

To: Unicode Technical Committee
From: Roozbeh Pournader (WhatsApp, Facebook) and Deborah Anderson (SEI, UC Berkeley)
Subject: Arabic additions for Quranic orthographies
Date: September 29, 2019

Arabic Quranic characters used to represent text in the minority orthographies appeared in proposals and documents from King Fahd Glorious Quran Printing Complex (L2/10-381), Mussa Abudena (L2/15-329, L2/16-044, and L2/17-004), Azzeddine Lazrek (L2/16-268, L2/17-252), Lateef Sagar Shaikh (L2/16-056, based on Abudena's L2/16-044), as well as comments from Kamal Mansour, Lorna Evans, and Mussa Abudena (L2/16-102).

Some of the characters were considered eligible for encoding based on discussion in the Script Ad Hoc group (L2/17-037 and L2/17-384). This document includes those, as well as quite a few other characters deemed useful in further discussions between the authors and Marijn van Putten of Leiden University, an expert in Quranic Arabic, or found later by the authors. The orthographies we include are mostly used in Northwest Africa, and they have some shared symbols. It should be noted that this proposal may not be covering all needed characters in those orthographies. Instead, it should be considered a critical step to establish the most important characters and help future proposals advance.

Based on existing Quranic characters already encoded in Unicode, we have assumed a graphemic model for new characters. We consider modern Quranic orthographies comparable to technical writing: If a symbol is graphically quite different from an existing character used in another orthography for the same purpose or concept, we believe it should be encoded.

If the characters are encoded in the manner proposed below, they will be consistent with already encoded characters, and will be easier to add to existing Unicode Arabic fonts.

New characters to be encoded

Note that in the figures below, needed characters are typically circled in red, while existing characters are typically circled in blue.

1. ARABIC SMALL HIGH WORD SAH

This is a pause/*waqf* sign, and a combining character, like the other *waqf* signs encoded for other Quranic orthographies (such as U+0615, U+0617, U+06D6..U+06DC, U+08D5..U+08D7, and U+08DD..U+08DF). It is the most common *waqf* sign in modern Northwest African orthographies of the Quran.

Graphically, this character is typically larger and wider than the mark above U+0671 ARABIC LETTER ALEF WASLA (as well as the ARABIC SYMBOL WASLA ABOVE proposed here (see #2 below) which is a spacing character for pedagogical purposes).

The proposed name is consistent with the name of existing characters U+08D4 and U+08DA..U+08DF. The name SAH comes from Abudena in L2/17-004, although he prefers other names for the character itself. The annotation “sign of waqf” should be added, with notes and references to make sure this character is not confused with a combining *wasla*.

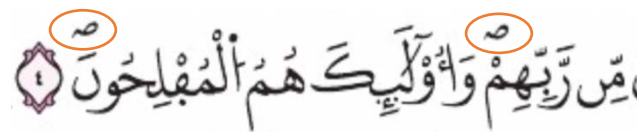
Figure 2 from L2/16-044 (Abudena):



Figure 1 from L2/16-056 (Shaikh, based on Abudena):



From King Fahd Warsh, showing a narrower version, graphically more similar to a *wasla*:



2. ARABIC SYMBOL WASLA ABOVE

Most examples only show this character over *alef*. Azzeddine Lazrek in L2/17-252 recommended a combining version of this character (first proposed by Miikka-Markus Alhonen in L2/03-166), but that would cause two different ways to represent the existing Unicode character U+0671 ARABIC LETTER ALEF WASLA with no equivalence relationship between them.

There clearly is a need for a non-combining spacing version for pedagogical use. We think it should be encoded at U+FBC2 to complete the existing set of Arabic pedagogical symbols at U+FBB2..U+FBC1.

Evidence of stand-alone pedagogical usage (from the end notes of a King Fahd Hafs Quran):

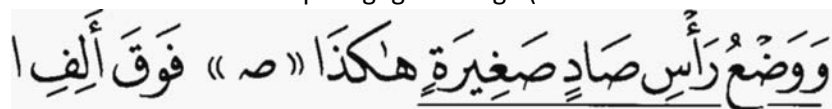


Figure 4 from L2/03-166 (Alhonen):

9) **ص** *vaṣl* ('liitántä', ar. *waṣla*) on sidontamerkki, jolla arabian määräävä artikkeli **al-**

3. ARABIC SMALL HIGH FARSI YEH

This character is the al-Dani/Qaloon version of U+06E7 ARABIC SMALL HIGH YEH for perhaps one specific case in those editions and should have the same properties. According to Abudena, it always takes a FATHA above it (L2/17-004, p.3). These orthographies use it to distinguish a missing consonant /j/ from a missing vowel /i:/.

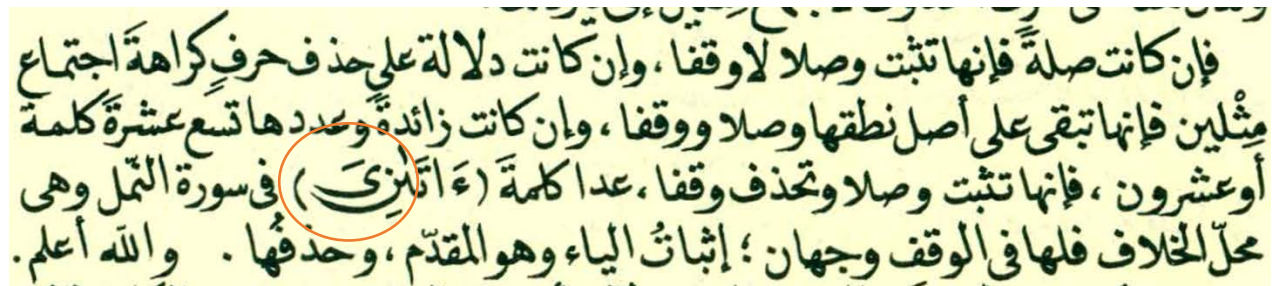
Figure 2 in L2/17-004 (Abudena):



Contrastive usage with U+06E7 ARABIC SMALL HIGH YEH from Tripoli Qaloon:



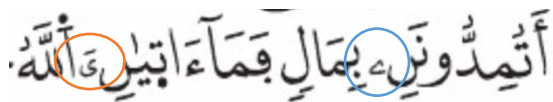
From Tripoli Qaloon end notes:



4. ARABIC SMALL FARSI YEH

This is the spacing baseline version of the ARABIC SMALL HIGH FARSI YEH (#3 above) and is used in the Warsh orthography. Note that the Warsh orthography uses both this and U+06E6 ARABIC SMALL YEH contrastively. (Note that we already have a similar contrast in U+06E6/U+06E7 and U+06E5/U+08F3).

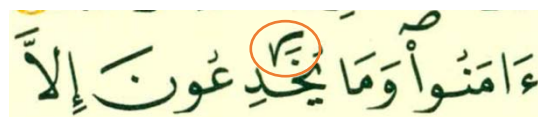
From King Fahd Warsh:



5. ARABIC SUPERScript ALEF MOKHASSAS

This symbol is used in Qaloon/al-Dani Qurans to specify cases where there are differences or doubts in the reading of a word.

From Tripoli Qaloon:



ومن ذلك الحذف المميّز بهذه العلامة « ٣ » وهو ما نعتبره بالخصّص ،
ويوجد في مائة وست وثلاثين كلمة (١٣٦) ، ووجه تسميته بهذا الاسم مأخوذة من قول
أهل الرسم : هذه الكلمة أو الكلمات خصّها أبو عمرو بالحذف .
وباستنقراء هذا النوع من الحذف في كلمات القرآن الكريم تبين أنه أحد أنواع الحذف
الثلاثة المعروف بالحذف « الإشاري » وهو ما يشير إلى قراءة أخرى متواترة في الغالب
والأكثر كما في : يخدعون - أسرى - تفكدهم .

أو قراءة شاذة في القليل كما في قوله تعالى : « إن يدعون من دونه إلا إنكنا » .
وقد يشار بهذا الحذف إلى اتفاق أهل الرسم على حذف ألف معيّنة كما في قوله تعالى :
« إِنَّا بَرَاءٌ لِّأَوْلِيَانِكُمْ » ومثيلاتها مما خرج على القياس واجمعت المصاحف على كتابته بدون
ألف ورسمت همزته المضمومة فوق الواو .

وقد يوجد هذا الحذف في كلمات خاصة مثل : « الميعاد » ، « كذّب » بالأفقال والزمر
إشارة إلى أن هذه الكلمات خصّت بالحذف دون غيرها من مثيلاتها .
وقد يأتي هذا الحذف في بعض الكلمات مشيراً إلى انفرادها وعدم تكررها في القرآن مثل :
« تَرْزُقْنِيهِ » بيوسف .

وبالجملة ، فكل كلمة قرآنية رسمت على هذا النوع فيها إشارة لطيفة إلى نحو من المعاني
التي أسلفنا مما ذكر في كتب الرسم ولم يذكر ، مما يدركه أهل البصر والبصائر من إيجاز
في رسم القرآن الكريم ، حيث إن القرآن الكريم كما هو معجز في نظمه معجز في رسمه .

ولعل في تمييز هذه الكلمات القرآنية بهذا النوع من الحذف سرّاً لطيفاً من أسرار
رسم القرآن الكريم اهتدى إليه شيخنا أبو عمرو الداني دون غيره من علماء الرسم الذين
عمموا علامة الحذف المعروفة في كل أنواع الحذف الثلاثة دون تمييز بينها .

بقي أن نعلم أن أصل هذه التسمية موجودة في كتب الرسم كما بينا ، لكن هذه العلامة « ٣ »
التي نستعملها لم نجد لها بصورتها في كتب الرسم ، ولكنها وجدت في بعض المصاحف الليبية
المخطوطة الموثقة بمكتبة الأوقاف بطرابلس تحت رقم : ٣٣ / ٢٢١ .

١- علامة الحذف « ١ » تستعمل فيما حذف ألفه مثل « العَلَمِينَ ، الرَّحْمَنُ ، ويمد الصوت بها
كالألف مدّاً طبيعياً أينما وجدت مثل : ذلك - « أُنذَرْتَهُمْ - « أَلِهَتَنَا . وعلامة المخصّص
« ٣ » داخلة ضمن الحذف في الحكم ، ومثلها في الحكم الواو والياء إذا كانا حرفي مدّ ولين .

6. ARABIC BASELINE ROUND DOT

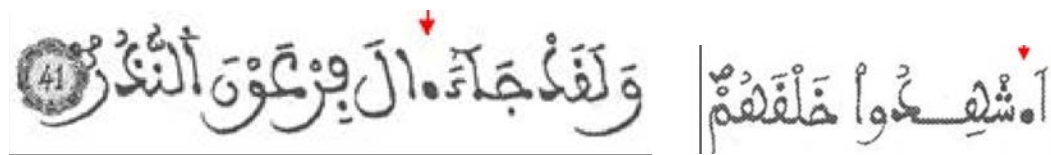
First proposed by King Fahd Glorious Quran Printing Complex (L2/10-381) with different properties, this is a spacing character sitting on the baseline and can take *harakat*. It's not the same dot as #7, which appears higher, at about the vertical center of an *alef*, and is sometimes smaller in size.

