Universal Multiple-Octet Coded Character Set
International Organization for Standardization
Organisation Internationale de Normalisation
Международная организация по стандартизации

| | |
|---|---|
| **Doc Type:** | **Working Group Document** |
| **Title:** | **Preliminary proposal to encode the Osage script in the UCS** |
| **Source:** | **Michael Everson, Herman Mongrain Lookout, Cameron Pratt** |
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**1. Introduction.** This document requests the addition of the Osage script to the UCS.

**1.1. Background.** A variety of ad-hoc Latin orthographies and transcriptions have been used for the Osage language over the past 210 years, having been devised by people for reasons such as bible verse translation, language documentation, and study. Most of the writing systems were prepared by second-language Osage speakers. One of the earliest sources is dated circa 1851, attributed to Father Ponziglione, a Jesuit priest who ministered to the Osage.

**2. The development of the Osage script.** In 2004, the 31st Council of the Osage Nation passed a resolution initiating the Osage Language Program. Soon after, Herman Mongrain Lookout—known as "Mogri"—was hired as the director, and was afforded office space in downtown Pawhuska, Oklahoma. At that time no standard orthography existed for Osage, and students were exhorted to "spell it like you hear it", which, naturally, led to conflicting conventions which differed from student to student and which lacked linguistic robustness. Mogri developed a Latin-based orthography which used all capitals: SHOᴺ-KE 'dog', TSI 'house', TA 'deer', KE 'turtle'. It soon became felt that students' knowledge of the English orthographic values of these letters interfered with good pronunciation of Osage, and by 2006, working with advanced learners, a practical orthography had been designed whose letters were ultimately based on Latin letters or fusions of Latin letters, but which were treated as a different script entirely. The words above were written 𐓏O^.ꓘꓳ 'dog', 𐓆∩ 'house', 𐓍Λ 'deer', ꓘꓳ 'turtle'.

The Osage script was take up with alacrity by students and teachers, and has been consistently and regularly used throughout the Osage Nation since 2006. In 2012 a number of linguists and language-speakers raised some issues about the repertoire of characters employed, on the basis of their experience using it. Cameron Pratt and Dylan Herrick produced some documents analysing the use of the script and outlining questions which they felt should be examined and addressed.

At the same time graphic artist Ryan RedCorn and more recently Jessica Harjo had explored Osage typography and noticed a number of features which they felt to be somewhat problematic. Issues of character encoding and of orthographic reform began to be discussed with Michael Everson late in 2012 and early in 2013, and finally a three-day working seminar was hosted by the Osage Language Department on 12–14 February 2014, at which questions of linguistic issues, graphic design and fonts, and character encoding were discussed at length. Participants in the seminars included Mogri Lookout (who devised the script), linguist Cameron Pratt, teachers and curriculum developers Janice

Carpenter and Stephanie Rapp, graphic designers Jessica Harjo and Ryan RedCorn, governmental representative Geoffrey StandingBear, and other members of the Osage community.

**3. Structure of the Osage script.** The Osage script is a casing alphabet which is written from left to right.

**3.1. Osage consonants.** The table below shows the relation between Osage consonantal phonology. The first column for each consonant is the transcription used in Quintero 2009, the second IPA transcription, and the third Osage orthography.

| | Labial | | | Dental | | | Palatal-alveolar | | | Velar | | | Glottal | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Glottalized stops | pˀ | pˀ | þ' | cˀ | tsˀ | ₽' | | | | kˀ | kˀ | ꞣ' | (ʔ)(ʔ) | | – |
| Lax voiceless stops | p | p | þ | t | t | ᴅ | č | tʃ | ɢ | k | k | ꞣ | | | |
| Afficates | c | ts | ₽ | | | | | | | | | | | | |
| Preaspirated/tense voiceless stops | hp | ʰp | þ | ht | ʰt | ᴅ | hč | ʰtʃ | ɢ | hk | ʰk | ꞣ | | | |
| | | | | hc | ʰts | ₽ | | | | | | | | | |
| Voiced stops | br | bɹ | ʀ | | | | | | | | | | | | |
| (Post)aspirated stops | pš | pʃ | þꙅ | ch | tsʰ | ₽ɹ | | | | kš | kʃ | ꞣꙅ | | | |
| | px | px | þ⳦ | tx | tx | ᴅ⳦ | | | | kx | kx | ꞣ⳦ | | | |
| Voiceless/tense fric. | | | | s | s | ç | š | ʃ | ꙅ | x | x | ⳦ | h | h | ɹ |
| Voiced/lax fricatives | | | | z | z | ⱬ | ž | ʒ | ʒ | ɣ | ɣ | ψ | | | |
| Palatalized | | | | | | | | | | kʲ | kʲ | ꞣ | hʲ | hʲ | ꭓ |
| Nasals | m | m | ℔ | n | n | ⅃ | | | | | | | | | |
| Approximants | w | w | ⅄ | l | l | ᴄ | | | | | | | | | |
| | ð | ð | ꜩ | | | | | | | | | | | | |

