

INTERNATIONAL FORUM FOR INFORMATION TECHNOLOGY IN TAMIL

EXECUTIVE DIRECTOR'S REPORT September 2003 -- December 2004

Introduction

The formation of the International Forum for Information Technology in Tamil (INFITT) was the culmination of a year-long effort that began soon after the TamilNet 99 conference held in Chennai, India. INFITT was the first global organisation set up to represent governments, corporations, interest groups and individuals who are concerned with the development and use of Tamil computing and Tamil Internet. It remains the only such organisation till now.

INFITT, since its inauguration on 23 July 2000, has focussed its efforts on establishing the infrastructure to function as a global organisation. Its annual international Tamil Internet conferences have gained acceptance as the major platform to discuss issues related to Tamil computing and Tamil Internet.

Aims

INFITT, in close collaboration with its regional chapters, Tamil Internet Steering Committees and other organisations, strive to achieve the following through various initiatives:

1. To coordinate the efforts of institutions and individuals interested in Tamil IT and to facilitate dialogue and cooperation among them.
2. To identify key application areas for the development of Tamil IT, to define broad guidelines for their implementation and to provide technical assistance wherever possible;
3. To develop norms and standards for Tamil IT;
4. To promote knowledge and use of Tamil IT;
5. To organise "Tamil Internet" ("Tamil Inaiyam") conferences regularly;
6. To act as a representative of the Tamil IT community in international, regional and national IT organisations, and to function as a liaison body and a voice for Tamil information technology.

Organisation

After its inauguration in 2000, INFITT was officially registered as a not-for-profit non-governmental organisation in the United States on 20 May 2002. Though INFITT has had a membership scheme from its inception, the official membership scheme for the registered NGO was launched on 9 August 2002.

At the members meeting at "Tamil Internet 2002" in September 2002 in US, it was also agreed that once the membership base reached a critical mass i.e. three times that of General Council membership of 51, elections will be held and the composition of GC and EC will adhere to constitutional provisions. However, in view of the lack of the required membership numbers, the EC placed a resolution before GB on holding elections (*Annex 1*) to get the mandate of members. In line with this, the resolutions for elections were circulated on 17 December 2003.

The resolution was accepted by all 41 of the 55 members who responded and the General Council was suspended in order to conduct the elections for a new EC directly by GB members. Subsequently, Prof M Anandakrishnan, Prof Tan Tin Wee and Prof Harold Schiffman were appointed as Election Returning Officers with Prof Anandakrishnan as the Chief Returning Officer. Nominations were invited for the 11 available seats in the EC. The following candidates were elected without contest at the closing of nominations on 10 January 2004:

Europe	-Ms Subashini Kanagasundaram
India	-Mr A Elangovan
	-Mr Maalan Narayanan
Malaysia	-Mr Muthu Nedumaran
Singapore	-Mr Arun Mahizhnan
Sri Lanka	-Mr Jeyatheepan Ulagapiragasam
United States	-Dr Vasu Renganathan
Members at large	-Dr K Kalyanasundaram (Switzerland)
	-Mr Karu Malar Selvan (USA)
	-Mr D Sivaraj (India)
	-Mr TNC Venkatarangan (India)

Executive Committee

The elected members of the Executive Committee unanimously agreed to the appointments below and the new EC took office on 22 January 2004:

1. Mr. Muthu Nedumaran, Malaysia (Chair)
2. Dr. K. Kalyanasundaram, Switzerland (Vice-Chair)
3. Mr. Arun Mahizhnan, Singapore (Secretary)
(also Executive Director for the INFITT Secretariat)
4. Mr. A Elangovan, India (Member)
5. Mr. Jeyatheepan Ulagapiragasam, Sri Lanka (Member)
6. Mr. Maalan Narayanan, India (Member)
7. Mr. Karu Malar Selvan, USA (Member)
8. Mr. D Sivaraj, India (Member)
9. Ms. Subashini Kanagasundaram, Germany (Member)

10. Dr. Vasu Renganathan, USA (Member)

11. Mr. TNC Venkatarangan, India (Member)

In addition, Mr. Kumar Kumarappan of USA was co-opted into the EC to act as its Treasurer, following the earlier departure of Mr. Mani Manivannan of USA from EC.

The new EC also appointed Prof M Anandkrishnan and Prof Tan Tin Wee as Advisors to EC.

INFITT Secretariat

The Executive Committee decided to continue with the INFITT Secretariat in Singapore. With this decision, Mr Arun Mahizhnan and Mr Narayanan Andiappan, of Singapore, continued as the honorary Executive Director and the Administration Manager of INFITT, respectively.

