



Management Applications, Inc.

**RESPONSE TO
REQUEST FOR PROPOSALS**

INFORMATION TECHNOLOGY SUPPORT SERVICES

MARINA COAST WATER DISTRICT

Proposal

Management Applications, Inc.
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Local Office: Glendale, CA

**April 29, 2016
4:00 PM**



April 29, 2016

Kelly Cadiente
Marina Coast Water District
11 Reservation Road
Marina, CA 93933

Dear Kelly:

Management Applications, Inc. (MAI) is pleased to submit the following Proposal in response to the Request for Proposal for **Information Technology Support Services** from the Marina Water Coast District (District). MAI has read the RFP documents and agrees to each and all of the terms and conditions, provisions, and requirements set forth.

MAI has over 21 years of experience working with Government, County and Municipal Entities across the United States. MAI can provide the District the operational team to assist with Strategy, Design, Transition, Operation and Continuous Service Improvements. We are confident that we have the experience, resources and infrastructure necessary to deliver outstanding service that will meet or exceed the District’s short and long-term IT objectives.

MAI has been providing services similar to the District’s scope of work for years as exemplified by the following projects:

- **Northwest Pump, Glendale, CA (Outsourced Information Technology Services such as Desktop Application Support, Server Administration, Network Administration, IT Security, 24/7 Help Desk and Strategic Planning).**
- **Los Angeles Unified School District, Los Angeles, CA (Network configuration engineering for the second largest school district in the nation).**
- **The City of Brookhaven, GA (Completely Outsourced IT Department: Project Management, Desktop Administration, Application Support, Server Administration, Network Administration, 24/7 Help Desk and IT Support, PD IT Support Services and City Department IT Support).**
- **Butcher Joseph Hayes (Outsourced Information Technology Services such as Desktop Application Support, Server Administration, Network Administration, IT Security, 24/7 Help Desk and Strategic Planning).**
- **The State of Wyoming and the Wyoming Education Network (Project Management, Network Design/Implementation/Monitoring, 24/7 Help Desk, IT Security and Strategic Planning).**
- **The State of Wyoming and the University of Wyoming Rural Health Care Support Project (Project Management, Network Monitoring and Management and 24/7 Help Desk).**

Below MAI has provided a depiction of our 24/7/365 end user support experience.

MAI's 24/7/365 End User Support Experience	
Customer	24/7/365 End User Support
City of Brookhaven, GA	✓
Northwest Pump	✓
Butcher Joseph Hayes	✓

University of Wyoming	✓
University of Wyoming, Rural Health Care Network (WY)	✓
Casper College	✓
Central Wyoming College	✓
Eastern Wyoming College	✓
Laramie County Community College	✓
Northwest College	✓
Sheridan College	✓
Western Wyoming Community College	✓
ALS Education Communications Network (AZ)	✓

Within this proposal, MAI has provided two local resumes that are qualified and capable of supporting the District's IT environment and are ready and committed to begin a contract with the District.

Incorporated in Virginia in November of 1994, MAI is a **SWaM Certified and SBA qualified woman-owned, small business**. Headquartered in Dulles, VA, MAI has regional offices in Austin, TX; **Glendale, CA** and Denver, CO. **Our Glendale, CA office will directly support this opportunity.**

Having more than 21 years of experience and specializing in Managed IT Support Services, our team is uniquely capable of providing services to the District. **MAI looks forward to establishing a strong relationship with the District and for the opportunity to show the District what MAI does best: Superior Managed IT Support Services.** Please direct all questions (technical and contractual) to myself, Jay Bushman, President & CEO (Primary Contact), at (703) 444-5067 or at jbushman@managementapps.com. I have full authority to negotiate and execute a resulting contract.

Sincerely,



Jay Bushman
President and CEO, MAI

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A. Introduction

Executive Summary

Management Applications, Inc. (MAI) is an information technology company specializing in Managed, Network and IT Support Services. Incorporated in Virginia in 1994, MAI has been providing **IT Services for over 21 years** and has cultivated a track record of success.

Headquartered in Dulles, Virginia, with strategic locations to include West Hartford, CT; Austin, TX; Glendale, CA and Denver, CO, our organization is built as a reflection of our commitment to the Information Technology Infrastructure Library (ITIL) program. Our strategic locations coupled with our incorporation of ITIL into our services have allowed us to achieve the goal of providing unparalleled support nationwide.

In addition to our location advantages, MAI has been able to leverage our company's best assets to support our customers in ways others cannot. MAI differentiates itself well from similar companies by defining the company vision as an **information technology ally to our customers**. MAI's key discriminator is that our management style and company infrastructure allows us to be nimble and flexible for our customers; **tailoring support services to each customer's unique requirements**. MAI is also unique because we have a proven track record of servicing clients both small and large giving us an exclusive standing within the Information Technology Industry.

Another advantage to MAI's service is our ability to provide an excellent and personal customer experience. Our **President and CEO is personally involved with each and every contract**. Our management setup also lends itself to providing customers with a senior staff member for each contract we sign. Our customers will never have to deal with a novice project manager's learning curve.

Given the number of years MAI has been working in IT we have had the opportunity to not only gain a vast amount of experience but we have also created long-term relationships with all of the best of breed product companies. This includes the establishment of product partnerships including our **Microsoft Partnership, Cisco Select Partnership, Aruba Partnership, HP PartnerOne Program** and a **VMware Consulting and Integration Partner Program (CIPP)**. This gives MAI the upper hand when coordinating the logistics of product procurement for contracts and providing highly competitive pricing to our customers.

Finally, MAI is reliable. **We complete contracts on time and within budget and have never defaulted on a contract** in the history of our more than 21-year existence. We believe our commitment to customer satisfaction as well as internalizing the tenets of ITIL are main factors in our success. MAI is proud of our time and again proven track record and we are ready to provide this accomplishment to future customers as well.

Now, MAI would like to introduce our ITIL approach to customer services. **ITIL creates clear-cut connections between IT and business operations**. IT services can then become aligned to the needs of a business and support its core processes (i.e. the customer's main business objectives). The ITIL approach provides guidelines for MAI on how to use IT as a tool to facilitate business transformation, change and growth.

ITIL best practices are broken down into five core areas:

- **Service Strategy,**
- **Service Design,**
- **Service Transition,**
- **Service Operation, and**
- **Continual Service Improvement**

These five areas encompass the entire ITIL Service Lifecycle, beginning with the identification of customer needs and drivers of IT requirements, through to the design and implementation of the service and finally the monitoring and improvement phase of the service.

This brings us to the purpose behind ITIL's invention and what ITIL can bring about for the Customer. ITIL's key capabilities are: support business outcomes, manage business change, manage risk in line with business needs, optimize customer experience, show value for money and continually improve. It is almost uncanny how similar the key capabilities of ITIL are when compared with many Customers' main business objectives. And it is obvious to MAI and hopefully the Customer how bringing the ITIL approach to service will vastly improve and continually support the Customer in its IT requirements.

With ITIL's best practices as a guide MAI will not only support the Customer's IT requirements but we will use our power of support to fulfill the Customer's business objectives at the same time. With our approach to the statement of work MAI will:

- Provide solid project management.
- Create a thorough and working catalogue of the customer's IT assets (Software, hardware, services).
- Bring visibility into IT operations and management.
- Plan regular and open communication.



MAI's dramatic success lies in the strength of our differentiation, highly qualified personnel and demonstrated corporate expertise. MAI has made multiple appearances in Washington Technology's prestigious "Fast 50," an annual report of successful information technology companies in the Washington, DC metropolitan area. MAI was also recently awarded the 2014 Best of Business Award for Sterling, VA in the Small Business Category by the SBCA.

Our customers range from Texas and Wyoming state agencies (WY community colleges and universities), including support of 911 entities, to medium-sized businesses to Fortune 500 accounts including 3M, Marriott International, ALCOA, Circuit City, Orbital Sciences, INTELSAT, Arizona Learning Systems, Drug Emporium, Value City Department Stores and Northwest Pump.

Starting with the big picture in mind, we customize solutions to accommodate budget and time constraints, existing environments and specific technology requests. Our proven track record speaks to our reputation to mobilize quickly, deliver as promised at a predetermined cost and stand behind our work. In the coming proposal MAI will outline our approach to the statement of work in support of the Customer's RFP requirements.

B. Scope of Services

MAI has read the District's Scope of Services and understands the need for services to support continuous monitoring of the server, desktop and network environment; a dedicated help desk; 24/7 on-call availability; guaranteed response; troubleshooting; data backup and disaster recovery; spam and virus protection; network security and documentation of the District's network.

IT Asset Inventory and Catalogue. At the start of the District's contract, MAI will conduct an IT asset inventory and review all system architecture and current processes. From this MAI will create a working catalogue of all IT assets within the customer's environment. This document will become a referential source for the customer and the IT support staff as it will contain significant and extremely useful knowledge concerning each asset the customer utilizes. Information contained in this catalogue for each asset will include the following:

- Name and description of the asset (hardware, software or service)
- Vendor
- Owned/Leased
- Maintenance Agreement
- Contracts
- Instructions (Installation support, use etc.)
- Service Level Agreements
- RACI Matrix
- Identified Champion (i.e. Super-user, MAI or a qualified customer staff member)
- Dependencies
- Stakeholders
- Users
- Additional Information (Knowledge base items, recurring issues)

R	• Responsible <ul style="list-style-type: none">• Who is/will be doing this task?• Who is assigned to work on this task?
A	• Accountable <ul style="list-style-type: none">• Who's head will roll if this goes wrong?• Who has the authority to take decision?
C	• Consulted <ul style="list-style-type: none">• Anyone who can tell me more about this task?• Any stakeholders already identified?
I	• Informed <ul style="list-style-type: none">• Anyone whose work depends on this task?• Who has to be kept updated about the progress?

Once the inventory and catalogue are complete all change such as a new asset, a patch/upgrade, or repair will be documented within the catalogue. This will become the standard for change management procedures within the customer. In support of projects, reporting and change management MAI will incorporate the concept of the RACI Model (which is an extension of ITIL best practices) into the customer to enhance support, visibility, communication and accountability within projects and change management processes.

The abbreviation RACI stands for Responsible, Accountable, Consulted and Informed. The RACI model gives way to a RACI matrix, also known as a Responsibility Assignment Matrix (RAM), describing the participation by various roles in completing tasks or deliverables for a

business process. It is especially useful in clarifying roles and responsibilities in cross-functional processes.

The matrix is typically created with a vertical axis (left-hand column) of processes, and a horizontal axis (top row) of roles, as illustrated in the image above. The RACI matrix ensures accountability and a level of visibility into each project. And it becomes a useful aspect of change management and project planning because of its organizational structure. A RACI matrix will be included as part of the description for each asset within the Catalogue. It will also be included within reports produced for the customer so they may easily see with whom to discuss project progress or whom to reach out to in case of issue.

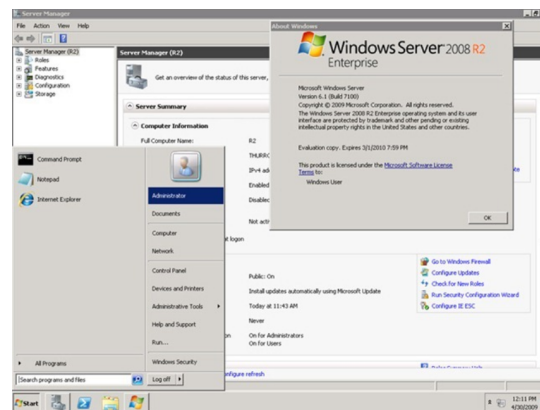
	CEO	CREATIVE DIRECTOR	PROJECT MANAGER	DIRECTOR OF UX
RESEARCH BRIEF	I	R	C	A
TECHNICAL SPEC	C	C	A	C
RESEARCH FINDINGS	A	R	I	C

Finally, in creating the Catalogue MAI will be able to evaluate the customer’s assets and look for opportunities to support the customer’s business goals. This may take the form of finding redundant assets and streamlining them or discovering the customer owns a surplus of software licenses and being able to put that value towards another area of need.

Monitoring of Servers, Desktops and Networking Devices

Monitoring of the Server Environment

MAI can provide end-to-end monitoring of the District’s 3 servers with a focus on lowering total cost of ownership by bringing in best practices that includes standardization, best of breed tools and latest technologies thereby reducing the management complexity. These support services include monitoring computer systems and networks to include complex application, database, messaging, web and other servers and associated hardware, software, communications, operating systems necessary for optimal system performance; scheduled preventive maintenance; maintain maintenance, operations, administrative, and quality assurance back-up plans and procedural documentation.



Providing 'Touch-Free Server Services' which enable remote management of centralized servers from centralized remote location.

Standardization of policies across the organization to ease administration.

