

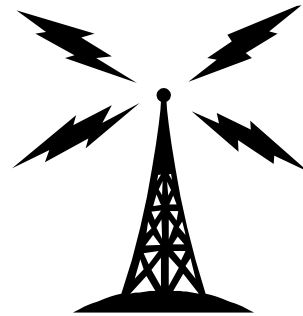
Telecommunications Department
Paul Kindell, Director

Mission: Telecommunications is responsible for the design, installation, and maintenance of the Warren County 911 Center, communications systems, and data systems utilized by Public Safety agencies in Warren County. The department is also responsible for providing telephone service to government offices and their affiliates. Additionally, Telecommunications supports the Mobile Data Systems and CAD “Computer Aided Dispatch” systems housed in the Telecommunications Network Operations Center (NOC) and wide area data network along with auxiliary subsystems comprised of video, alarm, paging, telemetry, point-to-point microwave, buried cable, fiber optic networks, routers, switches and more.

Number of Full-Time Employees: 15

Budget:

Employee Costs:	\$ 808,997.32
Operating Costs:	\$1,269,212.21
Capital Costs:	\$ 655,882.69
Total Costs:	\$2,734,092.22



INTRODUCTION

- Warren County Telecommunications department is located in the lower level of 500 Justice Drive.
- The department is administrated by a Director, Deputy Director, and staff members comprising 4 divisions, Administrative, Telephone, Radio, and Data Systems.

ADMINISTRATIVE DIVISION

The Administrative division

- Coordinates and prepares all communications, correspondence, purchase orders, transfers, payroll, and resolutions with the Commissioners Office, OMB and the Auditors Office.
- Admin tracks all expenditures, receipts, and billing to the departments and agencies for services provided.

TELEPHONE SYSTEMS DIVISION

The Telephone division began with the first centralized system in 1985. The division manages approximately

- 5000 telephones,
- 312 lines
- 30,000 telephone numbers.
- We interact with at least 6 local telephone companies. The Telephone division also provides all cellular services including spare and replacement phones, batteries, and chargers to county offices. The division provides alpha pagers and spares to the on call staff and assists the fire departments in managing theirs.
- Telephone division wires all telephone and data drops (Cat5) in all County buildings. We manage all moves and changes during construction, and installing temporary service to those displaced by construction.

911 System: The Telephone division manages the Counties **911 System**. They oversee installation, maintenance, and upgrades are provided to all public safety answering points including

- County Communications Center,
- Franklin Police Dispatch,
- Lebanon Police and Fire Dispatch by Telecommunications.

Installation of all new county telephone extensions are recorded in the 911 database so the extension's location is immediately reported to the 911 operator.

Inmate Calling System: The Telephone division manages the Inmate Calling System.

- We install, maintain, and collect revenue from the inmate telephone systems in the Jail and Juvenile detention facility.

- We receive numerous requests per week for recordings of inmate telephone calls and have assisted the Prosecutor's office in winning convictions in several cases.
- We are expanding the system in 2007 to give Detectives, the Drug Task Force, and Prosecutors the edge they need in closing and successfully prosecuting cases.

The Telephone division is a full service Telephone, Cellular and Pager provider. We:

- Develop custom solutions for all of our customers, and no two customers are alike!
- We use our Voice Mail, Fax Lines, HDSL digital data circuits, Automated Attendant, Automatic Call Distribution, and Interactive Informational Recordings to solve our customer's needs.
- Telephone provides a local calling number for all areas of the county for all police and fire so they may work together while keeping their costs to a minimum.

Some of the other services Telephone provides:

- Engraving of radios, pagers, badges, and accountability tags for Police and Fire, emergency
- "Hot Box" cellular, Emergency Phone banks in the EOC and Sheriffs Office,
- Payphones,
- Scheduled forwarding to open and close departments automatically,
- Detailed billing for cost control,
- Video arraignment ISDN systems for the Jail and local Courts, and
- Cable TV systems.



RADIO SYSTEMS DIVISION

The Radio Division began in 1989 with the construction of the **800 MHz Trunked Radio System**.

