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Notes on transfer of responsibility for OCR-B standards

Scope of the document

In March 2000, the SC 31 Secretariat wrote SC 2 regarding transfer of responsibility for the OCR-B standard (SC 2 N 3433). The matter is on the SC 2/WG 3 agenda (and on the Plenary agenda) in this year's Athens meeting.

The issue was raised originally in July 1996 in a liaison letter from SC 31 to SC 2 (SC 2 N 2727), with an SC 2 response to that given in October 1996 (SC 2 N 2766).

Being earlier the editor of the intended OCR - B standard revision, I consider the summary below needed as input to WG 3 agenda item 5.4. The text can be seen as a free-standing update to the 1996 document SC 2 N 2766, with much of its information repeated.

OCR - B background

The only internationally formally standardized fonts are those developed for OCR purposes in the sixties, in the US and in Europe. These two fonts are defined in the two-part standard ISO 1073 "Alphanumeric character sets for optical recognition" published in 1976, and there named OCR-A (the US-developed font) and OCR-B (the Europe-developed).

For the OCR-A font, complete specifications of the shapes of its glyphs are included in its part of the standard, while for the OCR-B part separate reference drawings of the glyph shapes are referred to. These drawings were produced at ECMA, and originally archived both there and at NIST (previously NBS) in the US. They have now been transferred to JISC.

A companion standard defining printing tolerances etc, was also developed, the ISO 1831 "Printing specifications for optical character recognition". This was published in 1980.

Both standards were processed within the then-existing ISO/TC 97, "Computers and information processing". When the ISO/IEC JTC 1 was created, responsibility for the two standards was placed in its SC 2. With the creation of SC 31, "Automatic identification and Data Capture Techniques", a more natural maintenance organization for the two standards appeared. At that time, however, it was considered unsuitable to transfer the responsibility, considering the ongoing revision of OCR-B (see below).

Even if bar coding has successively become dominant in machine-reading applications there still exist some special situations where the OCR fonts are needed. For example, the standards for travel documents developed by ICAO, and transposed into ISO and CEN standards, specify the OCR-B font for use in the machine-readable part of the documents (although the latest versions of the standards permit a bar-coding field also). Another application where the OCR-B will probably become used is for serial numbering of Euro Banknotes.

SC 2 revision history

After the ISO 1073 was published in 1976, no changes to it were requested until 1993. In that year, Turkey proposed an extension of the standard to include in it the specifically Turkish letters (Ğ, ğ, İ, ı, Ş, ş).

In its April 1994 Antalya meeting, SC2/WG3 adopted a resolution that a WG should be produced for the revision of ISO 1073 part 2 (i.e. OCR-B) to accommodate the Turkish and some other national requirements. Sweden provided an editor for this draft (K I Larsson).

The original intention of the revision was for a rather small extension to the standard's repertoire of glyphs, namely seven new diacritical marks and six special "national letters". Requests from NB immediately after the WG 3 meeting however increased the extension to 19 new glyphs. Extensive changes to the original text were also found needed. The proposed revision was circulated for CD ballot in July 1994.

The CD was declared accepted, but NB comments requesting further extensions to the glyph repertoire were given. After discussions in the June 1995 Helsinki meeting it was therefore decided that a second CD should be produced, including the requested glyph additions. The second CD was circulated for ballot in November 1995.

The Report was discussed in the SC 2 March 1999 Fukuoka meeting (which the editor did not attend). SC 2 there requested extensive changes to the Report, within a seven-week limit. Since this was impossible for the editor to comply with, the project was cancelled. (it shall be noted that all the editor's work in this matter has been completely unsupported) Since then, no further SC 2 work on the OCR-B has been done.

CEN OCR-B activities

The intended OCR-B revision has been followed with particular interest by CEN/TC 304, since there repertoire extension was intended to satisfy primary European needs. Also, in 1997 an additional OCR-B extension requirement appeared, namely for a glyph for the Euro currency.

Due to the SC 2 decision to not proceed with the revision, TC304 has considered the possibility of producing a European standard instead (EN or ENV). This European standard would correspond to an updated ISO 1073 part 2 with the Euro sign added normatively. The letter extensions would also be defined in the standard, but only informatively; it was felt, namely, that it might be possible to arrange for sufficient testing of the Euro glyph, but probably not for all the letters.

Some funding for OCR testing has been secured, and TC 304 in February 1999 issued a "Call for expert" to perform exhaustive testing of the Euro sign and limited testing of the other extensions. That Call did not result in any responses, but a proposal for the work is now under discussion, with the testing to be performed during autumn 2000.

Provided that the testing is concluded satisfactorily, it is intended to produce the draft for the EN early next year. A possible parallel ISO processing will be considered by TC 304 when the conditions for the presently proposed testing are finalized.

Recommendation for SC 2/WG3 action

As mentioned above, SC 31 appears the natural JTC 1 subcommittee to take maintenance responsibility for the ISO 1073 and the ISO 1831. In response to the SC 31 letter in SC 2 N 3433, a WG 3 resolution stating that an immediate transfer of the responsibility for the two standards from SC 2 to SC 31 is desirable, is therefore hereby proposed.