



Chapter V

Privacy Implications of Organizational Data Mining

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ABSTRACT

Technological advances and decreased costs of implementing and using technology have allowed for vast amounts of data to be collected, used and manipulated for organizations to mine. If correctly deployed, Organizational Data Mining (ODM) offers companies an indispensable decision-enhancing process that optimizes resource allocation and exploits new opportunities by transforming data into valuable knowledge (Nemati & Barko, 2001). These tools have the potential to significantly reduce a company's costs by helping to identify areas of potential business, areas that the company needs to focus its attention on or areas that should be discontinued because of poor sales or returns over a period of time. However, this information, if used in the wrong context, can be very harmful to an individual. As a result, ODM may "pose a threat to privacy" in the sense that discovered patterns can reveal confidential personal attributes about individuals. This paper examines a number of issues related to the privacy concerns that are inherent with the use of ODM.

PURPOSE OF ODM

Companies' interactions with their customers have changed dramatically over the years. There is no longer the guarantee of a customer's loyalty. Factors such as niche marketing, the decreased attention spans of customers, the availability of alternative products as well as others complicate the situation even more. "Your customers are not your customers. You are merely their caretaker until one of your competitors can provide and communicate a better offer" (Berson et al., 1997). As a result, many companies have realized that in order to remain competitive, they need to understand their customers better and to quickly respond to their customers' wants and needs. To succeed, these companies must anticipate customer desires, satisfy these desires and, at the same time, encourage continued business.

Gone are the days where the shopkeeper would simply keep track of all of his customers in his head, and would know what to do when a customer walked into the store. Today shopkeepers are faced with a much more complex situation: more customers, more products, more competitors and less time to react. Thus, understanding customers is now much harder to do. Also, in this new technology age, with businesses moving at "Internet speed," uncertainty over a business' sustainability has increased significantly: Competition is global, and businesses are trying to minimize costs while customers and prospective customers want to negotiate their own terms. To remain competitive in this environment involves using the best tools available that will allow the company to take care of customers better than its competition. As a result, both the customer and the company will benefit from the successful analysis and determination of customer needs. The customer will be satisfied that he/she is being served in a timely manner, and the company will reduce costs associated with providing products or services that are of little interest to the customer. Improved customer service and reducing costs, exemplify the importance of collecting data for analysis.

TECHNOLOGY IMPROVING DATA MINING

Technological advances and decreased costs of implementing and using technology have allowed for vast amounts of data to be collected, used and manipulated for data mining. Traditionally, data collection was done manually through market surveys conducted by companies. This data was then summarized and categorized for use by the company to assess their clientele's needs. The questions usually focused on the usage of particular products and comparisons to competitors' products. Because these surveys tended to be anonymous (at least initially), consumers had few, if any, reservations about providing data. By analyzing sales records (provided either through the stores or directly from salespeople) companies knew which areas had greater sales and which needed additional marketing or support to increase market share. This type of analysis, however, tended to be long and laborious producing large volumes of paperwork because almost everything was done manually.

With automation, work became more efficient and less labor intensive. Vast amounts of data could be processed in shorter time spans so analyses became more accurate and up-to-date. As transaction processing became more automated, it became easier for companies to collect and store vast amounts of transactional data on their customers. The cost of data storage also decreased further fueling the data collection

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