

DATE: 1998-02-27

## ISO/IEC JTC 1/SC 2/WG 2

Universal Multiple-Octet Coded Character Set  
(UCS)**Title: KIP SIGN - Laotian Currency Sign****Source: US National Body, Unicode and V. S. Umamaheswaran, IBM Canada****Status: National Body / Liaison / Expert Joint Contribution****Action: For consideration and acceptance by SC2/WG2****Distribution: NCITS-L2, UTC, ISO/IEC JTC1/SC2/WG 2**

This contribution is a proposal to add a new character - **KIP SIGN** (Laotian Currency Sign) - to UCS (ISO/IEC 10646-1: 1993 and Unicode 2.0) Standard.

The Vientiane Times, dated September 3-5, 1997, carried an article edited in English by Savankhone, entitled 'Regulations on management of computer standards'. A transcription of this article is attached. Two code pages -- EBCDIC LAO CODE PAGE (see Figure 1) and ASCII LAO CODE PAGE (see Figure 2) were illustrated as part of the Lao STENO's regulation, signed on 12 July 1997. Each of these code pages contain all the characters needed for the Lao language and traditional 7-bit ASCII characters. They also include the Laotian Currency Sign - KIP SIGN, which looks like a uppercase k with a stroke across it (shown below), at code position xDF in the ASCII code page and at x70 in the EBCDIC code page.

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KIP SIGN - representative shape



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UCS (ISO/IEC 10646 and Unicode 2.0) includes all the characters of these Lao code pages, permitting no loss during conversions between the UCS and the 8-bit codes referenced, except

the KIP SIGN, which is missing from UCS.

This contribution is a proposal to add the Laotian Currency Sign - KIP SIGN - to the Currency Symbols block in UCS. The next unassigned code position in this block is x20AD (x20AC was assigned to the EURO SIGN). This addition is required in the short term, for non-lossy interchange of data between systems using UCS and systems using the EBCDIC or ASCII LAO CODE PAGES. In the long term, it will be possible to approach STENO, to amend the STENO regulation to include UCS only if the missing KIP SIGN is included in UCS.

A proposal summary form is attached.

## **A. Administrative**

1. Title	KIP SIGN - Laotian Currency Sign
2. Requester's name	V. S. Umamaheswaran, IBM Canada Ltd.
3. Requester type	Individual contribution
4. Submission date	1998-02-06
5. Requester's reference	None
6a. Completion	This is a complete proposal.
6b. More information to be provided?	No

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

1a. Proposal for New Script? Name?	NO
1b. Addition of characters to existing block? Name of block?	Yes - Currency Symbols.
2. Number of characters	ONE
3. Proposed category	Category A
4. Proposed level of implementation and rationale	Level 1. The proposed character is a single non-combining character.
5a. Character names included in proposal?	Yes
5b. Character names in accordance with guidelines?	Yes



5c. Character shapes reviewable?	Yes
6a. Who will provide computerized font?	A .gif file is available from the author. KIP SIGN - representative shape  ⌘
6b. Font currently available?	
6c. Font format?	
7a. Are references (to other character sets, dictionaries, descriptive texts, etc.) provided?	See Figures 1 and 2
7b. Are published examples (such as samples from newspapers, magazines, or other sources) of use of proposed characters attached?	No - A transcript of newspaper article on STENO Regulation is included.
8. Does the proposal address other aspects of character data processing?	No

## C. Technical -- Justification

1. Has this proposal for addition of character(s) been submitted before?	No
2. Contact with the user community?	Yes
3. Information on the user community?	Lao script is already in the standard. This character is required per STENO Lao PDR regulation.
4a. The context of use for the proposed characters?	Common.
4b. Reference	Attached transcription of STENO Lao PDR regulation
5a. Proposed characters in current use?	Yes
5b. Where?	In systems using EBCDIC and ASCII Lao Code Pages in Lao PDR

