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 Report of the

 CODE MAINTENANCE COMMITTEE

 as of May 31, 2020

 Submitted by

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The Rules of Unified English Braille, Second Edition 2013 (The Rulebook)

Apostrophe and Quotation Marks

The problem of translating apostrophes and single quotes was brought to the Code Maintenance Committee (CMC) in 2014 by Sheila Armstrong, on behalf of UKAAF. She stated, "it does account for a very high percentage of manual interventions on computer-translated braille."

As we investigated the issue, it became clear that the print convention of using a single sign (U+2019) for the apostrophe and for the closing single quote was the source of the problem. It causes many apostrophes to be translated as quotes which, in braille, causes a fairly serious disruption to reading.

A survey was conducted in 2017 to solicit opinions on how to deal with the problem. Over 600 responses were received from around the world. Over half were from the United States. 45% of respondents were touch readers.

One of the favoured options was for no change (from 35% for touch readers to 70% for respondents from Australia). The other option that received the most support was to use dot 3 for both apostrophes and single quotes. Touch readers were the most supportive (40%) but only 28% of educators of blind children liked this option. Most respondents took the opportunity to include comments which were an indication in many cases of the degree of their support for a particular position.

At the mid-term Executive meeting in Ireland in 2018, it was decided to stay with the current rule but to rewrite it.

In the process of revising the rule, a handful of touch readers argued strongly to follow print exactly, using two-cell signs for all quotes. This approach was rejected based on the results of the survey.

The new Section 7.6 Quotation Marks, Apostrophe was approved October 8, 2019. The revision simplifies the rule, removing the concepts of “nonspecific” and “predominant” quotes. It emphasizes the importance of the apostrophe in braille. It includes an expanded section on avoiding ambiguity and a new section to give guidance for software developers. There are also several new examples.

Other Revisions to The Rulebook

In March 2017 we corrected an error in an example in section 10.12.2. The lower groupsign for "ea" is not used in the word "reactor".

In April 2017, we made changes regarding the use of \_ as the line indicator. A new section 15.1.3 allows it to be used to show ends of lines when presenting tabular material in a linear format. A revision to section 2.6.3 added the line indicator to the "standing alone" rule.

A new symbol for the check mark or tick as @% was approved in May 2018. A new section 3.28 was added saying to follow print for its use and giving examples.

BANA submitted a request to add "DeafBlind" (with a medial cap) to the Shortform List. This was approved as a special exception to the "standing alone" rule in April 2020. See below for the ongoing discussion on medial caps.

Revisions on Website

All approved changes are posted on ICEB's UEB web page. It was decided to compile these changes into one document at least once a year. This will enable people to download the revisions for printing or reference rather than having to constantly check online.

Current Discussions

Following the approval of using the shortform in "DeafBlind", CMC discussed the effect of medial caps (and other medial indicators such as typeforms) on the use of contractions generally. Possible changes to the rules, particularly those for shortforms, were explored but ultimately rejected. It was decided, however, that there is a need to clarify how medial caps and other indicators impact the "standing alone" rule and the various contraction rules. This will be done by adding examples and some new wording. The changes are under discussion.

In the discussions to revise the rules on omissions for the GTM (see below), it became necessary to revise the Rulebook in order to expand the use of the visible space. This primarily affects Section 6: Numeric Mode. The change is under discussion and has not yet been approved. The discussion on this change is taking place on both lists, UEB-CMC and UEB-TECH.

Problem Words

In June 2016, Frances Mary D'Andrea was working with Cay Holbrook on a UEB edition of The Braille Enthusiast's Dictionary. She consulted with me about certain contentious words. We added James Bowden to the discussions to get a British perspective. We felt that if the three of us could agree on how words should be brailled in UEB, then we could consider those particular words resolved. Frances Mary and Cay decided not to include any words in the Dictionary that remained contentious.

In the last few years, James has been working on updating the LibLouis tables and he used our informal group to discuss words that might be problems in that work.

One issue that remains is whether there is an online dictionary that could be used as a general resource in resolving contraction issues. Three possibilities are Merriam-Webster, Dictionary.com and Collins English Dictionary. All provide pronunciation. Only the first gives syllable divisions but it is American. The latter dictionary provides information for both British English and American English.

