

Online Support System for Mediator Education

Takahiro Tanaka, Yoshiaki Yasumura, Daisuke Katagami, Katsumi Nitta
Tokyo Institute of Technology
Department of Computational Intelligence and Systems Science
4259 Nagatsuta, Midori-ku, Yokohama, Japan 226-8502
takat@ntt.dis.titech.ac.jp

Abstract

To settle the dispute, ADR (Alternative Disputation Resolution) has been becoming popular instead of the trial. However, to educate the mediation skill, much training is needed. In this paper, we introduce the overview of the online mediator education system. This system navigates the users by providing materials for decision making by referring to old cases. Users can communicate with each other by using avatars, and they can see the status of disputation in the form of several diagrams.

1. Introduction

These days, there are various types of troubles related to transactions on the Internet. Especially the number of troubles in online shopping and online auctions are on the increase. Since going through trials to argue is high cost and time-consuming, therefore it is difficult to provide effective remedy for these types of troubles. Prompt and low-cost mediations and arbitrations called the Alternative Disputation Resolution (ADR) are in the spotlight.

Non-legal professions can carry out mediations, however, as the demand increasing, we are lacking mediators. Trainee mediators not only need education on the procedures and skills for actual mediations but also need to practice with example cases [Katsh, 2000; Rule, 2002]. However, when mediators practice, they need constant attendance by instructors. They have to be at the same location at same time which is a great burden.

Given this factor, we have been researching to aim for developing an online mediator education system. This system does not only provide online argument environment, but also assists and educates the mediators by using case example base. It also suggests a new education model using the analyzed data accumulated by the system.

2. Online mediation education assistance system

Online mediations are carried out by connecting to the server through the Internet by the users using the argument interface. Mediator (host) and the two parties are present for the system. Educational assistance is done by the instructor suggesting the next possible remark and judging the mediator's skill by analyzing the accumulated mediation records statistically.

The main features of this system are the following three;

- (1) To provide online mediation education environment
Exchanging remarks online, setting index to the remark contents and show them in diagrams and accumulate them in case example base
- (2) To navigate mediations using case example base
During mediation practice, similar past mediation cases can be searched and the next remarks candidate are indicated to the student acting as a mediator.
- (3) To analyze mediation skill using case example base
By analyzing mediation records in case example base, assess the mediation student's skill.



Figure 1: Argument Interface

Situated mediations are carried out with Argument Interface as shown in Figure 1. Users input "remark texts", "link data" and "avatar expressions".

The case data dealt in this study is natural-language texts representing conversations in mediations. To be able to search for similar situations from the conversations and to analyze statistically, we propose to index the remarks as follows;

Firstly, when instructors set questions, they should know what the point at issue is, for instance, in mediations for auction troubles, the following point at issues are to be included [Ashley, 1991; Aleven, 1997];

- f1: Whether or not the product auctioned was a defect
 - f11: Does it have any flaw?
 - f12: Is it broken?
- f2: Was there enough description for the product?
 - f21: Did the product description picture show the defect part?
 - f22: Did the description explain the defect-status well?

For each question set, we prepare around twenty points at issue for it beforehand. In addition, for each of them, we register which points at issue is on the topic when which term (or groups of term) appear. This extraction of wordlist is done by TF/IDF method by using mediation records in the case example base.

This allows one remark to have two data be indexed; (1) the point at issue in the remark and (2) the relation with the previous remark.

During mediation, we tend to be stuck what remarks to make next. In those cases, it would be helpful if we can refer to other people's remarks in similar situations picked up from the case example base, and by knowing how the mediation proceeded can help them refer to making next remark.

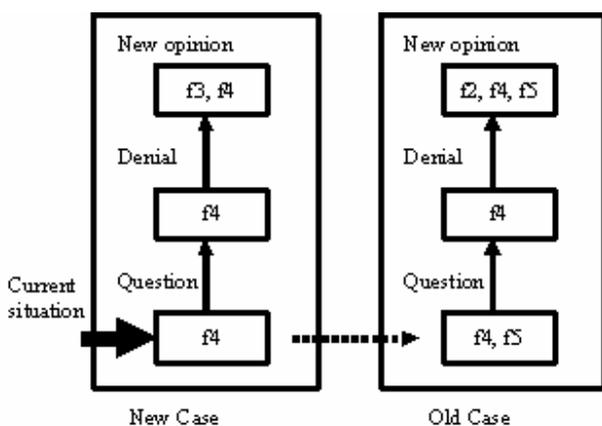


Figure 2: Similar Situation Search

However, searching similar situations are not easy. Similar remarks can always be slightly different from one another, as the expressions are different, and what we understand from them differs regarding the previous remarks.

To make searching for similar situations easier, we propose a searching method of using index of remarks. This method, as shown in Figure 2, goes back to two of the previous remarks from the present subject remark and within these three remarks, the point at issue and the relation (link data) are compared and similar situations are assessed.

3. Utilizing the case base

By analyzing old cases statistically, we can draw various information which is useful for legal education strategy. For example, by observing the number of issue points which the mediator introduced in the case, we can estimate how positively the mediator controls the mediation. This information is used to measure the mediation skill.

Another example is that we can classify the mediation data in the case base by comparing the flow of issue points. The classified data is used to arrange the mediation records and to evaluate the results of mediation training.

4. Conclusion

We introduced the outline of the online system of ADR mediation education assistance. The characteristics of this system are that it uses case example base to compare the mediation navigation and to assist mediator education.

The final object of this study is to develop a mediation agent that carries out mediations instead of human. Mediation agent acts as a host following the Argument models. With using the case example base, they can refer to the remarks form similar situations to use in hosting. Therefore, we need to collect more simulated mediation cases and statistically analyze them and with the results of them, we need to improve the accuracy of the similar situation search.

References

- [Rule, 2002] Colin Rule, Online Dispute Resolution For Business, Jossey-Bass, 2002.
- [Katsh, 2000] Ethan Katsh and Janet Rifkin, Online Dispute Resolution : Resolving Conflicts in Cyberspace, Jossey-Bass, 2000.
- [Ashley, 1991] Ashley, K.D, Reasoning with cases and hypotheticals in HYPO, Int.J.ManMachine Studies 34, pp.753-796, 1991.
- [Aleven, 1997] Vincent Aleven, Teaching Case-Based Argumentation Through a Model and Examples, University of Pittsburgh, 1997.