

International Conference on Speech and Language System for Human Communication and Workshop on Oriental COCOSDA (ICSLT-O-COCOSDA 2004) SPLASH – 2004

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Centre for Development of Advanced Computing (C-DAC), Noida and the Department of Information Technology, Govt. of India have organized an *International Conference on Speech and Language System for Human Communication and Workshop on Oriental COCOSDA (ICSLT-O-COCOSDA 2004)* held at New Delhi during November 17 – 19, 2004. Coinciding the event, a meeting of the International Committee for Coordination and Standardization of Speech Database and Assessment Technique for Speech I/O Systems (Oriental COCOSDA, 2004) was also held. About 250 delegates from premier Research & Development institutions, Universities and Industry, including 38 delegates from abroad attended the event.



The prominent speakers from overseas included Prof. Shuichi Itahashi, University of Tsukuba, Japan, Prof. Hiroya Fujisaki, University of Tokyo, Japan, Prof. Yoshinori Sagisaka, Waseda University, Japan, Prof. Hirosato Namura, Kyushu Institute of Technology, Japan, Prof. Jaime G Carbonell, Language Technology



Institute, USA, Dr. T. Shultz, Carnegie Mellon University, Pittsburgh, USA, Prof. K. K. Paliwal, Griffith University, Australia, Prof. Yong-Ju Lee, Korea, Prof. Yeow Kee Tan, Singapore, Dr. Hamman Riza, Indonesia, Prof. Idomuso Dawa, Mongolia, and Prof. Chiu-Yu Tseng, Taiwan.



The eminent speakers from Indian premier R&D Institutions, Universities and Industry were; Prof. K. K. Aggarwal, VC, GGSIP University, Prof. Y. S. Rajan, Confederation of Indian Industry, Prof. R. M. K. Sinha, IIT Kanpur, Dr. S.S. Aggarwal, Ex-Emeritus Scientist, CSIR, Prof. N. Balakrishnan, IISc. Bangalore, Dr. Om Vikas, Sr. Director, DIT, Prof. Ashoka Chandra, Ex-Special Secretary, MHRD, Dr. P. K. Saxena, Scientific Analysis Group, DRDO-Delhi, Prof. P. V. S. Rao, Tata Infotech India, Dr. K S R Anajenyulu, Director, Language Technology & Applications, HP Lab India, Prof. U. N. Singh, CIIL, Mysore, Shri Vinnie Mehta, MAIT, Dr. C.N. Krishnan, AUKBL, Chennai and Dr. M. Poonavaikko, SRM Institute of Science & Technology, Chennai etc.

The technical programme of the conference was divided into Plenary and Technical Paper Sessions. The Plenary Sessions (open to all participants) provided an opportunity to researchers to listen and share the experience of eminent experts in the field of Speech and Language Technologies, very relevant subjects, like:-

- Current Trends & Future Perspectives in Speech & Language Technologies
- Human Machine Communications Systems using Spoken languages
- Multilingual knowledge based systems
- Technology Development for Indian Languages; and many other subject were covered



The contributing papers were presented in four parallel sessions related to different themes. O-COCOSDA papers were presented in a separate stream in Country Presentations. Efforts were made to include at least one paper from each participating country and the remaining papers were included in parallel sessions.



A special session on Academia, R&D, and Industry interaction was also arranged to discuss the opportunities available to the industry in these areas. Companies such as Microsoft, IBM, Oracle, etc. participated.



An exhibition was also organized during the conference, displaying the products and technologies developed by C-DAC in the areas of the Speech and Language Technologies, Hon'ble Minister, MCIT visited the exhibition and appreciated the work already undertaken.

During the inaugural session, Hon'ble Minister for Communications & IT, Shri Dayanadhi Maran mentioned that the conference should come up with recommendations as how to consolidate the R&D efforts of various institutions to bring out usable products and technologies to meet the requirements of masses. In his address, Shri Brijesh Kumar, Secretary, DIT, also enumerated the various initiatives taken by the Govt. of India for technology development in Indian Languages and mentioned that the initiatives should be carried forward to bring the fruitage of the research to the masses as envisioned by the Hon'ble Minister.

