

Louis Braille Celebration

Unifying the English Braille Codes

Darleen Bogart

Does anyone really know how many braille codes exist? Louis Braille would be amazed and probably very pleased that his creation provided the means for literacy for people who are blind all over the world. What would he think about the proliferation of codes that present barriers to communication among blind people in different countries or even in different regions of the same country? Some of the changes made to the braille code have been necessary to allow braille to be adapted to languages other than its original French, but those altered codes retained the concept of using upper cells for letters and numbers and lower cells for auxiliary symbols, such as punctuation, in accordance with Louis Braille's original design. The braille music code has seen changes over the years, but it remains the only universal braille code.

In the English-speaking world, the two major developers of braille codes were the braille authorities (and their predecessors) of the United Kingdom and the United States. Since each were formed decades ago, in a time when international travel was costly and telephone contact was difficult, there had historically been little official communication between the two bodies, and each developed technical codes that were based on entirely different concepts. The remaining English-speaking countries adopted one system or the other and often made modifications to the braille codes to suit their local needs. These countries tended to purchase press braille from either the United Kingdom or the United States, depending on the braille system they had chosen. Many developing countries, which depended heavily upon the largess of

other countries for braille materials, often received donations of books in a braille code that did not match their system. The books were useless if they were in the wrong braille code, particularly if the donations were technical titles.

By the late 1970s, the Braille Authority of North America (BANA) had been concerned for some time that BANA braille codes were not meeting the needs of braille readers in the United States and around the globe based on the many anecdotal examples from educators, braille readers, and transcribers. As a result, BANA began working with other English-speaking countries to standardize English braille, but it was a very slow process. The stakeholders needed to get to know each other, and trust and respect had to be built. Two international conferences attended by expert braille representatives from several English-speaking countries were held in Washington, DC, in 1982 and London, England, in 1988. With the central purpose of standardizing the English braille codes, the International Council on English Braille (ICEB) was formed by the seven braille authorities from Australia, Canada, New Zealand, Nigeria, South Africa, the United Kingdom, and the United States, at a conference held in 1991 at Lake Joseph in Canada. The year 1991 has additional significance in the history of English braille, because it is the year that the Unified English Braille (UEB) code research project was initiated by BANA.

THE IMPETUS OF UNIFIED ENGLISH BRAILLE

Two American friends, Tim Cranmer and Abraham Nemeth, both braille readers who were heavily involved in the development of braille codes for technical materials (Computer Braille Code and the Nemeth Braille Code for Mathematics and Scientific Notation, respectively), had often discussed with each other the problems of braille code proliferation. Unfortunately, the BANA technical codes were not compatible with each other.

Although the design of the codes allowed for efficiency in spacing, and thus cut down on bulk, the discrepancies between the codes often required a braille reader to learn a unique braille symbol in each code for the same universal symbol in print. A simple example of a symbol being expressed in a multitude of ways is the print dot whose meaning is may be variously deciphered as a period, decimal point, part of an ellipsis, a dot for a missing letter, or a dot in an e-mail address. Drs. Cranmer and Nemeth believed they had helped create a “Tower of Babel” for braille readers. In 1991, they wrote to BANA with a proposal for one BANA code that would encompass all literary and technical symbols (Cranmer & Nemeth, 1991).

The Cranmer-Nemeth proposal for one BANA code was discussed at the BANA board meeting later that year, and, after some discussion, the board members agreed unanimously to proceed with the research project to determine if one code was possible. The decision was made even more poignant when the representatives of the two U.S. consumer organizations, Chris Gray, from the American Council of the Blind, and Fred Schroeder, from the National Federation of the Blind, moved and seconded the motion.

Shortly after the BANA meeting, ICEB President Fred Schroeder and BANA Chair Darleen Bogart, contacted Bill Poole, chair of the Braille Authority of the United Kingdom (BAUK), to invite BAUK to participate in the research project. It was very important that this undertaking by BANA not be seen as a move contrary to the recent ICEB goal for standardization of English braille.

The project began with four committee members, each chosen for the expertise they would bring to the project. Joe Sullivan, chair, was selected for his expertise in braille translation software. Three braille readers, each with expertise in development of braille codes, were also appointed to the committee: Tim Cranmer, Emerson Foulke

(whose expertise was in haptic perception), and Abraham Nemeth (BANA, 1991). While they worked to determine if one code was a possibility, the BANA board was preparing a proposal for ICEB to head the project and make it a truly international effort.

In 1993, ICEB unanimously agreed to take over the UEB project (ICEB, 1993). At that time, the two major code developers, BANA and BAUK, were ready to examine all their braille codes and work together through ICEB to craft one unified code. The primary criteria of the project was that the unified code would be unambiguous and be based on the literary codes and include all the symbols needed for technical materials (such as mathematics and chemistry). The four American committee members were joined by ICEB representative experts: Bruce Maguire (Australia) and Christo de Klerk (South Africa), two braille readers with code development expertise; and Margaret Salt (New Zealand) and Stephen Phippen (United Kingdom), two braille transcribers with a great deal of experience in the BANA and BAUK braille codes.

With the hard work of the original American experts and those from the ICEB member countries, all of whom volunteered their time, UEB eventually met all the criteria set for it. UEB’s design was based on the principles of an unambiguous symbol construction, so readers would always be able to determine where a symbol begins and ends when it occupies more than one cell. This tenet of UEB was designed to allow for the construction of new symbols that have yet to be introduced in English. Another advantage of the unambiguous design is that those learning to read and write braille will learn a symbol once and be able to read it regardless of the context—unlike the present situation, in which the dollar sign must be learned as three different braille symbols depending on the subject matter. The design of UEB, with few

changes and no new contractions, also ensures that the literary braille in existence today will be able to be read in the future. (For more information on the difficult decisions the committee members faced, see, for example Bogart, D'Andrea, & Koenig, 2004).

THE ACCEPTANCE OF UEB

In 2004, at its General Assembly, ICEB declared that UEB was sufficiently complete to be regarded as an international standard for English braille and suggested that the braille authorities of the member nations consider adopting it for their countries. Since that historic resolution, four braille authorities—Australia, New Zealand, Nigeria, and South Africa—have adopted UEB, and it is in various stages of implementation in these countries. The Canadian Braille Authority will be deciding whether to adopt UEB in 2010 after the results of a countrywide research project on UEB are made available. BAUK recently carried out an UEB information program in the United Kingdom. The resulting reader responses to a questionnaire did not support acceptance of UEB, but the decision will be reconsidered in five years. BANA has been monitoring the progress of UEB in other countries.

It has been my great privilege to have been Canada's representative to ICEB and the chair of the UEB project from its beginning. I have watched over a code-development process that was as open as it could be: Anyone was welcome to comment in electronic discussion groups of the working groups and act as observers with the opportunity to participate in the discussions and deliberations. (Visit web site <www.iceb.org> to read all the de-

liberations and transcripts of the face-to-face meetings regarding UEB.)

The process of creating UEB serves as an example of the good will among members of the community of visual impairment and blindness. This good will allowed all the stakeholders from around the globe the opportunity to make changes for the benefit of the next generation. I believe UEB has the potential to lead the way for further standardization of braille codes around the world. For example, unification is being considered by the French language group of braille authorities. The World Blind Union has appointed a new World Braille Council to seek ways to standardize braille or at least to stop the proliferation of codes internationally.

Why did the UEB project committees of ICEB succeed in creating a unified code? There was no one reason; rather it was because the right people joined together at the right time for the right reasons.

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