

Proposal to Encode the Box-Headed script in Unicode
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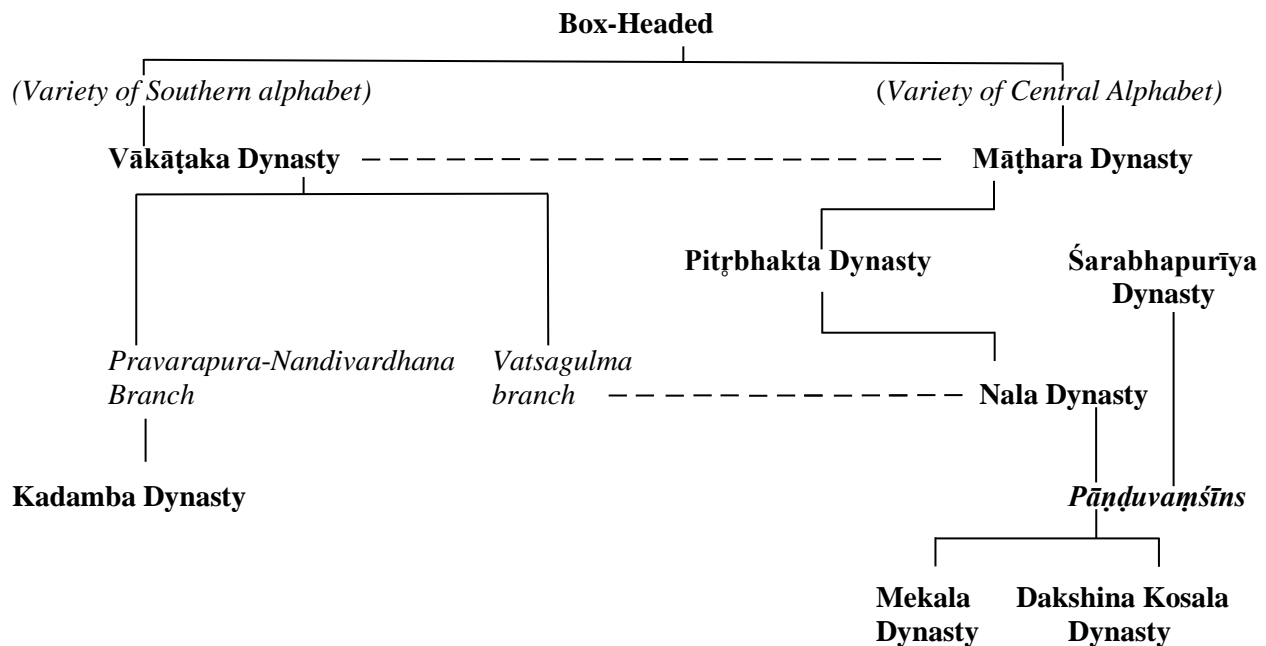
1. Introduction

This is proposal to encode the Box-Headed script in UCS. Box-Headed was used as official scripts in between 3rd century CE to 8th century CE in central India by various dynasties especially for Sanskrit language.

2. Background

Box-Headed script is an abugida based upon the Brahmi model. Box-Headed script was used in Central and Southern India from 3rd century CE through 8th century CE for writing Sanskrit (ISO 639: san; Dev:संस्कृतम्, BH:𑀩𑀭𑁆𑀢𑀺𑀓) and Kannada (ISO 639:kan; Kan:ಕನ್ನಡ, BH:𑀓𑀲𑀺𑀓𑀲𑀺𑀓). Origin of this script is unclear.

It may be sister or child script of Gupta script or late Brahmi script. In this script, there is a square shaped box above the letter. It was used as the official script for Vākāṭaka dynasty, Śarabhapurīya dyanasty and Pāṇḍuvaṃśī dyanasty. Some religious and royal plates of Nala Dynasty, Piṭṛbhakta dynasty and Badami Kadamba dynasty also found in this script. This script is divided into two parts as per its writing style: Variety of Southern alphabet and Variety of Central Alphabet.



Above diagram shows the usage of Box-headed script and the links of script between the dynasties.

2.1 Variety of Southern alphabet:

Vākāṭaka Inscriptions:

The *Vākāṭaka* dynasty was an ancient Indian Brahmin dynasty that originated from the Deccan in the mid-3rd century CE. Their empire at one time extended from Malwa and Gujarat in the north to the Tungabhadra River in the south and from the Arabian Sea in the west to the edge of Chhattisgarh in the east. They were the most important successors of the *Satavahanas* in the Deccan and contemporaneous with the Gupta in Northern India. The King *Vindhyaśakti I* established this dynasty in 250 CE. This

dynasty was divided into two branches: Main branch (*Pravarapura-Nandivardhana*) and *Vatsagulma* branch. The first Box-Headed inscription was found in the reign of Queen *Prabhāvatīgupta* (390 CE-410 CE) of Main branch. *Prabhāvatīgupta* was wife of King *Rudrasēna II* and the daughter of King *Chandragupta II* of the *Gupta* dynasty. Before that no inscription of this script is found. This proves that this script is influenced by Gupta script. The largest number of inscriptions date back to the reign of *Pravarasēna II* (420 CE-455 CE), son of *Prabhāvatīgupta*; then found during the reign of his grandson *Prthivīśēna II* (470 CE-500 CE). In the side of *Vatsagulma* branch, only few inscriptions found of *Vindhyasēna* aka *Vindhyasakti II* (355 CE-400 CE) and *Devasēna* (455 CE-480 CE).

Kadamba Inscriptions:

The *Kadambas* (345 CE-540 CE) were an ancient royal family of Karnataka, India, that ruled Northern Karnataka and the Konkan from Banavasi in present-day Uttara Kannada district. The kingdom was founded by *Mayūravarmā*. The '*Tālagunda Pillar Inscription*' of the period of *Kākusthavarmā* (425 CE-450 CE) and *Sāntivarmā* (455 CE-460 CE), has been found in this dynasty written in Box-Headed script, that is the only one in Sanskrit. And in the reign of *Mṛgeśvarmā* also Box-headed script was used. But it was used for Kannada language.

Relationship with Chalukya scripts:

Pulakeśin I (543 CE-566 CE), the successor of the *Tripurvatha* branch of the *Kadamba* dynasty, established the *Chalukya* dynasty. This is called *Badami Chalukya* or *Early Chalukya* dynasty (6th century CE- 8th century CE). The script development from the *Kadamba* Box-Headed script was used in this dynasty. After the decline of this dynasty, the *Chalukya* kingdom was re-established by *Tailapa II* (957 CE-997 CE) which come to be known as the *Kalyani Chalukyas*. Old forms of Kannada script were used in this dynasty.

2.2 Variety of Central alphabet:

Māthara Inscriptions:

The *Māthara* dynasty ruled in the Kalinga region of eastern India during 4th and 5th centuries CE. Their territory included parts of the area between the present-day Ganjam district of Odisha in north and the Srikakulam district in Andhra Pradesh in the south. Two Box-Headed inscriptions of the King *Anantaśaktivarman* were found.

Pitṛbhakta Inscriptions:

Pitṛbhakta dynasty succeeded the *Māthara* dynasty in 5th century CE and ruled over a century. Their territory included parts of the present day Northern Andhra Pradesh and the Southern Odisha. A single inscription found in *Koroshanda* in Ganjam district of King *Viśakhāvarman* reign.

Nala Inscriptions:

The Nalas were an Indian dynasty that ruled parts of present day Chhattisgarh and Odisha during the 6th century CE. Their core territory included the area around Baster and Koraput districts. We were found Box-headed inscriptions of *Bhavadattavarman* and *Arthapati* reigns of this dynasty.

Śarabhapurīya Inscriptions:

Śarabhapurīya dynasty ruled part of present-day Chhattisgarh and Odisha in India, during 5th and 6th century CE. The dynasty probably served as *Gupta* vassals in their early days, but became practically independent as the *Gupta* Empire declined. 17 copper plate grant inscriptions issued by *Śarabhapurīya* have been discovered. All the inscriptions were written in the so-called 'Box-Headed' script. The tops of the characters appear to be small square shaped boxes, resulting in this nomenclature. These characters are similar to the own occurring in the *Vākāṭaka* records.

Pāṇḍuvaṃśīns Inscriptions:

There were two *Pāṇḍuvaṃśīn* dynasties: *Pāṇḍuvaṃśī of Mekala* and *Pāṇḍuvaṃśī of Dakshina Kosala*. *Pāṇḍuvaṃśī of Mekala* or *Pāṇḍava* were an Indian dynasty that ruled the historical Mekala region in

present-day Chhattisgarh state of India, during 6th and 7th centuries. They may have been Gupta feudatories, and may have been related to the *Pāṇḍuvaṃśī of Dakshina Kosala*.

The inscriptions found of the King *Udīrṇavarmā* aka *Sūrabala Udīrṇavarmā* having Box-headed characters along with Triangular or “Nail-Headed” characters.

The *Pāṇḍuvaṃśī of Dakshina Kosala*, who succeeded the *Śarabhapurīya* and adopted their style of inscriptions, followed the *puṇimāla* styles. *Pāṇḍuvaṃśī of Dakshina Kosala* or *Pāṇḍava* were an Indian dynasty that ruled the historical Dakshina Kosala region in present-day Chhattisgarh state of India, during 7th and 8th centuries. The Box-Headed characters used in their inscriptions are the latest form of writing style. The characters used the inscriptions of King *Mahāśiva Tivara* aka *Tivaradēva* (660 CE-680 CE) are proposing this proposal.

There is an active community of scholars from S-E Asia conducting research on Box-Headed in the epigraphy, preservation of manuscript, and optical-character recognition. Scholar Nurisham Yahaya, independent researcher has been working to preserve Box-Headed manuscript in digital form. Font designer Ki Basajan designed two digital fonts ‘*Tivaradeva*’ and ‘*Kakusthavarman*’ with the collaboration of Nurisham Yahaya. ‘*Tivaradeva*’ used in this proposal. Design of ‘*Kakusthavarman*’ font is based on *Tālagunda Pillar Inscription*. His linguistic group is currently using this script.

3. Attested Sources

The script is attested on numerous copper plate grants, coins and stone inscriptions. The inscriptions prove that Box-Headed is a true writing system, especially its distinctive representation alongside Nāgari scripts (separately).

- Poonā plates (Pune district) of Prabhāvatīgupta
- Rīdhapur plates (Amravati district) of Prabhāvatīgupta
- Jāmb plates (Wardha district) of Pravarasēna II
- Bēlorā plates (Wardha district) of Pravarasēna II
- Chammak plates (Amravati district) of Pravarasēna II
- Siwanī plates (Chhindwada district) of Pravarasēna II
- Seal of Pravarasēna II
- Indore plates (Indore district) of Pravarasēna II
- Dudiā plates (Chhindwada district) of Pravarasēna II
- Tiroḍi plates (Balaghat district) of Pravarasēna II
- Waḍgāon plates (Wardha district) of Pravarasēna II
- Paṭṭan plates (Betul district) of Pravarasēna II
- Paṇḍhurṇā plates (Chhindwada district) of Pravarasēna II
- Rāmṭek plates (Nagpur district) of Pravarasēna II
- Pāṭnā museum plate of Pravarasēna II
- Mohallā plates (Durg district) of Pravarasēna II
- Bālāghāṭ plates (Balaghat district) of Prithivishena II
- Bāsim plates (Alokadin) of Vindhyaśakti II
- India office plate of Devasēna
- Tālagunda Pillar Inscription (Shivamogga) of Kākusthavarman
- Andhavaram Plates (Visakhapatnam district) of Anantaśaktivarman
- Madras Museum plates (Sakanaka village) of Anantaśaktivarman
- Koroshanda plates (Ganjam district) of Viśakhāvarman
- Rīthapur plates (Amravati district) of Bhavadattavarman
- Kesaribeda plates (Koraput district) of Arthapati
- Nagardhan plates ((Nagpur district) of Svamirāja
- Pipardula plates (Raipur district) of Narendra
- Kurud plates (Raipur district) of Narendra

- Rawan plates (Raipur district) of Narendra
- Amgura plates (Kalahandi district) of Jayarāja
- Mallar plates (Bilaspur district) of Jayarāja
- Mallar plates (Bilaspur district) of Mahajayarāja
- Arang Plates (Raipur district) of Mahajayarāja
- Nahna plates (Kalahandi district) of Sudevarāja
- Dhamatari plates (Raipur district) of Sudevarāja
- Sirpur plates (Raipur district) of Sudevarāja
- Arang plates (Raipur district) of Sudevarāja
- Kanvatal plates (Raigarh district) of Sudevarāja
- Raipur plates (Raipur district) of Sudevarāja
- Sarangarh plates (Raigarh district) of Sudevarāja
- Thakurduja plates (Raigarh district) of Pravaraarāja
- Mallar plates (Bilaspur district) of Pravaraarāja
- Mallar plates (Bilaspur district) of Vyāghrarāja
- Bamhani plates (Rewa district) of Udīrṇavarmā
- Mallar plates (Bilaspur district) of Udīrṇavarmā
- Arang plates (Raipur district) of Bhavadevaranakesarīn & Nannarāja
- Aḍhabhāra plates (Bilaspur district) of Nannarāja
- Bardula plates (Raigarh district) of Sivagupta
- Mallar plates (Bilaspur district) of Śivagupta
- Bonda plates (Raigarh district) of Śivagupta Bālārjuna
- Lodhia plates (Raigarh district) of Śivagupta Bālārjuna
- Mallar plates (Bilaspur district) of Śivagupta Bālārjuna
- Sirpur laksmana Temple Inscription (Raipur district) of Śivagupta Bālārjuna
- Bonda plates (Raigarh district) of Tivaradēva
- Rajim plates (Rajim district) of Tivaradēva
- Baloda plates (Raipur district) of Tivaradēva

4. Script

Scholars have identified at least 72 distinctive letters, signs and numbers for Box-Headed. Box-Headed letters are traditionally referred to by scholars and arrange using Brahmic order, eg. *a, ā,...ka, kha*, etc.

Variety of South alphabet is older than the *Variety of Central Alphabet*. Glyphic variant also occur in both the styles. Few letters are having glyphic variations. Vowel signs of *Variant of South alphabet* are different from the *Variety of Central Alphabet*. *Tivaradēva* style is the newest form in all the variants; that form proposed in this proposal. *Tivaradēva* style comes under *Variety of Central Alphabet*. Five more letters found in the *Variant of South alphabet*, which is absent in the *Variety of Central Alphabet*.

All the inscriptions written in Sanskrit and only few are having Prakrit words. Many letters and signs are missing those are using in present the Sanskrit texts. May be these letters will find later after new excavations. On that matter some blocks are going to reserve for those letters.

4.1 Vowels

There are 6 vowel letters proposed for encoding:

ꣳ	ꣳꣳ	ꣳꣳ	ꣳ	ꣳ	ꣳ
A	AA	I	U	E	O

In inscriptions we have got only 6 vowels and 2 vowels like ೀ ī and ೆ ṛ we have got from *Kannada Lipi Vikasa* (Manjunath & Devaraswamy) only, which has not been proposed due to lack of evidence. (page 22)

4.2 Consonants

There are 33 consonants letters proposed for encoding:

ಕ	ಕಾ	ಗ	ಗಾ	ಙ
KA	KHA	GA	GHA	NGA
ಚ	ಚಾ	ಜ	ಜಾ	ಞ
CA	CHA	JA	JHA	NYA
ಠ	ಠಾ	ಡ	ಡಾ	ಢ
TTA	TTHA	DDA	DDHA	NNA
ತ	ತಾ	ದ	ದಾ	ಢ
TA	THA	DA	DHA	NA
ಪ	ಪಾ	ಬ	ಬಾ	ಮ
PA	PHA	BA	BHA	MA
ಋ	ಋ	ಲ	ಲಾ	ಶ
YA	RA	LA	VA	SHA
ಷ	ಷ	ಹ		
SSA	SA	HA		

We have got 3 more letters from *Kannada Lipi Vikasa* (Manjunath & Devaraswamy) such as: ೀ ḷa, ೆ ṛa and ೆ fa, which have not been proposed due to lack of evidence. (page 25)

We have also found variant forms of some letters which are found only in the inscriptions of *Vākāṭaka*, *Māṅghara*, *Pitṛbhakta* and *Kadamba*. These characters are not currently proposed.

