

DOUGLAS COUNTY 9-1-1: GOING BEYOND THE CALL OF DUTY

PREMIERONE™
SMART PUBLIC SAFETY SOLUTIONS



CUSTOMER PROFILE



340

Square miles along the Missouri River, Nebraska



530,000+

residents served



3

Public Service Access Points (PSAPs)



32

dispatch positions



600,000

calls handled in 2014

THE CHALLENGE

The challenge Douglas County faces every day is the same as every community nationwide: **how to do more with less; how to make the most efficient use of the public's hard-earned tax dollars.**

Typically those in the public sector are hesitant to stray from time-tested solutions to achieve efficiencies, but not Douglas County. To contain cost and maximize performance when upgrading their 9-1-1 Call Center, they took an approach so aggressive it can only be considered unprecedented.



THE SOLUTION

When they migrated to PremierOne CAD in 2013, Douglas County chose to "virtualize" the deployment to realize greater efficiency and performance.

In the simplest sense, "virtualization" is taking one large and robust physical server and segmenting it so it can function like multiple smaller servers. The benefits are lower equipment cost, better performance, less space requirements and easier, faster maintenance. Now call takers and dispatcher can access their features and functionality within the Computer Aided Dispatch (CAD) system from any agency that is using the software — they do not need to be at their functional seat to access the system.

ARCHITECTURE

- Fully virtualized PremierOne CAD
- Virtualized MCC 7500 consoles
- Virtual data base server
- Two virtual application servers
- 350 + Premier Mobile Data Computers



"WE LOOKED AT THE HARDWARE, THE COST, THE PROJECTED PERFORMANCE AND DETERMINED THAT WE COULD GAIN COST SAVINGS AND BETTER PERFORMANCE BY GOING TO A VIRTUALIZED PLATFORM."

Kyle Kramer, IT Director / System Architect



A NEW APPROACH

Communications Director, Mark Conrey is equally modest when talking about their approach to providing emergency call service, “We’re a support agency. We support the public, the people who call 9-1-1 when they need help. That is our primary customer.”

But the level of “support” that Mark and Kyle are providing their customers is truly groundbreaking. They are pushing and adapting technology to deliver extraordinary efficiency and effectiveness, and their dedication is making Douglas County a better and safer place to live.



WE AVOID THE IDEA OF “GOVERNANCE” BECAUSE IT IMPLIES CONTROL AND AUTHORITY. INSTEAD WE FORM COORDINATING COMMITTEES, FOR EXAMPLE AMONG RADIO USERS FROM ALL THE DIFFERENT TOWNS AND COMMUNITIES.

WE SHARE OUR UNDERSTANDING OF WHAT NEEDS TO BE DONE AND GET EVERYONE ON BOARD AT THE SAME TIME. THE ONLY WAY THIS CAN WORK IS TO ENSURE EVERYONE FEELS THEY HAVE INPUT, THEN YOU CAN BE SUCCESSFUL.

Mark Conrey, Communications Director



OVERCOMING COMPLEXITY WITH FLEXIBILITY

Douglas County, Nebraska is a mix of urban communities like Omaha, Ralston, Valley, Waterloo and Bennington as well as smaller townships. They also provide 9-1-1 service and dispatch to the renowned village of Boys Town, dedicated to the care, treatment and education of at-risk children.

Communications Director, Mark Conrey points out that the 9-1-1 Call Center is a support agency, and he stresses that the public is their number one customer. But like in every community, it gets complicated. Mark explains, “ We fall (for supervision) under the 9-1-1 User Group made up of various representatives from the city, county, fire and police. They set the policy; we design our procedures around their policies.” This is true in a simple sense, but the reality is, as Mark continues, **“we work directly with each agency we support: city police and fire, the county sheriff, 5-6 rural communities... that gives us 13-14 bosses who we support directly.”**

The complications become even more pronounced when you consider how the 9-1-1 Center needs to work cooperatively with adjacent counties. “That’s the one way we’ve been able to be successful, by sharing resources. . . we (Douglas County) can buy something that would just be for us, but we’d find ourselves on an island. Every purchase, everything we do has got to have the capability to support multiple applications. That’s the only way we can be successful. We have to be a support agency, we have to support all these people, these agencies as they do their job.” **The key to success is flexibility.**



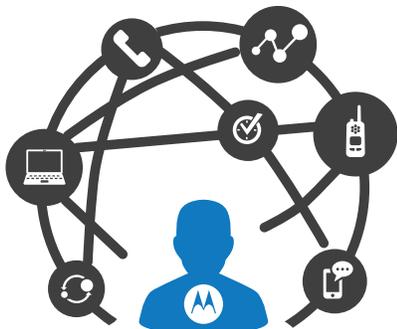
WORKING SIDE-BY-SIDE TO ACHIEVE SUCCESS

Mark says that Douglas County and Omaha Police have been working with Motorola Solutions radios for a “long, long time.” The county installed their first Computer Aided Dispatch (CAD) system in 1994, developed by a company that eventually became part of Motorola Solutions. They upgraded to a PremierOne™ CAD in 2013.