6a. Characters should be encoded entirely in BMP?	Yes. Position U+20AD in the Currency Symbols block is proposed.
6b. Rationale	All the remaining characters of the EBCDIC and ASCII Lao code pages are already encoded in the BMP.
7. Should characters be kept in a continuous range?	No. Need not be with the Lao Script block.
8a. Can the characters be considered a presentation form of an existing character or character sequence?	NO
8b. Where?	
8c. Reference	
9a. Can any of the characters be considered to be similar (in appearance or function) to an existing character?	NO
9b. Where?	
9c. Reference	
10a. Combining characters or use of composite sequences included?	NO
10b. List of composite sequences and their corresponding glyph images provided?	NO
11. Characters with any special properties such as control function, etc. included?	This character will participate as 'currency sign' in formatted Monetary Fields

## D. SC2/WG2 Administrative

To be completed by SC2/WG2

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	
Other Comments	

Transcription from:  
**Vientiane Times, September 3-5, 1997, p 5.**  
**Regulations on management of computer standards**  
**Edited in English by Savankhone**

(Transcribed for electronic attachment to proposal to add KIP SIGN to ISO/IEC 10646)  
 (by V.S. Umamaheswaran, IBM Canada Ltd., +1 416 448 3474; e-mail: umavs@ca.ibm.com)  
 (1998-02-06)

THE Science, Technology and Environment Organization (STENO) of the Lao PDR has issued a regulation concerning the management of computer standards used in the Lao PDR.

The regulation was signed by the head of STENO on July 12, 1997. It contains 13 articles, and is edited in English as follows:

**Part 1**

**General Principles**

**Article 1:** This regulation is issued to serve computer systems, in particular the management of computer standards used in the Lao PDR. The computer standards will be used uniformly across the country.

**Article 2:** Individuals, organizations or entities operating business in production and import of various types of computers, medium and large sized computers, must be responsible for basic standards specified in this regulation.

**Article 3:** Individuals, organizations or entities operating business in production and import of various types of computers, medium and large sized computers, which have a processor of 64 bits or above, must register with and receive approval from STENO prior to the operation of such a business.

**Part 2**

**Computer standards**

**Article 4:** Computers to be imported for use in control of computer networks must be medium or large-sized ones (mini/mainframe). The computers must consist of an operating system and data base, which also covers the Lao language, security system, storage system, communication system in Lao language, TP monitor system and spooling system.

**Article 5:** Computers, both medium and large sized ones, must be comprised of a Lao EBCDIC Code Page, while the small-sized computers to be used in the network must consist of Lao ASCII Code Page and standard key board.

**Article 6:** Software standards or commands to be used in computers must have the in/out system



in Lao language which does not use a language conversion program.

The system should include letters on the screen, saving in data base, spooling and communication within the network, which all must conform with the Lao code as specified in this regulation.

### **Part 3**

#### **Registration of computers**

**Article 7:** Individuals, organizations or entities that need to register computers must apply to STENO, and the application must be attached with the following documents:

1. Specification of computers
2. Source of production or import
3. Cost of production and import
4. Purpose of use
5. Copy of production or import business license.

**Article 8:** Applicants for computer registration must pay a fee to the registration authority at a rate equivalent to 0.01 per cent of the cost of computers to be produced or imported.

### **Part 4**

#### **Measures against violators**

**Article 9:** Any individuals or organisations that produce or import computers without approval from STENO will face a fine at an amount equivalent to 200 per cent of the cost of the computers, and the computers in question will be seized.

**Article 10:** Any individuals, or organisations, which have made a registration with or which have received approval from STENO, but fail to conform with standards, specified in this regulation, will be warned, disciplined and fined on a case-by-case basis.

**Article 11:** Users have the right to file against producers or suppliers of sub-standard computers and to sue for compensation of any or all loss.

### **Part 5**

#### **Implementation**

**Article 12:** STENO has assigned the Department of Intellectual Property, Standards and Measurement to oversee the implementation of this regulation and carry out the registration of computers to be produced and imported in the country.

