

- | Administrative Team
- | Computer-Aided Dispatch / Records Team (CRT)
- | Data Systems Team (DST)
- | Radio Systems Team (RST)
- | Telephone Systems Team (TST)

From the Director

2013 & 2014 proved to be exciting years for Telecom with Warren County's acquisition and installation of a standalone Digital Radio System, replacing a 23-year old analog system. We accomplished cost savings through our partnership with the State of Ohio to share their Radio System Master Computer. This cut approximately \$800,000 off the cost of the radio system and more importantly, will save our County \$250,000 each year thereafter in annual maintenance costs.

Benefits of the new digital system include statewide roaming on certain talkgroups, secure encryption of content-sensitive talkgroups, compatibility with some neighboring counties for the first time, stronger portable radio signal, and more! This was the top-priority project in 2014 with all divisions playing a role.

Also, we completed phase one of our emergency power system upgrades, replacing 12 independent battery backup systems (UPS) with 1 central redundant system achieving much more efficiency and reliability than before.

We also have two generators that protect the public safety systems (9-1-1 Center, phone lines, radio towers, etc). If one generator fails, the other takes over.

As we enter 2015, we look forward to the process of upgrading the CAD/9-1-1 system, and the County's telephone system replacement. All these projects truly improve the quality of life and operation for Warren County residents, employees, and public safety departments!

Paul Kindell, Director
 2006-Present



2014 Financial Overview

Expenditures

Payroll	\$1,039,375
Other	4,893
Benefits/Insurance	370,982
Operating Costs	1,112,128
Capital Costs	<u>831,635</u>
	\$3,359,013

