Dear Participants/Domain Experts,

I am Hang Dong, a 4th year PhD student at the School of Computer Science, University of Liverpool. Together with my supervisors Dr. Wei Wang, Prof. Frans Coenen and Prof. Kaizhu Huang, we would like to invite you to participate in the evaluation of our research and help us assess quality of the learned knowledge.

Purposes of our research:
- To learn and extract useful relations between concepts from social tagging data, i.e., http://bibsonomy.org.
- To evaluate whether a predicted subsumption relation holds between any two tags given another context tag.
    - For those relations already in existing knowledge bases (e.g., http://wikipedia.org), we can perform the evaluation automatically (we have done this).
    - For those relations not in the existing knowledge bases, we attempt to see if the learned relations can enrich the existing knowledge. We need your help for the human evaluation.

Suggested evaluation method:
In the EXCEL file, each row contains 3 concepts/tags, which represents a relation learned by our method. The first is the narrower concept, the second is the broader concept, and the third is the context concept.

In many cases you will find that the 2nd one is the same as the 3rd one, so the 2nd one itself is a context concept (or you can skip the context for such cases). The fourth one will be your evaluation result.

You may also find that many such relations do not make any sense. This is because those "correctly learned" relations, which can be found in existing knowledge bases, have been removed from the list. This evaluation is to see we really can extract something interesting to enrich the existing knowledge based on our method.

We would suggest that you consider the following approach for your manual evaluation. If you don't know a concept/tag (e.g., in abbreviated forms), please feel free to check Wikipedia, dictionaries or online vocabularies.

- If you think the **1st concept** can be seen as a candidate for **sub-topic, sub-field or narrower concept (is-a, is-kind-of, is-part-of, is-a-sub-topic-of, is-a-sub-field-of) of the 2nd one** (we call this a subsumption relation), please specify "**2**" in the fourth cell.
- If you think the subsumption relation does not hold between the 1st and the 2nd ones, but they are **related** (in other words, based on your knowledge and

understanding, you think it is reasonable to associate them given the context), then please specify "**1**".

- If both the subsumption and related relations do not hold, please specify "**0**".
- If you are not sure about which to choose, please leave a blank on the row.

This evaluation would take around 20 to 40 minutes. Your help on the human evaluation is much appreciated.

Best wishes,
Hang