Title:	**Proposal to add Arabic Currency Sign Rial to the UCS**
Source:	Roozbeh Pournader
Status:	Expert Contribution
Distribution:	Members of ISO/IEC JTC1/SC2/WG2 and liaison organizations
Date:	2001-09-20
Action:	For review and acceptance by WG2

1 Proposal: Arabic Currency Sign Rial

This is a proposal for encoding the Iranian Rial sign in the ISO/IEC 10646 standard. This character is an Arabic compatiblity character, needed for one-to-one mapping from Iranian 7-bit and 8-Bit character set standards ISIRI 2900 [1] and ISIRI 3342 [2]. In those standards, it is encoded in positions **2/4** and **A/4**, respectively. It is also on the Iranian keyboard standard ISIRI 2901 [3] on the **Shift**+**4** position.

This character has been available as a key on Persian typewriters before computers were deployed in Iran. The character shape is usually a little bit narrower than normal writing of the word Rial in the Arabic script (possibly because of space restrictions on places like price tags and typewriter wheels). The origin of the characters seems to be Iranian national standard ISIRI 820 [4], where it is claimed to be invented by the standards committee:

> "The Rial sign is the down-sized shape of the word Rial. It is an invention of the Standards Committee for Persian Letters in Typewriters and Computers, and its shape should be identical to the shape proposed by this committee. This letter only occupies one letter of space in typewritten text, is specially useful in banking and accounting tasks, and will be the source of many faciliations."

This sign can be encoded as a sequence of six existing characters, namely ⟨200C 0631 06CC 0627 0644 200C⟩, but we believe that because of the need for round-trip compatiblity of UCS with ISIRI 2900 and ISIRI 3342, and the character's special meaning as a currency sign (as used in Iranian software), it is needed in ISO/IEC 10646. Also, because some popular technologies, like X11, do not support assigning a sequence of characters to a single keyboard key, and this character is present on the Iranian standard keyboard, there is a need for encoding it.

This character has been accepted by the Unicode Technical Committee, at its 22 May 2001 meeting, to be encoded in the Unicode Standard as U+FDFC, with the character properties mentioned in the next section.

Figure 1: Example character shape for Arabic Currency Sign Rial

2 Unicode Character Properties

Code value: FDFC

Character name: ARABIC CURRENCY SIGN RIAL

General Category: Sc (Symbol, Currency)

Canonical Combining Classes: 0 (Spacing)

Bidirectional Category: AL (Right-to-left Arabic)

Character Decomposition Mapping: <isolated> 0631 06CC 0627 0644

Mirrored: N (No)

References

[1] Institute of Standards and Industrial Research of Iran, Iranian Standard No. 2900. *Iranian Standard Code for Information Interchange*, August 1989, available from `http://www.isiri.org/std/2900.htm`

[2] Institute of Standards and Industrial Research of Iran, Iranian Standard No. 3342. *Farsi 8-bit Coded Character Set for Information Interchange*, May 1993, available from `http://www.isiri.org/std/3342.htm`

[3] Institute of Standards and Industrial Research of Iran, Iranian Standard No. 2901. *Keyboard Layout for Farsi Characters in Computer*, First Revision, October 1994, available from `http://www.isiri.org/std/2901.htm`

[4] Institute of Standards and Industrial Research of Iran, Iranian Standard No. 820. *Character Arrangement on Keyboards of Persian Typewriters*, March 1973, available from `http://www.isiri.org/std/820.htm`

A Administrative

1. Title: Arabic Currency Sign Rial
2. Requester's name: Roozbeh Pournader
3. Requester type: Expert Contribution
4. Submission date: 20 September 2001
5. Requester's reference:
6. (Choose one of the following:)
> **This is a complete proposal:** Yes
> **or, More information will be provided later:** No

B Technical—General

1. (Choose one of the following:)
> **a. This proposal is for a new script:** No
> **Proposed name of script:**
> **b. The proposal is for addition of character(s) to an existing block:** Yes
> **Name of the existing block** Arabic Presentation Forms-A (proposed code point: U+FDFC)

2. Number of characters in proposal: 1 (One)
3. Proposed category: A
4. Proposed Level of Implementation: 1
> **Is a rationale provided for the choice?** Yes
> **If Yes, reference:** The proposed character is like similiar compatiblity characters in the Arabic Presentation Forms blocks.

5. Is a repertoire including character names provided? Yes
> **a. If YES, are the names in accordance with the character naming guidelines in Annex L of ISO/IEC 10646-1:2000?** Yes
> **b. Are the character shapes attached in a legible form suitable for review?** Yes

6. Who will provide the appropriate computerized font for publishing the standard?
Roozbeh Pournader, Sharif University of Technology (`roozbeh@sharif.edu`)
> **If available now, identify source(s) for the font and indicate the tools used:**

7. 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?** No

8. 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, Unicode character properties are included.

C   Technical—Justification

1. Has this proposal for addition of character(s) been submitted before? No
    If YES explain:
2. Has contact been made to members of the user community? Yes
    If YES, with whom? Iranian national body (ISIRI), Persian Academy for Language and Literate, members of the technical comittee for Iranian Information Technology standards
    If YES, available relevant documents:
3. Information on the user community for the proposed characters is included? Yes
    Reference: All users of Iranian character set standards; some users of Iranian standard keyboards
4. The context of use for the proposed characters (type of use; common or rare): It's a character for the Iranian currency unit Rial; Common
    Reference:
5. Are the proposed characters in current use by the user community? Yes
    If YES, where? In applications that support the Iranian character set standards
    Reference:
6. After giving due considerations to the principles in Principles and Procedures document, must the proposed characters be entirely in the BMP? Yes
    If YES, is a rationale provided? Yes
    If YES, reference: It should be kept with other characters in the 'Arabic Presentation Forms-A" block.
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? Yes
    If YES, is a rationale for its inclusion provided? Yes
    If YES, reference: It is encoded as a character in the Iranian national character set standards ISIRI 2900:1989 and ISIRI 3342:1993.
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?
    If YES, reference:
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character? No
    If YES, is a rationale for its inclusion provided?

If YES, reference:
11. **Does the proposal include use of combining characters and/or use of composite sequences?** No
    If YES, is a rationale for such use provided?
    If YES, reference:
    Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?
    If YES, reference:
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):
13. **Does the proposal contain any Ideographic compatibility character(s)?** No
    If YES, is the equivalent corresponding unified ideographic character(s) identified?
    If YES, reference: