

# Technical Standard

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## Localization of Applications and Language Technology

E-Governance Standards Workshop

Guwahati, Assam

June 26<sup>th</sup> , 2006

Chairman	- Dr.P.K.Das
Member Secretary	- Shri Kewal Krishnan
Track Coordinator	- Shri Rubaiyat UI Ali



## 2. Programme

At the beginning the participants were given warm welcome by Shri Rubaiyat UI Ali on behalf of NIC Assam State centre . In his welcome address he described the importance of Local language technology Standards for implementing Electronic Governance. The workshop was inaugurated by Shri Ariz Ahmed , IAS and Director Training , Assam Administrative Staff College. On this occasion Shri M.Moni DDG NIC HQ delivered keynote address though Video Conferencing followed by a presentation on E-Governance Standards by Ms Suchitra Pyarelal , TD & Member Secretary . The presentation was on the overall E-Governance Standards and activities that are being taken up in the entire country for making the draft standard document for release of initial set of standards to the Apex Body of Standards of DIT on timeline .

Shri Kewal Krishna , Member Secretary of the Working Group gave a presentation on the approach related to “Localization of Applications and Language Technology Standards” . During the presentation, Shri Krishnan explained the various issues in the area that could be taken up for discussion. The outcome of the Brainstorming sessions and the Working Group meetings were taken for discussions.

## 3. Discussions

- **Inputting Mechanism**
- **Font**
- **Rendering on PC in Application/Browser**
- **Encoding**
- **Content Creation Editors for Desktop & Web**
- **OS Supporting Indian Languages**
- **Transliteration**
- **Database supporting Indian Languages data storage & Retrieval**
- **Browsers Supporting Indian Languages (IE, Firefox): Display, Layout**

- Search Engine Supporting Indian Languages
- Resources : Dictionaries, Glossary, Lexicon, Thesaurus, Wordnet,
- Spell Checker
- Support for Locales
- Sorting Support
- Searching Support
- Localized Applications
- Interoperability between vendors, platform and technology.

## 4. Presentations

1. Ms Suchitra Pyarelal , TD & Member Secretary

2. Shri Kewal Krishna, TD & Member Secretary

## 5. Key Recommendations

### Roadmap for ASSAMESE Language for E-Governance

S.No.	Content	Action/Destination Desired
1.	<p><b>a) Inputting Mechanism Keyboard Layouts : Typewriter, Phonetic, Inscript</b></p> <p><b>b) Online Handwriting OCR</b></p>	<p><b>a) Inscript and Typewriter Keyboard layout should be standardized at the application level. For input layout for Assamese language: Linguists and Keyboard Operators should be involved in the Standardization process.</b></p> <p><b>b) Microsoft representative told Hindi solution is under development for tablet PC, which can be adopted for other Indian</b></p>

		Scripts.
	<b>c) Speech to Text</b>	<b>c) not available.</b>
<b>2.</b>	<b>Font : OTF</b>	<b>In LINUX – available Microsoft is going to release Windows – Vista with Assamese OTF fonts.</b>
<b>3.</b>	<b>Rendering on PC in Application/Browser</b>	<b>Lynx OS has keyboard manager software with by the name of Keyman. It also decided to have the exhaustive list of characters available in Assamese script along with the combination of different character or glyphs to the vendors for proper solution.</b>
<b>4.</b>	<b>Encoding : Unicode, ISCII</b>	<b>Completion and verification of Unicode set for Assamese script.</b>
<b>5.</b>	<b>Content Creation Editors for Desktop &amp; Web</b>	<b>Presently ISCII-based solution for Assamese language is in use for Desktop &amp; web. Microsoft Windows-Vista will include Assamese language support.</b>
<b>6.</b>	<b>OS Supporting Indian Languages</b>	<b>Presently in Windows XP and lynx Assamese language support is not available.</b>
<b>7.</b>	<b>Translation : Manual, Machine</b>	<b>No solution available for Assamese language.</b>
<b>8.</b>	<b>Transliteration</b>	<b>In ISCII – available In Unicode –not available.</b>
<b>9.</b>	<b>Database supporting Indian Languages data storage &amp; Retrieval</b>	<b>Databases like MS-Access, SQL Server, MySQL etc. can handle the Assamese language. Indexing and Sorting not currently available.</b>
<b>10.</b>	<b>Browsers Supporting Indian Languages (IE, Firefox): Display, Layout</b>	<b>Most browsers support (UNICODE) Assamese language.</b>
<b>11.</b>	<b>Search Engine Supporting Indian Languages (Google, Yahoo)</b>	<b>Locales to be selected which is provided by OS for Assamese language search.</b>
<b>12.</b>	<b>a) Resources : Dictionaries, Glossary, Lexicon, Thesaurus, Wordnet,  b) Corpora : Text &amp; Speech</b>	<b>a) <a href="http://www.baruah.in/assamese/asunicode.htm">www.baruah.in/assamese/asunicode.htm</a> online dictionary is available. Dr. D.N. Bezbaruah suggested adoption of the dictionary by Shri S. Chaliha. Advantage of this dictionary is that it is available in electronic form. b) available at IIT, Guwahati, CDAC, Kolkatta</b>

13.	Spell Checker	Government and Industry should be involved for building up the spellchecker.
14.	Support for Locales	State IT department and NIC should take the responsibility of ownership for Assamese language in UNICODE CLDR.
15.	Sorting Support	Reasonable benchmark is required. This is to be implemented in UNICODE Collation algorithm.
16.	Searching Support	Reasonable benchmark is required.
17.	Localized Applications	Reasonable benchmark is required. Inputs from the advisory committee
18.	Interoperability between vendors, platform and technology	W3cindia.in benchmark should be adopted for interoperability.