**3.2. Osage vowels.** Oral and nasal vowels are distinguished by means of a diacritic dot:

𐓏 𐓷 *A a*, 𐒰 𐓘 E e, 𐒺 𐓩 *I i*, 𐒻 𐓓 *O o*, � 𐓶 *U u*; 𐓀 𐓧 *Ą ą*, 𐒿 𐓮 *Į į*, 𐓈 𐓨 *Ǫ ǫ*

This diacritic is not a combining mark and cannot stand alone; three diphthongs use a similar dot inside the character (also not a combining character); there is also one oral diphthong:

𐓏 𐓷 *ąį ąį*, 𐒰 𐓘 *Eį eį*, 𐒻 𐓓 *Oį oį*; 𐓏 𐓷 *Ai ai*

Long vowels are indicated by means of U+0304 COMBINING MACRON ABOVE:

𐓏̄ 𐓷̄ *Ā ā*, 𐒰̄ 𐓘̄ *Ē ē*, 𐒺̄ 𐓩̄ *Ī ī*, 𐒻̄ 𐓓̄ *Ō ō*, 𐓶̄ *Ū ū*; 𐓀̄ 𐓧̄ *Ą̄ ą̄*, 𐒿̄ 𐓮̄ *Į̄ į̄*, 𐓈̄ 𐓨̄ *Ǭ ǭ*

Where pitch accent needs to be indicated U+0301 COMBINING ACUTE ACCENT is used:

𐓏́ 𐓷́ *Á á*, 𐒰́ 𐓘́ *É é*, 𐒺́ 𐓩́ *Í í*, 𐒻́ 𐓓́ *Ó ó*, 𐓶́ *Ú ú*; 𐓀́ 𐓧́ *Ą́ ą́*, 𐒿́ 𐓮́ *Į́ į́*, 𐓈́ 𐓨́ *Ǫ́ ǫ́*
𐓏́ 𐓷́ *Ą́į ą́į*, 𐒰́ 𐓘́ *Éį éį*, 𐒻́ 𐓓́ *Óį óį*; 𐓏́ 𐓷́ *Ái ái*

Where pitch accent needs to be indicated in conjunction with vowel length, U+030B COMBINING DOUBLE ACUTE ACCENT is used:

𐓏̋ 𐓷̋ *A̋ a̋*, 𐒰̋ 𐓘̋ *E̋ e̋*, 𐒺̋ 𐓩̋ *I̋ i̋*, 𐒻̋ 𐓓̋ *Ő ő*, 𐓶̋ *Ű ű*; 𐓀̋ 𐓧̋ *Ą̋ ą̋*, 𐒿̋ 𐓮̋ *Į̋ į̋*, 𐓈̋ 𐓨̋ *Ǫ̋ ǫ̋*

**4. Reforms of previous orthography.** Five reforms were agreed at the February 2014 meeting, which have been implemented in the present proposal. The first of these was the introduction of case pairs. The examples of the introduction of case into Old Hungarian by young learners, and of the ramifications of the re-introduction of case into the existing Cherokee encoding were discussed at considerable length, and during the February meetings everyone including Mogri Lookout and the two graphic designers was quite certain that the script was "mature" enough to acquire and

implement case, in order to to offer a robust new typographic tradition. (In particular the experience of the Cherokees changing the encoding model was taken quite seriously; the Osage accepted that any changes now needed to be permanent and stable.)

Another was the special representation of the "pre-aspirate" consonant class. These consonants represent original geminates in proto-Dhegiha, and are either pronounced as geminates by Osage women, or as pre-aspirated consonants by Osage men. The original representation was either ⱱÞ *hp*, ⱱꝹ *ht*, ⱱꝇ *hc*, ⱱꞓ *hč*, ⱱꝀ *hk* or ⱱÞ *ʰp*, ⱱꝹ *ʰt*, ⱱꝇ *ʰc*, ⱱꞓ *ʰč*, ⱱꝀ *ʰk*; the reform proposes to replace these with unitary characters þ *ʰp*, ꝺ *ʰt*, ꝗ *ʰc*, ꝿ *ʰč*, ꝁ *ʰk*.

The third reform involved the abolition of three letters, two of which were ligatures (ȡ *sts* for ꝇꝇ *s-ts* and ȿ *sk* for ꝇꝀ *s-k*) and one λ which indicated the sound [ə] which is not a phoneme but an allophone of Λ /a/. Two other characters which repesent palatalized (but evidently not phonemic) consonants ⱱ [hʲ] and ꝁ [kʲ] have been retained as *s hy* and *ꝁ ky*.

The fourth reform was in the representation of nasality. Instead of representing nasality in the nasal vowels Λ^ *ą*, ꞟ^ *į*, O^ *ǫ* differently from its representation in nasal diphthongs Δ *ai̧*, Ɑ *ei̧*, Ọ *oi̧*, an intrinsic dot, to the top left or internally, is now used for all of them: ʌ̇ *ą*, ꞟ̇ *į*, o̓ *ǫ*, ʌ *ai̧*, ɑ *ei̧*, ⊙ *oi̧*.

