

Data Refinement in a Market Research Applications' Data Production Process

Thomas Ruf, Thomas Kirsche

GfK Marketing Services, Germany
{thomas.ruf, thomas.kirsche}@gfk.de

Abstract. In this contribution, we will show how empirically collected field data for a market research application are refined in a stepwise manner and enriched into end-user market reports and charts. The collected data are treated by selections, transformations, enrichments, and aggregations to finally derive new market knowledge from the raw data material. Besides data-oriented aspects, process- and organization-related aspects have to be considered as well to ensure the required product quality for GfK Marketing Services' customers, which have known GfK for decades as a top-10 player in the international market research area. Based on an ongoing example from the panel-based Retail & Technology application domain, we will show how de-centrally collected and pre-processed data are transformed into integrated, global market knowledge in a network of world-wide companies.

1 Introduction

The GfK Group, ranked fifth among market research companies worldwide, actively participates in the following five fields of business: Consumer Tracking, Health Care, Retail & Technology, Media, and Ad Hoc Research. In the fiscal year of 2003, the GfK Group has achieved a turnover of 595 million Euro (previous year: 559 million Euro). Apart from 15 branches in Germany, more than 120 enterprises and shares in 57 nations belong to the GfK Group worldwide. Approximately 1,500 of currently close to 5,500 employees are working in Germany.

In the field of Retail & Technology, the GfK Group regularly provides their clients from trade and industry with information services that are gained on the basis of continuous surveys and analyses of profits of technical consumer products in retail trade in 48 countries worldwide. In the fiscal year of 2003, this line of business generated turnover of 166.7 million Euro. The field of Retail & Technology is represented by GfK Marketing Services (GfK MS).

The processing of data through Retail & Technology from the industry to market reports is a process far from consisting of simple mathematical operations. Even though operations such as additions and average calculations are executed, the value added to

the end-product lies in the refinement process, which is implemented as a business process with system support. Similar to an engineer, who applies and varies certain procedures for the construction of a component, GfK employees apply acknowledged and independently developed techniques to create reports, which actually reflect market events, from the data material. Artifacts from the random sampling as well as transfer and processing errors have to be identified and eliminated.

Concerning the software level, the refinement process is accompanied by a data production system that has been developed by GfK Marketing Services themselves. The data production system is a “data pump”, which forwards data from one processing step to the next. Contrary to production systems for consumer goods, in which individual components are combined to assembly groups and, eventually, to the final product, the data change morphologically due to the processing. The information content can be increased and the entropy decreased respectively by either eliminating interferences or bundling data.

In this chapter, major steps of the refinement process will be explained, always with regard to their interplay with the data production system. In order to do so, a general overview of the initial situation of periodic market research and the data production system will be provided in the next section. In the subsequent sections, it will be shown how the enrichment takes place in the master data system, the data acquisition system, the analysis system, and the reporting system. An outlook will conclude this paper.

2 Data Production at GfK Marketing Services

To get an understanding of the products of the field of Retail & Technology, the first thing to be explained in this section is the basis on which to work. Following this, there will be a short overview of the whole data production system.

2.1 Initial Scenario for the GfK Products

To discuss the business process, a hypothetical example shall be used: a potential customer enters a local Media-Markt branch that is located on the outskirts. This Media-Markt branch is an outlet of the distribution channel of technical supermarkets. This channel of distribution is supported with certain advertising programs for which an advertising agency is responsible. Furthermore, the branch is characterized by annual profits, sales area, available parking areas, and, of course, its geographical location. The customer is interested in a special model of a cell phone of which he or she knows properties such as weight, standby time, Bluetooth connection options, and many more. However, the customer considers the price too high. Therefore, he or she approaches a retail dealer nearby, who cannot offer the same cell phone alone though, but who would sell it together with a 24-month contract and a camera. Eventually, the customer purchases the phone, in a bundle with contract, camera, and an additional battery, which enabled him to bargain another certain discount.