
A Case for T_EX in India — The Indian T_EX Users Group

C. V. Radhakrishnan

Abstract

Unlike in other countries, T_EX migrated to India as a medium of typesetting for the Western publishing world. With its vast human potential and the cheapness of its cost, India enticed the publishing giants like Elsevier, Academic Press, Springer-Verlag, etc., for their pre-press work and with that the T_EX language found its way into this subcontinent. Its meager presence in the very many higher academic institutions and its pronounced absence from ordinary institutions strengthens the paradigm that T_EX usage in India is primarily a gut-oriented phenomenon rather than an author driven one. This is further demonstrated by the clear absence of T_EX-related research, newer macro development, font generation for the multitude of Indian scripts, etc. The Indian academy, in contrast to its Western counterparts, pays scant regard for such things or seldom considers it as a necessity. Therefore, the problems of T_EX usage in India are diametrically different from those in other parts of the world. It is not strange that the recently formed Indian T_EX Users Group faces the constraints of lack of research and economic issues of the users as well (quite strange!) since the vast majority of its members are from the typesetting industry who chose T_EX language as a means of their livelihood. These and related issues are described in this article.

A general overview of T_EX users in India

There can be a vertical split when we consider the general users of the T_EX language in India, one from the typesetting industry and the other from the higher institutions of learning. The former category may outnumber the latter. Except for the Indian Institutes of Technology (a chain of institutes spread all over India, noted for its academic excellence and standards) and certain specific scientific institutions like the Indian Institute of Science, Inter University Center for Astronomy and Astrophysics, Tata Institute of Fundamental Research, etc., T_EX is still alien to the academy or the researchers. The advent of WYSIWYG typesetting software has further pushed back the chances of T_EX usage. Yet another paradoxical element you can observe here is that the Indian academy considers typesetting issues as the burden of publishing houses, and it is not the concern of the author to address the enigma of his own document presentation. This is the general

philosophy of even the computer scientists working in various Universities in India. The limits of our document preparation skills are dictated by few Microsoft products. If any of the Microsoft product is incapable of presenting our document, we would resort to manual operations, thereby making it a childish doodle, for the present-day Indian mind is not at all carried away by refined and sophisticated presentation, in sharp contrast to the classic Indian aesthetic sensibilities.

This being the general attitude of the academics around this country, the quantum and the quality of T_EX usage in the academy can be gauged by anybody. This may be the prime reason why India lagged behind in forming its user group when everyone else in the educated West went ahead with their user groups and made substantive contributions to the T_EX language. India became a silent spectator, with a subdued longing for enjoying the fruits of T_EX research in the West with an apparent resignation that is typical of a Hindu mind. The shape of things in the Indian typesetting industry is also not so bright. Due to lack of any meaningful research and development team, they solely depend on or unabashedly hire Western intelligence for the development of their in-house arsenal. Even in matters as simple as writing a filter for SGML to T_EX or *vice versa*, they do get filters written by external agencies, present these to their clients as if developed by their own R&D team, and win huge contracts. In short, healthy usage of the T_EX language is still a distant dream in any of these agencies.

Early work on Indian languages

One of the earlier work on T_EX language that concerns Indian scripts are done by Avinash Chopde;¹ the package, called ITRANS, bundles lot of Indian scripts with L^AT_EX. You create an `.itx` file and run it through ITRANS to convert it to a `.tex` file. The commands are the same for Tamil, Sanskrit, Marathi, etc. His home page describes the system fully; it is available for UNIX and PC platforms.

There is also JTRANS (Sandeep Sibal), a Java program that enables you to see Sanskrit text in an HTML document. There is also an `Xdvng` font that if installed will display Sanskrit documents on the Web. All these are explained in detail in the file `index.html` available via anonymous ftp from `jaguar.cs.utah.edu` in the directory `private/sanskrit`. You will have fun with all these programs and Avinash can throw more light on all

¹ <http://www.paranoia.com/~avinash/itrans.html>

these topics, since he created the various ITRANS versions. He has also an ITRANS songbook that lists several thousand Hindi film songs in Devanagari script.

If you visit <http://www.concentric.com/~Dchand/jaguar>, click on Processing Tools, where several packages for processing Sanskrit on the net are described with pointers to ITRANS, JTRANS, and others. Currently ITRANS supports Devanagari (Sanskrit/Hindi/Marathi), Tamil, Telugu, Kannada, Bengali, Gujarati, and Romanized Sanskrit script output.

The input text to ITRANS is in a transliterated form. Each letter in an Indian Script is assigned an English equivalent, and the English letters are used to construct what will eventually print out in the Indian Language Script.

ITRANS offers a choice of two input encodings: ITRANS, and CS/CSX. ITRANS encoding is a 7-bit ASCII encoding, while the CS/CSX encoding is an 8-bit encoding. The ITRANS encoding requires multi-character English code be used to represent each Indic Script letter, while the CS/CSX encoding uses a one-character code to represent each Indic script letter.

Other meaningful work undertaken in T_EX-related areas includes various fonts created using METAFONT or tools like that. Some of the work has been undertaken by non-Indians too.

