

# THE COMPUTERWORLD HONORS PROGRAM

## CASE STUDY



**LOCATION:**  
*Ocala, Florida, United States*

**YEAR:**  
*2006*

**STATUS:**  
*Laureate*

**CATEGORY:**  
*Government  
and Non-Profit Organizations*

**NOMINATING COMPANY:**  
*Avaya*

### **ORGANIZATION:**

**Marion County, FL**

### **PROJECT NAME:**

**Network Upgrade**

### **Summary**

Government agencies in rapidly growing communities must become more efficient or they become ineffective. Government are not motivated to “turn a profit” when funding and supporting capital improvement project, but must look to reducing recurring operating cost, and improving service to the tax payer. This project was designed to improve communications between the departments of the Marion County Board of County Commissioners, and as well as other local government agencies while reducing the cost to tax payers for these services. An additional benefit was a greatly increased flexibility and improved response time for changes to our communications systems that allow our line business units to operate more efficiently and effectively to meet the needs of our constituents.

### **Introductory Overview**

Our plan was to consolidate from three medium sized Avaya Communications servers of different capabilities, features, and configurations, three different voicemail platforms, and a variety of management interfaces to one tightly integrated system based on the Avaya 8710 Communication Server. At the same time we were to add an additional 900-1000 stations, implement SIP (Session Initiation Protocol), and consolidate the messaging systems. Financially, we are looking at a cost savings of about \$300,000 per year. This project encompassed all of the departments of Marion County Board of County Commissioners’, the Marion County Clerk of the Circuit Court, the Marion County Health Department, the Marion County Court House, and the Marion County Public Defender’s Office. This equates to approximately 2300 stations. The project was managed by Marion County BCC MIS staff, although we did work with an Avaya business partner, Cross Telecomm, inc. for some assistance with acquisition, design, and implementation.

### **Benefits**

This project has benefited all those it was originally designed to help. The benefits range from cost savings, and improved management, to easier and more effective use of technology. Train-



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ing was the key to realizing the benefits for both the users and the system managers and was a major factor in the success of this project.

There are several advantages gained by the completion of this project. Unified communication, consolidated messaging, and quicker response to requests for changes are three of the advantages Marion County gained as a result of this project. At this time it looks like we will have reduced the County wide telecommunications budget by over \$200,000 this year, and it looks like we will meet our projected savings of \$300,000 in future years. At the same time we have improved service levels, and added many new features such as “Follow me” and “Extend to Cellular”.

Innovation has been a necessity for this County Government to deal with the rapid growth in central Florida. Marion County’s population has increases more the 405 in the last ten years. This project focused on bringing integrated basic communication services to the multiple agencies involved at a much reduced cost while continuing to implement innovative technologies such as Voice Over IP (VOIP), SIP, and integrated messaging as well as many other new features and services. We are looking to the future for use of this system as a basis for other customer service based technologies such as “Click to Talk”, and telephony application integration for thing like screen pops, and customer lookups via caller id.

### The Importance of Technology

The technology enabled the whole concept. Without the Private Branch Exchange, VOIP, SIP, QOS, PoE (Power over Ethernet), switched Ethernet, and a myriad of other technologies it would not have been a cost effective system. I had looked at building a system similar to this as early as 1998, but at that time I received quotes in excess of \$7,000,000 making the project unfeasible. This year we spent less than \$1,000,000 and achieve a far more flexible and manageable system with a much broader set of features and applications.

I would like to elaborate on the importance of a couple of technologies essential to this project. For starters, Ethernet, or more specifically switched Ethernet was an absolute necessity for this project. I predicted the death of other network technologies back in 1993, when I read an article about a company called Kalpana that had created a multi-port Ethernet bridge that was called an EtherSwitch. It had seven ports, each with its own collision domain. This company was acquired by Cisco in 1994.

Next, I would like to emphasis the significance that POE (Power over Ethernet) had on the project’s success. POE made it possible for us to design a system that closely resembled the system we were replacing. This close resemblance made the user very comfortable with the new system. It looked and worked like their old system, but with a few new features. POE also made the project much easier to implement; it only needed one cable to the work space. With the power for the device being provided by the network we are able to provide managed and monitored backup power if necessary.

### Originality

We were one of the first Government Agencies in Florida to adopt VOIP for production use. We started with fifty phones, and an Avaya IP 600 in production in May of 2001. That was the seed or pilot project that has led us to where we are today. In early 2004 we started working with the Avaya Converged Communication server to develop a way to cost effectively deliver a



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complete suite of communication services to our smaller branch offices. We were the first to get faxing to work over SIP via an analog terminal adapter. This was very significant as faxing is a very important aspect to our business. We have been willing to be beta testers, or early release candidates in order to control costs, and to ensure we have a thorough understanding of a product or technology before we deploy it to our users.

