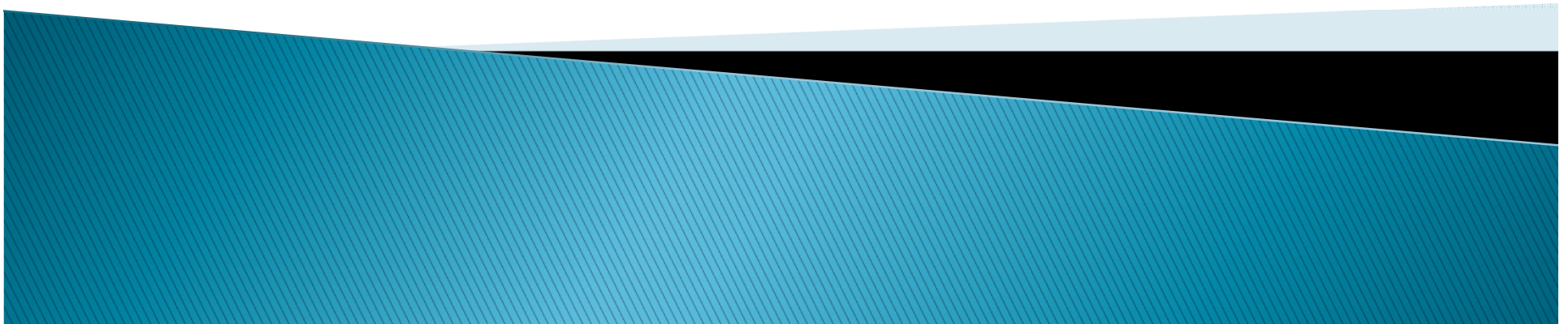


UEB and You: Adopting Unified English Braille

A BANA Update




Objectives

- ▶ 1. To gain increased familiarity with the Braille Authority of North America (BANA) and its purpose and current activities.
- ▶ 2. To increase familiarity with Unified English Braille, its similarities and differences with current code.
- ▶ 3. To gain increased awareness of UEB adoption and the development of an implementation plan for the United States.



What Is BANA?

- ▶ The BANA Board consists of representatives from organizations of blind people, educators, and transcribers
 - ▶ International: 15 member organizations, plus 3 associate members
 - ▶ 7 technical committees; 7 ad hoc committees; also general committees such as publications, and board committees such as bylaws
 - ▶ Committees are designed to include at least one braille reader, one transcriber, one educator, one person from each member country
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How Does BANA Work?

- ▶ BANA Board meets in person twice a year as well as by teleconference throughout the year
- ▶ Work is done by Board and committees all year long
- ▶ BANA is indebted to its hard-working volunteers
- ▶ Numerous projects ongoing:
 - Tactile Graphics guidelines
 - Formats Guidelines
 - Foreign Language Guidelines
 - Knit & crochet guidelines
 - Standardized test guidelines

and many others!



Background: Print Evolution

- ▶ There have been drastic changes in the appearance and production methods of print: new characters, icons, layouts, and fonts.
- ▶ Print is increasingly read from screens; schools are increasingly providing textbooks digitally rather than on paper.
- ▶ The boundaries between "technical" materials and everyday materials have increasingly blurred (e.g. web sites and email addresses in general literature).



Background: Braille Evolution

- ▶ Digital text provides the capability for braille users to read the material in braille instantly via refreshable braille.
- ▶ Braille is more widely available than ever before in history because of technology—braille embossers, translation software, and refreshable braille.



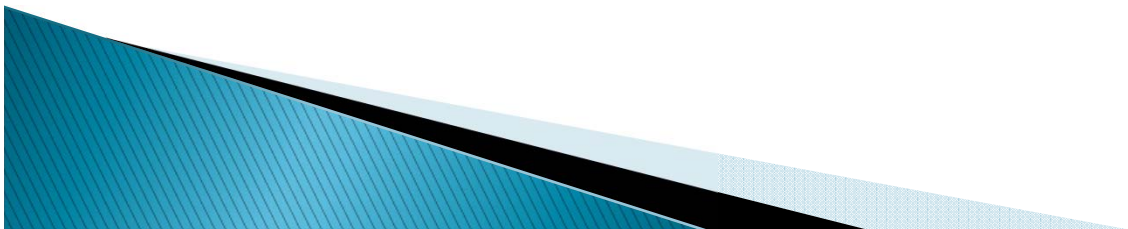
However:

- ▶ Because of ambiguities in current codes, computer translation of text into braille remains far from error-free.
- ▶ Although technology enables braille users to write material in braille and convert it instantly to print (backtranslation), the current code introduces many errors in the resulting document.
- ▶ Even the most basic mathematics material is not displayed correctly in braille generated by computers and mobile devices; therefore, the material is not reliable in this medium.



Need for Code Change

- ▶ Concern about braille complexity since CBC was introduced in late 1980s.
 - multiple braille symbols for same print symbol
 - increased contextuality of braille
- ▶ Increasing difficulty in constructing new code symbols to reflect changes in print.
- ▶ In 1991, Drs. Abraham Nemeth and Tim Cranmer presented a paper to BANA stating the urgent need to unify the various braille codes used in North America.