Key Initiatives & Developments

Tamil Internet 2003 Conference and Exhibition

The Tamil Internet 2003 Conference and Exhibition (Tamil Internet 2003), the sixth in the series, was held on 27-29 September 2003 in Chennai, Tamil Nadu, India. It was the second time that a conference in this series was convened in Chennai after 1999. TI2003, with the theme "IT for Education in Tamil," was organised by the Tamil Virtual University and Anna University in collaboration with Kani Thamizh Sangam and support from INFITT.

Conference

The conference was attended by about 400 delegates from around the world. Some 80 speakers addressed a wide spectrum of issues as in the past conferences, some ongoing and some new ones. They focused on technology, content, community and business developments. They included teaching and learning of Tamil through IT, E-Government, Tamil Unicode interfaces and implementation, latest developments in Tamil language based technologies such as optical character recognition (OCR), search engines, speech synthesis and handwriting recognition.

Exhibition

The exhibition of Tamil software and related materials attracted a total of 30,000 visitors over three days. The exhibition which featured 35 exhibitors, mostly from India, was a showcase of the thriving Tamil IT industry in Tamil Nadu. The products included many innovative software in Tamil such as digital dictionaries, computer games, and multimedia educational software.

Community Hub

As this has come to be a regular feature of TI conferences, TI2003 organisers had also organised various web-page creation competitions for schools across Tamil Nadu. The prizes were given out to the winning students by the Minister for Law & IT, Mr Jeyakumar. In addition, impromptu programming contests were held at the exhibition venue for students of colleges and universities to test their skills in developing solutions for a given problem.

INFITT Event in Sri Lanka

A seminar was organised by the INFITT's Sri Lankan representative, Mr Jeyatheepan Ulagapiragasam, to take the advancements in Tamil Internet to the rural community. The main theme of the seminar was "Thamizh Inaiyam for the betterment of our Nation" and its main focus was on standardisation efforts (TamilNet99 KeyBoard and Unicode font for 16 Bit encoding scheme).

The seminar attracted around 150 registered participants and 20 invited guests. Several leading personalities in the Sri Lankan IT scene as well as INFITT Chair gave talks at the seminar. In conjunction with this, a recruitment drive was also initiated to sign up members for INFITT.

INFITT Working Groups

Working Group 1: Glossary of Technical Terms in Tamil

Professor Radha Chellappan of Bharathithasan University, who was appointed Chair of this group in 2002 and the members compiled about 1,500 words and released them for public consultation in February 2004. The glossary is available at www.infitt.org. WG01 has now been closed.

Working Group 2: Tamil in Unicode

This group has been very active in finalising its proposals to the Technical Committee of the Unicode Consortium (UC) as well as exploring ways to disseminate correct information to the general public. In addition to the proposals accepted in the past, UC had accepted the following two proposals this year: Proposal to add Grantha character SHA to Unicode, and Proposal to add Tamil numeral zero to Unicode. Its report for the current year is in Annex 2.

Working Group 3: Internet Names in Tamil for Domains and others

WG03 has completed testing of the Tamil domain names in various platforms and was launched early this year. It has also developed IDN Unicode Tables and Languages Tables for submission to relevant authorities. Its report is in Annex 3.

Working Group 5: Transliteration Schemes

WG05 submitted a preliminary proposal for a "rigid scheme of transliteration" to the EC and upon approval, published it for public feedback in March 2004. This proposal is available at www.infitt.org

Working Group 8: Alternative 16-bit Scheme for Unicode

Following a proposal by Muthu Nedumaran, then Chair of WG02, and accepted by other interested individuals, the EC agreed to the formation of WG08 after the TI2003 conference in Chennai. This group has been carrying on its work on the 16-bit scheme and an interim report of its activities is in Annex 4.

INFITT Constitution

A team led by Dr K Kalyanasundaram, the Vice Chair of EC, has completed its review and re-drafting of the INFITT Constitution. It was placed before the GB for its review and comments by 15 November. EC will conclude this process of constitutional revision at the Singapore EC meetings in December 2004.

INFITT Chapters

A team led by Mr Maalan Narayanan, a Member of EC, has completed a new proposal for the establishment and maintenance of INFITT Chapters. It too was placed before the GB for its review and comments by 15 November. EC will make its final decisions regarding INFITT Chapters at the Singapore EC meetings in December 2004.