Our originality stems from the fact that we try to run this project from a business like point of view. We focus on benefits that have positive returns to our tax paying shareholders. We believe staff with good equipment and professional technical services will perform better for our customers. This project has succeeded by focusing on hard dollar return on investment with the senior management, while showing the users that we genuinely care about their issues, and that we want them to succeed in their mission. I think this requires a very delicate balance that is a struggle most internal governments agencies.

### Success

At this point in time (03/30/06) we are ahead of schedule, but we are not quite complete with the project. All of the back office tasks have been complete and all existing stations migrated to the new system, but we are still adding the smaller remote offices. The system is fully operational, and has been for over a month. We are already exceeding our planned returns by being 3 months ahead of schedule. This will equate to approximately an additional \$90,000 in savings this year.

Determining the number of beneficiaries for this project has to be broken down in to three groups. The first and largest group is the tax payers. There are about 305,000 tax payers currently living in Marion County which are benefiting from reduced recurring operating expenses from the local government, and better communication capabilities from public servants. The second group is the system users. These are the line business unit and internal service functions that make Marion County work. These functions vary from civil engineering to permitting, purchasing, judicial functions, and health care as well as a host of other tasks and responsibilities. Below are some quotes from the users of this system.

“This phone system does what its designed to do. It works, that’s what makes my job easier.”

Robert Inglese- Fleet Shop Mgr.

“Now that we have had some time to get used to our new phones, I thought I would share some of the positive features that we appreciate. First of all, the customization options are a real plus. All of us in the office have customized our ring tones, our labels, and our speed dial buttons based on our own individual needs and preferences. In addition, I am also very pleased with the log. I am able to see what calls I have received, what calls I have missed, and the calls that I have made. This has proven useful on many occasions. I realize that there is still much more to learn about the phones, but I can definitely say that they have brought a new level of professionalism and efficiency to this office.”

Sincerely,

Eva M. Rey



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“The new digital phone system allows calls to be transferred quickly and accurately. The front desk position is much easier with this user friendly system”

Joylene Smith

Marion County Transportation Department

Don't worry, this e-mail isn't yet another technology problem. It's about time I said thanks for the phone capabilities. I appreciate the fact the office phones have portability. We have twice picked up our physical offices and moved to another location. Both of those experiences were made easier by the fact you were able to re-program our phones to ring at a different location, so I did not have to publish a new phone number to our frequent callers, or worry about transferring calls. Callers never knew I was answering from another location and no calls were missed.

Another phone feature I appreciate is the ability to pick up my boss' phone from my own desk when I hear his ringing. Increased efficiency is always appreciated!

Debbie Zeak

Marion County Public Works

The third group that benefits from this project is the managers and administrators of the new system. They now are able to manage all of our communications with one user id and password that is unique to each member of our technical staff. Also, it is possible for us to make changes and optimize operations much quicker due to a consistent management interface. A quote from one of the analyst that manage the system is below.

“With the EC500/Extend Call features I never miss a call or am bound to my desk by one! Giving my office the portability I need...”

- Dennis Garraty, Network Systems Analyst

### Difficulty

All significant business projects include Change. Change has obstacles. The single most difficult problem we encountered was organizational support. As a local government we face many challenges when it comes time make a major change to operational norms. Some of these challenges are from politicians, some from senior management, and some are from individual departments. Sometimes the hurdles are funding, other times it is control, and often it is just a reluctance to change. At the outset of this endeavor I met with my senior management, the Assistant County Administrator to brief him on the details of my plan and to ensure he was fully aware of the benefits, and potential pitfalls. After some consideration, he agreed to go forward with this project. He then suggested we meet with the five County Commissioners one on one to determine if we could get support for our plan. Four of the Commissioners met with us, all agreed it looked promising, but were cautious about the upfront costs, and potential for problems during the transition. The fifth commissioner tacitly supported plan based her review of our ROI schedule.

Given the operational concerns, and funding issues the Board of County Commissioners funded a pilot project in the 2000/2001 fiscal year. It was a great learning experience for all. We started the project in May 2001. It was declared it a success in October 2001. Since that time we have phased in many components as directed by the Board. Using a phased approach



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allowed us to build on success, and use those successes as examples for more reluctant areas. This year's upgrade and consolidation project marks the end of a long journey for Marion County's Information Systems Department. As of today we are projecting completion of this very significant project by August of 2006.