Proactively manage server environment by robust policy administration.

Managed Server Services (MSS) offers server hardware including the day-to-day responsibility for operating and managing the server environment. The services can include product procurement, support and professional services as they specifically relate to the ongoing operation and management of the server environment, including personnel resources, tools, assets etc. The components of MSS are as mentioned below:

- Help Desk Services
 - Self Help
 - Tiered Level Support
 - Service Request Management
- Client Application Management Services
 - Application Packaging
 - Software Distribution
 - Image Management
 - Patch Management
- Client Support Services
 - Desk side Support Services
 - Break-Fix Support Services
 - Installation, Move, Add, Change, Disposal (IMACD) Services
 - Configuration documentation and tracking.
- Asset Management
 - Procurement
 - Inventory Management
 - Asset Tracking
 - Change Detection
 - Contracts Management
 - License Management

Monitoring of the Desktop Environment

MAI can provide end-to-end monitoring of the District's desktop environment. By bringing in best practices (ITIL) that include standardization, best of breed tools and latest technologies, MAI can reduce the complexity of desktop management. MAI will promote the standardization of desktops across the organization to ease administration and will proactively manage the desktop environment through robust policy administration.

Managed Desktop Services (MDS) offers the support of desktop and laptop hardware through MAI's help desk platform, including the day-to-day responsibility for operating and managing the desktop environment. The services include support and professional services as they specifically relate to the ongoing operation and management of the desktop and application environment especially hardware and software management. This is inclusive of installing PCs, laptops, PDAs, printers, peripherals and office automation software; diagnosing and correcting desktop application problems, configuring laptops and desktops for standard applications and

identifying and correcting end user hardware problems and performing advanced troubleshooting.

The components of MDS are as mentioned below:

- Help Desk Services
 - Self Help
 - Tiered Level Support
 - Service Request Management
- Client Application Management Services
 - Application Packaging
 - Software Distribution
 - Image Management
 - Patch and Upgrade Management
- Client Support Services
 - Desk-Side Support Services
 - Break-Fix Support Services
 - Installation, Move, Add, Change, Disposal (IMACD) Services
 - Network Connectivity Troubleshooting
- Asset Management
 - Procurement
 - Inventory Management
 - Asset Tracking
 - Change Detection
 - Contracts Management
 - License Management

Desktop support is the bread and butter of the IT industry. MAI's personnel are knowledgeable in an array of desktop hardware and software and their related peripherals and can be considered subject matter experts in desktop support.

Monitoring of Network Devices

The modern IT Infrastructure is made up of many components. These components include very dissimilar technologies, all with very different needs. At the core, in most cases, is an IP Infrastructure. This infrastructure requires constant care and maintenance.

MAI understands the requirements described by the customer and will provide the needed resources to accomplish the provisioning, engineering, operations and administration of the following data network infrastructures:

- Firewall
- Switches
- Routers
- Intrusive Detection
- Wireless Systems
- Network Optimization
- Network Design

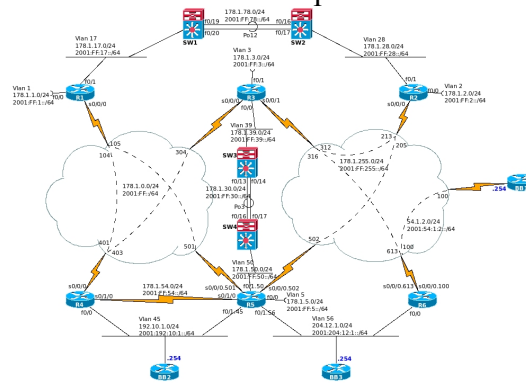


MAI will provide network technicians with a wealth of knowledge and experience in any capacity needed: service strategy, service design, service transition, service operation or continual process improvement.

Network Monitoring and Maintenance. MAI is vigilant about monitoring our customer's systems with the use of our Network Performance Monitoring (NPM) platform. MAI is able to minimize adverse effects of any incident or issue by following a problem management process protocol, including:

- Detection and Recording
- Grouping and Initial Support
- Investigation and Diagnosis
- Resolution and Recovery
- Closure

MAI personnel are able to quickly spot, isolate, diagnose and repair problems before they impact users. Real-time views of network performance and availability statistics, as well as detailed monitoring, collection and analysis of data from routers, switches, servers and any other SNMP-enabled devices, provides our customers with a comprehensive view of their network's health.



Comprehensive Network Performance Monitoring

- Monitors, tracks the up/down status, and analyzes real-time, in-depth, network performance statistics for routers, switches, wireless access points, servers, and any other SNMP-enabled device.
- An intuitive user interface works the way you think by providing device-by-device drill down and detailed system information on network devices, servers, virtual machines, or virtual or Fiber Channel switches.

Intelligent Network Alerting

- Allows you to quickly view the status of your core IT services and data center through refined alerting that dynamically groups related systems and devices.
- Delivers alerts on real issues by enabling advanced network alerting dependencies for correlated events, sustained conditions, and complex combinations of device states.

Automated Network Discovery and Mapping

- Periodically scans your network for changes and prompts you to monitor new devices.

- Displays your network pictorially and enables you to visually track performance statistics in real time via dynamic network maps.

Network Configuration Manager

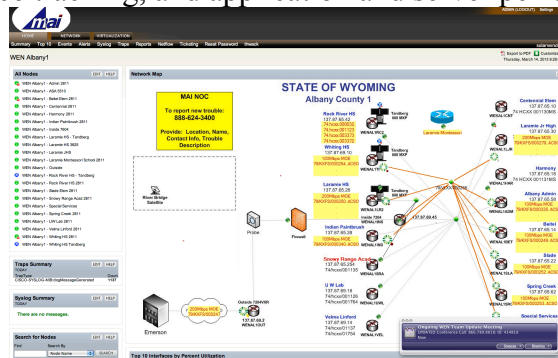
- Documents and tracks network and device configurations.
- Detects and reports on configuration changes and policy violations.

Robust Network Reports

- Customizable, out-of-the-box reports deliver insight into the health of your network.
- Share performance data with stakeholders who don't have a NPM login by easily scheduling and exporting reports to a PDF format.

Scalable, Extensible, and Easy to Deploy

- Modular design and flexible licensing model enables you to buy just what you need when your business needs it.
- Scales to accommodate growth and enterprise network management needs.
- Works with other software products to extend management capabilities to NetFlow traffic analysis, IP SLA WAN monitoring, IP address management, network configuration management, user device tracking, and application and server performance.



Security Services and Support

A strong security program is completely dependant on significant training of customer users and support staff in addition to the various technical and operational controls put into place. This is because security within the IT environment is as much a human issue as it is a technology issue.

To support the confidentiality, integrity, and availability of customer information within the current highly networked environments of our customers there are a few key items that form the baseline for a proper security program.

- Understanding roles and responsibilities related to the customer's organizational mission.
- Understanding of the customer's IT security policy, procedures and practices.
- Adequate knowledge of the various management, operational, and technical controls required and available to protect IT resources.

Resulting from years of performing IT audits and MAI's insider knowledge, it is easy for IT security professionals to understand that people are the weakest link within the realm of IT security. Because people are the weakest link they are also the key in providing and supporting an adequate level of security. As a result a robust, enterprise-wide awareness and training

program is paramount in creating and enforcing a security program. Some customers have very mature security programs in place, while other customers may have placed importance on other initiatives and have yet to enforce a well-developed security program.

MAI can help ensure that the customer's security program is both mature and well developed enough to support their vast enterprise environment. In previous contracts, MAI has assigned a personnel member (Security Program Manager, SPM) to manage the security program, awareness and training. The SPM will then assign responsibilities for IT security and support of an awareness and training program within the customer's environment.

Responsibilities of the SPM will be as follows:

- Establish overall strategy for the IT security awareness and training program.
- Ensure that customer and vendor management, system and data owners, and others understand the concepts and strategy of the security awareness and training program, and are informed of the progress of the program's implementation.
- Ensure the training of customer personnel with significant security responsibilities.
- Ensure that all users are sufficiently trained in their security responsibilities.
- Ensure that effective tracking and reporting mechanisms are in place.
- Ensure that awareness and training material developed is appropriate and timely for the intended audiences.
- Ensure that awareness and training material is effectively deployed to reach the intended audience.
- Ensure that users and managers have an effective way to provide feedback on the awareness and training material and its presentation.
- Ensure that awareness and training material is reviewed periodically and updated when necessary.
- Assist in establishing a tracking and reporting strategy.

MAI believes that a successful security program consists of:

- Developing an IT security policy that reflects the customer's business needs tempered by known risks.
- Informing users of their IT security responsibilities, as documented in customer security policy and procedures.
- Establishing processes for monitoring and reviewing the program.

An awareness program will begin with an effort that is deployed and implemented in multiple formats and is aimed at all levels of the customer, from management all the way down to the students. Awareness efforts are designed to change behavior and/or reinforce healthy security practices. An effective training program will explain proper rules of behavior for the use of customer IT systems and information. The program will explain IT security policies and procedures that must be followed to ensure a secure and healthy IT environment. Training strives to produce relevant and needed security skills and competencies so that users can be expected to use IT systems and information properly.

IT Security Support

Corporate environments are under a constant threat as targets of malicious attacks from external

entities. These entities include individuals a few blocks away or across the globe. In addition, internal attacks are still common and the least preventable are the accidentals. External attacks are the easiest to protect from. The tools utilized include firewalls, content filters and email filters. The simple solution is to protect the borders and the more complex solution is the development of security and user access policies. MAI will evaluate the customer's environment against current best practices to determine how effective their tools are and to be sure they are setup to achieve the best results.

Internal attacks are a little more difficult to protect from, because rights are given to individuals based on employee position or physical location. Not impossible, but care has to be taken in the configuration of all access to the Infrastructure and Applications. Physical protections include limited access (locked doors), segmentation (VLANs, DMZ, port protection) and surveillance (video, audio, logging). A full evaluation will be made to identify risks and recommendations made to minimize potential problems.

Accidentals are the toughest to prevent from. These are issues that occur by authorized users. A record is accidentally deleted. Confidential information is released. A network device is powered down during the day. The human element is the one we cannot account for. Prevention here is all about education. Educating the end-user community of what to do or not do. In most cases, company policy will dictate or govern what is allowed or not allowed. MAI will evaluate all customer policies and determine which can be prevented automatically. Examples include changing user rights from Read Write to Read Only, preventing the use of email on specific workstations or disabling USB flash drives. The other component is recovery, as well as, data retention, disaster recovery and backups.

MAI will perform all IT services and provide all IT functions while maintaining data and systems security and preventing corruption through appropriate means. We can provide state of the art security protocols, both hardware and software, to protect against outside penetration of the customer systems. MAI can monitor customer IT systems for security breaches and immediately report any such breaches for appropriate action. Including support of the following:

- Security of Data
- Security of Equipment
- Security of LAN/WAN components
- Security Plan for any Remote Monitoring/Hosted Environment/Cloud Environment
- Support for IT Operational Recovery Plan

As security administrators, MAI tries to be as proactive as possible, applying patches and updates, conducting penetration testing and establishing usage policies to create an impenetrable and healthy IT environment for our customers. Unfortunately, sometimes all the preventive care in the world won't protect systems from an inevitable infection. Incidents can vary widely and new malware is appearing regularly, so it is not always possible to stop them. But appropriate response protocols and regular data backups will prevent any real damage to a customer environment should a security threat emerge.

A virus or malware attack will be treated like any other issue in the technical environment. It should be reported to the help desk and they will escalate the issue as they see fit. Once the MAI

team is aware of the issue they will follow the below steps as necessary to stem the effects of the security threat and remediate them as soon as possible.

1. **Preparation:** MAI has developed malware-specific incident handling policies and procedures. We will train our staff on these procedures and test them in the customer environment.
2. **Detection and Analysis:** MAI will deploy and monitor antivirus/anti-spyware software to aid in the prevention of outbreaks and help us keep aware of happenings within the customer environment.
3. **Containment:** If an outbreak occurs, it is important to contain it immediately to minimize its effects on the customer's systems. Be prepared to shut down a server/workstation or block services, such as email to contain a malware incident. An agreed upon project officer will be given the authority to make this decision based on the malware activity.
4. **Eradication:** MAI has a variety of eradication techniques to remove malware from infected systems. We will train our technical staff on our protocols for these procedures.
5. **Recovery:** Restore the integrity and availability of data on infected systems and reverse containment measures. This will include reconnecting systems/networks and rebuilding compromised systems.
6. **Report:** MAI will document the incident and improve system security if possible to prevent future incidents.