- The system began with two tower sites and 5 radio channels.
- The system has grown to five tower sites and 15 radio channels.
- The division manages approximately 3000 mobile, portable, and control station radios for approximately 60 different departments and Agencies County wide.
- Radio maintains 6 radio consoles in the county 911 center and is adding 4 additional in 2007.
- Radio supports Lebanon, Franklin, & Springboro's dispatch centers and
- Radio is their first call with all of their radio issues around the clock.
- The division provides all radio equipment for all Police and Fire Departments County wide. The Radio Division assists the agencies in selecting the right equipment for the job and then designs a custom **radio configuration** for each agency based on their need.
- The Radio Division has designed, installed, and maintains a **county wide microwave backbone** in support of water department telemetry, local computer network for Police and Fire, backup telephone communications systems, and 802.11 hot spots for MDC's.
- The division provides **around the clock support** for the counties 800 radio and UHF paging systems. The county does not have any other support mechanism for the radio system. Radio goes on alert prior to predicted weather events and responds during the event when the radio system is affected. Radio responds to disaster scenes and provides support as in the tornado touchdown in Carlisle in 2006.
- The Radio Division manages all aspects of the radio systems, from construction of the towers, maintenance of the towers, FCC compliance, FAA compliance, generator maintenance, generator fuel, system equipment installation, system equipment repair, backup batteries, charging systems, and alarm systems,
- The division coordinates all radio repairs of all mobile and portable radio equipment and issues loaner equipment when necessary to keep public safety units on the air. Repairs are made in house when ever possible. Every effort is made to return the unit to service as soon as possible. Spare batteries, parts and accessories are stocked to allow departments to share

in our quantity discounts and maintain a pool of resources in case of disaster. Parts and accessories are billed back to the agencies.

- The Radio Division locates lost or stolen radios by utilizing directional finding equipment. Radio provides log data to determine the last time the radio was on, the last time transmitting and the last channel transmitted on to agencies for their insurance claims as well as vendor quotes for obtaining replacement equipment.

Some of the other services the Radio Division provides are

- managing radio inventory, tracking lost radios,
- setting up temporary communications systems for festivals & special events,
- provide emergency “Hot Box” radios and batteries to fire and disaster scenes,
- program custom toning solutions for Fire Dept pagers,
- design tone activations systems for and assist with tornado siren maintenance and activation,
- coordinate “Knox Box” installations and programming,
- attend state and local interoperability meetings,
- create and enforce radio system guidelines to ensure the efficient use of the system for all agencies,
- attend communications work groups for Police and Fire,
- participate in drills,
- provide radio operator training classes,
- provide Jail communications systems,
- provide Juvenile Detention Center communications systems,
- emergency button systems,
- radio ID tracking,
- radio system bandwidth adjustments during emergencies and high system usage typically during severe weather events,
- coordinate radio systems and talk groups for Drug Task Force, Prosecutors Office, and Tactical Team,

- custom talkgroup planning for local government's Police, Fire, and Public Service Departments,
- personal fitting of public safety microphones and ear pieces,
- custom mobile radio installations in Fire apparatus,
- tracking and mitigating radio interference,
- combining Police and Fire Tactical Channels for more efficient on scene communications,
- coordinate talkgroup and radio ID programming with agencies surrounding Warren County,
- provide and maintain radio equipment for Ohio Department of Natural Resources, Game Warden, & Ohio Department of Water Craft,



DATA SYSTEMS DIVISION

The Data Division began in 2001 with the replacement of the **CMI CAD** system in the County 911 center. This project was designed to proceed in four phases.

1. The first phase was to replace CMI CAD with Motorola Printrak CAD.
2. The second phase was to install the Fire and Police Records Management systems.
3. The third phase was integrating the existing Mobile Data Terminals with CAD,
4. Fourth, install Police and Fire Field Based Reporting Systems.

The division started from scratch inside one of our telephone switch rooms. Now known as the NOC, the **Network Operations Center** holds all of the servers that make up the Public Safety Network.

- Already on its second layout, the NOC continues to struggle with power, space, and air conditioning issues.
- The division has expanded several times and now occupies two of Telecommunication's largest rooms.

The Data Division has been nominated for numerous awards in the mobile data field.

