SINGLE VIEW OF CUSTOMER
Domain: Customer Relationship Management

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Abstract:
Customers are a company’s greatest single asset and having consistent, reliable information about these customers is essential for business success. This problem statement explores ACME, a DSL Internet Service Company which is improving by building a comprehensive view of the customers and prospects so that the company can cross-reference and analyze them quickly and simply. The goal is to access all the customer data for a customer by using a unique ID. The ID is a single index key that retrieves all information about the customer, i.e. account summary, service details, contracts, interactions with any departments, etc. Due to the highly competitive market, ACME has to provide the best customer service in order to increase its revenue, profit, market share, and market capitalization.

Keywords: Customer Relationship Management and Customer Services

DESCRIPTION OF A DOMAIN

ACME, a DSL Internet Service Provider serves customers such as small business firms, companies, and individual household customers with their fast and reliable Internet Service. The company presently tracks all its inventory, sales, billing, customer service, and marketing information of their customers into separate databases. The customer data is scattered around and locked away in different departmental silos and hence results in having a partial view of customers in every department. If this data is linked together customer service can be more effective.

A customer speaks with the pre-sales department that provides information on the services offered. If the customer decides to choose the service, he/she places an order with the sales department. The sales department records the customer’s information which includes the plan he/she wants to purchase, etc. The sales department notifies the inventory, billing, and customer service departments only with the required information that the respective departments require. The inventory back-office sends a DSL kit which includes manuals. Initial installation is provided. The billing department sends the customer the initial bill and then periodically charges the customer. The customer is now eligible for support. The support department takes care of any complaints or other questions regarding use of the service.

Each department interacts with the customer differently; thus each has a different partial view of the customer. This lack of integration (currently manual or periodic batch updates) results in
customer data not being synchronized across different departments as well as a slow system response to changes in a customer’s state. For example, once a complaint regarding billing issues is registered with the support department and the support department acknowledges the problem, the billing department is notified to stop billing the customer until the problem is resolved. The Billing and Support details are maintained in two separate databases which results in the delayed updating of information. This may lead to the customer being billed before the billing department is aware of the update made by the support department.

If the company decides to more effectively promote new products to its customers, they have to notify each customer based on their interests to target the promotions. Since the company does not have a single view of the customer, it would face a problem of aggregating and analyzing customer information necessary to design, build and deploy new products or to provide adequate levels of customer service. A problem would arise when the company wants to decide whether the customer could be interested in the product that it has designed. To have a better understanding they have to go to the customer’s records to verify the contract that he/she is enrolled in and what was his/her interests, etc. Since the company is maintaining customer information across various databases, integration would be a major problem.

Understanding the customer and identifying strategies to improve life-cycle management and profitability contribute to a competitive advantage. Hence creating a single view of the customer is a critical requirement for the ACME Company in achieving its objective.

**BLOCK DIAGRAM**

![Customer Block Diagram]

**DESIRED SYSTEM**

To be successful in today’s technology driven environment, businesses must be continuously innovating both their product and service offerings and their customer relationship management processes to keep pace with rising customer expectations. Building customer loyalty presupposes knowing the customer and calls for coherent management of all customer data. Through out the customer life cycle, from customer acquisition to building loyalty, customer care is the cornerstone of the customer-driven company.
Recently, businesses have come up with a single view of their customers’ relationships and interactions with the company across the entire business cycle. Customers also have a single view into all of their business interactions with the company through preferred access channels. The target is to make the enterprise’s view of the customer as complete as the customer’s view of the enterprise.

At any given moment, the system must be able to provide sales, marketing, billing, maintenance, and service employees with an accurate and comprehensive picture of each customer’s background history, current business and anticipated needs. The centralized system must have customer contact information, promotion history, contract history, billing history, purchase and return history, recent and past customer service transactions, and sales history. This allows us to build a single picture of the customer. Having all this information under one tree would help the company to effectively resolve problems, respond immediately to customer interactions by quickly answering questions, and also would further help to market targeted products and services to targeted customers.