Help Desk

Benefits of MAI's Help Desk:

- **Accessibility:** MAI's help desk can be accessed via email, a web-based portal and by phone.
- **Focus on Core Competencies:** MAI's technicians are best positioned to add value to the customer's help desk services. They are all knowledgeable on common business environment issues such as Microsoft Office support or basic network troubleshooting.
- **Scalability:** Help desk call volume can vary greatly for seasonal and other reasons. MAI's help desk has a flexible capacity for handling these changes in volume.
- **Continually Updated Training:** MAI specializes in help desk services so we work hard to keep our personnel's training current.
- **IT Can Focus on What's Important:** The help desk model allows regular IT staff to focus on the most important operational and support items. This creates a more efficient and productive IT service environment.

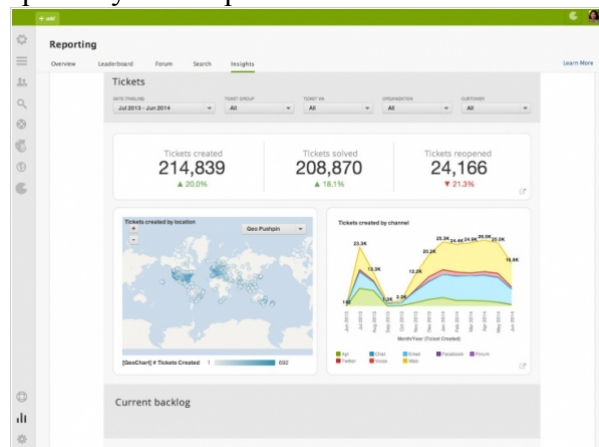
The day-to-day operations of any IT support team is the Help Desk function. The Help Desk is the centralized repository, dispatch and communication hub of all things IT. This is typically the face end-users see and where they turn to in cases of trouble. This is also where management is able to take a pulse of the environment as a whole to determine the health of all the services and environment.

MAI can provide help desk services to the District using the Zendesk trouble ticketing system, or their current/preferred platform. Zendesk provides a comprehensive, accessible, full-featured and customizable help desk option. MAI uses Zendesk in all of our current IT support contracts and have found it to be a successful and easy to implement option for help desk management.

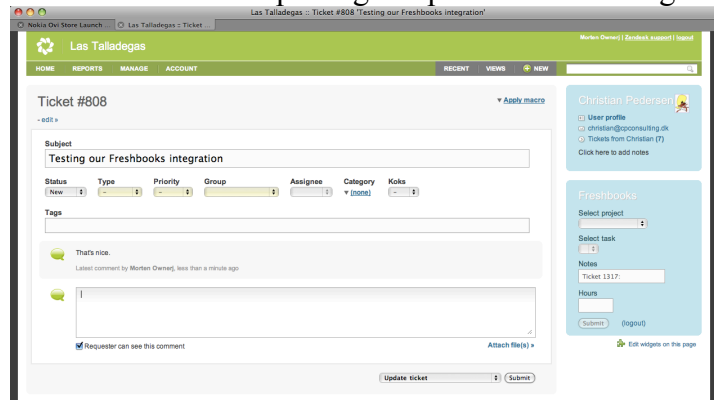
Our help desk provides the customer with end-to-end services to answer calls, record the service request, track and monitor requests for information technology services, event notifications, and coordinate TAC requests. A Help Desk phone number will be provided for inbound requests. Help Desk tickets are then created and tracked. Support requests will be logged into the Help Desk tracking software. The Help Desk will accept submissions for new service requests, software support, problem solving, status inquiries regarding prior service requests, software support, and all other information technology service inquires as provided for in the categories below.

The Help Desk System will include the following feature with additional constantly being added:

- Self-service IT help desk portal via browser.
- Receive and respond to tickets via HTML emails.
- Smartphone and tablet applications for IOS and Android devices.
- Assign tickets to staff.
- Automatically create tickets from alerts and emails.
- Automate ticket organization and actions.
- Knowledge base repository for frequent issues.

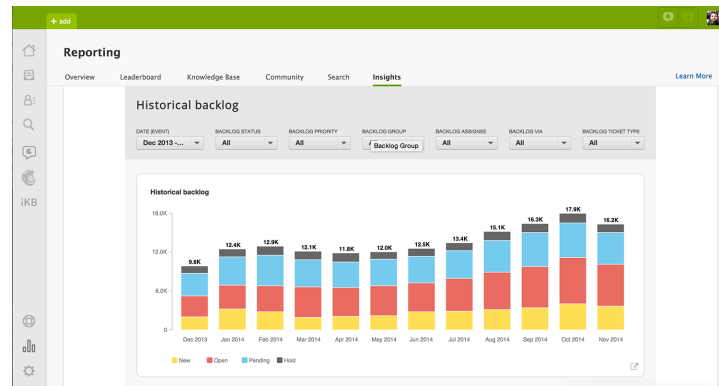


The Help Desk System includes a self-serve portal, which allows users to enter their own trouble requests, and will allow them to see potential related knowledge base articles. They also will have the ability to simple search the knowledge base directly for FAQs and articles created to assist in common issues. Customer management personnel will be provided with monthly reporting and will have access to adhoc reporting of open cases and assignments as needed.



Customized Reporting

Zendesk includes built-in reporting and graphs so that the customer can easily see exactly how the support organization is performing. These reports will show trends or patterns that may be important to business such as how many tickets are being created each month, how quickly issues are being resolved and so on. Custom reports and graphs can easily be created to highlight whatever data is important to the customer. In addition data can be export in CSV or XML format for further analysis in applications such as Excel, Crystal Reports, or Business Objects etc.



Integration

For most organizations Zendesk becomes their system of record for tracking and responding to customer inquiries. As its usage grows, Zendesk is often integrated with other systems, whether they are Internet based systems or on premise software applications run by the IT department or elsewhere in the business.

Zendesk includes “out of the box” integration with the most popular web based applications including: Atlassian, Jira, GoodData, Google Analytics, NetSuite, Salesforce.com and more than 60 others. That is more integration availability than any other help desk system currently available. And because of its open architecture it’s easy to integrate Zendesk with virtually any application the customer may be using. These integrations extend the power of Zendesk tremendously. The customer can also specify exactly how information should be mapped between Zendesk and outside applications to exactly match business needs.

Zendesk provides an open Application Program Interface (API) that will enable MAI to create plug-ins to integrate with almost any web-based application. Every resource in Zendesk including tickets, users, and tags has their own URL and can be manipulated in isolation.

Integrating with the Email Interface

MAI can also integrate with Zendesk from any standard email system using the email interface. This enables a support agent to respond to tickets, set properties or add comments when working with tickets via email.

Conclusion

Zendesk is an easy to use yet powerful customer support help desk. It was designed from the ground up to be completely customizable, scalable and integrated into other web based or on premise applications in order to provide a seamless experience to customers. **MAI is confident**

that via Zendesk, MAI can provide a solution to the District covering all of their current and future needs.

24/7 On-Call Availability

MAI will provide on-call availability to the District on a 24 hour, 7 day per week schedule. This availability will be facilitated through our help desk platform. A support request will be established through the help desk wither by email, phone or the web-based portal. The issue will be escalated according to service level agreement protocols and resolved as required.

Guaranteed Response Times

MAI will have personnel available to respond to the District’s support requirements, both remotely and in-person. These personnel will provide guaranteed response times according to the following service level agreements (SLAs). These SLAs will be negotiated and finalized with the District upon contract award.

Response Time

MAI will provide service and support to the customer in accordance with the below Ticket Priorities, Response Goals and Escalation Procedures.

Ticket Priorities		
Ticket Type	Priority	Performance Standard
Service Disruption/Outage	1 (Critical)	Immediate Intervention
Troubleshooting	2 (High)	Adhoc but schedule engineer as needed.
Change Request	3 (Medium)	Schedule during next maintenance windows.
Report Request	4 (Low)	48 Business Hours

Incident Response Goals		
Priority	90%	100%
1	30 Minutes	1 Hour
2	2 Hours	4 Hours
3	8 Hours	1 Business Day
4	Next Business Day	Next Business Day

Service Request Response Goals		
Priority	90%	100%
1	Immediately	1 Hour
2	8 Hours	1 Business Day
3	Next Business Day	Next Business Day
4	2 Business Days	2 Business Days

MAI will follow the escalation procedures as listed below, based on the priority of the issue. **MAI and the District will mutually agree upon the level of engagement.**

Escalation Procedures	
Escalation Level	Contact Level
1	District Director
2	District Manager
3	Senior MAI Personnel
4	Help Desk Engineer

Issues That Can Only be Handled Onsite. In such a case where a technical issue can only be handled onsite and there is no technician physically present at the District locations, please allow an additional 30 minutes of travel time for personnel to report to the District location and provide support.

Troubleshooting for System Failures, Client Database Access Issues and Hardware Failures

Issues such as System Failures, Client Database Access Issues and Predictable Hardware Failures will be handled via the help desk platform as all other issues. Each issue will be escalated depending on the severity, as described in the service level agreements. Following is an incident response plan for the District’s reference and in support of the previously mentioned issues.

While the job of IT support can seem to gear towards large-scale emergency situations such as responding to company wide Internet downtime or an epic data loss, this is simply not always the case. In fact if you have a great IT support team, such as MAI, on your side than most day-to-day IT issues will consist of small- to medium-scale items such as a hardware failures or a software malfunction. MAI will treat all issues with a sense of urgency towards resolution, whether they are an emergency issue or not. In the following discussion MAI will outline our Issue Response Plan.

Issue Response Plan

This issue response plan defines what constitutes an issue and outlines the phases of resolution. MAI’s Issue Response Plan integrates into our help desk and can be used for any issue level or incident occurrence. At the point of contact all issues will be treated with the same level of urgency and care until the help desk staff determines the issue level and escalates as necessary.

Response Plan Goals. This plan was developed to protect customer resources and operations against issues and events, causing slowed, ceased or otherwise interrupted IT operations.

Goals:

1. Verify the issue.
2. Maintain/restore continuity and operations.
3. Reduce the impact of the issue.
4. Determine the cause of the issue.
5. Resolve the issue.
6. Develop ways to prevent issue reoccurrence.
7. Improve issue response.

Definition of an Issue. An issue can be defined as any of the following (not all-inclusive):

- System Failures
- Unplugged Cords
- Hardware Failures
- Client Database Access Issues
- Software Malfunction
- Inoperable Equipment/Software on an Individual Employee Scale
- Inoperable Equipment/Software on a Large Scale
- Virus Resolution
- And much more!

Response Lifecycle

1. **Discovery.** An issue can be discovered by any of the following:

- a. Help Desk Personnel
- b. A System Administrator
- c. An End-User

2. **Notification.** Once an issue is discovered it should be brought to the attention of a Help Desk Staff Member. Following award MAI will provide contact information for our Help Desk Staff including: phone numbers, a web address, email addresses and web-portal information. Supporting varied means of communications ensures end users are always able to receive the support they require and are comfortable with. Once the help desk is reached the Help Desk Staff will begin the steps toward resolution.

3. **Response Strategy and Resolution.** Given the issue and its level of complication a response plan will be formulated as quickly as possible by the Help Desk Staff and will be escalated if required.

- a. What difficulties is the issue presenting?
- b. How urgent a response is required?
- c. What efforts or staff is needed to resolve the issue and resume normal functioning?
- d. Assign the issue ticket and begin the steps towards resolution.

Steps for resolution when a solution is not forthcoming or the implemented solution is unsatisfactory is cause for escalation to the next level so they may ameliorate the issue situation.

Response Time. MAI will provide service to the customer in accordance with the Service Level Agreements (SLAs), which can be discussed and negotiated upon contract award to best suit the customer and their specific support requirements.

4. **Documentation.** MAI will document the entire issue within the Help Desk ticketing system from start to finish to provide for reports and keep proper records of all issues and their resolutions. This documentation is in support of knowledge transfer efforts and will be used to monitor SLAs as well as provide knowledge-based articles for the help desk.

5. **Response Review.** After documenting the issue MAI will review the response efforts and make any necessary changes to operations to improve response and ensure the issue will not become a recurring problem. MAI is in favor of constant and regular review of our support efforts to ensure our company is providing the best and most efficient support we are capable of to our customers.

MAI will test and evaluate our Issue Response Plan on a regular basis to ensure it is processing resolution matters as it is meant to and to provide opportunities for improvement. **MAI will also review our plan following award to ensure it will be effective within the District's IT environment.**

Data Backup and Disaster Recovery

Data Backup Procedures

The protection of customer data is a crucial security feature within an IT environment and it is also imperative when it comes to emergency situations. Backup procedures act as an insurance plan for business operations. It can be quite easy to delete an important file. Or a natural disaster can wipe out an office environment. But with the implementation of proper backup procedures and recovery plans, getting a customer operating again just becomes as simple as following planned procedures.

