

Doc Number: SC2/WG2 N4901

Title: Preliminary Proposal on Encoding Ersu Hieroglyphs

Source: Zhao Liming 赵丽明, Wang Yihua 王奕桦

Status: Individual Contribution

Action: For Comments

Date: 2017-09-24

Reference: L2/16-262

Abstract: This preproposal collates and arranges southwest China minority hieroglyph script Ersu. We made glyph charts for Ersu Script and tried to propose an encoding project to it.

**ISO/IEC JTC 1/SC 2/WG 2**  
**PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS**  
**FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646<sup>1</sup>.**

**Please fill all the sections A, B and C below.**

**Please read Principles and Procedures Document (P & P) from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.**

**Please ensure you are using the latest Form from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.**

**See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.**

**A. Administrative**

1. Title:	<b>A Proposal to Encode Ersu Hieroglyphs in the UCS</b>
2. Requester's name:	<b>China</b>
3. Requester type (Member body/Liaison/Individual contribution):	<b>Memberbody</b>
4. Submission date:	<b>2017-09-24</b>
5. Requester's reference (if applicable):	<b>孙宏开, 尔苏沙巴图画文字, 民族语文, 1982(6): 44-50</b>
6. Choose one of the following:	
This is a complete proposal:	<b>Yes</b>
(or) More information will be provided later:	

**B. Technical – General**

1. Choose one of the following:	
a. This proposal is for a new script (set of characters):	<b>1</b>
Proposed name of script:	<b>Ersu Hieroglyphs</b>
b. The proposal is for addition of character(s) to an existing block:	
Name of the existing block:	
2. Number of characters in proposal:	<b>108</b>
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) <b>B. 1</b> 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?	<b>Yes</b>
a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?	<b>Yes</b>
b. Are the character shapes attached in a legible form suitable for review?	<b>Yes</b>
5. Fonts related:	
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<b>Wang Yihua 王奕桦 (caicaijuaner@qq.com), Department of Chinese, Fudan University</b>
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	

<sup>1</sup> 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)

chenzh@cesi.ac.cn

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)?  No

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? If YES explain	No
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.)? If YES, with whom?	Yes
	<i>Ersu Tibetan, Shimian County, Ersu Tibetan priests, Sun Hongkai 孙宏开, Yin Weibin 尹蔚彬, Huang Chenglong 黄成龙, Song Zhaolin 宋兆麟, Li Xingxing 李星星, Zhao Liming 赵丽明</i>
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:	Yes
	<i>Ersu Hieroglyphs Script is used by the Ersu Tibetan priests in Xieluo Tibetan Township, Shimian County, Ya'an City, Sichuan Province, China</i>
4. The context of use for the proposed characters (type of use; common or rare) Reference:	Almanac, Common
	<i>It is widely used among Ersu Tibetan priests like Priest Wang Dejun 苏明文, Priest Wang Xueyin 王学银 and other priests</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	Yes
	<i>Xieluo Tibetan Township, Shimian County, Ya'an City, Sichuan Province, China (中国四川省雅安市石棉县蟹螺藏族乡)</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference:	No
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	Yes
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference:	No
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If YES, reference:	No
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? If YES, is a rationale for its inclusion provided? If YES, reference:	No
11. Does the proposal include use of combining characters and/or use of composite sequences? 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:	No
12. 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
13. Does the proposal contain any Ideographic compatibility characters? If YES, are the equivalent corresponding unified ideographic characters identified? If YES, reference:	No

## I. Introduction

Ersu Hieroglyphs is a kind of religious hieroglyph used by Ersu /ə<sup>55</sup>su<sup>55</sup>/ (a Ersu Language speaking branch of East Tibetan) people who live in Xieluo Tibetan Township, Shimian County, Ya'an City, Sichuan Province, China and believe in the Tibetan primitive religion *Bon* འོན. Ersu Language belongs to the Sino-Tibetan Tibeto-Burmese Qiangic languages.

This script now mainly exists in almanac *Kasipu* /ka<sup>31</sup>si<sup>55</sup>pu<sup>53</sup>/ used by Ersu Priests (/ʂə<sup>31</sup>pɛ<sup>55</sup>/). There are 1121 glyphs in Dkar Rtsis Almanac. Through our arrangement we found that there might be 108 glyphs should be encoded in this script system in total.

This proposal is one of the project *Rescue, Recovery and Research on Minority Languages in Southwest China* undertaken by the Tsinghua University.

Since 2007, teachers and students have gone through all over counties like Ganluo, Yuexi and Shimian, found 10 Ersu religious books extant. So far these books could not be interpreted by anyone.

In the year 2013 we met Ersu Priest Su Mingwen 苏明文 and found that the almanac *Kasipu* kept by him is still in use. This almanac is used to calculate the fate of 360 days in a year. The local Ersu people are inseparable from the almanac to divine, exorcise and pray in their daily live. Now Priest Su trains apprentices to inherit his work and the treatise *Southwest China Endangered Script Literature Interpreting : Volume Ersu* is completed and waiting to be published.

