COST Action IC1205 on Computational Social Choice: STSM Report COST-STSM-IC1205-24310

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The goal of my STSM visit was to work with Enrico Gerding on *the aggregation of incomplete rankings with real-life data*, but accidentally there were a few other interesting events. On the first day of my visit, Alex Rogers gave his inaugural speech on "Smart Grids, Smarter Vehicles, Informed Consumers" in the evening, which was related to some of my work and very interesting to attend. Also, Ruben Stranders, a former PhD student of the Southampton AIC group visited to talk about his company FireServiceRota. Both talks were interesting examples of applying computer science techniques in practice to obtain socially desired results. Apart from those I had valuable talks with several other people such as Sarvapali Ramchurn (Gopal) and Tim Baarslag to learn about their current work.

Of course, mostly I talked and worked with Enrico. This week we worked on a continuation of earlier (unfinished) research, which we started around a visit of Enrico to Delft and during the EASSS last year. Apart from the problem of ranking Web pages by several search engines into an aggregate ranking (data from trec.nist.gov), we were able to do the experiments for two sets of voting data on true rankings from www.preflib.org (called dots and puzzle).

Also, we tried to come up with a more principled approach of the novel Borda variants we had developed before. For this we first studied more literature to see examples of such properties (such as consistency) and which ones relate or could be adapted to meet our intuition for incomplete votes. We then also tried to formulate desirable properties for voting rules on incomplete votes and to show which variants meet these properties. Although we made good progress, this is still ongoing work. We agreed to complete this work by cooperation over email and through teleconference meetings, and we plan to submit our results to one of the major related conferences with a deadline around this summer.

We also has a discussion about a possible next step, in which we included Tim Baarslag (now a postdoc in Southampton). The idea would be to use our results in a context of costly preference elicitation (this may be the reason votes are incomplete), and formulate an optimisation problem here. This work is still at a very preliminary stage, but we are confident that we can also make a worthwhile contribution here.