

**To:** ISO/IEC JTC1/SC2 WG2  
**From:** Peter Stokes, Peter Baker, and Odd Einar Haugen  
**Date:** 6 August 2018  
**Title:** Feedback on N4836 (L2/17-236) Proposal to add LATIN LETTER THORN WITH DIAGONAL to the UCS STROKE

The following are comments on N4836 (L2/17-236) LATIN LETTER THORN WITH DIAGONAL STROKE, in response to queries from Debbie Anderson ["Do you have an opinion on whether a separate thorn with diagonal stroke character is needed? Would encoding it be confusing for users? Would changing the representative glyph cause problems?"]

**Peter Stokes, Directeur d'études, École Pratique des Hautes Études – Université PSL, Section des Sciences Historiques et Philologiques, Savoirs et Pratiques du Moyen Âge au XIXe siècle; Project Leader: Archetype [formerly The DigiPal Framework]:**

It seems to me that there are two different issues here: one palaeographical and one typographical. I'm not a Nordacist, but palaeographically I would say that the difference in the MSS is graphic rather than semantic. It seems very clear to me that the angle of cross-stroke is not significant, and although I can't think of any bilingual Norse/Anglo-Saxon manuscripts, if there are any then I would be extremely surprised if the scribe differentiated the angle of stroke according to the language. Looking now at DigiPal, I see that there are indeed many Anglo-Saxon examples of horizontal cross-strokes. They're in a special category since they're very common and always represent the word 'thæt', so we created a 'thæt' pseudo-character, but we don't distinguish between diagonal and horizontal for reasons just discussed. See further [http://www.digipal.eu/digipal/search/?character=thæt&result\\_type=graphs&pgs=100](http://www.digipal.eu/digipal/search/?character=thæt&result_type=graphs&pgs=100)

Having said that, when it comes to typography there is a much stronger argument for having two forms, I think. The authors are right that the convention in Old English is to use an angled stroke and has been so for centuries. I therefore agree that it would be highly desirable to be able to use angled strokes for Old English, and I would be very unimpressed if I were printing an OE edition and couldn't do this. Conversely, thinking from the Nordacists point of view, if the representation of my glyphs was with horizontal strokes but then this suddenly changed to angled stokes then I would be even more unimpressed. Part of me says that this is an issue for the font designers, but then there are certainly modern printed studies which cite both OE and ON and I imagine they would potentially want to use both forms of crossed thorn. I don't have any to hand but I can ask around if that would be helpful. Looking at Junicode, from what I can see it changes the representation based on the language, with horizontal for Norse and angled for OE (see <http://junicode.sourceforge.net/Junicode.pdf> p. 5). This

seems ideal to me, though in practice probably difficult both to implement and to communicate to scholars.

**Prof. Peter Baker, Dept. of English, University of Virginia (Medievalist, with specialty in Old English; creator of Junicode font for Medievalists)**

The Unicode code chart doesn't have a lot to say about A765 LATIN SMALL LETTER THORN WITH STROKE. I don't know if there's more information elsewhere—i.e. whether it's ever used for anything but þæt/pat in Old English and Old Norse. If it is, then it might be worth encoding thorn with crossed stroke separately, but if not I wouldn't do it.

As to your question about whether users would be confused by two crossed thorns in the standard, I'd say they certainly would. (Some years ago a pretty good book on Beowulf came out, in which all the instances of þ in the quotations were rendered as þ̅—that is how clueless many users can be.) In fact, I'd guess that some are already confused by the two shapes of þ in Junicode—a thing I wouldn't have done if the two shapes weren't in MUFI. In Junicode, ss02 is for insular letter shapes. Among other things it substitutes thorn with diagonal stroke for þ. I think this a nice clean solution that takes care of several problems at once. And now just about every application has a way to turn on Stylistic Sets.

I'm not sure what most medievalists are doing to get þ̅ (not too many need it, actually). I suppose a person without a lot of tech savvy would probably leave the problem for a publisher or local tech support person, as we did in the days of typewriters.

Addendum to above:

After I wrote to you I followed the link for the Unicode proposal and looked at the MS images. And actually the Norse and English examples don't look all that different to my eye. The Old English crossed thorn usually has a distinct slant, but in the later MSS it tends to look flatter, sometimes with an upward curve. One of the later examples is essentially identical to the Norse example. This is no surprise, for the Norse MSS are contemporary with Middle English, not Old English MSS.

The printed examples are different, though. Norse printed editions tend to favor flat strokes while English printed editions favor flat ones. This suggests to me that it might best be handled with a locl feature in fonts that have both.

Earlier response (October 2017)

Q1: The thorn with horizontal stroke would be "incorrect" if found in OE print materials, is that correct?

[Peter Baker]

Yes, it would look odd at the very least, and many would see it as a typographical error. No one would be in any mistake as to the meaning, however.

Q2: Do most scholars of OE use specific fonts to get the diagonal stroke or markup or OpenType features to get the desired diagonal stroke?