Translations of The Rulebook

In November 2013, Braille Literacy Canada received permission to translate the Rulebook into French. A link to this translation is on the UEB page of the ICEB website.

In September 2017, we received a request from Tsukuba University of Technology for permission to translate the Rulebook into Japanese. Our Word files were sent to them to assist with the process.

In November 2019, an individual requested permission to translate the Rulebook into Spanish. Since this person did not appear to represent a recognized braille authority or organization, permission was denied.

In January 2020, the University of Lao asked to be allowed to translate the Rulebook into Lao. As of this writing, the request is being investigated.

In discussing these requests, the Executive developed the policy which is stated on the website: Translation of the Rulebook into further languages is welcome. Permission must be sought from ICEB by a recognised Braille Authority for the language. Funding and translation are then provided by the requesting Authority.

Unified English Braille Guidelines for Technical Material, 2008 version updated August 2014 (GTM)

Triple Vertical Bar Symbol

In 2011, Antonnette Botha, on behalf of South Africa, requested a symbol assignment for the triple vertical bar which is commonly used for "similar to". Discussion was initiated in May 2017 with the symbol #\_l being approved in August 2017. It is included in the revised GTM Section 3: Signs of Operation and Comparison.

Signs of Operation and Comparison

The complete revision of the GTM began with Section 3: Signs of Operation, Comparison and Omission. The revised Section 3: Signs of Operation and Comparison was approved in October 2018. The revision is vastly expanded from the original with many more examples. Several signs are included which were originally found in Section 11: Miscellaneous Symbols. The symbols list now lists Unicode values (including alternatives) for each print symbol. Subsections of this revised rule are 3.1 Spacing; 3.2 Minus; 3.3 Positive and negative numbers; 3.4 Hollow dot and 3.5 Asterisk, star.

The original rule included two subsections which are not in the revision. 3.5 Calculator Keys is still to be revised. It could be included when section 1.5 Typeforms is revised. See below for the revision of 3.6 Omission Marks in Mathematical Expressions which is in process.

Following the 2016 GA Bill Jolley, from Australia, took the lead on the GTM revision. He did an initial draft of the revision to Signs of Operation and Comparison but decided in February 2017 that he did not have sufficient knowledge of school-level maths or print technical notation to continue to lead the project. He remained as a valued expert. I thank Bill for his willingness to assume the leadership role.

Lorraine Banks, a Canadian transcriber and a former high school math teacher, assisted me by taking charge of the preparation of the print and braille documents. Revising the print files for the GTM presents a challenge because of the mathematical and technical symbols involved. Lorraine chose to use MathType which is an add-on for Word. She was a valued sounding board for ideas and was often able to provide excellent examples. I am most grateful to Lorraine for her assistance, good humour and expertise.

Current Discussions

In revising Subsection 3.6: Omission Marks in Mathematical Expressions, it was decided that omissions should be treated in a more general way and not as a subsection of Signs of Operation and Comparison. It is now proposed to be a new subsection 1.8 of Section 1: General Principles. While following print for signs of omission was felt to be the primary approach, the discussions found several situations where the use of the visible space would be better. The current proposal deals with: omissions when arithmetic concepts are being taught, omissions within simple numeric fractions, omitted digits within numbers, omissions within radicals, and the visible space as a general sign of omission. Several of these proposals will give a better result if the visible space is allowed in numeric mode, for instance, in a simple fraction or in expressions which are vertically aligned. This requires a change to Section 6: Numeric Mode of the Rulebook (see above).

Terms of Reference

The ICEB Executive approved revised Terms of Reference for the Code Maintenance Committee in December 2018. These establish Objectives, Composition and Tenure, Voting, Meetings and Reporting. The Objectives can be found in Appendix 1.

Charges

Tasks undertaken by the CMC are based on approved charges. The original list of charges was referred from the UEB Rules Working Group which disbanded in 2010 when the CMC was formed. Some of these are still outstanding, such as UEB symbols which were omitted from the GTM. A braille authority from a member country may propose a change and, if approved, it is added to the list of charges. Individuals sometimes ask for changes, proposing new shortforms, for example. These people are referred to their braille authority. The Code Maintenance Officer is given the responsibility of deciding which charges should be given priority. The CMO also consults frequently with the Executive on charges and their priority. The highest priority charges have been sorted into categories and are listed in Appendix 2.

