Chapter 17
Community Management Matters:
Advanced Visual Analytics for Online Community Managers

John McAuley
Centre for Next Generation Localization, Trinity College, Ireland

Alex O'Connor
Centre for Next Generation Localization, Trinity College, Ireland

Dave Lewis
Centre for Next Generation Localization, Trinity College, Ireland

ABSTRACT

Online communities provide technical support for organisations on a range of products and services. These communities are managed by dedicated online community managers who nurture and help the community grow. While visual analytics are increasingly used to support a range of data-intensive management processes, similar techniques have not been adopted into the community management field. Although relevant tools exist, the majority is developed in the lab, without conducting a domain analysis or eliciting user requirements, or is designed to support more general analytic tasks. In this chapter, the authors describe a case study in which we design, develop, and evaluate a visual analytics application with the help of Symantec's online community management team. The authors suggest that the approach and the resulting application, called Petri, is an important step to promoting online community management as a strategic and data-driven process.

1. INTRODUCTION

Over the last number of years, large organisations have recognised the benefit in hosting online communities that promote products and services and assist in the provision of technical support. These communities help to reduce the organisation's overhead, as it is the community members, and not the organisation's technical support department, that handle questions from other product and service users. The role of the online community manager has emerged as integral to this strategy. It is their job to ensure that the community develops in a productive fashion, that anti-social behaviour is kept to a minimum and that pro-active users are encouraged and in the promoted to positions of influence in the community. At the same time, the community manager must encourage "peering", whereby members of the community, and not the organisation's staff, answer questions from other community members. Active or prolific users are often then rewarded with affiliation programmes, access to new products or services, or in some cases, jobs, contracts and new positions.

The growing trend in strategic and operational management is to make use of advanced analytic technologies that provide insight into large volumes of data and thus support a more informed or data-centric approach to decision-making (Lohr, 2012). The online community manager is in an ideal position to take advantage of this trend. Community interactions are stored in online databases, which are accessible, generally, by public or private APIs. Moreover, the online community and social analytics literature is replete with new applications and technologies that could help the community manager to identify users of potential (H. Welser, Cosley, Kossinets, & Lin, 2011), spot points of conflict (Kittur & Kraut, 2010) and deepen their understanding of community dynamics (Suh, Chi, Kittur, & Pendleton, 2008). As yet, however, these tools have not been widely adopted by online community managers and either remain as part of a growing academic literature or are employed by researchers or data analysts. Furthermore, very few, if any, of these applications are designed from the perspective of the online community manager. Instead, researchers tend to develop a novel community metric and asses its utility across multiple datasets (Chan & Hayes, 2010; Wagner, Rowe, Strohmaier, & Alani, 2012) or design a new visualisation and use it to discover and thus explain certain community phenomenon (Wattenberg, Viégas, & Hollenbach, 2007).

Our position is that a human-centred design approach is required to shift visual analytics from the research community into the practice of online community management. In supporting this position, we conducted a case study with Symantec's online community management team in Dublin, Ireland. We drew on Munzner's nested model for design and validation to guide and to an extent formalise the design process (Munzner, 2009). The model consists of four nested layers, domain analysis, data/operation abstraction design, encoding/interaction technique design and finally algorithm design, and provides a rigorous way to construct and validate human-centred visualisations. While Munzner suggests validation over evaluation, we tend to adopt both methods, applying validation at certain points during the design process but then completing a final evaluation of the application with members of the community team (five in total). We tried to apply this model in as faithful a way as possible but were restricted by the amount of access we had to the team. We held five sessions in total with the community management team. The first two workshops were used to gather requirements and to sketch out some initial designs (Domain Analysis and Operation Design). The third workshop helped to validate the initial mock-ups and reject some alternative designs (Encoding/Interaction Design). In the fourth workshop, we identified the features that were used for clustering the community into meaningful cultures, which is discussed in more

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