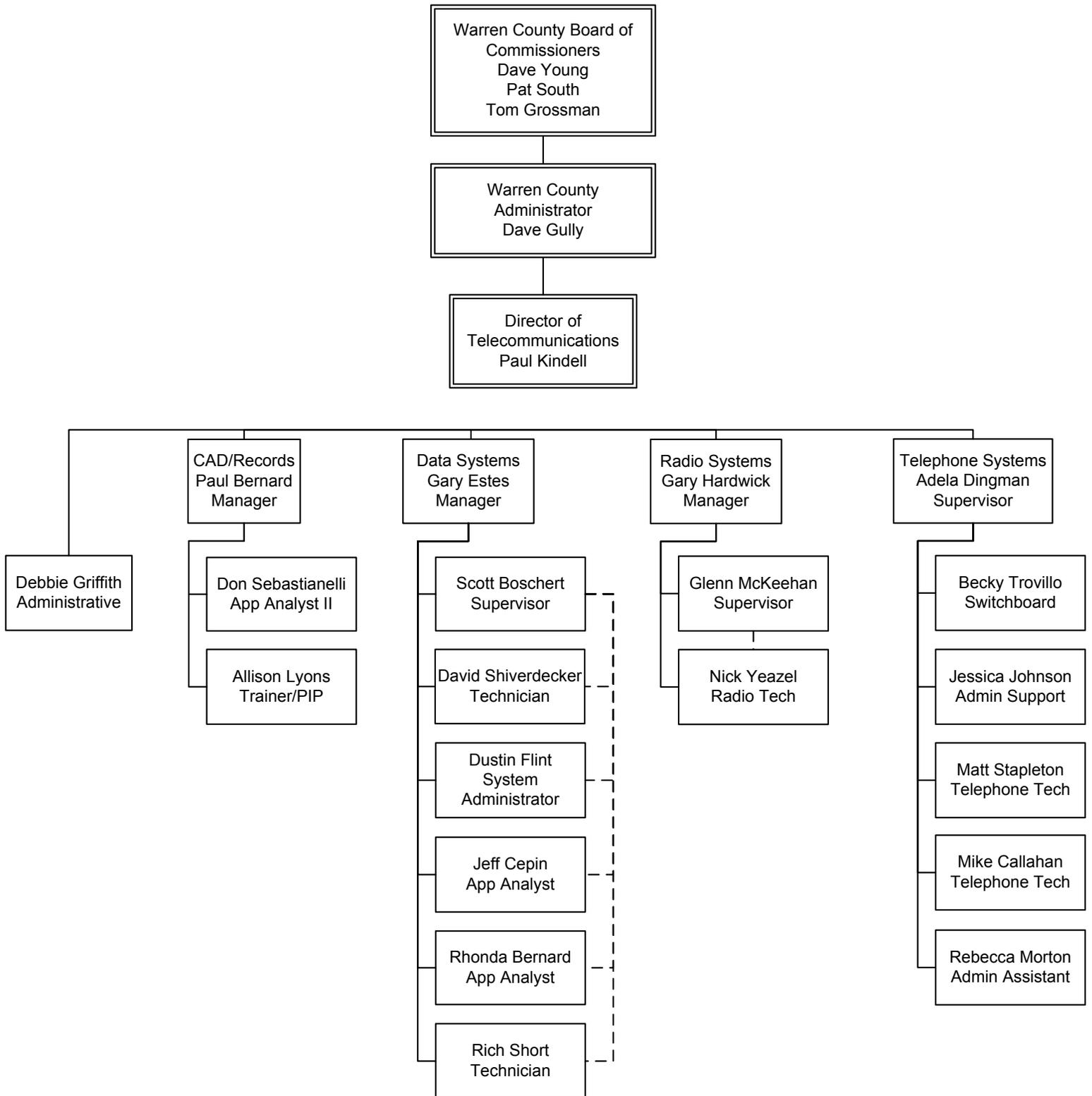
Revenue

Equipment/Service Invoicing	
-Telephone Division	\$15,068
-Data Systems Division	14,280
-Radio Systems Division	78,853
Telephone Services	297,112
Cellular/Pager Services	57,276
Mobile Data Receivables	102,906
IC Solutions Inmate Services	<u>126,164</u>
	\$691,659

Purpose	5-Year Goals
<ul style="list-style-type: none"> ▪ Oversees entire department for efficiency and productivity. Guides the department to make fiscally sound decisions and purchases. ▪ Represents Warren County on a multitude of committees including SOSINK (Southern Ohio / Southern Indiana / Northern Kentucky) Steering Committee, MARCS Steering Committee - Users Group Subcommittee, State of Ohio ESI Net (Next Gen 9-1-1) Technical Subcommittee, Home Land Security Region 6 Interoperability Chairman, State of Ohio Interoperability Executive Committee, MARCS Change Review Committee, Warren County Communications Advisory Board, Warren County Fire and Law Chiefs Associations, Warren County Communications Work Group. ▪ Coordinates and prepares communications, correspondence, purchase orders, transfers, payroll, and resolutions with the Commissioner's Office, OMB and the Auditor's Office. Tracks all expenditures, receipts, and billing to the departments and agencies for services provided. 	<p>Promote an existing manager to Deputy Director to begin the succession planning, simultaneously hiring for that manager's position.</p>

Organizational Chart

(as of 3/31/15)



Computer-Aided Dispatch / Records Team (3 employees)

Division Head: Paul Bernard

Purpose	5-Year Goals
<ul style="list-style-type: none"> ▪ Computer-Aided Dispatch - Troubleshoot, configure, and monitor the software that Emergency Services Dispatchers use to recommend law and fire responses. Work with public safety agencies to set up their response tables and apparatus. ▪ Records Management - retrieves and packages records requests (9-1-1 / CAD) for Emergency Services. Maintains the Fire Records program. Retrieves 9-1-1 phone recordings from AudioLog software and ensures the servers stay up and running. ▪ Reporting - queries and runs monthly reports for phone system, CAD, 9-1-1, and radio available for related agencies and the public. End-of-year totals for 9-1-1 calls, CAD statistics, fire, and law runs by agency or area. Can also pull LRMS-DSS and CAD-DSS (Decision Support Software) reports if requested by a public-safety agency. ▪ Mapping - maintain the master map which Computer-Aided Dispatch software pulls from for Dispatch. Same data is used for map requests and the BINGO map used by public and non-public safety agencies. ▪ Training - develop multi-media training material to educate our users: videos, PowerPoint, flyers, monthly newsletter, manuals, social media outlets. 	<ul style="list-style-type: none"> ▪ Replace current Computer-Aided Dispatch system (Premier CAD) with new CAD program. Submit the Purchase Order in 2015, implement in 2018 which is end of life for current system. ▪ Update Records Management System. ▪ Updating mapping software to support the new CAD and 9-1-1. ▪ Establish a training room to enhance our subscriber teachings.

Training Highlight

The Telecom Trainer was assigned the task of implementing the State of Ohio's MARCS-in-Schools Radio Program into Warren County. This program offers schools a desktop radio equipped with a large orange emergency button; that when pressed alerts the local dispatch center. How this response looked to Warren County was completely up to our law enforcement, fire, and EMS agencies.