Members and Observers

The Code Maintenance Officer (chair of the CMC) is deterritorialized. Each member country appoints a representative to the Committee who votes on behalf of that country. In addition, the ICEB President appoints up to two additional members for their expertise. As of May 2020, Bill Jolley and Joe Sullivan were the members appointed by the ICEB President. The full list of members can be found in Appendix 3.

In June 2016 a new listserv was established for the revision of *The Guidelines for Technical Material*. Members of the CMC and the Executive are on the list. It was set up so that observers could choose to follow discussions for either the Rulebook or the GTM or both. Votes may be taken by the CMC Members on either list. Observers may be added to the lists with the approval of their braille authority and the CMO. Their participation in the discussions is welcomed.

The number of observers on each list from each country is given in Appendix 3.

Reflections

I have chaired the Code Maintenance Committee since it was formed ten years ago. But the work did not begin then.

Darleen Bogart (Canada) was the Chair of the UEB Project which transformed a bold idea into an established, international collaboration which has strengthened braille for the English-speaking world. She is a colleague, a trusted advisor and a friend.

Joe Sullivan (United States) was the Chair of Committee II which was responsible for establishing the symbols and basic principles of Unified English Braille. He, better than anyone in the world today, understands UEB and its underlying theory. Yet he is open to new ideas. His participation in the CMC has been invaluable.

Antonnette Botha (South Africa) was the original leader in the painstaking work of framing the principles of the UEB Project into a Rulebook. She established a spirit of collaboration and consensus-building in our deliberations. She was my mentor and I am very grateful for her ground-breaking work.

In the first two years of the CMC's work (up to the General Assembly of 2012), we completed the final three sections of the Rulebook: Section 14: Code Switching; Section 15: Scansion, Stress and Tone; and Section 16: Line Mode, Guide Dots.

The following four years (up to the General Assembly of 2016) saw the

implementation of UEB in Ireland, the United Kingdom and the United States. We now have eight countries using UEB and our increased experience with the code has enabled the members and observers of CMC to speak to issues with better understanding and more confidence. The major achievement of this term was the publication of the Second Edition of the Rulebook, expertly edited by Christine Simpson (Australia), as was the first edition. It includes two new appendices: 2: Word List and 3: Symbols List.

The work of the final four years of my term (up to the General Assembly of 2020) makes up the bulk of this report. I thank the members of the ICEB Executive for their ongoing support and encouragement.

Many observers on our listservs choose not to take part in the discussions. However, there are several people who do contribute in very meaningful ways. They provide new points of view, ask important questions, suggest helpful examples and add invaluable insights based on their experience. With the participation of these observers, the CMC discussions are much richer, and the code changes are even better than they would be otherwise. I sincerely appreciate their time, expertise and thoughtfulness.

The Members of the CMC are our UEB experts but this is a volunteer position which they have assumed in addition to their full-time work. I am incredibly grateful for their expert and dedicated participation in our deliberations. I have relied on their differing perspectives to enable us to reach the best resolution to the many issues presented to us.

In retiring as CMO, I am proud of the work that has been accomplished over the past ten years. I look forward to my ongoing role as an ordinary member of the CMC under the leadership of Kathy Riessen (Australia). She brings a wealth of experience with UEB transcription to her new role. I know that having new leadership will bring renewed enthusiasm to the work.

Appendix 1, CMC Objectives (taken from Terms of Reference, approved December 2018)

3.1 Maintain and revise UEB rules as appropriate having regard to directives and resolutions from the Executive Committee and the General Assembly:

3.1.1 to reflect new print conventions or other changes including the creation of additional symbols;

3.1.2 to reflect the linguistic and cultural diversity of ICEB member countries and other countries where English is widely spoken;

3.1.3 to take into account the outcomes of relevant scientific research;

3.1.4 to take into account experience gained by using UEB in a variety of contexts;

3.1.5 to consider the effects of its decisions on other existing braille codes, forms and formats;

3.1.6 to consider the effects of its decisions on ease of production by various methods; and

3.1.7 to consider the effects of its decisions on acceptability to readers.

