----------------------start of proposal ----------------------

1. Document number :
2. Document type   : Proposal of new amendment
3. Document title   : Addition of Soyombo script on ISO/IEC 10646
4. Due date   :
5. Source   : Mongol & Japan   (tks Japan)
6. Project number   :
7. Action id   : For discussion at the SC2 WG2 meeting in London (Sep98)
8. Media   : P

Mongol and Japan request to the WG2 that the Soymbo script should be reviewd as a candidate of new additional script for the ISO/IEC 10646.
This is a preliminary notice of the requirement.

Note: This is one of the activity result of Asian activity (MLIT/AFSIT)

------------------start of the summary form--------------------------

PROPOSAL SUMMARY FORM

to accompany submissions for additions
to the repertoire of ISO/IEC 10646

A.   Administrative
1.   Title: **Addition of Soyombo Script**
2.   Requester's name: **Mongol & Japan**
3.   Requester type (Member body/Liaison/Individual contribution)   **NB**
4.   Submission date: **1998-08-21**
5.   Requester's reference (if applicable)
           See attached back up information
6.   (Choose one of the following)

B Technical general

1. (Choose one of the following)

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

Proposed name of script   **SOYOMBO**

b. This proposal is for addition of character(s) to an existing block:

Name of the existing block

2. Number of characters in proposal   **94**

3. Proposed category (see section II.   Character Categories)   **to be defined in later (TBD)**

4. Proposed level of implementation (see clause 15, ISO/IEC 10646-1)   **TBD**

Is a rationale provided for the choice?

If Yes, reference

5. Is a repertoire including character name provided?

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?

6. Who will provide the appropriate computerlized font?   **TBD**

If available now, identify source(s) for the font and indicate the tools used.

7. Reference: **to be provided in later**

a. Are reference (to the character set, dictionaries, descriptive texts etc.) provided?

b. Are published examples of use of proposed characters attached?

8. Special encoding issues:

Does the proposal address other aspect of character data processing?   **TBD**

C   Technical-Justification

1. Has this proposal for addition of characters(s) been submitted before?   **NO**

If YES, explain¯

2. Has contact been made to member of the user community?   **YES**

If YES, with whom   **MNSA**

If YES, available relevant document?

3. Information on the user community for the proposed characters

4. The context of use for the proposed character (s)

Reference

5. Are the proposed characters in current use by the user community?
   If yes, reference

6. After giving due considerations to the principles in N1352 must the proposed characters be entirely in the BMP?   **TBD**
   If YES, is rationale provided
        If yes, reference:

7. Should the proposed characters be kept together in contiguous range?   **YES**

8. Can any of those proposed characters be considered a presentation form of an existing character or character sequences?
        If YES, is rationale for its inclusion provided?
            If YES, rationale

9. Can any of the proposed characters be considered to be similar to an existing character?   **NO**
        If TES, is rationale for its inclusion provided?
            If YES, references

10. Does the proposal include use of combining character and/or use of composite sequences?
        If YES, is a rationale for such use provided?
            If Yes, reference
        Is a list of composite sequence and their corresponding glyph images provided?
            If YES, reference

11. Does the proposal contain characters with any special properties such as control function or similar semantics?   **NO**
            If YES, describe in detail

D. SC2/WG2 Administrative (To be completed by SC2/WG2)
1. Relevant SC2WG2 document number
2. Status
3. Additional contact to user communities, liaison organization etc.
4. Assigned category and assigned priority/time frame

-------end-------

Soyombo Characters Encoding Proposal

The Soyombo alphabet was created in 1686 by the great Mongolian scholar and monk Zanabazar. It was modelled after the graphical example of the Lantsa-Dewanagari script with the purpose of creating a script for Mongolia which could be used equally well for writing Mongolian, Tibetan and Sanskrit.

Though it was used in the beginning for writing Buddhist texts, it never became very popular and is mainly used for temple inscriptions and related purposes nowadays.