INFITT Membership

As mentioned earlier, with the formal incorporation of INFITT in the US, the official INFITT membership scheme was launched on 9 August 2002. For 2004, there were 50 registered members – 37 Individual and 13 Associate members.

MinManjari

Mr Maalan Narayanan took over the editorship of MinManjari in the past year and together with his editorial team completely revamped the INFITT ezine. It now appears regularly on a quarterly basis with information, news, commentary and compilations on INFITT and on Tamil IT. The latest edition was launched in December as a special issue on Tamil Internet 2004 conference.

OTHER

Obituaries

INFITT would like to record its deepest condolences on the demise of Mr Thamizh Kudimagan, Mr R Pakkirisamy, and Mr Ramalingam Sjanmugalingam. Mr Thamizh Kudimagan was a Minister in the Tamil Nadu Government and an early and active supporter of Tamil Internet conferences.

He was instrumental in organising the TamilNet 99 conference in Chennai in 1999. Mr Pakkirisamy from Tamil Nadu, was also an avid supporter of INFITT and Tamil computing efforts and attended every one of the last four conferences, despite his advanced age and ailments. Mr.Ramalingam Shanmugalingam (Appu Archie) was originally from Jaffna and became a naturalized US citizen, living in California. He was a Tamil scholar and a very competent software professional. He was the author of a Tamil Text Editor called "Yarzhhan Thamizh Editor" (developed and distributed since mid-nineties). In some aspects, it was a precursor to the popular Tamilnet99 phonetic keyboard, using sequential typing of vowels and consonants to get compound characters. All three friends of INFITT and Tamil IT will be missed much.

INFITT Resolutions on University of Cologne's Institute of Indology and Tamil Studies (IITS)

When INFITT was informed of University of Cologne's decision to close its Institute of Indology and Tamil Studies (IITS) in 2006, INFITT EC decided to express its concerns. It has passed three resolutions, each addressing the University of Cologne, the Government of India and the Government of Tamil Nadu, respectively, to urge them to do their utmost for the continuation of IITS. These three resolutions are in Annex 5.

Conclusion

Over the years, some initiatives of INFITT have gained wide recognition, the most significant being the annual Tamil Internet conferences, and the standards for keyboard and 8-bit encodings. The Unicode Consortium considers INFITT as a key player in the Tamil IT world and has taken note of INFITT's recommendations. It maintains an ongoing liaison relationship with INFITT through Mr. Michael Kaplan. Similarly, the Multilingual Internet Name Consortium (MINC) has maintained close contact with INFITT through Mr. S. Maniam. More recently, Mr Maalan has played a key role in facilitating the creation and standardisation of Tamil technical terms through Microsoft's Bhasha India community Glossary project. We understand this Glossary will be a vital tool in developing Windows in Tamil. Maalan has also played an active role in the exhaustive validation process of Microsoft office in Tamil. Similarly, Mr Jeyatheepan has been crucial in facilitating and developing a liaison relationship with the Information and Communication Technology Agency of Sri Lanka. This has led to the appointment of the INFITT Chair to ICTA's Tamil ICT Standards Work Group.

EC has set up a task force in preparation for the possibility of INFITT becoming the coordinator for Tamil domain names with ICANN. MINC has welcomed the INFITT initiative and Prof Tan as the chairperson and champion to pursue the role of INFITT as the delegated authority for .TAMIL TLD and to coordinate the delegation of all .TAMIL TLDs amongst the Tamil community worldwide.

Several other INFITT initiatives are underway to help develop, enhance and extend Tamil IT into new domains and platforms of usage. Lastly, the overwhelming number of technical papers that were submitted to the latest TIC, "Tamil Internet 2004," is ample testimony to the high regard in which Tamil IT experts hold INFITT. In recognition of the efforts of INFITT, various governments have also extended their support to INFITT over the years.

With all these positive developments and despite some setbacks and slowdowns, INFITT intends to extend its scope of activities and the base of its membership in the coming years. In doing so, INFITT looks forward to collaborative and cooperative relations with all the institutions and individuals dedicated to the development and promotion of Tamil IT.

Annex 1

Resolutions on INFITT Election

As most of you would know, the INFITT Executive Committee (EC) that is currently serving you all was first appointed by the Constituent Assembly held at the inception of INFITT in 2000 in Singapore. (Some members of EC have resigned and some have been co-opted over time.) It was the intention of EC to hold an election in the subsequent year when the association would be registered and an official Membership Scheme would be established.

