

Chapter 1

Introduction

1.1 Purpose of the project

Human interaction is one of the most important characteristics of group social dynamics in meetings. This project is developing a smart meeting system for capturing human interactions and recognizing their types, such as proposing an idea, giving comments, expressing a positive opinion, and requesting information. To further understand and interpret human interactions in meetings, there is need to discover higher level semantic knowledge about them, such as which interactions often occur in a discussion, what interaction flow a discussion usually follows, and what relationships exist among interactions.

1.2 Existing System

In Existing System, have found that viewing recorded meetings using traditional meeting viewers whose interfaces consist of an automatic speaker and a fixed context view does not provide sufficient information and control to the users. In particular, a survey of users who watch meeting recordings on a regular basis revealed that it is also useful to provide (1) speaker-related information, including who the speaker is talking to, looking at, and being interrupted by, and (2) more control of the interface, including changing the relative sizes of the speaker and context views and navigating within the context view. This presents a 3D interface prototype designed specifically to meet these requirements when viewing recorded meetings. This report describes in detail the results of a user study comparing the effectiveness of the new and traditional style interfaces with respect to these requirements. Based on this study, this report presents a set of guidelines for future interfaces.

Many applications track the movement of mobile objects, which can be represented as sequences of time stamped locations. Given such a spatio-temporal series, that helps to study the problem of discovering sequential patterns, which are routes frequently followed by the object. Sequential pattern mining algorithms for

Minutes of meeting

transaction data are not directly applicable for this setting. The challenges to address are (i) the fuzziness of locations in patterns, and (ii) the identification of non-explicit pattern instances. It defines pattern elements as spatial regions around frequent line segments. Our method first transforms the original sequence into a list of sequence segments, and detects frequent regions in a heuristic way.

Mining frequent tree patterns is an important research problem with broad applications in bioinformatics, digital library, e-commerce, and so on. Previous studies highly suggested that pattern-growth methods are efficient in frequent pattern mining.

Finding relevant segments in meeting recordings is important for summarization, browsing, and retrieval purposes. This project defines a relevance as the interest-level that meeting participants manifest as a group during the course of their interaction (as perceived by an external observer), and investigate the automatic detection of segments of high-interest from audio-visual cues. This is motivated by the assumption that there is a relationship between segments of interest to participants, and those of interest to the end user, e.g. of a meeting browser.

First address the problem of human annotation of group interest-level. On a 50-meeting corpus, recorded in a room equipped with multiple cameras and microphones, this found that the annotations generated by multiple people exhibit a good degree of consistency, providing a stable ground-truth for automatic methods. For the automatic detection of high-interest segments, which investigate a methodology based on Hidden Markov Models (HMMs) and a number of audio and visual features. Single- and multi-stream approaches were studied. Using precision and recall as performance measures, the results suggest that the automatic detection of group interest-level is promising, and that while audio in general constitutes the predominant modality in meetings, the use of a multi-modal approach is beneficial.

Drawbacks:

- Only small dataset are considered.
- Also, it includes only the simple nonverbal behaviors.