TECHNOLOGY RESOURCES

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TO: THE HONORABLE OZAUKEE COUNTY BOARD OF SUPERVISORS

As stated in our mission statement, the Technology Resources Department provides information systems, resources, and supports Ozaukee County departments, County residents, local municipalities, and businesses in their technological needs.

This report will highlight some of the major accomplishments in 2009. The year began with the activation of a new in house developed POWTS (Private Onsite Waste Treatment System) application. Staff from Technology Resources developed the programs for use by Land and Water Department and included a web portal to allow pumping services to submit transactions electronically. In mid year, Transcendent Solutions, LLC approached the county requesting to market the application as a module that could be linked to their land records system. An agreement between the County and Transcendent Solutions was reached and marketing is proceeding. Funds received from the sale will be returned to Land and Water Management Department to offset the development costs.

A land records system, which will replace the in house developed application for assessment and taxation processing, was purchased from Transcendent Solutions, LLC in June. This application was developed originally for Columbia County and is now being marketed through Transcendent Solutions. Conversion of the current data tables and testing of the assessment portion of the application has been performed. The new land records system went operational with the start of the 2010 assessment process. The taxation module will be converted during the first and second quarters of 2010. Customization is required to allow the system to accept multiple (three) installment payments at the local level of which we have three of our municipalities performing. I anticipate this migration will take place by September or earlier.

Another major change in operation was the expansion of technology at both golf courses. Network servers were installed at each site with wireless connectivity back to the Justice Center. This allowed administrative staff at the Administration Center to directly access information at both golf courses. Previously dial up connections were utilized which limited the amount and timeliness of information retrieved. New software was purchased to handle reservations, golfers and revenue in a more efficient manner.

In January the bandwidth for Internet at both Justice Center and Administration Center was expanded. Previously each site only had a 1.5MB access capacity for traffic to utilize. Those paths were enhanced to 10MB capacity. This increase aided several departments in receiving

better performance on their state applications which had shifted to web based connectivity. We have installed load balancing software so that traffic can be routed to either building to alleviate bottle necks during peak operation times.

Plans for a change in the law enforcement applications currently operating at the Sheriff's Department began. The major applications that run the CAD (Computer Aided Dispatch) system, criminal records and jail management needed to be enhanced or replaced. As a result, a search began to find possible replacements. Law enforcement from the local municipalities was invited to join in the use of a common application for all information processing. Considerable time was spent looking at what each agency was utilizing. Vendors were solicited as possible solutions. Vendors met with the county staff to learn what the objectives were in acquiring new software. The vendors made presentations to representatives from the local municipalities and county staff. The field of candidates was narrowed and additional presentations were provided. The group agreed on the application package from ProPhoenix from Moorestown New Jersey. A memorandum of agreement was signed by all law enforcement agencies to move forward with the acquisition of the application and conversion of information from all of the agencies. Work will begin in the first quarter of 2010.

A major platform change for Technology Resources was the approval to move from a single server storage environment to a virtual server platform with a San (Storage Area Network) linked plus redundancy for disaster recovery. This means that multiple applications will share a virtual server. All of the storage will utilize a common chassis with one being located at Administration Center and another being located at Justice Center with duplicate information. Each site will be replicated at the other. With the replication of the information and the use of virtual servers we will able to have a start toward a complete disaster recovery plan.

Several physical relocations were handled in 2009 including the departure of Community Care staff from the Historic Building basement offices along with about 11 staff members from Human Services. The space freed up with the Community Care departure is now partially used by staff working on the NOAA project for Planning Parks Department. The offices in Human Services freed by county staff relocations has been leased to staff from Lutheran Social Services who work on the Birth to Three program with county staff. Telephone and computing equipment were retrieved and reallocated as necessary. In the fourth quarter, Ozaukee County Shared Taxi Service, one of the county's WAN users, relocated from the Town of Port Washington to East Main Street in the City of Port Washington. Technology Resources assisted in the relocation to assure minimum interruption of service to constituents using the service.

Training classes were conducted in the first and second quarter of 2009 covering changes to Microsoft Office products going from version 2003 to version 2007. Highlights were focused on for Word and Excel which are the most common used packages in the user departments. In addition, classroom instruction was provided for Intermediate/Advanced Word 2007 and Intermediate Excel 2007.

In April, John Mesich, Communications Services Manager, was hired to lead the Radio Services activities in the department. He joined Radio Technician Shawn Anderson in handling both the daily operations of the radio services and recommendations on new projects related to radio and wireless law enforcement communications. The following is his report of some of the radio services activities in 2009.

Radio Services sought to phase out existing infrastructure on the aging EDACS data system, thereby transitioning all mobile data users within the county to the OpenSky data platform. After this was complete in mid-2009, the old EDACS data system was retired and taken off the air. Radio Services then began steps to comingle the OpenSky network and the County intranet, with the goal of making law enforcement and County databases available to data users in the squad cars, thereby increasing their efficiency in accessing real-time reports and data. Radio Services provided most equipment and installation, programming, and setup in order to facilitate the successful transition of the final mobile users to the OpenSky data platform.