## II. The Character Table



























	1x00	1x01	1x02	1x03	1x04	1x05	1x06
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							
A							
B							
C							
D							
E							
F							

**Ersu Hieroglyphs**

1X000		ERSU HIEROGLYPH SUN ONE	1X02B		ERSU HIEROGLYPH SUN NORTHWESTWARD MALEFIC
1X001		ERSU HIEROGLYPH SUN TWO	1X02C		ERSU HIEROGLYPH SUN NORTHWARD MALEFIC
1X002		ERSU HIEROGLYPH SUN THREE	1X02D		ERSU HIEROGLYPH SUN NORTHEASTWARD MALEFIC
1X003		ERSU HIEROGLYPH SUN FOUR	1X02E		ERSU HIEROGLYPH SUN MALEFIC SHELTERING TREE
1X004		ERSU HIEROGLYPH SUN FIVE	1X02F		ERSU HIEROGLYPH CLOUD
1X005		ERSU HIEROGLYPH SUN COVERED BY CLOUD	1X030		ERSU HIEROGLYPH DARK CLOUD
1X006		ERSU HIEROGLYPH SUN BREAKING WIND HORSE	1X031		ERSU HIEROGLYPH LIGHTNING
1X007		ERSU HIEROGLYPH RISING MOON	1X032		ERSU HIEROGLYPH DARKNESS
1X008		ERSU HIEROGLYPH MOON RISING FROM THE SOUTH	1X033		ERSU HIEROGLYPH BLACK RAHU
1X009		ERSU HIEROGLYPH MOON HIGH ABOVE IN THE SKY	1X034		ERSU HIEROGLYPH YELLOW RAHU
1X00A		ERSU HIEROGLYPH FALLING MOON	1X035		ERSU HIEROGLYPH RAHU
1X00B		ERSU HIEROGLYPH MOON FALLING TO THE SOUTH	1X036		ERSU HIEROGLYPH RAHU COVERED BY CLOUD
1X00C		ERSU HIEROGLYPH HALFMOON	1X037		ERSU HIEROGLYPH RAHU BREAKING WIND HORSE
1X00D		ERSU HIEROGLYPH MOON COVERED BY CLOUD	1X038		ERSU HIEROGLYPH SPIDER ONE
1X00E		ERSU HIEROGLYPH MOON COVERED BY CLOUD AND EVENING GLOW	1X039		ERSU HIEROGLYPH SPIDER COVERED BY CLOUD
1X00F		ERSU HIEROGLYPH MOON BREAKING WIND HORSE	1X03A		ERSU HIEROGLYPH SPIDER COVERED BY DARK CLOUD
1X010		ERSU HIEROGLYPH METEOR ONE	1X03B		ERSU HIEROGLYPH FOOT
1X011		ERSU HIEROGLYPH METEOR TWO	1X03C		ERSU HIEROGLYPH EARTHLY BRANCH RAT
1X012		ERSU HIEROGLYPH METEOR THREE	1X03D		ERSU HIEROGLYPH EARTHLY BRANCH OX
1X013		ERSU HIEROGLYPH BLOODY METEOR MALEFIC ONE	1X03E		ERSU HIEROGLYPH EARTHLY BRANCH TIGER
1X014		ERSU HIEROGLYPH BLOODY METEOR MALEFIC TWO	1X03F		ERSU HIEROGLYPH EARTHLY BRANCH RABBIT
1X015		ERSU HIEROGLYPH BLOODY METEOR MALEFIC THREE	1X040		ERSU HIEROGLYPH EARTHLY BRANCH DRAGON
1X016		ERSU HIEROGLYPH MALEFIC	1X041		ERSU HIEROGLYPH EARTHLY BRANCH SNAKE
1X017		ERSU HIEROGLYPH BLOODY MALEFIC	1X042		ERSU HIEROGLYPH EARTHLY BRANCH HORSE
1X018		ERSU HIEROGLYPH TWO MALEFICS	1X043		ERSU HIEROGLYPH EARTHLY BRANCH GOAT
1X019		ERSU HIEROGLYPH THREE STARS	1X044		ERSU HIEROGLYPH EARTHLY BRANCH MONKEY
1X01A		ERSU HIEROGLYPH THREE MALEFICS ONE	1X045		ERSU HIEROGLYPH EARTHLY BRANCH ROOSTER
1X01B		ERSU HIEROGLYPH THREE MALEFICS TWO	1X046		ERSU HIEROGLYPH EARTHLY BRANCH DOG
1X01C		ERSU HIEROGLYPH FOUR STARS	1X047		ERSU HIEROGLYPH EARTHLY BRANCH PIG
1X01D		ERSU HIEROGLYPH FOUR MALEFICS	1X048		ERSU HIEROGLYPH UPWARD MOUNT KILLING
1X01E		ERSU HIEROGLYPH FIVE STARS ONE	1X049		ERSU HIEROGLYPH DOWNWARD MOUNT KILLING
1X01F		ERSU HIEROGLYPH FIVE STARS TWO	1X04A		ERSU HIEROGLYPH WIND HORSE
1X020		ERSU HIEROGLYPH FIVE MALEFICS	1X04B		ERSU HIEROGLYPH BROKEN WIND HORSE
1X021		ERSU HIEROGLYPH SIX STARS ONE	1X04C		ERSU HIEROGLYPH RIGHTWARD ARROW KILLING
1X022		ERSU HIEROGLYPH SIX STARS TWO	1X04D		ERSU HIEROGLYPH RIGHTWARD ARROW KILLING
1X023		ERSU HIEROGLYPH SIX STARS THREE	1X04E		ERSU HIEROGLYPH LEFTWARD ARROW KILLING
1X024		ERSU HIEROGLYPH SIX STARS FOUR	1X04F		ERSU HIEROGLYPH DOWNWARD ARROW KILLING
1X025		ERSU HIEROGLYPH SEVEN STARS			
1X026		ERSU HIEROGLYPH SUN EASTWARD MALEFIC			
1X027		ERSU HIEROGLYPH SUN SOUTHEASTWARD MALEFIC			
1X028		ERSU HIEROGLYPH SUN SOUTHWARD MALEFIC			
1X029		ERSU HIEROGLYPH SUN SOUTHWESTWARD MALEFIC			
1X02A		ERSU HIEROGLYPH SUN WESTWARD MALEFIC			