**Article 13:** This regulation becomes effective as of the date it was signed.

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(Note: Two figures showing the EBCDIC LAO CODE PAGE and ASCII LAO CODE PAGE were also included in the news paper article. Their equivalents are attached as Figure 1 and Figure 2 to this transcription. Figure 1 shown in the news paper article had included columns 0, 1, 2 and 3 - with blank entries in them. These blank columns have been omitted in the attached

Figure 1.)

(Address of STENO:  
 Science, Technology and Environment Organization (STENO)  
 P O Box 2279  
 Vientiane, Lao PDR  
 Tel: (856 21) 213470/213471  
 Fax: (856 21) 213472)

Figure 1 - EBCDIC LAO CODE PAGE (IBM CPGID 1132)

HEX DIGITS 1ST → 2ND ↓	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-0	(SP) SP010000	& SM030000	- SP100000	K SC190000				O U0000ED0	{ SM110000	} SM140000	\ SM070000	0 ND100000
-1	(RSP) SP300000		/ SP120000		a LA010000	j LJ010000	~ SD190000	Q U0000ED1	A LA020000	J LJ020000		1 ND010000
-2	ກ U0000E01	ຍ U0000E0D	ປ U0000E0B	ສ U0000EA3	b LB010000	k LX010000	s LS010000	໒ U0000ED2	B LB020000	K LX020000	S LS020000	2 ND020000
-3	ຂ U0000E02	ດ U0000E04	ຜ U0000E0C	ລ U0000EA5	c LC010000	l LL010000	t LT010000	໓ U0000ED3	C LC020000	L LL020000	T LT020000	3 ND030000
-4	ຄ U0000E04	ຕ U0000E05	ຝ U0000E0D	ວ U0000EA7	d LD010000	m LM010000	u LU010000	໔ U0000ED4	D LD020000	M LM020000	U LU020000	4 ND040000
-5	ງ U0000E07	ຖ U0000E06	ພ U0000E0E	ທ U0000EA8	e LE010000	n LN010000	v LV010000	໕ U0000ED5	E LE020000	N LN020000	V LV020000	5 ND050000
-6	ຈ U0000E08	ທ U0000E07	ຝ U0000E0F	ອ U0000EAD	f LF010000	o LO010000	w LW010000	໖ U0000ED6	F LF020000	O LO020000	W LW020000	6 ND060000
-7	ສ U0000EAA	ນ U0000E09	ມ U0000EA1	ຮ U0000EAE	g LG010000	p LP010000	x LX010000	໗ U0000ED7	G LG020000	P LP020000	X LX020000	7 ND070000
-8	ຮ U0000EBA	ບ U0000E0A	ຢ U0000EA2		h LH010000	q LQ010000	y LY010000	໘ U0000ED8	H LH020000	Q LQ020000	Y LY020000	8 ND080000
-9	[ SM060000	] SM060000	^ SD150000	` SD130000	i LI010000	r LR010000	z LZ010000	໙ U0000ED9	I LI020000	R LR020000	Z LZ020000	9 ND090000
-A	€ SC040000	! SP020000	! SM050000	: SP130000		ຮ U0000EB4	໘ U0000EBC			ໍ U0000ECD		
-B	. SP110000	\$ SC030000	, SP080000	# SM010000		ຮ U0000EB5	໘ U0000EB1	໒ U0000EC0	ໍ U0000EC8	ງ U0000EC8		
-C	< SA030000	* SM040000	% SM020000	@ SM050000	໘ U0000EAF	ຮ U0000EB6	໘ U0000EBB	໒ U0000EC1	ໍ U0000EC9			
-D	( SP060000	) SP070000	= SP090000	' SP050000	ຮ U0000EB0	ຮ U0000EB7	໘ U0000EBD	໒ U0000EC2	ໍ U0000ECA	໘ U0000EDC		
-E	+ SA010000	: SP140000	> SA050000	= SA040000	໘ U0000EB2	໘ U0000EB8		໘ U0000EC3	ໍ U0000ECB	໘ U0000EDD		
-F	 SM130000	┘ SM080000	? SP150000	" SP040000	໘ U0000EB3	໘ U0000EB9		໘ U0000EC4	ໍ U0000ECC			EOI

