



Working Smarter with a Faster Order Entry System

*Enhanced MS Access System Improves
Customer Acquisition Rates, Saves \$50K*

USA Locksmith provides fast, professional 24-hour emergency lock, key and door service to hundreds of people everyday, nation-wide. Customers, who are often locked-out of their cars, send in a Web or phone request to a USA Locksmith dispatcher who then enters their job into an order entry system for lock servicing. Time is critical, not only for customer satisfaction, but for handling the volume of requests coming in every hour. USA Locksmith's order entry system was painfully slow until Bright Network Solutions helped improve performance, saving them \$1,000 a week in time they would have previously spent "waiting" for their order entry screens to refresh.

Solution-At-A-Glance

Company: USA Locksmith

Industry: Locksmith services

Problem: Exceedingly slow system response time. Lead developer abandoned project and each transaction was taking more than a minute to process, slowing new customer acquisition.

Solution: Improve software framework. Diagnose, rewrite and patch the software code problems. Implement hardware efficiencies and improve reliability.

Products and Technologies:

- MS Access
- MS SQL Server Database

Timeframe: 3 weeks

Money saved: \$50K/year

The Challenge: Make the Order Entry System Respond in Less than a Second

Hundreds of people per day get locked out of their cars, homes, or businesses and call upon USA Locksmith for help. USA Locksmith representatives enter customer requests into an order entry system for lock servicing, but their system was increasingly slow. The screens took over a minute to refresh between transactions. To compensate for the system's poor response time, USA Locksmith hired extra people to field incoming requests and enter orders.

Eric Cohen, President, USA Locksmith, was concerned not only that the Microsoft Access system was slow, but that it would crash, seriously impeding his business. Additionally, his lead developer abandoned the project and left for India.

Cohen needed help—fast. After "Googling" the Web for an Access developer, he found and met with Ray D'Andrade, President, Bright Network Solutions. "Ray seemed very knowledgeable and able to troubleshoot the problems right away, so I took a chance on someone new," says Cohen.

D'Andrade talked to Cohen about his business growth potential in the next few years and took a look at the software source code and the system architecture. "The system was poorly designed and so slow that extra people were hired to compensate. In turn, this added more simultaneous users, making the response time even worse," says D'Andrade. They needed a system to meet their immediate needs, but they also needed something that would accommodate their future business growth.

The solution to their performance issues was to first split their order entry system into two: a "front-end" and a "back-end." While SQL was being used partially as the "back-end," much of the data was being copied to the local Access tables in the front end. This is a very slow, inefficient way to process data. Instead, the structure was changed so that Access is used only as the "front-end" to display the data in forms, with SQL server as the new database "back-end." Also, the Access database would be converted into a higher performance "Access Project" that connects directly to the SQL server. This new framework improves performance, increases simultaneous user capacity, and also provides USA Locksmith with a solid upgrade path as their business grows. "As the business demands outgrow Access capabilities, they only have to upgrade their front end, not their database," says D'Andrade, "Data integrity is maintained."

The bulk of D'Andrade's time was spent investigating and trouble-shooting the faulty logic in the original software code and to include missing items critical to database capabilities, such as primary keys and indexes (for sorting).

In two weeks' time, USA Locksmith switched over to the new system earlier than planned because their old system crashed before D'Andrade was done with the new development. But the new software was far enough along that they could

carry on business while he simultaneously worked out the remaining software glitches over the following week.

“It used to take over a minute to refresh itself—now the system takes a fraction of a second.”

"Everything was secure in about three weeks' time and performance is top notch," says Cohen, "It used to take over a minute to refresh itself—now the system takes a fraction of a second," USA Locksmith representatives no longer wait for the system to refresh. More customers are served. More time is saved. More money is made.

Plus, Automated Credit Card Processing

Inspired by the time savings achieved with their new order entry system, USA Locksmith turned to D'Andrade to assist with automating their credit card processing.

USA Locksmith had only a paper trail of credit card transactions. Instead, they wanted credit card information stored in their database and that database to "talk" directly to the credit card gateway. To do this, D'Andrade wrote a program that integrated the gateway software into their system. Now, after entering a credit card number into their system, USA Locksmith immediately knows if it's approved and they receive a response code and transaction ID# which is important to the field locksmiths. They also benefit from reporting features to track payments.

"Bit by bit, the time saved adds up to even bigger money savings. We saved more than \$40K and can better serve our customers," says Cohen.

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