However, even after three years, the INFITT Membership Scheme has not generated enough members to follow through our original intention – as stated in our Constitution -- to elect a General Council (GC) of country or regional representatives which in turn would elect the EC. Our original expectation was that there would be at least about 150 voting members to form the GC. As at present we have only about 50. However, the prospect of the current EC members continuing without mandate from the membership is proving to be uncomfortable to EC and others. The issue of constitutional amendments to reflect the reality of membership needs to be considered too, but for the current EC to effect constitutional changes without membership mandate is also difficult to justify.

The EC has therefore decided that instead of carrying on, on the basis of the original appointment, it is best to get an "elected" EC, even without a representative GC.

We, therefore, propose the following resolutions for you -- the voting members of INFITT i.e. the Individual Members -- to consider and approve:

1. It is hereby resolved that the General Body of voting members (i.e. Charter Members, Institutional Members and Individual Members but not Associate Members) elects the Executive Committee directly this once, for a period of two years. The nature of future elections is to be determined by the new EC and the Constitution amended accordingly.

2. It is also hereby resolved that this election is based on the following representational basis: 2 representatives from India, 1 each from Europe, Malaysia, North America, Singapore and Sri Lanka, and 4 Representatives at Large. Only national/regional Individual Members can elect their own representatives. Representatives at Large can be elected by any and all Individual Members. In addition to elected representatives, EC may co-opt no more than 3 members, if the need arises. Co-Opted members will have the same rights and responsibilities as other EC members.

3. It is also resolved that the election will be conducted electronically through our website (www.infitt.org); that the EC will appoint the Chief Returning Officer and two Returning Officers who will be independent and respected individuals; and that the results will be based on the majority of the votes cast according to constituencies.

4. Finally, it is resolved that this proposal will be considered valid so long as **two thirds of the respondents to this mail** support it.

Schedule for INFITT Elections:

17 - 27 Dec: Circulate resolutions on election to Individual Members of GB & seek approval

28 Dec: If resolution approved by 27th, announcement of CRO & ROs for elections & call for Nominations for Candidates & publication of election procedures

29 Dec - 10 Jan: Candidates to start filing nominations with a 500-word write-up

12 Jan: CRO to announce approved candidates after checking credentials

13 - 19 Jan: Campaign period

20 - 21 Jan: Election Polling

22 Jan: Announcement of results

15 Feb: New EC assumes office

Annex 2

INFITT WG Report for December, 2004	
Working Group No: WG02	
Working Group Name: Unicode Tamil Segment	
Mailing list: wg02infitt@yahoogroups.com	
Members:	
Chellappan, P.	
Elango Govind (Inactive)	
Jayaradha, N. (Inactive)	
Jeyatheepan U.	
Kalyanasundaram, K.	
Kavi Arasan	
Manoj Annadurai	
Michael Kaplan	
Muguntharaj	
Muthu Nedumaran	
Naga Ganesan	
Dinesh Natarajan	
Ponnaivaikko	
Krishnamoorthy V. (Inactive)	
Srivas Sinnadurai	
Sivaraj, D. (Chair)	
Kalaimani	
Umamaheswaran, V.S.	
Vaseeharan, T.	
Venkatarangan, T.N.C.	
Goals of WG02	
1.	Propose changes to Unicode Tamil segment to add new characters, correct errors, and improve documentation.
2.	Prepare documentation to help implement and use Unicode Tamil.
3.	Encourage developers, content providers and end users to adopt Unicode against other legacy encodings.
Plan for 2004-2005:	
WG will continue as Working Group	

Status of Deliverables <i>(If WG continues as Working Group)</i>			
Item	Deliverable	Owner	Status
1.	Update WG02 homepage on INFITT website with working group information, current activity and publications.	Sivaraj	TBD
2.	Proposal to add grantha character SHA to Unicode.		Accepted by UC.
3.	Proposal to add Tamil numeral zero to Unicode		Accepted by UC.
4.	Proposal to add grantha character KSHA to Unicode.	Sivaraj	Draft proposal prepared
5.	Proposal to add Tamil symbol OM	Sivaraj	Draft proposal prepared
6.	Technical documentation on converting from legacy encodings to Unicode.	Muthu (TSCII)	Completed
		Chellappan(TAB /TAM)	Completed
7.	Determine default Tamil collation order. Submit it for publication by Unicode.	TBD	Awaiting TNG GO on the matter.
8.	Tamil 99 keyboard specifications for Unicode.	Chellappan	Draft document prepared.
9.	List of Operating Systems, Server and Client applications that are tested to flawlessly work with Unicode Tamil to be published in Infitt.Org/Unicode.	TBD	TBD
10.	Article on "How to create Unicode Tamil Fonts on Windows and MacOS" to be published in Infitt.Org/Unicode	Muthu	Document prepared. To be reviewed.
11.	With the help of the country INFITT rep and TISC, organise at least one Tamil Unicode Developer Seminar/Workshop	TBD	TBD
12.	Publish at least one non-technical article on Tamil Unicode in at least one popular Tamil publication in selected countries (Suggested to sync with workshop)	Muthu	Muthu wrote an article in Thisaigal.
13.	Publish list of converters that convert other formats to Unicode for download from Infitt.Org/Downloads	Muthu	Completed
14.	Aytham is an independent character. It was incorrectly classified as modifier.		Completed (Unicode 4.0)
15.	Add annotations to Grantha characters.	Kavi	TBD
16.	"What is Unicode" document to be	Vasee	Translated

