

## Diacritic Marks for Short e & o Vowels (Dravidian and Vedic) in Devanagari (North India) and Grantha (South India)

Dr. Naga Ganesan ([naa.ganesan@gmail.com](mailto:naa.ganesan@gmail.com))

### 1.0 Vedic vowels - Short e & o Diacritics in Devanagari script:

In a mail addressed to me in MinTamil e-list, Dr. Jean-Luc Chevillard (CNRS, Paris) gave a reference to an old article by K. V. Abhyankar .

The reference given is: Short E (ardha ekāra) and Short O (ardha okāra) in Sanskrit, Prof. K V Abhyankar, 1957, Annals of the Bhandarkar Oriental Research Institute, vol 38, pp 154-157. Here is the first paragraph, (Sanskrit quote transliterated into Latin script).

“ As Sanskrit is not a spoken language at present, it is very difficult to say definitely whether there is the pronunciation of short e and short o in Sanskrit as in the spoken Indian languages, and if so, where it is noticeable. In Kannada and other Indian languages short e and short o are looked upon as different vowels shown differently in writing. While discussing the necessity of the rule of Panini prescribing i and u as short substitutes in the place of ē, ai, ō, and au when the latter are to be shortened, Patanjali invites attention to the fact that short e and o do exist in the Sanskrit language and the followers of the Satyamugri and the Ranayaniya branches of the Samaveda do pronounce Short e and short o. In support of his statement the writer of the Mahabhasya quotes as instances the following passages *sujāte aśvasūṅṛtē, adhvaryo adribhiḥ sutam and śukraṁ te anyadyajataṁ te anyata* in which the vowel e in *sujāte* and *te*, and the vowel o in *adhvaryo* appear to be short e and o according to him.”

How can the User community represent short e & o from plain-text Unicode Devanagari fonts? There are many choices available as seen in L2/11-007. Additionally, in Nagari script, there is a recent innovation to denote Dravidian short e & o vowels, and these can be employed for Vedic e & o as well. On the glyphs of long e & o vowels in Nagari script, a diacritic mark (**tilde** sign imported from Europe) has been added to create short e (U+090E) & o (U+0912) in Devanagari script in Unicode.

There is also another innovation of adding a European diacritic, “*breve*” sign to create newly short e & o vowels. See S. Sharma, L2/11-007, pg. 7, “Further, some scholars (Dr Peter Scharf, personal communication) opine that the chandra is nothing but an adaptation of the European *breve* which is used for denoting short vowels in various transcription systems.”

The 1987 book which has this innovation & its publication details:  
Vyākaraṇa Mahābhāṣya with Pradīpa and Uddyōta, Vol 1; reprinted 1987 by  
Chaukhambha Sanskrit Pratisthan, Delhi; ed: Bhargava Shastri Bhikaji Joshi; ISBN 81-7084-026-0; p 112.

In the next section, we will study the diacritic mark used in Grantha script for writing Dravidian and Vedic e & o vowels. The Government of India proposal (L2/10-426) uses the well known diacritic from south Indian orthography, namely the dot or small circle, called *puLLi* in Tamil grammar, Tolkappiyam, aged about 2000 years ago.

## **2.0 Dravidian and Vedic vowels - Short e & o Diacritics in Grantha script:**

There are four major literary languages belonging to Dravidian family. Tamil, Telugu and Kannada have literatures that are more than 1000 years old, and inscriptions go further back in time. Hence, Tamil, Telugu and Kannada are declared as classical languages of India by the Govt. of India. The sacred Classics from Dravidian languages and their names (personal, places, rivers, etc.,) need representation in Grantha without mutilation. In addition, user community needs short e & o, llla, nna and rra without any ambiguity within Grantha script orthography.

The Govt. of India proposal on Grantha script encoding (L2/10-426), written after meeting with several Grantha experts all over India including Tamil Nadu has the 5 Dravidian letters (short e & o, plus the 3 Dravidian consonants). Dr. Swaran Lata's letter to Dr. Nakkeeran, Director, Tamil Virtual Academy, Tamil Nadu giving the table of 5 Dravidian letters compared to the corresponding 5 Devanagari letters (& 2 vowel signs for short e & o) is attached as Appendix I.

