# ISO/IEC JTC1/SC2/WG2 N 2322 L2/01-095 Date: 2001-02-05

TITLE:	Proposal to add "Arabic Tail Fragment" character
SOURCE:	IBM Egypt and the Unicode Consortium
ACTION:	For review and acceptance by WG2
DISTRIBUTION:	Members of JTC1/SC2/WG2

## ISO/IEC JTC 1/SC 2/WG 2 PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646

Please fill Sections A, B and C below. Section D will be filled by SC 2/WG 2.

For instructions and guidance for filling in the form please see the document "Principles and Procedures for Allocation of New Characters and Scripts" (http://www.dkuug.dk/JTC1/SC2/WG2/prot)

#### A. Administrative

1. Title: Arabic character tail for final Seen family (Seen, Sheen, Saad, Daad)

2. Requester's name: IBM Egypt

3. Requester type (Member body/Liaison/Individual contribution): Individual Contribution

4. Submission date: 02/05/2001

5. Requester's reference (if applicable):

6. (Choose one of the following:) This is a complete proposal: ; or, More information will be provided later: This is a complete proposal

#### **B. Technical - General**

1. (Choose one of the following:)

a. This proposal is for a new script (set of characters): 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 form B

2. Number of characters in proposal: 1 (One)

3. Proposed category (see section II, Character Categories): B.1

4. Proposed Level of Implementation (see clause 15, ISO/IEC 10646-1): 1 Is a rationale provided for the choice? The proposed character is like similar compatibility characters in the Arabic script. If Yes, reference:

5. Is a repertoire including character names provided?: Yes. The proposal is to add the following to the block - Arabic Presentation Form B:



**FE73 ARABIC TAIL FRAGMENT** with the property of an Extender associated with it.

a. If YES, are the names in accordance with the 'character naming guidelines' in Annex K of ISO/IEC 10646-1? Yes

b. Are the character shapes attached in a reviewable form? Yes (see above)

6. Who will provide the appropriate computerized font (ordered preference: True Type, PostScript or 96x96 bit-mapped format) for publishing the standard? IBM Egypt

If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used: **IBM-1046** font is available if needed.

7. References:

a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? This character is used by other codepages like <u>IBM-420</u>, <u>IBM-1046</u> and <u>IBM-864</u>

b. Are published examples (such as samples from newspapers, magazines, or other sources) of use of proposed characters attached? No. If needed, Host-printed document, we can send a sample by fax.

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): Facilitate the data interchange between Unicode and legacy applications and data stores, that use in particular the IBM-420 EBCDIC codepage and run on EBCDIC hosts such as AS400 and OS390.

#### **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 (for example: National Body, user groups of the script or characters, other experts, etc.)? Yes.

If YES, with whom?

The Unicode Technical Committee

Note: The character name proposed herein is as a result of discussion at the meeting 86 of the UTC. Also, at its meeting 86, the UTC has accepted this character for inclusion in the Unicode standard at FE73.

The Arabic coommunity representative in IBM.

Unicode community in IBM Cupertino.

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? Reference:

All the Arabic speaking countries, using IBM Arabic implementation.

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

5. Are the proposed characters in current use by the user community? If YES, where? Reference:

Yes, on all the Host legacy applications and data stores running on the EBCDIC platforms such as S390 and AS400.

6. After giving due considerations to the principles in N 1352 must the proposed characters be entirely in the BMP? Yes

If YES, is a rationale provided? Yes

If YES, reference: It needs to be available in the UCS range within the Arabic presentation forms-B characters block, for Arabic data interchange and property- compatability with existing data.

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

8. Can any of the proposed characters be considered a presentation form of an existing

character or character sequence? No; It may be generated by an automatic shaping program using appropriate fonts, for presentation purposes only.

If YES, is a rationale for its inclusion provided? If YES, reference: Required for data interchange of legacy data encoded in IBM EBCDIC Arabic CP-420.

9. 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:

10. Does the proposal include use of combining characters and/or use of composite sequences (see clause 4.11 and 4.13 in ISO/IEC 10646-1)? 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:

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

If YES, describe in detail (include attachment if necessary) No

It is a compatibility character, used only for preserving one to one mappings with legacy IBM Arabic code pages.