		MichKa	To be approved & Submitted.
17.	Separate Tamil Grantha block	TBD	TBD
18.	Linear and fallback rendering	TBD	On Hold
19.	Changes to IndicFAQ and block descriptions in Unicode book.	TBD	TBD

Summary and Recommendations:

1. The working group had been active during the year and sent 2 proposals to Unicode, which have been accepted.
2. Members of the working group have also published two Unicode technical notes.
3. Yet there is more work to be done. The WG will prioritize the pending items, and work on those during the current year.
4. Need to communicate information periodically to INFITT members to increase transparency and to publicize the work done by WG.

Annex 3

INFITT WG Report for December, 2004			
Working Group No: WG03			
Working Group Name: Internet Names in Tamil for Domains and Others			
Mailing list: wg03infitt@yahoogroups.com			
Members:			
Mr. S. Maniam (Co-Chair)			
Mr. V. Vasudevan (Co-Chair) - inactive			
Prof M. Ponnaivaiko - inactive			
Prof Chandra Bose			
Mr. P. Chellappan			
Mr. A. Palaniappan			
Mr. Muthu Nedumaran			
Dr. Kumar Mallikarjunan			
Mr. Nadesan Satyendra - inactive			
Dr. Vasu Renganathan - inactive			
Mr. Michael Kaplan			
Goals of WG03			
1.	Submission of IDN Unicode Tables to ICANN IDN WG Draft submitted to WG2 for their comment and approval for onward submission to EC		
2.	Submission of RFC on Tamil Domain Names		
3.	Recruitment of new members		
Plan for 2004-2005:			
WG will continue as Working Group			
Status of Deliverables <i>(If WG continues as Working Group)</i>			
Item	Deliverable	Owner	Status
1.	Submission of Unicode tables RFC to ICANN IDN WG..	S.Maniam	Subject to approval by EC
2.	Submission of Languages Tables for acceptance by ICANN IDN WG.	S.Maniam	To be on in 1 st Qrt of 2005
3.	New Members to be incorporated	-	Ti2004

Summary and Recommendations:

The WG has to submit two documents to ICANN IDN WG for International recognition on

Tamil Domain Names. RFC's has to be issued for language tables prior submission to ICANN IDN WG.

Active members need to be added to the WG.

Annex 4

WG08 - Interim Report on "Alternate 16 Bit Encoding for Tamil" – 23 Nov 04

Members:

Mr Chellappan.P
Mr Elangovan.A (Chair)
Mr Kavi Arasan
Dr Krishnamoorthy.V
Mr Mani Manivannan
Dr Ponnaivaikko.M
Mr Premkumar.M

1. Introduction of the problem

The Unicode encoding for Tamil, in spite of being aggressively pushed by Microsoft, is yet to become widely used by one and all. The reasons for this slow progress are many. Unlike other Indian languages Tamil has no Complex scripts. But Tamil script has been defined as Complex script in current Unicode. This has resulted in Tamil requiring Level-2 implementation instead of Level-1 implementation needed for non-complex scripts. Tamil Unicode support is yet to be available in other operating systems like MacOS, Linux, etc; Major Application developers like Adobe are yet to provide Tamil Unicode support even in Windows; Unicode fonts developed for one application(eg.OfficeXP) will not work in other Unicode aware applications(e.g. Adobe InDesign).

2. INFITT Working Group - WG08: Actions Taken (up to 23rd Nov '04)

The INFITT EC has formed a separate Working Group (WG08) on 1st January 2004 to evaluate the "Alternate 16 bit encoding scheme for Tamil" proposed by TVU.

