

# **Predicting Customer Satisfaction Through Social Network**

## **Analysis**

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Measuring the long-term health of customer relationships is key for any vendor of goods and services. This is particularly true for organizations engaged in providing enterprise services such as administrative support, account payable, payroll, and other back office support. The traditional way to monitor these issues is through customer satisfaction surveys, but they are neither timely nor granular enough to provide detailed information to the service provider.

In this paper we discuss first results obtained comparing the social network structure of the e-mail interaction between a provider of global office support of information processing and its customers with customer satisfaction measured through Net Promoter Score (NPS), (Reichheld 2003). Analyzing e-mail communication patterns allows predicting customer satisfaction with much less effort than administering a survey to thousands of end users, and much more frequently than just once every six months as is currently the case with NPS.

We have analyzed two groups of customers of the service provider. In the first project we collected the e-mail boxes of two to three account executives per customer, comparing their network structure with the NPS score of the customer. In the second project we collected the e-mail headers of the account executives from the firewall log, comparing their networking structure with NPS. In both projects we found significant correlation between network structure and NPS. We were also able to identify e-mail interaction patterns predictive of happy and less happy customers, leading to recommendations for improved communication between service provider and customer.