Each customer MAI works with has an operating environment unique to them and this means each customer has different data requirements and generates different amounts of data over the course of operation. Backup procedures need to be tailored to each customer's environment to ensure that if the time comes they will be able to recover from a backup with the data they actually need. MAI will work with the District to develop backup procedures and a recovery plan with their data needs in mind. To help in this endeavor MAI will consider the following items:

How important is the data on your systems? The importance of data will go a long way in determining what data actually needs to be backed up and how. Critical data, such as data held within the database, a redundant backup will be required that holds data for a few previous periods. Daily user files, which are likely hold less important data will still need regular back ups but will not requires such extensive redundancies and protection.

What type of information does the data contain? This question will need to be asked of various users and stakeholders, as what may seem unimportant to one user can be significant to another. Once MAI understands the significance of the information held within the data we would be able to choose the regularity with which it should be backed up and how.

How often does the data change? If data within a customer environment changes on a daily basis, it will be important to back up that data with the same frequency.

How quickly do you need to recover the data? Should an issue occur that requires recovery from a backup, what would be the optimal time to restore system functioning, causing the least amount of negative impact to operations? This will be a big consideration on how and where data is stored.

Do you have the equipment to perform backups? To properly perform backup procedures, the customer will require the necessary tools and hardware to carry out the procedures. Multiple backup devices and several sets of backup media may be required to support the customer's necessary backup schedule. The capabilities of backup tools will need to be considered as well.

What is the best time to schedule backups? The best time to schedule a backup is when system usage is at its lowest, such as after hours. However, after hours backups may not always be possible so an optimal schedule will need to be planned and well thought out so it causes the least disruption to service as possible.

Do you need to store backups off-site? If a natural disaster occurs, having backup options located offsite will be the only viable option to restore from. This will be a consideration MAI and the customer should weigh to decide what storage locations best suit the customer.

The Basic Types of Backup

There are multiple avenues for backing up data. The type MAI will use for the customer is based on the previous sections questions and other considerations such as cost, customer preference and ease of recovery. The basic types of backup MAI will perform are as listed:

- **Full Backup.** All files are backed up.
- **Copy Backup.** All selected files are backed up.
- **Differential Backup.** Designed to create backup copies of only files that have changed since the last full backup.
- **Incremental Backup.** Designed to create backups of files that have changed since the most recent full or incremental backup.
- **Daily Backup.** Designed to back up files using the modification date on the file itself. If a file has been modified on the same day as the backup, the file will be backed up.

The backup solution that is best for the customer will also depend on these factors:

- **Capacity.** The amount of data that you need to back up on a routine basis.
- **Reliability.** The reliability of the backup hardware and media.
- **Scalability.** The scalability of the backup solution.
- **Speed.** The speed with which data can be backed up and recovered.
- **Cost.** The cost of the backup solution.

MAI will create backup procedures that take into account a combination of the above types of backup and considerations so the District can rest assured their data is secure and recovery is only backup data away.

Disaster Recovery Support

Disaster Recovery Plan. The purpose of the disaster recovery plan is to prepare the District in the event of a serious disruption affecting business operation and functioning. This plan will guide MAI (And the District) through the restoration of integrity and normal operations.

Scope. The scope of this plan is limited to high severity incidents and is not a daily problem resolution tool. An incident for the purposes of this document is limited to severe events: Complete loss of ability to conduct business operations or a natural or man-made disaster.

Invoking the Plan. If an initial assessment of the disruption indicates a potential for a prolonged outage, this plan becomes effective when approved by MAI’s Network Operations Manager. The plan will remain in effect until network operations are resumed at all affected locations.

Notification. Regardless of the disruption circumstances MAI will contact all required Customer personnel to make them aware of the situation and the steps being followed to resolve the issue. For the purposes of this step upon award MAI will have the Customer fill in an Emergency Notification Contact Worksheet similar to the below matrix.

Emergency Notification Contact Worksheet				
Name	Address	Email	Home Phone	Mobile Phone
John Smith	Marina, CA	jsmith@mcwd.org	213-456-7890	213-789-4560

Disaster Recovery Plan

Below MAI has provided a brief description of our plan. Upon award MAI will provide a comprehensive plan to the District aligned to the specifications of their environment.

Brief Description of MAI’s Disaster Recovery Plan
Plan Action Items
Step 1. Identify and assess incident (Service disruption, security breach or outage).
Step 2. Review with MAI and Customer management.
Step 3. Evacuate area if necessary (Environmental threat, physical security breach).
Step 4. Initiate remedial actions to recover assets.
Step 5. Decision to invoke disaster recovery plans.
Step 6. Initiate disaster recovery plan activities. (I.e. restoring from backup etc.)
Step 7. Contact appropriate vendors, service providers and users.
Step 8. Follow through on recovery procedures.
Step 9. Confirm plan success and subsequent return to normal operations.
Step 10. Report to Customer management personnel.

Plan Review. The Disaster Recovery Plan will be reviewed semi-annually and exercised on an annual basis. This is to ensure the plan works as expected and takes into account any environmental changes or IT asset additions. Additionally, emergency and vendor contact information will be reviewed at this time as well.

Spam and Virus Protection

The tools utilized for virus protection include firewalls, content filters and email filters. The simple solution is to protect the borders. MAI will evaluate the current products in place within the District against our best practices and customer policies to determine how effective the tools are and to be sure they are setup to achieve the best results for spam and virus protection.

As security administrators, we try to be as proactive as possible, applying patches and updates, conducting penetration testing and establishing usage policies. Unfortunately, sometimes all the preventive care in the world won't protect systems from an inevitable infection. Incidents can vary widely and new malware is appearing regularly, so it is not always possible to stop them.

A virus or malware attack will be treated like any other issue in the technical environment. It should be reported to the help desk and they will escalate the issue to Tier 1/2/3 as they see fit.

Once the MAI team is aware of the issue they will follow the below steps as necessary to stem the effects of the virus or malware and remediate them as soon as possible.

1. **Preparation:** MAI has developed malware-specific incident handling policies and procedures. We will train our staff on these procedures and test them in the customer environment.
2. **Detection and Analysis:** MAI will deploy and monitor antivirus/anti-spyware software to aid in the prevention of outbreaks and help us keep aware of happenings within the customer environment.
3. **Containment:** If an outbreak occurs, it is important to contain it immediately to minimize its effects on the customer's systems. Be prepared to shut down a server/workstation or block services, such as email to contain a malware incident. An agreed upon project officer will be given the authority to make this decision based on the malware activity.
4. **Eradication:** MAI has a variety of eradication techniques to remove malware from infected systems. We will train our technical staff on our protocols for these procedures.
5. **Recovery:** Restore the integrity and availability of data on infected systems and reverse containment measures. This will include reconnecting systems/networks and rebuilding compromised systems.
6. **Report:** MAI will document the incident and improve system security if possible to prevent future incidents.

Network Security

Managing and maintaining network security is of the utmost importance for an IT project team. Network security support needs to be both proactive and responsive to fully monitor and support security efforts. MAI's Network Performance Monitoring (NPM) solution will provide comprehensive network security support options. MAI will be able to access all significant areas of the network such as firewalls, routers, switches, access points, servers and workstations to provide the full monitoring coverage needed for high level security. Items involved in network security management are as follows:

User Access. Measures will be taken to manage user access through both physical security and intangible security protocols such as user logins. It is evident by the RFP network security requirement that the District is taking the security of their systems seriously. MAI will complement this effort by setting up secure user access accounts as well as monitoring the network to ensure access is limited to authorized personnel only.

Patch Management. MAI will manage patches and updates to the software, which will leave the customer less vulnerable to threats trying to gain access.

Firewall Security Management. MAI will administer over the firewall environment to ensure proper configuration. MAI will also perform regular security audits on the network to confirm solid security.

Network Configuration Management. Using our NPM MAI can detect and report on configuration changes and policy violations. This is especially important in the case of unauthorized access resulting in configuration changes.

User Device Tracking. MAI will track, map and monitor switches, ports, endpoint devices, and user logins, which help discover areas of vulnerability or the entrance point of a security threat that needs to be remediated.

MAI's chosen network monitoring solution automates many aspects of the network security monitoring process and allows technicians to focus on keeping the network operating at its optimal capacity and preventing security threats from accessing the system.

Documentation of the Network

MAI uses the support of our Network Performance Monitoring (NPM) tool to document customer networks, including network diagrams and procedures. Documentation of the customer's network (configurations, standards, policies and procedures) creates a sort of strategic link between a customer's mission and vision and its operations (network access and usage).

Standard, policy and procedure documentation is critical because it provides a baseline of knowledge for users and support personnel. If employees are all operating under the same set of ideas, understandings and assumptions it creates an atmosphere for easy collaboration and integration of separate departments and task teams. Guidelines create structure and the ability to achieve success.

MAI will work with the customer to develop, review and revise all documentation to meet best practices, regulatory requirements, create internal controls and realize the customer's corporate objectives. Examples of the areas that MAI will address include, but are but not limited to:

- Review of current documentation.
- Improvement of current documentation and creation of new documentation.
- Identify areas of insufficient documentation and take corrective action.
- Information Security
- IT Governance
- System Development and Acquisition
- Change Management
- Data Backup, Recovery, Storage, and Backup Retention
- Disaster Recovery and Business Continuity Plans
- Incident Management
- Vendor Management

Our approach to IT documentation is both sound and comprehensive; we pay careful attention to the integration and appropriate cross-referencing of all related documentation. MAI will provide the District with all requisite network documentation using our NPM as a key support tool.

C. Qualifications

Project Experience

MAI's ability to provide for the District's needs can be found throughout the breadth and depth of our experience. Taking a look at components from a host of MAI's projects will instill confidence that MAI works personally and closely with our customers to facilitate the highest level of management and specialized technical IT support.

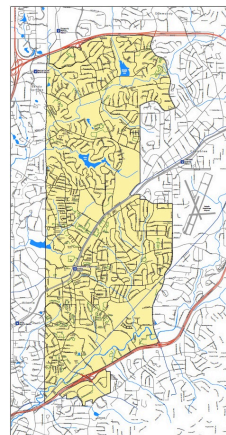
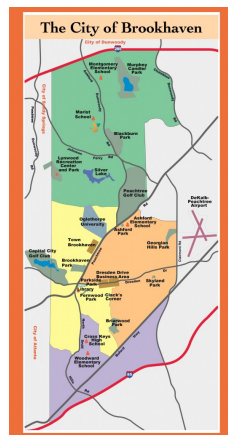
City of Brookhaven, Georgia Outsourced Information Technology Department

In December of 2014, MAI was awarded a **long-term contract by the City of Brookhaven, Georgia for an Outsourced Information Technology Department**. The City of Brookhaven was incorporated in December 17, 2012 and is the newest city in DeKalb County, GA. In 2014, The Atlanta Business Chronicle recognized the **City of Brookhaven as the fastest growing residential zip code in the metro-Atlanta area**. Many long-range planning initiatives have been underway in 2014. The demand for services from day-to-day operation, infrastructure maintenance and long term capacity, and the ability to track and respond internally and externally are top priorities for the City of Brookhaven.

MAI's contract with the City covers a completely outsourced IT Department the services of which are covered below.

IT Department Services

MAI **provides on-site IT support services** to the City, including IT consulting and strategic planning for the future of the City's IT environment. MAI also provides Project Management services to support tasks both on- and off-site, including **monthly status meetings, personnel management, vendor relations, City relations and project management**.



MAI provides Systems Support Services to monitor and maintain the entire City's IT systems. The System Support Services scope includes:

- **IT Asset Management,**
- **IT System Renewals,**
- **IT System Vendor Relations,**
- **Monitoring and Maintenance of the Network,**
- **Telecom and VoIP Management and Support,**
- **And Level 1/2/3 IT Help Desk Support (Zendesk).**
- **Software and Application Support (Including SunGard RMS, Syscon Court Management, Microsoft Office).**
- **Server Monitoring and Support**
- **IP Camera Infrastructure and Hardware Support**

- **Security Initiatives**
- **Email Support**
- **Firewall Support (Fortigate and Cisco)**

Police Department Services

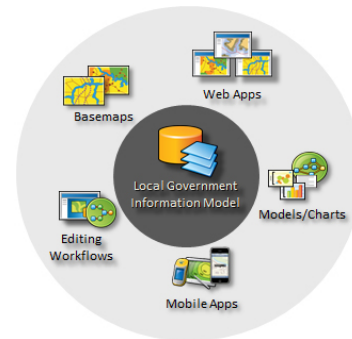
MAI provides **on-site IT Support Services dedicated to aiding the Police Department** with their enterprise level converged network that offers services for Telecommunication, Radio Wireless, IP Cameras (Genetec/Arbitrator), Unified Communication and E911 centers using multi-protocol and multi-vendor network solutions. IT Support maintains and monitors the IT systems used both within the police department and within the police cruisers and works with products like Citrix, NetMotion, SunGard, Panasonic Arbitrator, and Utility Rocketbox. **Help desk support services (Level 1/2/3)** are also provided to the City’s Police Department.