The final reform was modification of the glyph for ℨ *x/ɣ* and splitting it into two characters ⱶ *x* and a new ψ *ɣ*.

While the community is confident in the reforms agreed, they understand the permanency of the UCS encoding process and will take six months to test out the reforms following this preliminary proposal for encoding. A specific action plan has been outlined for this, and the two graphic designers Ryan RedCorn and Jessica Harjo will work along with Michael Everson to ensure that a variety of sample texts are available for scrutiny quite soon. In general, however, it has been recognized that the reforms respond appropriately to criticisms and queries about the script.

**5. Ordering.** Small letters precede capital letters. Nasal vowels are treated as separate letters from oral vowels. Accented vowels are treated as variants of their base letter. Preaspirate/geminate and palatalized letters are treated as separate letters from non-aspirate letters.

ʌ <<< Λ << ā̤ <<< Ā̤ << á <<< Á << ǎ <<< Ǎ < ʌ̇ <<< Λ̇ << ā̇ <<< Ā̇ << á̇ <<< Á̇ << ǎ̇ <<< Ǎ̇ < ʌ <<< Λ << ā <<< Ā << á <<< Á << ǎ <<< Ǎ < ʌ <<< Λ << ā <<< Ā << á <<< Á << ǎ <<< Ǎ < ʀ <<< ʀ < ɢ <<< ɢ < ɢ <<< ɢ < α <<< Ɑ << ᾱ <<< Ɑ̄ << ά <<< Ɑ́ << ǽ <<< Ǽ < ɶ <<< ɶ << ᾱ <<< ᾱ̄ << ǽ <<< ǽ << ǽ <<< ǽ < ɹ <<< ɹ < ɹˢ <<< ɹˢ < ᴜ <<< ᴜ << ū̄ <<< ᴜ̄ << ń <<< ᴜ́ << ǹ̋ <<< ᴜ̋ < ᴜ̇ <<< ᴜ̇ << n̄̇ <<< n̄̇ << ń̇ <<< ń̇ << ǹ̇̋ <<< ǹ̇̋ < ꝁ <<< ꝁ < ꝁ <<< ꝁ < ꝁ <<< ꝁ < ɕ <<< ɕ < ℔ <<< ℔ < ⱶ <<< ⱶ < o <<< O << ō <<< Ō << ó <<< Ó << ő <<< Ő < o̓ <<< O̓ << ō̇ <<< Ō̇ << ó̇ <<< Ó̇ << ő̇ <<< Ő̇ < ⊙ <<< ⊙ << ō̈ <<< Ō̈ << ó̈ <<< Ó̈ << ő̈ <<< Ő̈ < þ <<< Þ < þ <<< Þ < ɕ <<< ɕ < ꞗ <<< ꞗ < ꝺ <<< Ꝺ < ꝺ <<< Ꝺ < ꝗ <<< ꝗ < ꝗ <<< ꝗ < ꝗ <<< ꝗ < ꞓ <<< ꞓ < ᴜ <<< ᴜ << ū <<< Ū << ú <<< Ú << ű <<< Ű < ꝁ <<< ꝁ < ⱶ <<< ⱶ < ψ <<< Ψ < ℨ <<< ℨ < ȝ <<< Ȝ

**6. Font considerations.** It is expected that Osage users will prefer to have their fonts function with *italic* and **bold** and ***bold-italic*** styles just as Latin fonts do. To date specifically italic styles have not been designed but the utility of this vs. obliqued fonts is part of the action plan for encoding the script.

**7. Digits and punctuation.** Osage makes use of standard European digits and punctuation.

**8. Unicode Character Properties.**

TO BE SUPPLIED

**9. References.**

Quintero, Carolyn. 2009. *Osage dictionary*. Norman: University of Oklahoma Press. ISBN 978-0-8061-3844-2

Osage Nation Language Department. 𐓘𐓧.𐓰𐓧.𐓰𐓘 𐓣.𐓘 [*wa.ža.že i.e*]: *Osage Language Beginner Lessons*.