3.2 Maintain the list of shortforms that are approved for use in UEB.

3.3 Develop and maintain a list of words that provides guidance for transcribers in the use of contractions.

3.4 Maintain terminology and adjudicate on terminology debates.

3.5 Update *The Rules of Unified English Braille* and *Guidelines for Technical Material* as appropriate.

3.6 Receive and adjudicate on questions concerning UEB rules.

3.7 Collect and distribute answers to questions on UEB rules which will explain and provide guidance on their application. Mechanisms such as Q&A or FAQ on the UEB web page, directives to braille authorities or press releases may be used. The Promotions Committee shall be involved in the distribution of the material.

3.8 Suggest relevant research and investigation.

3.9 Undertake other activities as directed by The Executive Committee or General Assembly.

Appendix 2, Approved Charges/Tasks by Category

Note that charge numbers are for record-keeping purposes only and have no significance as to priority.

Clarifications

Medial capitals (from BANA - August 2017) - Clarify the effect of a medial capital on "standing alone". Determine the impact of a medial capital letter on UEB terminology, the standing alone rule and the use of contractions, especially shortforms. (Charge 28)

Clarify 10.9.5 (from BANA - August 2017) - This deals with letters-sequences confused with shortforms. Add examples. (Charge 29)

Symbols Needed

Sharp s or German ess-tset, double "s", "sz" - lowercase U+00df, uppercase U+1e9e (Charge 15)

Letter modifiers (all found in a South African language) - dot above (also found in Gaelic) U+0307, dot below U+0323, circumflex below U+032d (Charge 17)

Revision of GTM

Determine whether the new version will replace Section 11 of the Rulebook or be published as an Appendix. Consider overlap with signs listed in Section 3, General Symbols and Indicators. (Charge 21)

Clarify use of capital indicators in technical material. (Charge 27)

Symbols in GTM

Three symbols were approved by Committee 2 of the original UEB Project and included in the Reader Rules (RR) but are not listed anywhere except the Symbols List: calculator window ^[ (RR 3.25); "normal", a superscript circle crossed by a horizontal line .j (RR 3.18); accent grave alone U+0060 .\* (RR 3.17). Reference the accent grave alone in Section 4.2.6. (Charge 23)

Natural join used in relational algebra U+2a1d, U+22c8 or possibly U+27d7. (Charge 18)

Contractions

Expand Appendix 2: Word List to include "problem" words after deciding how they are to be contracted. (Charge 22)

Review 10.10, Preference and 10.11 Bridging (May 2018) to clarify contraction rules or prefixes and suffixes in general and also specifically relating to chemical, medical and technical nomenclature. (Charge 24)

Appendix 3, Members and Observers (as of May 2020)

Members

CMO - Phyllis Landon, deterritorialized

Country representatives:

Australia - Leona Holloway

Canada - Jen Goulden

Ireland - Donal Fitzpatrick

New Zealand - Maria Stevens

Nigeria - Jean Obi

South Africa - Tamaryn Watson

United Kingdom - James Bowden

United States - Jennifer Dunnam

President's Appointments:

Bill Jolley (Australia)

Joe Sullivan (United States)

Two other people have served as members of CMC since the last GA:

Christo de Klerk (member for South Africa to December 2016)

Peg Mercer (member for Canada from July 2016 to December 2018)

Observers

All members of the ICEB Executive Committee are automatically observers on the CMC listservs. The UEB-CMC list deals with revisions to *The Rules of Unified English Braille.* The UEB-TECH list deals with revisions to *Guidelines for Technical Material.*

Not including the Executive, the numbers of observers from each country for the lists are as follows:

UEB-CMC (for discussions of revisions to the Rulebook)

Australia 5

Canada 40

Ireland 1

New Zealand 5

Nigeria 0

South Africa 5

United Kingdom 13

United States 33

UEB-TECH (for discussions of revisions to the GTM)

Australia 6

Canada 24

Ireland 2

New Zealand 1

Nigeria 0

South Africa 0

United Kingdom 7

United States 36