

## What They Say is What You Get New text analysis tool reveals the true voice of the customer

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### Today's Gap in Learning from Textual Sources

Successful companies work hard to deliver products and services that delight customers and earn their loyalty. These organizations stay in touch with customers by collecting Voice of the Customer (VOC) information and using it to drive effective interventions across the enterprise.

What does a typical VOC process look like? Consider for a moment a hypothetical hotel chain, Sleep Well. Sleep Well regularly conducts customer satisfaction surveys with its guests. Like many customer satisfaction efforts, this survey contains several quantitative (structured) questions that are analyzed and reported with sophisticated statistical tools. Sleep Well uses this information to pinpoint gaps between customers' expectations and their actual experiences, disseminating it to multiple levels of the organization and frontline managers.

Sleep Well recognized that information from quantitative surveys does not capture everything their customers would like to tell them. Relying on a few structured questions imposes artificial limits on respondents' feedback and does not necessarily fit how individuals would respond if they were not constrained by survey structure. So, Sleep Well added several open-ended questions to the survey that allowed customers to provide feedback that they weren't able to share through the structured questions. (There was no question about the Godiva chocolate on the pillow, for example, and many customers shared that they relished this indulgence before settling down for the night and associated it with a caring company.) Although Sleep Well recognized the importance of collecting these free flowing

verbatim comments, they found it difficult to analyze and report the new information and to make it actionable. The only way to process verbatim comments was through manual coding, a time intensive process lacking in consistency and expensive for the value.

Sleep Well also has several other forms of text-based customer feedback available as part of their Voice of the Customer initiative: comment cards in the rooms, online surveys, questions and comments that come into their reservation and general customer support lines, plus logs kept by frontline employees to capture customer feedback at the moment of truth. These information sources contain valuable insights, but Sleep Well was unsure how to efficiently analyze this captured data and create a total picture based on a variety of textual information sources.

Sleep Well's situation is similar to other companies struggling with interpreting and integrating multiple sources of VOC information, which leads us to ask:

**How many customer insights are being lost because organizations do not have the tools to effectively analyze, mine, and connect these rich, textual data sources?**

The good news for Sleep Well and other customer-focused companies is there is a new way to mine previously untapped information – **Text Analytics**.

## Text Analysis – A Better Way to Learn from Text Data

Text mining is an interdisciplinary field which draws on information retrieval, data mining, machine learning, statistics and computational linguistics to do its job. One of the best known applications of text mining is the search and retrieval functionality familiar to millions of Google and Yahoo fans around the globe. However, text mining applications go far beyond search and retrieval:

- Manufacturers use it to monitor the warranty process and to serve as an early warning system for quality problems,
- Government and law enforcement use text mining to assess threat and efficiently deploy resources,
- Service industries use it to understand and route customer issues thereby speeding response time.

With the addition of analysis tools, text mining has begun to penetrate the marketing research industry. **Text analysis** uses a combination of natural language processing and other computational linguistic techniques to:

1. Categorize and summarize text
2. Extract information into a suitable form for analysis.

How is it possible for a computer to analyze human language? To the layperson, text may appear unstructured and, therefore, incompatible with computer manipulation. But this is misleading – language is actually highly structured. Software developers have created complex computer algorithms to interact with the building blocks of language (morphology, syntax and semantics). When coupled with the increased computational power readily available on the desktop, these tools leverage the underlying structure of text to transform qualitative data into a form that is analyzable via quantitative techniques.

Until recently, the marketing research industry has relied primarily on manual coding or categorization to make sense of open-ended survey responses and other textual data sources. Manual coding is subject to human error and can be a laborious process for large data sets. Moreover, coding is limited in its ability to provide advanced data analysis beyond category frequencies and simple cross-tabs. With the advent of automated text analytic tools, it is possible to remove the constraints inherent in manual coding.

Text analytic technologies vary widely in their level of sophistication and ability to derive meaningful insights from textual sources. Maritz uses a base technology powered by ClearForest Corporation, a market leader in text-driven business intelligence solutions. Originally developed to help organizations find situational content in text sources for use in Business Intelligence [BI] systems, Maritz has tailored the technology to fit marketing research applications and the sectors we serve. Using this solution, the advantages over traditional coding are:

- **Greater consistency in results and output:** Coding can be a messy process when many people work on a project. The result is significant “noise” in the data. Automated categorization removes the subjectivity that is intrinsic to traditional coding. The system categorizes and analyzes comments the same way each time based upon the algorithms embedded in the software and the customization Maritz provides for a particular data set.
- **Continual ‘learning’ to improve accuracy:** Human language is complex. With text analytic tools, we use our knowledge of the data set and industry to fine-tune results as new subtleties arise. If the comments are part of an ongoing tracking study, we can re-run historical data each time we make incremental improvements.
- **Easy scalability to large data sets:** Many studies lead to thousands of responses that take significant resources and time to process manually. Automated text analytic tools efficiently handle large numbers of comments from multiple text sources.

Although the benefits that derive from basic text analytic software are reason enough to use an automated system, we believe the real value comes from using a solution that allows advanced text exploration by providing unique ways to mine and visualize concepts and associations typically invisible in text.