ಠ	ಢ	ಡ	ಢ	ಢ
ṭa	ṇa	ṭa	ḍa	ṇa
ಬ, ಏ	ಬ	ಮ	ಲ	ಏ
ba	bha	ma	la	e

4.3 Vowel Signs

There are 10 dependent vowel signs proposed for encoding:

◌̄	◌̇	◌̈	◌̆	◌̣̆	◌̣̣̆	◌̣̣̣̆	◌̣̣̣̣̆	◌̣̣̣̣̣̆	◌̣̣̣̣̣̣̆	◌̣̣̣̣̣̣̣̆
AA	I	II	U	UU	VOCALIC R	E	AI	O	AU	
𑀧̄	𑀧̇	𑀧̈	𑀧̆	𑀧̣̆	𑀧̣̣̆	𑀧̣̣̣̆	𑀧̣̣̣̣̆	𑀧̣̣̣̣̣̆	𑀧̣̣̣̣̣̣̆	𑀧̣̣̣̣̣̣̣̆
<i>pā</i>	<i>pi</i>	<i>pī</i>	<i>pu</i>	<i>pū</i>	<i>pr</i>	<i>pe</i>	<i>pai</i>	<i>po</i>	<i>pau</i>	

Variant Especially in the inscriptions of *Variety of South alphabet (Vākāṭaka and Kadamba)* we get to see the variant of 5 vowel signs. These characters are not currently proposed.

◌̣̄	◌̣̇	◌̣̈	◌̣̣̆	◌̣̣̣̆	◌̣̣̣̣̆
-ā	-e	-ai	-o	-au	

4.4 Consonant-Vowel Combinations

Consonant-vowel (CV) combinations are produced by attaching a dependent-vowel sign to a consonant letter. Combinations involving certain consonants have additional rendering requirements, as do those involving certain vowel signs. The cases described below are normal behaviors for the script.

Contextual forms of vowel signs the following vowel signs change when they occur in CVs with particular consonants and with final forms these consonants:

	Regular	Contextual	Occurs with	
VOWEL SIGN AA	◌̄	◌̣̄	𑀧 JA	𑀧̣̄ <i>jā</i>
VOWEL SIGN U	◌̆	◌̣̆	𑀧 KA, 𑀧̣ JHA, 𑀧̣ RA	𑀧̣̆ <i>ku</i> , 𑀧̣̣̆ <i>jhu</i> , 𑀧̣̣̆ <i>ru</i>
VOWEL SIGN U	◌̆	◌̣̣̆	𑀧 GA, 𑀧 TA, 𑀧 NA, 𑀧 BHA	𑀧̣̣̆ <i>gu</i> , 𑀧̣̣̣̆ <i>tu</i> , 𑀧̣̣̣̣̆ <i>nu</i> , 𑀧̣̣̣̣̣̆ <i>bhu</i>
VOWEL SIGN UU	◌̣̆	◌̣̣̣̆	𑀧 KA, 𑀧̣ JHA, 𑀧̣ RA	𑀧̣̣̣̆ <i>kū</i> , 𑀧̣̣̣̣̆ <i>jhū</i> , 𑀧̣̣̣̣̣̆ <i>rū</i>
VOWEL SIGN UU	◌̣̆	◌̣̣̣̣̆	𑀧 MA	𑀧̣̣̣̣̣̆ <i>mū</i>

4.5 Consonant Conjunctions

Consonant cluster are written as conjuncts. Conjuncts are represented using ◻ CONJOINER, which is written after each consonant in a cluster and no conjoiner is needed after the final conjunct. Box-Headed conjuncts are written vertically.

4.5.1 Rendering Rules

Conjuncts are rendered using Top-based and below-based forms of letters (see below Table). Top-based (Initial) forms are used for writing vertical conjuncts. If present, the below-based may also be adjusted vertically depending upon the position of the letter in the cluster. *Med₁* used in tri-consonantal conjunctions and *Med₂* used in tetra-consonantal conjunctions. Final forms are contextual forms of letters that are used only when the letter occurs in a last letter of the conjunct. *Int₁RA* used as *repha* in conjunctions. *Int₁* forms used for *ra-phala* and *ya-phala*. (see appendix)

	<i>Int₁</i>	<i>Int₂</i>	<i>Med₁</i>	<i>Med₂</i>	<i>Final</i>		<i>Int₁</i>	<i>Int₂</i>	<i>Med₁</i>	<i>Med₂</i>	<i>Final</i>
KA	ക	ക	ക	-	ക	DA	ദ	ദ	ദ	-	ദ
KHA	ക	ക	ക	-	ക	DHA	ദ	ദ	ദ	ദ	ദ
GA	ഗ	ഗ	ഗ	-	ഗ	NA	ന	ന	ന	-	ന
GHA	ഗ	ഗ	ഗ	-	ഗ	PA	പ	പ	പ	-	പ
NGA	-	ം	-	-	ം	PHA	പ	പ	പ	-	പ
CA	ച	ച	ച	-	ച	BA	ബ	ബ	ബ	-	ബ
CHA	ച	ച	ച	-	ച	BHA	ച	ച	ച	-	ച
JA	ജ	ജ	ജ	-	ജ	MA	മ	മ	മ	മ	മ
JHA	ജ	ജ	ജ	-	ജ	YA	യ	യ	-	-	യ
NYA	ന	ന	ന	-	ന	RA	ര	-	-	ര	ര
TTA	ത	ത	ത	-	ത	LA	ല	ല	ല	-	ല
TTHA	ത	ത	ത	-	ത	VA	വ	വ	വ	-	വ
DDA	ദ	ദ	ദ	-	ദ	SHA	ശ	ശ	ശ	-	ശ
DDHA	ദ	ദ	ദ	-	ദ	SSA	സ	സ	സ	സ	സ
NNA	ന	ന	ന	-	ന	SA	സ	സ	സ	സ	സ
TA	ത	ത	ത	ത	ത	HA	ഹ	ഹ	ഹ	-	ഹ
THA	ത	ത	ത	-	ത						

Uses of *Int₁ form* when it is followed by *Final RA* ് and *Final YA* ്.e.g.

- < E JA, ്, ് YA > → (ഈ, ്) → ് *jya*.
- < E JA, ്, ് RA > → (ഈ, ്) → ് *ja*.
- < ട TTHA, ്, ് YA > → (ഠ, ്) → ് *thya*.
- < ട TTHA, ്, ് RA > → (ഠ, ്) → ് *thra*.
- < ള HA, ്, ് YA > → (ള, ്) → ് *hya*.
- < ള HA, ്, ് RA > → (ള, ്) → ് *hra*.

* *initial NGA never followed by Final RA ് and Final YA ്*

Exceptions Certain consonants have other shaping behaviors when they occur in conjuncts:

ഠ NGA *Initial* ഠ NGA takes the shape ഠ when followed by consonants: ് GHA and ് MA:

- < ഠ NGA, ്, ് GHA > → (ഠ, ്) → ് *ṅgha*.
- < ഠ NGA, ്, ് MA > → (ഠ, ്) → ് *ṅma*.

് RA *Int₁ RA* takes the shape ് instead of ് when followed by *Final E JA* and ് MA:

- < ് RA, ്, E JA > → (്, E) → ് *rja*.
- < ് RA, ്, ് MA > → (്, ്) → ് *rma*.

ഠ KHA *Final* ഠ KHA is rendered as ഠ only with *Initial* ഠ NGA:

- < ഠ NGA, ്, ഠ KHA > → (ഠ, ഠ) → ഠ *ṅkha*.

് YA *Final* ് YA is rendered as ് only with *Int₁ ് RA*:

- < ് RA, ്, ് YA > → (്, ്) → ് *rya*.

് RA *Final* ് RA is rendered as ് only with *Int₁ ് RA*:

- < ് RA, ്, ് RA > → (്, ്) → ് *rra*.

് LA *Final* ് LA is rendered as ് only with initial ് LA and ് SHA:

- < ് LA, ്, ് LA > → (്, ്) → ് *lla*.*
- < ് SHA, ്, ് LA > → (്, ്) → ് *śla*.

* but if ് *lla* is followed by vowel sign, then ് changes to ് *lla*

4.6 Sign Anusvara

The ് ANUSVARA is used for indicating nasalization. It is placed to the top of a base letter or top of vowel sign. (see fig 9)

്	്	്	്	്	്	്	്	്	്	്
<i>paṁ</i>	<i>pāṁ</i>	<i>piṁ</i>	<i>pīṁ</i>	<i>puṁ</i>	<i>pūṁ</i>	<i>ṛṁ</i>	<i>peṁ</i>	<i>paiṁ</i>	<i>poṁ</i>	<i>paum̐</i>

4.7 Sign Visarga

The ◌: VISARGA is used for representing post-vocalic aspiration /-h/. (see fig 9)

4.8 Sign Repha and Initial RA

Sign ◌ REPHA and ◌ initial RA both has been found in Box-Headed inscriptions. Initial RA is also a *repha* sign. Value of these two signs are same /r-/ with glyphic distinctions. Both signs can be used to write a same word in different way, the meaning of the word does not change. Sign ◌ REPHA is not possible to show with CONJOINER. Sign ◌ REPHA is proposed separately.(see fig 5, 6)

< ◌ REPHA, ◌ PA > → ◌ *rpa* (with Repha)

< ◌ RA, ◌, ◌ PA > → (◌, ◌) → ◌ *rpa* (with non-Repha)

Position of initial Ra and Repha with vowel signs and Anusvara:

◌	◌	◌	◌	◌	◌	◌	◌	◌	◌	◌
◌	◌	◌	◌	◌	◌	◌	◌	◌	◌	◌
<i>rpā</i>	<i>rpi</i>	<i>rpī</i>	<i>rupu</i>	<i>rpū</i>	<i>rpṛ</i>	<i>rpe</i>	<i>rpai</i>	<i>rpo</i>	<i>rpau</i>	<i>rpam</i>

Position of initial Ra and Repha with vowel signs + Anusvara:

◌	◌	◌	◌	◌	◌	◌	◌	◌	◌
◌	◌	◌	◌	◌	◌	◌	◌	◌	◌
<i>rpām</i>	<i>rpim</i>	<i>rpīm</i>	<i>rupm</i>	<i>rpūm</i>	<i>rpṛm</i>	<i>rpeṃ</i>	<i>rpaim</i>	<i>rpoṃ</i>	<i>rpauṃ</i>

4.9 Sign Virama

Sign ◌ VIRAMA is used for silencing the inherent vowel /ᳵ/ of a consonant. The default rendering of VIRAMA is as a visible sign. When letter ◌ TA and ◌ MA appear as the vowel less final letter of the sentence, they will changed their shape to ◌ -t and ◌ -m. (see fig 4)

4.10 Sign Conjoiner

Sign ◌ CONJOINER is used to create conjuncts. It will join letters by below-based form.

4.11 Sign Final M

Sign ◌ FINAL M /-m/ is equivalent to Devanagari -म् in Box-Headed inscriptions. This sign is visually distinct from non-initial vowel less final ◌ MA. It sets bottom right-side of base letter. Phonetic value of this sign is equivalent to ◌ ANUSVARA and non-initial vowel less final ◌ MA. (see fig 17)

Examples:

संस्कृतम् *saṃskṛtam* (with final *m*)

संस्कृत *saṃskṛtam* (with vowel less final *ma*)

संस्कृत् *saṃskṛtam* (with anusvara)

4.12 Sign Avagraha

The sign 5 AVAGRAHA is used for making the elision of word-initial *a* in Sanskrit as a result of sandhi. (see fig 7)

4.13 Sign Jihvamuliya

The sign [𑀧] JIHVAMULIYA represents a velar fricative [x] that occurs only before the unvoiced velar stops 𑀓 KA. In contrast to the practice in Devanagari (eg. खक *hka*), is written as a stacked conjunct in Box-Headed, eg. 𑀧𑀓. (see fig 11)

< [𑀧] JIHVAMULIYA, 𑀓 KA > → (𑀧, 𑀓) → 𑀧𑀓 *hka*.

4.14 Sign Upadhmaniya

The sign [𑀨] UPADHMANIYA is used for representing a bilabial fricative [ɸ] that occurs only before the unvoiced labial stops 𑀕 PA. In contrast to the practice in Devanagari (eg. खप *hpa*), is written as a stacked conjunct in Box-Headed, eg. 𑀨𑀕 (see fig 10). It has the variant form: [𑀩].

< [𑀨] UPADHMANIYA, 𑀕 PA > → (𑀨, 𑀕) → 𑀨𑀕 *hpa*.

5. Punctuation

The following punctuation characters are proposed for encoding:

1. (DANDA and 𑀅 DOUBLE DANDA The ends of sentences and larger text blocks are generally indicated with (DANDA and 𑀅 DOUBLE DANDA. (see fig 5, 6)
2. - *Punctuation dash* In the *Vākāṭaka* inscriptions ends of sentences and lines are indicated with - *punctuation dash* along with 𑀅 DOUBLE DANDA. It may be unified with EN DASH U+2013 – or EM DASH U+2014 —.(see fig 15, 16)
3. 𑀭 PUNCTUATION END OF TEXT The ends of paragraphs are generally indicated with 𑀭 PUNCTUATION END OF TEXT. It is equivalent to SINHALA PUNCTUATION KUNDDALIYA U+0DF4 𑀭 and TAMIL PUNCTUATION END OF TEXT U+11FFF 𑀭. (see fig 13, 14)

6. Word Breaking Sign

Word written in Box-Headed can be broken across lines. Evidence shows word *śrīvāpikā* broken into two lines (=śrī-vāpikā). Plus-like subscript is used at the end of line and Plus-like superscript is used at beginning of the new line. No rules of where a word can be broken have been formalized. These signs may be unified with SUBSCRIPT PLUS SIGN U+208A + and SUPERScript PLUS SIGN U+207A †. (see fig 12)

7. Auspicious Sign

© SIDDHAM This sign representing the word *siddham* “success or hail”, followed by word *svasti* “may it be well with thee” in the inscriptions. (see fig 9, 10)

8. Digits

Box-Headed has a full set of decimal digits: • ZERO, ၁ ONE, ၂ TWO, ၃ THREE, ၄ FOUR, ၅ FIVE, ၆ SIX, ၇ SEVEN, ၈ EIGHT, ၉ NINE.

