ACM DocEng 2008 Recap

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Welcome to São Paulo! This year's ACM-sponsored Document Engineering Symposium (DocEng 2008) was the first to be held in South America (and the Southern Hemisphere, come to that). In a year of firsts, this year's DocEng was the first to feature a Best Paper Award that brought a healthy competition amongst 5 deserving candidates during the conference and concluded these three days with an incredible suspense!

DOI: 10.1145/1457507.1457508 http://doi.acm.org/10.1145/1457507.1457508

First, some statistics for the multitudinous mathematicians in our target readership. Overall, the conference featured 21 full papers, 19 short papers and 6 demonstrations papers. Full paper authors gave a 30-minute presentation at the conference, while short paper authors gave 15-minute presentations. Demonstration papers were presented during a 2-hour demonstration session that took place exactly at the middle of the conference timeline (all is about symmetry in Mathematic). The acceptance rates were 34%, 40% and 43% for full papers, short papers and demonstrations, respectively.

The conference kicked off with an all-day Working Session on Multimedia Content Transformation on 16 September 2008. Roughly 30 attendees provided an interactive session, including the presentation of prepared slides providing industry and academic positions on the needs in multimedia content transformation. The discussion was lively, and emphasized the eclectic nature of the DocEng crowd. SMIL featured highly, especially in the presentations of Cécile Roisin and Dick Bulterman. Recent research based on SVG and BIFS multimedia formats were also introduced by Cyril Concolato. Roisin's talk on the spatio-temporal and hierarchical mappings between disparate multi-media was of special interest. It is clear from this workshop that "relatedness" in a multi-media context will be the subject of important research in years to come. The MM and DocEng crowds will need to put their heads together on what this means for the future of content.

The conference proper began on 17 September with the first keynote. Michael Shilman of Wize.com presented on "Aggregate Documents: Making Sense of a Patchwork of Topical Documents", which presented a view of how Wize.com interprets multiple customer reviews to create overall product recommendations. Products are ranked by usage. An interesting combination of data mining, natural language processing and confidence weighting, these techniques are extremely important for transforming data into information. Wize learns from examples, improves its accuracy with usage, and scales to other sources and domains. In short, it provided an update on what those Wize guys are up to.

The first session was on Scalable Documents, and included two of the papers competing for the Best Paper Award: "Enabling Adaptive Time-based Web Applications with SMIL

State" (Jansen, Bulterman) and "Adaptation of Scalable Multimedia Documents" (Pellan, Concolato). These papers provided insight into how multimedia will impact document creation, update and workflows. In the first, SMIL state details are modeled after XForms, emphasizing how successful MM representations will evolve from document standards. In the second, multimedia documents are divided into a scalable structure that determines adaptation features of its presentation in various usage environments.

The second session was on Structured Documents, and included one of the Best Paper Award candidates, "Merging Changes in XML Documents Using Reliable Context Fingerprints" (Rnnau, Pauli, Borghoff). This session was, perhaps, the one most focused on document engineering, and included research on document repurposing and mapping.

The third session, Variable Documents, featured presentations on document editing, document components and document layout. The session provided updates on two longstanding UK DocEng programs — those at the University of Nottingham and HP Labs-Bristol. Concurrent editing in multiple views was a highlight of John Lumley's talk — variations on variable documents!

The final session of the day featured the six demonstrations, with a beautiful view of the Octavio Frias de Oliveira bridge[1] from the gallery provided by conference host, Microsoft-Brazil. The demo featured documenting systems for medical applications, office mash-ups, visual Digital Radio, and image collection taxonomies; multimedia document playback; and a configurable editing framework. Of course, the booth that drew all the attention of the crowd of the beginning of this demo session was the DocEng welcome cocktail that brought a joyful atmosphere to all these technical discussions.