### D. SC 2/WG 2 Administrative (To be completed by SC 2/WG 2)

1. Relevant SC 2/WG 2 document numbers:

2. Status (list of meeting number and corresponding action or disposition):

3. Additional contact to user communities, liaison organizations etc:

4. Assigned category and assigned priority/time frame:

HEX DIGITS												
1ST →	4-	5-	6-	7-	8-	9-	A-	<b>B-</b>	<b>C-</b>	D-	<b>E</b> -	F-
2ND ¥												
-0	<b>(SP)</b> SP010000	& SM030000	_ SP100000	ے۔ AH450003	<b>ثر</b> AS230000	ظ AZ450000	غـ AG310003	<b>ک</b> AK010003	<b>د</b> SP140007	<b>오</b> SP150007	× SA070000	0 ND100000
-1	(RSP) SP300000	<b>ا</b> _ AA310002	/ SP120000	<b>خ</b> АН470000	<b>a</b> LA010000	<b>j</b> LJ010000	÷ SA060000	ل AL010000	<b>A</b> LA020000	<b>J</b> LJ020000	(NSP) SP310000	1 ND010000
-2	<b>ய</b> AX100000	<b>وً</b> AW310000	<b>ö</b> AT020000	<u>نے</u> AH470003	<b>b</b> LB010000	<b>k</b> LK010000	<b>S</b> LS010000	<b>5</b> AL220000	<b>B</b> LB020000	<b>K</b> LK020000	<b>S</b> LS020000	2 ND020000
-3	<u>س</u> AX100004		ت AT010000	د AD010000	<b>C</b> LC010000	<b>l</b> LL010000	<b>t</b> LT010000	5 AL220003	<b>C</b> LC020000	L LL020000	<b>T</b> LT020000	3 ND030000
-4			تــ AT010003	<b>ذ</b> AD470000	<b>d</b> LD010000	<b>m</b> LM010000	<b>u</b> LU010000	<b>Å</b>	<b>D</b> LD020000	M LM020000	U LU020000	<b>4</b> ND040000
-5	<b>ر</b> SM870000	<u>چ.</u> AY310000	يە AT470000	ر AR010000	<b>e</b> LE010000	<b>n</b> LN010000	<b>V</b> LV010000	کر AL320003	E LE020000	<b>N</b> LN020000	<b>V</b> LV020000	5 ND050000
-6	<b>\$</b> AX300000	AA010000	<u>^</u> AT470003	خ AZ010000	f LF010000	<b>O</b> LO010000	<b>W</b> LW010000		F LF020000	<b>O</b> LO020000	<b>W</b> LW020000	6 ND060000
-7	T AA210000	L AA010002	<b>E</b> AG230000	سر AS010000	<b>g</b> LG010000	<b>p</b> LP010000	<b>X</b> LX010000		<b>G</b> LG020000	P LP020000	<b>X</b> LX020000	<b>7</b> ND070000
-8	۲ AA210002	<b>ب</b> AB010000	<b>ې</b> AG230003	ىيىـ AS010003	<b>h</b> LH010000	<b>q</b> LQ010000	<b>y</b> LY010000	<b>Y</b> AL020000	H LH020000	<b>Q</b> LQ020000	<b>Y</b> LY020000	8 ND080000
-9	<b>f</b> AA310000	<b>ب</b> AB010003	<b>С</b> АН450000	<b>6</b> SP080007	<b>i</b> LI010000	<b>r</b> LR010000	<b>Z</b> LZ010000	У AL020003	<b>I</b> LI020000	<b>R</b> LR020000	<b>Z</b> LZ020000	<b>9</b> ND090000
-A	<b>¢</b> SC040000	<b>!</b> SP020000	SM650000	\$ SP130000	<b>ثث</b> AS230003	<b>ع</b> AC470000	<b>غ</b> AG310004	<b></b> AL010003	(SHY) SP320000	<b>ی</b> AA020000	<b>)</b> ND010001	€ SC200000
-B	• SP110000	<b>\$</b> SC030000	<b>9</b> SP080000	# SM010000	<b>حر</b> AS450000	<b>ک</b> AC470002	ف AF010000	<b>6</b> AM010000	AH010003	<b>ی</b> AA020002	<b>F</b> ND020001	<b>7</b> ND060001
-C	< SA030000	* SM040007	◆/↓ SM020007	0 SM050000	<b>بے</b> AS450003	<b>ے۔</b> AC470003	ف AF010003	<b></b> AM010003		<b>ي</b> AY010000		<b>V</b> ND070001
-D	<b>(</b> SP060000	) SP070000	SP090000	• SP050000	خر AD450000	<b></b> AC470004	ق AQ010000	ن AN010000	<b>-</b> AH010004	<b>ي</b> AY010002	<b>۲</b> ND030001	<b>A</b> ND080001
-E	+ SA010000	• • SP140000	> SA050000	<b>—</b> SA040000	يند AD450003	<b>غ</b> AG310000	<b>ق</b> AQ010003	<u>・</u> AN010003		<b>ب</b> AY010003	<b>£</b> ND040001	<b>9</b> ND090001
-F	SM130000	SM660000	<b>?</b> SP150000	<b>11</b> SP040000	<b>ل</b> AT450000	<b>خ</b> AG310002	کے AK010000	<b>A</b> H010000	و AW010000	• ND100001	<b>)</b> ND050001	(EO)