1X050 <sup>4</sup> ERSU HIEROGLYPH UPWARD PHUR PA  
ONE

1X051 <sup>5</sup> ERSU HIEROGLYPH UPWARD PHUR PA  
TWO

1X052		ERSU HIEROGLYPH DOWNWARD PHUR PA ONE
1X053		ERSU HIEROGLYPH DOWNWARD PHUR PA TWO
1X054		ERSU HIEROGLYPH DOWNWARD PHUR PA THREE
1X055		ERSU HIEROGLYPH DOWNWARD PHUR PA FOUR
1X056		ERSU HIEROGLYPH DOWNWARD PHUR PA COVERED BY CLOUD
1X057		ERSU HIEROGLYPH GOLDEN URN
1X058		ERSU HIEROGLYPH EASTWARD FORK
1X059		ERSU HIEROGLYPH WESTWARD FORK
1X05A		ERSU HIEROGLYPH CROSS
1X05B		ERSU HIEROGLYPH BLACK CROSS
1X05C		ERSU HIEROGLYPH RED CROSS
1X05D		ERSU HIEROGLYPH UPWARD MANIRATNA ONE
1X05E		ERSU HIEROGLYPH UPWARD MANIRATNA TWO
1X05F		ERSU HIEROGLYPH DOWNWARD MANIRATNA
1X060		ERSU HIEROGLYPH DOWNWARD MANDALA ONE
1X061		ERSU HIEROGLYPH DOWNWARD MANDALA TWO
1X062		ERSU HIEROGLYPH DOWNWARD MANDALA THREE
1X063		ERSU HIEROGLYPH TOR MA ONE
1X064		ERSU HIEROGLYPH TOR MA TWO
1X065		ERSU HIEROGLYPH TOR MA THREE
1X066		ERSU HIEROGLYPH TOR MA FOUR
1X067		ERSU HIEROGLYPH TOR MA COVERED BY CLOUD
1X068		ERSU HIEROGLYPH COFFIN
1X069		ERSU HIEROGLYPH COFFIN COVERED BY CLOUD
1X06A		ERSU HIEROGLYPH COFFIN BREAKING WIND HORSE
1X06B		ERSU HIEROGLYPH ONE FIFTH IN FIFTH MONTH












