This is called a *musahhala hamza*. It's a certain way of representing *hamza*, when it's not formally written as a letter, while also hinting at a specific way of recitation. It may appear next to another hamza, but it's not a modifier: traditionally, it's considered a second "softened" hamza. (According to Marijn van Putten, it's no longer a phonetical glottal stop, it becomes a syllabic break without an intervening consonant.)

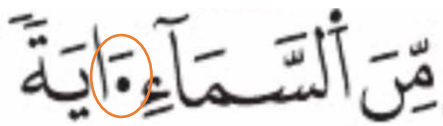
Note that the size of the dot could vary a little in different editions, but there doesn't seem to be contrastive usage in any edition. The identity of the character is defined by it sitting on the baseline and being round.

Another potential name is ARABIC INLINE ROUND DOT.

Figures 12b and 14b from L2/17-252 (Lazrek)



From King Fahd Warsh (note that it's taken a Fatha):

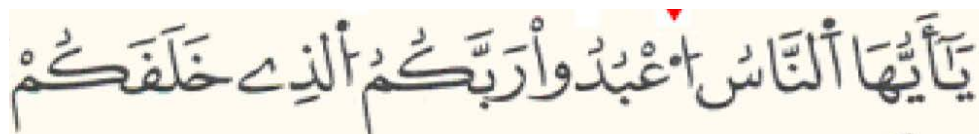


7. ARABIC RAISED ROUND DOT

First proposed by King Fahd Glorious Quran Printing Complex (L2/10-381) with different properties, this is to be used as a choice in a group of three, with U+06EC ARABIC ROUNDED HIGH STOP WITH FILLED CENTRE (shown below with blue ovals) and U+065C ARABIC VOWEL SIGN DOT BELOW. While those two are combining and appear above and below an *alef* form, this follows the *alef* form and is vertically aligned to the center of its height. Compare with #6, which sits lower and may be larger in size.

Similar to #6, the size of the dot could vary a little in different editions, but there doesn't seem to be contrastive usage in any edition. The identity of the character is defined by it sitting higher than the baseline, near the vertical center of an *alef* it always follows, as well as being round. There are editions of the Quran that use both of these contrastively.

Figure 6.a. L2/17-252 (Lazrek)



8. ARABIC LETTER ALEF WITH ATTACHED FATHA
9. ARABIC LETTER ALEF WITH RIGHT MIDDLE STROKE
10. ARABIC LETTER ALEF WITH ATTACHED KASRA
11. ARABIC LETTER ALEF WITH ATTACHED TOP RIGHT FATHA
12. ARABIC LETTER ALEF WITH LEFT MIDDLE STROKE
13. ARABIC LETTER ALEF WITH ATTACHED BOTTOM RIGHT KASRA

These are generally used to help recitation when there's a choice for connection (*wasl*) or disconnection (*ghat'*).

Note that while one may not expect it, #13 is indeed right-joining, like a normal *alef*, as can be seen in this example from King Fahd al-Duri:

يَبْنِي لَا تُشْرِكْ بِاللَّهِ

Typically, each orthography may use three of the above set of six. But both #9 and #12 exist in King Fahd Warsh in contrastive use, which uses four of them:

نُدُّعَالِي فُلُوبِهِمْ فَلَا يُؤْمِنُوا حَتَّى يَرَوْا الْعَذَابَ
فَالْفِدَا حَيْبَت دَعْوَتُكُمْ فَاَسْتَفِيمَا وَلَا تَتَّبِعَنَّ

Discussion from King Fahd Warsh end notes discussing #8, #10, and #12:

وَوَضَعُ جَرَّةً هَكَذَا (-) مَكَانَ هَمْزَةِ الْقَطْعِ الَّتِي حُذِفَتْ بَعْدَ نَقْلِ حَرَكَتِهَا إِلَى السَّاكِنِ قَبْلَهَا يَدُلُّ
عَلَى أَنَّ مَحَلَّ الْجَرَّةِ هُوَ مَحَلُّ الْهَمْزَةِ قَبْلَ نَقْلِ حَرَكَتِهَا، فَوَضَعُ الْجَرَّةَ فَوْقَ الْأَلِفِ إِذَا كَانَتِ الْهَمْزَةُ
مَفْتُوحَةً نَحْوُ: (وَمَا أَسْأَلُكُمْ عَلَيْهِ مِنْ أَجْرٍ) وَتَحْتَهَا إِذَا كَانَتْ مَكْسُورَةً نَحْوُ:
(أَلَا إِذَا سَمِعْتُمْ دَاءَ آيَاتِ اللَّهِ) وَفِي وَسْطِهَا عَلَى الْيَسَارِ إِذَا كَانَتْ مَضْمُومَةً نَحْوُ: (مَنْ أَوْتَى)

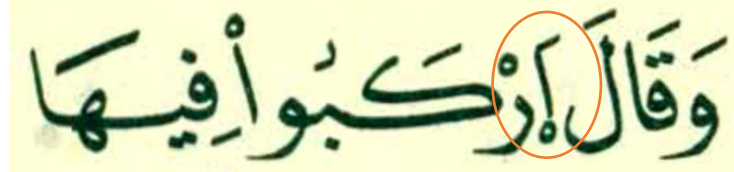
Figure 14.b in L2/17-252 (Lazrek) showing #8 (followed by #6):

أَشْفَعُوا

King Fahd Warsh showing #8, #9, and #10:



From Tripoli Qaloon showing #11 (with a *sukun* below):



From Tripoli Qaloon end notes, discussing #9, #11, and #13:

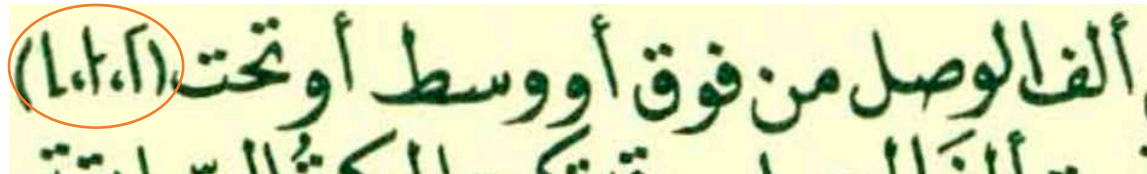
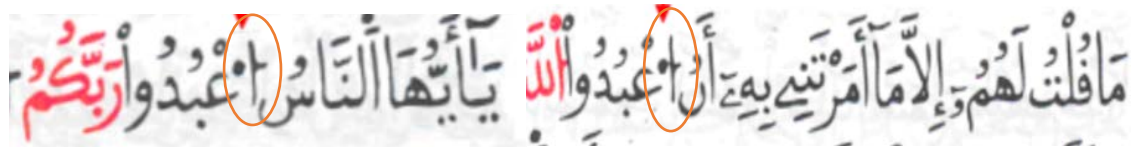
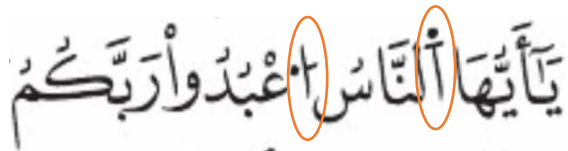


Figure 6d and 8d in L2/17-252 (Lazrek) showing #9 followed by #7:



From King Fahd Warsh showing #8 and #9:



From Tripoli Qaloon showing #9:

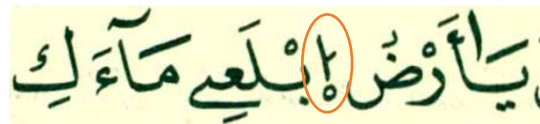
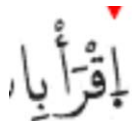


Figure 9b in L2/17-252 (Lazrek) showing #10:



From King Fahd Warsh showing #8 and #10:

إِتَّفَوْا إِذَا مَسَّهُمْ

From King Fahd al-Duri 1436AH end notes showing #13:

فَتِيلاً أَنْظُرَ

From Tripoli Qaloon showing #13:

يَابُنَيَّ إِذْ رُكِبَ مَعَنَا

From Tunis Qaloon showing #9, #11, and #13:

قُلْ هُوَ اللَّهُ أَحَدٌ ﴿١﴾ اللَّهُ الصَّمَدُ

همزة الوصل وكيفية ضبطها

١ وضعُ نُقْطَةٍ فوقِ الألفِ، تَدُلُّ على أَنَّ الْإِبْتِدَاءَ بِهَا فِي اللَّفْظِ يَكُونُ بِحَرَكَةِ الْفَتْحِ، وَذَلِكَ نَحْوُ: «أَلْحَمْدُ».

٢ وضعُ نُقْطَةٍ تُجَاهَ مُنْتَصَفِ يَسَارِ الْأَلْفِ، تَدُلُّ على أَنَّ الْإِبْتِدَاءَ بِهَا فِي اللَّفْظِ يَكُونُ بِحَرَكَةِ الضَّمِّ، وَذَلِكَ نَحْوُ: «أَعْبُدُوا».

٣ وضعُ نُقْطَةٍ تَحْتَ الْأَلْفِ، تَدُلُّ على أَنَّ الْإِبْتِدَاءَ بِهَا فِي اللَّفْظِ يَكُونُ بِحَرَكَةِ الْكَسْرِ، وَذَلِكَ نَحْوُ: «أَهْدِنَا».

٤ وضعُ جَرَّةِ الصَّلَةِ فوقِ الألفِ، تَدُلُّ على أَنَّ الْحَرَكَةَ الَّتِي قَبْلَ هَمْزَةِ الْوَصْلِ هِيَ فَتْحَةٌ، وَذَلِكَ نَحْوُ: «رَبِّكَ الْأَعْلَى».

٥ وضعُ جَرَّةِ الصَّلَةِ فِي وَسْطِ الْأَلْفِ، تَدُلُّ على أَنَّ الْحَرَكَةَ الَّتِي قَبْلَ هَمْزَةِ الْوَصْلِ هِيَ ضَمَّةٌ، وَذَلِكَ نَحْوُ: «يَعْمُرُ الْجَهْرَ».

٦ وضعُ جَرَّةِ الصَّلَةِ تَحْتَ الْأَلْفِ، تَدُلُّ على أَنَّ الْحَرَكَةَ الَّتِي قَبْلَ هَمْزَةِ الْوَصْلِ هِيَ كَسْرَةٌ، وَذَلِكَ نَحْوُ: «رَبِّ الْعَالَمِينَ».