**11. Figures.**
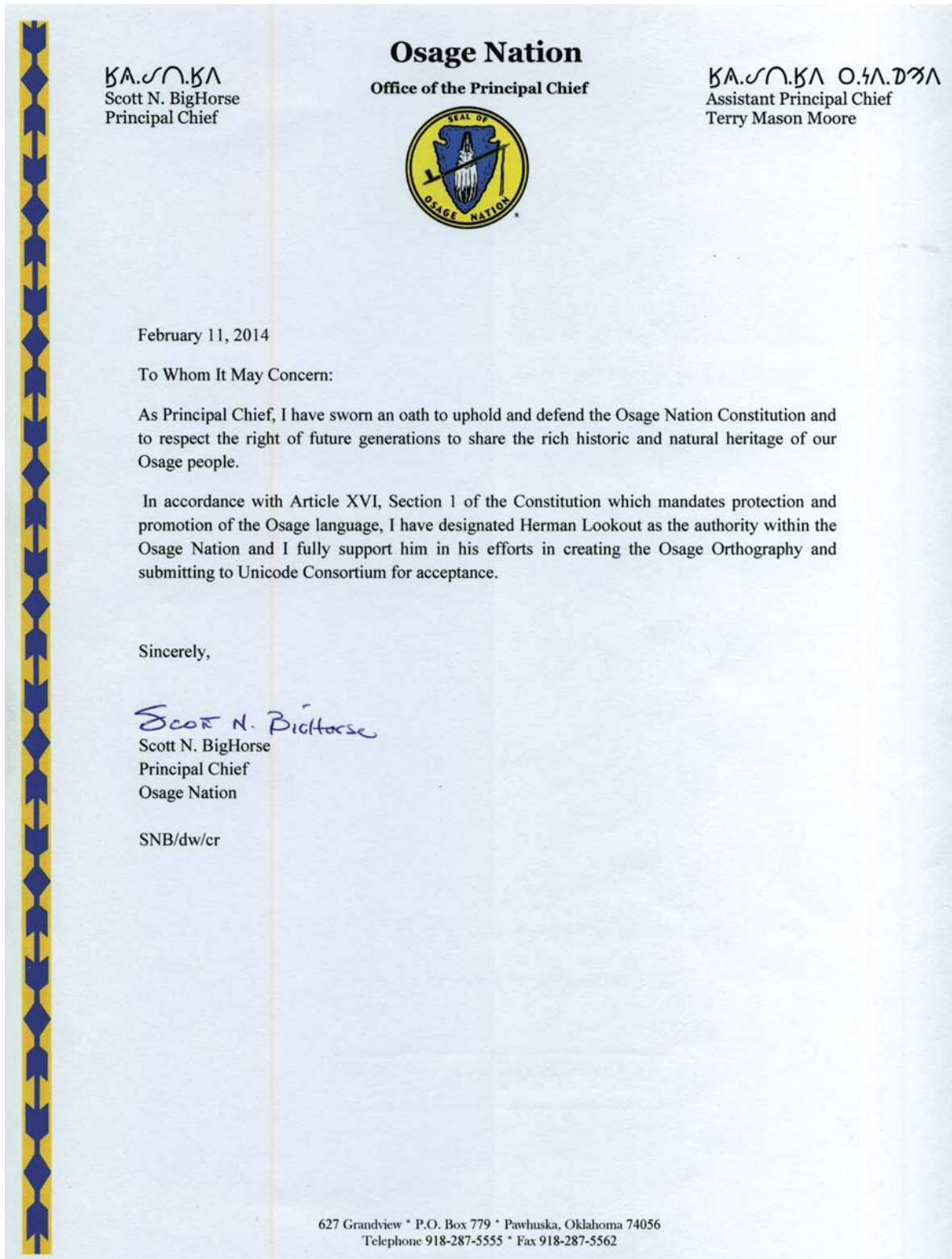


**Figure 1.** Letter from the Principal Chief of the Osage Nation detailing Herman Mongrain Lookout's authority in the matter of Osage orthography and the UCS encoding.

# Osage Orthography

## Primaries

| | |
|---|---|
| Λ | 'awe' sound as in the word, <u>awe</u>some. |
| ∩ | long e sound as in the word, sl<u>ee</u>p. |
| ⍺ | short e sound as in the word, <u>e</u>gg. |
| λ | short u sound as in word, b<u>uh</u>! |
| O | long o sound as in the word, <u>o</u>h. |
| U | 'oo' sound as in the word, b<u>oo</u>t. |
| ^ | nasal sound |
| Δ | blend of Λ and ∩^ |
| Ọ | blend of O and ∩^ |
| ⍺̣ | blend of ⍺ and ∩^ |
| Λ̄ | blend of Λ and ∩ |

## Modifiers

| | |
|---|---|
| ᔆ | similar to the 'X' sound, but guttural. |
| ᔕ | english S |
| ꜱ | english H |
| Ꮷ | english W |
| ᴄ | english L |
| ᴔ | english M |
| ⋋ | english N |
| 7 | english Z |
| Þ | between the 'P' and 'B' |
| Ƙ | between the 'K' and 'G' |
| Ꭰ | between the 'T' and 'D' |
| ħ | blend of T and H as in the word, <u>th</u>ese. |
| ꭹ | blend of S and H as in the word, <u>sh</u>ip. |
| �ǹ | blend of C and H as in the word, <u>ch</u>ip. |
| ⱬ | blend of Z and H as in the word, trea<u>s</u>ure. |
| ꝑ | blend of T and S together. |
| R | blend of Þ medial and R. |
| ᔕ̌ | blend of S and K. |
| Ƙ̌ | blend of K and Y. |
| ꜱ̌ | blend of H and Y. |
| Ꝛ | blend of S and D |

