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Title: Proposal for the encoding of an Egyptological YOD

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References: WG2 N2043 (L2/99-246), N2241(L2/00-293), N3382R(L2/08-

049R), N3431(L2/08-087), N3432(L2/08-146)

**Summary**: This document contains a draft proposal for the encoding of an Egyptological YOD in the Latin Extended D block. While this character has been proposed before and rejected, the proposed alternative solutions have not been implemented by the vendors, therefore harming the user community and it is time to come back to an easier solution which is the encoding of a non-decomposable character.

## Introduction

The story of the Egyptian transliteration characters goes a long way back. These characters were first introduced in document WG2 N2043 and finally proposed for encoding in document N2241, almost 17 years ago. Four of the six proposed characters were encoded in the Latin Extended-D block, but the proposed Egyptological YOD was not accepted because it was thought that it could be represented by a combining sequence using the Latin Letter I followed by either U+0313 COMBINING COMMA ABOVE or U+0357 COMBINING RIGHT HALF RING ABOVE. None of them fully represented the visual aspect of the character. Then it was suggested to use U+0486 COMBINING CYRILLIC PSILI PNEUMATA as the combining diacritic, and adding an annotation to the code point in the name list (ref N3382R). This was consequently rejected by document N3431, endorsed by N3432, recommending 'a specialized font for Egyptian transliteration be created that would permit the appropriate placement of the diacritic'. The result has been that there is no commonly accepted representation of the letter (nothing worse than having an undefined value for the diacritic mark).

Making the matter worse is the fact most Egyptian transliteration are done in an italicized style, and none of the commonly available commercial fonts produce a result which is acceptable when combining an Italic 'i' with any of the suggested diacritics. Clearly the Cyrillic PSILI PNEUMATA has the right shape in term of diacritic, but the confusion brought by documents N3431 and 3432 has ensured that there is no commercial solution. Furthermore, a specialized font for Egyptian transliteration with no guidance for the encoding of the sequence has no chance to be used in an interoperable fashion.

The author faced the issue when creating an extension of the Egyptian Hieroglyphs and trying to transliterate the ideograms and logograms associated with the proposed characters and add them in a database that can be shared with the user community. There is simply no good solution. There are fonts using either incorrect code points or PUA for the YOD. Alternatively, many users just go around and use the letter 'j".

By far the simplest solution is to revisit the issue and re-introduce the concept of a non-decomposable character representing the YOD.

We could simply use the original glyph as proposed in N2241:

ľ	0236	LATIN CAPITAL LETTER EGYPTOLOGICAL YOD
ì	0237	LATIN SMALL LETTER EGYPTOLOGICAL YOD

It should be noted that the common representations look more like I and I because Egyptian transliteration is commonly italicized. This fact could be mentioned in an annotation in the name list because the code chart glyphs would de facto be extremely rare.

The code positions could be U+A7BA and U+A7BB (next available code positions), properties as follow:

A7BA;LATIN CAPITAL LETTER EGYPTOLOGICAL YOD;Lu;0;L;;;;N;;;A7BB; A7BB;LATIN SMALL LETTER EGYPTOLOGICAL YOD;Ll;0;L;;;N;;A7BA;;A7BA

There are not confusable with any existing code points, but the new characters could be confused with the sequence of the Latin letter I, Latin letter IOTA, Greek letter IOTA, followed by a diacritical mark resembling the top of the glyph. Given the existing confused situation, this does not exacerbate the risk in a meaningful way. There is a limited need to use a YOD in general purpose identifiers; its main purpose is to represent transliteration of historic Egyptian text originally written using Egyptian hieroglyphs.

In the Egyptian alphabet, the Egyptological yod is sorted after the Egyptological aleph (U+A723), and behaves like a normal letter. Obviously, these proposed characters would have no decompositions into a base letter I followed by a diacritic.

The author would be ready to create a full summary form if the additions are acceptable and will provide the appropriate font if accepted.

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