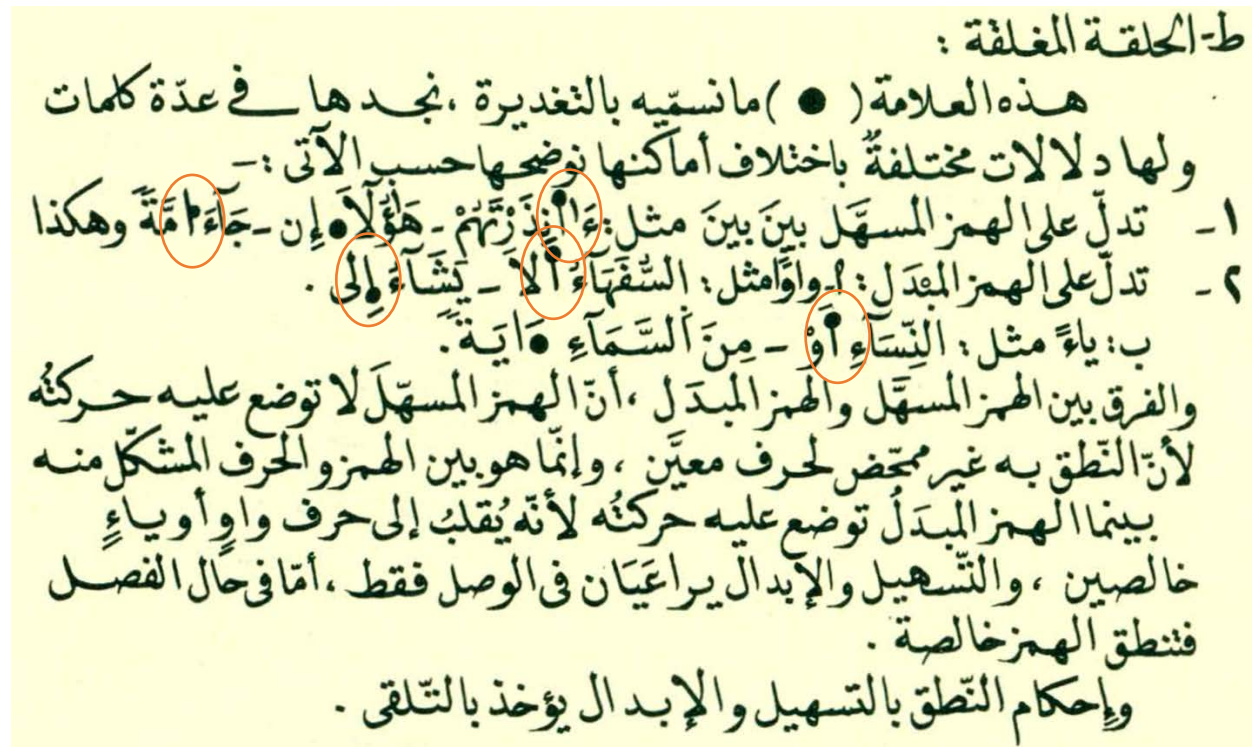
14. ARABIC LETTER ALEF WITH ATTACHED ROUND DOT ABOVE
15. ARABIC LETTER ALEF WITH ATTACHED LEFT ROUND DOT
16. ARABIC LETTER ALEF WITH ATTACHED RIGHT ROUND DOT
17. ARABIC LETTER ALEF WITH ATTACHED ROUND DOT BELOW

These are hints for various types of recitation of *hamza* in Warsh and al-Dani/Qaloon orthographies.

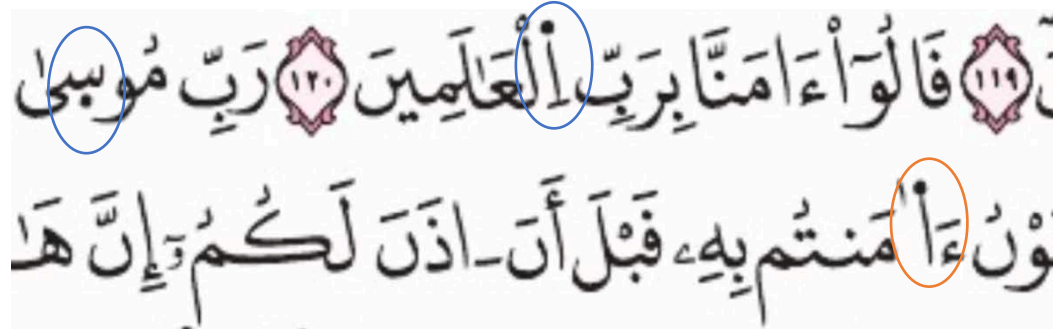
From Tripoli Qaloon, #14:



Description of #14, #16, and #17 from end notes of Tripoli Qaloon. Note the right circled example in the second line. It uses a fatha over #14:



Sample for #14 from King Fahd Warsh, in red (compare with the non-attached usage of the round dot over *alef* and under *seen* in the first line, in blue):



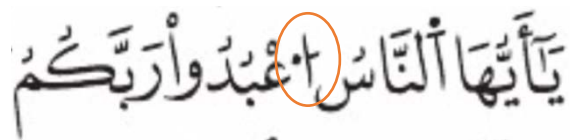
Discussion of #14, #15, and #17 from King Fahd Warsh end notes:

وَوَضَعُ هَذِهِ النِّقْطَةَ الْمَذْكُورَةَ مَكَانَ الْهَمْزَةِ مِنْ غَيْرِ حَرَكَةٍ يَدُلُّ عَلَى تَسْهِيلِ الْهَمْزَةِ
 بَيْنَ بَيْنَ ، وَهُوَ النُّطْقُ بِالْهَمْزَةِ بَيْنَهَا وَبَيْنَ الْأَلِفِ إِنْ كَانَتْ مَفْتُوحَةً نَحْوُ: (ءَأَمَنْتُمْ) ،
 وَبَيْنَهَا وَبَيْنَ الْيَاءِ إِنْ كَانَتْ مَكْسُورَةً نَحْوُ: (شَهَدَاءُ إِذْ) وَبَيْنَهَا وَبَيْنَ الْوَاوِ إِنْ كَانَتْ
 مَضْمُومَةً نَحْوُ: (جَاءَ أُمَّةً) .

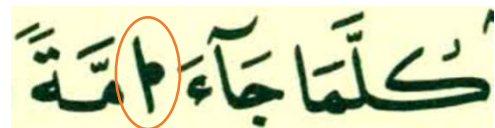
Sample for #15 from King Fahd Warsh:



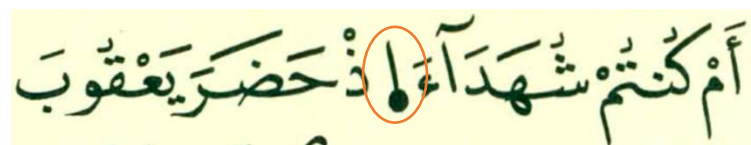
Contrast the above with the disjoint version from the same edition:



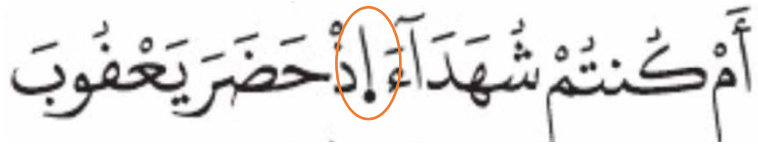
Sample for #16 from Tripoli Qaloon:



Sample for #17 from Tripoli Qaloon:



Sample for #17 from King Fahd Warsh:



18. ARABIC LETTER ALEF WITH DOT ABOVE

19. ARABIC LETTER ALEF WITH ATTACHED TOP RIGHT FATHA AND DOT ABOVE

20. ARABIC LETTER ALEF WITH RIGHT MIDDLE STROKE AND DOT ABOVE

21. ARABIC LETTER ALEF WITH ATTACHED BOTTOM RIGHT KASRA AND DOT ABOVE

While other Northwest African orthographies tend to use the same graphical shape of a rounded dot in all three positions, the Tripoli Qaloon uses a normal “letter” dot above, an attached ring or *sukun* to the left, and a detached *sukun* below. Since Unicode encodes letters with modifier dots atomically, these characters are proposed atomically.

From the end notes of Tripoli Qaloon, discussing #18:

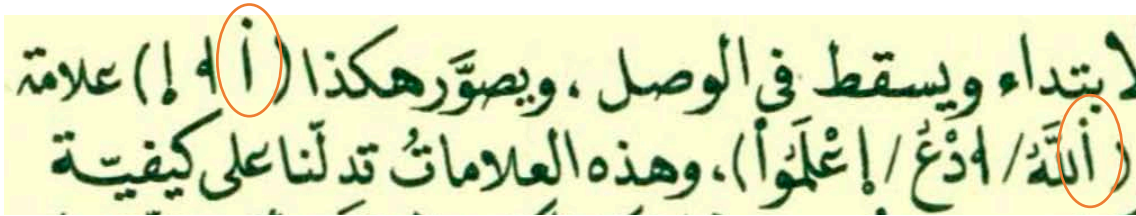
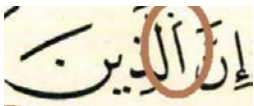
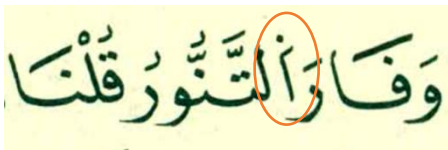


Figure 1 L2/16-056 (Shaikh, based on Abudena), showing #19:



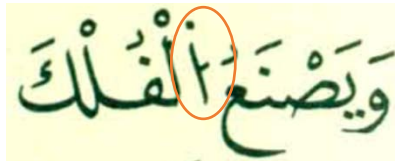
From Tripoli Qaloon showing #19:



Note that this version, from King Fahd al-Duri 1436AH end notes, uses a round dot, so it's best represented by #11, followed by U+06EC ARABIC ROUNDED HIGH STOP WITH FILLED CENTRE:



From Tripoli Qaloon showing #20:



Note that this version, from King Fahd al-Duri 1436AH end notes, uses a round dot, so it's best represented by #9, followed by U+06EC ARABIC ROUNDED HIGH STOP WITH FILLED CENTRE:



A bismillah, from Tripoli Qaloon, showing #21 three times:



22. ARABIC LETTER ALEF WITH ATTACHED TOP RIGHT FATHA AND LEFT RING

23. ARABIC LETTER ALEF WITH RIGHT MIDDLE STROKE AND LEFT RING

24. ARABIC LETTER ALEF WITH ATTACHED BOTTOM RIGHT KASRA AND LEFT RING

These were originally proposed by Abudena in L2/15-329 with different names. While most other orthographies use a attached or detached round dot to represent these, the Tripoli Qaloon uses an attached ring or *sukun*. We use the name ring for consistency with existing character names.

[L2/18-028](#) recommended character sequence to represent these, but in the Unicode Arabic model, when elements touch or intersect, they are encoded as a single precomposed character. Abudena originally proposed the precomposed characters in [L2/15-329](#) and [L2/16-044](#).