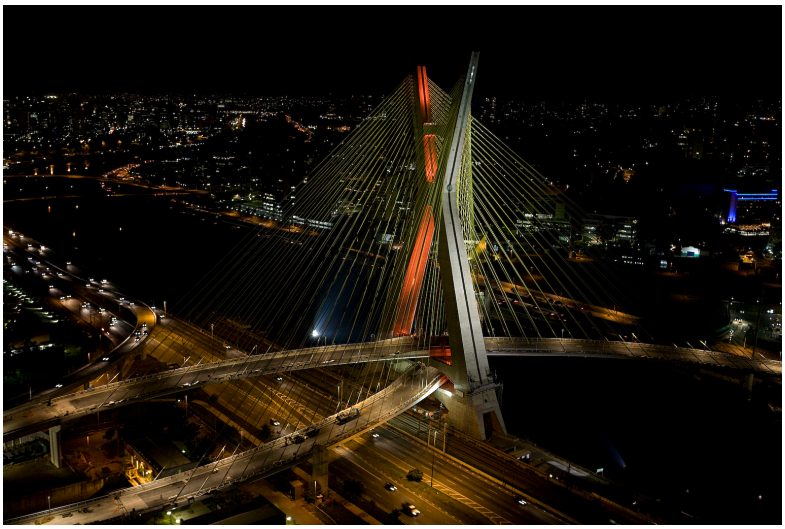

Fig. 1. Octavio Frias de Oliveira Bridge

[1]Photograph shown in Figure 1 courtesy of Klaus Petri. `http://presse.philips.de/apps/n_dir/e1231501.nsf/alle/B04F57BDC0F06138C125743A0034E11B?opendocument`

The second day of the conference, 18 September 2008, began with a session on Finding, Mashing and Mixing. This session included work on document archiving, digitization, mining and retrieval tasks. The Document/Image Layout session followed, which featured layout optimization, PDF document restoration and two more best paper candidates focusing on automated document presentation: "Two algorithms for automatic document page layout" by Oliveira, and "Authoring adaptive diagrams" by McCormack, Marriott and Meyer. In the first, placing algorithms for document items are experimented to automatically generate journal pages. In the second constrained-based placement tools are attached to diagrams to provide layout adaptation features. Interesting work, in any format.

The next session, on Modeling Documents, featured document similarity and querying research. The final session of 18 September was on Information Extraction. This research strives to determine document and phrase saliency, including key phrase and title identification.

Since all good things always come at the end (and not yet to an end!), this second day of the conference culminated with an exciting trip to the São Paulo Museum of Art (MASP in Portuguese) and an amazing conference dinner in a restaurant called Fogo-de-chão. The MASP is an important fine-art museum of São Paulo and very famous for its imposing building which illustrates the ACM Proceedings of DocEng this year (see `http://portal.acm.org`). Unfortunately, São Paulo is also very famous for its enormous traffic jams and it took us some time reach our restaurant where Brazilian culinary specialties where expecting us... In Brazilian, "fogo de chão" roughly stands for "fire of the ground" and perpetuate the Gaucho culture that emerged by the blending of traditions from European immigrants and Brazilian natives. Indeed, an important element of this culture is churrasco, the Gaucho way of roasting meats over pits of open fire for delicious barbecues. This dinner can be shortly described as a never-ending ballet of waiters proposing constantly and repeatedly all kind of delicious meats until you decided to give up. As meat implies drinks, the social network of DocEng participants rapidly tighten into passionate and loud discussions that postponed the best paper announcement to the next day!

The final day of the conference, 19 September 2008, began with the Generation and Printing session, which featured printing of documents from the web and presentation of web material in a magazine format.

The next session was on Content Processing, featuring text simplification through rule- and natural-language processing. Extraction of specific instructions and summarization of text were the topics of the final two presentations.

The closing keynote was given next by Alberto Laender of the Universidade Federal de Minas Gerais. The talk was on "Keeping Digital Libraries Clean: New Solutions to Old Problems". The two "old problems" solved were name disambiguation in bibliographies and searching for a document's full text.

The penultimate session, on Recognizing Characters, included document image processing research — thresholding, handwriting recognition and binary image rotation. The conference's last session was on Modeling, Editing, Adaptation and Interaction. Synchronization and Interaction of MM data was a theme of these four papers that included several research works on NCL which is the standard declarative language of the Brazilian Terrestrial Digital TV System.

The conference culminated with the presentation of the Best Paper Award. This was awarded to Jack Jansen and Dick Bulterman for their paper, “Enabling Adaptive Time-based Web Applications with SMIL State”. We would like to take the opportunity to sincerely thank the organizing committee of this 8th DocEng conference and more particularly Maria de Graa Pimentel, Luiz Fernando Gomes Soares and Dick C.A. Bulterman for their successful organization of the conference. Next DocEng will be held in Munich, Germany, September 15-18, 2009. Come for the first-order predicate logic, stay for the gemuchlichkeit!