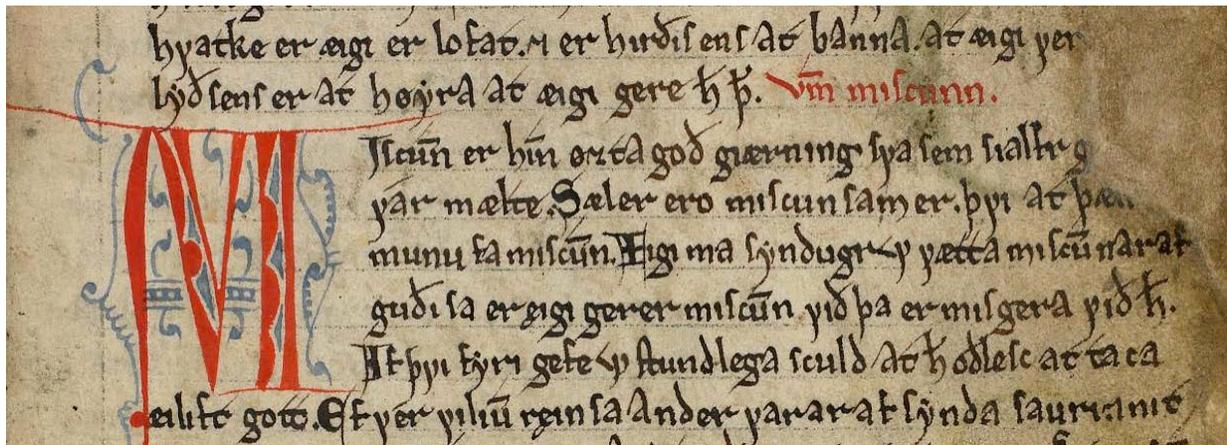
[Peter Baker]

The Medieval Unicode Font Initiative pseudo-standard assigns the thorn with diagonal stroke to PUA slot U+F149, and several fonts have it there (my Junicode font, Cardo, a few others). I know several books have used Junicode to produce it (e.g. Jane Roberts, *Guide to English Scripts* (2005)). I don't know of a font that uses an OpenType feature to produce this character. Junicode uses ss02 for insular letter-shapes, and now that you mention it, I believe I'm going to add U+A765 @ U+F149 to this feature.

I should say that I am rather neutral about the idea of adding crossed thorn with diagonal stroke. There are numerous differences between Norse and Old English letter-shapes (I've already mentioned þ and ð). Why single out this one? From an end-user's perspective it is surely much easier to access an alternative letter-shape like this one via an OpenType feature than by hunting down a new Unicode code-point.

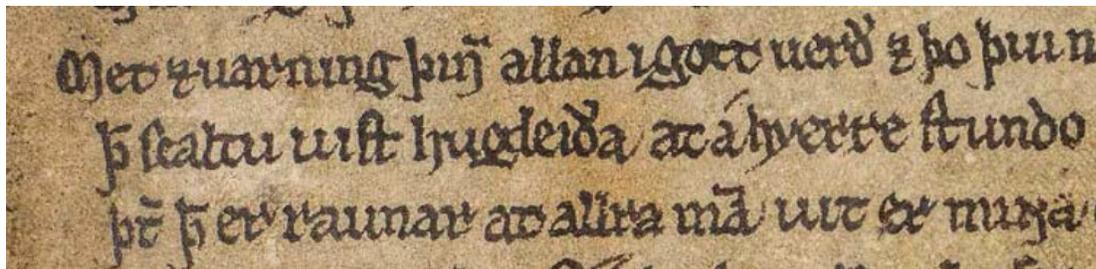
**Prof. Odd Einar Haugen, Dept. of Linguistic, Literary, and Aesthetic Studies,  
University of Bergen (Professor of Old Norse philology and founder of Medieval  
Unicode Font Initiative [MUFI]):**

In Medieval Nordic manuscripts there is (to the best of my knowledge) no semantic distinction between a horizontal bar across the thorn and a diagonal one. In some mss., the bar is diagonal and has the same angle as accents and other strokes. One good example is The Old Norwegian Homily Book in København, Den Arnamagnæanske Samling, AM 619 4to, fol. 3r, lines 8-15. (ca. 1200-1225):



In the second line in this extract, the two words right before the red caption are “h(ann) þ(at)”. As you can see, the angle of the bars are approximatey the same as in. e.g. the bar across the “eth” in the very first word of the same line, “lyð”.

In other manuscripts, the bar across will be horizontal, while accents are diagonal. One example is this very brief extract from a fragment of Konungs skuggsjá in Oslo, Riksarkivet, NRA 58A, fol. 1r, lines 6-8. (ca. 1260):



The first word in the second line in this extract is “þ(at)”, and also the second word in the third line. Note the angle of the accent above “a” in the middle of the second line.

So, for Medieval Nordic, there is no semantic distinction to be made with respect to the angle of the bar across the thorn. In fonts like Andron Mega corpus, the bar is rendered in a horizontal position, which also is what I would recommend.

The angle of the stroke across the thorn is quite distinctive, and while I as a Nordacist would prefer to have it in a horizontal position, I understand that people working with Old English might prefer a diagonal position.

In short, I agree with what Peter Stokes writes in his response above.

From my point of view, there is not a problem with confusion here. One has to accept that some Unicode characters will be used in ways not intended, and as long as Unicode does not specify rules for the usage of each character this is inevitable. The bar across the thorn is a low-risk candidate in my view. This character will typically be used by specialists.

As for the two examples above, they can be viewed in context in the Menota catalogue with full transcriptions: <http://clarino.uib.no/menota/catalogue>