

AT&T ASSESSES RISK OF NEW BILLING STRATEGY

Assessing the risk involved with new projects, policies, and marketing strategies is critical for businesses large and small. Today, big players in the telecommunications industry are under increased pressure to maximize profits and minimize risks. As a result, they are constantly exploring new marketing strategies while keeping a close eye on customer retention data.

Recently, AT&T explored new marketing strategies in regards to customer billing. Unlike most industries, long distance carriers often include their bill with the local phone bill, removing them from direct contact with the customer. Considering direct customer contact is advantageous, AT&T set out to test a direct billing strategy to see whether it increased or posed a risk to customer retention.

First, AT&T created a control group of customers who would continue to receive their long distance charges with their local phone bill-the indirect billing method. Then, a treatment group of customers was selected to receive a separate long distance bill directly from AT&T-the direct billing method. At any time, customers receiving a separate long distance bill could choose to switch back to the indirect billing method.

AT&T wanted to assess the risk of losing customers to other long distance carriers, and determine the time period during which customers were most likely to switch due to new billing method. It was important to evaluate the relative risk of the direct billing method versus the indirect billing method. By determining the long-term risk of losing customers to other carriers, AT&T could decide whether to implement the new billing method nationwide. Figure 1 is a survival analysis based on the Weibull regression and the Kaplan-Meier estimate fitted to the control group and the treatment group, respectively. Using S-PLUS's exclusive Trellis graphics, the data are conditioned on high and low market value, that is, long distance charges averaging \$75 and \$10 per month, respectively. Early in the process the treatment group has about the same cumulative hazard of switching to another carrier as the control group. However, the long-term cumulative hazard for the treatment group is significantly less than the control group in the low market value segment. Based on this information it appears the direct billing strategy is worth pursuing because it actually improves customer retention in the long run.

Source: Insightful Corp., 2007

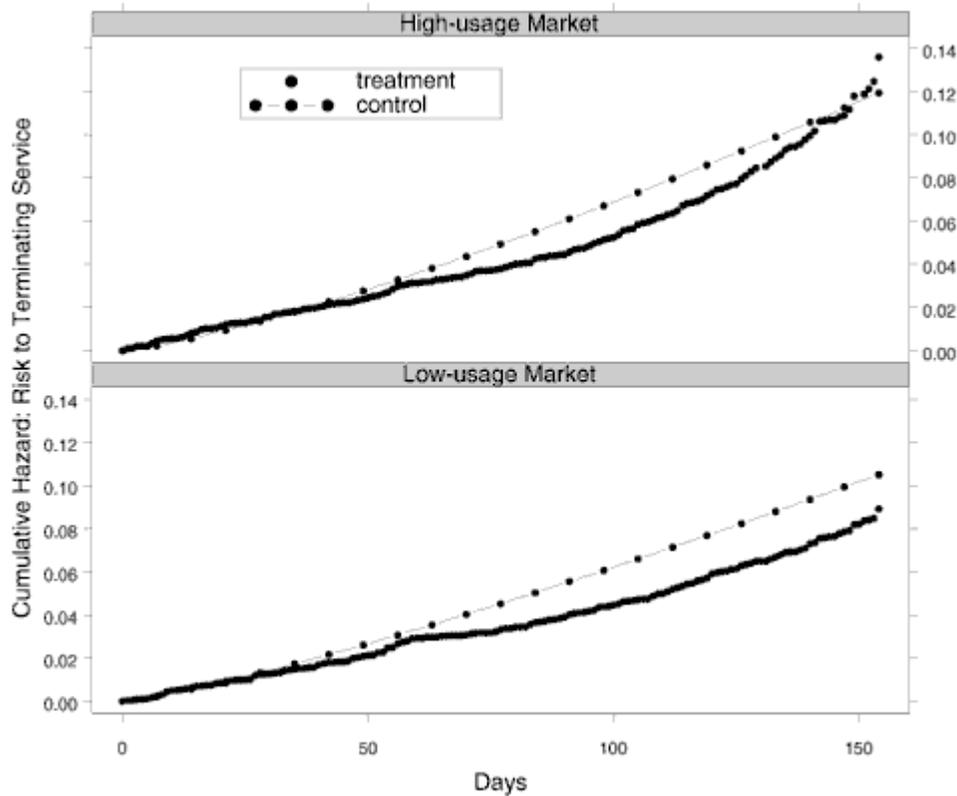


Figure 1. A Trellis graph showing the risk of losing customers to other carriers for the treatment and control groups conditioned on the usage type. While early in the process the treatment group has a slightly higher risk of switching to another carrier, the long-term risk for this group is significantly less than the control group.

Since the direct billing strategy has a long-term advantage for AT&T, the next task was trying to figure out when customers were most likely to switch back to the indirect billing method. Figure 2 shows a density plot of the time it took for customers to switch back to an indirect bill. Three densities are plotted corresponding to three different widths of the Gaussian kernel used to obtain the estimates. Two major peaks in the density estimates occur within the first 50 days of the trial corresponding to receipt of the first two bills under the direct billing scheme. These peaks indicate customers are most likely to switch back to the indirect billing method during the first 50 days. However, after the first two months, customers are used to the direct billing system and are less likely to change. Based on this information, AT&T now knows that they need to concentrate their marketing campaigns during the first 50 days of the trial to communicate the benefits of the direct billing method to their customers.

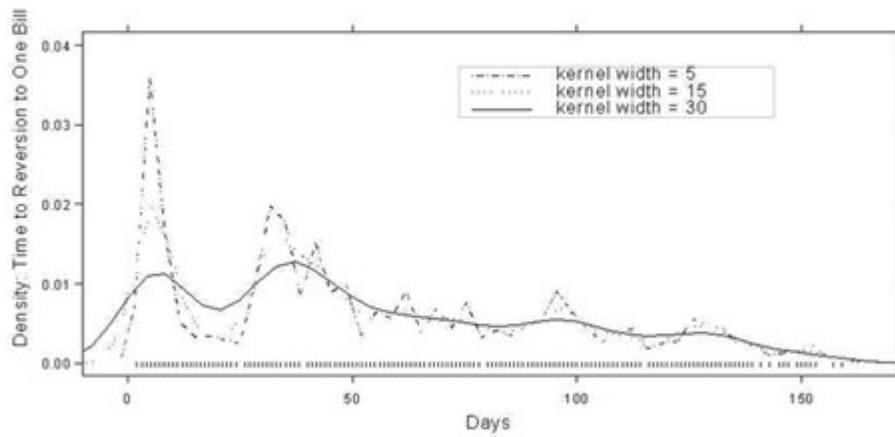


Figure 2. A density plot with three estimates of a customer's response to the new billing strategy measured over time. Two major increases in density occur within the first 50 days of the trial. After the first two months, customers are used to the indirect billing system and are less likely to change.

Source: Data and analysis provided by Ed Chao, Insightful Corp.