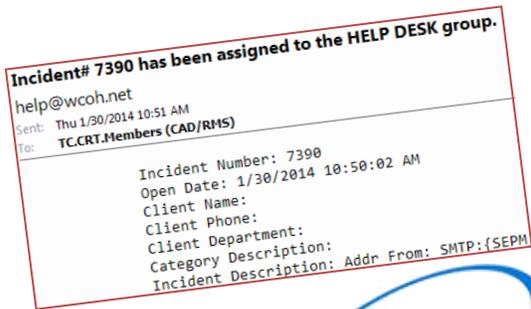
Telecom worked with the Chiefs Associations to design the public safety response, then defined usage parameters and programming capabilities. Due to Telecom's close relations with the MARCS, the State asked us to share our Best Practices so that they could forward them to other communities not sure how to implement this new radio program. Telecom drafted a Memorandum of Understanding to be signed by the School District, Fire Chief, Police Chief, Responsible Communications Center(s), and the Board of County Commissioners. A semi-annual emergency button test schedule was established, school-specific talkgroups were created, CAD Alias scheme were assigned, custom PowerPoints were designed, and careful coordination occurred with the private vendor contracted by the State to program/install the radios. As schools applied for and were approved for the State's program, the Telecom Trainer coordinated a 1-hour training session inviting the school representatives, Chiefs, and responsible Dispatch Center(s) so that details of the radio anatomy and program could be communicated and agreed to. Every public school took advantage of the State's grant, and on August 1st, 2014 Telecom activated 52 school radios on Warren County's Digital Radio System.

In December 2014, the State opened up their radio grant to private schools beginning a second wave of meetings and activations; potentially adding 20 more schools to Warren County's radio system in 2015. Telecom was on the receiving end of this State project, implementing it in the already busy time of launching the highly anticipated digital P25 radio system; but the response from the school and community aware of it shows how important it is for the safety of the thousands of children in our townships, villages, and cities.

Computer-Aided Dispatch / Records Team (3 employees)

Division Head: Paul Bernard

The Proof is in the Numbers



Customer Service

361 requests for **533mb** of files - Radio and Phone Audio Record Requests.
171 Emergency Services Requests. **100** Help Tickets. **902** receiver devices and **371** receiver groups maintained and configured within Hiplink's 2 servers. Hiplink allows incidents from CAD to be automatically sent to subscriber's mobile phones or emails to stay in-the-know even when not on shift or on premise.

Assists users with CAD-DSS and LRMS-DSS questions, problems, and custom reports

Mapping

6 Map Uploads to CAD System. **79** MSAG updates (Master Street Address Guide)
628 Mapping Street Feature changes/additions. **361** Mapping Common Place Feature changes/additions. **28** Mapping City/Fire/Police/EMS Feature changes/additions. Various requests for printed and pdf bingo/street maps to users.

Reporting / Program Maintenance

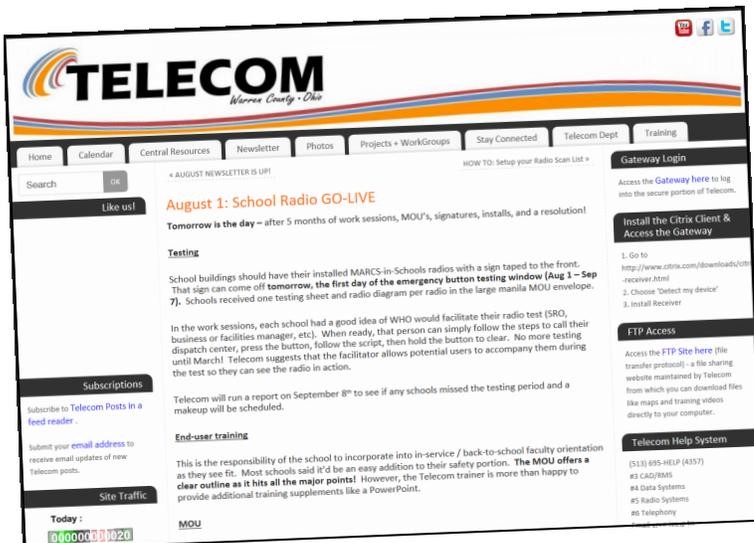
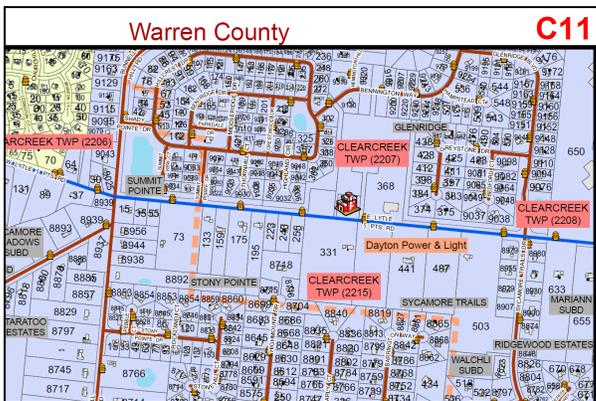
59 9-1-1 Call Problem Reports. Creates monthly and yearly reports for CAD, 9-1-1, Radio System, and Dispatch telephone. Axis Cameras Maintenance and configuration including moving to new server. Maintained, installed, and configured **7** new AudioLog servers and decommissioned **2** servers (captures traffic on dispatch radios and 9-1-1 calls).