From Tripoli Qaloon, showing #22:

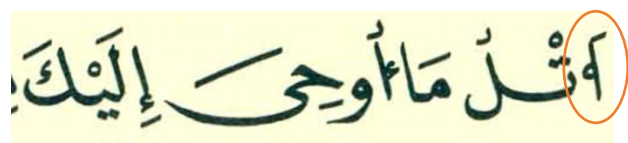
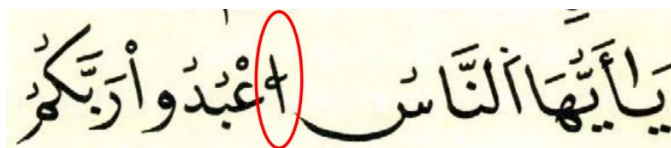
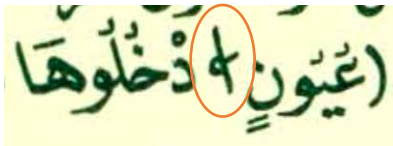


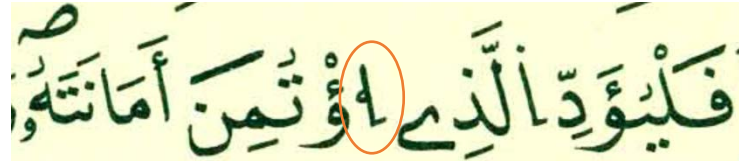
Figure 3 in L2/16-044 (Abudena), showing #23:



From Tripoli Qaloon end notes, showing #23:



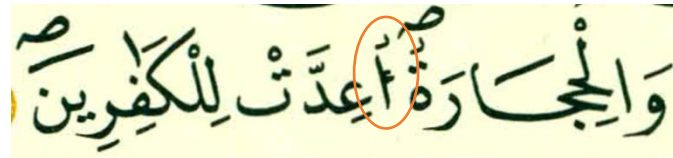
From Tripoli Qaloon, showing #24:



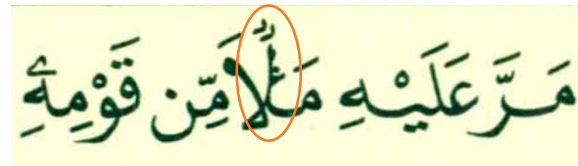
25. ARABIC LETTER ALEF WITH ATTACHED RIGHT HAMZA

Some Northwest African editions use this when the *alef hamza* is followed by a *damma*, where the most common orthographies use U+0623 ALEF WITH HAMZA ABOVE instead.

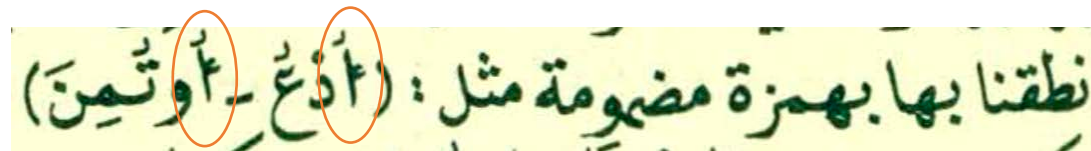
From Tripoli Qaloon:



From Tripoli Qaloon, as part of a *lam-alef* ligature (note that some of these Quranic orthographies consider the right leg to be the *alef* and the left leg to be the *lam*, while Middle Eastern orthographies and modern Arabic typically do the opposite):



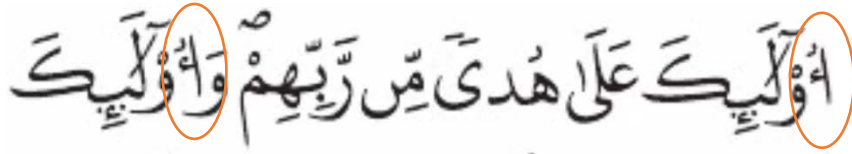
From end notes of Tripoli Qaloon:



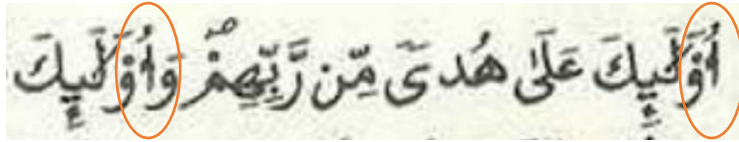
26. ARABIC LETTER ALEF WITH ATTACHED LEFT HAMZA

This is similar to #25, but it's used in Warsh orthographies, and the *hamza* is attached to the left of the *alef*. Depending on the style, the following *damma* may appear over the *alef* part or the *hamza* part.

From King Fahd Warsh:



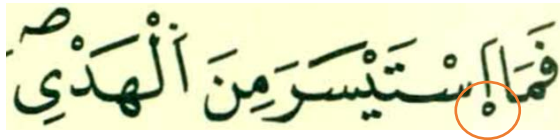
Same text, from Abudena's L2/16-153:



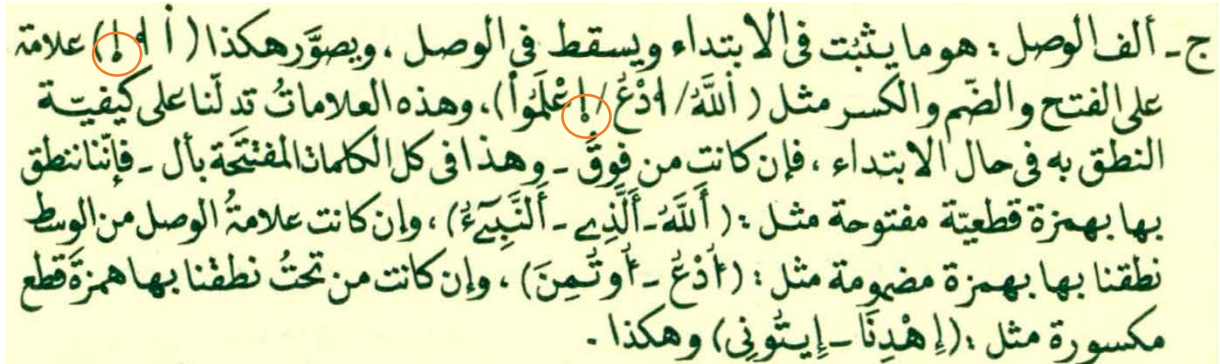
27. ARABIC SUKUN BELOW

Abudena proposed this in L2/15-329 as a part of his precomposed proposed characters 25, 26, and 27. Since in all the examples he provides they appear detached from the *alef* form, and there may be a need for a *sukun* below in other orthographies, we think a combining *sukun* below is a better choice for encoding, as it's more productive.

From Tripoli Qaloon:



From the end notes of Tripoli Qaloon, discussing the notation:



ج- ألف الوصل : هو ما يثبت في الابتداء ويسقط في الوصل ، ويصوّر هكذا (أ) علامة على الفتح والضم والكسر مثل (الله / ادْعُ / اعلموا) ، وهذه العلامات تدلنا على كيفية النطق به في حال الابتداء ، فإن كانت من فوق - وهذا في كل الكلمات المفتحة بال - فإننا نطق بها بهمزة قطع مضمومة مثل : (الله - الذبيح - النبي) ، وإن كانت علامة الوصل من الوصل نطقنا بها بهمزة مضمومة مثل : (ادْعُ - أوْتَمِن) ، وإن كانت من تحت نطقنا بها بهمزة قطع مكسورة مثل : (إهدنا - إيتوني) ، وهكذا .

28. ARABIC LARGE CIRCLE BELOW

This is clearly a “graphical” circle, intended to contrast with sukun and the filled round dot. It’s used in the al-Duri orthography to represent a certain kind of *imala*, in contrast with places where a filled circle would be used.

From King Fahd al-Duri 1436AH:

مُوسَى لِقَوْمِهِ

From King Fahd al-Duri 1436AH end notes, discussing the notation and calling the symbol “a large empty-centered dot”:

وَوَضَعَ نُقْطَةً كَبِيرَةً خَالِيَةً الْوَسْطِ تَحْتَ الْحَرْفِ بَدَلًا مِنَ الْفَتْحَةِ يَدُلُّ عَلَى إِمَالَتِهِ إِمَالَةً صُغْرَى نَحْوُ: (مُوسَى، وَعِيسَى، وَيَحْيَى) وَالْإِمَالَةُ الصُّغْرَى هِيَ مَا بَيْنَ الْفَتْحِ وَالْإِمَالَةِ الْمُحَضَّةِ (الْكُبْرَى) وَلِذَا يُقَالُ لَهَا بَيْنَ بَيْنَ، وَبَيْنَ اللَّفْظَيْنِ، وَتُسَمَّى بِالتَّقْلِيلِ. وَاخْتَارَتِ اللَّجْنَةُ هَذِهِ الْكَيْفِيَّةَ فِي الْإِمَالَةِ الْكُبْرَى لِغُضُوضِ عُلَمَاءِ الضَّبْطِ، وَآثَرَتْ هَذِهِ الْكَيْفِيَّةَ فِي الْإِمَالَةِ الصُّغْرَى لِلْفَرْقِ بَيْنَهُمَا، وَلِأَنَّ هَذِهِ الْكَيْفِيَّةَ فِي الصُّغْرَى أَقْرَبُ إِلَى عِلْمَاتِ الضَّبْطِ الْمَصَاحِفِ، وَيَبْقَى الْمَعْوَلُ عَلَيْهِ فِي الْفَرْقِ بَيْنَ الْإِمَالَتَيْنِ هُوَ التَّلَقُّ مِنْ أَفْوَاهِ الْمَشَائِخِ الْمُتَّقِنِينَ.

29. ARABIC ROUND DOT INSIDE LARGE CIRCLE BELOW

This is similar to #28 but is used in the Tunis Qaloon. It used to differentiate imala types, but while the King Fahd al-Duri uses the empty circle for small *imala* and the filled circle for large *imala*, the Tunis Qaloon uses the filled circle for small *imala* and the the two circles for large *imala*.

From Tunis Qaloon:

جُرْفٍ هَارٍ فَانْهَارِ بِهِ

From Tunis Qaloon end notes, discussing the notation:

علامة الحرف الممال

الإمالة هي: تقريب حركة الفتح من حركة الكسر، و الألف من الياء، وعلامتها: نقطة سوداء كبيرة توضع تحت الحرف الممال مع تعريته من حركته الأصلية، نحو: التَّوْبَةُ (• إمالة صغرى)
ومن قوله تعالى « عَلَى شَفَا جُرْفٍ هَارٍ » التوبة 109 (◉ إمالة كبرى)

30. ARABIC DOUBLED MADDA

31. ARABIC HALF MADDA OVER MADDA

These graphically innovative characters are used in Tunis Qaloon in contrast with U+0653 ARABIC MADDAH ABOVE to represent different lengths for recitation of madda. #31 appears to be only used when followed by a pause (*waqf*).