III. Glyph Sources





























Order	Glyph	Reading <sup>2</sup>	Glyph Name	A Origin <sup>3</sup> And Frequency
1		me <sup>55</sup> shē <sup>53</sup> /ŋi <sup>55</sup> me <sup>53</sup>	ERSU HIEROGLYPH SUN ONE	 30/1121
2		be <sup>31</sup> tṣa <sup>55</sup> bu <sup>53</sup> i <sup>53</sup> shou <sup>53</sup> pu <sup>31</sup> tsə <sup>31</sup> u <sup>55</sup>	ERSU HIEROGLYPH SUN TWO	 1/1121
3		ua <sup>55</sup> ua <sup>53</sup>	ERSU HIEROGLYPH SUN THREE	 5/1121
4		kə <sup>31</sup> lə <sup>31</sup> ua <sup>31</sup> bu <sup>55</sup> /kə <sup>31</sup> lɛ <sup>31</sup> ua <sup>55</sup> ua <sup>53</sup> /be <sup>55</sup> lu <sup>53</sup> /me <sup>31</sup> lɛ <sup>31</sup> shə <sup>55</sup> khua <sup>53</sup>	ERSU HIEROGLYPH SUN FOUR	 3/1121
5		tɕ <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH SUN FIVE	 1/1121
6		tsə <sup>31</sup> tɛ <sup>55</sup> du <sup>53</sup> dɛ <sup>55</sup> lɛ <sup>13</sup> ŋi <sup>31</sup> mɛ <sup>31</sup> bu <sup>55</sup> ua <sup>53</sup> kha <sup>31</sup> shə <sup>55</sup> shə <sup>53</sup> tɛ <sup>53</sup>	ERSU HIEROGLYPH SUN COVERED BY CLOUD	 3/1121
7		ŋi <sup>31</sup> mɛ <sup>31</sup> bu <sup>53</sup> tɛ <sup>55</sup> ka <sup>53</sup> ne <sup>31</sup> zi <sup>13</sup> thɛ <sup>31</sup> ke <sup>31</sup> fu <sup>55</sup> tɛ <sup>53</sup>	ERSU HIEROGLYPH SUN BREAKING WIND HORSE	 3/1121
8		xa <sup>55</sup> phe <sup>53</sup>	ERSU HIEROGLYPH RISING MOON	 31/1121
9		xa <sup>55</sup> phe <sup>53</sup>	ERSU HIEROGLYPH MOON RISING FROM THE SOUTH	 4/1121
10		xa <sup>55</sup> phe <sup>53</sup>	ERSU HIEROGLYPH MOON HIGH ABOVE IN THE SKY	 1/1121
11		xa <sup>55</sup> phe <sup>53</sup>	ERSU HIEROGLYPH FALLING MOON	 26/1121
12		xa <sup>55</sup> phe <sup>53</sup>	ERSU HIEROGLYPH MOON FALLING TO THE SOUTH	 1/1121
13		xa <sup>55</sup> phe <sup>53</sup>	ERSU HIEROGLYPH HALF MOON	 1/1121
14		dɛ <sup>31</sup> lu <sup>55</sup> lɛ <sup>53</sup> da <sup>31</sup> nua <sup>31</sup> i <sup>53</sup> tsə <sup>53</sup> xa <sup>31</sup> phe <sup>55</sup> bu <sup>53</sup> ua <sup>53</sup> kha <sup>31</sup> shə <sup>55</sup> shə <sup>53</sup> tɛ <sup>53</sup>	ERSU HIEROGLYPH MOON COVERED BY CLOUD	 2/1121
15		xa <sup>31</sup> phe <sup>31</sup> bu <sup>55</sup> ua <sup>53</sup> tsə <sup>53</sup> da <sup>31</sup> nua <sup>31</sup> i <sup>53</sup> kha <sup>31</sup> shə <sup>55</sup> shə <sup>53</sup> tɛ <sup>53</sup> , ŋi <sup>31</sup> mɛ <sup>31</sup> ne <sup>55</sup> tɕho <sup>53</sup> i <sup>53</sup> tsə <sup>31</sup> dɛ <sup>55</sup> su <sup>53</sup> tɛ <sup>31</sup> du <sup>31</sup> dɛ <sup>55</sup> lɛ <sup>13</sup> i <sup>13</sup> ta <sup>31</sup> tsə <sup>53</sup> mu <sup>53</sup> kha <sup>31</sup> shə <sup>55</sup> shə <sup>53</sup> tɛ <sup>53</sup>	ERSU HIEROGLYPH MOON COVERED BY CLOUD AND EVENING GLOW	 1/1121























<sup>2</sup> Sometimes a glyph have more than one pronunciation, even those pronunciations may represent the same word. Pronunciations from different sources are separated by slashes; variant pronunciations from the same source are separated by semicolons.





















<sup>3</sup> A is short for the almanac owned by Su Mingwen 苏明文.

























