

Review Support System with Visual-Oriented Annotation Method for Presentation Rehearsal

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Abstract: The purpose of presentation rehearsal is to enable a presenter to be aware of insufficiency or incompleteness of his/her knowledge and refining the knowledge. In our study, we have proposed a framework of the presentation rehearsal support system to assist the peers to review the presentation in the rehearsal, and have developed a prototype system. In the review work of our system, a reviewer make annotations with text, but it sometimes hides the peers from giving explicit and practical review comments for a presenter. Therefore, we attempt to apply a visual annotation method for computerized presentation rehearsal system. In this paper, we propose the visual-oriented annotation method for review works in our computerized presentation rehearsal support system.

Keywords: presentation rehearsal, peer review, visual annotation

1. Introduction

Learning in a self-directed way has been more and more important along with increasing opportunities for learning on the Web. On the other hand, learners often finish it with incomplete knowledge (Hammond N., 1993). It is also hard for them to be aware of the incompleteness of knowledge they have learned even if they think it is completed (Thüring M. et al., 1995). From this point of view, the purpose of presentation rehearsal is to enable a presenter to be aware of the insufficiency or incompleteness of his/her knowledge and to refine his/her knowledge, presentation materials and oral explanations through a review work with peers comments. However, it is sometimes hard for the reviewers to remember the details of a particular part of the presentation precisely and give instructive suggestions or resolutions to the presenter.

We have accordingly proposed the framework of computerized presentation rehearsal support environment and developed the prototype system (Okamoto R. and Kashiara A., 2007). We made a test use of this system with improvement in the last 6 years. The system equipped with a function of making annotations to a particular slide of a presentation with text comments. The function is almost working well, however, it is sometimes hard for peers to write all precise information of annotation targets with its position etc. in a short time. This hinders the peers from giving explicit and practical review comments to the presenter, and causes some disagreements in the discussion. Our approach to resolving the issue is to propose a review support system with visual-oriented annotation method. This paper describes the problems with an existing approach, proposes our new approach and prototype system.

2. Annotation Method in Review Work for Presentation Rehearsal

In the review work of a presentation rehearsal, in general, an annotation is made as text data consists of a pointer to targets and reviewer's comment. Though, it is sometimes hard for reviewers to note down all of necessary information while listening to the presentation in the short time. In addition, text information has a linguistic ambiguity from the first. Therefore, it causes of a gap in understanding between the reviewer and others. For the issues, we attempt to apply visual anchor annotation method.

We have been developing a prototype system of a presentation rehearsal support system. We have made improvements the system has gone along with operational test since 2006 and recorded 61 sets of rehearsal data with 2,380 annotations in total. Table 1 shows a type classification result of annotations accumulated in the database.

Table 1: Classification of Annotation Points

Type of Annotation Point		Number		Percentage
(1) Presenter	Behavior of Presenter	201	653	27.4 %
	Aural Expression	452		
(2) Presentation Scheme	Relation between Slides	578		24.3 %
(3) Slide Contents	Layout	187	933	39.2 %
	Graphics	120		
	Text	626		
(4) Others		216		9.1 %
		Total: 2,380		

There are four types of categories, from a viewpoint of visibility of the target, (3) 39.2 % is the only visible target and others are not. The total percentage of (1) and (2) is 51.7 % which more than half number of annotations, but we cannot apply the anchor annotation method directly to them. (1) is a category of presenter's behaviors which includes annotations for a falter or fluff in aural expressions and (2) is for a structure of a presentation. In our previous review system, these two types of annotations are just associated with slide transition timing and not classified explicitly.

3. Review Process with Visual-Oriented Annotation

To apply visual anchor annotation method, we define two phases of annotation process as follows.

(1) Annotation Making Process: This is a term in the middle of a presentation. In this process, for “(3) Slide Contents”, the reviewer use straightforward access to targets by use of graphical interface of presentation slides. About the other types of annotations, reviewer makes annotations briefly and takes time later in next process in a phase of interval between presentation and discussion.

(2) Annotation Refinement Process: In this process, reviewer refines the annotations and reorganizes made in the previous process. We newly designed two types of interfaces for this process. The one is for “(1) Presenter”, the annotations stored in the previous process are related to the time-line by confirming recorded video etc. The second is for “(2) Presenter Scheme”. For these annotations, we use a tree structure of scheme visually.