The Alternate 16 bit encoding has been developed primarily to solve these problems. It is based on the fact that Tamil script is a Simple script and not a Complex script.

"Unicode Tamil-New", a full-fledged Keyboard Interface and a Unicode font has been developed based on the "Alternate 16 bit Encoding Scheme" in the PUA (Private Use Area).

The initial trials indicate that most of the above mentioned problems of current Tamil Unicode are solved.

The Unicode Tamil-New encoding works satisfactorily in most of the applications like OpenOffice, all browsers, Adobe, Quark, Corel, Macromedia apart from Microsoft applications.

The encoding is also compatible to Windows98, 2000, NT, XP, ME, MacOS9, MacOSX versions. It is expected to be suitable for Unix and Linux also.

Natural and correct sorting order is provided in the encoding.

The fonts are very easy to develop and easy to implement in all applications without waiting for the respective developers to provide for Tamil support.

It is about 40% more efficient than the current Standard Unicode Tamil. It is found to be the cheapest way to provide Tamil IT enabled services and the fastest way to spread Tamil usage in all IT and communication software. The testing is continuing and will be reaching the stage of beta very shortly wherein the the keyboard and the font for the new scheme will be made available in the Public Domain for testing by others.

After getting the feedback from all beta testers, it will converted into a formal RFC.

The WG08 will continue as a Working Group.

3. Code Block for "Tamil Unicode-New" in the Private Use Area:

The New Unicode Tamil block proposed for incorporating in the Private Use Area, viz Tamil Unicode New is furnished in annexure-1A & 1B.

The earmarked PUA starts from E000 and extends up to E8FF. Since, some of the early occupiers of the PUA might have started from the initial blocks, it is proposed to leave the early blocks and use the block E200 to E38F for the Tamil Unicode New.

Tamil Unicode -New in PUA will co-exist with the Tamil Unicode Standard ver 4.0 in Unicode regular space. Hence, all Tamil characters including Grandha letter only are included in the new block as in Annexure-1; for all other special symbols, the existing locations in the current Unicode standard ver 4.0 will be made use of.

In the character set, one more character "SHA" has been added. This character and Tamil numeral for Zero are already in the pipeline table announced by Unicode Standard 4.0.

The order and arrangement of the Grandha characters are as per the sorting order recommended to the Tamilnadu Government recently by the Tamil Virtual University.

4. Advantages of the "Tamil Unicode-New"

4.1. Simple Script and Level 1 Implementation

In Unicode Tamil-New, the Tamil script is treated as a Simple Script (non complex) and hence it is implemented as Unicode Level-1 instead of Level 2 implementation in the current Unicode standard.

4.2 No Dependence on OS and Application developers

With Unicode Level-1 implementation, it is not necessary for the OS and Application developers to provide Indic support for Tamil Unicode at the core level. The "TAU_Elango_Bharathi.ttf" Unicode new font for Tamil is found to be working in most of the Operating systems like Windows 2000/NT/XP, Windows 98 and Mac OS09/ OSX. The Unix and Linux are under testing. Also it is found to be working well with most of the popular packages like MS Office, Open Office, Adobe In Design, Quark Xpress, Photoshop, Illustrator, Outlook Express, Internet Explorer, etc; It is expected that any current or future Unicode aware applications will be able to support Unicode Tamil-New automatically. Dependency on the application developers for Tamil support has been eliminated.

4.3 Natural Sorting Order

All Tamil Character blocks are arranged in the correct sorting order as per the proposal to the TN Govt. Hence all applications will give correct and uniform sorting order without any algorithm to be provided by the application provider.

4.4 Real Character Encoding

It is the real character encoding, representing the true nature of Tamil as they appear in primary school Tamil text books.

4.5. Efficient Design

The creation of the 16 bits is done in a scientific way. Of the sixteen bits, the first 7 bits indicates the language. The next 5 bits gives the serial number of the consonant part of a Tamil letter. The next 4 bits gives the serial number of the vowel part of a Tamil letter. A zero here means the absence of the consonant or vowel part, that is, it is a pure vowel or pure consonant. Hence, it is extremely easy to see what a letter contains. This simplicity comes from the natural way in which the coding is designed. Unicode Tamil-New is as efficient as the English in all applications tested so far. It is at least 40% more efficient than the current Unicode Standard ver 4.0. Unicode Consortium may not be concerned about efficiency of encoding. Can Tamil Diaspora afford to pass this avoidable inefficiency to the next generations?

