International Council on English Braille (ICEB)

Report of the Code Maintenance Committee (CMC)

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# Background

The Code Maintenance Committee (CMC) has the day-to-day responsibility for maintaining *The Rules of Unified English Braille* (the Rulebook), including the creation of new rules and the modification of existing ones, under the supervision of the Executive Committee. It is chaired by the Code Maintenance Officer (CMO), a position on the Executive Committee, who does not represent his/her country.

The CMC is also responsible for *Unified English Braille: Guidelines for Technical Material.* However, since 2016, this responsibility has been delegated to a Technical Subcommittee, which has submitted its own report to this General Assembly.

I was co-opted into the role of CMO in February 2023 following the retirement of Kathy Riessen, who was elected CMO at the start of this quadrennium.

# Composition

Each member country of ICEB is invited to appoint one voting member to the CMC. At the end of this quadrennium, these members are:

* James Bowden (United Kingdom)
* Christo de Clerk (South Africa)
* Jodie Doolan (replacing Leona Holloway) (Australia)
* Jennifer Dunnam (United States)
* Jen Goulden (Canada)
* Donal Fitzpatrick (Ireland)
* Maria Stevens (New Zealand)

In addition, the CMO in consultation with the President of ICEB may appoint up to two additional voting members. At the end of this quadrennium, these members are:

* Phyllis Landon (replacing Bill Jolley) (CMO to 2020)
* Joe Sullivan (chair of the original UEB Project Committee 2 to 2004)

The majority of the work of the CMC is conducted by email and, with the approval of their Braille Authority, individuals from ICEB member countries may join the CMC listserv as an observer. Observers are encouraged to participate in discussions, but may not vote. Their insights are invaluable.

At the end of this quadrennium, the number of observers per country is as follows:

* Australia: 17 (12 more than 2020)
* Canada: 38 (2 fewer than 2020)
* Ireland: 1 (unchanged since 2020)
* New Zealand: 7(2 more than 2020)
* South Africa: 10 (5 more than 2020)
* United Kingdom: 7 (6 fewer than 2020)
* United States: 37 (4 more than 2020)

# Charges

The Executive Committee defines the work of the CMC by setting charges, which are prioritised by the CMO. The following charges were completed during this quadrennium:

* CM-15: Symbol for the sharp s (German ess-tset, double "s", "sz", lower case U+00df, uppercase U+1e9e).
* CM-28: Clarify the effect of a medial capital on "standing alone" (from BANA).
* CM-29: Clarify 10.9.5 (letters-sequences confused with shortforms) and add examples (from BANA).

The following charge was discarded during this quadrennium:

* CM-25: Collect questions and answers for listing on the UEB web page.

The following charges remain outstanding:

* CM-17: Symbols for the following letter modifiers, all found in a South African language: dot above (also found in Gaelic U+0307), dot below (U+0323), and circumflex below (U+032d) Investigate letter modifiers not covered in Section 4.2, which may be required for languages other than English used in ICEB member countries. These may include dot above, dot below, circumflex below and ogonek. Charge modified 12 July 2022 to expand the scope.
* CM-22: Expand Appendix 2: Word List to include "problem" words after deciding how they are to be contracted.
* CM-24: Review rules 10.10 Preference and 10.11 Bridging to clarify contraction rules for prefixes and suffixes in general and also specifically relating to chemical, medical and technical nomenclature.

In addition, I am maintaining an extensive list of additional work which has not currently been charged, but which individuals have brought to the attention of the CMC or the Executive Committee.

The following outstanding charges have been delegated to the Technical Subcommittee:

* CM-18: Symbol for the natural join used in relational algebra (U+2a1d, U+22c8 or possibly U+27d7).
* CM-21: Revise Guidelines for Technical Material. 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.
* CM-23: Three symbols were approved by Committee 2 and included in the Reader Rules (RR) but are not listed in the Rulebook or the GTM. (They are in the Symbols List.) Determine whether to retain them and where to list them. These are: calculator window, dots 45-246 (RR 3.25), "normal", a superscript circle crossed by a horizontal line, dots 46-245 (RR 3.18), and accent grave alone (U+0060), dots 46-16 (RR 3.17). Reference the accent grave alone in Section 4.2.6.
* CM-27: Clarify use of capital indicators in technical material (from UKAAF and others).

# Rule Changes

Before her retirement, Kathy Riessen oversaw the following pieces of work, and I wish to put on record my sincere appreciation for this.

## Interior Capitals in Shortforms

Following the addition of the shortform for DeafBlind during the last quadrennium, it was felt that a more substantial revision to the rules was necessary in order to determine how future shortforms involving interior indicators should be treated. After much discussion, it was agreed that:

* Shortforms should be permissible regardless of the type of indicator, e.g. capitals or typeforms; but
* Shortforms involving interior indicators should be specifically authorised by the CMC in accordance with the Rules for List Construction (Appendix 1), except for longer words containing the 10 special shortforms listed in section 10.9.3, where interior capitals may be permitted.