GIS Services

MAI provides **on-site GIS Services supporting ESRI GIS software**, providing GIS and Map Services for many City functions from **Community Development, Public Works, the Mayor, and the City Manager to the Police Department.**

The GIS Services scope is as follows:

- Map/Data Production
- Spatial Analysis
- **Data Maintenance/QA/QC**
- **Database Administration**
- **Application Support**
- **System Maintenance**
- **System Integration**
- **System Implementations**
- Scripting



MAI is providing a **host of on-site Outsourced Information Technology Services** to the City that include:

- **A completely Outsourced IT Department** at the City’s disposal.
- Providing experienced **Senior Project Management Support**.
- **Maintaining the computerized network system software** to satisfy the City’s computing and technology needs for municipal operations.
- Developing, implementing and maintaining an **optimal network and IT infrastructure**.
- **24/7 Help Desk Support Services (Zendesk)**.
- **IP Camera Support Services**.
- **Ensuring all remote offices and city services are well connected to the central City location**.
- **Developing, administering and maintaining the City’s IT hardware, software, license and wireless device inventory**.
- **Developing and maintaining a replacement program for all computers and IT equipment**.
- Developing and implementing **disaster recovery and business continuity plan**.
- Providing Geographic Information System Services.

- **Providing state of the art security protocols, both hardware and software, to protect against outside penetration of City's system.**
- Administering and maintaining of the **City's website.**
- Administering and maintaining **VoIP services.**
- Police Department support and 911 Services.
- Nightly Backup Services.

MAI's services are being provided by on-site personnel to fulfill all contract requirements.

Start date: January 2015 End Date: Present

Northwest Pump Outsourced Information Technology Support Services

MAI won a large competitively bid project to provide **Outsourced Information Technology Support Services (including help desk and desktop support)** to Northwest Pump, America's largest distributor of Petroleum equipment, pumps and comprehensive service since 1959. Northwest Pump has **17 locations nationwide** in Portland, Seattle, Spokane, Pasco, Honolulu, Anchorage, San Diego, Phoenix, Tucson, Glendale, Sacramento, Fresno, Fremont, and Anaheim, Las Vegas, Boise, and Billings. They operate in four divisions: Petroleum Equipment Sales, Industrial Equipment Sales, and Car Wash Equipment Sales and Service.

MAI's Initial Assessment was to **compile/update an inventory** of all information technology related assets, assess system architecture and current processes.



Desktop Applications Support - Perform basic support functions (help desk services) including installing PCs, laptops, PDAs, printers, peripherals, and office automation software; diagnosing and correcting desktop application problems, configuring laptops and desktops for standard applications and identifying and correcting end user hardware problems, and troubleshooting.

Server and Virtual Server Administration Services - Manage computer systems and networks to include complex application, database, messaging, web and other servers and associated hardware, software, communications, operating systems necessary for the quality, security, performance, availability, recoverability, and reliability of the system. Virtual Servers, Virtual Desktops, LAN, WAN, Enterprise Network Appliances, Virtual Environment

Implementation and Support (VMWare, XenApps, MS Hypervisor/Azure) and Server Farm Management.

Network Administration Services - Scope of activity includes **all network equipment** including switches, firewalls, routers, and other security devices located in their regional and testing facilities. Primary installation and maintenance of printers, network copiers/scanners, etc. **Primary maintenance including regular analysis, routine configuration changes, and installation of patches and upgrades.**

Security - Maintenance of virus detection programs on servers, the network, email and computers and laptops. MAI also performs regular security audits.

Strategic Planning - Engineering, planning, and design services for major system enhancements, including installations and upgrades of new or existing systems.

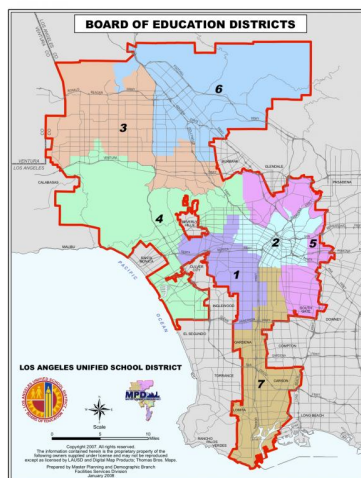
MAI is providing a full service solution to NP in support of this project that includes network design, development, WAN circuits, project management, **help desk services and 24x7 monitoring and maintenance.** MAI also provides training to staff and the network will be used to provide Internet service to all 17 Northwest Pump locations.

Contract Value: \$1,000,000

Start date: 2009 End Date: Present

Los Angeles Unified School District Network Configuration Engineering Project

In August of 2014, MAI was awarded a long-term contract by the City of Los Angeles for the Los Angeles Unified School District (LAUSD) for Configuration Network Engineering Services. The LAUSD is the second largest school district in the nation. They enroll more than 640,000 students in kindergarten through 12th grade, at over 900 city schools, and 187 public charter schools. The boundaries spread over 720 square miles and include the mega-city of Los Angeles as well as all or parts of 31 smaller municipalities plus several unincorporated sections of Southern California.



MAI is providing Configuration Network Engineering Services, Wireless Infrastructure Support and Network Connectivity Services to the Los Angeles' Unified School District. These services consist of travelling to assorted LAUSD locations and supporting the below items (not all inclusive):

- Complete full site **network configuration and migration.**
- **Connect and configure routers, switches, WLAN controllers, access points, bridges and bandwidth optimization devices.**
- Configuration of Cisco, Aruba, Alcatel, and HP network devices.
- **Implement new or additional IP addresses.**
- Support VLANs.
- Configure host names in all networking equipment.
- **Document network configurations, including equipment locations, host names, serial numbers, IP addresses, etc.**
- **Analyze technical problems and recommend solutions.**
- Disable legacy wireless devices.
- Maintain a log of field activities.
- Provide services to the LAUSD Information Technology Division (ITD) as a member of the Design & Quality Assurance team insuring full implementation of network and telecommunications systems at LAUSD school sites.

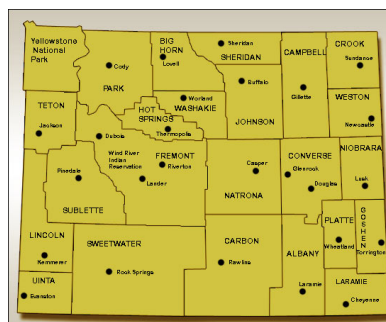
Start date: 2015 End Date: Present

Wyoming Education Network

Wyoming invested \$29 million in a **statewide high-speed telecommunications network (including help desk support services)**. Dubbed the Wyoming Equality Network, its primary goal has been to connect all of **Wyoming's public schools** to better utilize teaching and information resources across the entire state. To aid in this important endeavor, the State of Wyoming chose MAI with a \$5M contract to help **design, install, manage and maintain this critical State asset.**

The project was equally divided into five (5) major tasks:

- 1) Network Management and Monitoring**
- 2) Level 1/2/3 Help Desk and Engineering Support**
- 3) Application and Engineering Support**
- 4) WEN Video and Engineering Support**
- 5) WEN Security Services**



The Wyoming Equality Network (WEN) is a **statewide, high-speed data and video network** that connects all Wyoming public schools and gives communities capability for telemedicine, economic development and community outreach applications as well as access to the Internet. The Wyoming Equality Network is the network, which was created through the state's agreement with Qwest (CenturyLink) and Management Applications, Inc., which enabled the state to provide telecommunications capabilities to schools and related entities.

The WEN supports all schools via their intranet. There are **48 school districts** in Wyoming. The **schools include all grade schools, middle schools, high schools, junior/community colleges and universities**. Following is a break down of each community college and university MAI supported through this contract. MAI provided help desk services, **application support and development services (Banner)** and generally acted as an IT ally for each individual school.

Casper College: Casper College houses 28 buildings on more than 200 acres. It currently enrolls 4,023 students and there are approximately 250 faculty.

Central Wyoming College: Central Wyoming College's 60-acre campus has six major buildings, with four residential structures. Student enrollment is 2,351.

Eastern Wyoming College: Eastern Wyoming College serves almost 2,000 students in credit courses and over 6,500 students in non-credit activities.

Laramie County Community College: Laramie County Community College has campuses in Cheyenne and Laramie and outreach centers at F.E. Warren Air Force Base and in Pine Bluffs. Laramie enrolls 3,572 full time students, has 114 full time faculty and 213 part time faculty.

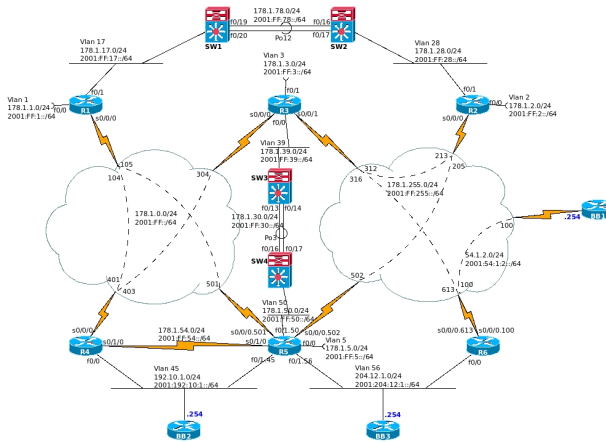
Northwest College: Northwest College houses 62 buildings on a total of 132 acres and has 4 off-campus centers. Northwest enrolls 1,719 credit students and has 313 total employees.

Sheridan College: Sheridan College has four main buildings and two off campus locations. It enrolls around 300 students.

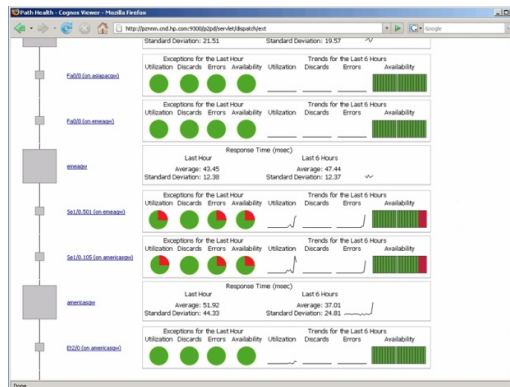
Western Wyoming Community College: Western Wyoming Community College has approximately 1,000 students enrolled for college credit courses and has about 1,800 full time equivalent students.

University of Wyoming: The University of Wyoming is a large university located 2 hours north of Denver and has a current total enrollment of 13,929 students.

MAI provides **24/7 around the clock support to all 48 school districts, which in total numbers adds up to nearly 600 circuits and thousands of devices** for this critical state asset.



MAI provides these State of Wyoming education entities with network monitoring, network management, **device monitoring, device management, application monitoring, application management, and help desk services.**

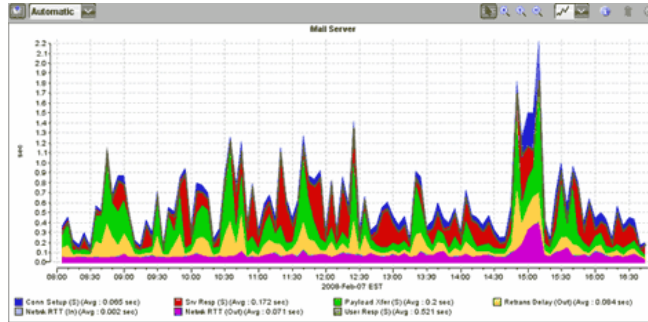


MAI provides the following value added services in support of the State Of Wyoming:

- **Senior Project Management Services**
- **Customer Support**
- **24x7 Help Desk Support**
- **Troubleshooting**
- **Proactive Network Management and Monitoring**
- **Application Development and Support (Including Banner Support)**
- VMWare Support
- Problem notification and resolution
- Network base lining
- Management control
- Reporting and carrier escalation
- Equipment configuration & maintenance

MAI's NOC is the single point of contact for all WAN circuit or device management issues. MAI's trained and experienced **engineers perform any and all network management functions, including monitoring of devices, management of circuit issues, network**

troubleshooting, capacity planning, escalation procedures, full agency, and bandwidth optimization. These services apply to all devices in the State of Wyoming's WAN infrastructure.



MAI provides the customer **24x7x365 WAN Help Desk Services.** Help Desk Services include answering any questions and assisting the end-user customer with problem resolution on all devices or circuits managed in the WAN. MAI also provides our customer with a very sophisticated and effective **web portal access** so they can view real-time data from our NMS systems and support performing troubleshooting as needed.