Historically, Grantha script has been a multi-language script. Several languages such as Malayalam, Tamil and South East Asian languages have been written using Grantha script. Without the Dravidian letters in Grantha script, literally 1000s of native words of south India cannot be written correctly & lead to major errors in their semantic meanings for people who want to use Grantha script in Unicode.

The GoI proposal for Grantha uses a native diacritic viz., the age-old tradition recorded in Tolkappiyam grammar - use a *puLLi* diacritic to mark short e & o vowels. BTW, what is in GoI proposal for Grantha Unicode is actually Tamil Grantha or Grantha Tamil script.

On the transcription of Dravidian languages' letters – vowels short e, short o, consonants RRA, LLLA and NNNA in the Grantha script, P. Visalakshy states that “ The variety of Grantha script suitable enough to represent both Tamil and Sanskrit is known as ‘Tamil Grantha’ or ‘Grantha Tamil.’ ” Page 66, P. Visalakshy, 2003, The Grantha Script, Dravidian Linguistics Association, St. Xavier's College, University of Kerala, Trivandrum, India.



Tamil scholars are of the considered view that Tamil script originates from Grantha script. For example, page 37, A. C. Burnell, *Elements of South Indian Paleography*, 1874. “ The origin of this Tamil alphabet is apparent at first sight; it is a brahmanical adaptation of the Grantha letters corresponding to the old VaTTezuttu, from which, however, the last four signs (LLL, LL, RR and NNN) have been retained, ... The Grantha Tamil differs from the Grantha alphabet in precisely the same way as the VaTTezuttu, as far as reduplication of consonants and the expression of the absence of the inherent vowel (virama) are concerned. The puLLi or dot above the consonant which serves the purpose of the virama, does not occur in any of the inscriptions I have seen, and it is omitted in the earliest printed books. The famous Jesuit Beschi (1704-1774) is the author of a great improvement in Tamil orthography – the distinction between long and short e & o.”

The puLLi is located only very rarely in cave inscriptions, and none in palm leaves. The reason is clear, palm leaves get destroyed by puLLi holes. But in printing, there is no problem with puLLi and it is needed for disambiguation. Before Beschi created new shapes for long e & o in Tamil, and shifted long e & o as short e & o for Tamil script (see Tamil block in Unicode), long e & o of Grantha and Tamil scripts were identical, and puLLi is prescribed for creating short e & o vowels in grammars and inscriptions. For short e & o vowels and the corresponding vowel signs using the ancient puLLi diacritic, refer to Govt. of India Grantha code chart (Fig. 1) from L2/10-426.

Subbiah, A. *Is the Tamil alphabet system an adaptation?* *Journal of Tamil Studies* (Madras) 3 (Sep 1973) 64-74

"Prof. T. P. Meenakshisundaran has done a great service to the cause of Tamil research by raising (Journal of Tamil Studies, 1972) the hitherto little debated question as to whether the Tamil alphabetic system is an indigenous one or adapted from the modified Brahmi script used by Buddhist and Jain monks for their rock cut inscriptions in Tamil Nad; I Mahadevan (1968) has named the Script as Tamil-Brahmi in supersession of the term Dravidi or Damili used in earlier times and has dated the earliest of these inscriptions to 2<sup>nd</sup> century BC. On the basis of (a) cUttirams Nos 15 & 16 reading,

The nature of the consonant  
is to be provided with a dot  
e and o are also of the same nature.

and (b) the relegation is the end of the alphabetic inventory now current, those sounds of Tamil which do not find a place in Prakrit or Sanskrit for writing which languages the Brahmi script was originally devised viz., LLLA, LLA, RRA, NNNA. T. P. Meenakshisundaran arrives at the conclusion that Tolkappiyar appears to have based his alphabetic system on the Tamil-Brahmi script. This is broadly in agreement with Mahadevan's earlier hypothesis, that Tamil had no Script of its own until the Tamil-Brahmi script was generally adopted in Tamil country for writing Tamil; the latter could if at all have been possible only after the Tamil-Brahmi Script had time to get established in Tamil Society and accepted by the Tamil rulers, as normally such an important development could be brought about only by a recognized authority such as the

Government or a recognized Academy. The implication of this is that Tolkappiyam must have been written long after the 2nd century BC."