The implementation of these decisions involved significant rewrites to sections 2.6, 10.9 and Appendix 1 of the Rulebook.

## Additional Changes to Sections 2.6, 10.9 and Appendix 1

As part of the rewrites described above, the following clarifications were also incorporated:

* Section 2.6 now clarifies the status of interior apostrophes more effectively;
* Section 2.6 now clarifies the status of non-alphabetic symbols;
* Section 10.9 now clarifies where “s” and “apostrophe s” may be added to a shortform and its extensions;
* Section 10.9 now clarifies how to handle letters sequences which could be misread as shortforms, where that sequence occurs partway through a longer sequence and where a grade 1 symbol indicator is therefore not sufficient, e.g. the letters OZBRL (not OZBRAILLE);
* Appendix 1 has been alphabetised;
* Words which are permissible under rule 10.9.3 have been removed from appendix 1.

## Sharp S/Ess-Tset

The CMC has approved a new symbol for the sharp s/ess-tset: dots 46 followed by dots 2346. A new section of the Rulebook has been devised to cover this symbol and is numbered 4.6.

The capital sharp s/ess-tset is dot 6, dots 46, dots 2346 and has been added to section 8.

## Beethoven

The CMC voted to use the strong groupsign for th in the word Beethoven. The strong groupsign is not felt to seriously distort the pronunciation or hinder the recognition of the word (rule 10.10.9).

# The Rules of Unified English Braille Third Edition 2024

A third edition of the Rulebook has been under discussion for several years. A recurrent theme of this discussion is that there is a balance to be struck between keeping the Rulebook up-to-date on the one hand, and not publishing a new edition too frequently on the other. There is consequently a sense that the publication of the third edition should be delayed until more changes to the rules have been approved. However, there is no policy on the number of changes which need to have been approved before a new Rulebook is viable, and UEB is subject to constant review to ensure it continues to meet the evolving needs of braille readers. This sense will therefore be present regardless of when the decision to republish is taken.

When I assumed the role of CMO, I found it very difficult to keep track of the updates to the Rulebook which had already been approved and how these would interact with future updates that the CMC would like to implement. I have therefore agreed with the Executive Committee that we will publish the third edition of the Rulebook to coincide with this General Assembly. This will consolidate all of the work which has been completed to date and pave the way for much more efficient working in the forthcoming quadrennium.

In addition, in response to feedback from users of the second edition of the Rulebook, the third edition now includes an index of terms and their corresponding rule references, organised alphabetically. I wish to put on record my heartfelt thanks to Phyllis Landon for compiling this index, and the volunteers at the Canadian National Institute for the Blind for their diligent proofreading.

Finally, all braille dots in the PDF version of the third edition are created using Unicode braille characters instead of ASCII braille. This will significantly improve the experience for users of screen readers and refreshable braille displays, who should be able to read the braille examples without needing to change their screen reader or braille display settings. We have made this change whilst still retaining all shadow dots, so sighted users of the Rulebook are not disadvantaged. I am very grateful to Duxbury Systems for their support with this development.

# Forthcoming Work

The CMC benefits from an incredible level of expertise and global perspective and I am grateful to everyone on the listserv for contributing to discussions in such a convivial manner. I held two meetings in July 2023 where similar qualities were exhibited and I am grateful for this as well.

Other than these two meetings, I have not brought forward any items of new business to the CMC since assuming the role of CMO. However, through discussions with the Executive Committee and CMC members, reviewing past documentation and correspondence, and compiling the third edition of the Rulebook, I have identified a number of items of business which I would like to focus on in the forthcoming quadrennium. In doing so, it is my hope that we will be able to re-evaluate our ways of working, retaining the processes which work well and allowing new processes to emerge where they would help us work more effectively. I would then like to document these processes, firstly so that we can more accurately forecast and manage our work, and secondly so that future CMOs can be inducted into the role more easily.

Particularly noteworthy items of business for the forthcoming quadrennium include:

* New symbols: I have compiled an extensive list of new symbols which would be welcomed by ICEB member countries, some of which already have proposals which could be considered straight away and potentially adopted relatively quickly.
* Responding to reading science research: one of our meetings in July 2023 focussed on the research of Dr Robert Englebretson, Cay Holbrook and Simon Fischer-Baum in respect of the impact of braille contractions on reading fluency. This is especially relevant to UEB in terms of whether contractions should bridge prefixes and suffixes. The meeting offered a good foundation for future discussion which may ultimately resolve disagreements around UEB rules in this area.
* Word list: a significant amount of work has already been undertaken in terms of offering an expanded list of specimen words against their correct contracted braille form, as a reference for braille transcribers. This work now needs to be finalised and ratified.

# Conclusion

In spite of this quadrennium being quite a turbulent one for the CMC, some significant work has been accomplished, culminating in the exciting release of the third edition of the Rulebook. The background work which has been undertaken in the final year of the quadrennium has laid effective foundations for the future and I look forward to working with CMC colleagues to progress our important work.