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**ISO/IEC JTC 1/SC 2/WG 3
7-bit and 8-bit codes and their extension
SECRETARIAT : ELOT**

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The US is concerned about the need for the OCR-B standard (ISO 1073-2) and its associated standard reference materials. The US asks that SC 2 consider the information in this document and make appropriate decisions. In particular, ECMA and the US National Institute of Science and Technology (NIST, formerly the National Bureau of Standards, NBS) urgently need ISO direction on the disposition of the current OCR-B reference drawings.

Background

ISO 1073-2 states that standard reference drawings of the OCR-B glyphs are available from ECMA and the US National Bureau of Standards. However, NIST has withdrawn its Standards Reference Materials (SRMs) for OCR-B and is not selling or maintaining its leftover stock of SRMs. ECMA still has the original OCR-B reference drawings. However, ECMA no longer is able to copy the drawings and has asked ISO to designate another organization to distribute the reference drawings.

The reference drawings were used by font vendors to ensure that their OCR-B font matched the standard glyphs, and by developers of OCR equipment to ensure that the equipment correctly distinguished the glyph images and converted them character codes.

According to Mr. Karl Larsson (the editor of the revision to OCR-B), (a) OCR-B is still widely used and required by the ISO standard for passports, and (b) consequently, the reference materials are still required. However, sales of the reference documents from ECMA and from NIST have been minimal. In 1993, the last year that ECMA sold any copies, only two were sold. NIST has sold no copies since 1987.

Concerns

1. Both ECMA and NIST need to know what to do with the copies of the reference materials.

Both ECMA and NIST are willing to transfer the drawings to an organization designated by ISO but need direction from ISO.

2. Are the OCR standards and the corresponding reference materials still required?

The US questions the need for an OCR-B standard and continued availability of the associated reference drawings. The character recognition technology of 1997 is much more sophisticated than the technology available in the 1970s when the OCR-B standard was adopted. According to US experts, OCR technology can now reliably recognize character shapes (glyphs) from the Times and Helvetica fonts just as reliably as the OCR-B glyphs.

If ISO decides that OCR-B reference materials are still required, are better alternatives available than the existing hardcopy drawings? Copying and maintaining the reference drawings is expensive and requires special copying equipment. As an alternative, making some type of machine-readable material available may eliminate the need for the current hardcopy reference materials. With such information available, ISO may choose to place the material on its web site or may find a volunteer organization to maintain and distribute such material.

One alternative may be to scan the hardcopy drawings into bitmaps. Another one may be machine-readable outline-glyphs. Mr. Larsson, the ISO editor for the OCR-B revision, added provisions in the draft of the revised standard to allow the use of outline glyphs according to ISO/IEC 9541. Mr. Larsson has stated that a simple conversion will transform ISO/IEC 9541 standard outline-glyphs into outline glyphs in the Adobe Type 1 format. (However, the outline-glyphs by themselves do not constitute a font because glyph metrics are not included.) As part of developing the

revised OCR-B standard, Mr. Larsson has produced the outline glyphs for the new OCR-B glyphs added in the revision. If outline glyphs conformant to the current reference drawings are also available from a font vendor, the outline glyphs for the new and existing glyphs could be combined into the full set.

3. Should responsibility for the OCR-B standard be transferred outside of SC 2?
The US suggests that the OCR technology may be closer to the work of SC 31 than SC 2.

Suggested Actions for ISO

1. Decide if the OCR standards should be transferred outside of SC 2 to SC 31.
2. Decide if OCR-B reference materials are still required, and if so, if machine-readable information might be a better alternative to the current hardcopy reference materials.
3. Formally respond to ECMA and to the US National Institute of Science and Technology (NIST). State either (a) where they should send the reference documents, or (b) that they may dispose of the reference documents (e.g., to a museum).