The script has been documented and explained by a number of authors like the Hungarian scholar G. Kara [1] and the Mongolian scholars Rinchen [2] and Shagdarsürän. The latter contributed several texts [3, 4] and a primer [5].

The logical construction of the script is two-dimensional, not linear. Basic consonants are combined with vowels and final consonants in a way similar to Tibetan; in fact, some of the letter shapes as well as the arrangement of the alphabet was heavily influenced by Tibetan.

The basic consonant fills the major area of the symbol; if no vowel sign is added, the basic vowel *a* is assumed; if a vowel is added, then it is either placed on top of the character (in case of *i, ä, o, ö*) or in the lower third of the character box (in the cases of *ü, u*). A secondary consonant, i.e. a consonant closing the syllable, can be added to the basic character; it is then placed in the right third of the lower third of the character box. Long vowels are marked by a protruding tip of the right-side beam. there are two diphthongs, *Vu, Vi*, which are both attached to the right side of the basic character.

Figure 1 shows the structural layout of the Soyombo characters.

In the code table, the Soyombo characters are arranged in their alphabetical order. Character forms are given as canonical characters as is the case in all alphabetical lists.

The list of names tries to reflect the naming conventions for these characters as far as possible yet for some names longer constructs had to be defined.

The following example shows how the words *xamuɣ sädgil-tü* written in Soyombo ཀཱྵ ཨཱྵཀྵཥ translate into a sequence of transliteration characters.

Original	ཀ		ཤ			ཥ		གྷ			ཥ	
Decomposed	ཀ		ཤ	ཥ	ཥ	ས	ཥ	ཥ	ག	ཥ	ཥ		ཝ	ཥ
Transliterated	x	a	m	u	ɣ	s	ä	d	g	i.	l	-	t	ü

In order to show the construction of the Soyombo characters (for writing text books, etc.) one blind or dummy character ཥ was created which does not
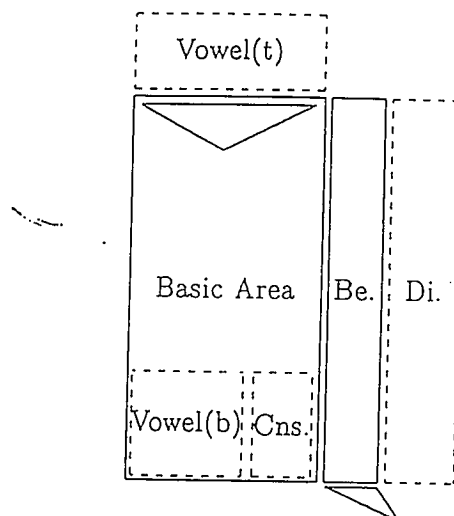
Figure 1: Structural Layout of Soyombo Characters

appear in the original alphabet. This character was given the name SOYOMBO DUMMY.

References

[1] G. Kara. Un texte mongol en écriture soyombo. *AOH*, IX(1), 1959.

[2] B. Rinqän. Zwei unbekannte mongolische Alphabete aus dem XVII. Jahrhundert. *AOH*, II:63–72, 1952.

[3] C. Shagdarsürän. Sur quelques traductions mongoles du Natha. *SM*, 2(10), 1975.

[4] C. Shagdarsürän. *Mongol Üsägzüi*. Ulaanbaatar, 1981.

[5] C. Shagdarsürüng. *Soyongbo bicig-ün caɣan toloɣai*. Mongɣol bicig-ün käbläl-ün xoriy-a, ulaɣanbaɣatur, 1995.