It is to the credit of Prof. T. P. Meenakshisundaran that we have his showing of Tamil sacred classics being written in Grantha script (Cayaamil Tiruvempaavai Tiruppaavai, Contribution to the external history of the Tamils, 1961, 2<sup>nd</sup> edition 1978). Some of the sacred Tamil texts as seen in Thailand have been re-written in Grantha script in a 1972 EFEO (Paris) publication by Prof. Jean Filliozat. This was a book from scholars at Pondicherry, south of Madras city. I will discuss this 1972 EFEO book and more in a separate document.

Isaac Taylor (1829-1901), The alphabet: an account of the origin and development of letters. Vol. 2, page 356, "From this lapidary alphabet two scripts were developed, a cursive and literary script. The first is represented by the Tamil, while the other has developed into the Grantha or 'book' alphabet used by the Tamil Brahmans for the Sanskrit transcriptions of their sacred books. From it are derived two vernacular alphabets which are used on the Malabar coast; one is the Tulu Grantha (line 23), and the other the Malayalam, from which several characters were borrowed by the Christians of St. Thomas in order to supplement the Syriac (Karshuni) alphabet which they obtained from the Nestorian missionaries (see vol. i., p. 293.)

The great Tamil alphabet occupies the extreme south of India."

Student's Britannica India, 5 volumes, Editors: Dale Hoiberg and Indu Ramchandani, pg. 349 has the entry on Malayalam language.

Of particular interest is the fact that Malayalam is also written using Tamil Grantha script that includes all the 5 Dravidian letters - e, o, llla, nna and rra.

pg. 349, Malayalam language:

"The earliest record of the language is an inscription dated to AD c. 830. An early extensive influx of Sanskrit words influenced the Malayalam script (derived from the Grantha script, itself derived from Brahmi): it has letters to represent all the Sanskrit sounds, besides the Dravidian sounds. The language also uses a script called Kolezhuttu (Rod script), which is derived from the Tamil writing system. The Tamil Grantha script is used as well."

**Appendix I Dr. Swaran Lata's letter from Govt. of India.**

Note in particular the table giving comparison of Dravidian letters' glyphs between Tamil, Devanagari and Grantha scripts. There are some 27 letters common between Tamil and Grantha scripts for Dravidian and Indo-Aryan languages.

By Speed Post

Swaran Lata  
Director & HoD  
Human Centred Computing Division



भारत सरकार  
GOVERNMENT OF INDIA  
संचार और सूचना प्रौद्योगिकी मंत्रालय  
MINISTRY OF COMMUNICATIONS AND  
INFORMATION TECHNOLOGY  
सूचना प्रौद्योगिकी विभाग  
DEPARTMENT OF INFORMATION TECHNOLOGY  
इलेक्ट्रॉनिक्स निकेतन  
ELECTRONICS NIKETAN  
6, सी.जी.ओ. कॉम्प्लेक्स / 6, C.G.O. COMPLEX  
नई दिल्ली / New Delhi-110003  
Website : www.mit.gov.in

दूरभाष/Tele:  
असो पत्र सं० :  
D.O.NO.....13(1)/2009-HCC(TDIL)

दिनांक/Dated.....27-12-2010

Dear Shri Nakkeeran,

I acknowledge receipt of your email regarding the Government of India proposal on encoding of Grantha script in the Unicode Standard. With reference to the above I would like to inform you that these seven characters were not the part of the initial Government of India proposal submitted by CDAC to Unicode Technical Committee. Experts discussed inclusion of these in a meeting held in DIT on September 6<sup>th</sup>, 2010. The recommendation of the experts with regard to these characters was totally based on the fact that addition of these characters in the Grantha script will help to represent all the sounds present in North Indian as well as South Indian scripts using Grantha script. The rationale of incorporating these characters is enclosed. I am sure that the concerns of Gol in providing necessary linkages among Indian languages in the Unicode encoding including Grantha are adequately addressed through these characters.

