UEB

Roots, Prefixes, and Modes

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Introduction

The title Unified English Braille refers to the code being one, stand-alone code. As such, when we talk about the "code" we are talking about the rules and principles of transcribing print-to-braille. Today, we are going to be talking about the way the code was designed. It is our hope that at the end of this workshop we will have decoded the way that the characters and modes work together to create the symbols of the code.

First, we will be talking about "roots" and "prefixes". In this section, we will go over the many ways that they are used throughout the code to make the characters and indicators.

Then, we will discuss the use of "modes" in UEB. By the end of this section we will be able to use modes, both effectively and without fear!

For our purposes today, we will refer to the following cross-references:

Rules of Unified English Braille, Second Edition, 2013—abbreviated, *UEB* .

Braille Formats: Principles of Print-to-Braille Transcription, 2016— abbreviated as *BF*.

UEB Guidelines for Technical Material, 2008 version updated August 2014—abbreviated, *GTM*

2.1 Terminology

braille character: any one of the 64 distinct patterns of six dots, including the space, which can be expressed in braille

braille symbol: one or more consecutive braille characters comprising a <u>unit</u>, consisting of a root on its own or a root preceded by one or more prefixes

indicator: a braille sign that does not directly represent a print symbol but that indicates how subsequent braille sign(s) are to be interpreted

mode: a condition initiated by an indicator and describing the effect of the indicator on subsequent braille signs

modifier: a diacritical mark (such as an accent) normally used in combination with a letter

prefix: any one of the seven braille characters having only right-hand dots

⠠ ⠨ ⠰ ⠈ ⠘ ⠸ ⠐ or the braille character ⠼

root: any one of the 56 braille characters, including the space, which is not a prefix

standing alone rule: A letter or letters-sequence is considered to be "standing alone" if it is preceded and followed by a space, a hyphen or a dash.

symbols-sequence: an unbroken string of braille signs, whether alphabetic or non-alphabetic, preceded and followed by space (also referred to as *symbols-word*)

terminator: a braille sign which marks the end of a mode

Roots and Prefixes

UEB: prefix: any one of the seven braille characters having only right-hand dots

⠨ ⠘ ⠰ ⠸ ⠈ ⠐ ⠠ or the braille character ⠼

 root: any one of the 56 braille characters, including the space, which is not a prefix

Roots and Prefixes to Make Typeforms and Modes

The use of roots and prefixes is one of the ways to easily decode UEB. When you think of roots, they tell us what we are looking at:

Symbol ⠰

Word ⠂

Passage ⠶

Terminator ⠄

Prefixes tell us what KIND we are looking at:

Italic ⠨

Bold ⠘

Underline ⠸

Script ⠈

Grade 1 ⠰

Capital ⠠

Transcriber-defined ⠈ ⠼

Number ⠼

Putting Them Together

When we make typeforms with roots and prefixes, we simply combine the prefix with the root.

Italic symbol ⠀⠨⠆

Bold word ⠘⠆

Underlined passage ⠠⠶

Script terminator ⠈⠆

When we make modes with roots and prefixes, it gets a little more complicated. We forgo most of the roots, and instead repeat the prefixes. The exception to this is the terminators, that still use the termination root. We will go over these three modes later on in this workshop.

Grade 1 word ⠰⠰

Capitalized passage ⠠⠠⠠

Numeric passage indicator ⠼⠼

Grade 1 terminator ⠰⠄

Capital terminator ⠠⠄

Numeric mode terminator ⠼⠄

Roots and Prefixes in Other Parts of the UEB Code

Many other symbols in the code are also created in this same manner. We will look at some examples of how roots and prefixes are used for symbols of grouping, currency, math symbols of operation, as well as miscellaneous print symbols.

Root and Prefixes in Grouping

In grouping, we only have one root: ⠣ ⠜. We use prefixes, again to show us what kind:

Round (parenthesis) ( ) ⠐⠣   ⠐⠜

Square (brackets) [ ] ⠨⠣   ⠨⠜

Angled < > ⠈⠣   ⠈⠜

Curly (brace) { } ⠨⠣   ⠨⠜

Transcriber's Note ⠈⠨⠣   ⠈⠨⠜

Multi-line Curly (brace) ⠠⠨⠣   ⠠⠨⠜

Prefixes for Print Symbols

Print symbols are very different from grouping. Here, we only use a handful of prefixes, and many, many roots. This is not going to be a definitive list, but enough to give you an idea of how print symbols are created.

The prefixes for print symbols are:

Dot 4 (usually used for common symbols, and currency) ⠈

Dots 45 (usually used for less common print symbols) ⠘

Dot 5 (mathematic symbols) ⠐

Currency

The symbols for currency combine the dot 4 ⠈ prefix with the base letter of the print symbol.