1. ItxGuj, a Gujarati font, and ItxBeng, a Bengali font, were added to ITRANS. These fonts have been donated to ITRANS by Shrikrishna Patil, and are available in PostScript Type 1 and TrueType formats, so they can be used for printing as well as for display on WWW browsers such as Netscape 3.0 (or later).
2. Though a lot of improvisation is needed, KannadaT_EX (developed by the Central Institute of Indian Languages, Mysore) is a commendable work in the right direction. For the Kannada font from the KannadaT_EX package, ITRANS support was added by Raghunath K. Rao. This is a font in METAFONT format, so it can be used only with T_EX.
3. Devanagari font: Xdvng, by Sandeep Sibal is available in PostScript Type 1 and TrueType formats, so it can be used for printing as well as for display on WWW HTML browsers such as Netscape 3.0 (or later). The Xdvng font is a derivative of the Devnag font developed by Frans Velthuis.
4. Romanized Devanagari fonts: CSUtopia, by Dominik Wujastyk,² and Washington Indic Roman by Thomas Ridgeway; both in Classical Sanskrit Roman encoding (CS/CSX encoding).
5. Malayalam font: by Jeroen Hellingman,³ a commendable work for both the traditional and reformed scripts. This is complete except for METAFONT sources; instead a range of pre-compiled sizes is included for the main font, and is available at CTAN. This system comes with two pre-processors, patc and mm.

The malyalam.sty⁴ package is an interface to malayalamT_EX, for use with L^AT_EX 2_ε. It works by loading Hellingman's macro files mmmacs.tex and mmtrmacs.tex to interpret the T_EX macros generated by the patc and mm pre-processors.

Note that these macro files are *not* provided as part of malyalam.sty, but must be collected separately from CTAN or elsewhere.

Problems of T_EX in India

As you can see, except for baseline research on some font generation, nothing substantive is forthcoming from the Indian T_EX world. T_EX has never percolated into the local publishing industry. As such, document preparation (especially technical documents) in the regional languages suffers considerably and its current status is deplorably poor. It has an indirect effect on the development of scientific document presentation in local languages. People quite simply are forced to believe that our languages are not fit for scientific document presentation and console themselves that it is a cherished domain of European languages. For instance, the State Languages Institute of Kerala (Kerala is one of the Indian States where the literacy rate has surpassed 95%), the official body for the production of school and University text books in Malayalam (the language of Kerala), finds it difficult to produce advanced scientific books with a quality comparable to English language text books, though intellectual resources are abundant.

Secondly, with a very healthy and vibrant literature, the Indian regional languages publishing is one of the richest industries in the country. But electronic digitizing and archiving of the multitude of books released in a variety of languages (both officially recognized and otherwise) is a distant dream for us. No effort has been invested to address the

² d.wujastyk@ucl.ac.uk

³ etmjeh@etm.ericsson.se

⁴ <http://ctan.tug.org/tex-archive/language/malayalam/>

problems of archiving of text data and its retrieval. SGML (Standard Generalized Markup Language) is still alien to Indian languages. A vast heritage of Indian Literature still thrives on paper, raising a multitude of issues relating to storage and retrieval of information. The advent of InterNet and the WWW has prompted very many Indian regional periodicals to enter into the world of electronic magazines. Without proper fonts and an encoding scheme fit for the WWW browsers, most of them are still wallowing in the primitive world of presenting images of whole text pages, which becomes highly unpopular among Indian viewers where the poor dialup line speed prevents easy browsing.

Thirdly, there is a wide gap between Indian T_EX Users and the current status of T_EX in the world. The old L^AT_EX 2.09 is still in popular usage among most of the typesetting houses and general users as well. Most users are afraid of L^AT_EX 2_ε. When the world is hopefully anticipating the arrival of L^AT_EX 3, our users are still in the domain of the obsolete L^AT_EX 2.09. In the workshop held along with the inauguration of the Indian T_EX Users Group, most of the participants had not heard of graphics inclusion programs like METAPOST, XYPic, PSTricks, etc. PostScript and its relationship with T_EX is also still unfamiliar.

Formation and relevance of the Indian T_EX Users Group

It is at this state of affairs, some of the T_EXies in the southernmost part of India came up with the idea of forming a Users Group in India. Sebastian Rahtz⁵ of UKTUG played a key role in its formation. A few academics and researchers from the University of Kerala, Trivandrum, scientists from the Space Center, programmers from Indian software and typesetting companies assembled together and launched the Indian T_EX Users Group (short-named TUG*India*). The aims and objectives of TUG*India* do not differ much from that of the international TUG, aside from a special emphasis on extending T_EX to Indian languages. As a first step towards this goal TUG*India* is associating with Yannis Haralambous⁶ of the French T_EX Users Group to build an Omega-Malayalam system. Preliminary work done so far gives quite encouraging results, and with these results the local education department has agreed in principle to finance projects relating to actualizing and perfecting the Omega Malayalam system that

can solve the problem of technical document preparation in Malayalam.