9. Collation

The sort order for Box-Headed is as follows:

< ၵ A < ၵၵ AA < ၵ I < ၵ U < ၵ E < ၵ KA < ၵ KHA < ၵ GA < ၵ GHA < ၵ NGA < ၵ CA < ၵ CHA < ၵ JA < ၵ JHA < ၵ NYA < ၵ TTA < ၵ TTHA < ၵ DDA < ၵ DDHA < ၵ NNA < ၵ TA < ၵ THA < ၵ DA < ၵ DHA < ၵ NA < ၵ PA < ၵ PHA < ၵ BA < ၵ BHA < ၵ MA < ၵ YA < ၵ RA < ၵ LA < ၵ VA < ၵ SHA < ၵ SSA < ၵ SA < ၵ HA < ၵ SIGN AA < ၵ SIGN I < ၵ SIGN II < ၵ SIGN U < ၵ SIGN UU < ၵ SIGN VOCALIC R < ၵ SIGN E < ၵ SIGN AI < ၵ SIGN O < ၵ SIGN AU < ၵ SIGN VIRAMA < ၵ CONJOINER < ၵ SIGN ANUSVARA < ၵ SIGN VISARGA < ၵ SIGN FINAL M < ၵ SIGN REPHA < ၵ SIGN AVAGRAHA < ၵ SIGN JIHVAMULIYA < ၵ SIGN UPADHMANIYA < ၵ SIGN SIDDHAM < ၵ DANDA < ၵ DOUBLE DANDA < ၵ PUNCTUATION END OF TEXT < • ZERO < ၁ ONE < ၂ TWO < ၃ THREE < ၄ FOUR < ၅ FIVE < ၆ SIX < ၇ SEVEN < ၈ EIGHT < ၉ NINE

10. Character Data

10.1 Character Properties

In the format of UnicodeData.txt:

```
1E660;BOX HEADED LETTER A;Lo;0;L;;;;N;;;;;
1E661;BOX HEADED LETTER AA;Lo;0;L;;;;N;;;;;
1E662;BOX HEADED LETTER I;Lo;0;L;;;;N;;;;;
1E663; <reserve for letter ii>
1E664;BOX HEADED LETTER U;Lo;0;L;;;;N;;;;;
1E665; <reserve for letter uu>
1E666; <reserve for letter vocalic r>
1E667; <reserve for letter vocalic rr>
1E668; <reserve for letter vocalic l>
1E669; <reserve for letter vocalic ll>
1E66A;BOX HEADED LETTER E;Lo;0;L;;;;N;;;;;
1E66B; <reserve for letter ai>
1E66C;BOX HEADED LETTER O;Lo;0;L;;;;N;;;;;
1E66D; <reserve for letter au>
1E66E;BOX HEADED LETTER KA;Lo;0;L;;;;N;;;;;
1E66F;BOX HEADED LETTER KHA;Lo;0;L;;;;N;;;;;
1E670;BOX HEADED LETTER GA;Lo;0;L;;;;N;;;;;
1E671;BOX HEADED LETTER GHA;Lo;0;L;;;;N;;;;;
1E672;BOX HEADED LETTER NGA;Lo;0;L;;;;N;;;;;
1E673;BOX HEADED LETTER CA;Lo;0;L;;;;N;;;;;
1E674;BOX HEADED LETTER CHA;Lo;0;L;;;;N;;;;;
1E675;BOX HEADED LETTER JA;Lo;0;L;;;;N;;;;;
1E676;BOX HEADED LETTER JHA;Lo;0;L;;;;N;;;;;
1E677;BOX HEADED LETTER NYA;Lo;0;L;;;;N;;;;;
1E678;BOX HEADED LETTER TTA;Lo;0;L;;;;N;;;;;
1E679;BOX HEADED LETTER TTHA;Lo;0;L;;;;N;;;;;
1E67A;BOX HEADED LETTER DDA;Lo;0;L;;;;N;;;;;
1E67B;BOX HEADED LETTER DDHA;Lo;0;L;;;;N;;;;;
1E67C;BOX HEADED LETTER NNA;Lo;0;L;;;;N;;;;;
1E67D;BOX HEADED LETTER TA;Lo;0;L;;;;N;;;;;
1E67E;BOX HEADED LETTER THA;Lo;0;L;;;;N;;;;;
1E67F;BOX HEADED LETTER DA;Lo;0;L;;;;N;;;;;
1E680;BOX HEADED LETTER DHA;Lo;0;L;;;;N;;;;;
1E681;BOX HEADED LETTER NA;Lo;0;L;;;;N;;;;;
1E682;BOX HEADED LETTER PA;Lo;0;L;;;;N;;;;;
1E683;BOX HEADED LETTER PHA;Lo;0;L;;;;N;;;;;
```

1E684;BOX HEADED LETTER BA;Lo;0;L;;;;N;;;;;
 1E685;BOX HEADED LETTER BHA;Lo;0;L;;;;N;;;;;
 1E686;BOX HEADED LETTER MA;Lo;0;L;;;;N;;;;;
 1E687;BOX HEADED LETTER YA;Lo;0;L;;;;N;;;;;
 1E688;BOX HEADED LETTER RA;Lo;0;L;;;;N;;;;;
 1E689;BOX HEADED LETTER LA;Lo;0;L;;;;N;;;;;
 1E68A; <reserve for letter lla>
 1E68B;BOX HEADED LETTER VA;Lo;0;L;;;;N;;;;;
 1E68C;BOX HEADED LETTER SHA;Lo;0;L;;;;N;;;;;
 1E68D;BOX HEADED LETTER SSA;Lo;0;L;;;;N;;;;;
 1E68E;BOX HEADED LETTER SA;Lo;0;L;;;;N;;;;;
 1E68F;BOX HEADED LETTER HA;Lo;0;L;;;;N;;;;;
 1E690; <reserve for letter rra>
 1E691; <reserve for letter fa>
 1E692;BOX HEADED VOWEL SIGN AA;Mn;0;NSM;;;;N;;;;;
 1E693;BOX HEADED VOWEL SIGN I;Mn;0;NSM;;;;N;;;;;
 1E694;BOX HEADED VOWEL SIGN II;Mn;0;NSM;;;;N;;;;;
 1E695;BOX HEADED VOWEL SIGN U;Mn;0;NSM;;;;N;;;;;
 1E696;BOX HEADED VOWEL SIGN UU;Mc;0;NSM;;;;N;;;;;
 1E697;BOX HEADED VOWEL SIGN VOCALIC R;Mn;0;NSM;;;;N;;;;;
 1E698; <reserve for vowel sign vocalic rr>
 1E699; <reserve for vowel sign vocalic l>
 1E69A; <reserve for vowel sign vocalic ll>
 1E69B;BOX HEADED VOWEL SIGN E;Mn;0;NSM;;;;N;;;;;
 1E69C;BOX HEADED VOWEL SIGN AI;Mn;0;NSM;;;;N;;;;;
 1E69D;BOX HEADED VOWEL SIGN O;Mn;0;NSM;;;;N;;;;;
 1E69E;BOX HEADED VOWEL SIGN AU;Mn;0;NSM;;;;N;;;;;
 1E69F;BOX HEADED SIGN VIRAMA;Mc;9;L;;;;N;;;;;
 1E6A0;BOX HEADED CONJOINER;Mn;9;NSM;;;;N;;;;;
 1E6A1;BOX HEADED SIGN ANUSVARA;Mn;0;NSM;;;;N;;;;;
 1E6A2;BOX HEADED SIGN VISARGA;Mc;0;L;;;;N;;;;;
 1E6A3;BOX HEADED CONSONANT SIGN FINAL M;Mc;0;NSM;;;;N;;;;;
 1E6A4;BOX HEADED SIGN REPHA;Lo;0;L;;;;N;;;;;
 1E6A5;BOX HEADED SIGN AVAGRAHA;Lo;0;L;;;;N;;;;;
 1E6A6;BOX HEADED SIGN JIHMAMULIYA;Lo;0;L;;;;N;;;;;
 1E6A7;BOX HEADED SIGN UPADHMANIYA;Lo;0;L;;;;N;;;;;
 1E6A8;BOX HEADED SIGN SIDDHAM;Po;0;L;;;;N;;;;;
 1E6A9;BOX HEADED DANDA;Po;0;L;;;;N;;;;;
 1E6AA;BOX HEADED DOUBLE DANDA;Po;0;L;;;;N;;;;;
 1E6AB;BOX HEADED PUNCTUATION END OF TEXT;Po;0;L;;;;N;;;;;
 1E6B0;BOX HEADED DIGIT ZERO;Nd;0;L;0;0;N;;;;;
 1E6B1;BOX HEADED DIGIT ONE;Nd;0;L;1;1;N;;;;;
 1E6B2;BOX HEADED DIGIT TWO;Nd;0;L;2;2;N;;;;;
 1E6B3;BOX HEADED DIGIT THREE;Nd;0;L;3;3;N;;;;;
 1E6B4;BOX HEADED DIGIT FOUR;Nd;0;L;4;4;N;;;;;
 1E6B5;BOX HEADED DIGIT FIVE;Nd;0;L;5;5;N;;;;;
 1E6B6;BOX HEADED DIGIT SIX;Nd;0;L;6;6;N;;;;;
 1E6B7;BOX HEADED DIGIT SEVEN;Nd;0;L;7;7;N;;;;;
 1E6B8;BOX HEADED DIGIT EIGHT;Nd;0;L;8;8;N;;;;;
 1E6B9;BOX HEADED DIGIT NINE;Nd;0;L;9;9;N;;;;;

10.2 Linebreaking

In the format of LineBreak.txt:

1E660..1E662 ; AL # [03] BOX HEADED LETTER A .. BOX HEADED LETTER I
 1E664 ; AL # [01] BOX HEADED LETTER U
 1E66A ; AL # [01] BOX HEADED LETTER E
 1E66C ; AL # [01] BOX HEADED LETTER O
 1E66E..1E689 ; AL # [28] BOX HEADED LETTER KA .. BOX HEADED LETTER LA
 1E68B..1E68F ; AL # [05] BOX HEADED LETTER VA .. BOX HEADED LETTER HA
 1E692..1E697 ; CM # [06] BOX HEADED VOWEL SIGN AA .. BOX HEADED VOWEL SIGN VOCALIC R
 1E69B..1E69E ; CM # [04] BOX HEADED VOWEL SIGN E .. BOX HEADED VOWEL SIGN AU
 1E69F ; CM # [01] BOX HEADED SIGN VIRAMA
 1E6A0..1E6A3 ; CM # [04] BOX HEADED CONJOINER .. BOX HEADED CONSONANT SIGN FINAL M
 1E6A4..1E6A7 ; AL # [04] BOX HEADED SIGN REPHA .. BOX HEADED SIGN UPADHMANIYA
 1E6A8 ; BB # [01] BOX HEADED SIGN SIDDHAM
 1E6A9..1E6AB ; BA # [03] BOX HEADED DANDA .. BOX HEADED PUNCTUATION END OF TEXT
 1E6B0..1E6B9 ; NU # [10] BOX HEADED DIGIT ZERO .. BOX HEADED DIGIT NINE

10.3 Syllabic Categories

In the format of IndicSyllabicCategory.txt:

```
# Indic_Syllabic_Category=Bindu
1E6A1 ; Bindu # Mn [01] BOX HEADED SIGN ANUSVARA
# Indic_Syllabic_Category=Visarga
1E6A2 ; Visarga # Mn [01] BOX HEADED SIGN VISARGA
# Indic_Syllabic_Category=Avagraha
1E6A5 ; Avagraha # Lo [01] BOX HEADED SIGN AVAGRAHA
# Indic_Syllabic_Category=Pure_Killer
1E69F ; Pure_Killer # Mn [01] BOX HEADED SIGN VIRAMA
# Indic_Syllabic_Category=Vowel_Independent
1E660..1E662 ; Vowel_Independent # Lo [03] BOX HEADED LETTER A .. BOX HEADED LETTER I
1E664 ; Vowel_Independent # Lo [01] BOX HEADED LETTER U
1E66A ; Vowel_Independent # Lo [01] BOX HEADED LETTER E
1E66C ; Vowel_Independent # Lo [01] BOX HEADED LETTER O
# Indic_Syllabic_Category=Vowel_Dependent
1E692..1E697 ; Vowel_Dependent # Mn [06] BOX HEADED VOWEL SIGN AA .. BOX HEADED VOWEL SIGN VOCALIC R
1E69B..1E69E ; Vowel_Dependent # Mn [04] BOX HEADED VOWEL SIGN E .. BOX HEADED VOWEL SIGN VOCALIC AU
# Indic_Syllabic_Category=Consonant
1E66E..1E689 ; Consonant # Lo [28] BOX HEADED LETTER KA .. BOX HEADED LETTER LA
1E68B..1E68F ; Consonant # Lo [05] BOX HEADED LETTER VA .. BOX HEADED LETTER HA
# Indic_Syllabic_Category= Consonant_Prefixed
1E6A6..1E6A7 ; Consonant_Prefixed # Lo [02] BOX HEADED SIGN JIHVAMULIYA .. BOX HEADED SIGN
UPADHMANIYA
# Indic_Syllabic_Category= Consonant_Preceding_Repha
1E6A4 ; Consonant_Preceding_Repha # Lo [01] BOX HEADED SIGN REPHA
# Indic_Syllabic_Category= Invisible_Stacker
1E6A4 ; Invisible_Stacker # Mn [01] BOX HEADED CONJOINER
# Indic_Syllabic_Category= Consonant_Final
1E6A3 ; Consonant_Final # Mc [01] BOX HEADED CONSONANT SIGN FINAL M
# Indic_Syllabic_Category=Number
1E6B0..1E6B9 ; Number # Nd [10] BOX HEADED DIGIT ZERO .. BOX HEADED DIGIT NINE
```

10.4 Positional Categories

In the format of IndicPositionalCategory.txt:

```
# Indic_Positional_Category=Right
1E6A2 ; Right # Mc [01] BOX HEADED SIGN VISARGA
# Indic_Positional_Category=Top
1E692..1E694 ; Top # Mn [03] BOX HEADED VOWEL SIGN AA .. BOX HEADED VOWEL SIGN II
1E69B..1E69E ; Top # Mn [04] BOX HEADED VOWEL SIGN E .. BOX HEADED VOWEL SIGN AU
1E6A1 ; Top # Mn [01] BOX HEADED SIGN ANUSVARA
1E6A4 ; Top # Lo [01] BOX HEADED SIGN REPHA
1E6A6..1E6A7 ; Top # Mn [02] BOX HEADED SIGN JIHVAMULIYA .. BOX HEADED SIGN UPADHMANIYA
# Indic_Positional_Category=Bottom
1E695 ; Bottom # Mn [01] BOX HEADED VOWEL SIGN U
1E697 ; Bottom # Mn [01] BOX HEADED VOWEL SIGN VOCALIC R
1E69F ; Bottom # Mn [01] BOX HEADED SIGN VIRAMA
# Indic_Positional_Category=Bottom_And_Right
1E696 ; Bottom_And_Right # Mc [01] BOX HEADED VOWEL SIGN UU
1E6A3 ; Bottom_And_Right # Mn [01] BOX HEADED CONSONANT SIGN FINAL M
```

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	1E66	1E67	1E68	1E69	1E6A	1E6B
0	ꠘ 1E660	ꠙ 1E670	ꠚ 1E680		ꠛ 1E6A0	ꠜ 1E6B0
1	ꠝ 1E661	ꠞ 1E671	ꠟ 1E681		ꠠ 1E6A1	ꠡ 1E6B1
2	ꠢ 1E662	ꠣ 1E672	ꠤ 1E682	ꠥ 1E692	ꠦ 1E6A2	ꠧ 1E6B2
3		꠨ 1E673	꠩ 1E683	꠪ 1E693	꠫ 1E6A3	꠬ 1E6B3
4	꠭ 1E664	꠮ 1E674	꠯ 1E684	꠰ 1E694	꠱ 1E6A4	꠲ 1E6B4
5		꠴ 1E675	꠵ 1E685	꠶ 1E695	꠷ 1E6A5	꠸ 1E6B5
6		꠹ 1E676	꠺ 1E686	꠻ 1E696	꠼ 1E6A6	꠽ 1E6B6
7		꠾ 1E677	꠿ 1E687	ꡀ 1E697	ꡁ 1E6A7	ꡂ 1E6B7
8		ꡃ 1E678	ꡄ 1E688		ꡅ 1E6A8	ꡆ 1E6B8
9		ꡇ 1E679	ꡈ 1E689		ꡉ 1E6A9	ꡊ 1E6B9
A	ꡋ 1E66A	ꡌ 1E67A			ꡍ 1E6AA	
B		ꡎ 1E67B	ꡏ 1E68B	ꡐ 1E69B	ꡑ 1E6AB	
C	ꡒ 1E66C	ꡓ 1E67C	ꡔ 1E68C	ꡕ 1E69C		
D		ꡖ 1E67D	ꡗ 1E68D	ꡘ 1E69D		
E	ꡙ 1E66E	ꡚ 1E67E	ꡛ 1E68E	ꡜ 1E69E		
F	ꡝ 1E66F	ꡞ 1E67F	ꡟ 1E68F	ꡠ 1E69F		

Independent Vowels

1E600	ㅏ	BOX HEADED LETTER A
1E601	ㅑ	BOX HEADED LETTER AA
1E602	ㅓ	BOX HEADED LETTER I
1E603	☐	<reserve>
1E604	ㅕ	BOX HEADED LETTER U
1E605	☐	<reserve>
1E606	☐	<reserve>
1E607	☐	<reserve>
1E608	☐	<reserve>
1E609	☐	<reserve>
1E60A	ㅗ	BOX HEADED LETTER E
1E60B	☐	<reserve>
1E60C	ㅛ	BOX HEADED LETTER O
1E60D	☐	<reserve>