Dollar Sign $ ⠈⠎

Yen sign ¥ ⠈⠽

Pound sterling £ ⠈⠇

Commonly Used Print Symbols

These symbols also use the dot 4 ⠈ prefix.

At Sign @ ⠈⠁

Ampersand & ⠈⠯

Less than/Greater than < > ⠈⠣   ⠈⠜

Less Common Print Symbols

These less used print symbols combine the dot 45 ⠘ prefix with the base letter of the print symbol.

Copyright Sign © ⠘⠉

Section mark § ⠘⠎

Paragraph mark ¶ ⠘⠏

Math Symbols

These symbols use the dot 5 ⠐ prefix. All the symbols in this category are used in computation.

Plus Sign + ⠐⠖

Asterisk * ⠐⠔

Division sign ÷ ⠐⠌

Multiplication sign × ⠐⠦

Minus Sign - ⠐⠤

Equal sign = ⠐⠶

Modes

UEB uses Modes to change the way the symbols are read. There are three types of modes we will be talking about today: Capitals, Grade 1 and Numeric. There are some rules that govern these that we will go over as well.

Capitals Mode

This particular mode is usually the first we are taught as transcribers. It is taught in lesson 2 of the NLS Literary Course, and is covered in section 8 of the UEB Code. We're going to go over the rules for Capitals Mode here, and then we're going to tie those rules together with the other modes to (hopefully!) bring about a more complete understanding of the modes and how they are used in a literary context.

UEB 8.4.1 The capitalised word indicator sets capitals mode for the next letters-sequence or the remainder of the current letters-sequence.

UEB 8.4.2 The effect of a capitalised word indicator is terminated by a space, a single capital letter, a nonalphabetic symbol, or a capitals terminator, but not by a modifier or a ligature indicator.

UEB 8.5.1 The capitalised passage indicator sets capitals mode for the next passage.

UEB 8.5.3 A capitalised passage is terminated by the capitals terminator immediately following the last affected symbols-sequence.

What this means is capitals mode set by word mode indicators ends at any nonalphabetic symbol, single capital, or termination symbol. Capitalized passage mode is terminated only by a capitals terminator.

TRANSCRIBER'S NOTES ⠰⠰⠞�'⠎⠀⠝⠕⠞⠑⠎

CAUTION! HIGH VOLTAGE! ⠠⠠⠉⠁⠥⠞⠊⠕⠝⠖⠀⠓⠊⠛⠓⠀⠧⠕⠇⠞⠁⠛⠑⠖

www.PEMDASExposed.com ⠺⠺⠺⠲⠰⠠⠠⠏⠑⠍⠙⠁⠎���

We are not going to go over all the rules for Capitals at the moment. We are going to apply these things to look at the modes that we don't see as often.

Grade 1 Mode

This is the mode we use when we don't want our single letters or symbols to be mistaken for contractions or shortform words. We are going to skip over the single grade 1 indicator, and focus on the word, passage, terminator, and passage with the dot locator for use. One thing to note is that we do not use grade 1 mode in uncontracted braille as there are no contractions or shortform words to confuse the meaning of the braille symbol.

UEB 5.3.1 The grade 1 word indicator sets grade 1 mode for the next symbols-sequence or the remainder of the current symbols-sequence.

UEB 5.3.2 The effect of a grade 1 word indicator is terminated by a space or a grade 1 terminator.

UEB 5.4.1 The grade 1 passage indicator sets grade 1 mode for the next passage.

UEB 5.4.2 A grade 1 passage is terminated by the grade 1 terminator.

Looking back at capital word mode, the main difference is that grade 1 word mode isn't terminated by any punctuation or any non-alphabetic symbols. So, unlike capitals, the grade 1 will extend to the entire symbols-sequence, not just standing alone pieces. It is for this reason that we must terminate grade 1 mode to use contractions again.

He spelled it out: C-O-N-T-R-O-L-Group.

⠰⠓⠆ ⠎⠏⠑⠇⠇⠫ ⠊⠞ ⠳⠞⠒

⠰⠉⠤⠕⠤⠝⠤⠞⠤⠗⠤⠕⠤⠇⠤⠠⠛⠗⠳⠏⠲

> NOTE: In this example, we terminated grade 1 mode to use the ou contraction in group. In general transcription this is not usually necessary unless it saves space. However, if you are applying these rules for the purposes of the NLS Braille course, you will want to terminate to use contractions. The reason for this is to preserve the "normal look of the word." Under most circumstances, you will want to save space above most things of this nature. We do recommend preserving the "normal look" when it is a wash as far as space goes.

