
Media, Conversations, and Shadows

David A. Shamma

Yahoo Inc.
4301 Great America Parkway
Santa Clara, CA 95054
aymans@acm.org

Lyndon Kennedy

Yahoo Inc.
4301 Great America Parkway
Santa Clara, CA 95054
lyndonk@yahoo-inc.com

Elizabeth F. Churchill

Yahoo Inc.
4301 Great America Parkway
Santa Clara, CA 95054
churchill@acm.org

Abstract

This article proposes that microblogged messages that relate to a live event can be examined as indirect annotation on a media object that might not exist. From a collection of Twitter posts around two political events, we have begun to discover techniques for identifying how microblog posts relate to the matching media event. Further, we identify the relationship between the media event itself and the conversational shadow cast from the online community.

Keywords

TV, Twitter, inauguration, conversation, commentary, broadcast, event, participation, community, follower, social media.

ACM Classification Keywords

H.5.2 Information Interfaces and Presentation: User interfaces – Evaluation/ methodology. H.5.3 Information Interfaces and Presentation: Group and Organization Interfaces (Synchronous interaction; Collaborative computing), H.5.1 Information interfaces and presentation: Multimedia Information Systems (Video).

General Terms

Human Factors

Introduction

People, individuals and organizations alike, microblog for several reasons such as to maintain social connectivity, to exchange media, and to announce new information. In many cases, this live commentary can provide an immediate reaction to an event or broadcast media, like a sports game. While people microblog—particularly via Twitter—in-situ, we find the resulting short posts can serve as an indirect annotation.

In the case of video, this indirect annotation provides new opportunities for multimedia research and content understanding. Microblogging about live events allows one to realign each time-stamped comment with a particular moment during the event (for recorded media that has yet to exist). As, eventually, many live events wind up online, what can we learn by examining the media with its indirectly collected microblogged conversation?

Recently, we have examined two political events that were broadcast live: the first 2008 Presidential debate [2] and the 2009 inauguration of Barack Hussein Obama [3]. Using a matching collection of Twitter posts, or *tweets*, we have found methodologies for identifying the event's structure, important moments, and topics of sustained interest.

Conversations and Shouts

Microblogging happens for numerous reasons [1]. Some people announce messages while others converse in largely asynchronous @mention threads. Explorations such as ours should examine the conversation and the shouting, as well as, the relationship between the two.

At its core, the practice of tweeting while watching an event is no different than watching a movie with friends or having people over to watch 'the game.' There is a congregation of people. The conversation waxes and wanes depending on a number of features: activity level of the program, the program genre/venue, and the event's structure. Online, tweets exhibit similar patterns; thus research in this area should equally be human-centered.

In our studies, we have found conversation volume can be used as a segmentation boundary to break a long video into smaller sections. Eigenvector-centrality can be used to generate a candidate list of who might be in the video. Finally, moving beyond 'trending now', standard information retrieval techniques can be modified to find topics of sustained conversational interest.

From these metrics, we built Statler¹. Using the debate and the inauguration, Statler is a visualization of the conversational features and patterns we have discovered. It segments the debate into topical units without examining the text of the tweets. For the inauguration, it displays a real-time metric of how important the current video moment is as well as how chatty people are being.

Future work

We have begun to examine the relationship between live microblogging of events and the resulting captured media object. Our techniques have been successful for political media events; we wish to investigate three new directions. First, how do other genres alter our

¹ <http://bit.ly/statler>

existing methodology? Second, how does a particular event relate to an ongoing trend? Finally, what new tools, for media consumers, journalists and producers, can be built to enable people's understanding of how a representative community interprets and reacts towards live events.

References

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