From Tunis Qaloon, showing #30:

وَلَا الضَّالِّينَ

From Tunis Qaloon, showing #31:

عَامِنَ السُّفَهَاءِ إِلَّا

Compare with normal *madda*, U+0653 ARABIC MADDAH ABOVE from Tunis Qaloon:

هُمُ السُّفَهَاءِ

Discussion of the notation, from Tunis Qaloon end notes:

5- المدُّ اللازمُ: وهو أن يكونَ بعدَ حرفِ المدِّ حرفٌ ساكنٌ سُكوناً أصلياً، ومقدارُ مدِّه ثلاثُ أَلِفَاتٍ أي بالمدِّ الطَّويلِ، وأبرزناه بـ ﴿ ٥ ﴾ ومثاله: (الضَّالِّينَ)، (الحَاقَةَ)، (مَحْيَايَ).

6- المدُّ المُتَّصِلُ: وهو أن يأتي بعدَ حرفِ المدِّ همزةٌ قطعٌ في كلمةٍ واحدةٍ، ومقداره: التَّوسُّطُ، وأبرزناه بـ ﴿ ٦ ﴾ ومثاله: (السُّوءَ)، (جَاءَ)، (وَجِيءَ). ويُضَافُ وجهٌ ثانٍ في حالة الوقفِ، ومقداره الطَّويلُ، وأبرزناه بـ ﴿ ٧ ﴾ ومثاله: (السَّمَاءِ)، (يَشَاءُ)، (أَغْيَاءُ).

32. ARABIC SMALL HIGH ZAH

This is used to note that a *dad* should be pronounced as *zah* (compare to U+06DC ARABIC SMALL HIGH SEEN, which is used to note that a *sad* should be pronounced as *seen*). It is very rare and may only happens once in the few traditions that use it. Also note that since this is similar to U+06DC ARABIC SMALL HIGH SEEN in being closely tied to the letter it modifies, it should be listed in MCM characters in UTR #53.

Similar to U+06DC, we may later find that this symbol is also used as a *waqf* sign in some Quranic notation. In such a case, a CGJ would be used to make it appear after *harakat*.

From King Fahd al-Duri 1436AH:

وَمَا هُوَ عَلَى الْغَيْبِ بِضَنِينٍ ﴿٥٣﴾

From King Fahd al-Duri 1436AH end notes discussing the character, as well as U+06DC ARABIC SMALL HIGH SEEN:

وَإِذَا كَانَ الْحَرْفُ الْمَتْرُوكُ لَهُ بَدَلٌ فِي الْكِتَابَةِ الْأَصْلِيَّةِ عُوِّلَ فِي النَّطْقِ عَلَى
 الْحَرْفِ الْمَلْحَقِ لِأَعْلَى الْبَدَلِ نَحْوُ: (الصَّلَاةِ)، (كَمِشْكَاةٍ)، (الرَّبِوَاءِ)،
 (وَاللَّهُ يَقْبِضُ وَيَبْضُطُ)، (بِضِيْنِ).

33. ARABIC LETTER THIN YEH

This is a *yeh* written with a thinner pen, used contrastively with the normal *yeh* in the Warsh orthography to represent a *yeh* letter that is not present in early manuscripts but is added to ease reading. In other orthographies that try to remain true to the original letters, it may be written as U+06E6 ARABIC SMALL YEH.

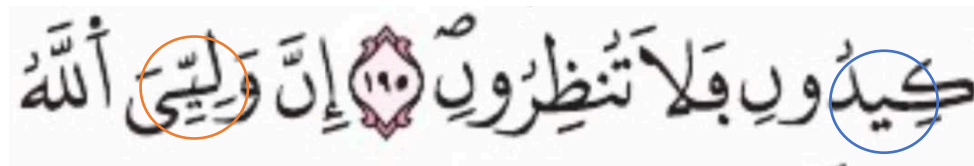
From King Fahd Warsh, compare the first initial *yeh* (in blue), which is a normal *yeh*, with the thin *yeh*:



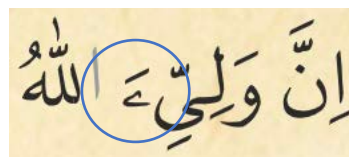
Compare the above text with a more common Middle Eastern orthography (from the website quranrasm.ir), which uses U+06E6 ARABIC SMALL YEH:



From King Fahd Warsh, showing the medial forms of both normal and thin *yehs*:



Compare the above text with a more common Middle Eastern orthography (the website quranrasm.ir), which takes the first *yeh* as a normal *yeh* and adds a stand-alone U+06E6 ARABIC SMALL YEH:



From the end notes of King Fahd Warsh, discussing the thin yeh:

وَقَدْ يَكُونُ الْإِلْحَاقُ بِتَرْقِيقِ الْحَرْفِ فِي الْحَطِّ، وَاتِّصَالِهِ بِحُرُوفِ الْكَلِمَةِ وَذَلِكَ نَحْوُ:
(إِنَّ وَلِيَّيَ اللَّهِ) (إِيْلَيْهِمْ) وَعَلَى ذَلِكَ جَرَى الْعَمَلُ عِنْدَ الْمَغَارِبَةِ، وَإِنَّمَا كَانَ الْحَرْفُ دَقِيقًا
رَقِيقًا لِكَلِّهَا يُتَوَهَّمُ أَنَّ الْحَرْفَ ثَابِتٌ رَسْمًا مَعَ أَنَّهُ مَحْدُوفٌ .

34. ARABIC TATWEEL WITH TWO DOTS BELOW

The Tripoli Qaloon uses this instead of #33. Instead of a lighter pen, the notation doesn't write the tooth starting the letter, practically making it a tatweel with two dots below.

From Tripoli Qaloon, used word-initially:

إِيْلَيْهِمْ رِحْلَةَ الشِّتَاءِ

From Tripoli Qaloon, followed by U+06E7 ARABIC SMALL HIGH YEH as well as a *shadda* and *kasra*, used word-medially:

وَلَكِنْ كُونُوا رَبَّانِيِّينَ بِمَا كُنْتُمْ تَعْلَمُونَ

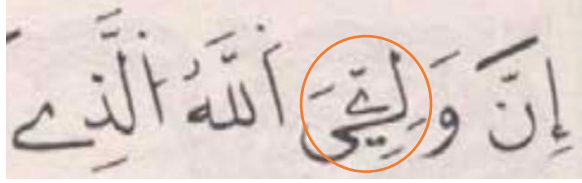
From Tripoli Qaloon end notes:

٢ رَسَمْتُ «رَبَّانِيِّينَ» بِالْأَسْمَرَانِ بِالْأَلْفِ حَتَّى لَا يَجْتَمِعَ فِي الْكَلِمَةِ حَذْفَانِ .

From another Qaloon edition, very similar in style to the Tripoli Qaloon, used word-initially:

إِيْلَيْهِمْ رِحْلَةَ الشِّتَاءِ

From the same Qaloon edition, followed by U+06E7 ARABIC SMALL HIGH YEH as well as a *shadda* and *kasra*, used word-medially:

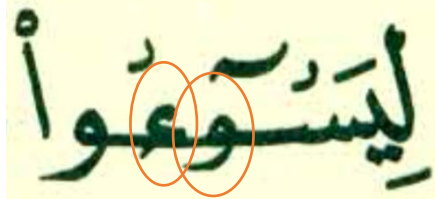


35. ARABIC TATWEEL WITH OVERSTRUCK WAW

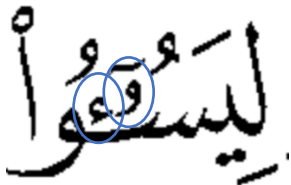
36. ARABIC TATWEEL WITH OVERSTRUCK HAMZA

These represent an unwritten *waw* and an unwritten *hamza* in a specific word, “*liyasu’u*” whose skeleton is written a unique way. Similar to *tatweel*, these are join-causing letters and connect to both sides, without changes in their general shape.

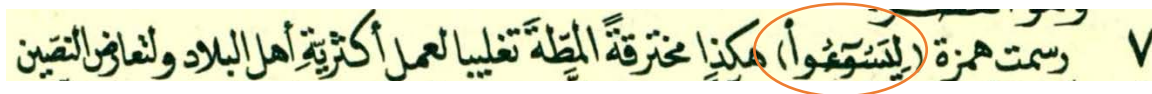
From Tripoli Qaloon:



Compare these to the more common forms, from a Middle Eastern edition, that uses U+08F3 ARABIC SMALL HIGH WAW and U+0654 ARABIC HAMZA ABOVE:



From Tripoli Qaloon end notes:



From Al-Saleki 2017, mixing the formats, using #35 but not #36:



37. ARABIC SMALL HIGH YEH BARREE WITH TWO DOTS BELOW

This is a modifier symbol that specifies that an *alef* should be pronounced as *yeh*. The *yeh* is dotted, to hint that it should be pronounced as /j/ instead of /i:/. It's a rare character, and it seems that it appears

only once in the whole text of the Quran in Warsh orthography, to specify that a word that other traditions usually read as /li-ʔahaba/ should be read as /li-jahaba/.

From King Fahd Warsh (also mentioned in Lazrek L2/17-252), followed by a *fatha*:



From Morocco Warsh, followed by a *fatha*:

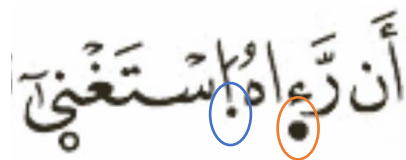


38. ARABIC LARGE ROUND DOT ABOVE

39. ARABIC LARGE ROUND DOT BELOW

While in most Quranic orthographies the size of a round dot does not appear to be significant, the al-Duri orthography makes a distinction between a large round dot and a small round dot. It uses a large round dot for *imala*, and a small round dot for *tasheel* of *hamza* and pronunciation of *alef* in case of a disconnect in pronunciation (*qat'*).

Sample showing differentiation in King Fahd al-Duri 1429AH:



Description of each symbol from the end notes of King Fahd al-Duri 1429AH, where the difference is size is called out by calling these “large” and “small” round filled dots:

وَالنُّقْطَةُ الْمُسْتَدِيرَةُ الشَّكْلِ الْمَطْمُوسَةُ الْوَسْطِ تَدُلُّ عَلَى كَيْفِيَةِ الْإِبْتِدَاءِ بِالْأَلِفِ
الْوَصْلِ فَإِنْ وُضِعَتْ فَوْقَ الْأَلِفِ ابْتَدَى بِهَا مَفْتُوحَةٌ نَحْوُ: (هُوَ اللهُ)، وَإِنْ وُضِعَتْ
تَحْتَهَا ابْتَدَى بِهَا مَكْسُورَةٌ نَحْوُ: (فَمَنْ يَهْتَدِ فَلِنَفْسِهِ)، وَإِنْ وُضِعَتْ أَمَامَهَا فِي
الْوَسْطِ ابْتَدَى بِهَا مَضْمُومَةٌ نَحْوُ: (قُلْ ادْعُوا اللَّهَ).