Contract Value: \$5,055,075

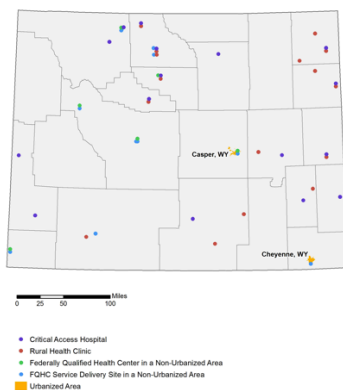
Start date: July 2006

End Date: July 2013

University of Wyoming Rural Health Care Support Project

Since 2010, MAI has provided 24/7 around the clock Network Management and Monitoring support (including help desk support) to over 72 sites for the State of Wyoming in conjunction with the University of Wyoming. The University of Wyoming's Center for Rural Health Research and Education (CRHRE) sponsors the connections with a grant from the Federal Communications Commission (FCC). This is a joint project with the Wyoming Telehealth Consortium in an effort to bring health care to rural Wyoming residents.

Selected Rural Health Care Facilities in Wyoming



Map of Wyoming depicting the scarcity of healthcare facility access

The vital network, labeled the Rural Health Care Network (WYNETTE) provides dedicated health care telecommunications systems for every hospital, community mental health center, and substance abuse clinic in the state. **This network will provide 72 sites with high-speed connections** not only to each other but also to the world through the Internet. Included in the Rural Health Care Network are **30 hospitals, and 42 community mental health and/or substance abuse centers**. This project is contracted for a 5-year period. Both Data and Video are utilized and supported by the MAI engineering team.

MAI supports WyNETTE’s services via the MAI Network Operations Center (NOC) using state of the art management platforms and web portals for both Device and NetFlow Management & Monitoring. MAI’s design would place a Cisco router at each remote site as well as provide connectivity through an ATM “cloud³” to an aggregation point, placed at the **University of Wyoming (UW)** in Laramie. In addition to keeping the design simple, this approach will eliminate interruption of service at multiple locations. The larger hospitals, of which there are seven, will be connected to UW through dual T-1 ATM lines. Connection to national wide-area networks will be made through UW’s links to the Front Range GIGAPop (FRGP), a larger aggregation point in Colorado **managed by a consortium of universities, non-profits, and government agencies to which UW belongs.**



Figure 2. Internet 2 connectivity from the University of Wyoming.

MAI's NOC is the single point of contact for all circuit, device, or WorkFlow issues. MAI's trained and experienced engineers perform any and all network management functions, including monitoring of devices, circuits, network troubleshooting, escalation procedures, reporting, and full agency support. These services apply to all devices under management in WyNETTE's WAN infrastructure. MAI also provides billing and invoicing activities, Contract Transition Plan/Administration, State Responsibilities, Continuity of Service/Disaster Recovery for WyNette.

Contract Value: \$100,000

Start date: 2010 End Date: Present

Butcher Joseph Hayes Outsourced Information Technology Support Services

MAI won a competitively bid project to provide **Outsourced Information Technology Support Services (including help desk and desktop support)** to Butcher Joseph Hayes (BJH) an investment firm, which recently relocated within Saint Louis, MO and would need IT services to service the move and after. Butcher Joseph Hayes specializes in employee buyouts, valuation advisory, recapitalization, sale/acquisition, strategic advice, feasibility assessment, and debt & equity sourcing. They provide these services to the following industries: agriculture and farming, construction, warehouse, facilities services, financial services, food and beverage, government services, independent dealership distribution, industrial, marine, mass communication, mining Services, manufacturing, energy, tires and automotive, and value-added distribution.



MAI's initial assessment was to compile an **inventory of all information technology related assets**, assess system architecture and current processes to understand BJH's current IT environment. Currently MAI is providing the following IT Support Services to BJH:

Desktop Applications Support - Perform basic support functions including installing PCs, laptops, PDAs, printers, peripherals, and office automation software; diagnosing and correcting desktop application problems, configuring laptops and desktops for standard applications and identifying and correcting end user hardware problems and troubleshooting.

Server and Virtual Server Administration Services - Manage computer systems and networks to include complex application, database, messaging, web and other servers and associated hardware, software, communications, operating systems necessary for the quality, security, performance, availability, recoverability, and reliability of the system. Virtual Servers, Virtual Desktops, LAN, WAN, Enterprise Network Appliances, Virtual Environment Implementation and Support (VMWare, XenApps, MS Hypervisor/Azure) and Server Farm Management.

Network Administration Services - Scope of activity includes all network equipment including switches, firewalls, routers and other security devices located in their office facilities. Primary installation and maintenance of printers, network copiers/scanners, etc. Primary maintenance including regular analysis, routine configuration changes, and installation of patches and upgrades.

Security - Maintenance of virus detection programs on servers, email and computers and laptops. MAI also performs regular security audits.

Strategic Planning - Engineering, planning and design services for system enhancements, including installations and upgrades of new or existing systems.

MAI is providing a full service solution to BJH in support of the project that includes network design, development, WAN circuits, project management, **help desk services** and 24x7 monitoring and maintenance.

Contract Value: \$ 500,000

Start date: March 1, 2013

End Date: Present

ALS Statewide Education Communications Network Project

MAI won a large competitively bid project to provide a **statewide Distance Education Communications Network (including help desk support)** to the State of Arizona, called the Arizona Learning System (ALS).

ALS is an alliance of Arizona's urban and rural community colleges, whose purpose is to provide learner-centered educational opportunities presented by the unique benefits technology affords the learning process. There are three primary phases of the ALS institution. First is the **expansion and upgrade of telecommunications infrastructure** to connect more than 155 learning sites throughout the state. The second phase is a **redesign of part of the higher education delivery network** to meet the developing and evolving needs of Arizona's residents for user-convenient access to an increased array of programs and continuing education. The final stage is the **development, application, and assessment of new and powerful technology-assisted learning strategies.**



ALS selected MAI to support this eight-year, multi-million dollar project, which will equitably interconnect Arizona’s community colleges, universities, K-12 schools and other educational providers and consumers. ALS, a partnership of the ten Arizona community college districts, brings the convenience of distance learning, with the uniform quality of an Arizona community college to customers across the State.

The **network MAI is implementing supports voice, data and video applications** with the primary application to provide distance-learning capabilities to each site. MAI supports application development and support for the schools. All ALS sites use Cisco Routers and Firewalls for security, as well as, Tandberg’s (Cisco) Educator 6000 series videoconferencing systems with triple 36” monitors and the Natural Presenter Package. Individual classrooms were professionally installed by MAI’s qualified engineers. Our engineers design and install videoconferencing solutions specific to room dimensions and acoustics. To bring a strong videoconferencing experience to students, many accessories were added, such as Tandberg’s (Cisco) AudioScience microphones for superior audio quality, document cameras, locator mats, and VCRs and DVD players.

All ALS equipment provides flexibility. TANDBERG (Cisco) is constantly issuing new software revisions that support new functionality. With this in mind, the TANDBERG (Cisco) 6000 systems can be upgraded easily. The Accord Bridge and Cisco Lightstream have a modular design that can support new sites and new functionality.

MAI is providing a full service network solution to ALS in support of this project that includes, **24x7 Help Desk Support, network design, development, WAN circuits, project management and 24x7 remote monitoring and maintenance.** MAI also provides training and the network provides Internet service to all sites. MAI is fully managing this network, including all CPE equipment and ATM circuits on a 24x7 basis out of our Network Operations Center in Dulles, VA.

On top of the above project specific services MAI provides the following value added services in support of ALS:

- **Project Management**
- **Customer Support**
- **24x7 Remote Help Desk Support**
- **Network and Hardware Troubleshooting**
- **Proactive Network Management and Monitoring**
- **Application Development and Support (Including Banner)**

- WAN Circuit ownership and Provisioning (CLEC)
- Network base lining
- Problem Notification and Resolution
- Management control
- Reporting and Carrier Escalation
- Equipment Configuration & Maintenance

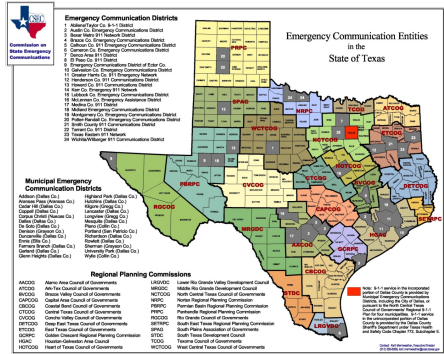
Contract Value: \$3,000,000

Start date: 2000 End Date: 2008

State of Texas Public Safety Support Services

The Commission on State Emergency Communications (CSEC) contracted MAI to support a **statewide network in support of over (350) 9-1-1 Public Safety Answering Points (PSAP) across the State of Texas.** Beginning with the initial deployment in 2000, MAI has maintained a relationship with each and every Regional Planning Commission (RPC) or Council of Government (COG) servicing equipment and providing **on-site 24x7 support.**

MAI supports an enterprise level (5000+ network devices, 500+ servers) converged network that offers services for Telecommunication, Radio Wireless, Unified Communication and E911 centers using multi-protocol and multi-vendor network solutions. This is a service contract that still remains in place. The infrastructure has evolved, but given proper planning and maintenance has been trouble-free.



Most Texas 9-1-1 PSAPs currently are focusing on upgrading and administering the 9-1-1 systems. Major focus consists of the Next Generation 911 (NG911), which will utilize the Internet and fiber optics to enable 911 callers to provide more than just voice data to PSAPs. NG911 will allow for text messages, videos, telematics, and pictures to be delivered to dispatchers who in turn can share that information with units in the field. These 911 upgrades will pose funding challenges that require the district to direct its resources completely on the Traditional 911 System.

MAI CUSTOMERS	PROJECT MANAGEMENT	ENGINEERING & INSTALLATION	MAINTENANCE & SUPPORT
Texas 9-1-1 Council of Governments			
Alamo Area Council of Governments	✓	✓	✓
Ark-Tex Council of Governments	✓	✓	✓
Brazos Valley Council of Governments	✓	✓	✓
Capital Area Council of Governments	✓	✓	✓
Central Texas Council of Governments	✓	✓	✓
City of Laredo/STDC	✓	✓	✓
Coastal Bend Council of Governments	✓	✓	✓
Concho Valley Council of Governments	✓	✓	✓
Deep East Texas Council of Governments	✓	✓	✓
East Texas Council of Governments	✓	✓	✓
Golden Crescent Regional Planning Commission	✓	✓	✓
Heart of Texas Council of Governments	✓	✓	✓
Houston-Galveston Area Council	✓	✓	✓
Lower Rio Grande Valley Development Council	✓	✓	✓
Middle Rio Grande Development Council	✓	✓	✓
Nortex Regional Planning Commission	✓	✓	✓
North Central Texas Council of Governments	✓	✓	✓
Panhandle Regional Planning Commission	✓	✓	✓
Permian Basin Regional Planning Commission	✓	✓	✓
Rio Grande Council of Governments	✓	✓	✓
South East Texas Regional Planning Commission	✓	✓	✓
South Plains Association of Governments	✓	✓	✓
Texoma Council of Governments	✓	✓	✓
West Central Texas Council of Governments	✓	✓	✓

Contract Value: \$1,000,000

Start date: 2000 End Date: Present

TWCC LAN/WAN Upgrade Project

Management Applications, Inc. was selected to bring the **Texas Worker’s Compensation Commission (TWCC)** into the digital age by **upgrading its local and wide area networks (LAN/WANs)**.

MAI assessed TWCC’s current networking environment, provided **design, implementation, installation and maintenance support**. MAI’s design worked to upgrade data communication technology for inter/intra agency communications, upgrade the agency data communication network to support implementation of client/server systems development, LAN-based e-mail, systems network management, and data warehousing. This project also included the **upgrade of the Central Office and installation of LANs in 27 remote locations**. This award was based on best value and innovation. The work performed encompassed **full life-cycle engineering** functions including network design, installation and maintenance.



Key Attributes:

- LAN/WAN Design**
- Voice/Video/Data**
- Voice over Frame Configuration**

**Complete Lifecycle Design
Dedicated Project Management**

Contract Value: \$3,000,000

Start date: 1998 End Date: 2004

DIR Engineering Support Project

The **Texas Department of Information Resources (DIR)** contracted MAI to provide **Technical and Engineering Support (including help desk support)** through their Network Operations Center (NOC) in Austin, Texas. This project required project management, network engineering and maintenance support. The award was based on MAI's ability to cater to DIR's requirements. The Telecommunications division is a service bureau providing state agencies with two primary telecommunications services: The Capitol Complex Telephone System (CCTS), a centralized telephone service for all agencies in the Capitol Complex area; and TEX-AN 2000, the statewide telecommunications network. All state agencies, with the exception of state universities and legislative bodies, are required to use "intercity telecommunication services" provided by TEX-AN. Additionally, the division is permitted to serve political subdivisions, which include cities, counties, municipalities, and K-12 schools.

