



Protecting Wireless Carriers from Fraud



Problem

Six major U.S. mobile telephony providers were losing \$500 million a year to fraudulent activity

Solution

Our consultants developed real-time streaming analytics technology to terminate fraudulent calls and disable high-risk accounts

Results

Fraudulent loss cut by 50%, improved customer satisfaction reduced subscriber churn, behavior analytics identified opportunities for increased revenues

Overview

The detection of fraudulent calls over wireless networks requires a fluid and flexible approach, since any fraudulent call must be terminated within the one second billing interval. For six national U.S. wireless carriers and several smaller regional carriers, this was an impossible task given their existing manual processes and batch-oriented analytics. Their mounting fraudulent call losses totaled almost \$500 million annually, and with new criminal tactics regularly emerging, there was no end in sight.

Challenges

We needed to develop a new approach that integrated information from call detail records, caller behavior patterns and subscriber accounts to create real-time, predictive analytics; these analytics combined call behavior heuristics, machine learning and big data technology to score potential fraud cases. Our real-time solution was first deployed and perfected at switching centers experiencing the greatest losses (typically inner city areas), and then rolled out across each carrier's entire network.

Results

Today, almost half of U.S. wireless carriers utilize this approach to real-time analytics. The technology's flexibility allows for rules to be updated as new fraud tactics are detected, extending the system's life cycle. For the initial six wireless carrier customers, our solution cut fraud losses in half, amounting to several hundred million dollars annually. Additionally, call behavior information was used to reduce subscriber churn, improve customer satisfaction and to identify targeted additional services for increased revenue.