4. Development of Prototype System

We have been developed a prototype system of the review support environment. The base of the system is our pre-developed rehearsal support system, and we have upgraded the “Review Server” for the new feature of our new “Peer Client” with our visual-annotation method.

Figure 1 shows an example of an interface of a peer client for the review work. In the interface, many types of data from review server are displayed depending on the situation. In the middle of a presentation, a screen image of a projector, which reflects an animation progress at intervals of a few seconds, is displayed. The progress status of a presentation is displayed as a list of slide information in real-time at the lower left of the interface. To make annotations to slide contents

in the screen image, a reviewer can make an annotation point, which in the shape of red pin, any time with a mouse-click on the image and write a comment for it in the lower middle field. In other cases, make annotation for “Presenter” or “Presentation Schema”, a reviewer can make a review-point and move it on to the area for each at the upper middle of the interface. The review-points stored in the area are associated with time stamp and schema tree in another window.

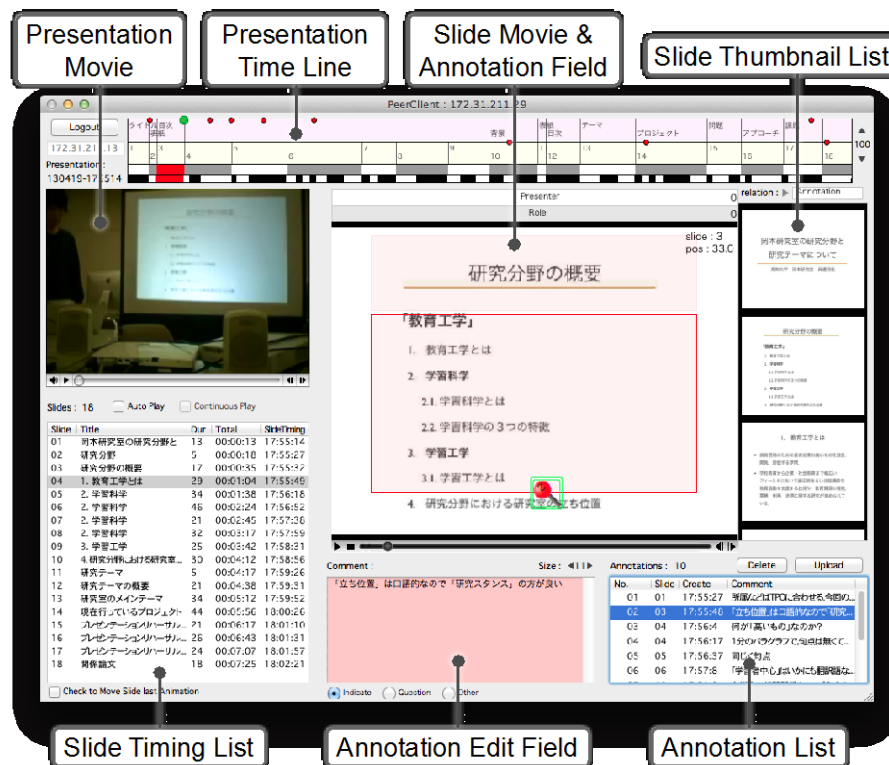


Figure 1. Interface of Peer Client in Visual-Oriented Annotation Method

5. Conclusions

In this paper, we described the problems with an existing approach in computerized presentation rehearsal system in our previous research. And also, we proposed a review support system with visual-oriented annotation method and describe about new prototype system. Presently, we are continuously developing the prototype system and will make a test use in the near future to evaluate availability of the method.

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References

- Hammond N. (1993) 'Learning with Hypertext: Problems, principles and prospects', in McKnight C., Dillon A. and Richardson J. (eds.): Hypertext: A Psychological Perspective, Ellis Horwood Limited, pp.51-69.
- Thüring, M., Hannemann, J. and Hake, J.M (1995) 'Hypermedia and Cognition: Designing for Comprehension', *Commun. ACM*, Vol.38, No.8, pp. 57-66.
- R.Okamoto, and A.Kashihara (2007). Presentation Review Supporting Environment with Realtime-created Hypervideo Technique. Proc. of International Conference on Computers in Education, 433-440, Hiroshima, Japan.