## The Optimal Approach to Mining Data in Marketing Research

### Analytic Technology Combined with Marketing Research and Industry Expertise

There are several versions of tools with the name Text Analysis or Text Mining. We feel it is important to choose software that doesn't just categorize data or auto code, but also allows you to find relationships with other topics in the text or in relationship with your structured data. Technology alone doesn't get the job done-people do. We recommend an approach to text analytics that combines text analytic technology tailored for market research applications with analysts who have a unique blend of text analytic, market research, and sector expertise. It is important to have analysts who are skilled research scientists with a deep knowledge of the industry from which the data is collected. The result is a solution that provides the ability to mine rich insights from textual data.

With text analysis tools and industry knowledge, skilled analysts can identify insights that were once almost impossible to discern from textual sources. Specifically, this approach allows you to:

- **View relationships between words:** In customer satisfaction data, the analyst can understand the relationship between a particular product/service feature and customer complaints or compliments. This capability uncovers connections that are difficult to see using manual coding alone.
- **Track trends over time:** It allows the isolation and monitoring of specific issues that may surface over time. This makes it easy to identify, for example, emerging issues and whether targeted improvements are having the desired effect.
- **Integrate structured data with textual data:** The analysis capabilities allow exploration of the relationships between quantitative responses and open-ended comments. For example, it is possible to contrast what customers with high satisfaction are saying versus those with low satisfaction. It is possible to see which issues are relevant for some customer groups and not others.
- **Drill down into issues not revealed by quantitative results:** Once an issue is identified through quantitative research, a logical next step is to identify the root cause. The qualitative information provided in open-ended comments can provide significant insights into the potential source of a problem when properly analyzed.
- **Account for synonyms, industry terms, and varying dialects:** Many words mean the same thing and a specific word can have multiple meanings making categorizing responses a difficult task. The analysis tool and analyst can account for these differences and combine synonyms and new terms that may appear over time.
- **Analyze comments within or without a pre-existing code frame:** Text analysis software offers the option of analyzing verbatims in the context of a pre-existing coding system. In other situations there may be value in analyzing text data without the constraint of a pre-existing set of codes.
- **Access comments on a topic:** Once a particular topic or issue has been highlighted, the individual verbatim comments that correspond to that issue can quickly be accessed for review.

- **Create/improve survey with current customer input:** Many organizations conduct exploratory focus groups and/or depth interviews to ensure that all critical elements of the total customer experience have been identified. Since this tool provides the voice of the customer experience, you can continually have a resource for updating and improving the questionnaire.
- **Integrate and analyze multiple sources of VOC data with greater speed and consistency:** The Maritz white paper titled “Why Your Organization Needs an Integrative Approach to Capturing and Utilizing the Voice of the Customer”<sup>1</sup> builds a strong case for an integrative approach to customer satisfaction measurement – one that employs multiple and complementary methods of listening and learning (e.g. survey research, call centers, chat rooms, customer e-mails, etc.). The key benefit of integrating comparable VOC data is rather than having to rely on results from a single data source (none of which is without its limitations or potential biases), decision makers are able to corroborate findings and conclusions using multiple sources. After developing a framework for a given data set, it can be easily applied to other data sets.
- **Identify top complaints and compliments:** Sleep Well can understand positive and negative aspects of the experience their customers are having.
- **Determine root causes:** The reports will also help identify root causes of specific issues, such as why customers rate the bed comforters poorly or the challenges with the electronic room entry system.
- **Integrate data from comment cards and customer support feedback to gain convergent intelligence:** Importantly, the team is now able to view comments collected through sources other than satisfaction survey, e.g. comment cards and customer support lines, to look for convergent intelligence. In this way, Sleep Well will have a more accurate and complete view of their customers’ voice than structured surveys alone can provide.

## Applying Text Analysis

### How Sleep Well Can Learn More from

#### Customer Feedback

So, in light of the advantages that text analysis software can provide, how might it be applied to Sleep Well’s customer satisfaction program? Here are a few suggestions:

- **Validate the existing code list:** Since Sleep Well has a code list they have used for the past 18 months, we can use the analysis tools to validate the current codes, identifying codes that are no longer relevant or new codes that are needed.
- **Train the system on the improved code list:** Once the code list is complete and current, the analysis tools can be trained to “understand” the code list and incorporate it into the automated system.

## Summary

New text analytic tools are poised to transform the way the marketing research industry views open-ended comments and other sources of textual data—these will no longer be a source of untapped potential. We now have the technology and the research expertise to mine rich insights from customer comments that were difficult to extract using manual processes.

With the ability to extract more value from verbatim comments, we have the flexibility to design surveys that better meet client information needs, while allowing customers to express their opinions the way they desire. Companies can make better use of information-rich textual data sources and hear the true Voice of the Customer.

For information about Maritz Text Analysis solution, Maritz Clear Voice, please complete the Contact Us form.

1. For a detailed discussion of this approach, see Brandt, R. (2004) “Implementing an Integrative VOC Architecture.” Maritz Research Report, Volume 17 (October), which can be found at [www.maritzresearch.com](http://www.maritzresearch.com).

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