L2/21-140

Title: Proposal to Encode the Sylheti Nagri Numerals in the UCS Source: Harris Mowbray (harrismowbray@yahoo.com) Status: Individual Contribution Action: For consideration by UTC and WG2 Date: 2021-06-24

I. Introduction

This is a proposal to encode ten new characters into the Syloti Nagri Unicode block of the Universal Character Set. These characters represent the ten digits used in Syloti Nagri numerals. There are only four unallocated codepoints left in the Syloti Nagri Unicode block so a new block will have to be added somewhere else.

Glyph	Name
0	SYLOTI NAGRI DIGIT ZERO
	SYLOTI NAGRI DIGIT ONE
μ	SYLOTI NAGRI DIGIT TWO
9	SYLOTI NAGRI DIGIT THREE
Ь	SYLOTI NAGRI DIGIT FOUR
ົ	SYLOTI NAGRI DIGIT FIVE

d	SYLOTI NAGRI DIGIT SIX
V	SYLOTI NAGRI DIGIT SEVEN
8	SYLOTI NAGRI DIGIT EIGHT
٩	SYLOTI NAGRI DIGIT NINE

II. Background

The Sylheti language is an Indo-Aryan language spoken in northwestern Bangladesh as well as some neighboring regions in India. The government of Bangladesh does not recognize Sylheti as a language and it is often perceived as a dialect of Bengali, which has caused people to stop using it in favor of Bengali. Regardless, the Sylheti language is making a comeback, and its traditional script is making a comeback too. Often Sylheti is written in the Bengali script, but the Syloti Nagri script is considered to be more authentic. When using the Syloti Nagri script, Bengali numerals are often used; this can be seen especially online, such as on the Wikipedia incubator for the Sylheti language. However, the Syloti Nagri script has its own set of digits, which were not encoded into Unicode. There are a few extant fonts (that I can provide) which cover these numbers (in a non-Unicode way) and there is substantial evidence of the usage of these digits. Before submitting this proposal, contact was made with many members of the Syloti language community who were enthusiastic about adding these digits to Unicode and considered it an important step in advancing the language.

According to the Endangered Alphabets Project

(https://www.endangeredalphabets.net/alphabets/syloti-nagri/), it has been recently "discovered that the original numbers, and references to them, have been deleted in several internet locations". This is certainly mysterious, and might explain why the digits were never encoded in the first place.

While the origin of these digits is unclear, even apparently to experts in the field, what we do know is that a prominent community member affectionately known as 'Nagri Shab' promoted

these digits starting around the 1980's, though he may have learned them from someone else. Four out of ten digits look very similar to their international counterparts (0,1,8, and 9). It does not really matter how old they are, they are currently being used by a language community so they belong in Unicode.

According to the original 2003 Unicode proposal for the Syloti Nagri script, the creators said that there was no evidence of other digits being used in their manuscripts which ranged from the 19th century to 1970's. Personally I hypothesize that the digits were created around the 1980's, and probably were not widely used among the Sylheti community until the dawn of the 21st century. This would explain why no old documents with these numbers have been found, but they are certainly in use today. Anyone involved in Sylheti language activism can confirm the substantial extent to which these digits are used.

III. Implementation

Character Names

The character names should just be SYLOTI NAGRI DIGIT ZERO through SYLOTI NAGRI DIGIT NINE.

Allocation

Because of the lack of space in the Syloti Nagri Unicode block, the codepoints are to be determined.

```
XXXX;SYLOTI DIGIT ZER0;Nd;0;L;;0;0;0;N;;;;;
XXXX;SYLOTI DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
XXXX;SYLOTI DIGIT TW0;Nd;0;L;;2;2;2;N;;;;;
XXXX;SYLOTI DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
XXXX;SYLOTI DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
XXXX;SYLOTI DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
XXXX;SYLOTI DIGIT SIX;Nd;0;L;;6;6;7;N;;;;;
XXXX;SYLOTI DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
XXXX;SYLOTI DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
XXXX;SYLOTI DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;
```



Some image shared on social media in Sylheti, maybe relating to Ramadan; the Bengali, Gregorian, and Islamic dates are given



An image found on Instagram showcasing the 10 digits in a modern-looking font (https://www.instagram.com/p/CM9WScBjjO2/)

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Id	IV	18	19	ra	11	rr		
10	rb	rD	rd	rv	18	rq		
90	10							

August rori								
Sun	Mon	Tue	Wed	Thu	Fri	Sat		
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Ir	10	Ib	120	Id	IV	18		
19	ra	rı	rr	10	rb	12		
rd	rv	18	rq	00				

December ror I								
Sun	Mon	Mon Tue Wed	Thu	Fri	Sat			
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Э	d	v	8	q	10	н		
Ir	10	Ib	D	Id	IV	18		
19	ro	rı	rr	10	rb	12		
rd	rv	18	rq	00	10			

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A Gregorian calendar for 2021 using Syloti Nagri numerals



IV तजनाग Ibbr फीलनी IV वञ्चजाग Ibr8 वा°ता 00 रेजनीत ror I जीजादा के जुर्मा मुनवान के

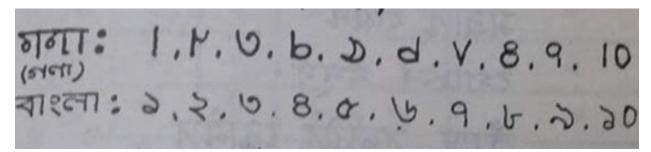




An image with these numerals in a different font, which seems to be based on handwriting

बाजली - र.ने 0 3 बाश्ला - १. ि. २ 6 U 0 Type of Bouk: ssue Date れてら आला (बा:ला) २२७8 ८७१ ७२० र्हा :(गाग्नी) 1 v v b 2 d v 8 9 10 10 = 20 (मग = 27 नारि) हेप्र करी 10 = 20 (निग- 27 करि) 05 = 01 てて वागान रिया আ্আত 🖑 0(0)

This seems to be an image of a book teaching Syloti numerals. The page number is shown in both Syloti and Bengali numerals.



Here is a handwritten example contrasting Syloti Nagri digits with Bengali-Assamese digits.