وَوَضِعُ نُقْطَةً كَبِيرَةً مَطْمُوسَةً الْوَسْطِ تَحْتَ حَرْفٍ بَعْدَهُ أَلِفٌ بَدَلًا مِنَ الْفَتْحَةِ يَدُلُّ
عَلَى إِمَالَةِ الْحَرْفِ وَالْأَلِفِ إِمَالَةً كُبْرَى نَحْوُ: (ذِكْرِي)، (الْبَهَارِ).

وَوَضِعُ نُقْطَةً صَغِيرَةً مَطْمُوسَةً الْوَسْطِ مَكَانَ الْهَمْزَةِ الثَّانِيَةِ مِنْ غَيْرِ حَرَكَةٍ
يَدُلُّ عَلَى تَسْهِيلِ الْهَمْزَةِ بَيْنَ بَيْنٍ، وَهُوَ النُّطْقُ بِالْهَمْزَةِ بَيْنَهَا وَبَيْنَ الْأَلِفِ إِنْ كَانَتْ
مَفْتُوحَةً نَحْوُ: (أَنْذَرْتَهُمْ)، وَبَيْنَهَا وَبَيْنَ الْيَاءِ إِنْ كَانَتْ مَكْسُورَةً نَحْوُ: (أَبَيْكُمْ)
وَبَيْنَهَا وَبَيْنَ الْوَاوِ إِنْ كَانَتْ مَضْمُومَةً نَحْوُ: (أَفَبَيْكُمْ).

Discussion from the end notes of Tunis Qaloon, showing the differentiation in size:

علامة الحرف الممال

الإمالة هي: تقريب حركة الفتح من حركة الكسر، و الألف من الياء، وعلامتها: نقطة سوداء كبيرة توضع تحت الحرف الممال مع تعريته من حركته الأصليّة، نحو: التَّوْبَةُ (• إمالة صغرى)
ومن قوله تعالى « عَلَى شَفَا جُرْفٍ هَارٍ » التوبة 109 (● إمالة كبرى)

While the King Fahd al-Dani uses a large dot for *imala* and a small dot for *ikhtilas*, the Tripoli Qaloon uses a large dot for both, which can go both above and below a letter:

تدل على الإمالة كما في كلمة (هَارٍ) وهي الكلمة الممالة الوحيدة بالنسبة لرواية قالون، وإمالتها كبرى .

تدل على الاختلاس في كلمات: نِعْمًا ، لَأَنفُذُوا ، لَأَيُّهَا ، يَخْضَمُونَ والاختلاس هو الإسراع بالحركة بحيث لا ينطق بها كاملة والباقي منها أكثر .









Suggested codepoints and properties

There is not enough space in the existing Arabic Extended-A block, so a new block named Arabic Extended-B should be allocated at U+0870..U+089F.

0870	آ	ARABIC LETTER ALEF WITH ATTACHED FATHA
0871	آ	LETTER ALEF WITH ATTACHED TOP RIGHT FATHA
0872	آ	ARABIC LETTER ALEF WITH RIGHT MIDDLE STROKE

0873	ا	ARABIC LETTER ALEF WITH LEFT MIDDLE STROKE
0874	آ	ARABIC LETTER ALEF WITH ATTACHED KASRA
0875	أ	ARABIC LETTER ALEF WITH ATTACHED BOTTOM RIGHT KASRA
0876	إ	ARABIC LETTER ALEF WITH ATTACHED ROUND DOT ABOVE
0877	اٖ	ARABIC LETTER ALEF WITH ATTACHED RIGHT ROUND DOT
0878	اٗ	ARABIC LETTER ALEF WITH ATTACHED LEFT ROUND DOT
0879	ا٘	ARABIC LETTER ALEF WITH ATTACHED ROUND DOT BELOW
087A	اٙ	ARABIC LETTER ALEF WITH DOT ABOVE
087B	اٚ	ARABIC LETTER ALEF WITH ATTACHED TOP RIGHT FATHA AND DOT ABOVE
087C	اٛ	ARABIC LETTER ALEF WITH RIGHT MIDDLE STROKE AND DOT ABOVE
087D	اٜ	ARABIC LETTER ALEF WITH ATTACHED BOTTOM RIGHT KASRA AND DOT ABOVE
087E	اٝ	ARABIC LETTER ALEF WITH ATTACHED TOP RIGHT FATHA AND LEFT RING
087F	اٞ	ARABIC LETTER ALEF WITH RIGHT MIDDLE STROKE AND LEFT RING
0880	اٟ	ARABIC LETTER ALEF WITH ATTACHED BOTTOM RIGHT KASRA AND LEFT RING

0881	ﺀ	ARABIC LETTER ALEF WITH ATTACHED RIGHT HAMZA
0882	ﺀ	ARABIC LETTER ALEF WITH ATTACHED LEFT HAMZA
0883	ﻉ	ARABIC TATWEEL WITH OVERSTRUCK HAMZA
0884	ﻭ	ARABIC TATWEEL WITH OVERSTRUCK WAW
0885	ﻥ	ARABIC TATWEEL WITH TWO DOTS BELOW
0886	ﻱ	ARABIC LETTER THIN YEH
0887	•	ARABIC BASELINE ROUND DOT
0888	•	ARABIC RAISED ROUND DOT
089D	ﺀ	ARABIC SUPERSCRIPT ALEF MOKHASSAS
089E	ﻡ	ARABIC DOUBLED MADDA
089F	ﻡ	ARABIC HALF MADDA OVER MADDA
08C9	ﻱ	ARABIC SMALL FARSI YEH
08CA	ﻱ	ARABIC SMALL HIGH FARSI YEH
08CB	ﻱ	ARABIC SMALL HIGH YEH BARREE WITH TWO DOTS BELOW

08CC		ARABIC SMALL HIGH WORD SAH
08CD		ARABIC SMALL HIGH ZAH
08CE		ARABIC LARGE ROUND DOT ABOVE
08CF		ARABIC LARGE ROUND DOT BELOW
08D0		ARABIC SUKUN BELOW
08D1		ARABIC LARGE CIRCLE BELOW
08D2		ARABIC ROUND DOT INSIDE LARGE CIRCLE BELOW
FBC2		ARABIC SYMBOL WASLA ABOVE

Suggested properties

No collation information is available. These characters should be included in the MCM set in UTR #53 since they can all take *fathas*:

U+08CA ARABIC SMALL HIGH FARSI YEH

U+08CB ARABIC SMALL HIGH YEH BARREE WITH TWO DOTS BELOW

U+08CD ARABIC SMALL HIGH ZAH

The proposed character properties follow.

UnicodeData.txt:

```

0870;ARABIC LETTER ALEF WITH ATTACHED FATHA;Lo;0;AL;;;;;N;;;;;
0871;ARABIC LETTER ALEF WITH ATTACHED TOP RIGHT FATHA;Lo;0;AL;;;;;N;;;;;
0872;ARABIC LETTER ALEF WITH RIGHT MIDDLE STROKE;Lo;0;AL;;;;;N;;;;;
0873;ARABIC LETTER ALEF WITH LEFT MIDDLE STROKE;Lo;0;AL;;;;;N;;;;;
0874;ARABIC LETTER ALEF WITH ATTACHED KASRA;Lo;0;AL;;;;;N;;;;;
0875;ARABIC LETTER ALEF WITH ATTACHED BOTTOM RIGHT KASRA;Lo;0;AL;;;;;N;;;;;
0876;ARABIC LETTER ALEF WITH ATTACHED ROUND DOT ABOVE;Lo;0;AL;;;;;N;;;;;
0877;ARABIC LETTER ALEF WITH ATTACHED RIGHT ROUND DOT;Lo;0;AL;;;;;N;;;;;
0878;ARABIC LETTER ALEF WITH ATTACHED LEFT ROUND DOT;Lo;0;AL;;;;;N;;;;;
0879;ARABIC LETTER ALEF WITH ATTACHED ROUND DOT BELOW;Lo;0;AL;;;;;N;;;;;

```

087A;ARABIC LETTER ALEF WITH DOT ABOVE;Lo;0;AL;;;;;N;;;;;
 087B;ARABIC LETTER ALEF WITH ATTACHED TOP RIGHT FATHA AND DOT
 ABOVE;Lo;0;AL;;;;;N;;;;;
 087C;ARABIC LETTER ALEF WITH RIGHT MIDDLE STROKE AND DOT
 ABOVE;Lo;0;AL;;;;;N;;;;;
 087D;ARABIC LETTER ALEF WITH ATTACHED BOTTOM RIGHT KASRA AND DOT
 ABOVE;Lo;0;AL;;;;;N;;;;;
 087E;ARABIC LETTER ALEF WITH ATTACHED TOP RIGHT FATHA AND LEFT
 RING;Lo;0;AL;;;;;N;;;;;
 087F;ARABIC LETTER ALEF WITH RIGHT MIDDLE STROKE AND LEFT
 RING;Lo;0;AL;;;;;N;;;;;
 0880;ARABIC LETTER ALEF WITH ATTACHED BOTTOM RIGHT KASRA AND LEFT
 RING;Lo;0;AL;;;;;N;;;;;
 0881;ARABIC LETTER ALEF WITH ATTACHED RIGHT HAMZA;Lo;0;AL;;;;;N;;;;;
 0882;ARABIC LETTER ALEF WITH ATTACHED LEFT HAMZA;Lo;0;AL;;;;;N;;;;;
 0883;ARABIC TATWEEL WITH OVERSTRUCK HAMZA;Lo;0;AL;;;;;N;;;;;
 0884;ARABIC TATWEEL WITH OVERSTRUCK WAW;Lo;0;AL;;;;;N;;;;;
 0885;ARABIC TATWEEL WITH TWO DOTS BELOW;Lo;0;AL;;;;;N;;;;;
 0886;ARABIC LETTER THIN YEH;Lo;0;AL;;;;;N;;;;;
 0887;ARABIC BASELINE ROUND DOT;Lo;0;AL;;;;;N;;;;;
 0888;ARABIC RAISED ROUND DOT;Sk;0;AL;;;;;N;;;;;
 089D;ARABIC SUPERSCRIPT ALEF MOKHASSAS;Mn;230;NSM;;;;;N;;;;;
 089E;ARABIC DOUBLED MADDA;Mn;230;NSM;;;;;N;;;;;
 089F;ARABIC HALF MADDA OVER MADDA;Mn;230;NSM;;;;;N;;;;;
 08C9;ARABIC SMALL FARSI YEH;Lm;0;AL;;;;;N;;;;;
 08CA;ARABIC SMALL HIGH FARSI YEH;Mn;230;NSM;;;;;N;;;;;
 08CB;ARABIC SMALL HIGH YEH BARREE WITH TWO DOTS BELOW;Mn;230;NSM;;;;;N;;;;;
 08CC;ARABIC SMALL HIGH WORD SAH;Mn;230;NSM;;;;;N;;;;;
 08CD;ARABIC SMALL HIGH ZAH;Mn;230;NSM;;;;;N;;;;;
 08CE;ARABIC LARGE ROUND DOT ABOVE;Mn;230;NSM;;;;;N;;;;;
 08CF;ARABIC LARGE ROUND DOT BELOW;Mn;220;NSM;;;;;N;;;;;
 08D0;ARABIC SUKUN BELOW;Mn;220;NSM;;;;;N;;;;;
 08D1;ARABIC LARGE CIRCLE BELOW;Mn;220;NSM;;;;;N;;;;;
 08D2;ARABIC ROUND DOT INSIDE LARGE CIRCLE BELOW;Mn;220;NSM;;;;;N;;;;;
 FBC2;ARABIC SYMBOL WASLA ABOVE;Sk;0;AL;;;;;N;;;;;