- The Data Division provides customized "Turn Key" Mobile Data Terminals for all agencies in the County. From start to finish Data, with input from the agency, specifies the computer and mount for the vehicle. Data then obtains a quote and assist in ordering of the equipment. Once the equipment comes in, Data verifies the complete order has arrived, loads all software onto the computer, and customizes it for the individual agency. Once the configuration is complete, Data works with the agency to schedule the installation of the terminal. The Data Division minimizes agency interaction with vendors saving the agency time and money.

The Data Division attends many meetings including the

- Police Communications Workgroup, Fire Communications Workgroup,
- Fire Chiefs Meetings,
- Police Chief Meetings,
- Advisory Board Meetings, as well as
- One on one meetings as often as possible with the Chiefs of the Departments we serve.

The division is working on an **off site recovery system** for servers and records storage. This multi year project will someday allow us to have a hot stand by remote data center. This gives our customers a Disaster Recovery System for their records getting them back on in minutes rather than days.

The Data Division maintains a web based ticket system to allow departments to create **work orders** and receive email confirmation that their ticket has been logged into the system. The agency gets email updates as the work order is processed.

The division created and answers an email trouble reporting system know as “DPR” or **Dispatch Problem Report**. Data answers DPR’s around the clock for all technical issues in the Communications Center, agency gateway problems, and Mobile Data Terminal problems in the field, etc.

The Data Division is currently working on a **cost containment program** that will allow agencies to only pick the features of the Public Safety Network that they want for each of their employees. This is expected to save on license, maintenance, and hardware costs.

Once a year the Data Division organizes a symposium to introduce our agencies to new technology, new features to our existing technology, and generally bring the agencies up to speed with what’s going on with the systems. Initially, only data systems technology was presented, now the symposium has become a show place for all of Telecommunications to show off its technology including the Radio and Telephone Divisions.

Too numerous to go into detail, here are some of the many systems that Data supports: CAD, Dispatcher Workstation Design and Maintenance, Police and Fire Records Management Systems, Police and Fire Field Based Reporting Systems, Web Proxy, 802.11 wireless network for MDC, Open Query Leads

GUIDING FACTORS

Telecommunications is striving to improve the effectiveness, efficiency, and quality of services we provide to our customers. Telecommunications is focusing on the following ideas to ensure our success:

Agency relationships and satisfaction:

Understand agency requirements and raise awareness of technologies available in order to provide products and services that will meet or exceed their expectations and assist in accomplishing their goals.

Providing value to our Agencies:

Continually improve the quality and timeliness of Telecommunication's services while maintaining rates at or lower than traditional service models and consistently out performing vendors.

Focusing on Continuous Improvement:

Telecommunication's planning includes input from County Officials and Department Heads, Warren County Police and Fire Chiefs Associations, Agency management and staff, and similar organizations from across the country.

Addressing the constantly changing telecommunications and information technology environment:

This requires an "enterprise" approach to effectively manage and utilize information resources. Telecommunications must continuously update and improve our plans in order to adapt to the continuing changes in technology and Agency needs.

Achievement through teamwork:

Recognize that Telecommunications success depends on the partnership and collaboration of our four divisions.

Learning and growth:

Develop an efficient, motivated, and educated workforce with knowledge, skills, and ability to meet our current and future challenges.

Effective Cost Control:

Technology continues to evolve rapidly, resulting in continuous improvement in

efficiencies and economics. We seek to improve lifecycle cost estimates, project cost management and accountability, and our Total Cost of Ownership and maximizing our return on investment.

2007 GOALS

Inmate Calling Systems: (The Enforcer)

- Upgrade the Inmate Calling Services to a web-based system that offers real time system administration with easy access to all related features of inmate calls. This system will also allow certain individuals such as Prosecutor's and Sheriff's Office personnel to retrieve records on demand as well as be alerted to calls being made as they are being made.

Automatic Call Distribution Feature on Telephony Switch:

- Configure and implement the ACD feature for several different Warren County Agencies in order to better handle incoming calls. This will also allow agencies to retrieve various statistics and reports on any incoming traffic to a customer service section of their agency.

Call Accounting System:

- Install a new call accounting system that displays detailed records for every call made and received on the county telephone system. To give the availability of more user generated reports, and receive telephony switch formatted call detail records for better service invoicing.