**Figure 2.** Description of the earlier Osage orthography.

**Figure 3.** Example text from the beginning workbook for Osage language.

Osage Orthography Keyboard
Reference Chart

| Keyboard | 6 |
|---|---|
| Osage Orthograhy | ^ |

| Keyboard | W | E | T | Y | U | I | O o | P | [ | ] | \ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Osage Orthography | ꞗ | ɑ | ħ | ∩ | U | Ʌ | O Ꝍ | Þ | Ʒ | Ꝑ | ꝛ |

| Keyboard | A a | S | D | H | J | K | L | ; | ' |
|---|---|---|---|---|---|---|---|---|---|
| Osage Orthography | Ʌ Δ | Ϲ | Ꭰ | ꭘ | ⅄ | Ꝅ | Ϲ | ꝸ | ' |

| Keyboard | Z | X | C | V | B | N | M | , | . | / |
|---|---|---|---|---|---|---|---|---|---|---|
| Osage Orthography | Ɀ | ꭐ | ꭎ | ꞗ | R | ꞁ | ꭟ | Ꝅ | . | Ꝅ |

**Figure 4.** Scheme for the first Osage-script keyboard layout.

**Figure 5.** Exterior of the Osage Language Department showing the script in use. The text in red says *Wažaže ie* 'Osage language'.



**Figure 6.** The Osage Language Department in Pawhuska, Oklahoma.

**Figure 7.** One of many drawings by children displayed in the Osage Language Department. Text reads: Ꞇꜣ ꝺ∧ꞁꞇ þ∧.ꞇ⋌∧.ꞇ∧ ꞇ∧.ꞇ∧: þꞑ; in another font style Ꞇꜣ ꝺ∧ꞁꞇ þ∧.ꞇ⋌∧.ꞇ∧ ꞇ∧.ꞇ∧ þꞑ.



**Figure 8.** More drawings by children displayed in the Osage Language Department.

𐒻𐓪.𐓘𐓣 𐓏𐓪.𐓏𐓣.𐓵𐓟 𐓶𐓣 𐒼𐓪^.𐓣𐓪

I want to address everyone as friends and relatives

𐓣.𐓚 𐓲𐓟.𐓚 𐓚.𐒼𐓣.𐓶𐓼𐓚 𐓶𐓣 𐒼𐓪^.𐓣𐓪

I want to say a few words

𐓧𐓚 𐒻𐓪.𐓘𐓣 𐓏𐓣.𐓚 𐒼𐓼𐓣.𐓚

I am addressing you all.


𐒻𐓪.𐓘𐓣 𐓏𐓪.𐓏𐓣.𐓵𐓟 𐓶𐓣 𐒼𐓪^.𐓣𐓪

I want to address everyone as friends and relatives

𐓣.𐓚 𐓲𐓟.𐓚 𐓚.𐒼𐓣.𐓶𐓼𐓚 𐓶𐓣 𐒼𐓪^.𐓣𐓪

I want to say a few words

𐓧𐓚 𐒻𐓪.𐓘𐓣 𐓏𐓣.𐓚 𐒼𐓼𐓣.𐓚

I am addressing you all.

**Figure 9.** Above, text in the original standard "Official Osage font"; below, examples of Jessica Harjo's experiments in quite graceful Osage typography, using the original orthography. The text reads: 𐒻𐓪𐓘𐓣 𐓏𐓪𐓏𐓣𐓵𐓟 𐓶𐓣 𐒼𐓪𐓣𐓪, 𐓣𐓚 𐓲𐓟𐓚 𐓚𐒼𐓣𐓶𐓼𐓚 𐓶𐓣 𐒼𐓪𐓣𐓪, 𐓧𐓚 𐒻𐓪𐓘𐓣 𐓏𐓣𐓚 𐒼𐓼𐓣𐓚; in another font style: 𐒻𐓪𐓘𐓣 𐓏𐓪𐓏𐓣𐓵𐓟 𐓶𐓣 𐒼𐓪𐓣𐓪, 𐓣𐓚 𐓲𐓟𐓚 𐓚𐒼𐓣𐓶𐓼𐓚 𐓶𐓣 𐒼𐓪𐓣𐓪.



