Facilitating Presentation Rehearsal Review with Realtime-created Hypervideo Technique

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Abstract

The peer review in a presentation rehearsal enables the presenter to be aware of the insufficiency or incompleteness of his/her knowledge and to refine his/her knowledge, presentation materials, and oral expressions. However, it is not so easy for the peers to review the presentation in a fruitful way, and it is not easy for the presenter to review the results from the peers to refine his/her knowledge. Our approach to the issues is to utilize realtime-created hypervideo technique for the peer review support. In this paper, we describe a design of review support in the presentation rehearsal with realtime-created hypervideo. We also describe details of some technical issues and its implementation of a prototype system as solutions.

1. Introduction

The purpose of a presentation rehearsal to enable a presenter to be aware of the insufficiency or incompleteness of his/her knowledge and to refine his/her knowledge, presentation materials (PowerPoint slides for example), and oral explanations. However, it is sometimes hard for peers to remember details of a particular part of the presentation precisely. This hinders the peers from giving explicit and practical comments to the presenter and causes some disagreements in the discussion. Therefore, the presenter cannot obtain instructive suggestions or resolutions from the peer review. Additionally, after receiving the peer review, the presenter should review the results of the peer review to refine his/her knowledge. Unfortunately, the presenter cannot often remember the accurate situations of the discussion concern with each review points. To facilitate effectiveness of peer review in presentation rehearsal, we have pointed out four types of difficulties in a presentation rehearsal as follows [1].

(1) Pursuing the progress of a presentation concurrently
(2) Remembering details of the presentation precisely
(3) Tracing topics reviewed
(4) Remembering the result of the peer review precisely

Our approach to these issues is to propose a new hypervideo technique [2] as a basis of a framework for supporting peer review works. In general, utilization of video technique is very popular to record and playback situations of a presentation rehearsal. Nevertheless, in the traditional way, recorded video sequences cannot playback partially to respond to the needs. Thus, we propose realtime-created hypervideo techniques for a selective and partially playback of situations and attempt to realize time-shift of the peer review works. In this paper, we describe a design of review support in the presentation rehearsal with realtime-created hypervideo. And we describe details of some technical issues and its implementation of a prototype system as solutions.

2. Presentation Rehearsal Support System

To solve the difficulties in a presentation rehearsal by computerized supporting system with Hypervideo technique. To solve the difficulties in a presentation rehearsal, we have developed a prototype system with hypervideo technique [1]. Figure 1 shows a configuration of the system. The system is developed from scratch with cross-platform environment, which runs on both MacOSX and Windows XP platforms.

The system consists of four kinds of application software, and each application work with other applications via network. The presenter client works on a presenter's PC with a presentation software (PowerPoint etc.). The client extracts information about presentation slides and timings of presentation progress from the presentation software and sends them to a review server simultaneously via network. The peer

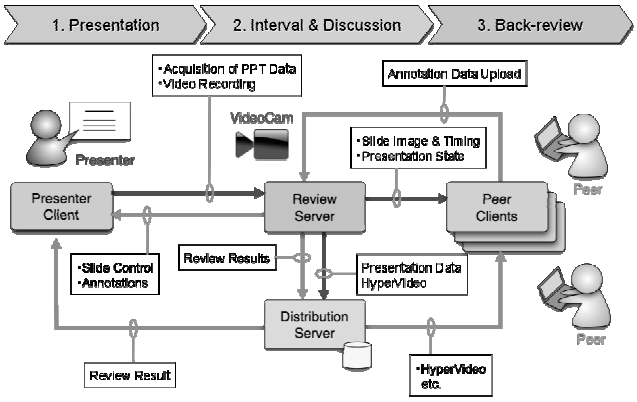

Figure 1. System Configuration

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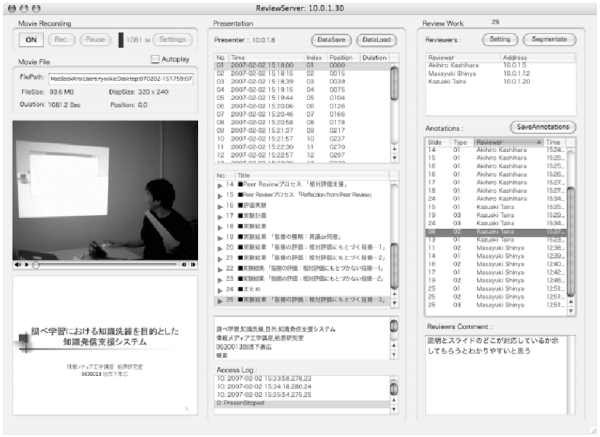

Figure 2. Review Server

client works on peer's PC. While presenter performs presentation, the client acquires information of the presentation, images and texts of each slides and transition timing of slides etc. The peers can make annotations in any points of the presentation as a peer review works, and the results of the work are transmitted to the review server.

3. Realtime-creation of Hypervideo

The main role of the presenter client is to extract the contents data included in presentation slides and timings of slide transitions during a presentation. The extracted data are transmitted to the review server through network immediately. For the data extraction, we use a technology of "inter-application communication". The review server works on a dedicated PC located in a meeting room of a presentation rehearsal and equipped with a "video camera" such as a web-cam. The server has an interface for checking status and a data management as shown in Figure 2. When the server is connected from the presenter client, the server starts to record a situation of a presentation and stores it into a compressed MPEG-4 movie. While recording is in progress, the server receives presentation data continuously from the presenter client, and keywords are extracted from the text data of a current slide by a morphological analysis. When presentation is over, the recorded movie is divided into several video sequences by timings of slide transitions. Then, the video segments are indexed by the keywords and managed in a database as a set of hypervideo. It usually takes much time to segment a recorded movie by slide-transition-timings and to make it ready for the distribution since re-encoding process is involved. For example, it takes 580 seconds for QuickTimePlayer-Pro to publish the presentation movie of 163MB MPEG-4 file including 1,020 Sec. in total duration, and 40 slides as streaming format. But in our system the whole process of hypervideo generation is finished in 17 seconds. It is 37 times faster and enough for our condition.

4. Peer Review Work Support

During the presentation, peers can see presentation data except hypervideo on "Peer Client" via network and take short note for each slide. The peers can also make annotations about curious or worrisome points while listening to a presentation. In this period, the peers simply make annotations or short memos to remind in a discussion. After presentation, all participants of the review work would have few minutes interval to give the server time necessary for generating hypervideo. The peers go into details about the annotation points marked during the presentation. This is a first time when the peers use the hypervideo to refer hypervideo segments across the presentation. For the discussion period, the annotations stored are used to indicate points in arguments. In this process, the peers can utilize the traceability of hypervideo to confirm relationships among each annotation point, and indicate them to others. As optional functions, the peers can control PowerPoint to change current slide remotely from the peer client, and the presenter can make a quick short note on the presenter client. In the system, the review work can also be done remotely via global network asynchronously. This function is very effective for a group with a few members, and it facilitates the presentation rehearsal.

5. Conclusion

In this paper, we have described the design of a review support functions for a presentation rehearsal based on the configuration of our supporting system. Presently, we made a test use of around 30 presentations, which included from our collaborators, and the system worked almost well. As our future work, we would like to continue developing the system and consider about more appropriate annotation and back-review method by an analysis of the collected data.

6. Acknowledgements

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