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Figure 2 - ASCII LAO CODE PAGE (IBM CPGID 1133)



HEX DIGITS 1ST → 2ND ↓	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-0			SP) 0	@	P	`	p					ឆ	ម	្ក		័
			SP010000	ND100000	SM050000	LP020000	SD130000	LP010000				U0000E9C	U0000EB0	U0000EC0		U0000ED0
-1			!	1	A	Q	a	q				រ	ឃ	ៗ	្ក	័
			SP020000	ND010000	LA020000	LQ020000	LA010000	LQ010000				U0000EB1	U0000EBD	U0000EB2	U0000EC1	U0000ED1
-2			"	2	B	R	b	r				២	ប	ៗ	្ក	័
			SP040000	ND020000	LB020000	LR020000	LB010000	LR010000				U0000EB2	U0000EBE	U0000EB3	U0000EC2	U0000ED2
-3			#	3	C	S	c	s				ឆ	ឃ	ៗ	្ក	័
			SM010000	ND030000	LC020000	LS020000	LC010000	LS010000				U0000EB4	U0000EBF	U0000EB4	U0000EC3	U0000ED3
-4			\$	4	D	T	d	t				២	ឃ	ៗ	្ក	័
			SC030000	ND040000	LD020000	LT020000	LD010000	LT010000				U0000EB7	U0000EA1	U0000EB5	U0000EC4	U0000ED4
-5			%	5	E	U	e	u				ៗ	ឃ	ៗ	្ក	័
			SM020000	ND050000	LE020000	LU020000	LE010000	LU010000				U0000EB8	U0000EA2	U0000EB6	U0000EC5	U0000ED5
-6			&	6	F	V	f	v				ឆ	ឃ	ៗ	្ក	័
			SM030000	ND060000	LF020000	LV020000	LF010000	LV010000				U0000EAA	U0000EA3	U0000EB7	U0000EC6	U0000ED6
-7			'	7	G	W	g	w				២	ឃ	ៗ	្ក	័
			SP050000	ND070000	LG020000	LW020000	LG010000	LW010000				U0000EBA	U0000EA5	U0000EB8	U0000ECA	U0000ED7
-8			(	8	H	X	h	x				ឃ	ឃ	ៗ	្ក	័
			SP060000	ND080000	LH020000	LX020000	LH010000	LX010000				U0000EBD	U0000EA7	U0000EB9	U0000ECB	U0000ED8
-9			)	9	I	Y	i	y				ឆ	ឃ	ៗ	្ក	័
			SP070000	ND090000	LJ020000	LY020000	LJ010000	LY010000				U0000EB4	U0000EAB	U0000EB0	U0000ECC	U0000ED9
-A			*	:	J	Z	j	z				ឆ	ឃ	ៗ	្ក	័
			SM040000	SP130000	LJ020000	LZ020000	LJ010000	LZ010000				U0000EB5	U0000EAD	U0000EB1	U0000ECD	
-B			+	:	K	[	k	{				ឆ	ឃ	ៗ	្ក	័
			SA010000	SP140000	LK020000	SM050000	LK010000	SM110000				U0000EB6	U0000EAE	U0000EB2	U0000ECS	
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			SP080000	SA020000	LL020000	SM070000	LL010000	SM130000				U0000EB7		U0000EBD		SC040000
-D			-	=	M	]	m	}				ឃ		្ក		័
			SP100000	SA040000	LM020000	SM090000	LM010000	SM140000				U0000EB9			U0000EDC	SM060000
-E			.	>	N	^	n	~				ឃ		្ក		័
			SP110000	SA050000	LN020000	SD150000	LN010000	SD190000				U0000EBA			U0000EDD	SM050000
-F			/	?	O	_	o					ឃ	្ក		័	័
			SP120000	SP150000	LO020000	SP090000	LO010000					U0000EBB	U0000EAF		SC190000	(RSP) SP300000

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