4.6. Savings in Cost of Computer Storage Space

Its simplicity leads to enormous savings. The space requirement for a Unicode Tamil-New is about 40% less than what is required in the current Unicode Tamil. If we calculate the cumulative storage requirement of over 60 million Tamils, it will be in thousands of crores of rupees every month.

4.7. Saving in Cost of Internet Communication Bandwidth

The Time and Cost required to communicate Tamil text in the Unicode Tamil-New encoding is about 40% less than in the current Unicode.

4.8. Saving in Computer Display Time

The display time required to display the stored data from the hard disk to the display monitor is less than one tenth of that in the current Unicode scheme. The extra time of waiting for display could be very high if the file size is larger.

4.9. Other Savings

The rendering time, searching time and many language processing times are also significantly less in the Unicode Tamil-New as compared to current Unicode.

5. Lesser Overall Cost

Unicode Tamil-New will cost much less in both initial cost of hardware and software as well as in the recurring cost of providing the IT enabled services to the masses. It may be argued by some that with the falling prices of hardware and abundant bandwidth availability, cost is not a criterion anymore. The comparative cost will always be at-least 40% less compared to the current Unicode. This is an achievable, recurring saving in expenditure. Current Unicode will result in enormous drain of the resources of the Tamil community. Thousands of crores of rupees will be wasted every month forever until we take corrective action.

Conclusion

Tamil Diaspora in developing countries are interested in the fastest spread of Tamil in all forms of IT enabled services at the lowest cost possible. Cost of providing IT services is a primary concern in many developing countries including India especially when we want to reach to the masses in the rural areas.

The Tamil Unicode-New which takes into account all aspects of requirements for incorporating in the Unicode Private Use Area is found to be fully adequate and strongly recommended for implementation in the proposed Unicode Private Use Area E200-E38F.

ANNEX 5

Resolutions on University of Cologne's Institute of Indology and Tamil Studies (IITS) Passed by the Executive Committee of INFITT on 12 December 2004

Resolution 1:

To:
The Rector
University of Cologne
Albertus-Magnus-Platz
D-50923 Cologne
Germany

E-mail: rektor@uni-koeln.de

The International Forum for Information Technology in Tamil (INFITT), a global organisation dedicated to the development and promotion of Tamil IT, notes with deep concern the University of Cologne's decision to close its Institute of Indology and Tamil Studies (IITS) in 2006. IITS is a highly valued institution not only within Germany but also around the world for its scholarship and its service in the fields of Indology and Tamil studies. The Online Tamil Lexicon (OTL) of IITS, which is used by many across the net, and its tremendous contribution in Tamil digitization efforts, specifically of classical Tamil literature, are just a couple of examples of the valuable service rendered by IITS.

Closure of IITS will be a great loss to the Tamil community across the world and will be resented by the Tamil diaspora, as well as by the thousands of scholars, academia, research students and enthusiasts in these fields.

INFITT, therefore, appeals to the management of the University of Cologne to review this decision and to do its utmost to ensure the continuation of this renowned institution.

INFITT is also appealing to the Government of India and the Government of Tamil Nadu to offer any assistance they could towards the maintenance of IITS. We have enclosed the copies of our appeal and request the officials to make efforts with these governments for availing their good offices in avoiding the closure of IITS.

Mr. Muthu Nedumaran (Kuala Lumpur, Malaysia)
Chair

Dr. K. Kalyanasundaram (Lausanne, Switzerland)

Vice-Chair

Mr. Arun Mahizhnan (Singapore)
Executive Director

Members of the Executive Committee:

Mr. A. Elangovan (Chennai, Tamilnadu, India)

Ms. Subashini Kanagasundaram (Boeblingen, Germany)

Mr. Kumar Kumarappan (San Francisco, CA, USA)

Mr. Karu. Malar Selvan (Huston, TX, USA)

Mr. Maalan Narayanan (Chennai, Tamilnadu, India)

Dr. Vasu Renganathan (Philadelphia, PA, USA)

Mr. D. Sivaraj (Hyderabad, Andhra Pradesh, India)

Mr. T.N.C. Venkata Rangan (Chennai, Tamilnadu, India)

Mr. Jeyatheepan Ulagapiragasam (Colombo, Sri Lanka)

*

Resolution 2:

To
The Prime Minister of India
7, Race Course Road
New Delhi - 110 011
India

E-mail: manmohan@sansad.nic.in

The International Forum for Information Technology in Tamil (INFITT), a global organisation dedicated to the development and promotion of Tamil IT, notes with deep concern the University of Cologne's decision to close its Institute of Indology and Tamil Studies (IITS) in 2006. IITS is a highly valued institution not only within Germany but also around the world for its scholarship and its service in the fields of Indology and Tamil studies. The Online Tamil Lexicon (OTL) of IITS, which is used by many across the net, and its tremendous contribution in Tamil digitization efforts, specifically of classical Tamil literature, are just a couple of examples of the valuable service rendered by IITS.