ArabicShaping.txt:

0870; ALEF WITH ATTACHED FATHA; R; ALEF
 0871; ALEF WITH ATTACHED TOP RIGHT FATHA; R; ALEF
 0872; ALEF WITH RIGHT MIDDLE STROKE; R; ALEF
 0873; ALEF WITH LEFT MIDDLE STROKE; R; ALEF
 0874; ALEF WITH ATTACHED KASRA; R; ALEF
 0875; ALEF WITH ATTACHED BOTTOM RIGHT KASRA; R; ALEF
 0876; ALEF WITH ATTACHED ROUND DOT ABOVE; R; ALEF
 0877; ALEF WITH ATTACHED RIGHT ROUND DOT; R; ALEF
 0878; ALEF WITH ATTACHED LEFT ROUND DOT; R; ALEF
 0879; ALEF WITH ATTACHED ROUND DOT BELOW; R; ALEF
 087A; ALEF WITH DOT ABOVE; R; ALEF
 087B; ALEF WITH ATTACHED TOP RIGHT FATHA AND DOT ABOVE; R; ALEF
 087C; ALEF WITH RIGHT MIDDLE STROKE AND DOT ABOVE; R; ALEF
 087D; ALEF WITH ATTACHED BOTTOM RIGHT KASRA AND DOT ABOVE; R; ALEF
 087E; ALEF WITH ATTACHED TOP RIGHT FATHA AND LEFT RING; R; ALEF
 087F; ALEF WITH RIGHT MIDDLE STROKE AND LEFT RING; R; ALEF
 0880; ALEF WITH ATTACHED BOTTOM RIGHT KASRA AND LEFT RING; R; ALEF
 0881; ALEF WITH ATTACHED RIGHT HAMZA; R; ALEF

0882; ALEF WITH ATTACHED LEFT HAMZA; R; ALEF
 0883; TATWEEL WITH OVERSTRUCK HAMZA; C; No_Joining_Group
 0884; TATWEEL WITH OVERSTRUCK WAW; C; No_Joining_Group
 0885; TATWEEL WITH TWO DOTS BELOW; C; No_Joining_Group
 0886; THIN YEH; D; THIN YEH
 0887; ARABIC BASELINE ROUND DOT; U; No_Joining_Group

Annotations for existing round dot characters

New annotations should be added to the names list in order to help users of the standard identify the characters to use:

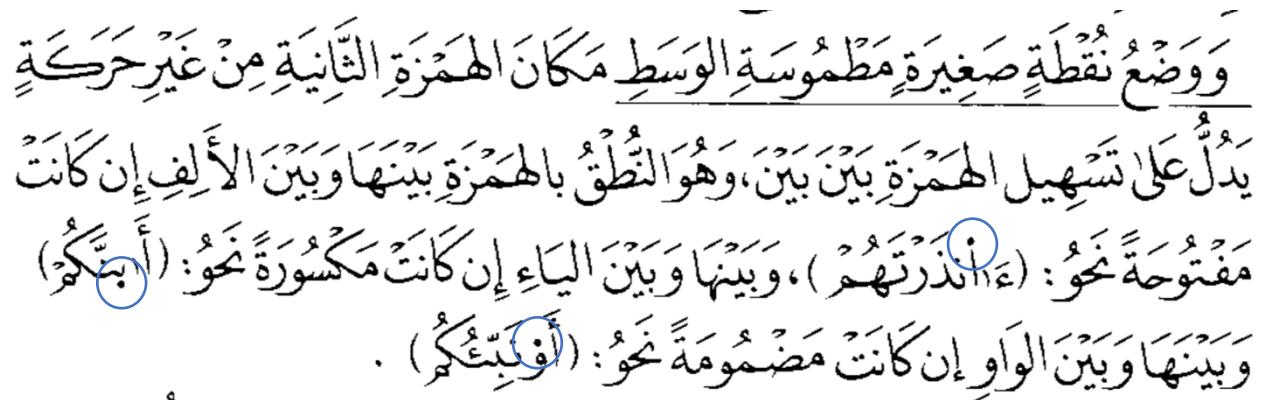
A1. To U+065C ARABIC VOWEL SIGN DOT BELOW, add an annotation “Also used in Quranic text in African and other orthographies”

A2. To U+06EC ARABIC ROUNDED HIGH STOP WITH FILLED CENTRE, add an annotation “Also used in Quranic text in African and other orthographies to represent wasla, ikhtilas, etc”.

From King Fahd Warsh, as *wasla* marks:



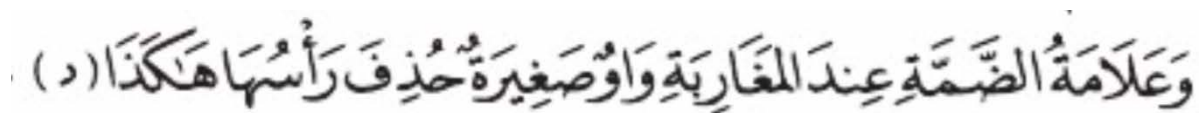
From King Fahd al-Duri 1436AH end notes, explaining how it's used for *tasheel* of *hamza*:



Annotations for existing arrowhead characters

Abudena, in L2/15-329, proposes Al-Dani versions of *damma* and *dammatan*. While others thought the normal *damma* character should be used for these, we found that African *dammats* are already encoded in Unicode! U+08F8 and U+08FB (proposed by Lorna A. Priest and Martin Hosken in [L2/10-288R](#)) are indeed African forms of *dammats*, also used in the Warsh orthography.

The end notes of King Fahd Qaloon visually describe these as “a small headless *waw*”:



A3. To U+08F8 ARABIC RIGHT ARROWHEAD ABOVE, add an annotation “Also used in Quranic text in African and other orthographies to represent damma”.

A4. To U+08FB ARABIC DOUBLE RIGHT ARROWHEAD ABOVE, add an annotation “Also used in Quranic text in African and other orthographies to represent dammatan”.

Symbols not proposed

In reviewing the above-mentions proposals and various modern published Qurans, we ran into a few other symbols that we don’t properly understand yet. The symbols found in these samples are still not analyzed to the authors’ satisfaction, so they are not proposed yet.

X1-X4. Abudena, in L2/15-329, proposes several *tanween* forms, which are also used in other African orthographies. As explained in “Annotations for existing arrowhead characters”, above, one of 2 or 3 is already encoded at U+08FB ARABIC DOUBLE RIGHT ARROWHEAD ABOVE. The four others should be encoded for consistency, but proper names and potential unification for them depends on better understanding of alternate *tanween* forms across the different orthographies.

2	◌◌◌ ◌◌◌	ALDANI ARABIC DAMMATAN IN CASE OF ETHHAR
3	◌◌◌◌ ◌◌◌◌	ALDANI ARABIC DAMMATAN IN CASE OF EDGAHM AND EKHFA
4	◌◌◌◌◌ ◌◌◌◌◌	ALDANI ARABIC DAMMATAN IN CASE OF EQLAB
5	◌◌◌◌◌◌ ◌◌◌◌◌◌	ALDANI ARABIC FATHATAN IN CASE OF EQLAB
6	◌◌◌◌◌◌◌ ◌◌◌◌◌◌◌	ALDANI ARABIC KASRATAN IN CASE OF EQLAB

X5. From King Fahd al-Duri 1636AH, perhaps a baseline small alef, similar to U+06E5 ARABIC SMALL WAW and U+06E6 ARABIC SMALL YEH:



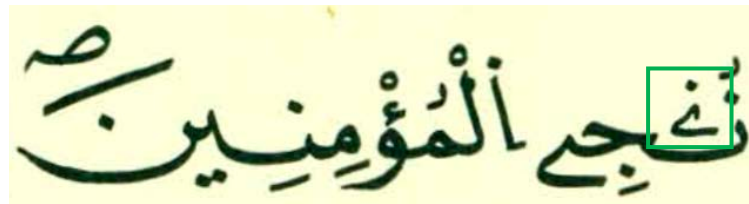
Discussion of the above notation, from the end notes of King Fahd al-Duri 1436AH:

وَوَضَعَ نَقْطَةً صَغِيرَةً مَطْمُوسَةً الْوَسْطِ مَكَانَ الْهَمْزَةِ الثَّانِيَةِ مِنْ غَيْرِ حَرَكَةٍ
يَدُلُّ عَلَى تَسْهِيلِ الْهَمْزَةِ بَيْنَ بَيْنٍ، وَهُوَ النَّطْقُ بِالْهَمْزَةِ بَيْنَهَا وَبَيْنَ الْأَلِفِ إِنْ كَانَتْ
مَفْتُوحَةً نَحْوُ: (أَلَا أَلَذَّرْتَهُمْ)، وَبَيْنَهَا وَبَيْنَ الْيَاءِ إِنْ كَانَتْ مَكْسُورَةً نَحْوُ: (أَبْلَغْتُمْ)
وَبَيْنَهَا وَبَيْنَ الْوَاوِ إِنْ كَانَتْ مَضْمُومَةً نَحْوُ: (أَوْ نَبِّئْتُمْ).

١- رَأَتْ لَجْنَةُ مُرَاجَعَةِ الْمُصْحَفِ الْكَرِيمِ رَسَمَ كَلِمَةِ (أَلَا تَكْفُرُ) فِي قَوْلِهِ تَعَالَى (أَلَا تَكْفُرُ
لِتَأْتُونَ الرِّجَالَ) بِسُورَةِ الْأَعْرَافِ وَ (أَلَا تَكْفُرُ لِتَأْتُونَ الْفَلْحِشَةَ) الْمَوْضِعَ الْأَوَّلَ بِسُورَةِ الْعَنْكَبُوتِ
مِنْ غَيْرِ يَاءٍ أُتْبَاعًا لِمَا ذَكَرَهُ الْإِمَامُ الدَّانِيُّ فِي (الْمُقْبِعِ).