16		xa <sup>55</sup> phe <sup>53</sup> bu <sup>53</sup> te <sup>55</sup> ka <sup>53</sup> ne <sup>31</sup> zi <sup>13</sup> the <sup>31</sup> ke <sup>53</sup> te <sup>53</sup>	ERSU HIEROGLYPH MOON BREAKING WIND HORSE	 1/1121
17		tɕl <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH METEOR ONE	 1/1121
18		tɕl <sup>55</sup> bu <sup>53</sup> da <sup>31</sup> nua <sup>53</sup>	ERSU HIEROGLYPH METEOR TWO	 1/1121
19		tɕl <sup>55</sup> bu <sup>53</sup> da <sup>31</sup> nua <sup>53</sup>	ERSU HIEROGLYPH METEOR THREE	 1/1121
20		de <sup>31</sup> ŋi <sup>31</sup> ku <sup>53</sup> i <sup>53</sup> tɕl <sup>31</sup> bu <sup>55</sup> /tɕl <sup>53</sup> de <sup>31</sup> ŋi <sup>55</sup> ku <sup>53</sup>	ERSU HIEROGLYPH BLOODY METEOR MALEFIC ONE	 1/1121
21		de <sup>31</sup> ŋi <sup>31</sup> ku <sup>53</sup> i <sup>53</sup> tɕl <sup>31</sup> bu <sup>55</sup> /tɕl <sup>53</sup> de <sup>31</sup> ŋi <sup>55</sup> ku <sup>53</sup>	ERSU HIEROGLYPH BLOODY METEOR MALEFIC TWO	 2/1121
22		de <sup>31</sup> ŋi <sup>31</sup> ku <sup>53</sup> i <sup>53</sup> tɕl <sup>31</sup> bu <sup>55</sup> /tɕl <sup>53</sup> de <sup>31</sup> ŋi <sup>55</sup> ku <sup>53</sup>	ERSU HIEROGLYPH BLOODY METEOR MALEFIC THREE	 3/1121
23		tɕl <sup>55</sup> bu <sup>53</sup> da <sup>31</sup> nua <sup>53</sup>	ERSU HIEROGLYPH MALEFIC	 1/1121
24		de <sup>31</sup> ŋi <sup>31</sup> ku <sup>53</sup> i <sup>53</sup> tɕl <sup>31</sup> bu <sup>55</sup> /tɕl <sup>53</sup> de <sup>31</sup> ŋi <sup>55</sup> ku <sup>53</sup>	ERSU HIEROGLYPH BLOODY MALEFIC	 11/1121
25		tɕl <sup>13</sup> da <sup>31</sup> nua <sup>31</sup> na <sup>31</sup> pə <sup>55</sup>	ERSU HIEROGLYPH TWO MALEFICS	 14/1121
26		tɕl <sup>13</sup> si <sup>31</sup> pə <sup>55</sup>	ERSU HIEROGLYPH THREE STARS	 3/1121
27		tɕl <sup>55</sup> da <sup>31</sup> nua <sup>55</sup> si <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH THREE MALEFICS ONE	 6/1121
28		tɕl <sup>55</sup> da <sup>31</sup> nua <sup>55</sup> si <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH THREE MALEFICS TWO	 1/1121
29		tɕl <sup>13</sup> zo <sup>31</sup> pə <sup>53</sup>	ERSU HIEROGLYPH FOUR STARS	 1/1121
30		tɕl <sup>55</sup> zo <sup>31</sup> bu <sup>31</sup> ta <sup>31</sup> ua <sup>53</sup>	ERSU HIEROGLYPH FOUR MALEFICS	 1/1121
31		tɕl <sup>31</sup> ŋə <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH FIVE STARS ONE	 1/1121
32		tɕl <sup>31</sup> ŋə <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH FIVE STARS TWO	 1/1121
33		tɕl <sup>53</sup> ŋə <sup>31</sup> bu <sup>53</sup> ta <sup>31</sup> ua <sup>55</sup>	ERSU HIEROGLYPH FIVE MALEFICS	 1/1121
































34		tɕɿ <sup>53</sup> tɕhu <sup>31</sup> bu <sup>53</sup>	ERSU HIEROGLYPH SIX STARS ONE	 3/1121
35		tɕɿ <sup>53</sup> tɕhu <sup>31</sup> bu <sup>53</sup>	ERSU HIEROGLYPH SIX STARS TWO	 3/1121
36		tɕɿ <sup>53</sup> tɕhu <sup>31</sup> bu <sup>53</sup>	ERSU HIEROGLYPH SIX STARS THREE	 2/1121
37		tɕɿ <sup>53</sup> tɕhu <sup>31</sup> bu <sup>53</sup>	ERSU HIEROGLYPH SIX STARS FOUR	 1/1121
38		tɕɿ <sup>55</sup> sɿ <sup>31</sup> bu <sup>53</sup>	ERSU HIEROGLYPH SEVEN STARS	 1/1121
39		tsə <sup>31</sup> li <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH SUN EASTWARD MALEFIC	 32/1121
40		tsə <sup>31</sup> li <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH SUN SOUTHEASTWARD MALEFIC	 30/1121
41		tsə <sup>31</sup> li <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH SUN SOUTHWARD MALEFIC	 31/1121
42		tsə <sup>31</sup> li <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH SUN SOUTHWESTWARD MALEFIC	 29/1121
43		tsə <sup>31</sup> li <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH SUN WESTWARD MALEFIC	 30/1121
44		tsə <sup>31</sup> li <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH SUN NORTHWESTWARD MALEFIC	 29/1121
45		tsə <sup>31</sup> li <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH SUN NORTHWARD MALEFIC	 29/1121
46		tsə <sup>31</sup> li <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH SUN NORTHEASTWARD MALEFIC	 30/1121
47		tsə <sup>31</sup> li <sup>55</sup> ka <sup>53</sup> an <sup>55</sup> the <sup>31</sup> dzu <sup>13</sup> i <sup>53</sup> si <sup>55</sup> ka <sup>53</sup> tsɿ <sup>31</sup> gu <sup>31</sup> le <sup>31</sup> kha <sup>31</sup> tshə <sup>55</sup> tshə <sup>53</sup> tɕ <sup>53</sup>	ERSU HIEROGLYPH SUN MALEFIC SHELTERING TREE	 1/1121
48		tsə <sup>53</sup> de <sup>55</sup> lu <sup>53</sup>	ERSU HIEROGLYPH CLOUD	 1/1121
49		tsə <sup>55</sup> nua <sup>53</sup>	ERSU HIEROGLYPH DARK CLOUD	 1/1121
50		me <sup>31</sup> dzə <sup>31</sup> ka <sup>55</sup>	ERSU HIEROGLYPH LIGHTNING	 1/1121
51		me <sup>31</sup> na <sup>31</sup> nkhə <sup>55</sup>	ERSU HIEROGLYPH DARKNESS	 5/1121