Consonants

1E60E	ㅋ	BOX HEADED LETTER KA
1E60F	ㆁ	BOX HEADED LETTER KHA
1E670	ㆁ	BOX HEADED LETTER GA
1E671	ㆁ	BOX HEADED LETTER GHA
1E672	ㆁ	BOX HEADED LETTER NGA
1E673	ㆁ	BOX HEADED LETTER CA
1E674	ㆁ	BOX HEADED LETTER CHA
1E675	ㆁ	BOX HEADED LETTER JA
1E676	ㆁ	BOX HEADED LETTER JHA
1E677	ㆁ	BOX HEADED LETTER NYA
1E678	ㆁ	BOX HEADED LETTER TTA
1E679	ㆁ	BOX HEADED LETTER TTHA
1E67A	ㆁ	BOX HEADED LETTER DDA
1E67B	ㆁ	BOX HEADED LETTER DDHA
1E67C	ㆁ	BOX HEADED LETTER NNA
1E67D	ㆁ	BOX HEADED LETTER TA
1E67E	ㆁ	BOX HEADED LETTER THA
1E67F	ㆁ	BOX HEADED LETTER DAI
1E680	ㆁ	BOX HEADED LETTER DHA
1E681	ㆁ	BOX HEADED LETTER NA
1E682	ㆁ	BOX HEADED LETTER PA
1E683	ㆁ	BOX HEADED LETTER PHA
1E684	ㆁ	BOX HEADED LETTER BA
1E685	ㆁ	BOX HEADED LETTER BHA
1E686	ㆁ	BOX HEADED LETTER MA
1E687	ㆁ	BOX HEADED LETTER YA
1E688	ㆁ	BOX HEADED LETTER RA
1E689	ㆁ	BOX HEADED LETTER LA
1E68A	☐	<reserve>
1E68B	ㆁ	BOX HEADED LETTER VA
1E68C	ㆁ	BOX HEADED LETTER SHA
1E68D	ㆁ	BOX HEADED LETTER SSA
1E68E	ㆁ	BOX HEADED LETTER SA
1E68F	ㆁ	BOX HEADED LETTER HA
1E690	☐	<reserve>
1E691	☐	<reserve>

Dependent Vowel Signs

1E692	◌̆	BOX HEADED VOWEL SIGN AA
1E693	◌̇	BOX HEADED VOWEL SIGN I
1E694	◌̈	BOX HEADED VOWEL SIGN II
1E695	◌̉	BOX HEADED VOWEL SIGN U
1E696	◌̊	BOX HEADED VOWEL SIGN UU
1E697	◌̋	BOX HEADED VOWEL SIGN VOCALIC R
1E698	◌̌	<reserve>
1E699	◌̍	<reserve>
1E69A	◌̎	<reserve>
1E69B	◌̏	BOX HEADED VOWEL SIGN E
1E69C	◌̐	BOX HEADED VOWEL SIGN AI
1E69D	◌̑	BOX HEADED VOWEL SIGN O
1E69E	◌̒	BOX HEADED VOWEL SIGN AU

Various Signs

1E69F	◌̓	BOX HEADED SIGN VIRAMA <ul style="list-style-type: none">• Vowel killer (always rendered visibly)
1E6A0	◌̔	BOX HEADED CONJOINER <ul style="list-style-type: none">• Used for producing below-base conjunct forms
1E6A1	◌̕	BOX HEADED SIGN ANUSVARA
1E6A2	◌̖	BOX HEADED SIGN VISARGA
1E6A3	◌̗	BOX HEADED CONSONANT SIGN FINAL M
1E6A4	◌̘	BOX HEADED SIGN REPHA
1E6A5	◌̙	BOX HEADED SIGN AVAGRAHA
1E6A6	◌̚	BOX HEADED SIGN JIHVAMULIYA
1E6A7	◌̛	BOX HEADED SIGN UPADHMANIYA

Auspicious Signs

1E6A8	◌̜	BOX HEADED SIGN SIDDHAM
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Punctuations

1E6A9	◌̝	BOX HEADED DANDA
1E6AA	◌̞	BOX HEADED DOUBLE DANDA
1E6AB	◌̟	BOX HEADED PUNCTUATION END OF TEXT

Digits

1E6B0	◌̠	BOX HEADED DIGIT ZERO
1E6B1	◌̡	BOX HEADED DIGIT ONE
1E6B2	◌̢	BOX HEADED DIGIT TWO
1E6B3	◌̣	BOX HEADED DIGIT THREE
1E6B4	◌̤	BOX HEADED DIGIT FOUR
1E6B5	◌̥	BOX HEADED DIGIT FIVE
1E6B6	◌̦	BOX HEADED DIGIT SIX
1E6B7	◌̧	BOX HEADED DIGIT SEVEN
1E6B8	◌̨	BOX HEADED DIGIT EIGHT
1E6B9	◌̩	BOX HEADED DIGIT NINE

	<i>Box Headed</i>	<i>Brahmi</i>	<i>Gupta</i>	<i>Pallava</i>	<i>E. Chalukya</i>	<i>L. Chalukya</i>	<i>Kannada</i>
A	𑀅	𑀅	𑀅	𑀅	𑀅	𑀅	ಅ
AA	𑀆	𑀆	𑀆	𑀆	𑀆	𑀆	ಆ
I	𑀇	𑀇	𑀇	𑀇	𑀇	𑀇	ಇ
U	𑀈	𑀈	𑀈	𑀈	𑀈	𑀈	ಉ
E	𑀉	𑀉	𑀉	𑀉	𑀉	𑀉	ಏ
O	𑀊	𑀊	𑀊	𑀊	𑀊	𑀊	ಓ
-ā	𑀋	𑀋	𑀋	𑀋	𑀋	𑀋	಼
-i	𑀌	𑀌	𑀌	𑀌	𑀌	𑀌	಼ಿ
-ī	𑀍	𑀍	𑀍	𑀍	𑀍	𑀍	಼ೀ
-u	𑀎	𑀎	𑀎	𑀎	𑀎	𑀎	಼ು
-ū	𑀏	𑀏	𑀏	𑀏	𑀏	𑀏	಼ು಼ಿ
-r	𑀐	𑀐	𑀐	𑀐	𑀐	𑀐	಼ರ
-e	𑀑	𑀑	𑀑	𑀑	𑀑	𑀑	಼ೇ
-ai	𑀒	𑀒	𑀒	𑀒	𑀒	𑀒	಼ೇ಼
-o	𑀓	𑀓	𑀓	𑀓	𑀓	𑀓	಼ೋ
-au	𑀔	𑀔	𑀔	𑀔	𑀔	𑀔	಼ೋ಼

Comparison Table 1: Vowels and vowel signs of the Box-Headed script with Brahmi, Gupta, Pallava, Badami Chalukya, Kalyan Chalukya and Kannada.

<i>Box Headed</i>	<i>Brahmi</i>	<i>Gupta</i>	<i>Pallava</i>	<i>E. Chalukya</i>	<i>L. Chalukya</i>	<i>Kannada</i>
KA	𑀓	𑀘	𑀙	𑀛	𑀜	ಕ
KHA	𑀔	𑀡	𑀢	𑀝	𑀞	ಖ
GA	𑀕	𑀣	𑀤	𑀟	𑀠	ಗ
GHA	𑀖	𑀥	𑀦	𑀡	𑀢	ಘ
NGA	𑀗	𑀧	𑀨	𑀣	𑀤	ಙ
CA	𑀘	𑀨	𑀩	𑀥	𑀦	ಚ
CHA	𑀙	𑀩	𑀪	𑀦	𑀧	ಛ
JA	𑀚	𑀪	𑀫	𑀧	𑀨	ಜ
JHA	𑀛	𑀫	𑀬	𑀨	𑀩	ಝ
NYA	𑀜	𑀬	𑀭	𑀩	𑀪	ಞ
TTA	𑀝	𑀭	𑀮	𑀪	𑀫	ಟ
TTHA	𑀞	𑀮	𑀯	𑀪	𑀬	ಠ
DDA	𑀟	𑀯	𑀰	𑀫	𑀭	ಡ
DDHA	𑀠	𑀰	𑀱	𑀫	𑀮	ಢ
NNA	𑀡	𑀱	𑀲	𑀬	𑀯	ಣ
TA	𑀢	𑀲	𑀳	𑀭	𑀰	ತ
THA	𑀣	𑀳	𑀴	𑀭	𑀱	ಥ

	<i>Box Headed</i>	<i>Brahmi</i>	<i>Gupta</i>	<i>Pallava</i>	<i>E. Chalukya</i>	<i>L. Chalukya</i>	<i>Kannada</i>
DA	𑀓	𑀓	𑀓	𑀓	𑀓	𑀓	𑀓
DHA	𑀔	𑀔	𑀔	𑀔	𑀔	𑀔	𑀔
NA	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
PA	𑀖	𑀖	𑀖	𑀖	𑀖	𑀖	𑀖
PHA	𑀗	𑀗	𑀗	𑀗	𑀗	𑀗	𑀗
BA	𑀘	𑀘	𑀘	𑀘	𑀘	𑀘	𑀘
BHA	𑀙	𑀙	𑀙	𑀙	𑀙	𑀙	𑀙
MA	𑀚	𑀚	𑀚	𑀚	𑀚	𑀚	𑀚
YA	𑀛	𑀛	𑀛	𑀛	𑀛	𑀛	𑀛
RA	𑀜	𑀜	𑀜	𑀜	𑀜	𑀜	𑀜
LA	𑀝	𑀝	𑀝	𑀝	𑀝	𑀝	𑀝
VA	𑀞	𑀞	𑀞	𑀞	𑀞	𑀞	𑀞
SHA	𑀟	𑀟	𑀟	𑀟	𑀟	𑀟	𑀟
SSA	𑀠	𑀠	𑀠	𑀠	𑀠	𑀠	𑀠
SA	𑀡	𑀡	𑀡	𑀡	𑀡	𑀡	𑀡
HA	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢

Comparison Table 2: Consonants of the Box-Headed script with Brahmi, Gupta, Pallava, Badami Chalukya, Kalyan Chalukya and Kannada.

Comparison Table 3: Evolution of Kannada script: Ashoka (Column 1), Satavahana (Column 2), Kadamba (Column 3), Badami Chalukya (Column 4), Rashtrakuta (Column 5), Kalyan Chalukya (Column 6), Hoysala (Column 7), Vijaynagara (Column 8) and Mysore Wodeyara (Column 9).

Kadamba (Column 3) script indicates **Box-Headed** script with *variety of southern alphabets* having letter *ī, r, ḷa, ra* and *fa*. (Manjunath & Devaraswamy 2017: 98-101)

ಕನ್ನಡ ಲಿಪಿಯ ಅವಸ್ಥಾಂತರಗಳು									
ರಾಜ ವಂಶಗಳು									
	ಅಶೋಕ	ಶಾತವಾಹನ	ಕದಂಬ	ಬಾದಾಮಿ ಚಾಲುಕ್ಯರು	ರಾಷ್ಟ್ರಕೂಟರು	ಕಲ್ಯಾಣ ಚಾಲುಕ್ಯ	ಹೊಯ್ಸಳ	ವಿಜಯನಗರ	ಮೈಸೂರು ಒಡೆಯರು
ಅ	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍
ಆ	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖
ಇ	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜	𑀝	𑀞	𑀟
ಈ		𑀠	𑀡	𑀢	𑀣	𑀤/𑀥	𑀦	𑀧	𑀨
ಉ	𑀩	𑀪	𑀫	𑀬	𑀭	𑀮	𑀯	𑀰	𑀱
ಊ									
ಋ			𑀲	𑀳	𑀴	𑀵	𑀶	𑀷	𑀸
ಎ									
ಏ	𑀹	𑀺	𑀻	𑀼	𑀽	𑀾	𑀿	𑁀	𑁁
ಐ							𑁂		
ಒ									
ಓ	𑁃	𑁄	𑁅	𑁆	𑁇	𑁈	𑁉	𑁊	𑁋/𑁌

ರಾಜ ವಂಶಗಳು									
	ಅಶೋಕ	ಶಾತವಾಹನ	ಕದಂಬ	ಬಾದಾಮಿ ಚಾಲುಕ್ಯರು	ರಾಷ್ಟ್ರಕೂಟರು	ಕಲ್ಯಾಣ ಚಾಲುಕ್ಯ	ಹೊಯ್ಸಳ	ವಿಜಯನಗರ	ಮೈಸೂರು ಒಡೆಯರು
ಔ						ಔ	ಔ	ಔ	ಔ
ಊ	•	•	•	•	◦	◦	◦	◦	ಊ
ಋ	:	:	:	:	◌	◌	◌	◌	ಋ
ೠ	+	+	+	+	+	+	+	+	ೠ
ಋ	ॠ	ॠ	ॠ	ॠ	ॠ	ॠ	ॠ	ॠ	ಋ
ೠ	ॡ	ॡ	ॡ	ॡ	ॡ	ॡ	ॡ	ॡ	ೠ
ಋ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ಋ
ೠ	ॣ	ॣ	ॣ	ॣ	ॣ	ॣ	ॣ	ॣ	ೠ
ಋ	।	।	।	।	।	।	।	।	ಋ
ೠ	॥	॥	॥	॥	॥	॥	॥	॥	ೠ
ಋ	०	०	०	०	०	०	०	०	ಋ
ೠ	१	१	१	१	१	१	१	१	ೠ
ಋ	२	२	२	२	२	२	२	२	ಋ
ೠ	३	३	३	३	३	३	३	३	ೠ
ಋ	४	४	४	४	४	४	४	४	ಋ
ೠ	५	५	५	५	५	५	५	५	ೠ
ಋ	६	६	६	६	६	६	६	६	ಋ
ೠ	७	७	७	७	७	७	७	७	ೠ
ಋ	८	८	८	८	८	८	८	८	ಋ
ೠ	९	९	९	९	९	९	९	९	ೠ

ರಾಜ ವಂಶಗಳು

	ಅಶೋಕ	ಶಾತವಾಹನ	ಕದಂಬ	ಬಾದಾಮಿ ಚಾಲುಕ್ಯರು	ರಾಷ್ಟ್ರಕೂಟರು	ಕಲ್ಯಾಣ ಚಾಲುಕ್ಯ	ಹೊಯ್ಸಳ	ವಿಜಯನಗರ	ಮೈಸೂರು ಒಡೆಯರು
ಟ	ఠ	ඞ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ
ಠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ	ఠ