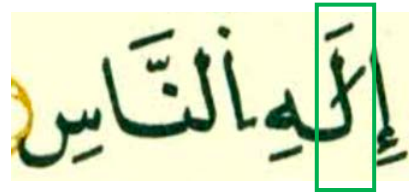
٢- لَمَّا كَانَتْ الْهَمْزَةُ الْأُولَى مَفْتُوحَةً مِنْ كَلِمَةِ (أَلَا تَنْ) فِي قَوْلِهِ تَعَالَى (أَلَا تَنْ لَنَا الْأَجْرًا)
بِسُورَةِ الْأَعْرَافِ، وَالْهَمْزَةُ الثَّانِيَةُ مَكْسُورَةً فَإِنَّ اللَّجْنَةَ ضَبَطَتْ هَذِهِ الْكَلِمَةَ
بِجَعْلِ الصُّورَةِ لِلْهَمْزَةِ الْأُولَى بِنَاءً عَلَى مَا اخْتَارَهُ عُلَمَاءُ الضَّبْطِ.

X6. Abudena proposes a HIGH YEH WITH DOT ABOVE form in L2/15-329 (his character 16), which actually appears to be a *noon*. It's unclear if this should be unified with U+06E8 ARABIC SMALL HIGH NOON or not. Here is a sample from the Tripoli Qaloon:

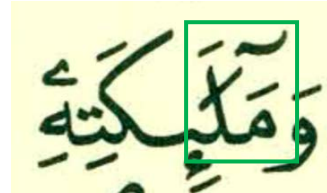


X7. Abudena, in L2/15-329, proposes two *lam-alef* ligature forms common in Northwest African orthographies (his characters 28 and 29), which are actually a ligature of *lam* with a superscript *alef*. Encoding these as an atomic ligature could be problematic, since each part can take a different *harakat*. But it's unclear if we should encode another combining superscript *alef* form or treat the whole thing as a ligature of U+0644 ARABIC LETTER LAM and U+0670 ARABIC LETTER SUPERSCRIPT ALEF.

Here's a sample from Tripoli Qaloon, where the *lam* is taking a *fatha*:



Here's another sample from Tripoli Qaloon, where the *lam* is taking a *fatha* and the *alef* part is taking a *madda*:

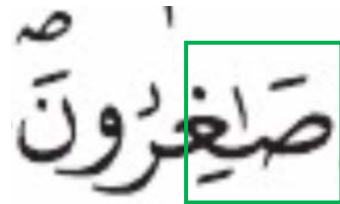


X8-X9. In L2/15-329, Abudena proposes a toothless *sad* and toothless *dad*. At first, they appear to be a different style, but there is indeed potentially intentional contrastive usage of normal *sad* and toothless *sad* in Tripoli Qaloon.

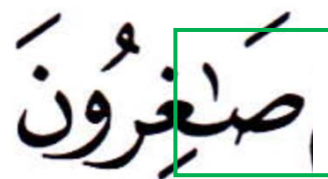
Here is contrastive evidence (both from page 380 of Tripoli Qaloon):



We need to understand if there's a meaning or an intentional pattern, especially since this doesn't exist in the King Fahd Qaloon:



... or Tunis Qaloon:



We also need to understand if a final or isolated form of such a toothless *sad* or *dad* exist.

X10. A baseline dash that indicated deletion of a hamza sound. This may be representable by either U+06D4 ARABIC FULL STOP or <tatweel, ZWNJ>. Discussion from end notes of King Fahd Warsh:

وَوَضِعُ جَزْرَةٌ هَكَذَا (-) مَكَانَ هَمْزَةِ الْقَطْعِ الَّتِي حُذِفَتْ بَعْدَ نَقْلِ حَرَكَتِهَا إِلَى السَّاكِنِ قَبْلَهَا يُدَلُّ
عَلَى أَنَّ مَحَلَّ الْجَزْرَةِ هُوَ مَحَلُّ الْهَمْزَةِ قَبْلَ نَقْلِ حَرَكَتِهَا ، فَتُوضَعُ الْجَزْرَةُ فَوْقَ الْأَلِفِ إِذَا كَانَتْ الْهَمْزَةُ
مَفْتُوحَةً نَحْوُ: (وَمَا أَسْأَلُكُمْ عَلَيْهِ مِنْ أَجْرٍ) وَتَحْتَهَا إِذَا كَانَتْ مَكْسُورَةً نَحْوُ:
(أَلِ إِذَا سَمِعْتُمْ رَاءَ آيَاتِ اللَّهِ) وَفِي وَسْطِهَا عَلَى الْيَسَارِ إِذَا كَانَتْ مَضْمُومَةً نَحْوُ: (مَنْ أَوْتِيَ)
وَعَلَى السَّطْرِ قَبْلَ الْأَلِفِ الَّتِي بَعْدَهَا إِذَا لَمْ يَكُنْ لَهَا صُورَةٌ نَحْوُ: (مَنْ-أَمَّنْ)

Acknowledgments

Marijn van Putten was key to us deciphering many of the symbols and helped the authors with understanding their semantic and behavior in several communications, as well as by finding sources. Lorna Evans kindly designed the glyphs used in the chart based on SIL's Scheherazade font. Kamal Mansour and members of the Unicode script ad hoc reviewed the proposal and provided us with comments that helped improve it.

References

Al-Saleki 2017 (Accessed September 25, 2019. <https://bit.ly/2leOpSv>):

د. أحمد كوري بن يابة السالكي. «الاعتراضات الرسمية والضبطية لشرح المحتوي الجامع، للإمام الطالب عبد الله الجكني الشنقيطي (ت نحو ١٢٥٠ هـ)». مجلة البحوث و الدراسات القرآنية. العدد السابع عشر، السنة الحادية عشرة.

The following editions of the Quran have also been used:

1. Tripoli Qaloon:

مصحف الجماهيرية، برواية الإمام قالون و الرسم العثماني على ما اختاره الحافظ ابو عمرو الداني، جمعية الدوة الإسلامية العالمية، طرابلس، 1989.

2. King Fahd al-Duri 1429AH:

مصحف المدينة النبوية، برواية الدوري عن أبي عمرو البصري، مجمع الملك فهد لطباعة المصحف الشريف، ١٤٢٩ هـ.

3. King Fahd al-Duri 1436AH:

مصحف المدينة النبوية، برواية الدوري عن أبي عمرو البصري، مجمع الملك فهد لطباعة المصحف الشريف، ١٤٣٦ هـ.

4. Tunis Qaloon:

المصحف المعلم، برواية قالون عن الإمام نافع المدني، مع إبراز أهم قواعد الترتيل، حنبعل، تونس،
.ISBN 9789973690029

5. King Fahd Warsh:

مصحف المدينة النبوية، وفق رواية ورش عن الإمام نافع، مجمع الملك فهد لطباعة المصحف الشريف،
١٤٢٨ هـ.

6. King Fahd Qaloon:

مصحف المدينة النبوية، وفق رواية قالون عن الإمام نافع، مجمع الملك فهد لطباعة المصحف الشريف،
١٤٣١ هـ.

7. Morocco Warsh:

قراءان كريم برواية ورش، المصحف الحسني المسبع، وزارة الأوقاف و الشؤون الاسلامية، المملكة المغربية، 1417 هـ.

ISO/IEC JTC 1/SC 2/WG 2

PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS

FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹.

A. Administrative

1. Title:	Arabic Additions for Quranic orthographies
2. Requester's name:	<i>Roozbeh Pournader and Deborah Anderson</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>Expert Contribution</i>
4. Submission date:	<i>September 29, 2019</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<i>Yes</i>
(or) More information will be provided later:	<i>No</i>

B. Technical – General

1. Choose one of the following:	
a. This proposal is for a new script (set of characters):	<i>No</i>
Proposed name of script:	<i>N/A</i>
b. The proposal is for addition of character(s) to an existing block:	<i>Yes</i>
Name of the existing block:	<i>Arabic Extended-A and Arabic Presentation Forms-A (as well as new block Arabic Extended-B)</i>
2. Number of characters in proposal:	<i>39</i>
3. Proposed category (select one from below - see section 2.2 of P&P document):	
A-Contemporary	<input type="checkbox"/>
B.1-Specialized (small collection)	<input checked="" type="checkbox"/>
B.2-Specialized (large collection)	<input type="checkbox"/>
C-Major extinct	<input type="checkbox"/>
D-Attested extinct	<input type="checkbox"/>
E-Minor extinct	<input type="checkbox"/>
F-Archaic Hieroglyphic or Ideographic	<input type="checkbox"/>
G-Obscure or questionable usage symbols	<input type="checkbox"/>
4. Is a repertoire including character names provided?	<i>Yes</i>
a. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document?	<i>Yes</i>
b. Are the character shapes attached in a legible form suitable for review?	<i>Yes</i>
5. Fonts related:	

¹ Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?

Lorna Evans (SIL Internaional)

b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):

SIL International

6. References:

a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?

Yes

b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?

Yes

7. Special encoding issues:

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

UTR #53 information is provided for rendering order of combining marks.

8. Additional Information:

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/reports/tr44/>) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	Yes
If YES explain	<i>See various proposals mentioned on page 1</i>
2. 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
If YES, with whom?	<i>Several Quranic experts, including Marijn van Putten of Leiden Univeristy</i>
If YES, available relevant documents:	<i>Offline communications</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?	Yes
Reference:	<i>Several Muslim communities with minority interpretations of the Quran</i>
4. The context of use for the proposed characters (type of use; common or rare)	<i>Technical</i>
Reference:	
5. Are the proposed characters in current use by the user community?	Yes
If YES, where? Reference:	<i>Mostly based in Northwest Africa (aka Maghrib)</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?	Yes
If YES, is a rationale provided?	Yes
If YES, reference:	<i>Existing similar characters are in the BMP, since some of these are combining or have contextual shaping, it's better to keep them in the same plane as the characters they interact with.</i>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	No
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?	No
If YES, is a rationale for its inclusion provided?	N/A
If YES, reference:	<i>N/A</i>
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?	No
If YES, is a rationale for its inclusion provided?	N/A
If YES, reference:	<i>N/A</i>
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character?	Yes

If YES, is a rationale for its inclusion provided?	Yes
If YES, reference:	<i>Different notation system</i>
11. Does the proposal include use of combining characters and/or use of composite sequences?	Yes
If YES, is a rationale for such use provided?	Yes
If YES, reference:	<i>The combining characters are used as combining</i>
Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?	N/A
If YES, reference:	<i>N/A</i>
12. Does the proposal contain characters with any special properties such as control function or similar semantics?	No
If YES, describe in detail (include attachment if necessary)	N/A
<hr/> <hr/>	
13. Does the proposal contain any Ideographic compatibility characters?	No
If YES, are the equivalent corresponding unified ideographic characters identified?	N/A
If YES, reference:	<i>N/A</i>