New Phone Systems:

- Install a new telephone system for 911 dispatching center to replace old existing equipment.
- Install telephone system at the new Mason Title office to give them better call management.
- Install Automatic Call Distribution Center for Warren County Child Support Enforcement Agency.

Telephone Switch:

- Expand existing unit 2 telephone switch in order to install more county lines.
- Program and configure new telephone switch to be used at off premise building for installing new phone system and routing of calls.

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Paging Systems: Warren County MRDD: Install new dial-up paging system at the Warren C. Young Center to be used for notifying of emergency situations in the building.

Phase 2 Storage Area Network: Install a redundant 5 terabyte storage network to minimize system downtime and enhance disaster recovery.

Invoicing Software: Set up and implement new invoicing software for

- Cellular Service/Equipment: Paging Service/Equipment:
- Mobile Data Terminals:
- Initialize billing of mobile data terminals for Warren County Fire Agencies
- Telephone Service:
- Radio Equipment:

Phase 2 VMWare Servers: Continue converting physical servers to virtual servers to conserve space, cooling and power. Establish second VMWare farm.

Power Upgrades: Existing power usage is at 100%. Need additional power feed and UPS expansion.

Offsite Storage: Establish off site hot standby data warehouse.

FBR Deployment & Training: Develop Law Field Based Reporting training program and begin training.

MDC Training: Begin Mobile Data Computer classes.

Microwave Upgrades: Replace 800 Radio System microwave links.

Network North Well Field with Water Tanks: Install microwave networks for telemetry, access points, and water department operations.

Reprogram Common Tactical Channels in all Public Safety Radios: Complete initiative to combine Police and Fire Tactical Channels for better interoperability between Public Safety entities.

Reband the Radio System Due to Nextel Interference: Involves moving portions of the 800 Radio System into a new public safety frequency band and replacing and or reflashing every radio on the system.

Fire MDC Deployment: Complete Fire Mobile Data Computer Deployment.

SUMMARY - Telephone Division

Telephone Work Orders	
Trouble	460
Install	148
Moves	203
Changes	319
Inmate Call Searches	181
Disconnects	35

Work orders completed for the installation, operation, configuration, maintenance and repair of all county owned telephone/communications equipment and circuitry.

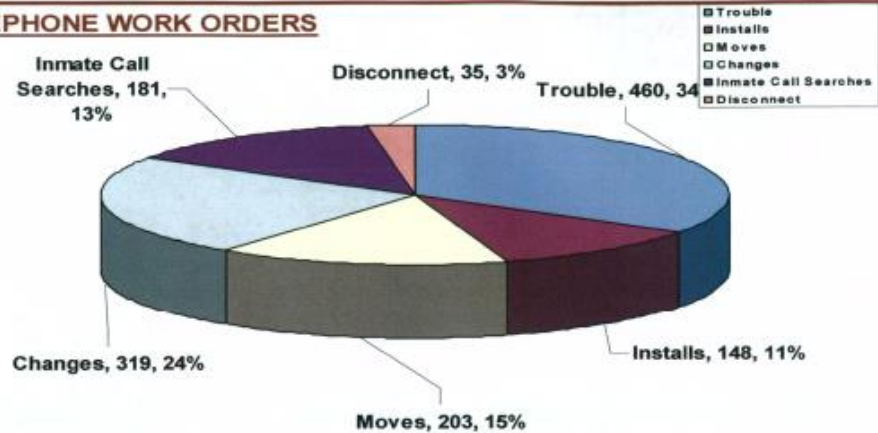
Inmate Call Searches were at an all time high this past year. This function has aided the W.C. Prosecutor's Office and the W.C.S.O. greatly in their Court cases.