52		tɕl <sup>55</sup> da <sup>31</sup> nua <sup>13</sup>	ERSU HIEROGLYPH BLACK RAHU	 1/1121
53		lǎ <sup>31</sup> du <sup>55</sup> ku <sup>53</sup>	ERSU HIEROGLYPH YELLOW RAHU	 4/1121
54		lǎ <sup>31</sup> du <sup>55</sup> ku <sup>53</sup>	ERSU HIEROGLYPH RAHU	 24/1121  2/1121  1/1121
55		tsǎ <sup>53</sup> de <sup>31</sup> lu <sup>31</sup> te <sup>55</sup> nteho <sup>53</sup> lǎ <sup>31</sup> du <sup>31</sup> ku <sup>31</sup> bu <sup>55</sup> ua <sup>53</sup> kha <sup>31</sup> tshǎ <sup>55</sup> tshǎ <sup>53</sup> te <sup>53</sup>	ERSU HIEROGLYPH RAHU COVERED BY CLOUD	 3/1121
56		te <sup>55</sup> ka <sup>53</sup> the <sup>31</sup> ke <sup>53</sup> te <sup>53</sup> lǎ <sup>31</sup> du <sup>31</sup> ku <sup>55</sup> bu <sup>53</sup> te <sup>55</sup> ka <sup>53</sup> ne <sup>31</sup> zi <sup>13</sup> te <sup>53</sup>	ERSU HIEROGLYPH RAHU BREAKING WIND HORSE	 2/1121
57		kǎ <sup>31</sup> lǎ <sup>31</sup> ua <sup>31</sup> bu <sup>55</sup> /kǎ <sup>31</sup> le <sup>31</sup> ua <sup>55</sup> ua <sup>53</sup> /be <sup>55</sup> lu <sup>53</sup> /me <sup>31</sup> le <sup>31</sup> tshǎ <sup>55</sup> khua <sup>53</sup>	ERSU HIEROGLYPH SPIDER ONE	 32/1121
58		kǎ <sup>31</sup> lǎ <sup>31</sup> ua <sup>31</sup> bu <sup>53</sup> tɕa <sup>31</sup> bu <sup>31</sup> te <sup>55</sup> bu <sup>53</sup> dʒ <sup>55</sup> ge <sup>53</sup> thi <sup>55</sup> dʒ <sup>31</sup> ge <sup>55</sup> xa <sup>53</sup> tsǎ <sup>55</sup> de <sup>31</sup> lu <sup>53</sup> te <sup>55</sup> nteho <sup>53</sup> kha <sup>31</sup> tshǎ <sup>31</sup> tshǎ <sup>55</sup> bǎ <sup>13</sup>	ERSU HIEROGLYPH SPIDER COVERED BY CLOUD	 2/1121
59		tsǎ <sup>31</sup> te <sup>55</sup> du <sup>53</sup> da <sup>31</sup> nua <sup>53</sup> kǎ <sup>31</sup> lǎ <sup>31</sup> ua <sup>31</sup> bu <sup>31</sup> ua <sup>13</sup> kha <sup>31</sup> tshǎ <sup>55</sup> tshǎ <sup>53</sup> te <sup>53</sup>	ERSU HIEROGLYPH SPIDER COVERED BY DARK CLOUD	 1/1121
60		lu <sup>31</sup> tshǎ <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH FOOT	 1/1121
61		gu <sup>53</sup>	ERSU HIEROGLYPH EARTHLY BRANCH RAT	 8/1121  4/1121  4/1121  4/1121
62		ŋǎ <sup>13</sup>	ERSU HIEROGLYPH EARTHLY BRANCH OX	 8/1121  4/1121




































				 4/1121  4/1121
63		le <sup>13</sup>	ERSU HIEROGLYPH EARTHLY BRANCH TIGER	 8/1121  4/1121  4/1121  4/1121
64		mi <sup>31</sup> dz <sup>53</sup>	ERSU HIEROGLYPH EARTHLY BRANCH RABBIT	 8/1121  4/1121  4/1121  4/1121
65		lu <sup>31</sup> dz <sup>53</sup>	ERSU HIEROGLYPH EARTHLY BRANCH DRAGON	 8/1121  4/1121  4/1121  4/1121
66		be <sup>53</sup> lu <sup>53</sup>	ERSU HIEROGLYPH EARTHLY BRANCH SNAKE	 8/1121  4/1121  4/1121  4/1121







