

# Agreement: How to Reach it? Defining Language Features Leading to Agreement in Dialogue

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## Abstract

Consensus is the desired result in many argumentative discourses such as negotiations, public debates, and goal-oriented forums. However, due to the fact that usually people are poor arguers, a support of argumentation is necessary. Web-2 provides means for the on-line discussions which have their characteristic features. In our paper we study the features of discourse which lead to agreement. We use an argumentative corpus of Wikipedia discussions in order to investigate the influence of discourse structure and language on the final agreement. The corpus had been annotated with rhetorical relations and rhetorical structures leading to successful and unsuccessful discussions were analyzed. We also investigated language patterns extracted from the corpus in order to discover which ones are indicators of the following agreement. The results of our study can be used in system designing, whose purpose is to assist on-line interlocutors in consensus building.

## 1 Introduction

The issue of consensus building within discourse has become more substantial since the computer and web technologies offer vast opportunities for public debates, collaborative discussions, negotiations etc. In computational linguistics there have been numerous studies dedicated to discourse analysis, modelling and analysis of collaboration (Chu-Carroll and Carbery, 1998; Sidner 1994),

negotiations (Sokolova et.al. 2004) and agreement process (Di Eugenio et al., 2000).

Two important components of discourse studies are representation of discourse structure and language. We investigated discourse structure in an attempt to find out how it can reflect successful or unsuccessful result of a web-discussion. Our aim was to determine structures of discourse representation that lead to consensus at the end of the discussion and structures that do not lead to consensus. We think these types of structures could help for better understanding of position and intentions of participants during agreement process. We performed our study using web-discussions (Wikipedia Talk pages, English language), where participants had as their goal to agree upon the editing policy of Wikipedia articles.

To build up the discourse structure we used Rhetorical Structure Theory (RST) relations (Mann and Thomson, 1987). We then applied statistical analysis to our corpus of discussions annotated with 918 relations.

As mentioned before, another important component of discourse analysis is language cue or better said those words and phrases used by the participants to directly indicate the structure of the argument to the other participants. After preliminary determination of some rhetorical structures that could lead to consensus, we, as well, investigated how language reflects success or failure in our web-discussions.