ರಾಜ ವಂಶಗಳು									
	ಅಶೋಕ	ಶಾತವಾಹನ	ಕದಂಬ	ಬಾದಾಮಿ ಚಾಲುಕ್ಯರು	ರಾಷ್ಟ್ರಕೂಟರು	ಕಲ್ಯಾಣ ಚಾಲುಕ್ಯ	ಹೊಯ್ಸಳ	ವಿಜಯನಗರ	ಮೈಸೂರು ಒಡೆಯರು
ಛ	𑀘	𑀅	𑀉	𑀅	𑀉	𑀅	𑀉	𑀉	𑀅
ಟ	𑀟	𑀆	𑀊	𑀆	𑀊	𑀆	𑀊	𑀊	𑀆
ಠ	𑀠	𑀇	𑀋	𑀇	𑀋	𑀇	𑀋	𑀋	𑀇
ಡ	𑀡	𑀈	𑀌	𑀈	𑀌	𑀈	𑀌	𑀌	𑀈
ಢ	𑀢	𑀉	𑀍	𑀉	𑀍	𑀉	𑀍	𑀍	𑀉
ಠ	𑀣	𑀊	𑀎	𑀊	𑀎	𑀊	𑀎	𑀎	𑀊
ಠ	𑀤	𑀋	𑀏	𑀋	𑀏	𑀋	𑀏	𑀏	𑀋
ಠ	𑀥	𑀌	𑀐	𑀌	𑀐	𑀌	𑀐	𑀐	𑀌
ಠ	𑀦	𑀍	𑀑	𑀍	𑀑	𑀍	𑀑	𑀑	𑀍
ಠ	𑀧	𑀎	𑀒	𑀎	𑀒	𑀎	𑀒	𑀒	𑀎
ಠ	𑀨	𑀏	𑀓	𑀏	𑀓	𑀏	𑀓	𑀓	𑀏
ಠ	𑀩	𑀐	𑀔	𑀐	𑀔	𑀐	𑀔	𑀔	𑀐
ಠ	𑀪	𑀑	𑀕	𑀑	𑀕	𑀑	𑀕	𑀕	𑀑
ಠ	𑀫	𑀒	𑀖	𑀒	𑀖	𑀒	𑀖	𑀖	𑀒
ಠ	𑀬	𑀓	𑀗	𑀓	𑀗	𑀓	𑀗	𑀗	𑀓
ಠ	𑀭	𑀔	𑀘	𑀭	𑀘	𑀭	𑀘	𑀘	𑀭
ಠ	𑀮	𑀕	𑀙	𑀮	𑀙	𑀮	𑀙	𑀙	𑀮
ಠ	𑀯	𑀖	𑀚	𑀯	𑀚	𑀯	𑀚	𑀚	𑀯
ಠ	𑀰	𑀗	𑀛	𑀰	𑀛	𑀰	𑀛	𑀛	𑀰
ಠ	𑀱	𑀘	𑀜	𑀱	𑀜	𑀱	𑀜	𑀜	𑀱
ಠ	𑀲	𑀙	𑀝	𑀲	𑀝	𑀲	𑀝	𑀝	𑀲
ಠ	𑀳	𑀚	𑀞	𑀳	𑀞	𑀳	𑀞	𑀞	𑀳
ಠ	𑀴	𑀛	𑀟	𑀴	𑀟	𑀴	𑀟	𑀟	𑀴
ಠ	𑀵	𑀜	𑀠	𑀵	𑀠	𑀵	𑀠	𑀠	𑀵
ಠ	𑀶	𑀝	𑀡	𑀶	𑀡	𑀶	𑀡	𑀡	𑀶
ಠ	𑀷	𑀞	𑀢	𑀷	𑀢	𑀷	𑀢	𑀢	𑀷
ಠ	𑀸	𑀟	𑀣	𑀸	𑀣	𑀸	𑀣	𑀣	𑀸
ಠ	𑀹	𑀠	𑀤	𑀹	𑀤	𑀹	𑀤	𑀤	𑀹
ಠ	𑀺	𑀡	𑀥	𑀺	𑀥	𑀺	𑀥	𑀥	𑀺
ಠ	𑀻	𑀢	𑀦	𑀻	𑀦	𑀻	𑀦	𑀦	𑀻
ಠ	𑀼	𑀣	𑀧	𑀼	𑀧	𑀼	𑀧	𑀧	𑀼
ಠ	𑀽	𑀤	𑀨	𑀽	𑀨	𑀽	𑀨	𑀨	𑀽
ಠ	𑀾	𑀥	𑀩	𑀾	𑀩	𑀾	𑀩	𑀩	𑀾
ಠ	𑀿	𑀦	𑀪	𑀿	𑀪	𑀿	𑀪	𑀪	𑀿
ಠ	𑀽	𑀧	𑀫	𑀽	𑀫	𑀽	𑀫	𑀫	𑀽
ಠ	𑀾	𑀨	𑀬	𑀾	𑀬	𑀾	𑀬	𑀬	𑀾
ಠ	𑀿	𑀩	𑀭	𑀿	𑀭	𑀿	𑀭	𑀭	𑀿
ಠ	𑀽	𑀪	𑀮	𑀽	𑀮	𑀽	𑀮	𑀮	𑀽
ಠ	𑀾	𑀫	𑀯	𑀾	𑀯	𑀾	𑀯	𑀯	𑀾
ಠ	𑀿	𑀬	𑀰	𑀿	𑀰	𑀿	𑀰	𑀰	𑀿
ಠ	𑀽	𑀭	𑀱	𑀽	𑀱	𑀽	𑀱	𑀱	𑀽
ಠ	𑀾	𑀮	𑀲	𑀾	𑀲	𑀾	𑀲	𑀲	𑀾
ಠ	𑀿	𑀯	𑀳	𑀿	𑀳	𑀿	𑀳	𑀳	𑀿
ಠ	𑀽	𑀰	𑀴	𑀽	𑀴	𑀽	𑀴	𑀴	𑀽
ಠ	𑀾	𑀱	𑀵	𑀾	𑀵	𑀾	𑀵	𑀵	𑀾
ಠ	𑀿	𑀲	𑀶	𑀿	𑀶	𑀿	𑀶	𑀶	𑀿
ಠ	𑀽	𑀳	𑀷	𑀽	𑀷	𑀽	𑀷	𑀷	𑀽
ಠ	𑀾	𑀴	𑀸	𑀾	𑀸	𑀾	𑀸	𑀸	𑀾
ಠ	𑀿	𑀵	𑀹	𑀿	𑀹	𑀿	𑀹	𑀹	𑀿
ಠ	𑀽	𑀶	𑀺	𑀽	𑀺	𑀽	𑀺	𑀺	𑀽
ಠ	𑀾	𑀷	𑀻	𑀾	𑀻	𑀾	𑀻	𑀻	𑀾
ಠ	𑀿	𑀸	𑀼	𑀿	𑀼	𑀿	𑀼	𑀼	𑀿
ಠ	𑀽	𑀹	𑀽	𑀽	𑀽	𑀽	𑀽	𑀽	𑀽
ಠ	𑀾	𑀺	𑀾	𑀾	𑀾	𑀾	𑀾	𑀾	𑀾
ಠ	𑀿	𑀻	𑀿	𑀿	𑀿	𑀿	𑀿	𑀿	𑀿

Comparison Table 4: Satavahana and Kadamba scripts chart: Nashik (Column 1), Nashik (Column 2), Sannati (Column 3), Banavasi (Column 4), Nagarjunakonda (Column 5), Amravati (Column 6), Dudhia (Column 7), Talagunda (Column 8), Mrigesha (Column 9), Halmidi (Column 10), Raviverma (Column 11) and Krishnaverma (Column 12).

Talagunda (Column 8), Mrigesha (Column 9) script of Kadamba inscriptions indicates **Box-Headed** script with *variety of southern alphabets*. (Devarakonda 2002: 132-133)

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ಲಿಪಿಯ ಹುಟ್ಟು ಮತ್ತು ಬೆಳವಣಿಗೆ

ಶಾತವಾಹನ - ಕದಂಬ ಲಿಪಿಪಟ್ಟಿಕೆ

	1	2	3	4	5	6	7	8	9	10	11	12
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೧						𑀌	𑀍	𑀎		𑀏	𑀐	𑀑
೨	𑀒					𑀓		𑀔		𑀕	𑀖	
೩	𑀗	𑀘	𑀙					𑀚		𑀛	𑀜	𑀝
೪	𑀞	𑀟	𑀠					𑀡		𑀢	𑀣	𑀤
೫	𑀥	𑀦	𑀧	𑀨		𑀩	𑀪	𑀫	𑀬	𑀭	𑀮	𑀯
೬	𑀰	𑀱	𑀲	𑀳		𑀴	𑀵	𑀶	𑀷	𑀸	𑀹	𑀺
೭	𑀻	𑀼	𑀽	𑀾		𑀿	𑁀	𑁁	𑁂	𑁃	𑁄	𑁅
೮	𑁆	𑁇	𑁈	𑁉		𑁊	𑁋	𑁌	𑁍	𑁎	𑁏	𑁐
೯	𑁑	𑁒	𑁓	𑁔		𑁕	𑁖	𑁗	𑁘	𑁙	𑁚	𑁛
೧೦	𑁜	𑁝	𑁞	𑁟		𑁠	𑁡	𑁢	𑁣	𑁤	𑁥	𑁦
೧೧	𑁧	𑁨	𑁩	𑁪		𑁫	𑁬	𑁭	𑁮	𑁯	𑁰	𑁱
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೧೩	𑁽	𑁾	𑁿	𑂀		𑂁	𑂂	𑂃	𑂄	𑂅	𑂆	𑂇
೧೪	𑂈	𑂉	𑂊	𑂋		𑂌	𑂍	𑂎	𑂏	𑂐	𑂑	𑂒
೧೫	𑂓	𑂔	𑂕	𑂖		𑂗	𑂘	𑂙	𑂚	𑂛	𑂜	𑂝
೧೬	𑂞	𑂟	𑂠	𑂡		𑂢	𑂣	𑂤	𑂥	𑂦	𑂧	𑂨
೧೭	𑂩	𑂪	𑂫	𑂬		𑂭	𑂮	𑂯	𑂰	𑂱	𑂲	𑂳
೧೮	𑂴	𑂵	𑂶	𑂷		𑂸	𑂹	𑂺	𑂻	𑂼	𑂽	𑂾
೧೯	𑂿	𑃀	𑃁	𑃂		𑃃	𑃄	𑃅	𑃆	𑃇	𑃈	𑃉
೨೦	𑃊	𑃋	𑃌	𑃍		𑃎	𑃏	𑃐	𑃑	𑃒	𑃓	𑃔

1. ನಾಸಿಕ್, 2. ನಾಸಿಕ್, 3. ಸನ್ನತಿ, 4. ಬನವಾಸಿ, 5. ನಾಗಾರ್ಜುನಕೊಂಡ, 6. ಅಮರಾವತಿ
7. ದುಡಿಯ ಲ. ತಾಳಗುಂದ, 9. ಮೃಗೇಶ, 10. ಹಲ್ಮಿಡಿ, 11. ರವಿವರ್ಮ 12. ಕೃಷ್ಣವರ್ಮ

	೧	೨	೩	೪	೫	೬	೭	೮	೯	೧೦	೧೧	೧೨
ಕ	ಗ	ಗ	ಗ	ಗ	ಗ	ಗ	ಗ	ಗ	ಗ	ಗ	ಗ	ಗ
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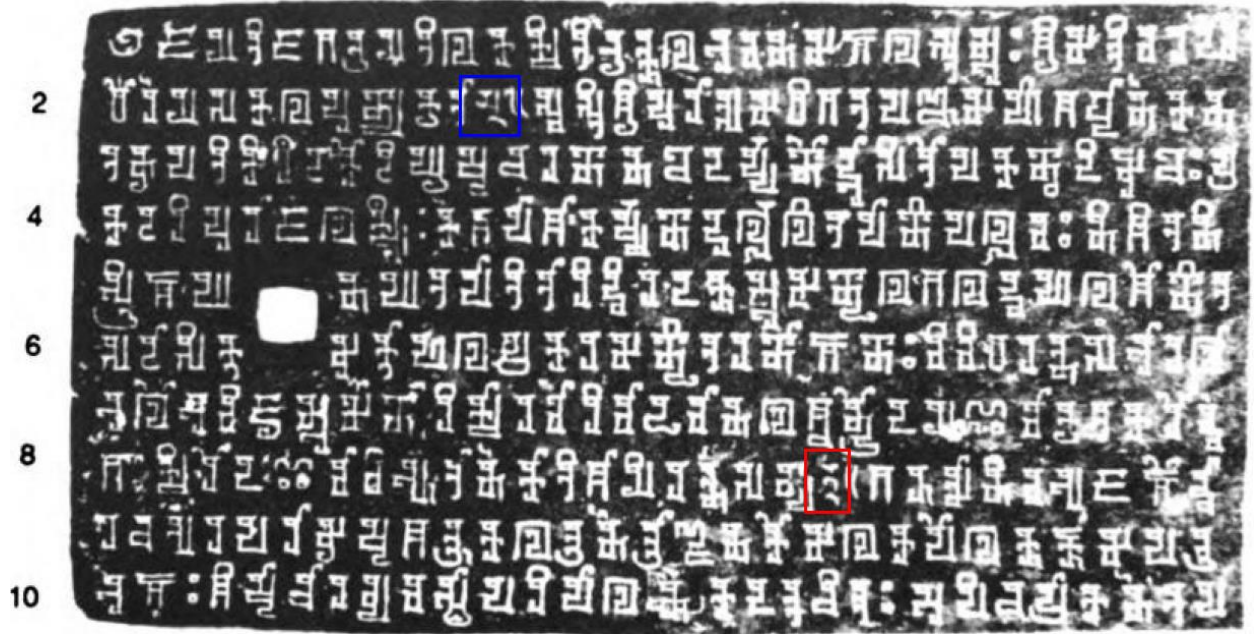
Fig 1: Talagunda Pillar inscription of the Kadamba dynasty. (455 CE-460 CE)



Fig 2: Coin of King Prasannamatra of the Sarabhapuriyas in Kosala. (525CE-550CE)



Fig 3: Tirodi seal of King Pravarasena of Vakataka Kingdom.



FIRST PLATE

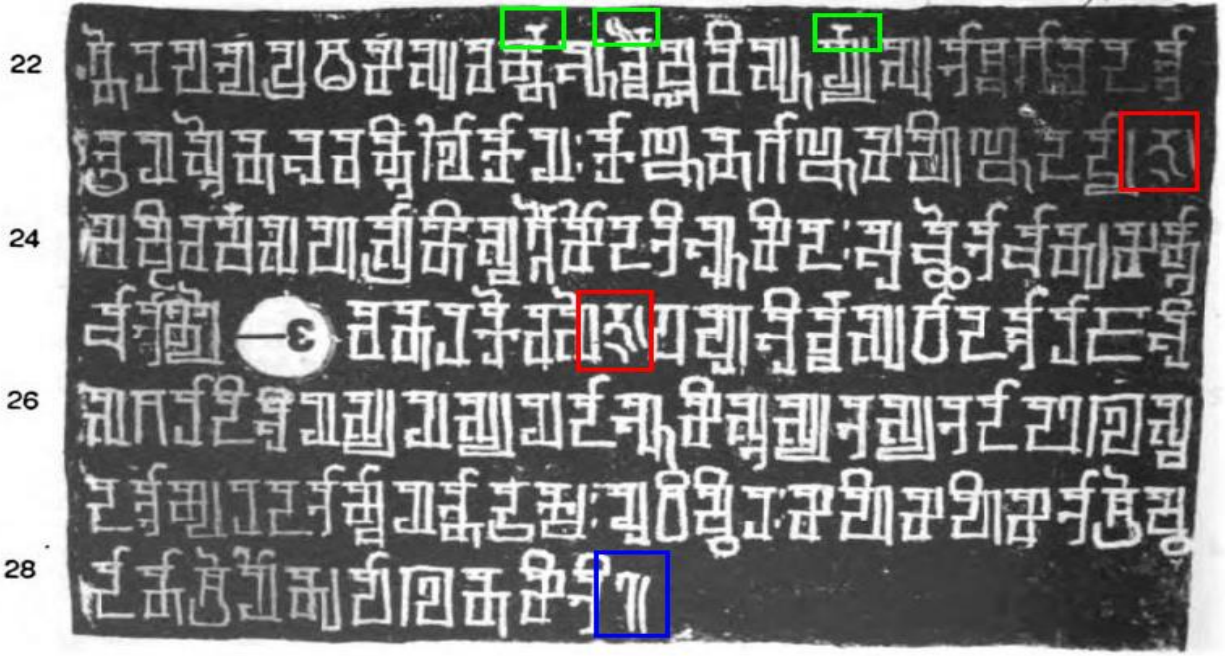
Translation (Hultsch):

- 2 धौरेयः[*] सकलपुष्पकृताम् ॥⁶[१॥*] स्वस्ति शि (श्री) पुराट'समधिगतपञ्चमहाशब्दानेकन-
- 8 गः क्षि (क्षी) रोद⁸ इवाविर्भूतानेकातिशायिरत्नसम्पत् ॥⁹ गरुत्मानिव भुजङ्गोदा-

Transliteration (Hultsch):

2. dhaureya[h*]sakalapuṣpakṛtām ॥⁶[7॥*] svasti śri(śrī) purāt⁷samadhigatapañcamahāśabdānekana-
8. gaḥ kṣi (kṣī) roda⁸ ivāvirbhūtānekātiśāyiratnasampat ॥⁹ garutmāniva bhujāṅgoddhā-

Fig 4: Shows the non-initial final Ma (blue) and non-initial final Ta (red). (from IV Baloda Plates of Tivaradeva, yr 9: 7th CE)