Closure of IITS will be a great loss to the Tamil community across the world and will be resented by the Tamil diaspora, as well as by the thousands of scholars, academia, research students and enthusiasts in these fields.

INFITT, therefore, appeals to the Government of India, which has only recently declared Tamil as a Classic Language, to do its utmost to help University of Cologne review its decision and to assist financially or otherwise in the continuation of this renowned institution. One probable model could be to establish a "Chair" funded by Government Of India at University of Cologne (Koeln) to continue the activities of IITS. There have been success stories that have followed such an approach. One such is the "Tamil Chair" at University of California, Berkeley. We at INFITT request the Government of India to give this due consideration.

Mr. Muthu Nedumaran (Kuala Lumpur, Malaysia)
Chair

Dr. K. Kalyanasundaram (Lausanne, Switzerland)
Vice-Chair

Mr. Arun Mahizhnan (Singapore)
Executive Director

Members of the Executive Committee:
Mr. A. Elangovan (Chennai, Tamilnadu, India)

Ms. Subashini Kanagasundaram (Boeblingen, Germany)

Mr. Kumar Kumarappan (San Francisco, CA, USA)

Mr. Karu. Malar Selvan (Huston, TX, USA)

Mr. Maalan Narayanan (Chennai, Tamilnadu, India)

Dr. Vasu Renganathan (Philadelphia, PA, USA)

Mr. D. Sivaraj (Hyderabad, Andhra Pradesh, India)

Mr. T.N.C. Venkata Rangan (Chennai, Tamilnadu, India)

Mr. Jeyatheepan Ulagapiragasam (Colombo, Sri Lanka))

*

Resolution 3:

To:
The Chief Minister of Tamilnadu

Fort St. George,
Chennai 600 009
India

E-Mail: cmcell@tn.gov.in

The International Forum for Information Technology in Tamil (INFITT), a global organisation dedicated to the development and promotion of Tamil IT, notes with deep concern the University of Cologne's decision to close its Institute of Indology and Tamil Studies (IITS) in 2006. IITS is a highly valued institution not only within Germany but also around the world for its scholarship and its service in the fields of Indology and Tamil studies. The Online Tamil Lexicon (OTL) of IITS, which is used by many across the net, and its tremendous contribution in Tamil digitization efforts, specifically of classical Tamil literature, are just a couple of examples of the valuable service rendered by IITS.

Closure of IITS will be a great loss to the Tamil community across the world and will be resented by the Tamil diaspora, as well as by the thousands of scholars, academia, research students and enthusiasts in these fields.

INFITT, therefore, appeals to the Government of Tamil Nadu, which is the motherland of Tamil, a Classic Language, to do its utmost to help University of Cologne review its decision and to assist financially or otherwise in the continuation of this renowned institution. One probable model could be to establish a "Chair" funded by Government of Tamil Nadu at the University of Cologne (Koeln) to continue the activities of IITS. There have been success stories that have followed such an approach. One such is the "Tamil Chair" at University of California, Berkeley. We at INFITT request the Government of Tamil Nadu to give this due consideration.

Mr. Muthu Nedumaran (Kuala Lumpur, Malaysia)
Chair

Dr. K. Kalyanasundaram (Lausanne, Switzerland)
Vice-Chair

Mr. Arun Mahizhnan (Singapore)
Executive Director

Members of the Executive Committee:
Mr. A. Elangovan (Chennai, Tamilnadu, India)

Ms. Subashini Kanagasundaram (Boeblingen, Germany)

Mr. Kumar Kumarappan (San Francisco, CA, USA)

Mr. Karu. Malar Selvan (Huston, TX, USA)

Mr. Maalan Narayanan (Chennai, Tamilnadu, India)

Dr. Vasu Renganathan (Philadelphia, PA, USA)

Mr. D. Sivaraj (Hyderabad, Andhra Pradesh, India)

Mr. T.N.C. Venkata Rangan (Chennai, Tamilnadu, India)

Mr. Jeyatheepan Ulagapiragasam (Colombo, Sri Lanka)