System Work Orders	
Voice mail Systems	110
Telephone Systems	17
Auto Answering Systems	7
Phone/Voice Mail Class	12
Data Drops	123
Conference Call Setups	42

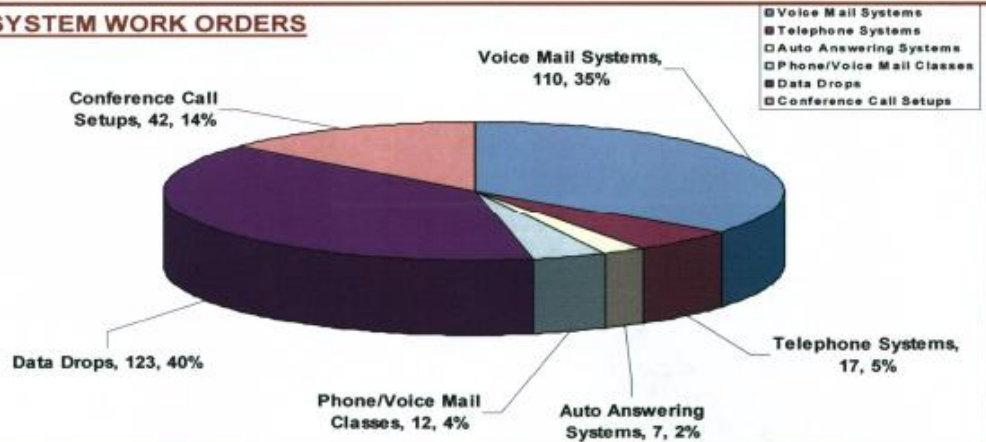
Telecommunications telephony Division offer several different types of call management systems to county agencies.

We provide training classes on all telephony systems to any agencies or departments in need.