**Figure 10.** Typographic explorations in a heavy display face by Ryan RedCorn.
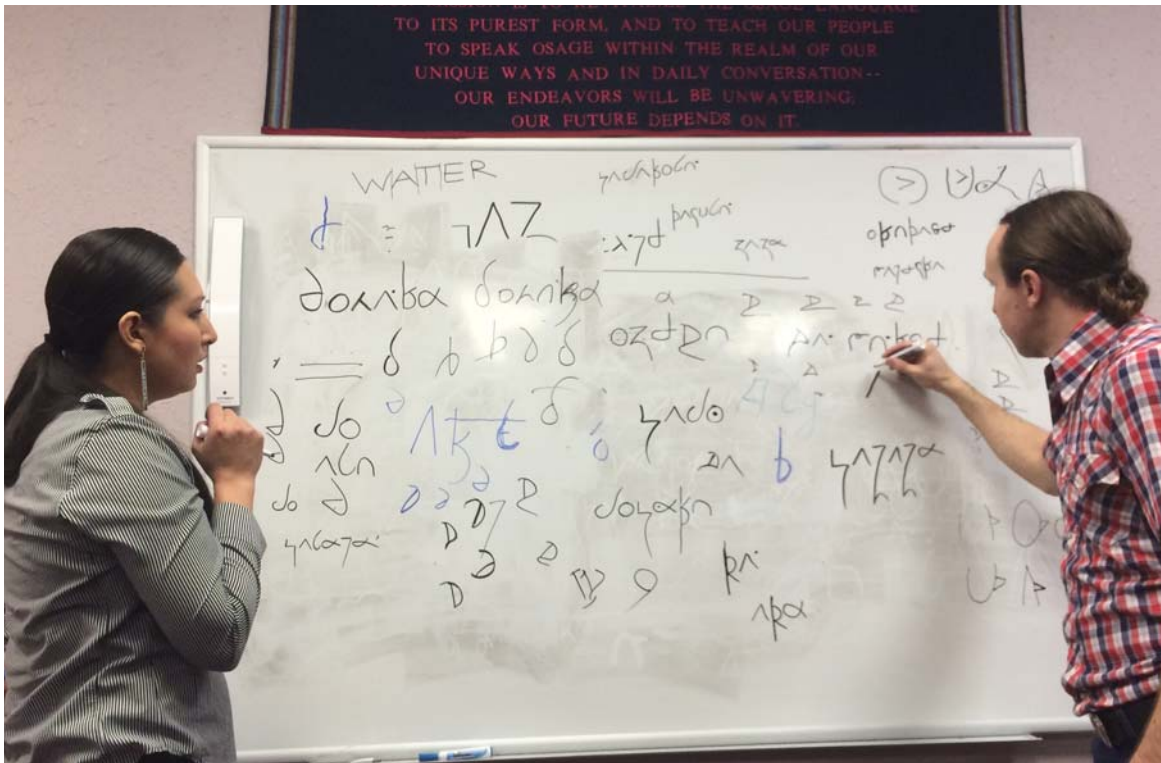
**Figure 11.** Jessica Harjo and Ryan RedCorn on the third day of the seminars in February 2014. Text here is casing, and the lower-case letters have ascenders and descenders.



**Figure 12.** Participants in the third day of seminars in February 2014. From left to right are Stephanie Rapp, Janis Carpenter, Michael Everson, Mogri Lookout, Jessica Harjo, Cameron Pratt, and Ryan RedCorn.

| | 104B | 104C | 104D | 104E | 104F |
|---|---|---|---|---|---|
| 0 | Λ <br> 104B0 | Ɑ <br> 104C0 | Ꝥ <br> 104D0 | ɑ <br> 104E0 | Ϛ <br> 104F0 |
| 1 | Λ̇ <br> 104B1 | ℗ <br> 104C1 | ⱷ <br> 104D1 | ʃ <br> 104E1 | ﻼ <br> 104F1 |
| 2 | Λ <br> 104B2 | ʟ <br> 104C2 | Ψ <br> 104D2 | ʃ <br> 104E2 | Đ <br> 104F2 |
| 3 | Λ̇ <br> 104B3 | O <br> 104C3 | Ɀ <br> 104D3 | Ω <br> 104E3 | Đ <br> 104F3 |
| 4 | Ɍ <br> 104B4 | Ȯ <br> 104C4 | Ʒ <br> 104D4 | Ω̇ <br> 104E4 | Ƥ <br> 104F4 |
| 5 | Ɠ <br> 104B5 | ⊙ <br> 104C5 | | ƙ <br> 104E5 | Ƥ <br> 104F5 |
| 6 | Ɠ <br> 104B6 | Þ <br> 104C6 | | ƙ <br> 104E6 | Ħ <br> 104F6 |
| 7 | ɑ <br> 104B7 | Ꝧ <br> 104C7 | | ƙ <br> 104E7 | U <br> 104F7 |
| 8 | ɑ <br> 104B8 | Ɑ <br> 104C8 | Λ <br> 104D8 | Ɑ <br> 104E8 | Ꝥ <br> 104F8 |
| 9 | ʃ <br> 104B9 | ﻼ <br> 104C9 | Λ̇ <br> 104D9 | ℗ <br> 104E9 | ⱷ <br> 104F9 |
| A | ʃ <br> 104BA | Đ <br> 104CA | Λ <br> 104DA | ʟ <br> 104EA | Ψ <br> 104FA |
| B | Ω <br> 104BB | Đ <br> 104CB | Λ <br> 104DB | O <br> 104EB | Ɀ <br> 104FB |
| C | Ω̇ <br> 104BC | Ƥ <br> 104CC | Ɍ <br> 104DC | Ȯ <br> 104EC | Ʒ <br> 104FC |
| D | ƙ <br> 104BD | Ƥ <br> 104CD | Ɠ <br> 104DD | ⊙ <br> 104ED | |
| E | ƙ <br> 104BE | Ħ <br> 104CE | Ɠ <br> 104DE | Þ <br> 104EE | |
| F | ƙ <br> 104BF | U <br> 104CF | ɑ <br> 104DF | Þ <br> 104EF | |

