

IVth International Forum on Syriac Computing

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The Fourth International Forum on Syriac Computing was held in conjunction with the Fourth North American Syriac Symposium at Princeton Theological Seminary, Princeton, New Jersey on July 11, 2003. The Forum as well as the Symposium were co-sponsored by Princeton Theological Seminary, Princeton University, The Institute for Advanced Study, and Beth Mardutho: The Syriac Institute.

Five papers and a tutorial were presented at the forum in three sessions. Several participants attended the sessions. The sessions were streamed live over the internet enabling participants from the USA, Canada, Europe, Australia and even Saudi Arabia to listen live remotely to the presentations and discussions that followed. The streamed media will be archived on the Beth Mardutho web-site.

In the first session chaired by Prof. William Clocksin two papers were presented. The first was by Thomas Joseph, Web Master of the Syriac Orthodox Resources web site, on the automated generation of the liturgical calendar and lectionary of the Syriac Orthodox Church. The paper, co-authored with Simon Skaria of Microsoft, provided an overview of the evolution of the liturgical calendar in the Syriac Orthodox Church, the algorithms for generating the calendar, and the description of an implementation of the algorithms in a Java application.

This was followed by a presentation by Emil Soleyman-Zomalan, Web Master of Beth Mardutho, on the architecture and implementation of the re-designed Beth Mardutho web site. Participants offered both speakers many worthy ideas for enhancing the respective implementations.

In the second session chaired by Thomas Joseph three papers were presented. George Kiraz, Director of Beth Mardutho, and Steve Caruso, the lead programmer of the eBeth Arke project, presented an overview and demonstration of the eBeth Arke: The Syriac Digital Library Project. This is an ambitious project which will create a digital archive of mss., out-of-copyright books, journal articles, and collections of other multimedia material of relevance to Syriac Studies. Such a project will be an immense resource for

scholars in Syriac Studies and facilitate research in the field. A beta site with 50 books was used to demonstrate how scholars will be able to access such a library on-line for their research.

Next, William Clocksin presented a paper on the automatic recognition of Syriac handwriting, co-authored with Prem P.J. Fernando. The paper described several computer-based techniques developed for the automatic transcription of Estrangelo handwriting from historical manuscripts. Data on the recognition rates achieved in experiments using a variety of segmentation methods were presented. This is a very promising line of research that will advance automatic handwriting recognition in general; but more importantly for Syriac Studies scholars and Syriac communities, this will hopefully bear fruit in the form of a handwriting recognition product which will facilitate the digitization of Syriac mss. into electronic text. The paper is published in this issue of *Hugoye*.

The final paper in the session, on Meltho: Syriac Open Type fonts, was presented by Sargon Hasso. Sargon described the design and architecture of the Meltho fonts that support three major Syriac scripts: Estrangelo, Serto, and East Syriac. Meltho fonts are based on the OpenType fonts supported by Microsoft Windows operating systems and the Syriac character encoding specified in Unicode 3.0. Sargon discussed the challenges in designing fonts for traditional Syriac scripts such as the contextual variation of letter shapes, diacritics and their placement on characters, ligatures and other unique behaviors. He then highlighted the features of the OpenType font technology which enable the glyph shaping logic to be embedded within the font files offering the designer flexibility and control over glyph shape rendering by the target operating systems. Current support for Meltho fonts in popular desktop applications as well future support with emerging technology standards such as XSL FO were briefly addressed.

In the third and final session, George Kiraz presented a tutorial on using Syriac in Windows XP. The tutorial provided instructions on the installation of Meltho fonts, and demonstrations on using these fonts in Windows applications. Participants who had difficulties with the installation of the fonts on their computers were able to get these resolved during the tutorial.

The fourth International Forum on Syriac Computing was a resounding success. As with the past forums, it provided an opportunity for an esoteric group of scholars, technology architects and developers to interact and exchange ideas on harnessing technologies for supporting scholarly research in Syriac Studies and enrich-

ing the religious and cultural heritage of Syriac speaking communities.

This was the first forum to be streamed live on the internet, thanks to the exceptional efforts of the media personnel at Princeton Theological Seminary. The archives of the streamed media will be made available on the Beth Mardutho web site. The wider dissemination of information on the innovative projects presented at the forum will hopefully attract more talent into this narrow but important field of activity, so essential to bringing Syriac Studies into the third millenium.