Unified English Braille

- ▶ UEB started as BANA research project; became international in early 1990s.
- ▶ UEB was developed primarily by braille readers in seven countries.
- ▶ ICEB endorsed UEB in 2004 as an official code.
- ▶ All ICEB members have now adopted it:
Australia, New Zealand, South Africa, Nigeria, Canada, United Kingdom, and now the United States
- ▶ BANA monitored adoption and implementation around the world for years before voting to adopt it in the United States.



Research on UEB

- ▶ Research conducted in US and Canada published in JVIB.
 - ▶ Research articles and links listed on BANA website from various countries:
 - readability studies indicate no significant differences in the readability of the code, reading speed, or number of miscues while reading
 - study in UK indicates that the majority of readers were able to read without difficulty the material produced in UEB
 - transition period to UEB was brief in countries that have implemented it
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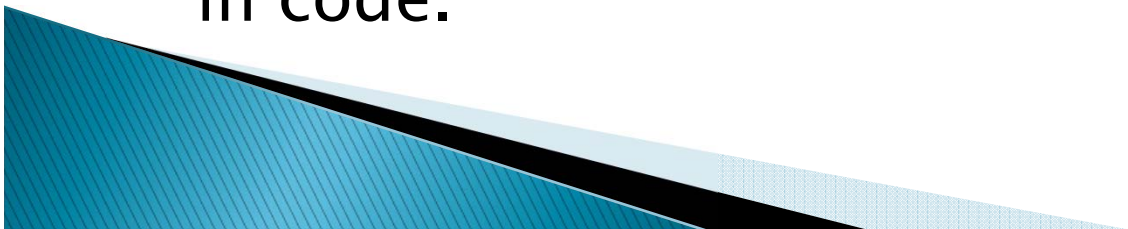
General Characteristics of UEB

- ▶ UEB is a revision and extension of the current literary code; it includes new symbols for items not currently in EBAE. In that way, it unifies existing codes, except music.
- ▶ UEB eliminates some contractions from the current literary code to reduce ambiguity; it adds some symbols, changes a few others.
- ▶ In UEB numbers are written in the upper part of cell as they are currently in literary materials.
- ▶ UEB is designed to be extensible (easy to add new symbols as needed), consistent, and unambiguous. Because of this, UEB is more computable and better for backtranslation.



Specific Changes

- ▶ UEB follows original text, so all symbols have spaces between them; this includes *and*, *for*, *of*, *the*, *with*.
- ▶ UEB eliminates nine contractions: *ble*, *dd*, *com*, *ation*, *ally*, *to*, *into*, *by*, and *o'clock* because they created ambiguity in the code.
- ▶ UEB uses new symbols for some punctuation such as parentheses and ellipsis; other symbols are added or changed such as bullet, asterisk, dollar sign, and percent sign.
- ▶ UEB uses all numbers in upper part of the cell in all contexts. Mathematical symbols are included in code.



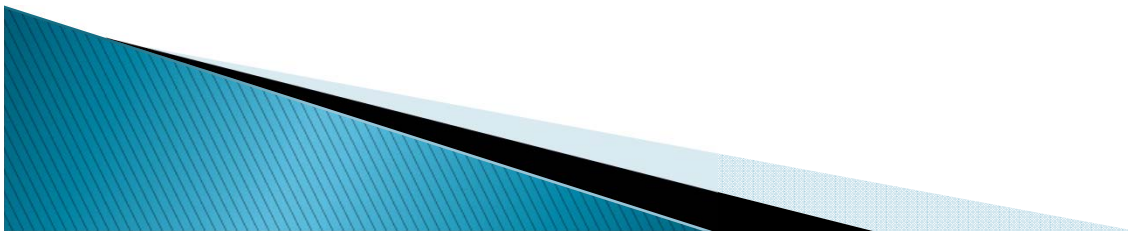
Current status

- ▶ BANA voted on code change at fall meeting, November 2–4, 2012, in Los Angeles.
- ▶ Motion passed to adopt UEB replacing *English Braille American Edition* and adding UEB to Nemeth, Music, and IPA as official codes.
- ▶ BANA is developing an implementation plan that will include constituents and stakeholders of consumers, educators, transcribers, and producers.
- ▶ Braille Formats and Tactile Graphics Guidelines will remain in place with appropriate updates.



Resources and Support

- ▶ *UEB Rulebook* and some training materials are available on line.
- ▶ Translation software for UEB already exists and is accessible.
- ▶ UEB is compatible with existing braille devices (such as the BrailleNote) and is supported by Apple products.



Additional Information

- ▶ Recent updates:
 - ICEB met in South Africa, May 2012
 - Ireland has now joined ICEB;
 - Other countries are interested in joining;
 - Canada and UK are beginning implementation of UEB



Contact Us

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BANA welcomes your comments and feedback!

