[9-15] 화상 채팅방의 음란성을 차단하기 위한 기술적 방법

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Technical Approaches for Blocking Obscenity in Internet Video Chatting

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요 약

In this paper an analysis of current video chatting situation and connection status is performed and a technical method to block the obscene contents is proposed. Methods to shut down socially degenerate Internet sites are well known, which are essentially directory or vocabulary based. For the video chatting sites, however, dynamic selectivity is required as the chatting groups in a sites are all different and even in a single group the contents of chatting may turn socially objectionable as time passes. The proposed method is based on the analysis of chatting contents and selectively blocks the sound and/or video data streams. To prove the effectiveness of the method the experiments are performed and the results are shown very satisfactioy.

1. Introduction

As Internet has become a vital part of our day to day life, the negative use of it has grown proportionally, evidenced by the existence of suicide web sites, draft dodger web site school dropout web sites, and etc. One of the fastest evo ving Internet technology application area is the proliferation of various chatting sites [1] ~ [3]. Initially began with character type chatting, the service has progressed through voice chatting and now to video cha ting. The format of chatting varies many forms of combinations such as one to one, one to many. Originally started as a convenient communication means, the Internet cha ting has become one of the most vicious tools leading to many social problems and crimes. The biggest problem is that our under-aged society members are defenselessly exposed to obscene video chatting and enticing means leading them to offline delinquency and degeneration [4]. Further, the number of chatting participants are ever growing. This still remains as a technical problem. Only obscenity in video chatting has been noticed in the press. For the pornographic Internet sites, social issues have been raised and technical measures to block them are known, which are directory and vocabulary based. However, the same method can not be applied to the video chatting sites because the sites need to be blocked only when they turn obscene. The objective of this research is to develop a technical measure to selectively turn the chatting room off only when it becomes obscene. We survey the chatting situation, analyze the technical aspect of chatting process, and propose measures to screen the chatting participants for their adulthood and the contents of chatting for their obscene nature.

2. Video Chatting Situation

The technical advance in chatting to the video form has caused the change of the nature in chatting. While video chatting is vital in exchange of useful information, it has also introduced proliferation of hardcore pornographic chatting sites. Figure 1 shows only one of "moderate" contents currently exchanged in these chatting sites.

(Figure 1) An example of video chatting scene.

Others include video exchange of live sex acts, showing hardcore pornographs, coercively inducing live sex act, and etc. In these cases the chatting site operators are actively protecting the obscene chatting performance by forcing inactive or very passive group chatting participants out of the process. It seems that the chatting site operation is one of the very valuable cash cows in ISPs' business now. Our survey of randomly chosen 87 subjects on their 30's shows that wide spread exposure and participation of the their age group in pornographic video chatting <Table 1>.

<Table 1> Survey results of 87 participant on their 30's.

Sex of Survey Participant	Male(55), Female(32)
Video Chatting Experience	Yes (45), No (42)
Connection Time	Mostly between 18:00 P.M and 23:00 P.M
Chatting Time	Below 1 hr.(24), 1 hr. - 3 hrs. (9), 3 hrs. - 5 hrs. (3), Over 5 hrs. (3)
Invitation to Offline Meeting	Yes (21), No (18)
Request for Sex	Yes (13), No (30)
Offline Meeting after Chatting	Yes (13), No (20)
Have Seen Pornographic Scene during Chatting	Yes (21), No (13)