Mark is candid when speaking about working with Motorola Solutions, and he points to technical issues in the past that needed to be worked out, but the end result has been success.

“Motorola Solutions doesn’t mind working with us because we have the same interest as them, the successful deployment of their products.”

Mark and his technical team are thankful for the willingness Motorola Solutions has shown to help with their deployments, and Motorola Solutions certainly appreciates working side-by-side with Douglas County as they deployed their virtual PremierOne CAD.



Kyle Kramer, IT Director and System Architect for Douglas County, elaborates on the working relationship, “Motorola Solutions has a lot of different divisions, and sometimes those divisions don’t necessarily get the opportunity to work together to test out a full system.

By bringing it all together in a customer site — where we have Motorola Solutions radios, Premier Mobile Data Computers (PMDC), and PremierOne CAD — we’re able to see how the whole system functions together.”



“AS WE’VE MIGRATED THROUGH THE TECHNOLOGY, THE WORKING RELATIONSHIP WITH MOTOROLA SOLUTIONS TO GET THINGS DONE HAS BEEN EXCEPTIONAL.”

Mark Conrey, Communications Director



ARCHITECTURE

Adaptability

Douglas County went live with an estimated amount of virtual networking, processor and memory and they adjusted levels “on the fly”.

Flexibility

Changes to network configurations can be done with little or no service interruption.

Scalability

The system can easily grow or contract as needs evolve; for example three adjacent counties were added to the system.

Control

Clients and applications are in the same server room with network connectivity between applications and clients.

Resiliency

In a network interruption, end users are immediately returned to where they left off.

Performance

With the client and application server in the same server room, there is no latency.

Access

Users have full functionality through the Internet using a desktop, notebook or even a tablet.

Rapid Support

Techs can remotely “tap into” any console and have full functionality to resolve issues.



Mark adds, "You're able to take a single resource and use it for multiple purposes to gain efficiencies and save a lot of money... **virtualization, for example, enables you to spend \$400 for an end users' computer instead of a \$2,000 while getting tremendous technical capability, redundancy, and resiliency all at the same time.**"

ADDRESSING THE NEED FOR SPEED

Virtualization eliminates the need for clients to talk over a WAN and through a firewall. Instead CAD clients are all plugged into the same core LAN switch and linked directly to a server using 10 gigabit Ethernet connectivity and no firewall. As Kyle explains, "... **when a transaction happens on one of our CAD clients, it basically gets through the very first time. They never need to try more than once to get all the data.**"



MAKING VIRTUALIZATION A REALITY

Douglas County has approximately 12 applications and 30 virtual CAD consoles that "sit" on one server. Each console also has specific hardware that enables them to run efficiently with share server resources that deliver better performance than could be realized if the functionality was distributed among stand-alone units.

For example, Douglas County has a couple of high-end video cards that sit on the server. These are better than any PC video card. The CAD consoles can use these high-end video cards as needed, and as Kyle highlights, "Luckily not all the CAD users need to use their map to pan and scroll at the same time." Overall you gain higher performance than if operators only had the resources available to them in one physical PC.



"ONCE YOU INVEST IN TECHNOLOGY, YOU HAVE TO KEEP INVESTING IN IT OR IT GETS OUTDATED FAIRLY QUICKLY. BY SHARING (WITH ADJOINING COUNTIES) WE CAN MAXIMIZE THE DOLLARS WE SPEND AND KEEP UP WITH CHANGES".

Mark Conrey, Communications Director

ADAPTING OFF-THE-SHELF SOLUTIONS TO DELIVER RESULTS

The approach Kyle, Mark and Douglas County have taken to virtualized the PremierOne™ CAD deployment is unconventional, however Mark stresses that they want to use as much equipment and software off the shelf as possible. "We found that the more you go away from that (off-the-shelf), the harder it is to get updates and you get yourself into more trouble... **We want to stay as close to off-the-shelf as we can and then we have to really plan when we make the move to the additional requirements.**"

It was this philosophy that guided their virtualization initiative and the remarkable success they achieved – and continue to achieve – in delivering high performance technology while keeping costs tightly in check.

TRANSFORM THE WAY YOU RESPOND AND CONNECT UNLOCKING THE FULL POTENTIAL OF AGENCIES WITH SMART PUBLIC SAFETY SOLUTIONS

To learn more about how PremierOne Smart Public Safety Solutions can help increase information access, accuracy and sharing, contact Motorola Solutions representative or visit: motorolasolutions.com/icc

Motorola Solutions Inc. 1301 E. Algonquin Road, Schaumburg, Illinois 60196 U.S.A motorolasolutions.com/icc

MOTOROLA and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license.

All other trademarks are the property of their respective owners. © 2016 Motorola Solutions, Inc. All rights reserved.

09-2016