The Conference also led to formulation of projects with Carnegie Melon University (CMU), USA for the following areas: -

- Speech Corpora Development in Indian Language
- Annotation of Speech Corpora in Hindi, English and Punjabi
- Tool Design for Corpora collection

These projects will be funded by CMU under existing agreements.

Modalities were also finalized for an MoU between European Language Resources Association (ELRA) and C-DAC, Noida for:-

- Proliferation of Speech and Language Technology
- Development of Linguistic Data Resources
- Design and Development of Application useful for masses
- Exchange of experts between the two organizations

At the concluding session, Dr. Shaqeel Ahmad, Hon'ble Minister of State for Communications &

IT, also emphasized the need for proliferating the technologies to the rural citizens, to bridge the digital divide. Shri S. Lakshminarayanan, Secretary, Inter State Council, M/o. Home Affairs, Shri Subhash Pani, chief Secretary, Govt. of Orissa, Shri R. Chandrashekhar, Joint Secretary, IT, Shri Pankaj Agarwal, Joint Secretary, IT and Dr. N . Vijayaditya, DG, NIC, Shri M.L. Gupta, Joint Secretary, Dept. of Official Language were also present.

The following recommendations emerged at the Conference: -

- Vision for development of Translation Systems to realize speech to speech translation amongst 22 recognized Indian languages
- Set up milestones to come up with usable products by the people of India with a view to reduce digital divide.
- Set up a Linguistic Resource Centre called SPHOORTI (Sponsoring Pooling Honoring and Organizing Resources in Technical institutes) at C-DAC to collate the research carried-out at various centers/universities.
- Encourage better sharing of the knowledge pool, by creating open source components on a public web-based platform related to speech and language technologies.
- Embark upon Human Resource Development for this vital area as there is large number of unemployed linguistic but at the same there is shortage of computing linguistics.
- Productize the research and bring to market in useful forms.
- DIT and Deptt. of Official Language to support Mission Mode Project in these areas.
- Standardization issues to be resolved .

Shri R. Chandrashekhar, Joint Secretary, DIT in his concluding remarks, assured the gathering that Govt. of India would seriously consider these recommendations to develop the area of human machine communication involving speech and language technologies. At the end of the session, Prof. Hiroya Fujisaki stated that C-DAC, Noida should

participate in the ISCA-SIG Group set-up by European Commission to bring the works done in C-DAC at International level. He also stated that for the accelerated development of speech and language technology and in order to remain updated, India's continued participation in O-OCOSDA is vital.



A well focused presentation on “A Roadmap for development of Speech & Language Technology: Indian Perspective” by Shri V.N. Shukla and Shri M. Kulkarni, C-DAC.



In the valedictory address of Dr. Shaqeel Ahmad, Hon'ble Minister of State for Communications & IT , Govt. Of India, has mentioned the conference has provided a forum, as envisaged, for brainstorming and deliberations as to how we can use Speech & Language Systems to improve human communication with the larger objective of bridging the digital divide.

The Hon'ble Minister for Communications and IT, Shri Dayanidhi Maran, in his inaugural address had outlined the need to orient the Research and Development in the area of speech and language technologies in enhancing human machine interface

using computers. The distinguished speakers in the inaugural and other sessions have also emphasized the relevance of speech and language technologies, particularly for India where 22 officially recognized languages and hundreds of dialects were spoken by over a billion of people.



More than 150 technical papers were received in the conference from experts world over. The accepted papers have been compiled and published in Two Volumes of the Proceedings, which has made available to the delegates during the course of the event. CD of the proceedings has also been produced.



Vol-I: Proc. Of International Symp. On Machine Translation NLP & TSS (iSTRANS-2004). Chief editor R. M. K. Sinha, Co-Editor V. N. Shukla

Vol-II: Proc. Of International Symp. On Speech Tech. & Processing Systems (iSTEPS-2004) & Oriental COCODA-2004 . Chief editor Shyam S. Agrawal, Co-Editor K. Samudravijaya.

The event lead to recognition of the works done in India at International level and also establishing relationship with leading R&D institutions in India and abroad. This would enable us to consolidate its efforts and would also provide a direction to carry forward the mission to meet our requirements.

The theme of the conference was very appropriate not only in the Indian context, but also globally, as we are heading towards knowledge-based society, which cannot be realized without adequate language interface to machine.

Courtesy :

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