Yours sincerely,

(Swaran Lata)

To

Dr. PR Nakkeeran, Director  
Tamil Virtual Academy  
Module 44, 4th Floor,  
Elnet Software City,  
Taramani  
Chennai - 600 113



राष्ट्रीय इ-गवर्नेंस योजना  
National e-Governance Plan

Public services closer home

**CHARACTERS IN QUESTION IN PROPOSED GRANTHA SCRIPT V/S TAMIL V/S DEVANAGARI**

PROPOSED GRANTHA CHARACTERS			EXISTING TAMIL CHARACTERS			SIMILAR DEVANAGARI CHARACTERS *		
Code	Glyph	NAME OF THE CHARACTER	Code	Glyph	NAME OF THE CHARACTER	Code	Gyph	NAME OF THE CHARACTER
1130E	ᱠ	GRANTHA LETTER E *for transcribing Dravidian short /e/	0B8E	ᱠ	TAMIL LETTER E	90E	ऐ	DEVENAGARI LETTER SHORT E
11312	ᱡ	GRANTHA LETTER O *for transcribing Dravidian short /o/	0B92	ᱡ	TAMIL LETTER O	912	औ	DEVENAGARI LETTER SHORT O
11329	ᱢ	GRANTHA LETTER NNNA *for transcribing Dravidian alveolar nasal	0BA9	ᱢ	TAMIL LETTER NNNA	929	ऋ	DEVENAGARI LETTER NNNA
11331	ᱣ	GRANTHA LETTER RRA *for transcribing Dravidian alveolar /r/	0BB1	ᱣ	TAMIL LETTER RRA	931	ॠ	DEVENAGARI LETTER RRA
11334	ᱤ	GRANTHA LETTER LLLA *for transcribing Dravidian retroflex continuant	0BB4	ᱤ	TAMIL LETTER LLLA	934	ॡ	DEVENAGARI LETTER LLLA
11346	ᱥ	GRANTHA VOWEL SIGN E *for transcribing Dravidian short /e/	0BC6	ᱥ	TAMIL VOWEL SIGN E	946	े	DEVENAGARI VOWEL SIGN SHORT E
1134A	ᱦ	GRANTHA VOWEL SIGN O *for transcribing Dravidian short /o/	0BCA	ᱦ	TAMIL VOWEL SIGN O	94A	ो	DEVENAGARI VOWEL SIGN SHORT O

\* These characters were not available in the original DEVANAGARI SCRIPT but introduced in DEVANAGARI to Transcribe Dravidian Sounds



Appendix II Jean-Luc Chevillard's email to N. Ganesan.  
Prof. Abhyankar reference:

[Begin Quote]

Dear NG,

since you have provided us with the opinion of Professor S.V. Shanmugam, it would also be nice if you could at the same time find out what Professor S.V. Shanmugam thinks about what Professor George Cardona has written on page 259 of his 1976 book /Panini, a survey of research/ (I am quoting the 1997 reprint by Motilal Banarsidass).

<QUOTE>

In the Mahābhāṣya ..., Patanjali notes that according to certain chanters of the Sāma-veda, there are short (/ardha/ 'half') vowels /e/ and /o/. K.V. Abhyankar has discussed details concerning this question.  
</QUOTE>

In his bibliography, on page 13, Professor Cardona gives the bibliographical reference for the Abhyankar article

1957, "Short /e/ (/ardha ekāra/) and short /o/ (/ardha okāra/) in Sanskrit", ABORI 38: 154-7.

((ABORI = Annals of the Bhandarkar Oriental Research Institute)

I shall be grateful for any ACADEMIC clarification which you can bring to that topic.

அன்புடன்

-- ஜூான் (Jean-Luc Chevillard)

[End Quote]