THIRD PLATE

Translation (Jain):

- 22 ग्नेरपत्यं प्रथमं सुवर्णं (णं) भूर्व्वैष्णवि (वी) सूर्यसुताश्च गावः [१*] दत्ता-
 23 त्र (स्त्र) यस्तेन भवन्ति लोका यः ¹⁰काञ्चन (नं) गाञ्च ¹¹महि (ही) च ¹²दद्यात् । [३॥*]
 25 चा (च) ¹³तान्येव नरके वसेत् । [४॥*] बहुभिर्व्वसुधा दत्ता राजभिः [५*]
 28 दानाश्रे (च्छे) योनुपालनमिति ¹³² ॥ [६॥*]

Transliteration (Jain):

22. gnerapatyaṃ prathamam suvarṇṇa (ṛṇṇam) bhūrvvaiṣṇavi (vī) sūryyasutāśca gāva [ḥ 1*] dattā-

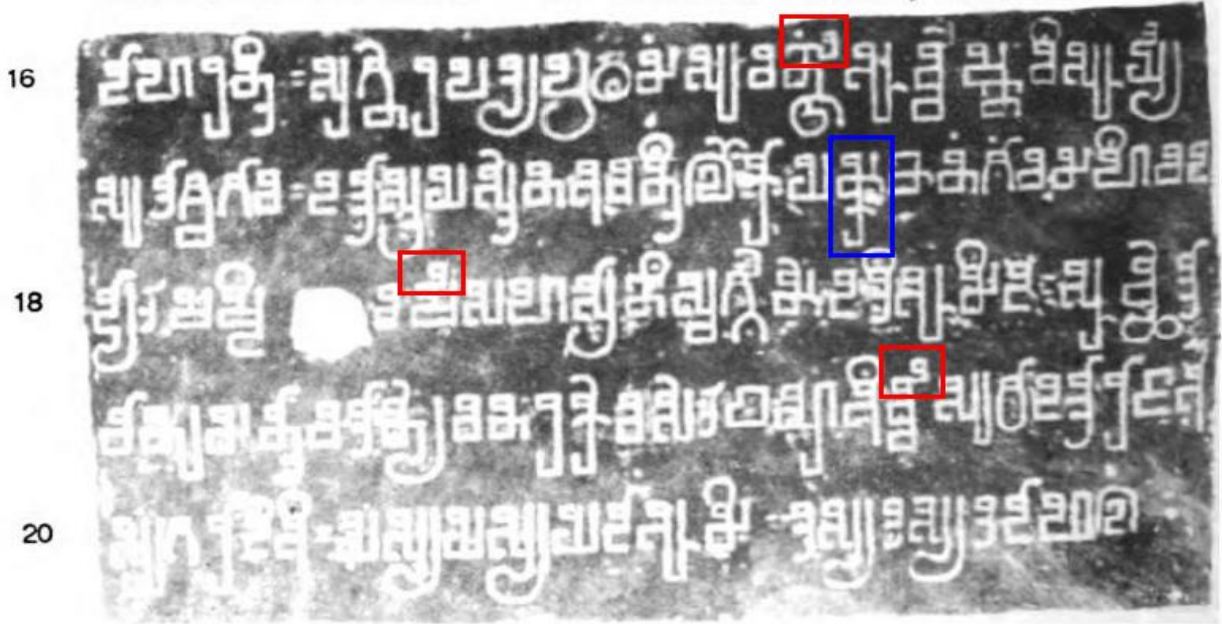
23. tra (stra) yastena bhavanti lokā yaḥ¹⁰ kāñcana (naṃ) gāñca¹¹ mahi (hī) ñca¹² dadyāt [11311*]

25. cā (ca)¹³ tānyeva narake vaset । [11411*] bahubhirvvasudhā dattā rājabhi [ḥ*]

28. dānāśre (cchre) yonupālanamiti¹³² ॥ [611*]

Fig 5: Shows the sign Repha (green), final Ta with sign Danda (red) and Double Danda (blue). (from X Mallar Plates of Śivagupta: 8th CE)

NAHNA¹ PLATES ¹⁶ OF SUDEVARĀJA, YEAR 2



THIRD PLATE : FIRST SIDE

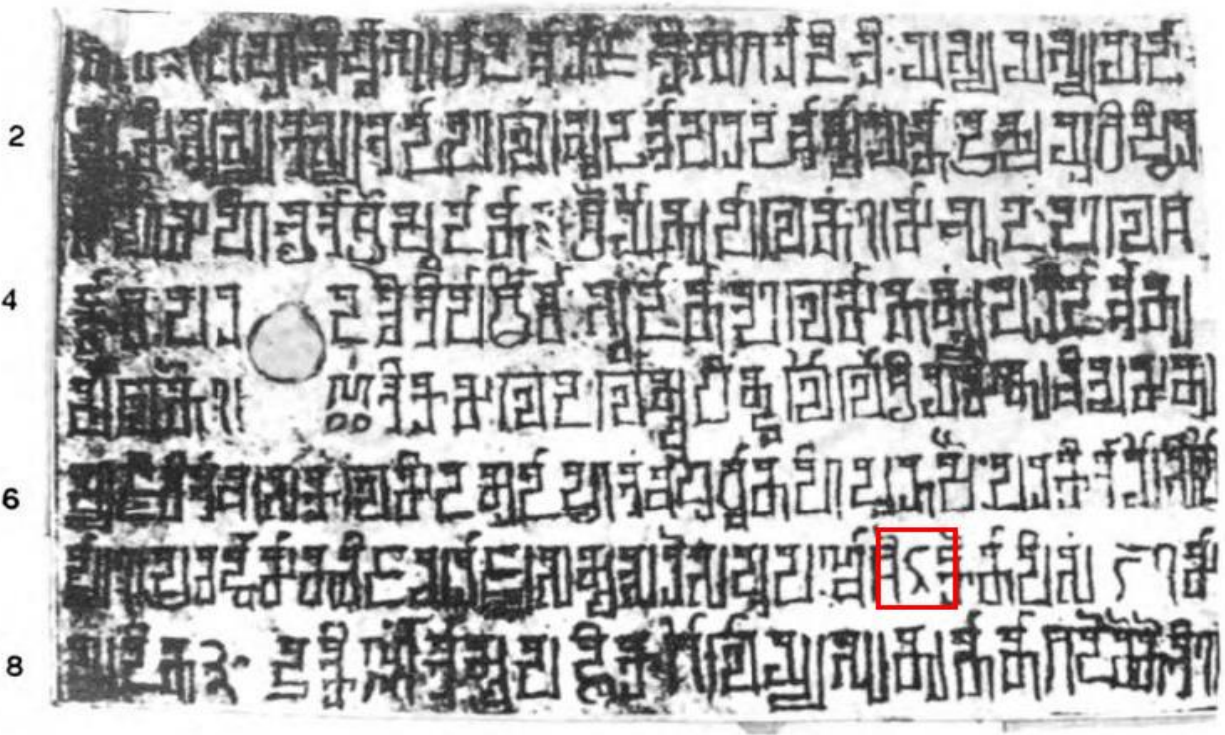
Translation (Lal):

- 16 दाहरन्ति ॥ अग्नेरपत्य (त्यं) प्रथमं सुवर्णं भूर्वृष्णवी¹⁷ सूर्यं—
 17 सुताश्च गावः [1*] दत्तास्त्रयस्तेन भवन्ति¹⁸ लोकाय x काञ्चनं¹⁹ गां च महीं च द—
 18 यात् [॥ 2॥*] षष्टिवर्षसहस्राणि स्वर्गं मोदति भूमिदः [1*] आच्छेत्ता
 19 चानुमन्ता च तान्येव नरके वसेत् [॥ ३॥*] बहुभिर्व्वसुधा दत्ता राजभि—

Transliteration (Lal):

16. dāharanti || agnerapatya(tyaṃ) prathamam suvaṛṇa bhūrvvaiṣṇavī¹⁷ sūryya-
 17. sutāśca gāvaḥ [1*] dattāstrayastena bhavanti¹⁸ lokāyāḥkāñcanaṃ¹⁹ gāṃ ca mahīm ca da-
 18. dyāt[॥2॥*] ṣaṣṭivarṣasahastrāṇi svargge modati bhūmidah[1*] ācchettā
 19. cānumantā ca tānyeva narake vaset [॥3॥*] bahubhiṛvvasudhā dattā rājabhi-

Fig 6: Shows the sign Initial Ra (red) and Jihvamuliya with Ka (blue). (from VIII Nahna Plates of Sudevaraja: 7th CE)



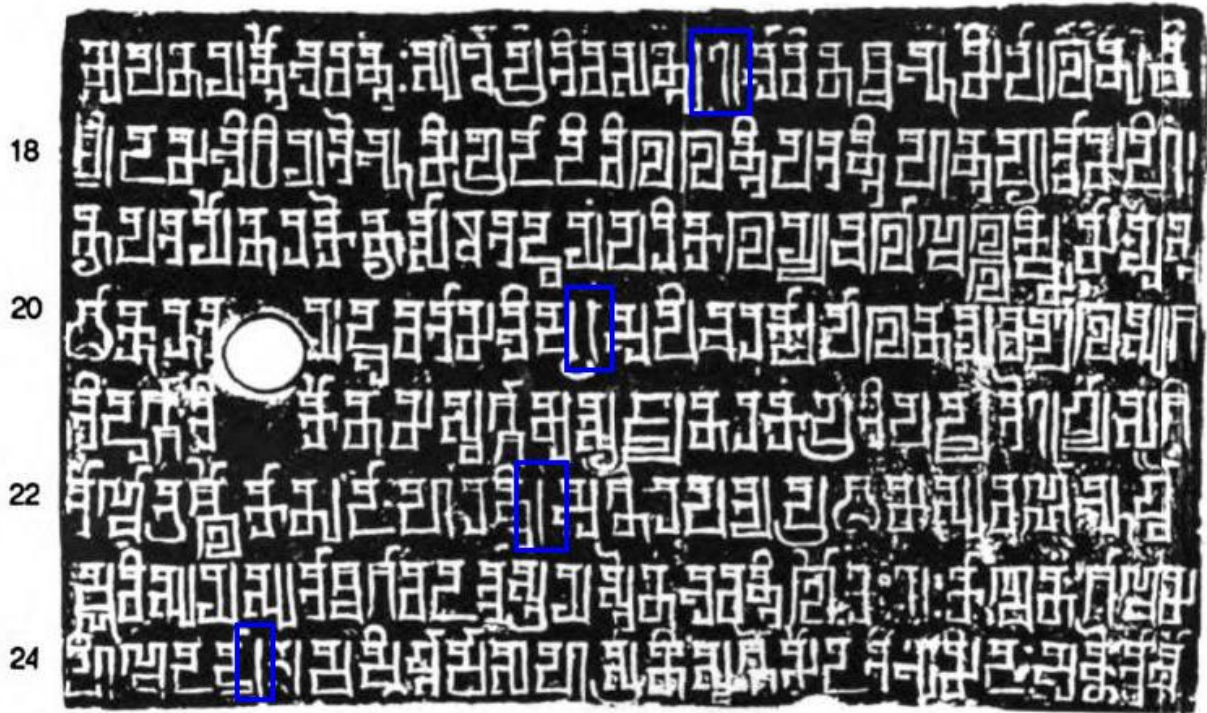
Translation:

7 प्याः ॥ प्रवद्धमानविजयराज्यसम्ब (संव) त्सरे सप्तपञ्चाशोऽङ्केनापि सं० ५० ७ मा-

Transliteration:

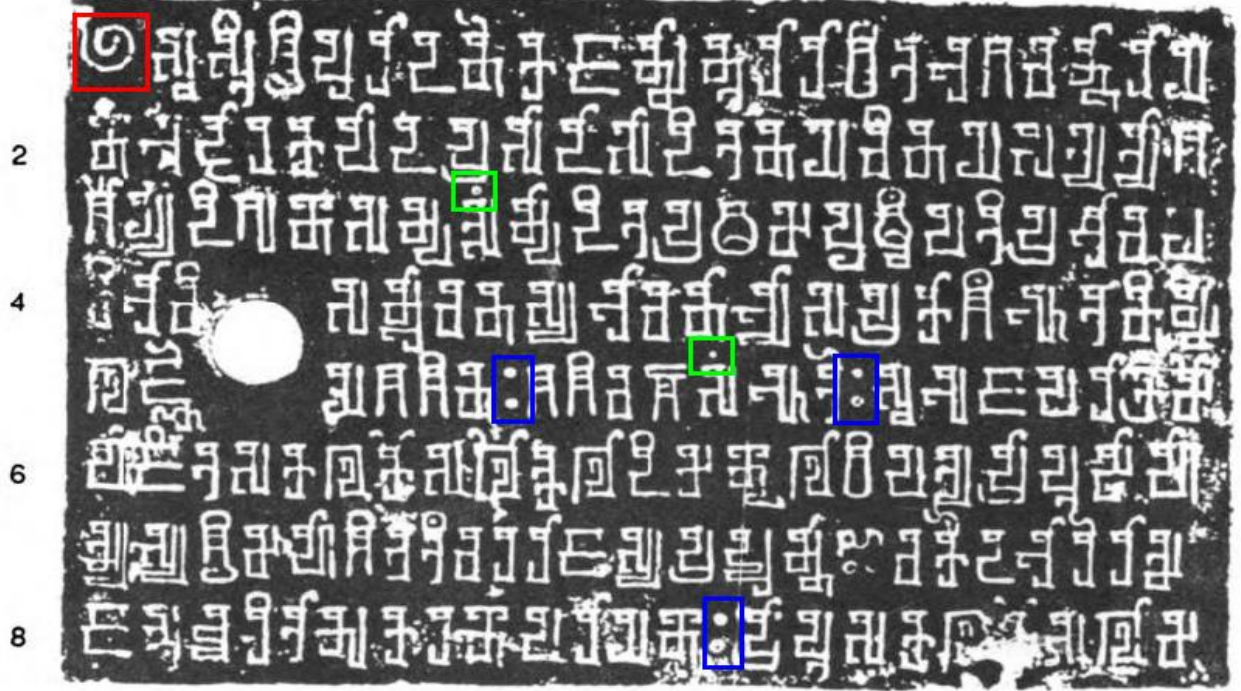
7. pyāḥ ॥ pravarddhamānavijayarājyasamba (saṃva) tsare saptapañcāśe nkenāpi saṃ. 50 7 mā-

Fig 7: Shows the Avagaraha sign (red). (from II A Stray Plates of Śivagupta yr. 57: 8th CE)



SECOND PLATE : SECOND SIDE

Fig 8: Shows the usage of Danda and Double Danda. (from VIII Lodhia Plates of Śivagupta yr. 57:8th CE)