## Capital letters

| | | |
|---|---|---|
| 104B0 | Λ | OSAGE CAPITAL LETTER A |
| 104B1 | Λ́ | OSAGE CAPITAL LETTER AN |
| 104B2 | Λ | OSAGE CAPITAL LETTER AI |
| 104B3 | A | OSAGE CAPITAL LETTER AIN |
| 104B4 | R | OSAGE CAPITAL LETTER BRA |
| 104B5 | Ǥ | OSAGE CAPITAL LETTER CHA |
| 104B6 | Ǥ | OSAGE CAPITAL LETTER EHCHA |
| 104B7 | Ơ | OSAGE CAPITAL LETTER E |
| 104B8 | Ơ | OSAGE CAPITAL LETTER EIN |
| 104B9 | Ɉ | OSAGE CAPITAL LETTER HA |
| 104BA | Ɉ́ | OSAGE CAPITAL LETTER HYA |
| 104BB | Ω | OSAGE CAPITAL LETTER I |
| 104BC | Ώ | OSAGE CAPITAL LETTER IN |
| 104BD | Ҟ | OSAGE CAPITAL LETTER KA |
| 104BE | Ҟ | OSAGE CAPITAL LETTER KYA |
| 104BF | Ƙ | OSAGE CAPITAL LETTER EHKA |
| 104C0 | Ϲ | OSAGE CAPITAL LETTER LA |
| 104C1 | ℔ | OSAGE CAPITAL LETTER MA |
| 104C2 | λ | OSAGE CAPITAL LETTER NA |
| 104C3 | O | OSAGE CAPITAL LETTER O |
| 104C4 | Ơ | OSAGE CAPITAL LETTER ON |
| 104C5 | Θ | OSAGE CAPITAL LETTER OIN |
| 104C6 | Þ | OSAGE CAPITAL LETTER PA |
| 104C7 | Þ | OSAGE CAPITAL LETTER EHPA |
| 104C8 | Ϲ | OSAGE CAPITAL LETTER SA |
| 104C9 | ℛ | OSAGE CAPITAL LETTER SHA |
| 104CA | Ɗ | OSAGE CAPITAL LETTER TA |
| 104CB | Đ | OSAGE CAPITAL LETTER EHTA |
| 104CC | Ƥ | OSAGE CAPITAL LETTER TSA |
| 104CD | Ƥ | OSAGE CAPITAL LETTER EHTSA |
| 104CE | Ŧ | OSAGE CAPITAL LETTER DHA |
| 104CF | U | OSAGE CAPITAL LETTER U |
| 104D0 | Ƨ | OSAGE CAPITAL LETTER WA |
| 104D1 | ф | OSAGE CAPITAL LETTER KHA |
| 104D2 | Ψ | OSAGE CAPITAL LETTER GHA |
| 104D3 | Ʒ | OSAGE CAPITAL LETTER ZA |
| 104D4 | Ʒ | OSAGE CAPITAL LETTER ZHA |

## Small letters

| | | |
|---|---|---|
| 104D8 | ʌ | OSAGE SMALL LETTER A |
| 104D9 | ʌ́ | OSAGE SMALL LETTER AN |
| 104DA | ᴀ | OSAGE SMALL LETTER AI |
| 104DB | ᴀ | OSAGE SMALL LETTER AIN |
| 104DC | ʀ | OSAGE SMALL LETTER BRA |
| 104DD | ɢ | OSAGE SMALL LETTER CHA |
| 104DE | ɢ | OSAGE SMALL LETTER EHCHA |
| 104DF | α | OSAGE SMALL LETTER E |
| 104E0 | ᴄ | OSAGE SMALL LETTER EIN |
| 104E1 | ʃ | OSAGE SMALL LETTER HA |
| 104E2 | ʃ́ | OSAGE SMALL LETTER HYA |
| 104E3 | ᴨ | OSAGE SMALL LETTER I |
| 104E4 | ᴨ́ | OSAGE SMALL LETTER IN |
| 104E5 | ĸ | OSAGE SMALL LETTER KA |
| 104E6 | ĸ | OSAGE SMALL LETTER KYA |
| 104E7 | ƙ | OSAGE SMALL LETTER EHKA |
| 104E8 | ᴄ | OSAGE SMALL LETTER LA |
| 104E9 | ℔ | OSAGE SMALL LETTER MA |
| 104EA | ʎ | OSAGE SMALL LETTER NA |
| 104EB | o | OSAGE SMALL LETTER O |
| 104EC | ơ | OSAGE SMALL LETTER ON |
| 104ED | ⊖ | OSAGE SMALL LETTER OIN |
| 104EE | þ | OSAGE SMALL LETTER PA |
| 104EF | þ | OSAGE SMALL LETTER EHPA |
| 104F0 | ç | OSAGE SMALL LETTER SA |
| 104F1 | ℛ | OSAGE SMALL LETTER SHA |
| 104F2 | ᴅ | OSAGE SMALL LETTER TA |
| 104F3 | ᴆ | OSAGE SMALL LETTER EHTA |
| 104F4 | ℗ | OSAGE SMALL LETTER TSA |
| 104F5 | ℗ | OSAGE SMALL LETTER EHTSA |
| 104F6 | ₸ | OSAGE SMALL LETTER DHA |
| 104F7 | ᴜ | OSAGE SMALL LETTER U |
| 104F8 | ƺ | OSAGE SMALL LETTER WA |
| 104F9 | ф | OSAGE SMALL LETTER KHA |
| 104FA | ψ | OSAGE SMALL LETTER GHA |
| 104FB | ꙁ | OSAGE SMALL LETTER ZA |
| 104FC | ʒ | OSAGE SMALL LETTER ZHA |