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HEX DIGITS																
1ST →	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	A-	<b>B-</b>	C-	D-	<b>E</b> -	<b>F</b> -
2ND 🕇																
-0			<b>(SP)</b> SP010000	0 ND100000	@ SM050000	<b>P</b> LP020000	<b>\$</b> SD130000	<b>p</b> LP010000	AA310402	_#  AU050004	(RSP) SP300000	+ ND100001	<b>ے۔</b> AC470003	ذ AD470000	 SM860000	AI050000
-1			<b>!</b> SP020000	1 ND010000	<b>A</b>	<b>Q</b> LQ020000	<b>a</b> LA010000	<b>q</b> LQ010000	× SA070000	AI050004	<b>5</b> AA210006	ND010001	<b>ç</b> AX300000	ر AR010000	ف AF010000	<b>للا</b> AX100000
-2			11 SP040000	2 ND020000	<b>B</b>	<b>R</b>	<b>b</b>	<b>1</b> LR010000	÷	<u></u> AX100004	<b>3</b> AA310006	<b>۲</b> ND020001	<b>T</b> AA210000	<b>ز</b> AZ010000	ق AQ010000	<b>A</b> E050000
-3			# SM010000	3 ND030000	<b>C</b> LC020000	<b>S</b> LS020000	<b>C</b> LC010000	<b>S</b> LS010000	ىر AS010000	AE050004	<b>)</b> AA310406	<b>*</b> ND030001	<b>أ</b> AA310000	س AS010006	<u>ک</u> AK010000	<b>ق</b> AQ010003
-4			\$ SC030000	<b>4</b> ND040000	<b>D</b> LD020000	<b>T</b> LT020000	<b>d</b> LD010000	<b>t</b> LT010000	شر AS230000	AA050004	<b>X</b> SC010000	<b>٤</b> ND040001	<b>ق</b> AW310000	ش AS230006	ل AL010000	<b>ک</b> AK010003
-5			•/• SM020007	5 ND050000	<b>E</b> LE020000	U	<b>e</b> LE010000	<b>u</b> LU010000	<b>حر</b> AS450000	<b>یء</b> AY310002	<b>)</b> AA010006	<b>)</b> ND050001	<b>)</b> AA310400	ص AS450006	<b>۴</b> AM010000	
-6			& SM030000	6 ND060000	F LF020000	<b>V</b> LV020000	f LF010000	<b>V</b> LV010000	ضر AD450000	<del>و</del> ) AA020002	<u>چ.</u> AY310000	<b>٦</b> ND060001	<b>ی۔</b> AY310006	<b>ض</b> AD450006	ن AN010000	<b>ر</b> SM870000