Figure 2: The Soyombo Character Set

	00	01	02	03	04	05	06	07
0	(000)	(016)	(032)	(048)	(064)	(080)	(096)	(112)
1	(001)	(017)	(033)	(049)	(065)	(081)	(097)	(113)
2	(002)	(018)	(034)	(050)	(066)	(082)	(098)	(114)
3	(003)	(019)	(035)	(051)	(067)	(083)	(099)	(115)
4	(004)	(020)	(036)	(052)	(068)	(084)	(100)	(116)
5	(005)	(021)	(037)	(053)	(069)	(085)	(101)	(117)
6	(006)	(022)	(038)	(054)	(070)	(086)	(102)	(118)
7	(007)	(023)	(039)	(055)	(071)	(087)	(103)	(119)
8	(008)	(024)	(040)	(056)	(072)	(088)	(104)	(120)
9	(009)	(025)	(041)	(057)	(073)	(089)	(105)	(121)
A	(010)	(026)	(042)	(058)	(074)	(090)	(106)	(122)
B	(011)	(027)	(043)	(059)	(075)	(091)	(107)	(123)
C	(012)	(028)	(044)	(060)	(076)	(092)	(108)	(124)
D	(013)	(029)	(045)	(061)	(077)	(093)	(109)	(125)
E	(014)	(030)	(046)	(062)	(078)	(094)	(110)	(126)
F	(015)	(031)	(047)	(063)	(079)	(095)	(111)	(127)