## A. Administrative

1. Title
**Preliminary proposal to encode the Osage script in the UCS**
2. Requester's name
**Michael Everson, Herman Mongrain Lookout, Cameron Pratt**
3. Requester type (Member body/Liaison/Individual contribution)
**Individual contribution.**
4. Submission date
**2014-02-20**
5. Requester's reference (if applicable)
6. Choose one of the following:
6a. This is a complete proposal
**No.**
6b. More information will be provided later
**Yes.**

## B. Technical – General

1. Choose one of the following:
1a. This proposal is for a new script (set of characters)
**Yes.**
1b. Proposed name of script
**Osage.**
1c. The proposal is for addition of character(s) to an existing block
**No.**
1d. Name of the existing block
2. Number of characters in proposal
**74.**
3. Proposed category (A-Contemporary; B.1-Specialized (small collection); B.2-Specialized (large collection); C-Major extinct; D-Attested extinct; E-Minor extinct; F-Archaic Hieroglyphic or Ideographic; G-Obscure or questionable usage symbols)
**Category A.**
4a. Is a repertoire including character names provided?
**Yes.**
4b. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?
**Yes.**
4c. Are the character shapes attached in a legible form suitable for review?
**Yes.**
5a. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?
**Michael Everson.**
5b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:
**Michael Everson, Fontographer.**
6a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?
**Yes.**
6b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?
**Yes.**
7. Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?
**Yes.**
8. Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at http://www.unicode.org for such information on other scripts. Also see Unicode Character Database http://www.unicode.org/Public/UNIDATA/ UnicodeCharacterDatabase.html and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.
**See above.**

## C. Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.
**No.**
2a. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?
**Yes.**

2b. If YES, with whom?

**Members of Osage governmental and educational authorities, and others: Debra Atterberry, Janis Carpenter, Jessica Harjo, Mary Linn, Herman Lookout, Ted Moore, Terry Mason Moore, Veronica Pipestem, Cameron Pratt, Billy Proctor, Stephanie Rapp, Ryan RedCorn, Ed Shaw, Geoffrey StandingBear, Joe Tillman.**

2c. If YES, available relevant documents

3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?

**Osage speakers and writers.**

4a. The context of use for the proposed characters (type of use; common or rare)

**In modern use.**

4b. Reference

5a. Are the proposed characters in current use by the user community?

**Yes.**

5b. If YES, where?

**Various publications, many educational.**

6a. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?

**No.**

6b. If YES, is a rationale provided?

6c. If YES, reference

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

**Yes.**

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?

**No. The script derives from Latin, but is not unifiable with Latin.**

8b. If YES, is a rationale for its inclusion provided?

8c. If YES, reference

9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?

**No.**

9b. If YES, is a rationale for its inclusion provided?

**No.**

9c. If YES, reference

10a. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?

**No.**

10b. If YES, is a rationale for its inclusion provided?

10c. If YES, reference

11a. Does the proposal include use of combining characters and/or use of composite sequences (see clauses 4.12 and 4.14 in ISO/IEC 10646-1: 2000)?

**Yes.**

11b. If YES, is a rationale for such use provided?

**No.**

11c. If YES, reference

11d. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

**Yes.**

11e. If YES, reference

**Existing combining characters are used with Osage vowels to indicate length and pitch accent.**

12a. Does the proposal contain characters with any special properties such as control function or similar semantics?

**No.**

12b. If YES, describe in detail (include attachment if necessary)

13a. Does the proposal contain any Ideographic compatibility character(s)?

**No.**

13b. If YES, is the equivalent corresponding unified ideographic character(s) identified?