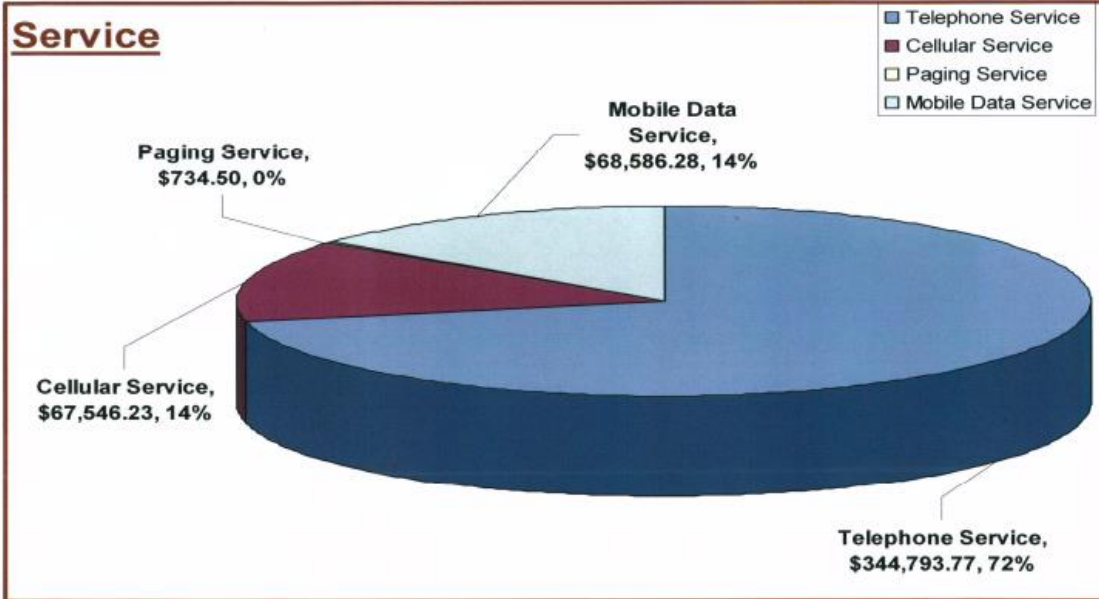
TELEPHONE WORK ORDERS



SYSTEM WORK ORDERS

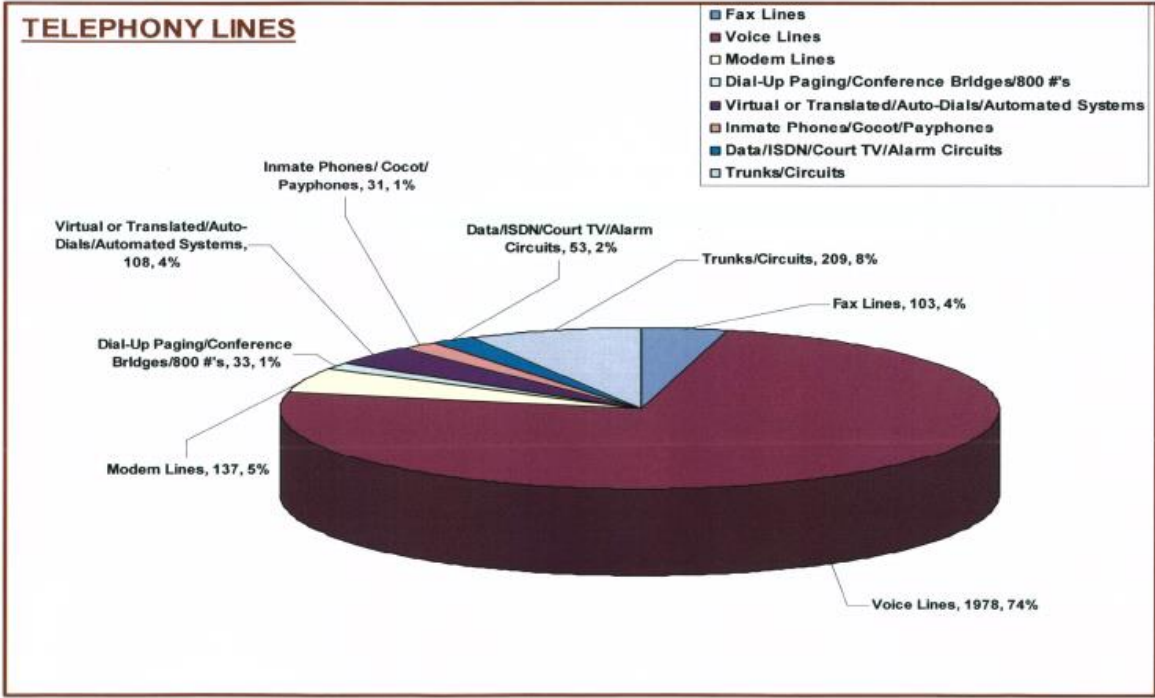


Telephony Division Services	
Telephone Service	\$344,793.77
Cellular Service	\$67,546.23
Paging Service	\$734.50
Mobile Data Service	\$68,586.28



The Telecommunications Telephony division provides voice, voice mail, data, fax, ISDN, HDSL and Internet services to all county agencies. We are responsible for the design, installation, operation and maintenance of all communications systems for County Agencies as well as various State, Federal, and private agencies located within the City of Lebanon limits.

We also provide a very advanced Inmate calling system that has been crucial to court cases for the Warren County Prosecutor's Office, Drug Task Force and the Sheriff's Office.

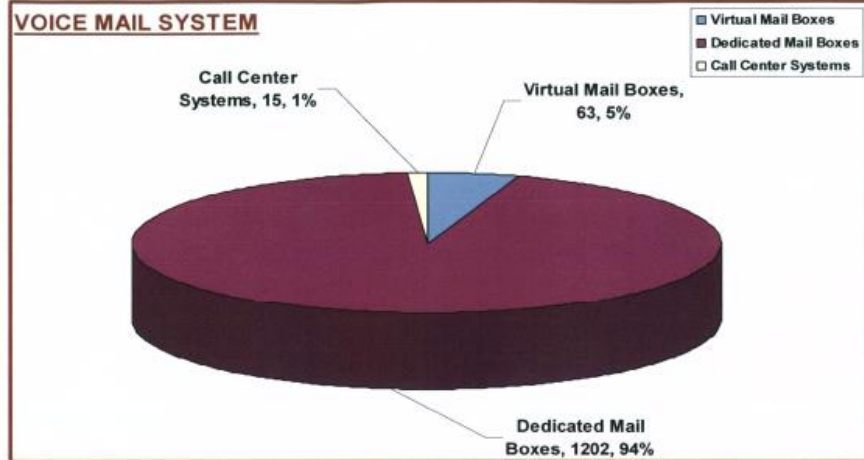


Voice Mail Boxes	
Dedicated Line Boxes	1202
Virtual Mail Boxes	63
Call Center Systems	15

Telecommunications Telephony Division is able to provide voice mail service for Warren County employees for dedicated county lines or virtual boxes for those who share a line with other users.

