Case Study

C1: Continental Airlines, this call is being monitored

O'brien, J. A., & Marakas, G. M. (2005). Introduction to information systems (Vol. 13). New York City, USA: McGraw-Hill/Irwin.

# Description

If you’ve ever placed a call to any big company’s customer service department, you’ve heard the caveat: “This call may be monitored for quality assurance purposes.” But is anyone really listening? Someone is—or at least the computers are—at Continental Airlines.

Building customer loyalty has become crucial in the beleaguered airline industry, which is why Continental enlisted the help of Witness Systems, whose call-center software, CallMiner, does more than eavesdrop: It records conversations and captures every keystroke, so managers know whether the right actions were taken. And because the ex-changes reveal what customers really want, Continental is also mining the data to help craft marketing plans and shape overall strategy. Fortunately for Witness, which saw its revenues jump 60 percent to $108 million in 2003, that trend is catching on: 53 percent of its clients are now using such data beyond the call center.

Continental Airlines is the world’s seventh-largest airline and has more than 2,300 daily departures. With 134 domestic and 92 international destinations, Continental has the broadest global route network of any U.S. airline, including extensive service throughout the Americas, Europe, and Asia. Continental has hubs serving New York, Houston, Cleveland, and Guam and carries approximately 41 million passengers per year on the newest jet fleet among major U.S. airlines. With 42,000 employees, Continental is ranked one of the 100 Best Companies to Work For in America by For- tune Magazine. In 2003, Fortune ranked Continental highest among major U.S. carriers in the quality of its service and products, and No. 2 on its list of Most Admired Global Airlines.

Despite these accolades, before the CallMiner software was installed in 2001, Continental’s agents were unable to resolve about 6 percent of the 60 million calls they fielded annually. Instead, these problems were routed to an internal help desk. The Witness data revealed that some agents “weren’t attempting to look up the answers on their own,” says Andre Harris, director of reservations training and quality. New standards were put in place, and within a year, nearly 20 percent fewer calls were being sent to the help desk, saving the company $1 million. In addition, customer satisfaction rose by 10 percent, and e-ticket sales increased by 8 percent.

Harris soon realized that the data could be a treasure trove for marketing and service operations too. “We thought we were just replacing tape recorders,” she says, “but it dawned on us that we could use this system to drive business decisions.” Now if enough calls come in on one topic, Continental can respond. For instance, when the company learned that as many as 14 percent of customers were reconfirming flights, it ran a notice in its in-flight magazine to assure fliers that such calls were unnecessary.

To make the call monitoring more effective, Continental added CallMiner, a laborsaving Witness program that automatically transcribes conversations into text. “It gives me more time to analyze the data,” Harris says, “rather than just collect it.” Tying speech systems to mainstream corporate IT systems, and the use of Internet-based voice systems such as Voice over IP (VoIP), are making it easier to mine databases of voice records, much as companies have mined other customer records for years. Intelligent Voice Recognition (IVR) analysis tools usually can keep track of and report on a caller’s choices based on which menu paths the caller has taken. But CallMiner and a few other tools can go into the voice record and look for specific words or word combinations. Continental recorded a sample of its 5 million monthly calls and then used CallMiner to turn the dialogues into text to mine for certain things. It discovered that about 10 percent of the calls contain the actual word reconfirm.

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The survey data also revealed areas in which agents needed more training. For example, the surveys pinpointed the most frequently asked questions and helped Continental identify issues with the navigation of its reservation system. Using the CallMiner enabled the airline to make technological improvements so agents

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# Assignment

1. Describe the knowledge acquisition process illustrated in this case study using the Knowledge Uplift Trail method presented in class

The following questions can guide the exercise:

* Which goal Continental Airlines want to achieve?
* Which knowledge is used to reach this goal?
* Which steps allow to uplift this knowledge?
* Which information allows to acquire this knowledge?

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| --- | --- | --- | --- | --- |
|  | ***Input*** | ***Acquired Knowledge*** | | ***Output*** |
|  |  | ***Analytics/Models*** | ***Type*** |  |
| ***Step 1*** |  |  |  |  |
| ***Step 2*** |  |  |  |  |
| ***Step 3*** |  |  |  |  |
| ***Step 4*** |  |  |  |  |