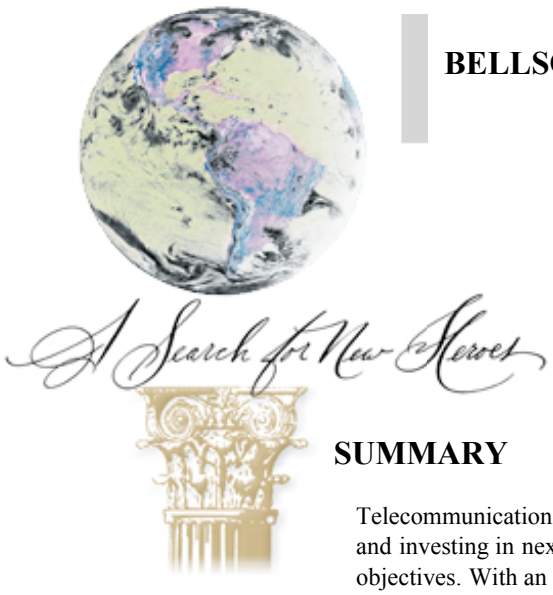

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BELLSOUTH APPLICATION FOR NETWORK DATA INVENTORY TRANSFORMATION

2005 COMPUTERWORLD HONORS CASE STUDY

Business & Related Services

A major telecommunciations company broadens the horizons of its inventory management strategy, vastly improving how it identifies, recovers and reuses stranded capacity on the network—and usesthe savings to expand a next-generation network to better serve its customers - saving over $30 million in the process. **[20055421]**

SUMMARY

Telecommunications companies are focused on two major goals: driving costs out of their existing networks and investing in next-generation networks. BellSouth has developed a unique method for achieving both objectives. With an innovative marriage of technology and process changes called “BellSouth Application for Network Data Inventory Transformation”, the company has broadened the horizons of its inventory management strategy, vastly improving how it identifies, recovers and reuses stranded capacity on the network —and using the savings to expand a next-generation network to better serve its customers. In its first year of operation, BellSouth Application for Network Data Inventory Transformation has identified and recovered more than 35,000 unused network cards--an accomplishment that saved BellSouth over $30 million, which is earmarked for the implementation of higher-value network elements that will provide new services like Voice Over IP.

APPLICATION

BellSouth’s Synchronous Optical Network (SONET) and Digital Cross-connect System (DCS) network is comprised of hundreds of thousands of network cards, each costing between $800 and $1,000. BellSouth realized that an opportunity existed to improve its ability to locate, recover and reuse stranded cards on its network. Such an innovation would help the company reduce the costs of purchasing replacements for stranded cards, allowing BellSouth to redirect funds to the building of a capacity-rich Internet Protocol (IP) network that featured upgraded new services and product offerings.
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BellSouth collaborated with Accenture to develop asset-recovery technology that would expand the domain of inventory management to include the harvesting of spare capacity. Traditionally, telecommunications companies have lacked the capability to quickly and easily locate and reuse stranded capacity. As a result, they spent millions to procure new capacity. With its novel approach, BellSouth Application for Network Data Inventory Transformation demonstrates that by locating, recovering and reusing those cards, millions can be saved in procurement costs. The project, which represents a breakthrough in telecommunications network inventory management, also involves aligning inventory control systems and equipment assignment databases with the actual status of equipment. It marks a significant improvement in telecommunications inventory management.

BellSouth completed a proof-of-concept for the asset recovery solution in the first quarter of 2004. By the second quarter, the capability had scaled to the point where the company was identifying 3,000 unused cards each week. By the third quarter BellSouth had met its projected target of more than 35,000 cards, representing a savings of over $30 million, which was available to invest in a new IP-based network. With Accenture’s help, BellSouth developed and deployed technology that linked the telecom’s legacy system to a new inventory management system. The objective is to strengthen the network—to drive cost from the circuit-based network as it builds the IP network.

With BellSouth Application for Network Data Inventory Transformation, BellSouth is now able to generate a list of all stranded cards, then query the inventory management system to check for pending service orders that would require putting those cards into service. That way, the cards could be recovered when necessary, or left in place. (There are benefits to leaving a certain number of unused cards in the system.) The capability allows BellSouth to control its own growth and provide the best possible service to customers even as it more efficiently and effectively upgrades its network.

BENEFITS

BellSouth Application for Network Data Inventory Transformation represents a massive transformation and improvement of BellSouth's inventory management and overall operations. In addition to the first-year cost savings of $30 million, most of which will be invested in the new IP network, BellSouth now has the capability to continually monitor and adjust its network. The company expects to target an additional $10 million in savings in the second year.

BellSouth views the benefits in phases:

Phase One. BellSouth changed the process of inventory management to include the discovery of stranded cards in the network.