We are also able to set up complex call centers for county agencies in order to better handle incoming call flow.

In 2006, Telecommunications set up a Public Safety Network Call Center. This enabled County Police and Fire Agencies to receive system outage notices and report any trouble detected to the proper division: CAD/RMS; Data; Radio; Telephone.



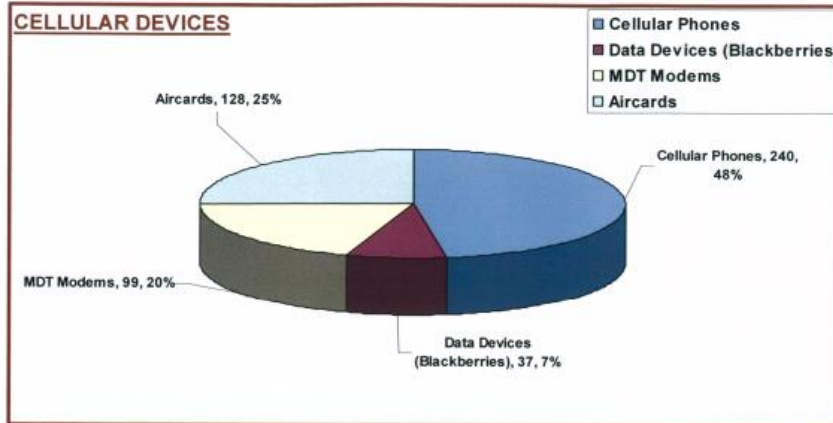
Telecommunications Telephony Division is responsible for the design, configuration, installation and maintenance for various Department Call Centers that enable more efficient call management. The following is a list of current call centers on the Warren County system.

Call Center Systems
Water Department
Mental Health Center
Child Support Enforcement
Adult Probation
Board of Education
Health Department
Convention & Visitor's Center
Metropolitan Housing
County Court – Administration Offices
County Court – Probation Department
County Court – Traffic Violations
W.C.S.O. – Jail
Human Services
USDA Agricultural Center
Telecommunications Department – Public Safety Network

Cellular Devices	
Cellular Phones	240
Data Devices (Blackberries)	37
MDT Modems	99
Aircards	128

The Telecommunications Telephony division handles the ordering, invoicing, maintaining and troubleshooting of cellular and data devices as well as ordering accessories associated with them for all County Agencies.

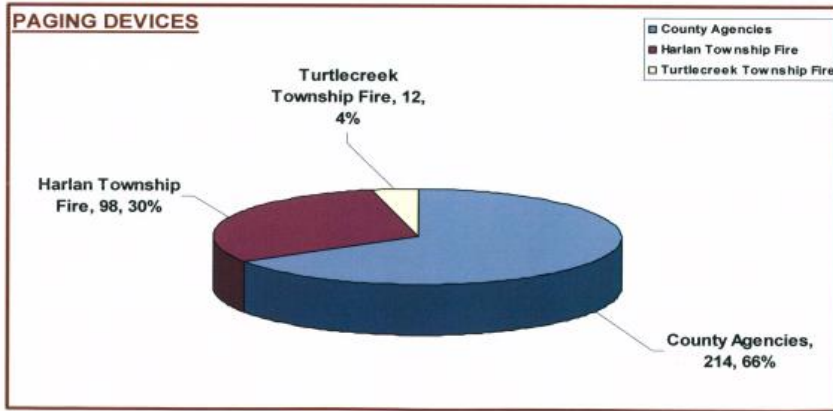
We also assist State Offices, Federal Offices, and Warren County Police and Fire Agencies with their cellular needs and with obtaining competitive pricing on contracts.



Paging Devices	
County Agencies	214
Harlan Township Fire	98
Turtlecreek Township Fire	12

Telecommunications Telephony division is in charge of ordering, activating, programming, and invoicing all pagers for County Agencies. We also assist various County Police and Fire Agencies with ordering, activating and programming of their units.

Warren County Telecommunications has been vitally important in assisting various county agencies, such as police and fire, in negotiating their contracting needs with paging and cellular vendors.



SUMMARY – Radio Division

Radio Work Orders