67		nbo <sup>13</sup>	ERSU HIEROGLYPH EARTHLY BRANCH HORSE	 8/1121  4/1121  4/1121  4/1121
68		io <sup>53</sup>	ERSU HIEROGLYPH EARTHLY BRANCH GOAT	 8/1121  4/1121  4/1121  4/1121
69		mi <sup>13</sup>	ERSU HIEROGLYPH EARTHLY BRANCH MONKEY	 8/1121  4/1121  4/1121  4/1121
70		dzə <sup>13</sup>	ERSU HIEROGLYPH EARTHLY BRANCH ROOSTER	 8/1121  4/1121  4/1121  4/1121

71		tṣho <sup>13</sup>	ERSU HIEROGLYPH EARTHLY BRANCH DOG	 8/1121  4/1121  4/1121  4/1121
72		ui <sup>13</sup>	ERSU HIEROGLYPH EARTHLY BRANCH PIG	 8/1121  4/1121  4/1121  4/1121
73		le <sup>31</sup> ṣa <sup>31</sup> ka <sup>55</sup>	ERSU HIEROGLYPH UPWARD MOUNT KILLING	 10/1121  6/1121  4/1121  1/1121  1/1121  1/1121
74		le <sup>31</sup> ṣa <sup>31</sup> ka <sup>55</sup>	ERSU HIEROGLYPH DOWNWARD MOUNT KILLING	 5/1121  1/1121
75		te <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH WIND HORSE	 92/1121
76		te <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH BROKEN WIND HORSE	 29/1121

77		mə <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH RIGHT WARD ARROW KILLING	 1/1121
78		mə <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH RIGHT WARD ARROW KILLING	 1/1121
79		mə <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH LEFT WARD ARROW KILLING	 1/1121
80		mə <sup>55</sup> ka <sup>53</sup>	ERSU HIEROGLYPH DOWNWARD ARROW KILLING	 1/1121
81		be <sup>55</sup> tʂa <sup>53</sup>	ERSU HIEROGLYPH UPWARD PHUR PA ONE	 9/1121
82		be <sup>55</sup> tʂa <sup>53</sup>	ERSU HIEROGLYPH UPWARD PHUR PA TWO	 1/1121
83		be <sup>55</sup> tʂa <sup>53</sup>	ERSU HIEROGLYPH DOWNWARD PHUR PA ONE	 27/1121
84		be <sup>55</sup> tʂa <sup>53</sup>	ERSU HIEROGLYPH DOWNWARD PHUR PA TWO	 24/1121
85		be <sup>55</sup> tʂa <sup>53</sup>	ERSU HIEROGLYPH DOWNWARD PHUR PA THREE	 4/1121
86		be <sup>55</sup> tʂa <sup>53</sup>	ERSU HIEROGLYPH DOWNWARD PHUR PA FOUR	 1/1121  3/1121  3/1121  1/1121  1/1121  1/1121
87		tsə <sup>55</sup> u <sup>53</sup> be <sup>31</sup> tʂa <sup>53</sup> ka <sup>55</sup> ua <sup>53</sup> na <sup>31</sup> xə <sup>31</sup> xə <sup>53</sup> tə <sup>53</sup>	ERSU HIEROGLYPH DOWNWARD PHUR PA COVERED BY CLOUD	 3/1121
88		vu <sup>31</sup> pə <sup>55</sup> ʂɿ <sup>53</sup>	ERSU HIEROGLYPH GOLDEN URN	 1/1121
89		ʂə <sup>31</sup> mə <sup>31</sup> ka <sup>55</sup>	ERSU HIEROGLYPH EAST WARD FORK	 5/1121



90		ḡə <sup>31</sup> mə <sup>31</sup> ka <sup>55</sup>	ERSU HIEROGLYPH WESTWARD FORK	 3/1121
91		tshə <sup>31</sup> tshə <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH CROSS	 7/1121
92		tshə <sup>31</sup> tshə <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH BLACK CROSS	 2/1121
93		tshə <sup>31</sup> tshə <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH RED CROSS	 1/1121
94		po <sup>31</sup> phu <sup>53</sup>	ERSU HIEROGLYPH UPWARD MANIRATNA ONE	 9/1121  1/1121
95		po <sup>31</sup> te <sup>31</sup> phu <sup>53</sup>	ERSU HIEROGLYPH UPWARD MANIRATNA TWO	 1/1121
96		po <sup>31</sup> phu <sup>53</sup>	ERSU HIEROGLYPH DOWNWARD MANIRATNA	 3/1121
97		tṣə <sup>31</sup> ŋə <sup>31</sup> phu <sup>55</sup>	ERSU HIEROGLYPH DOWNWARD MANDALA ONE	 2/1121
98		tṣə <sup>31</sup> ŋə <sup>31</sup> phu <sup>55</sup>	ERSU HIEROGLYPH DOWNWARD MANDALA TWO	 1/1121
99		tṣə <sup>31</sup> ŋə <sup>31</sup> phu <sup>55</sup>	ERSU HIEROGLYPH DOWNWARD MANDALA THREE	 1/1121
100		si <sup>31</sup> zu <sup>55</sup> / pi <sup>31</sup> tshɿ <sup>31</sup> phu <sup>55</sup>	ERSU HIEROGLYPH TORMA ONE	 24/1121  1/1121
101		si <sup>31</sup> zu <sup>55</sup>	ERSU HIEROGLYPH TORMA TWO	 2/1121
102		si <sup>31</sup> zu <sup>55</sup>	ERSU HIEROGLYPH TORMA THREE	 1/1121
103		tṣə <sup>31</sup> ŋə <sup>31</sup> pu <sup>55</sup> / pi <sup>31</sup> tshɿ <sup>31</sup> phu <sup>55</sup>	ERSU HIEROGLYPH TORMA FOUR	 3/1121  1/1121
104		tṣə <sup>53</sup> de <sup>31</sup> lu <sup>53</sup> te <sup>55</sup> ntcho <sup>53</sup> si <sup>31</sup> zu <sup>31</sup> pu <sup>31</sup> ua <sup>53</sup> kha <sup>31</sup> tshə <sup>55</sup> tshə <sup>53</sup> te <sup>53</sup>	ERSU HIEROGLYPH TORMA COVERED BY CLOUD	 2/1121
105		kə <sup>31</sup> ntehi <sup>55</sup> /si <sup>31</sup> pu <sup>31</sup> fu <sup>55</sup> /mo <sup>31</sup> bu <sup>55</sup> /mo <sup>31</sup> tshɿ <sup>53</sup>	ERSU HIEROGLYPH COFFIN	 28/1121