FIRST PLATE

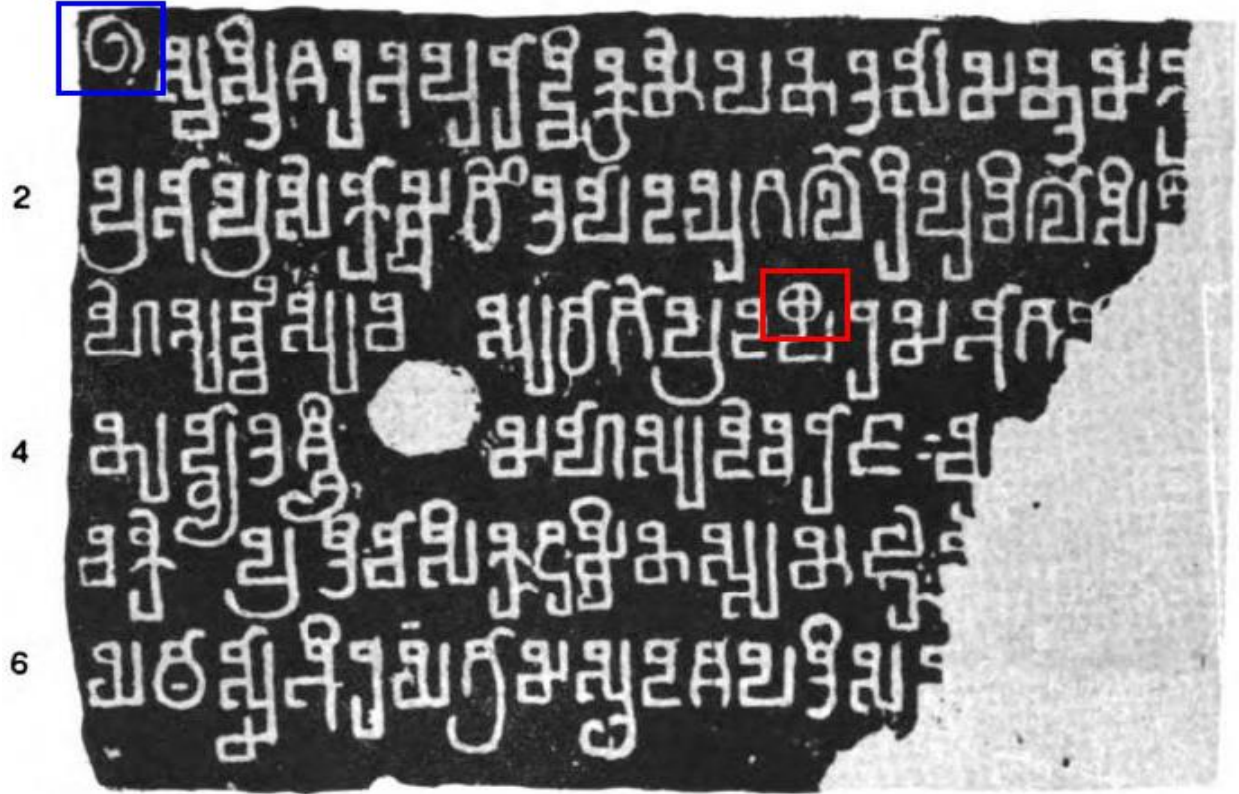
Translation (Shastri):

- 1 सिद्धम् [I*] स्वस्ति [I*] शि (शी) पुरादनेकजन्मान्तराराधितभगवन्नाराय-
- 3 शौर्यादिगुणसम्पत्सं (त्स) म्पादितप्रथमपृथ्वीपतिप्र[भा]वप-
- 5 लज्जेयशशिनः शशिव (वं) छश (श) संभूतेः स्वभुजपराक्रमो-
- 8 ज[स्त]ञ्चरितानुकरणपरायणः प्राप्तसकल[क]ोसलाम-

Transliteration (Shastri):

1. Siddham⁵ [I*] svasti [I*] śri (śrī) purādanekajanmāntarārādhitabhagavannārāya-
3. śauryyādiguṇṣampatsam (tsa) mpāditaprathamapṛithvīpatipra[bhā]vapa-
5. lajñeyaśaśinah śaśiva (vaṃ) ṅśa (śa) sambhūteh svabhujaparākramo-
8. ja[sta]ccaritānukaraṇaparāyaṇah prāptasakala[ka]osalāma-

Fig 9: Shows the usage of Siddham (red), Anusvara (green) and Visarga (blue). (from V Adhabhāra Plates of Nannarāja: 7th CE)



FIRST PLATE

Translation (Shastri):

- 1 सिद्धम्²² [।*] स्वस्ति [।*] शरभपुराद्विक्रमोपनतसामन्तमकु [टचूडामणि *]³—
 3 हेतुव्वंसुवसुधागोप्रद—परमभागव [तो मातापितृपादा*]—

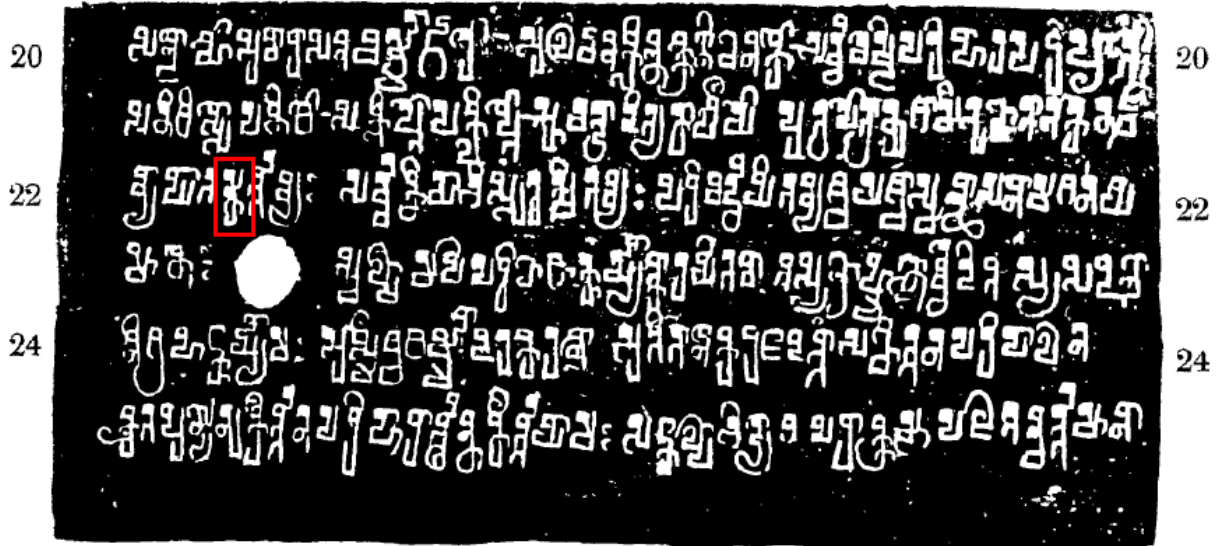
Transliteration (Shastri):

1. Siddham²² [।*] svasti [।*] śarabhapurādvikkramopanasāmāntamaku [ṭacūḍāmaṇi*]³—
 3. heturvvasuvasudhāgoprada**h**paramabhāgava [to mātāpitṛpādā*]—

Fig 10: Shows the usage of Siddham (blue) and sign Upadhamaniya (red). (from X Sirpur Plates of Sudevaraja, yr 7: 7th CE)

DUDIĀ PLATES OF PRAVARASĒNA II

11, a



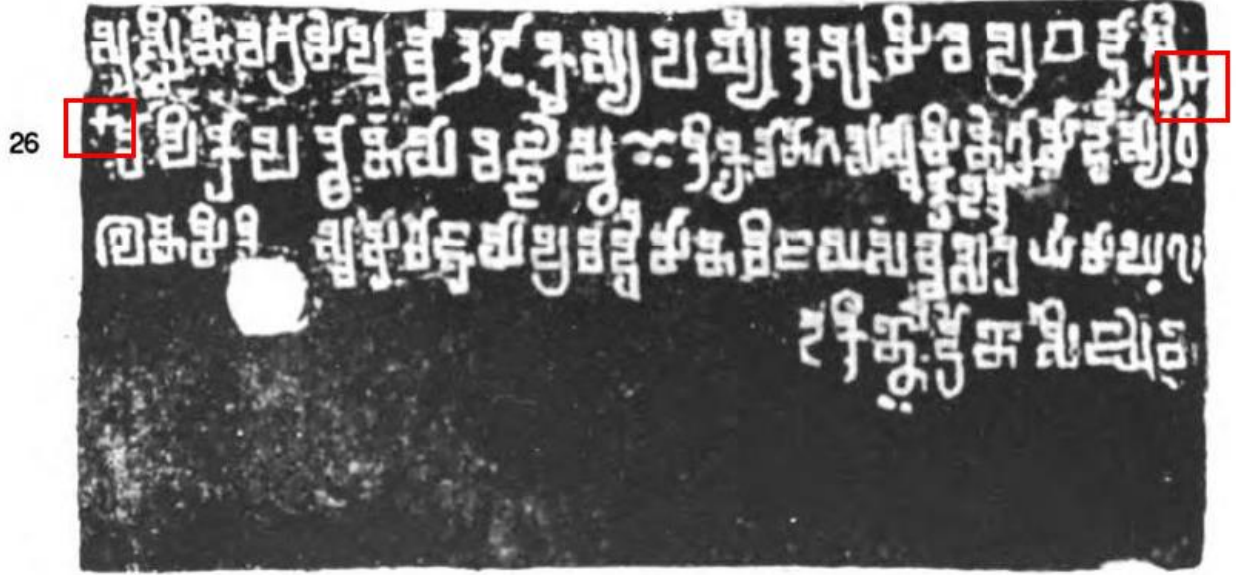
Translation :

22 व्या (द्वया) घातः कर्तव्य सर्वकक्रियाभिस्सरक्षितव्य परिवर्द्धयितव्यश्च¹ [।] यश्चास्मच्छासना-
(न) मगन (ण) य-

Transliteration :

22. vyā (dvayā) ghāta^hkarttavya sarvakkriyābhissarakṣitavya parivarddhayitavyaśca¹[।] yaścāsmacchāsanā-
(na) Magana (ṇa) ya-

Fig 11: Shows the usage of sign Jihvamuliya (red). (from Dudiā Plates of Pravarasena II: 5th CE)



THIRD PLATE : SECOND SIDE

Translation (Lal):

25 अस्मिने (न्ने) व ग्रामे पूर्वतटाकस्य पर्यन्त (न्त) भूमिवप्रबद्धा श्री-

26 ²²वापिका पत्था (न्था) न²³ यावज्जा (ज्ये)ष्ठ इति कृत्वा नाग [व*] त्सस्वामिने ग्रामद्वंस्याधि²⁴

Transliteration (Lal):

25. asmīne (nne) va grāme pūrvvataṭākasya paryyatta (nta) bhūmivaprabaddhā śrī-

26. ²²vāpikā patthā (nthā) nam²³ yāvajjā (jy)ṣṭha iti kṛtvā nāg [va*] tsasvāmine grāmarddhasyādhi²⁴

Fig 12: Shows the usage of punctuation sign plus for word breaking. (from XIII Raipur Plates of Sudevarāja, yr 10)



THIRD PLATE : SECOND SIDE

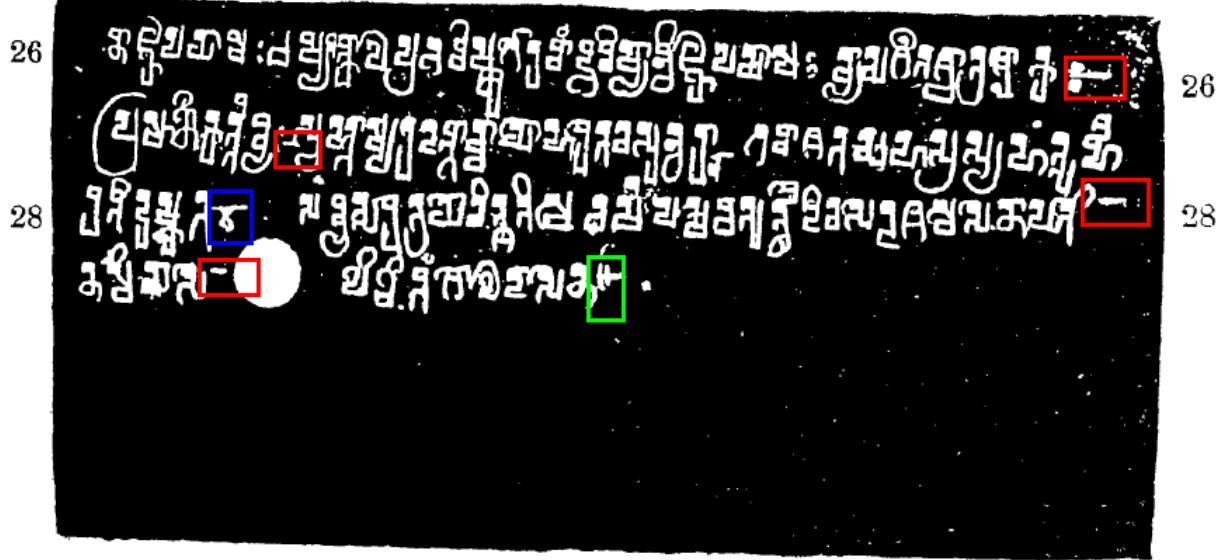
Fig 13: Shows the use of punctuation end of text. (from VII Mallar Plates of Jayarāja, yr 9)

WADGAON PLATES OF PRAVARASĒNA II



Fig 14: Shows the use of punctuation end of text. (from Wadgaon Plates of Pravarasēna II)

DUDIĀ PLATES OF PRAVARASĒNA II



Translation (Lal):

- 26 नाज्ञापयाम । एष्यतत्काल⁵प्रभविष्णुगौरवा (वा) ङ्गविष्यान्विज्ञापयाम. [I*] व्यासगीतरचात्र
श्लोक⁶ ।
- 27 प्रमाणीकत्तव्य । स्वदत्ताम्परद[त्ता] व्वा यो हरेत वसुन्धरान्(म्) [I*] गवा(वा) शतसह-
स्रस्य हत्तु(न्तु)र्ह-
- 28 रति दुष्कृतम्⁷ [II*] सव्वत्सरे त्रयोवित्गतिमे⁸ वर्षापक्षे चतुर्थे दिवसे दशमे सेनापतौ ।⁶
- 29 नमिदासे ।⁶ लिखित गोलदासेन ॥

Transliteration (Lal):

26. nājñāpayāma | eṣyatatkāla⁵prabhaviṣṇugauravā (vā) ḍḅaviṣyānvijñāpayām. [I*] vyāsagitaścātraśloka⁶ |
27. pramāṇīkarttavya | svadattāmparada[ttā] vṅvā yo hareta vasundhāran(m) [I*] gavā (vā) śatasaha-
srasya hattu(ntu)rh-
28. rati duskṛtam⁷ [II*] savvatsare trayovitsātime⁸ varṣāpakṣe caturthe divase daśame senāpatau ।⁶
29. namidāse ।⁶ likhit goladāsen ॥

Fig 15: Shows the usage of Punctuation Dash (red), sign final Ma (blue) and Double Danda (green).(from Dudiā Plates of Pravarasēna II)

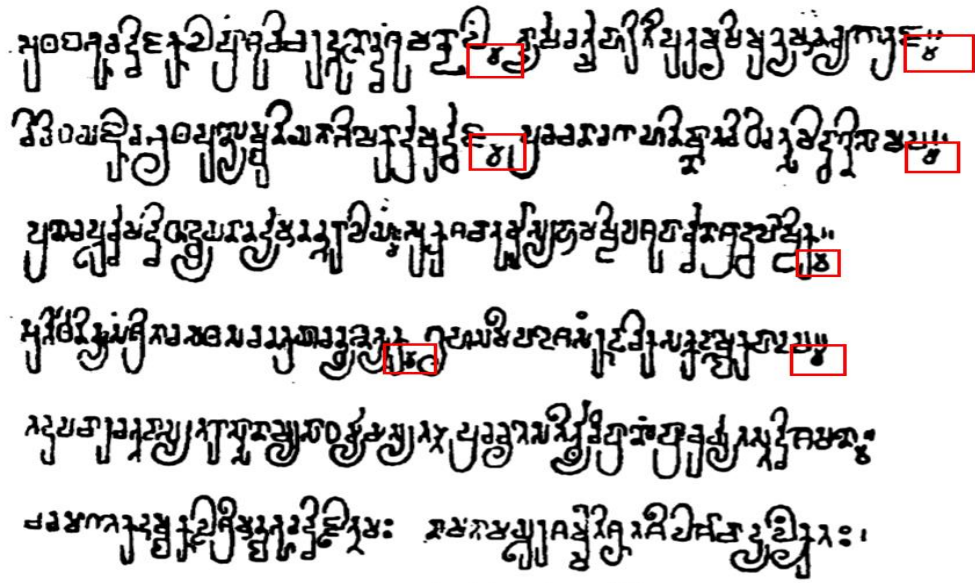
Seal



Fig 16: Shows the use of Punctuation Dash in Vakataka seal.