## 6. State-level Committee

1. Shri Dhiren Bezboruah, Former Editor & President Editors Guild of India, Chairman
2. Dr P K Das, Professor, IITG, Member Secretary.
3. Dr Ariz Ahmed, Director, AASC
4. Shri PK Das, Director, STPI
5. Shri K Baruah, Director, DOEACC, Guwahati
6. Shri Maniraj Barua
7. Shri Arup Kumar Misra, Asst Professor, AEC
8. Shri Pradip Kumar Nath, Dy Secy, Govt of Assam
9. Shri Maznueb Hoque, Dy Secy, WPT&BC
10. Shri Hemanta Saikia, TD, NIC
11. Shri Devajit Bhattacharjya, TD, NIC
12. Smt Naina Begum, PSA, NIC

13. Shri Rubaiyat Ali, PSA, NIC  
14. Smt Bhaswati Duara, SSA, NIC.

## 7. LIST of PARTICIPANTS

Sl No.	Name	Designation with Address
1.	Dr P.K.Dash	Professor IITg Guwahati, pkdas@iitg.ernet.in
2.	MR. D.N. Bezboruah	Former Editor, The Sentinel.
3.	Shri Kewal Krishnan	TD , NIC HQ kewal.krishan@nic.in
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5.	Mr. K. Baruah	Director, DOEACC, Guwahati-5
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7.	Shri Devajit Bhattacharyya , TD	TD NIC Assam State Centre devajit@nic.in
8.	Naina Begum	PSA , NIC Assam State Centre naina@nic.in
9.	Shri Rubaiyat Ali	PSA , NIC Assam State Centre rubaiyat@nic.in
10.	Shri Arup Kr Mishra	Professor , Assam Engineering College
11.	M.D. Mokib Uddin Ahmed	Supdt. of Jail, O/o the Supdt. District Jail, Barpeta, Assam
12.	Md. Maznuib Hoque	Dy. Secy. To the Govt. of Assam, O/o the W.P.T. & B.C.
13.	Shri Naba Shyam Singha	Asstt. Engineer
14.	Shri Mridul Kr. Das	E.A.C. O/o the S.D.O.(Civil) Gossaigaon.
15.	Shri Pradip Kr. Nath	Dy. Secretary, O/o the Public Enterprises, Dispur, Guwahati-6
16.	Shri Pradeep Kumar Sengupta	A.E.E. O/o the Chief Engineer, Assam, Guwahati-1
17.	Sri R.K. Borgohain	A D C

		O/o the Dy. Commissioner, Dhemaji.
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22.	Syed Zakir Ahmed	F I O Assam
23.	Shri Bhrat Ch. Bhattaryya	.E. E P W D (B), Guwahati-3
24.	Shri Ramesh Ch. Borah	S E W.R. Deptt.
25.	Shri Mridul Talukdar	Asstt. Engineer, O/o the Chief Engineer, P W D (B), Guwahati-3
26.	Shri Ganesh Ch. Kakati	Joint Director, O/o the Assam Institute of Research for Tribals & Scheduled Castes,Guwahati-22.
27.	Mr. Debbrat Dutta	Dy. Manager, Assam State Electricity Board.
28.	Mr. Mani Raj Baruah	Sabdalipi
29.	Mr. Arup Kr. Mina	Asstt. Profressor, Assam Engineering College Guwahati-13
30.	Shri Jiten Bhuyan	A E (PHE)
31.	Shri L.N.Thakur	Systems Analyst , Assam Administrative Staff College lnthakur@gmail.com
32.	Bhaswati Duara	Scientist, 'C' NIC ASSC
33.	Mr. Mridul Kr. Das	EAC,
34.	Mr. P. Pal	HCL Infotech Limited, Guwahati
35.	D. Sham	HCL Infotech Limited, Guwahati
36.	Shri Arun Kr. Konwar	Supdt. , O/o the Superintendent,

		District Jail ,Goalpara, Assam
37.	Md. Aga Ahmmed	Under Secy. GAD Dispur
38.	Shri Bipul Das	E.A.C. Parbatjhara, Parbatjhara Camp Kokrajhar, Assam
39.	Shri Bhogeswar Shyam	S.D.O.(S) Haflong, N.C. Hills.
40.	Shri Bipul Kr. Das	E.O.E. O/o the Deputy Commissioner,Dhemaji.
41.	Shri Dwipendra Kakati	Dy.Manager, O/o the Assam Electronics Dev.Corp.,Ltd. Industrial Estate, Assam, Guwahati-1.
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Photos