MAI provided tier-three (help desk support) and Network Engineering support via two full-time engineers:

Resolution of high-level customer access issues to include routing and access problems within the network.

Provisioning and support of wide-area network access for state customers to include ISDN, T1, T3 and OC-3 topologies. Provisioning and support of metropolitan-area network access for state customers in the Capitol Complex area to include Ethernet, Fast Ethernet, and Gigabit Ethernet.

Monitoring and configuration of EIGRP and BGP routing policies for the routed data network.

Monitoring of network resources using HP OpenView and Cisco Works.

Assists in **developing network strategic technology plans** and assists with the implementation of new technology.

Facilitates the generation and analysis of various network reports using HP OpenView, Cisco Works, NetFlow, etc.; initiates corrective action as appropriate.

Analyzes customer services and support, business processes and operations; makes recommendations for improvements.

Works with local, state and federal departments in matters concerning the coordination of project implementations.

Dallas County School's Managed, Professional and Enterprise Solution Services

In June of 2015, MAI was awarded a long-term contract by the Dallas County Schools (DCS) as part of a multi-award contract to provide **Managed Technology, Professional Services and Enterprise Solutions**. DCS is a county school district providing services to independent school districts (Technology, Transportation and Psychology Services) throughout the State of Texas. The district consists of a team of more than **2,000 professionals** providing services for more than **425,000 students** within Dallas County and exponentially more statewide.



DCS is an alliance of 14 independent school districts, all of which obtain Information Technology services through this contract. The following school districts make up DCS:

- Aledo ISD
- Brock ISD
- Carrollton/Farmers Branch ISD
- Dallas ISD
- Duncanville ISD
- Grand Prairie ISD
- Highland Park ISD
- Irving ISD
- Italy ISD
- Lake Worth ISD
- Maypearl ISD
- Mesquite ISD
- Richardson ISD
- White Settlement ISD

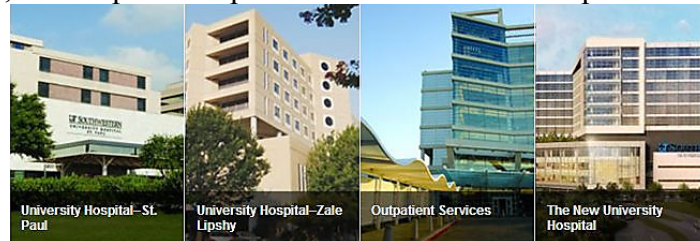
MAI is providing materials and managed services in the areas of: Server and Desktop Virtualization; Enterprise Storage; Enterprise Backup Solutions; Network Infrastructure and Monitoring; Server, Desktop and Operating System Support; and Staff Augmentation, Managed Services and Support Services.

Start Date: 2015 End Date: Present

University of Texas Southwestern Medical Center Network Engineers Project

The University of Texas Southwestern Medical Center ranks among the world's leading

academic medical centers, patient-care providers, and research institutions. Part of The University of Texas System, UT Southwestern includes **three degree-granting institutions:** UT Southwestern Medical School, UT Southwestern Graduate School of Biomedical Sciences, and UT Southwestern School of Health Professions. The schools and UT Southwestern faculty train more than **4,700 medical, graduate, and health professions students, residents, and postdoctoral fellows** each year. UT Southwestern is home to more than 13,800 employees who support the nearly 92,000 hospitalized patients and 2.1 million outpatient visits per year.



MAI's Network Engineers will be providing services in support of the following task items:

- Manages the network security posture as it relates to numerous network projects.
- Performs evaluations, recommends, and implements solutions from a network security-wired and wireless perspective.
- Provides security technical expertise and assistance for design integration support applications, networks, communications, and operational system with members from other division within Information.
- Resources Manages the network security posture as it relates to numerous network projects Designs and plans network communication system.
- Provides specifications and detailed schematics for network architecture.
- Provides specific, detailed information for hardware and software selection, implementation techniques, and tools for the most efficient solution to meet business needs, including present and future capacity planning.
- Coordinates testing of network design.
- Maintains a database of registered servers for firewall rules to ensure accurate information pertaining to data access and security protection implementation.
- Performs firewall administration on an as needed basis based on requests and required maintenance.
- Maintain technical expertise in all areas of network and computer hardware, software interconnection, and interfaces such as routers, firewalls, switches, gateways, and related functions.
- Evaluates and reports on new communication technologies to enhance the capabilities of the network.
- Mentors and supports the work activities of lower level network engineers.

Start Date: 2015 End Date: Present

MAI Corporate Qualification Matrix

Through each project, MAI has gained valuable technical knowledge and forged excellent client/contractor relationships through the support of our clients' mission goals. The following table is a sample of the customers that MAI has supported or is in the process of supporting.

MAI CUSTOMERS	NETWORK MANAGEMENT	PROJECT MANAGEMENT	ENGINEERING & INSTALLATION	MAINTENANCE & SUPPORT
State Agencies				
Wyoming Equality Network	✓	✓	✓	✓
Texas General Services Commission	✓	✓	✓	✓
Texas Workers' Compensation Commission	✓	✓	✓	✓
Teachers Retirement System of Texas	✓			✓
Texas Dept. of Mental Health and Mental Retardation	✓			✓
Texas Dept. of Transportations	✓		✓	✓
University of Houston	✓		✓	✓
Texas Department of Banking	✓	✓	✓	✓
Texas Department of Public Safety	✓	✓	✓	
Texas Commission on State Emergency Communications	✓	✓		
Federal Agencies				
Naval Engineering and Logistics Office	✓		✓	✓
Office of Naval Research	✓		✓	✓
Social Security Administration	✓		✓	✓
U.S. House of Representatives	✓	✓	✓	✓
U.S. Department of Treasury	✓	✓	✓	✓
Defense Information Systems Agency	✓			
U.S. Army Medical Command - Ft. Sam Houston	✓			✓
Commercial				
Value City Department Stores	✓	✓	✓	✓
INTELSAT	✓		✓	✓
Big A Drug Stores	✓	✓	✓	✓
Marriott International	✓	✓	✓	✓
Orbital Sciences	✓		✓	✓
3M	✓	✓	✓	✓
ALCOA	✓		✓	✓
Visual Networks, Inc.		✓	✓	✓
WinStar	✓		✓	✓
Wheat First Union	✓		✓	✓

As an industry leader in IT support services, communications and LAN/WAN service provider arenas, MAI has supported many State and Federal agencies over the last 21 years to include the Texas Workers' Compensation Commission, Commission on State Emergency Communications, most of the Texas 911 COGs, Texas Division of Information Resources (DIR), State of Wyoming - Wyoming Equality Network, both the Wyoming and Texas Department of Transportation and Wyoming Network for Telehealth (WyNETTE) to name a few.

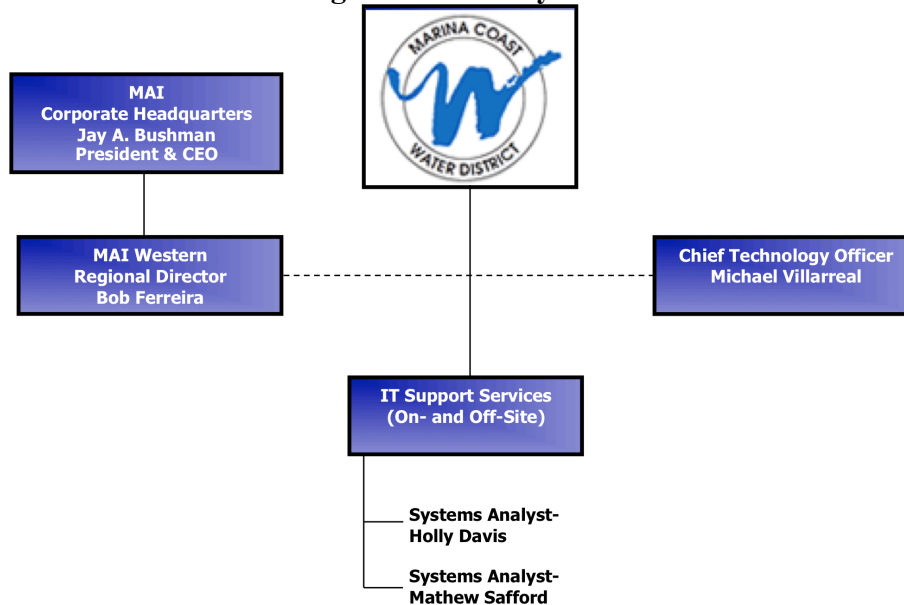
MAI provides full Infrastructure life-cycle engineering solutions and support to Fortune 500 (3M, Drug Emporium and Value City Department Stores, etc.) accounts since 1994, as well, bringing 20 years of IP networking and infrastructure experience to the table. MAI has provided services meeting many of the customer's categories:

- **Managed IT Services**
- **Outsourced IT Department**
- **On- and Off-Site Support**
- **Help Desk Services**
- **Application Management**
- **Desktop Administration**
- **Server Administration**
- **Network Administration**
- **Virtualization and Cloud Support**
- **Strategic and Capacity Planning**
- **Project Management**
- **IT Project Implementations**
- **Hardware and Software Deployment**
- **Upgrades and Patch Management**
- **Change and Configuration Management**
- **Personnel and Resource Management**
- **IT Best Practice Implementation**
- **IT Governance**

Proposed Personnel

MAI's personnel are some of the best in the industry and are more than capable of supporting the District's contract. Following MAI has provided two resume options for the District's reference. Each proposed personnel is local to Monterey and is ready and committed to supporting a contract with the District.

Organizational Chart: MAI's Management and Key Personnel



Systems Analyst

Holly Davis, MCTS, MCP, MCSE, AS/400

QUALIFICATIONS SUMMARY

Solutions oriented, IT professional with **23 years of extensive training and experience developing, implementing and supporting IT systems.** Able to **improve system efficiency, stability and employee productivity.** **Technical and business analysis backgrounds,** able to **define objectives, determine project scopes and manage resources and projects.** Effective at bridging the communication gap between technical staff, management and end users. Expertise includes: Software Design and Implementation/Integration, Business Analysis and Requirements Gathering, Advanced Network Consulting and Support, Process and Performance Improvement, Project Scope and Management and Social Media Marketing.

PROFESSIONAL EXPERIENCE

IT Support and Social Media Marketing

Ongoing

Corporate and private user, IT consulting for clients in agriculture, law, medical, dental, consulting and various other industries. **Planned system upgrades, resolved business issues,** and advised on various industry situations. **Created network infrastructure for multi-location firms and remote access** over VPN and public internet circuits. **Installed and configured SonicWall, Cisco, Netgear and Linksys routers, ASN's and access points.** **Installed, upgraded and maintained Windows servers (AS/400NT, 2003, 2008, 2012) using Hyper-V and VMWare** for network services, accounting and other client requirements. Provided **desktop support** for Windows NT, XP, 2000, 7, 8 and 10 and Mac OS X and Parallels. **Consulted on software use** including Microsoft Office, Microsoft Exchange, QuickBooks and Famous. Also for various clients created and maintained: Newsletters, Social Media Setups, Letterhead

Business Forms, Business Cards, Constant Contact/E-blasts Website Development using Wordpress, Joomla, Squarespace and HTML.

Senior Systems Engineer (Consultant)

October 2011 to Present

Senior Systems Engineer

October 2010 to October 2011

Mainline Information Services, Inc., Monterey and Fresno, CA

October 2010 to Present

Corporate IT consulting for clients in agriculture, law, medical, dental, consulting and various other industries. **Planned system upgrades, resolved business issues** and advised on various industry situations. **Created network infrastructure for multi-location firms** and installed cooler and shipper systems for remote access. Installed shipper and cooler networks over VPN, Internet and T1 circuits. **Installed and configured SonicWall, Cisco, Netgear and Linksys routers, ASN's and access points.** **Installed, upgraded and maintained Windows servers (AS/400NT, 2003, 2008, 2012) using Hyper-V and VMWare** for network services, accounting and other client requirements. **Consulted on software use including Microsoft Office, Microsoft Exchange, QuickBooks and Famous.**

IT Manager/Marketing Specialist

L+G, LLP Attorneys at Law, Salinas, CA

October 2013 to December 2015

For boutique corporate law firm with **5 locations: Performed all daily IT support for 30 users** with **multiple Windows 2012 servers using Hyper-V** and a Shoretel phone system/server. **Responsible for software and hardware implementation** including Microsoft Office, Office 365/Exchange Email, Adobe Acrobat, Worldox Document Management System, Workshare Document Comparison software and SharePoint. **Configured and maintained Contact Database** for social media and corporate reference. **Remote locations supported via VPN**, Windows 2012 terminal server and attorneys provided with remote access via cell phones, tablets and Windows/Mac systems. Setup paperless scanning and printing services. Responsible for social media implementation via Facebook, LinkedIn, Twitter, Yelp, Constant Contact, Paperless Post and Google+. **Designed two new websites** and created event materials.