ಲಿಪಿಯ ಹುಟ್ಟು ಮತ್ತು ಬೆಳವಣಿಗೆ

೧೨೯



ಕದಂಬ ಕಾಕುತ್ಸ್ಥ ವರ್ಮನ ಶಾಸನ

ಕೃಪ : ಸಿ.ಶಿ.ಮೂರ್ತಿ

Fig 17: Shows the use of sign final Ma in Talagunda inscription.(*Devarakonda* 2002: 129)

Appendix

Conjuncts

<i>kka</i>	കക	<i>kla</i>	കല	<i>gdha</i>	ഗദ	<i>ñka</i>	ക്ക
<i>kkha</i>	കക	<i>kva</i>	കവ	<i>gdhva</i>	ഗദ്വ	<i>ñkta</i>	ക്ക
<i>kca</i>	കക	<i>kvyā</i>	കവ്യാ	<i>gna</i>	ഗ്ന	<i>ñkṣa</i>	ക്ക
<i>kṇa</i>	കക	<i>kṣa</i>	കക്ഷ	<i>gnya</i>	ഗ്ന്യാ	<i>ñkṣva</i>	ക്ക
<i>kta</i>	കക	<i>kṣṇa</i>	കക്ഷ്ണ	<i>gbha</i>	ഗ്ബ	<i>ñkha</i>	ക്ക
<i>kyā</i>	കക	<i>kṣmā</i>	കക്ഷ്മ	<i>gbhya</i>	ഗ്ബ്യാ	<i>ñkhyā</i>	ക്ക
<i>ktra</i>	കക	<i>kṣmyā</i>	കക്ഷ്മ്യാ	<i>gma</i>	ഗ്മ	<i>ṅga</i>	ക്ക
<i>ktryā</i>	കക	<i>kṣyā</i>	കക്ഷ്യാ	<i>gya</i>	ഗ്യാ	<i>ṅgyā</i>	ക്ക
<i>ktva</i>	കക	<i>kṣva</i>	കക്ഷ്വ	<i>gra</i>	ഗ്ര	<i>ṅgra</i>	ക്ക
<i>ktha</i>	കക			<i>grya</i>	ഗ്ര്യാ	<i>ṅgha</i>	ക്ക
<i>kna</i>	കക	<i>khna</i>	കക്ന	<i>gla</i>	ഗ്ല	<i>ṅghra</i>	ക്ക
<i>knyā</i>	കക	<i>khya</i>	കക്യാ	<i>gva</i>	ഗ്വ	<i>ṅṅa</i>	ക്ക
<i>kma</i>	കക	<i>khra</i>	കക്ര			<i>ṅma</i>	ക്ക
<i>kya</i>	കക			<i>ghna</i>	ഗ്ന		
<i>kra</i>	കക	<i>gga</i>	ക്ക	<i>ghma</i>	ഗ്ന		
<i>kryā</i>	കക	<i>gda</i>	ക്ക	<i>ghya</i>	ഗ്ന്യാ		

<i>cca</i>	ꣳꣳ	<i>jñya</i>	ꣳꣳꣳ	<i>tsa</i>	ꣳꣳ	<i>ṇṭa</i>	ꣳꣳ
<i>ccha</i>	ꣳꣳꣳ	<i>jma</i>	ꣳꣳ			<i>ṇṭha</i>	ꣳꣳ
<i>cchra</i>	ꣳꣳꣳꣳ	<i>jya</i>	ꣳꣳꣳ	<i>ṭhya</i>	ꣳꣳꣳ	<i>ṇḍa</i>	ꣳꣳ
<i>cchva</i>	ꣳꣳꣳꣳꣳ	<i>jra</i>	ꣳꣳꣳ	<i>ṭhra</i>	ꣳꣳꣳ	<i>ṇḍra</i>	ꣳꣳꣳ
<i>cñā</i>	ꣳꣳꣳꣳ	<i>jva</i>	ꣳꣳꣳ			<i>ṇḍya</i>	ꣳꣳꣳꣳ
<i>cma</i>	ꣳꣳꣳ			<i>ḍga</i>	ꣳꣳꣳ	<i>ṇḍha</i>	ꣳꣳꣳ
<i>cya</i>	ꣳꣳꣳꣳ	<i>ñca</i>	ꣳꣳꣳꣳ	<i>ḍgya</i>	ꣳꣳꣳꣳ	<i>ṇṇa</i>	ꣳꣳꣳꣳ
		<i>ñcha</i>	ꣳꣳꣳꣳꣳ	<i>ḍgha</i>	ꣳꣳꣳꣳꣳ	<i>ṇṇma</i>	ꣳꣳꣳꣳꣳ
<i>chya</i>	ꣳꣳꣳꣳꣳ	<i>ñja</i>	ꣳꣳꣳꣳꣳ	<i>ḍghra</i>	ꣳꣳꣳꣳꣳꣳ	<i>ṇva</i>	ꣳꣳꣳꣳ
<i>chra</i>	ꣳꣳꣳꣳꣳꣳ	<i>ñśa</i>	ꣳꣳꣳꣳꣳꣳ	<i>ḍḍa</i>	ꣳꣳꣳꣳꣳꣳ	<i>ṇya</i>	ꣳꣳꣳꣳꣳꣳ
				<i>ḍma</i>	ꣳꣳꣳꣳꣳꣳ	<i>ṇra</i>	ꣳꣳꣳꣳꣳꣳ
<i>jjā</i>	ꣳꣳꣳꣳ	<i>ṭka</i>	ꣳꣳꣳꣳ	<i>ḍya</i>	ꣳꣳꣳꣳꣳ		
<i>jjñā</i>	ꣳꣳꣳꣳꣳꣳ	<i>ṭṭa</i>	ꣳꣳꣳꣳꣳꣳ	<i>ḍra</i>	ꣳꣳꣳꣳꣳꣳ		
<i>jjva</i>	ꣳꣳꣳꣳꣳꣳꣳ	<i>ṭṭha</i>	ꣳꣳꣳꣳꣳꣳꣳ				
<i>jjha</i>	ꣳꣳꣳꣳꣳꣳꣳ	<i>ṭya</i>	ꣳꣳꣳꣳꣳꣳꣳ	<i>ḍhya</i>	ꣳꣳꣳꣳꣳꣳꣳ		
<i>jñā</i>	ꣳꣳꣳꣳꣳꣳ	<i>ṭra</i>	ꣳꣳꣳꣳꣳꣳ	<i>ḍhva</i>	ꣳꣳꣳꣳꣳꣳꣳ		

<i>tka</i>	𑄎	<i>tsnya</i>	𑄎𑄏	<i>dbra</i>	𑄎𑄏	<i>ntya</i>	𑄎𑄏
<i>tta</i>	𑄎	<i>tsya</i>	𑄎𑄏	<i>dbha</i>	𑄎𑄏	<i>ntra</i>	𑄎𑄏
<i>ttya</i>	𑄎𑄎			<i>dbhya</i>	𑄎𑄏𑄎	<i>ntsa</i>	𑄎𑄏𑄎
<i>ttva</i>	𑄎𑄎	<i>thya</i>	𑄎𑄏	<i>dya</i>	𑄎𑄏	<i>ntha</i>	𑄎𑄏𑄎
<i>ttha</i>	𑄎𑄎			<i>dra</i>	𑄎𑄏	<i>nda</i>	𑄎𑄏𑄎
<i>tna</i>	𑄎𑄏	<i>dga</i>	𑄎𑄏	<i>drya</i>	𑄎𑄏𑄎	<i>nddha</i>	𑄎𑄏𑄎𑄏
<i>tnya</i>	𑄎𑄏𑄎	<i>dgra</i>	𑄎𑄏𑄎	<i>dva</i>	𑄎𑄏	<i>ndra</i>	𑄎𑄏𑄎
<i>tpa</i>	𑄎𑄏	<i>dda</i>	𑄎𑄏	<i>dvya</i>	𑄎𑄏𑄎	<i>ndha</i>	𑄎𑄏𑄎
<i>tpha</i>	𑄎𑄏𑄎	<i>ddra</i>	𑄎𑄏𑄎			<i>ndhya</i>	𑄎𑄏𑄎𑄏
<i>tma</i>	𑄎𑄏	<i>ddya</i>	𑄎𑄏𑄎	<i>dhna</i>	𑄎𑄏	<i>nna</i>	𑄎𑄏𑄎
<i>tya</i>	𑄎𑄏	<i>ddva</i>	𑄎𑄏𑄎	<i>dhma</i>	𑄎𑄏	<i>nnya</i>	𑄎𑄏𑄎𑄏
<i>tra</i>	𑄎𑄏	<i>ddha</i>	𑄎𑄏	<i>dhya</i>	𑄎𑄏	<i>nma</i>	𑄎𑄏𑄎
<i>trya</i>	𑄎𑄏𑄎	<i>ddhya</i>	𑄎𑄏𑄎	<i>dhra</i>	𑄎𑄏	<i>nya</i>	𑄎𑄏𑄎
<i>tva</i>	𑄎𑄏	<i>ddhva</i>	𑄎𑄏𑄎	<i>dhva</i>	𑄎𑄏	<i>nra</i>	𑄎𑄏𑄎
<i>tsa</i>	𑄎𑄏	<i>dna</i>	𑄎𑄏			<i>nva</i>	𑄎𑄏𑄎
<i>tsna</i>	𑄎𑄏𑄎	<i>dba</i>	𑄎𑄏	<i>nta</i>	𑄎𑄏	<i>nsa</i>	𑄎𑄏𑄎

<i>pta</i>	ㅍㅌ	<i>bbha</i>	ㅃ	<i>mya</i>	ㅁㅑ	<i>vva</i>	ㅅㅑ
<i>ptya</i>	ㅍㅑ	<i>bya</i>	ㅃㅑ	<i>mra</i>	ㅁㄹ		
<i>pna</i>	ㅍㄴ	<i>bra</i>	ㅃㄹ	<i>m̄la</i>	ㅁ̄ㄹ	<i>śca</i>	ㅅㅑ
<i>pma</i>	ㅍㅁ					<i>śna</i>	ㅅㄴ
<i>pya</i>	ㅍㅑ	<i>bhna</i>	ㅃㅑ	<i>yya</i>	ㅑㅑ	<i>śma</i>	ㅅㅁ
<i>pra</i>	ㅍㄹ	<i>bhya</i>	ㅃㅑ	<i>yva</i>	ㅑㅅ	<i>śya</i>	ㅅㅑ
<i>pla</i>	ㅍㄹ	<i>bhra</i>	ㅃㄹ			<i>śra</i>	ㅅㄹ
<i>psa</i>	ㅍㅅ	<i>bhva</i>	ㅃㅑ	<i>lka</i>	ㄹㅋ	<i>śrya</i>	ㅅㅑ
				<i>lga</i>	ㄹㄱ	<i>śla</i>	ㅅㄹ
<i>phyā</i>	ㅍㅑ	<i>mna</i>	ㅁㅑ	<i>lya</i>	ㄹㅑ	<i>śva</i>	ㅅㅑ
		<i>mpa</i>	ㅁㅍ	<i>lla</i>	ㄹㄹ/ㄹ	<i>śvya</i>	ㅅㅑ
<i>bja</i>	ㅃㅑ	<i>mphra</i>	ㅃㅑ	<i>lva</i>	ㄹㅅ		
<i>bda</i>	ㅃㄴ	<i>mpha</i>	ㅁㅍ				
<i>bdha</i>	ㅃㄴ	<i>mba</i>	ㅁㅅ	<i>vna</i>	ㅅㅑ		
<i>bdhva</i>	ㅃㅑ	<i>mbya</i>	ㅁㅑ	<i>vya</i>	ㅅㅑ		
<i>bba</i>	ㅃㅁ	<i>mma</i>	ㅁㅁ	<i>vra</i>	ㅅㄹ		

<i>ṣka</i>	ṣk	<i>ṣṣa</i>	ṣṣ	<i>ssa</i>	ṣṣ
<i>ṣkra</i>	ṣkṛ				
<i>ṣṭa</i>	ṣṭ	<i>ska</i>	sk	<i>hṇa</i>	ṣṭ
<i>ṣṭra</i>	ṣṭṛ	<i>skra</i>	skṛ	<i>hna</i>	ṣṭṛ
<i>ṣṭya</i>	ṣṭṛ	<i>skha</i>	skḥ	<i>hma</i>	ṣṭṛ
<i>ṣṭrya</i>	ṣṭṛṣ	<i>sta</i>	sk	<i>hya</i>	ṣṭṛṣ
<i>ṣṭva</i>	ṣṭṃ	<i>stra</i>	skṛ	<i>hra</i>	ṣṭṃ
<i>ṣṭha</i>	ṣṭḥ	<i>stva</i>	skṃ	<i>hla</i>	ṣṭḥ
<i>ṣṭhya</i>	ṣṭḥṛ	<i>stha</i>	skḥ	<i>hva</i>	ṣṭḥṛ
<i>ṣṇa</i>	ṣṇ	<i>sthya</i>	skḥṛ		
<i>ṣṇya</i>	ṣṇṛ	<i>sna</i>	skṃ		
<i>ṣpa</i>	ṣp	<i>spa</i>	skp		
<i>ṣpra</i>	ṣpṛ	<i>sma</i>	skṃ		
<i>ṣma</i>	ṣm	<i>smya</i>	skṃṛ		
<i>ṣya</i>	ṣṛ	<i>sya</i>	skṛ		
<i>ṣva</i>	ṣṃ	<i>sra</i>	skṛ		

SO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹_{TP PT}

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

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

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

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

A. Administrative

1. Title:	Proposal to Encode the Box-Headed Script in Unicode
2. Requester's name:	<i>Biswajit Mandal (biswajitmandal.bm90@gmail.com)</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>Individual Member</i>
4. Submission date:	<i>02/03/2024</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<i>Y</i>
(or) More information will be provided later:	<i>N</i>

B. Technical – General

1. Choose one of the following:	
a. This proposal is for a new script (set of characters):	<i>Y</i>
Proposed name of script:	<i>Box Headed</i>
b. The proposal is for addition of character(s) to an existing block:	
Name of the existing block:	
2. Number of characters in proposal:	<i>72</i>
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) <input type="checkbox"/>
C-Major extinct <input checked="" type="checkbox"/>	B.2-Specialized (large collection) <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?	<i>Y</i>
a. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document?	<i>Y</i>
b. Are the character shapes attached in a legible form suitable for review?	<i>Y</i>
5. Fonts related:	
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<i>Biswajit Mandal</i>
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	<i>Biswajit Mandal (biswajitmandal.bm90@gmail.com) & Ki Basajan (juragan.wr12@gmail.com)</i>
6. References:	
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	<i>Y</i>
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<i>Y</i>
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)?	<i>N</i>

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 HTU <http://www.unicode.org> UTH for such information on other scripts. Also see Unicode Character Database ([Hhttp://www.unicode.org/reports/tr44/](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?		N
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.)?		Y
If YES, with whom?	Nurisham Yahaya, Ki Basajan, Pendi Supriyadi, Jinten Sumbarsih, Supriyadi Sapta Atmaja, Muhammad Nur Hidayat Jilid IV, abdu el Gholibi, etc	
If YES, available relevant documents:	See the proposal	
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?		Y
Reference:	See the proposal	
4. The context of use for the proposed characters (type of use; common or rare)		rare
Reference:	See the proposal	
5. Are the proposed characters in current use by the user community?		Y
If YES, where? Reference:	Currently used by scholars of S-E Asia; see section 2 of proposal	
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?		N/A
If YES, is a rationale provided?		
If YES, reference:		
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?		Y
If YES, is a rationale for its inclusion provided?		Y
If YES, reference:	See the proposal	
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?		Y
If YES, is a rationale for its inclusion provided?		Y
If YES, reference:	See the proposal	
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?		Y
If YES, is a rationale for its inclusion provided?		Y
If YES, reference:	See the proposal	
11. Does the proposal include use of combining characters and/or use of composite sequences?		Y
If YES, is a rationale for such use provided?		
If YES, reference:	See the proposal	
Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?		Y
If YES, reference:	See the proposal	
12. Does the proposal contain characters with any special properties such as control function or similar semantics?		N
If YES, describe in detail (include attachment if necessary)		
13. Does the proposal contain any Ideographic compatibility characters?		N
If YES, are the equivalent corresponding unified ideographic characters identified?		
If YES, reference:		