The cypher read: Q-J-H-L Q-E-T-S-X Q-R-H-L

⠰⠮ ⠉⠽⠏⠓⠻ ⠗⠑⠁⠙⠒ ⠰⠰⠰⠠⠟⠤⠚⠤⠓⠤⠇ ⠠⠟⠤⠑⠤⠞⠤⠎⠤⠭ ⠠⠟⠤⠗⠤⠓⠤⠇⠠⠄

Numeric Mode

In our application, (Literary braille), we aren't going to go into many of the uses for numeric mode. It is used quite a bit in UEB Technical (the math part of the UEB Code). You will not see it very much in a literary context, but as part of modes, we wanted to be as complete as possible. As such, these examples are going to show how it can be applied.

UEB 6.1.1 Numeric indicators set numeric mode for the remainder of the symbols-sequence.

UEB 6.2.1 The following symbols may occur in numeric mode:
- the ten digits;
- full stop (period);
- comma;
- the ten numeric space-digit symbols;
- simple numeric fraction line; and
- the two-line continuation indicators.

UEB 6.3.1 A space or any symbol not listed in 6.2.1 terminates numeric mode.

UEB 6.9.1 The numeric passage indicator sets numeric mode and grade 1 mode for all text until the terminator is reached.

Looking back at capitals mode, it is very similar to numeric mode. We have a list of mathematic symbols and continuations that do not terminate numeric mode. Everything else does terminate numeric mode. This is reminiscent of the non-alphabetic rules for capitals mode. Again, much like capitals passage mode, numeric passage mode is only terminated by the numeric terminator.

The model number is 5378Tea7632

⠠⠮ ⠍⠕⠙⠑⠇ ⠝⠥⠍⠃⠻ ⠊⠎ ⠼⠑⠉⠛⠓⠠⠞⠑⠁⠼⠛⠋⠉⠃

On the side of the tombstone was this code:

22-44 33-11 12-21 14-32 35-17

⠠⠕⠝ ⠮ ⠎⠊⠙⠑ ⠕⠋ ⠮ ⠞⠕⠍⠃⠌⠕⠝⠑ � ⠹ ⠉⠕⠙⠑⠒

⠼⠃⠃⠤⠙⠙ ⠼⠉⠉⠤⠁⠁ ⠼⠁⠃⠤⠃⠁ ⠼⠁⠙⠤⠉⠃ ⠼⠉⠑⠤⠁⠛

> NOTE: In the normal course of transcription, we wouldn't use numeric mode this way. This was done to show how it used in a general sense. Since it is typically used for mathematics, which we won't be going over in this workshop.

Grade 1 Mode Set by the Numeric Indicator

Grade 1 mode is also set by the numeric indicator. This is used in many literary applications: web addresses, simple equations, and number/word combinations.

UEB 5.6.2 When grade 1 mode is set by the numeric indicator it is terminated by a space, hyphen, dash or grade 1 terminator.

UEB 6.5.1 A numeric indicator also sets grade 1 mode. Grade 1 mode, when set by a numeric indicator, is terminated by a space, hyphen, dash or grade 1 terminator.

These two small blurbs, one in the section on Grade 1 and one in the section on Numeric mode, seem very easy at first. However, in practice they are much harder. Much like grade 1 word mode, the grade 1 set by the numeric indicator doesn't terminate with most non-numeric and non-alphabetic symbols. Only the space hyphen or dash terminates grade 1 mode. This means that the grade 1 mode set by the numeric indicator extends much farther than the numeric mode set by the numeric indicator.

As the following examples will show, while we naturally want to use contractions after many print symbols, most print symbols do not terminate the grade 1 mode set by the numeric indicator.

09/11/2001 ⠼⠚⠔⠂⠁⠂⠃⠚⠚⠁

09/September ⠼⠚⠔⠠⠎⠑⠏⠞⠑⠍⠃⠻

> Note: As you can see in the above example, we need to repeat the numeric indicator after each slash. This doesn't, however, change the grade 1 mode set by the numeric indicator.

You will also see this issue in some web addresses.

www.doctorwho.tv/news/?article=daleks-doctor-who-magazine-issue-557#_what-can-you-do

⠺⠺⠺⠲⠙⠕⠉⠞⠕⠗⠺⠓⠕⠲⠞⠧⠌⠝⠑⠺⠎⠌⠐⠦⠜⠞⠊⠉⠇⠑⠶⠙⠁⠇⠑⠅⠎⠤⠙⠕⠉⠞⠕⠗⠤

⠺⠓⠕⠤⠍⠁⠛⠁⠵⠊⠝⠑⠤⠊⠎⠎⠥⠑⠤⠼⠑⠑⠛⠸⠹⠠��⠺⠓⠁⠞⠤⠉⠁⠝⠤

⠽⠳⠥⠤⠙⠕