Owner

VRT Solutions, Inc., Salinas, CA

1999 to October 2010

Corporate IT consulting for clients in agriculture, law, medical, dental, consulting and various other industries. **Planned system upgrades, resolved business issues**, and advised on various industry situations. **Created procedures to create reports and databases** during E. coli Spinach recall for various AG clients. **Created network infrastructure for multi-location firms** and installed cooler and shipper systems for remote access. Installed shipper and cooler networks over VPN, Internet and T1 circuits. Installed and configured SonicWall, Cisco, Netgear and Linksys routers, ASN's and access points. **Installed, upgraded and maintained Windows servers (Netware, AS/400, NT, 2003, 2008)** for network services, accounting and other client requirements. **Consulted on software use** including Microsoft Office, Microsoft Exchange, QuickBooks and Famous. **Supervised additional IT technicians.** Performed corporate accounting and tax functions for company.

Systems Manager

Mission Packing/Misionero Vegetables/EarthGreens, Salinas, CA

1996 to 1999

In-house staff for a major fresh produce grower and shipper. **Maintained IBM AS/400** for all accounting functions. **Installed first TCP/IP network including NT and Novell servers.** **Designed and implemented wiring and network structure** for new buildings. **Installed first PCs for connection to AS/400 using Client Access.** **Created VPN to coolers** for shipping and inventory systems. **Installed T1 and internet circuits for remote access and multiple locations.** Maintained AT&T Phone system. **Acted as backup accounting technician for payroll, invoicing and accounts payable** during employee absences. **Assisted with software selection** to add Famous as new accounting system. **Transitioned to new system and configured users and file maintenance.**

Programmer Analyst

AG Business Management, Salinas, CA

1993 to 1996

AS/400 programming for AG clients. **Performed system programming and maintenance, year-end updates, and code changes.** Worked with clients to **determine system requirements** and implemented changes. Designed and coded AS400 based Grower/Shipper/Cooler system for AG clients using Powerhouse 4GL. **Implemented PC systems** for connection to AS/400 systems. Wrote system for attendance and billing for Salinas Rotary. **Created all system documentation for accounting and inventory systems as well as network documentation.**

EDUCATION

Bachelor of Science Degree in Agricultural Economics and in Managerial Economics

University of California, Davis

C++, RPG, Advanced RPG and Advanced Cobal Programming

University of California, Davis Extension, Hartnell College

CERTIFICATIONS, TRAINING & MEMBERSHIPS

Microsoft: MCTS, MCP, MCSE, MCP+I Certifications

IBM AS/400 Certification

PowerHouse 4GL Beginning and Advance Programming

SANS Forensic Training

Monterey County Mensa Member: Executive Committee, Newsletter Editor and Scholarship Chair

GIAC Forensic Certification

Systems Analyst

Mathew Safford, CCNA, MCTS, MCSE, A+, Network+, Linux+

QUALIFICATIONS SUMMARY

IT professional with **11 years of experience** supporting enterprise IT environments. Adept at **aligning IT to meet business goals** and strategies. **Knowledgeable of networking protocols** including TCP/IP, subnetting, VLSM, VLANs, routing protocols and network services such as DNS, DHCP and FTP. **Experienced in supporting Microsoft Windows OS** at both the client and server level. **Skilled at troubleshooting end user issues** including software, operating system and hardware problems. Experience **developing documentation** to streamline support activities and track the IT environment. Experience in both **on- and off-site support**.

PROFESSIONAL EXPERIENCE

On-Site Technical Care Analyst

Intuit Inc., Mountain View, CA

February 2016 to Present

Provide in person **support for Mac, Windows, iOS, and Android** endpoints for internal customers at company headquarters, **troubleshooting hardware and software issues**. **Track incidents** in ServiceNow ticketing system and escalate issues to proper teams when necessary. **Perform imaging and configuration of endpoints** for deployment using DeployStudio and Casper for Apple devices and Landesk for Windows PC's. **Schedule endpoint refreshes** with customers.

Systems Administrator

Brocade Communications, San Jose, CA

February 2008 to September 2014

Worked with IT Management and Information Security teams to **design and implement a mobile device strategy** aligned with the strategic goals of the organization. **Performed day-to-day operational and maintenance duties on the organization's enterprise mobility management system:** MobileIron. **Created and maintained internal process documentation** for the administration of mobile policy procedures. Created and maintained all end user mobile device guides. **Provided mobile device support** to local and remote users for iOS, Android, Blackberry, and Windows Phone platforms including setup and troubleshooting of ActiveSync, Wi-Fi connectivity, MobileIron MDM registration, and internal mobile apps. **Provided high-level executive support** to VP's and Executive Administrators with company owned mobile devices. **Created and maintained an inventory** of company owned loaner devices. **Provided endpoint support for Windows, Mac OS X, and Linux based laptop systems both remotely and in person** troubleshooting Active Directory, Outlook connectivity, MS Office, network connectivity, VPN, antivirus remediation, software installation, re-imaging etc. **Documented all issues** in a ticketing system, escalating and routing them as needed in order to maintain company SLAs.

Notable Achievements: Assisted the company in the **planning, testing, and deployment of a BYOD program** to allow for the connection of personally owned endpoints to company resources. Helped the company transition from a corporate owned single platform mobile device model to one that provides a company stipend for personally owned devices, and support for multiple device platforms; iOS, Android, Blackberry, and Windows Phone. **Helped research, test and implement MobileIron** as the enterprise mobility management solution for the organizations **3000+ mobile devices**. Helped implement screen lock, encryption, remote wipe, and other security policies as required by the business to protect company data. **Established a loaner device library** to document and track all company owned loaner equipment.

Systems Administrator

Fuscoe Engineering, Inc., Irvine, CA

January 2006 to January 2008

Setup new workstations and provided desktop support for Windows and Mac systems. **Designed and implemented network infrastructure** at new offices. **Setup and installed routers, switches, domain**

controllers, file and print servers. Implemented naming conventions and asset tagging system for endpoints. Provided onsite and remote technical support for both corporate and branch offices throughout 6 locations in the Southern California region. Performed daily system administration duties including maintaining and updating servers, desktop computers, maintaining backups, maintaining network infrastructure, troubleshoot desktop user issues, create network software deployments. Maintained a log of all IT related tasks and resolutions for the various teams on site. **Managed copiers and plotters** at corporate headquarters and design studio, ordered supplies and created service calls when needed, entered meter readings, performed troubleshooting for user printing issues, quality, jamming, installed and replaced field replaceable units as needed. **Created and maintained detailed network topology documentation for corporate headquarter and branch offices.**

Network Field Technician

Pro Data Imaging, Irvine, CA

January 2005 to January 2006

Performed network installations for Toshiba and Sharp multi-function printers, scanners, and faxes. **Performed troubleshooting for network connectivity issues** for printing, scanning and faxing both on site and over the phone. **Performed service calls and installed field replaceable units** including system boards, processors, memory, hard drives, fax modules. **Installed system software and firmware updates. Trained customers** on copying, printing, network scanning, faxing, toner install, and troubleshooting.

EDUCATION

Bachelor of Science in Business Administration

Menlo College, Atherton, CA 2014 to Present

Mission College, Santa Clara, CA September 2015

CERTIFICATIONS

Cisco: CCNA

Microsoft: MCTS, Exchange 2007; MCSE 2003

CompTIA: A+, Network+, Linux+

D. References

Reference 1: Northwest Pump, Outsourced IT Support Services	
Reference Contact and Title:	Scott Tracy, Vice President
Type of Firm:	Commercial
Address:	Glendale, California
Email Address:	scotttracynwp@gmail.com
Telephone:	(818) 207.5409
Dates of Service:	2009-Present
Scope of Service:	Desktop administration and application support, server and virtual server administration, IT security services, network administration and monitoring and strategic planning. Help desk services provided on a 24/7 basis in both a remote and onsite capacity.
Customer Size:	17 Locations nationwide.

Reference 2: Butcher Joseph Hayes, Outsourced IT Support Services	
Reference Contact and Title:	Joseph Strycharz, Managing Partner
Type of Firm:	Commercial
Address:	Saint Louis, Missouri
Email Address:	strycharz.joe@gmail.com
Telephone:	(703) 625.7237
Dates of Service:	2013-Present
Scope of Service:	Desktop and applications support, server and virtual server administration, network administration, IT security and strategic/capacity planning. 24/7 Help desk support provided in a remote and onsite capacity.
Customer Size:	25 Employees

Reference 3: City of Brookhaven, GA, Outsourced IT Department	
Reference Contact and Title:	Robert Mullis, IT Director
Type of Firm:	Government
Address:	Brookhaven, Georgia
Email Address:	rmullisit@gmail.com
Telephone:	(404) 637.0640
Dates of Service:	December 2014-Present
Scope of Service:	Comprehensive IT Department services including the administration of the server, network and desktop environments. Additional services include 24/7 help desk support, GIS support for multiple departments, Police Department IT support, vendor relations, IP camera support and the implementation of best practices, protocols and procedures.
Customer Size:	160 City Employees

Reference 4: Wyoming Education Network, State of Wyoming	
Reference Contact and Title:	John Wood, CIO at Central Wyoming College
Type of Firm:	Government, Education
Address:	State of Wyoming
Email Address:	jwood@cw.edu
Telephone:	(307) 855.2162
Dates of Service:	2006-2013
Scope of Service:	Project management support. Design, implementation and management of a statewide, high-speed telecommunications network. Network monitoring and management and help desk services via an NOC.
Customer Size:	48 School districts (Including grade schools, middle schools, high schools, junior/community colleges and universities), which in total numbers adds up to nearly 600 circuits and thousands of devices.

Reference 5: Los Angeles Unified School District, Network Configuration Engineers	
Reference Contact and Title:	Nikolas Guiler, Deputy Director of Design and QA
Type of Firm:	Government, Education
Address:	Los Angeles, CA
Email Address:	Nikolas.guiler@lausd.net
Telephone:	(213) 241.1145
Dates of Service:	2014-Present
Scope of Service:	Full-site network configuration and migration. Connect and configure routers, switches, WLAN controllers, access points, bridges and bandwidth optimization devices. Analyze technical problems and recommend solutions.
Customer Size:	2nd Largest school district in the nation. They enroll more than 640,000 students in kindergarten through 12th grade, at over 900 city schools, and 187 public charter schools.

E. Cost

In the following matrix MAI has provided the fully burdened hourly rates of our proposed resume options.

Fully Burdened Hourly Rates	
Title	Hourly Rate
Systems Analyst: Holly Davis	\$80
Systems Analyst: Mathew Safford	\$70

F. Draft Agreement

MAI has read the District's Draft Agreement and has taken no exceptions with the terms and conditions as they are described.

SWaM Certification

COMMONWEALTH OF VIRGINIA



DEPARTMENT OF MINORITY BUSINESS ENTERPRISE

1111 E. MAIN STREET, SUITE 300
RICHMOND, VA 23219

Management Applications, Inc.

Is a certified Small, Women-Owned, and Minority-Owned Business (SWaM)
meeting all the eligibility requirements set forth under the Code of Virginia Section 2.2-1401.

Certification Number: **710276**

Certification Approved Date: **10-31-2014**

Valid Through: **10-31-2017**

Accordingly Certified

Virginia Department of Small Business
& Supplier Diversity

Department of Minority Business Enterprise



United Bank Letter of Good Standing



April 24, 2015

To Whom It May Concern:

The purpose of this letter is to state that Management Applications, Inc., a longstanding customer of more than 10 years, is a valued customer of United Bank. We are happy to inform you that we deem both MAI's loan account and their operating account to be in good standing.

MAI and its owners have always acted responsibly with their depository and lending relationship. At a personal level, we feel that the owners of MAI are of good moral character and would therefore, comply dutifully with any financial obligation incurred with your institution. As such, United Bank anticipates our continued support of MAI in its growth and acquisition strategies.

If you have any questions, feel free to contact me at Allen.schirmer@bankwithunited.com

Sincerely yours,

A handwritten signature in black ink that reads 'E. Allen Schirmer'.

E. Allen Schirmer, SVP

Virginia Certificate of Good Standing

Commonwealth OF Virginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That MANAGEMENT APPLICATIONS, Inc. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is January 23, 2009;

That the period of its duration is perpetual; and

That the corporation is in existence and in good standing in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:
November 14, 2013*

Joel H. Peck
Joel H. Peck, Clerk of the Commission

CISECOM
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