Radio Services directed an upgrade of the Mutual Aid radio system, which is used for interoperability purposes within and around Ozaukee County. The Wisconsin Office of Justice Assistance (OJA) provided grant funding to assist with this project, which sought to deploy new base stations and voting receivers to all County-owned transmitter sites. The ITAC Overlay project, as it was called, was completed successfully, and will now provide mobile and portable radio coverage throughout Ozaukee County for backup and Mutual Aid purposes. The Mutual Aid (ITAC) system is programmed to frequencies available to all emergency response personnel nationwide who utilize 800MHz radios.

The digital audio logging recorder system for the Ozaukee Countywide Trunked Radio System (OZTRS) experienced issues with removable storage media in early 2009. In response to this issue, Radio Services worked with engineers and local vendors to plan an upgrade utilizing Network Attached Storage (NAS) server technology. The upgrade was successful, and the new NAS system now provides a high level of redundancy on both hard disk media as well as in the power systems that did not exist prior to the upgrade.

Radio Services worked to improve two-way radio coverage in several areas within the County in 2009, including the testing and installation of a radio frequency amplification system at Harrington Beach State Park. Radio Services also worked with local and national vendors throughout the year to near the end of the re-banding mandate, facilitating the replacement, upgrade, and reprogramming of many radios used throughout all municipalities in Ozaukee County.

At the Ozaukee County Justice Center in Port Washington, Radio Services operates a 300' radio tower that is required to be lighted per Federal Aviation Administration (FAA) mandates. The tower had been equipped with a dual intensity white strobe system since it was built; however this system had become faulty and no longer provided a bright enough strobe output to maintain compliance with FAA regulations. The system was also outdated and replacement parts were no longer available from the manufacturer. For these reasons, Radio Services proactively researched a new tower lighting system for the Justice Center radio tower. A system compliant with FAA Type 1-A tower obstruction lighting standards was purchased and installed under the direction of Radio Services. In addition to a successful installation of the new system, Radio Services also ensured that spare parts were obtained up-front to facilitate future servicing. The system now displays an FAA approved single white strobe during daylight hours, and red side markers with a single red flashing beacon during nighttime hours.

The Milwaukee Urban Area Strategic Initiative (UASI) group awarded several grants to Ozaukee County in 2009. One of the grants provided a portable video surveillance trailer to each of the five counties in and around Milwaukee. Radio Services played an integral part in programming and deploying the portable surveillance unit once it was obtained from the vendor. Radio Services provided the Sheriff's Department and the Detective Bureau with training and customization of the unit in order to facilitate the needs of the department, including remote access and recording. In addition, Radio Services assisted the Sheriff's Department with the purchase of a mobile Incident Command Vehicle (ICV), which will be utilized as a base of operations for any incidents that occur within the County. Radio Services provided the Sheriff's Department with a detailed plan for the procurement and installation of equipment to support interoperable radio communications, IP and cellular telephony, and remote wireless network access to law enforcement databases and systems. Radio Services also engineered redundant backup and off-grid power systems for the vehicle, in addition to IP/video surveillance and wireless information sharing systems for interoperability purposes for emergency responders.

Radio Services provided engineering and installation services to the Ozaukee County Sheriff's Department on several major projects during 2009. Radio Services completed the installation of new dispatch consoles in the 911 Dispatch Center, as well as the implementation and installation of new emergency power circuitry to support the Dispatch Center. Radio Services also customized a solution for the Sheriff's Department Prisoner Transport division, whereby color video cameras and monitors were installed into Prisoner Transport vans in order to facilitate

observation of the prisoners during transports. Radio Services also designed, engineered, and installed a custom covert emergency lighting, siren, and covert two-way radio package solution for the Ozaukee County Sheriff's Drug Unit.

Ozaukee County Radio Services also planned, deployed, and implemented an 802.16 wireless 4.9GHz link to the Village of Saukville in mid-2009. The link was set up to replace an existing leased T1 line that connected the Village of Saukville to the Ozaukee County Justice Center for network, email, and law enforcement database access. Radio Services worked to ensure that the new wireless link was installed, tested, and operational prior to the automatic renewal of the T1 lease. The OZWAN link installation and testing was successful, and the implementation of this link has allowed Ozaukee County to save yet another recurring expense on leased data lines used within the County. It is Radio Services' plan to implement several more of these OZWAN wireless links in 2010.

These are just a few of the many projects and activities Technology Resources staff have addressed in 2009 and will be continuing in 2010. I appreciate the cooperation and support of the County Board of Supervisors, County Administrator, County Departments and local municipalities we serve.

Respectfully submitted,

John J. Buhler
Technology Resources Director