This is only a first step towards extending T_EX to Indian languages. Slowly and steadily this mission would be spread to other parts of India to cover all the major languages. It may sound a little strange that a single user group in a vast country with diverse lingua and cultures can hold all the users with different identities together. Unlike other parts of the world, this is an amazing truth so far as India is concerned and the TUG*India* Board has decided that its secretariat would be shifting its location to different centers in India in a fixed periodical manner so that the current bias towards the south will be annulled.

To familiarize its members with the emerging trends in T_EX research, TUG*India* will be holding periodical seminars and workshops, etc.; the first of these was conducted along with the inaugural ceremony. The main themes discussed were L^AT_EX to SGML conversion strategies, pdfT_EX and related issues, Hypertext in T_EX, graphics and color inclusion in L^AT_EX, and METAPOST and other graphics programs.

Miscellany

The majority of T_EX users in India are from the typesetting companies and the T_EX implementations are naturally the choice of their employers. Most of them are using Y&Y with Win95 operating platform except for one company (to my knowledge) which uses *Textures* for Mac. Still another company which has more than 100 terminals employs Novell Netware and DOS based T_EX implementation too. Most of the computers used are Intel based PCs. Unlike this scenario, the academic institutions like the Indian Institute of Technology, Indian Institute of Science, Inter-Univ. Center for Astronomy and Astrophysics, etc., where T_EX remains a leading document preparation medium, the operating platform is various flavors of UNIX. Most of these institutions have Sun workstations, DEC Alpha systems, or HP workstations, and T_EX implementations for these systems are in use.

Epilogue

The Indian T_EX Users Group would be publishing a journal *viz.*, TUG*India* Journal, every four months and the first issue is getting ready to be released within a fortnight. TUG*India* welcomes articles from all the T_EXies interested in publishing an article in our journal. Various User Groups are also informed that TUG*India* will be happy to reprint each other's articles on a reciprocal basis. The address

⁵ s.rahtz@elsevier.co.uk

⁶ yannis@pobox.com

for communication: Indian T_EX Users Group, TC
24/548, KRIPA, Sastha Gardens, Thycaud, Trivan-
drum 695014, India. Tel. +91 471 324341, Fax. +91
471 333186, e-mail: tugindia@mailexcite.com.

◇ C. V. Radhakrishnan
River Valley Technologies
Software Technology Park
Trivandrum 695034
India
river@earthling.net

Search inside document. Indian TEX Users Group. : <http://www.river-valley.com/tug> The BTEX program. BTEX Style les. 15 A On-line Tutorial on LTEX The Tutorial Team Indian TEX Users Group, Buildings, Cotton Hills Trivandrum 695014, 2000 Prof. A c 2000, Indian TEX Users Group. This document may be distributed under the terms of the LTEX A Project Public License, as described in lppl.txt in the base LTEX distribution, either version 1.0 or, at your option, any later version. Close. Quit. c 2000, Indian TEX Users Group. This document may be distributed under the terms of A A the L TEX Project Public License, as described in lppl.txt in the base L TEX distribution, either version 1.0 or, at your option, any later version. 10 Bibliography. 10.1. Introduction Bibliography is the environment, which helps the author to cross-reference one publication A from the list of sources at the end of the document. Bibliography needs consistency, L TEX A helps author to write well structured bibliography, because this is how L TEX works by specifying structure. It is easy to convert the style o Software Technology Park, Trivandrum, India email: cvr@river-valley.com. This is for public consumption and for release to Comprehensive TEX Archive Network. 1/10. Objectives. â€¢ to devise a method for easier technical presentation. 2/10. Objectives. â€¢ to devise a method for easier technical presentation. â€¢ to help the mix of mathematical formulae with text and.â€¢ to help the mix of mathematical formulae with text and. graphics which the present day WYSIWYG tools fail to accomplish. â€¢ to exploit the platform independence of TEX so that presen- tation documents become portable. 2/10. Objectives. â€¢ to devise a method for easier technical presentation. â€¢ to help the mix of mathematical formulae with text and. graphics which the present day WYSIWYG tools fail to accomplish. Indian TEX Users Group. Review of TUG98. Kaveh Bazargan. Focal Image Ltd., London kaveh@focal.demon.co.uk. Philip Taylor. Univ. of London, Egham, Surrey p.taylor@vax.rhbc.ac.uk. The 19th annual TEX Users Group Meeting took place in Toruń, Poland, in August of this year. The following is the impression of the authors who tried to attend all. the talks. Unfortunately a couple of the talks were not attended by either of the. present authors. Apologies to those participants. Daniel Taupin described his LATEX to RTF converter, ltx2rtf. TEX INDIA Fashions, Coimbatore, Tamil Nadu. 7,982 likes Â· 159 talking about this Â· 9 were here. At TEX INDIA we believe in simplicity and ethnicity. Our...Â· In case of Fraud, Report to the nearest Police station with the persons's details. Also, let us know his/ her details so that we can remove him/ her from group to avoid such scams. We need your help to avoid such scams. We don't promote any porns in this group. Please report if found any. You will be permanently banned from the group if found posting porns here. Market Place Buy And Sell Group. Public group.