106		tsə <sup>31</sup> de <sup>55</sup> lɛ <sup>13</sup> mo <sup>31</sup> bu <sup>31</sup> ua <sup>53</sup> kha <sup>31</sup> tshə <sup>55</sup> tshə <sup>53</sup> tɛ <sup>5</sup>	ERSU HIEROGLYPH COFFIN COVERED BY CLOUD	 4/1121  1/1121
107		mo <sup>31</sup> da <sup>31</sup> ntshə <sup>31</sup> ntshə <sup>53</sup> si <sup>31</sup> ʂə <sup>31</sup> ka <sup>55</sup> le <sup>53</sup> ne <sup>31</sup> zi <sup>13</sup> the <sup>31</sup> ke <sup>31</sup> ba <sup>13</sup>	ERSU HIEROGLYPH COFFIN BREAKING WIND HORSE	 1/1121
108		tʂɿ <sup>31</sup> ŋə <sup>31</sup> bu <sup>55</sup>	ERSU HIEROGLYPH ONE FIFTH IN FIFTH MONTH	 1/1121

#### IV. References

- [1] 拯救羌语支濒危语言——尔苏语、纳木依语、贵琼语、扎巴语资料记录和保存, 刘辉强, 尚云川, 西南民族大学学报(人文社科版), 2006. 12.
- [2] 孙宏开, 尔苏语概况, 语言研究, 1983. 2.
- [3] 孙宏开, 六江流域的民族语言及其系属分类——兼述嘉陵江上游、雅鲁藏布江流域的民族语言, 民族学报, 1983, 3.
- [4] 巫达, 尔苏语言文字与尔苏人的族群认同, 中央民族大学学报(哲学社会科学版), 2005,6.
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#### V. Appendix 1: Published Examples



Ersu Priest Su Mingwen with Ersu Almanac



Ersu Almanac, Diagram
















Ersu Almanac, Cover with Tibetan Script *kam* ཀམ on it




VI. Appendix 2: Not yet encoded sacred printing stick glyphs




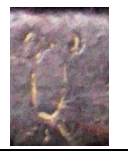






There are still a lot of glyphs appeared on sacred printing sticks. These glyphs are worn to some degree and most of them have not been deciphered yet.

Sacred Printing Stick Glyph	Reading	Meaning
	$l\acute{o}^{53}u\grave{a}\eta^{31}g\grave{o}^{53}d\grave{z}a^{31}p\acute{o}^{53}$	the deity of water
		
		the deity of the mountain
	$l\acute{e}^{31}t\acute{s}e^{55}$	a mound
	$\eta\acute{o}^{55}d\acute{e}^{53}$	the deity of the house
		not quite clear
		not quite clear

		not quite clear
		not quite clear
	tsɿ <sup>31</sup> ntchi <sup>31</sup> tse <sup>55</sup> ui <sup>53</sup> le <sup>31</sup> mɛ <sup>53</sup>	Tang Monk
	ŋo <sup>55</sup> de <sup>53</sup> ko <sup>31</sup> de <sup>31</sup> u <sup>55</sup> ia <sup>53</sup> ɕe <sup>31</sup> nbɛ <sup>31</sup> le <sup>53</sup>	the deity of wealth
	tɕɿ <sup>55</sup> tɕha <sup>53</sup>	the blood
		unclear
	ɕɿ <sup>31</sup> zɿ <sup>53</sup> le <sup>31</sup> le <sup>55</sup> mu <sup>53</sup>	beating the drum which is used to call back the spirit of the dead
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