Figure 3: The Soyombo Character Names

dec	hex	Name	dec	hex	Name
000	00	SOYOMBO SPACE	064	40	SOYOMBO LETTER RI
001	01	SOYOMBO DUMMY	065	41	SOYOMBO LETTER RII
002	02	SOYOMBO INITIAL	066	42	SOYOMBO LETTER LI
003	03	SOYOMBO COMMA	067	43	SOYOMBO LETTER LII
004	04	SOYOMBO STOP	068	44	SOYOMBO LETTER AMM
005	05	SOYOMBO TERMINAL	069	45	SOYOMBO LETTER AH
006	06	(THIS POSITION SHALL NOT BE USED)	070	46	SOYOMBO LETTER GALIG GA
007	07	(THIS POSITION SHALL NOT BE USED)	071	47	SOYOMBO LETTER GALIG GHA
008	08	(THIS POSITION SHALL NOT BE USED)	072	48	SOYOMBO LETTER GALIG JA
009	09	(THIS POSITION SHALL NOT BE USED)	073	49	SOYOMBO LETTER GALIG JHA
010	0A	(THIS POSITION SHALL NOT BE USED)	074	4A	SOYOMBO LETTER GALIG TA
011	0B	(THIS POSITION SHALL NOT BE USED)	075	4B	SOYOMBO LETTER GALIG THA
012	0C	(THIS POSITION SHALL NOT BE USED)	076	4C	SOYOMBO LETTER GALIG DA
013	0D	(THIS POSITION SHALL NOT BE USED)	077	4D	SOYOMBO LETTER GALIG DHA
014	0E	(THIS POSITION SHALL NOT BE USED)	078	4E	SOYOMBO LETTER GALIG NA
015	0F	(THIS POSITION SHALL NOT BE USED)	079	4F	SOYOMBO LETTER GALIG DDA
016	10	SOYOMBO LETTER A	080	50	SOYOMBO LETTER GALIG DDHA
017	11	SOYOMBO LETTER AA	081	51	SOYOMBO LETTER GALIG BBA
018	12	SOYOMBO LETTER I	082	52	SOYOMBO LETTER GALIG BBHA
019	13	SOYOMBO LETTER II	083	53	SOYOMBO LETTER GALIG SHA
020	14	SOYOMBO LETTER E	084	54	SOYOMBO LETTER GALIG KYA
021	15	SOYOMBO LETTER EE	085	55	SOYOMBO LETTER GALIG KRA
022	16	SOYOMBO LETTER UE	086	56	SOYOMBO LETTER GALIG KLA
023	17	SOYOMBO LETTER UUE	087	57	SOYOMBO LETTER GALIG KMA
024	18	SOYOMBO LETTER U	088	58	SOYOMBO LETTER GALIG KKA
025	19	SOYOMBO LETTER UU	089	59	SOYOMBO LETTER GALIG NKA
026	1A	SOYOMBO LETTER O	090	5A	SOYOMBO LETTER GALIG NCA
027	1B	SOYOMBO LETTER OO	091	5B	SOYOMBO LETTER GALIG NDA
028	1C	SOYOMBO LETTER OE	092	5C	SOYOMBO LETTER GALIG NTA
029	1D	SOYOMBO LETTER OOE	093	5D	SOYOMBO LETTER GALIG MPA
030	1E	SOYOMBO LETTER AU	094	5E	SOYOMBO LETTER GALIG LKA
031	1F	SOYOMBO LETTER AI	095	5F	SOYOMBO LETTER GALIG SHKA
032	20	SOYOMBO LETTER GA	096	60	SOYOMBO LETTER GALIG SKA
033	21	SOYOMBO LETTER KA	097	61	SOYOMBO LETTER GALIG RKA
034	22	SOYOMBO LETTER NGA	098	62	SOYOMBO LETTER GALIG ZA
035	23	SOYOMBO LETTER ZA	099	63	SOYOMBO LETTER GALIG CHA
036	24	SOYOMBO LETTER CA	100	64	SOYOMBO LETTER GALIG JJA
037	25	SOYOMBO LETTER NYA	101	65	SOYOMBO LETTER GALIG ZHA
038	26	SOYOMBO LETTER DA	102	66	SOYOMBO LETTER GALIG ZZA
039	27	SOYOMBO LETTER TA	103	67	SOYOMBO LETTER GALIG AA
040	28	SOYOMBO LETTER NA	104	68	(THIS POSITION SHALL NOT BE USED)
041	29	SOYOMBO LETTER BA	105	69	(THIS POSITION SHALL NOT BE USED)
042	2A	SOYOMBO LETTER PA	106	6A	(THIS POSITION SHALL NOT BE USED)
043	2B	SOYOMBO LETTER MA	107	6B	(THIS POSITION SHALL NOT BE USED)
044	2C	SOYOMBO LETTER YA	108	6C	(THIS POSITION SHALL NOT BE USED)
045	2D	SOYOMBO LETTER RA	109	6D	(THIS POSITION SHALL NOT BE USED)
046	2E	SOYOMBO LETTER WA	110	6E	(THIS POSITION SHALL NOT BE USED)
047	2F	SOYOMBO LETTER LA	111	6F	(THIS POSITION SHALL NOT BE USED)
048	30	SOYOMBO LETTER SHA	112	70	(THIS POSITION SHALL NOT BE USED)
049	31	SOYOMBO LETTER SA	113	71	(THIS POSITION SHALL NOT BE USED)
050	32	SOYOMBO LETTER HA	114	72	(THIS POSITION SHALL NOT BE USED)
051	33	SOYOMBO LETTER KSHA	115	73	(THIS POSITION SHALL NOT BE USED)
052	34	SOYOMBO LETTER AG	116	74	(THIS POSITION SHALL NOT BE USED)
053	35	SOYOMBO LETTER AK	117	75	(THIS POSITION SHALL NOT BE USED)
054	36	SOYOMBO LETTER ANG	118	76	(THIS POSITION SHALL NOT BE USED)
055	37	SOYOMBO LETTER AD	119	77	(THIS POSITION SHALL NOT BE USED)
056	38	SOYOMBO LETTER AN	120	78	(THIS POSITION SHALL NOT BE USED)
057	39	SOYOMBO LETTER AB	121	79	(THIS POSITION SHALL NOT BE USED)
058	3A	SOYOMBO LETTER AM	122	7A	(THIS POSITION SHALL NOT BE USED)
059	3B	SOYOMBO LETTER AR	123	7B	(THIS POSITION SHALL NOT BE USED)
060	3C	SOYOMBO LETTER AL	124	7C	(THIS POSITION SHALL NOT BE USED)
061	3D	SOYOMBO LETTER ASH	125	7D	(THIS POSITION SHALL NOT BE USED)
062	3E	SOYOMBO LETTER AS	126	7E	(THIS POSITION SHALL NOT BE USED)
063	3F	SOYOMBO LETTER AANG	127	7F	(THIS POSITION SHALL NOT BE USED)