argonauten360°

STATISTICA Data Miner in the Telecommunication Industry: The German consulting company argonauten360° uses STATISTICA Data Miner to develop effective Product portfolios custom-tailored to their customers

BACKGROUND. argonauten360° is a consulting group that helps businesses build and improve successful strategies for customer relationship management (CRM). Using Relevanz-Marketing®. argonauten360° creates value by facilitating relevant dialog with relevant customers. argonauten360° can utilize and work with the entire spectrum of methods for interview (dialog) and interactive marketing. Its list of clients include, among many others, BMW, Allianz, Deutsche Bank, Gerling, Coca-Cola.

THE PROBLEM. argonauten360° is a leading consulting company to the telecommunications industry (as well as others). As such, the application of effective advanced analytic technologies for client scoring, clustering, and life-time-value computations are a routine part of their daily work. The requirements for flexible and powerful analytic tools are demanding, because each project typically presents a new and specific set of circumstances, data scenarios, obstacles, and analytic challenges. Therefore, the existing toolset needed to be augmented with effective, cutting-edge, yet flexible data mining capabilities. Another critical consideration was for the solution to yield quick ROI: It had to be easy-to-apply, with a fast learning curve, so that analysts could quickly take ownership of even the most advanced analytic procedures.

THE SOLUTION. STATISTICA Data Miner by StatSoft, Inc., provides the ideal combination of features to satisfy all requirements. The decision to adopt STATISTICA was therefore unanimous, even though competing data mining products were "in-the-running" from vendors of (simpler) analytic tools that were already in place. But after 12 months of working with STATISTICA Data Miner, the experience with the service and support provided by StatSoft reinforces the choice in favor of this solution: StatSoft service is fast, competent, professional, to-the-point, and overall the relationship with StatSoft can simply be described as effective and pleasant.

" The capabilities of STATISTICA Data Miner immediately impressed and convinced us. Also, price/performance is fantastic! Effective service rounds out this positive experience.

The partnership with StatSoft is professional and rewarding "

- Jochen Hahn, Managing Director

AN EXAMPLE OF AN INNOVATIVE PROJECT. In Europe, for users of cellular as well as regular phones, so-called "Call-by-Call" services are very popular. Those plans make no or very low charges for the basic service, but bill for the actual air time that is used. This is a very competitive business, and the success of the Call-by-Call telecommunications provider depends greatly on attractive per-minute calling rates. Rankings of those rates are widely published, and the key is to be ranked somewhere in the top-five lowest-cost providers, while maintaining the best possible margins. Because of the competitive

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environment created by this arrangement, popular wisdom holds that there is virtually no price-elasticity in this market (to allow providers to charge even the smallest extra margin without losing customers); and if such price-elasticity existed, it certainly could not be predicted. However, the argonauten360° consultants analyzed the available data with *STATISTICA Data Miner*, and **proved that popular wisdom wrong**! Indeed, their successful analyses won argonauten360° the business of a leading provider of Call-by-Call services.

THE ANALYSIS. The analysis was based on data describing the minute-by-minute phone traffic. Specifically, the sale of minutes-of-airtime over a one year period was analyzed. To obtain optimal discrimination, 20 ensembles of models were estimated. Each consisted of several regression functions for modeling long-term trends, and a self-learning ARIMA component. All specific time intervals (time "zones") were carefully modeled, identifying 4 zones with particular price-sensitivity and competitive pressures.

RESULTS AFTER TWO MONTHS. Prior to the application of models derived via data mining, heuristic "expert-opinions" were used to forecast the expected volume of minutes (of airtime) for the following two months. By using *STATISTICA Data Miner*, the accuracy of those prognoses improved significantly, while the **error rate was cut in half**! Given the enormous volume of minute-to-minute calling traffic (airtime), this is a dramatic result, thus providing clear proof-of-concept for the efficacy and potential of advanced analytic strategies when applied to problems of this type.

IMPLEMENTING THE SOLUTION AT THE CUSTOMER SITE. The Call-by-Call provider now utilizes this data mining based solution for predicting and simulating optimal cellular (airtime) rates. The system was installed by argonauten360° as a complete turn-key ("push-of-the-button") solution. Using this solution, the Call-by-Call provider can now predict with much greater accuracy the demand (for airtime) in a highly price-sensitive and competitive market, and offer the "correct" rates. Thus, the provider is enjoying a key competitive advantage. In a second phase, this system will be further improved with a "dash-board-like" system that automatically compares predictions with observed data. This system will ensure that, when necessary, argonauten360° can update the estimates of model parameters to adjust to the dynamic market place. Hence, without acquiring any analytic know-how, the Call-by-Call provider now has access to a reliable implementation of a sophisticated demand-forecasting and rate-simulation system -- **something heretofore considered impossible**! This is an excellent example of a successful application of data mining technologies to gain competitive advantage in a highly competitive business environment.