Activity report 2012

Sanskrit Associated Team

Centre de Paris-Rocquencourt, INRIA (France),

Dept. of Sanskrit Studies, Univ. of Hyderabad (India)

and the Sanskrit Library, Providence (USA)

1   Joint activities and exchanges in 2012

A workshop was organized in Velyanad, Kerala, from December 22nd to December 27th, 2011. This workshop, organized by our Associated team and hosted by the Chinmaya foundation, was the occasion of introducing Sanskrit teachers to our computational tools. About 30 Sanskrit teachers attended. Gérard Huet presented in detail the various tools of the Sanskrit Heritage platform.

In January 2012 was organized the World Sanskrit Conference, the major conference on Sanskrit, happening every 3 years. Gérard Huet presented a paper "Departing from Pāṇini for good reasons" in the Linguistics panel "Models and Theories in Sanskrit grammar and linguistics" organized by Jan Houben and Pierre-Sylvain Filliozat.

The Paris site was specially active in 2012. Peter Scharf, professor in the Classics Dept of Brown University, took his Blaise Pascal Chair at the Paris 7 UMR "Histoire des théories linguistiques", and visited regularly the Rocquencourt site of the team.

Pawan Goyal, who had joined the team as a Post-doc on October 1st 2011, stayed until November 15th 2012. He worked with Gérard Huet on improving the Sanskrit Heritage Engine, specially from the point of view of justification of the software computations with respect to the traditional grammar of Pāṇini. Also major improvements of the engine interface were effected, such as input in *devanāgarī* script. This work lead to a joint paper "Completeness Analysis of a Sanskrit Reader", accepted at the 5th International Symposium on Sanskrit Computational Linguistics, organized by IIT Mumbai in January 2013.

A major project was accomplished, in connection with the Sanskrit Library organization. The Monier-Williams dictionary (172 entries), digitalized by Köln University, and formated as an XML digital library by Jim Funderburk, was aligned by Pawan Goyal with the Sanskrit Heritage generative lexicon, using up to date data correlation technique, with use of Google translate to relate French and English entries. Furthermore, the appendix of errata to the Monier-Williams dictionary was integrated in the database.

In March Pr Malhar Kulkarni, from the Humanities department of IIT Mumbai, visited our site for a few days. On April 5, Gérard Huet gave a talk on his

work at University Paris 7, in the framework of the seminar of Peter Scharf's Blaise Pascal Chair.

On April 16th, G. Huet gave a lecture "What I learned form LCF" at the conference in homage of Robin Milner organized by the University of Edinburgh.

In June Pr Ralph Bunker, of the Maharishi University of Management (Iowa), and also associated with the Sanskrit Library, visited Rocquencourt for a month. He implemented an interface allowing annotators to grammatically tag Sanskrit corpus from the Sanskrit Library, by appropriate call-backs to the parsing tools of the Sanskrit Heritage Engine. This interface is now being used by annotators such as Sharon Ben-Dor, who visited Rocquencourt for a week.

Amba Kulkarni, who heads the Hyderabad team, visited INRIA-Rocquencourt for two weeks at the end of June. On June 30th, we presented our computational tools at the "Journée du sanskrit" organised at Maison de l'Inde in Cité Universitaire by Pr Gopabandhu Misra (Sanskrit Chair in Paris financed by the Indian government).

From these various interactions, we wrote a paper "A Collaborative Platform for Sanskrit Processing", co-authored by Pawan Goya, Gérard Huet, Amba Kulkarni, Peter Scharf and Ralph Bunker, that got accepted at the very competitive 24th International Conference on Computational Linguistics (COLING), Mumbai, December 2012.

2   Extension and renewal of the MoU

We prepared during Spring an annex to the MoU between INRIA and the University of Hyderabad, setting the conditions for joint software development between our sites, and extending our MoU until the end of March 2014. The document was signed in June.

Gérard Huet will visit India again in January 2013, at the occasion of the 5th International Symposium on Sanskrit Computational Linguistics, organized by IIT Mumbai.

3   Future of the Joint Team

This is the 6th year of the Sanskrit Computational Linguistics Joint Team. We acknowledge that the Joint Team program of the International Relations Office of Inria does not provide funding beyond 6 years. Nevertheless, there is no reason to stop this very succesful research cooperation, which will be pursued at least till the end of the MOU agreement on April 1st 2014.

4   Publications

The publications of Amba Kulkarni are listed at `http://sanskrit.uohyd.ernet.in/faculty/amba/`, those of Gérard Huet at `http://yquem.inria.fr/`

`~huet/bib.html`, those of Peter Scharf at `http://www.brown.edu/Departments/Classics/people/facultypage.php?id=10044`

The series of proceedings "Sanskrit Computational Linguistics" published in the Springer Lecture Notes series is detailed at `http://yquem.inria.fr/~huet/EA/`.

The Sanskrit Library is accessible from `http://sanskritlibrary.org/`, the Sanskrit Heritage site at `http://sanskrit.inria.fr/`, the SCL platform of University of Hyderabad at `http://sanskrit.uohyd.ernet.in/scl/`.