-7			• SP050000	7 ND070000	<b>G</b> LG020000	<b>W</b> LW020000	<b>g</b> LG010000	<b>W</b> LW010000	<b>4</b> AA070004	<b></b> AY010003	<b>ب</b> AB010003	<b>V</b> ND070001	AA010000	<u>لم</u> AT450000	AH010003	<b>5</b> AL220000
-8			<b>(</b> SP060000	8 ND080000	<b>H</b>	<b>X</b> LX020000	<b>h</b> LH010000	<b>X</b> LX010000		<b>ہے</b> AY010002	تـ AT010003	<b>Å</b> ND080001	<b>ب</b> AB010000	ظل AZ450000	و AW010000	لاً AL320000
-9			) SP070000	<b>9</b> ND090000	<b>I</b> LI020000	<b>Y</b> LY020000	<b>i</b> LI010000	<b>y</b> LY010000	SM470000	<b>خ</b> AG310002	<u>م</u> AT470003	<b>9</b> ND090001	<b>ö</b> AT020000	<b>ع</b> AC470000	ى AA020000	<b>X</b> AL320400
-A			* SM040007	\$ SP130000	<b>J</b> LJ020000	<b>Z</b> LZ020000	<b>j</b> LJ010000	<b>Z</b> LZ010000	SF110000	غ AG310003	<b>ج</b> AG230003	<b>ش</b> AS230003	ت AT010000	<b>غ</b> AG310000	<b>ي</b> AY010000	<b>У</b> AL020000
-B			+ SA010000	<b>,</b> SP140000	<b>K</b> LK020000	<b>[</b> SM060000	<b>k</b> LK010000	<b>{</b> SM110000	SF100000	غد AG310004	<b>م</b> AH450003	۲ • SP140007	ث AT470000	<b>.</b> AC470004	# AA070000	<b>ہے۔</b> AM010003
-C			<b>,</b> SP080000	< SA030000	LL020000	\ SM070000	<b>l</b> LL010000	SM130000	SF030000	5 AL220003	<b>6</b> SP080007	<b>مد</b> AS450003	<b>ح</b> AG230000	ل AA210002	<b>\$</b> AU070000	نـ AN010003
-D			_ SP100000	<b>—</b> SA040000	<b>M</b> LM020000	] SM080000	<b>m</b> LM010000	<b>}</b> SM140000	SF010000	<b>گ</b> AL320003	(SHY) SP320000	ضر AD450003	С АН450000	<b>ٱ</b> AA310002	<b>F</b> AI070000	<b>-</b> AH010004
-E			• SP110000	> SA050000	<b>N</b> LN020000	▲ SD150000	<b>n</b> LN010000	~ SD190000	SF020000	<b>ک</b> AL320402	نے АН470003	<b>Č</b> AC470002	<b>خ</b> АН470000	L AA010002	AA050000	<b>گ</b> AH010000
-F			/ SP120000	? SP150000	<b>O</b> LO020000	SP090000	<b>O</b> LO010000		SF040000	کل AL020003	سيـ AS010003	<b>?</b> SP150007	د AD010000	 AF010003	-* AU050000	€ SC200000