Phase Two. BellSouth gained the ability to predict, with 99.9 percent accuracy, cards that could be recovered, with no interruption to service. That accuracy was a major element of the project's success. The company also was able to match up procurement of those cards to inventory records, and to recover and redirect the cards.

Phase Three. BellSouth significantly improved the accuracy of its inventory management system. The company gained the capability to transfer data from the network and legacy inventory management system into a new inventory management system that allowed for greater capacity management. The improved data accuracy enabled BellSouth to begin cleaning its legacy system.

By implementing BellSouth Application for Network Data Inventory Transformation, BellSouth saved over 90% of the value of purchasing new cards, the result of improved network card utilization. It generated tax savings from the purchase of new network assets. It reduced technician labor time spent manually investigating the opportunity of obtaining circuits, and saved on the labor needed to procure and manage new network cards.

BellSouth now has the ability to optimize its network capital spending and increase the overall scale of its network operations. BellSouth Application for Network Data Inventory Transformation allowed BellSouth to improve the utilization of network provisioning and inventory services, benefits that help the telecommunications company provide customers with a stronger and more reliable network.

IMPORTANCE

BellSouth Application for Network Data Inventory Transformation was enabled by leading-edge information technology. It runs on a Sun Microsystems Solaris platform and an Oracle database.

The innovation lies in the technology's ability to precisely identify cards and apply business rules that dictate whether or not a card should be removed. BellSouth Application for Network Data Inventory Transformation relies on IT to identify cards that are neither being used nor planned for future use.

BellSouth Application for Network Data Inventory Transformation is designed to connect with a hundred thousand network elements, inventory the network cards embedded in those elements, and update the records of multiple inventory and equipment assignment databases.

The system leveraged an existing mediation layer to the network that allows BellSouth to identify spare cards, and an interface application to BellSouth's legacy inventory management system.

A data transformation tool parses data from the network and from the information management system and transfers that data in a format that can be loaded into the new inventory management system. The technology compares data and identifies what gets sent to the new inventory management system. The process includes a report function to build candidate reports, verify report content, and update circuit recovery and reuse tracking.

ORIGINALITY

There are four reasons why BellSouth Application for Network Data Inventory Transformation is considered original:

While the practice of recovering stranded assets is not new, the ability to view stranded assets in real time is a breakthrough.

Prior to BellSouth Application for Network Data Inventory Transformation there was no system to communicate between the two telecommunications technologies involved, SONET and DCS, and utilize such information as the number and types of network cards plugged into the equipment, and determine whether the cards are part of an active customer circuit or not.

What's also original is the development of technology capable of scaling to BellSouth's requirements. BellSouth Application for Network Data Inventory Transformation involves an end-to-end repeatable process that scales to tackle 70,000+ elements.

Meanwhile, the novel system is designed to maximize capital savings. BellSouth Application for Network Data Inventory Transformation first searches for recovery cards that have a high value, so they will be reused quickly.

SUCCESS

BellSouth now has a dependable evergreen solution for ongoing stranded network card recovery. BellSouth divided its nine-state network into four regions; BellSouth Application for Network Data Inventory Transformation scans a new region each week. Having saved more than $30 million in network card recovery in 2004, BellSouth's goal is to recover as much as $10 million in 2005.

The network card recovery operation was developed and implemented with little financial investment on the part of BellSouth—it paid for itself in three months in the savings generated by recovered cards. And it provided BellSouth with capital that is being used to expand and upgrade the network. By selecting this project BellSouth generated a Return on Investment in excess of 900 percent. BellSouth expects to continue receiving a significant ROI from the initiative.

The innovative project is a key link that enables BellSouth to efficiently and effectively transition from its existing network and legacy inventory management system to a next-generation network and inventory management system.

Thanks to the BellSouth Application for Network Data Inventory Transformation solution, BellSouth avoids overbuilding its network, saves millions of dollars in reduced equipment and labor costs, and significantly enhances customer service.

DIFFICULTY

The sheer scale of BellSouth's operation posed the greatest challenge. To control costs, BellSouth and Accenture were determined to utilize as many legacy systems as possible, a strategy that boosted the degree of difficulty.

In addition to facing the daunting technical challenge of enabling communication links with hundreds of thousands of network cards, BellSouth and its collaborator Accenture also had to identify thousands of business rules in order to develop the ability to determine which of the cards are unused.

The systems integration challenges of such a large operation also were significant, requiring deep knowledge of BellSouth's operating environment.

Because the network elements provide service to customers, BellSouth had to create a solution that generated unfailingly accurate reports. By incorrectly identifying a network card as being unused, BellSouth could inadvertently disrupt service to a customer. Of the more than 35,000 cards that were recovered, there were less than five incidents of interrupted service.