REQUIREMENTS

The three basic requirements the ACME Company has to meet are

- **Integrate all customer information into a unified whole**
  This involves creation of a single record for a customer with a unique ID to access it. The customer record consists of a master record, which contains the basic customer information like name, ID and contact information. The master record contains sub records to hold information pertaining to every department. The integration of customer information results in the straightforward creation of customer records and sub records by using a unique ID for each new customer. For an existing customer, the information already existing in various departments should be linked to the new master record that is created.

- **Capture and Process all kinds of customer behavioral information**
  The customer record is a single interface to obtain customer contact Information, Promotion History, Contract History, Billing History, Purchase and Return History, Recent and Past customer service transactions, and Sales History. This information provides a detailed pattern of a customer’s requirements and helps the company to draw a clear picture of their anticipated needs. This helps the company to promote new products to targeted customers and improve business.

- **Customers and Employees must share a common knowledge base for better tracking and management**
  Integration of customer information enables the customer to have one-point of contact with the company. A customer contacts the customer service personnel of ACME for all kinds of enquiries or to report problems. The customer service personnel have access to view the customer’s record and hence can serve the customer regarding all issues. The customer service personnel log the details of the interaction with the customer for future reference. If there is an issue, customer service notifies the respective department by providing the customer ID. All department personnel and the customer can view the information in the customer record. Any department that is notified of an issue can view the customer interaction log to learn about the problem and attempt to resolve it. This gives a consolidated picture of the customer and their interactions with all the departments. The modification of customer records requires special authorization. For example, only billing department personnel have the access to modify a customer record pertaining to billing issues. This avoids unwanted or accidental tampering of a customer
record. Better tracking is achieved by providing a status flag in a customer record that specifies if an issue is pending. When receiving a report from the customer, the customer service personnel sets the flag to “issue pending”. The respective department personnel sets it back to “done” after it is resolved.

The system has many actors. This includes customers, customer service personnel, billing department personnel, inventory department personnel, sales and marketing personnel, technical support personnel, and the single view software system that interacts with each actor.

USE CASES

Provide Customer information

When a customer wants to get DSL Internet service from ACME, he/she provides information that includes their first name, last name, SSN, credit card information, etc.

Fetch Customer Information

In the process of renovating the company, ACME is providing an ID for each customer. This ID is unique to each customer. For already existing customers, all the customer information from different departments is collected and kept in a single record and a unique ID is given to this record.

Create Customer Record

A unique ID is created for all the ACME Customers and a master record is created for each customer with this unique ID. The unique ID assigned to each customer is helpful in extracting records from different departments efficiently.

Links to Sub Records:

The unique Id is mapped to all departments IDs. Links are created to each department database in such a way that once the unique Id is entered it automatically maps to the department Id.

Modify Record

Authorized users have the ability to make changes to the current customer record, containing basic information like address of customer, name, etc.

Check Access Rights

Before modifying any records the access rights of the user are checked. If department personnel are provided with access rights, then they may modify the sub records of customers relating to their department.

View Record

All departments can view the collective information of a customer based on a single customer Id. The customer can also view all his/her information.
Notify Departments

The customer interacts with customer service if he/she has to order equipment, report faulty equipment, report billing error, request tech help, etc. The customer service notifies the respective department that handles respective issues. Here the customer service acts as a notifier between all departments.

Change Status

Whenever a customer reports a problem or orders new equipment the status is noted as pending and the date is recorded by the customer service representative. When the work is completed, the respective department that handled the problem would change the status to indicate completion and record the completion date. In this way the company can bill the customers for only the service they have utilized and not charge its customers for the period when they have not used the service, thus building a strong customer relationship.

Log Information

The customer service personnel for future reference enters the interaction between the customer and the company in the customer log file.

Contact Company

A customer can contact the customer service personnel via phone, email, fax or mail for any specific or general enquiries.