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HEX DIGITS																
1ST →	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	A-	B-	C-	<b>D-</b>	<b>E</b> -	F-
2ND 🕇																
-0		SM590000	<b>(SP)</b> SP010000	0 ND100000	@ SM050000	<b>P</b> LP020000	SD130000	<b>p</b> LP010000	<b>0</b> SM190000	<b>β</b> GB010000	(RSP) SP300000	• ND100001	¢ SC040000	ذ AD470000	 SM860000	<u>س</u> AX100004
-1	<b>S</b> 5000000	SM630000	<b>!</b> SP020000	1 ND010000	<b>A</b> LA020000	<b>Q</b> LQ020000	<b>a</b> LA010000	<b>q</b> LQ010000	• SD630000	<b>X</b>	(SHY) SP320000	ND010001	<b>ç</b> AX300000	ر AR010000	ف AF010003	<b>ய</b> AX100000
-2	<b>5</b> M930000	\$ SM760000	11 SP040000	2 ND020000	<b>B</b> LB020000	<b>R</b> LR020000	<b>b</b>	<b>r</b> LR010000	• SA790000	<b>ф</b> GF010001	L AA210002	<b>۲</b> ND020001	T AA210000	ز AZ010000	<b>تــ</b> AQ010003	ن AN010000
-3	<b>J</b> SM910000	SP330000	# SM010000	<b>3</b>	<b>C</b>	<b>S</b>	<b>C</b>	<b>S</b>	SA800000	±	£	<b>*</b>	<b>Å</b> A310000	ىي <u>د</u> AS010003	<u>ح</u> 4K010003	<b>b</b> AH010000
-4	\$M690000	¶	\$ SC030000	<b>4</b>	<b>D</b>	<b>T</b>	<b>d</b>	t	SE150000	1/2	X SC010000	<b>£</b>	و و ۵۱/۱۵۵۵	ش ۵۶230003		<b>€</b>
-5	SE430000	\$ SM240000	*/*	5	E	U	<b>e</b>	<b>u</b>	SE100000	1/4 NE040000	L	<b>0</b>	AC470002	<u>مد</u>	AM010003	میں 10000 میں AA020002
-6	SF240000	SM700000	& SM030000	6 ND060000	F	<b>V</b>	f	<b>V</b>	SF110000	≈ ≈		<b>N</b> D060001	<u>e</u> , AY310000	<u>بن المراجعة</u>	<u>ن</u> AN010003	<b>بي</b> AY010002
-7		<u>↓</u> SM770000	• SP050000	7 ND070000	<b>G</b>	<b>W</b> LW020000	<b>g</b> LG010000	<b>W</b> LW010000	SF050000	<b>«</b> SP170000	€ SC200000	V ND070001	AA010000	<b>ل</b> AT450000	AH010003	غـ AG310004
-8	SF230000	↑ SM320000	( SP060000	8 ND080000	<b>H</b>	X	<b>h</b>	<b>X</b>	5F090000	>> SP180000	L			ظ AZ450000	و. AW010000	ق AQ010000
-9	SF410000	↓ SM330000	) SP070000	<b>9</b>	<b>I</b> LI020000	<b>Y</b>	i	<b>y</b>	SF060000	<b>گ</b> AL320000	ب AB010000	<b>9</b> ND090001	<b>Š</b> AT020000	<u>م</u> AC470003	ى AA020000	للا AL220000
-A	SF420000	→ SM310000	* SM040007	\$ SP130000	<b>J</b> LJ020000	<b>Z</b> LZ020000	<b>j</b> LJ010000	<b>Z</b> LZ010000	SF080000	لاً AL320003	ت AT010000	ف AF010000	تـ AT010003	<u>ن</u> AG310003	<b>ب</b> AY010003	び AL220003
-B	SF400000	← SM300000	+ SA010000	, SP140000	<b>K</b>	<b>[</b> SM060000	<b>k</b> LK010000	<b>{</b> SM110000	5F070000		ث AT470000	۲ SP140007	<u>^</u> AT470003	SM650000	ضر AD450000	ل AL010000
-C	SF250000	L SA420000	<b>9</b> SP080000	< SA030000	LL020000	\ SM070000	<b>1</b> LL010000	SM130000	SF030000		<b>6</b> SP080007	ىر AS010000	<b>ب</b> AG230003		<b>_3_</b> AC470004	کے AK010000
-D	SF390000	↔ SM780000	_ SP100000	<b>—</b> SA040000	<b>M</b> LM020000	] SM080000	<b>m</b> LM010000	<b>}</b> SM140000	SF010000	<b>ک</b> AL020000	<b>C</b> AG230000	<b>ثر</b> AS230000	<b>A</b> H450003	÷ SA060000	<b>خ</b> AG310002	<b>ي</b> AY010000
-E	SF380000	SM600000	• SP110000	> SA050000	<b>N</b> LN020000	A SD150000	<b>n</b> LN010000	~ SD190000	SF020000	کر AL020003	С АН450000	<b>صر</b> AS450000	<b>نے</b> AH470003	× SA070000	<b>غ</b> AG310000	SM470000
-F	SF260000	▼ SV040000	SP120000	? SP150000	<b>O</b> LO020000	SP090000	<b>O</b> LO010000	<b>С</b> SM790000	SF040000	ر SM870000	<b>с</b> АН470000	<b>?</b> SP150007	د AD010000	<u>ع</u> AC470000	AM010000	

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