Training

3,030 minutes spent training fire, police, probation, courts, schools, public works, etc. **1** Public Works department trained. **16** hours of in-house fire department radio/ePCR training. **1** Public Works department trained.

10 newly hired WCSO Corrections Officers trained on radio. **4** Adult

Probation employees trained on radio. **4** newly hired WCSO Deputies. **12** monthly TelecomMatters newsletters totaling **72** pages of content. **12** Technical Bulletins. **1** Human Services employees on radio. **3** WCSO ride longs. **3** Juvenile Probation Officers on radio. **90** minutes with Kings Island Police. **12** MARCS-in-Schools Radio Training Sessions. **44** web pages maintained. **43** website posts. **53** public schools individually trained on their MARCS-in-Schools emergency radio.



Data Systems Team | Division Head: Gary Estes | 7 employees

Purpose (Warren County Public Safety Network)

Communications Center Technology Environment

- Computer Aided Dispatch (CAD) - Server, interfaces, workstations, required devices and applications, radio system workstations, required devices and applications, 9-1-1 Workstations, required devices and applications
- Genwatch – used for emergency button notification in Franklin and Lebanon Dispatch Centers.

Wants & Warrants

- Open Query Server and Clients allow Dispatchers to access LEADS, NCIC, BMV and other systems as required.
- LEADS Main Terminal – Support for this function for the Communications Center.
- Message Switch – Used by all mobile users in the county. This message switch interfaces CAD, Records, State, Federal databases.

Records Management Systems (RMS)

- Law and Fire/EMS Field Based Reporting
- Law Records Management System (LRMS) - Used by all Agencies except Franklin, Lebanon and Mason. Integrated to CAD and Law Field Based Reporting (LFBR)
- FRMS – Fire/EMS Records Management System - Used by all Agencies, Integrated to CAD and Electronic Patient Care Records (ePCR).

Mobile Environment

- In a secure and managed environment, Agencies have access to all the resources of the Warren County Public Safety Network (WCPSN) via mobile devices - Law Field Based Reporting (LFBR), Electronic Patient Care Records (ePCR), Agencies Mapping, Accident and Scene Diagram and Drawing, Mobile Printing, Drivers License and Document Scanning, In Car Camera Systems, Integration with Regional Licenses Plate Reader systems (LPR), Mobile Messaging – Secure email and chat all Agencies (LAW, FIRE, EMS and Dispatch) to communicate.

Data Center (provides the infrastructure to support the Warren County Public Safety Network.)

- Physical and Virtual Server environments - Reduces cost in physical hardware, operating systems, database platforms and environmental (electric, cooling) – more green.
- Access Infrastructure - Provides WCPSN applications to agencies without expensive site-to-site vpn. Allows users to use almost any client device for access from anywhere (lower cost and risk.)
- Networking - Provides Local Area Networks (LAN), Wide Area Networks (WAN), Cellular and secure connections to mobile environment.
- Standard Operation Environment (SOE) - allows for standardized support, deployment, upgrades and stability lowering downtime and support costs.
- Security - Implementation, upgrade and maintenance of Infection Management Systems, Intrusion Detection Systems, Patch Management Systems, and required logging and analysis systems.
- User Account Management - Creation, deletion, retention, access configuration, password/passphrase/token management for each WCPSN user.
- Messaging and Notification Environment - Allows for emergency and routing notification to users, system-to-system notification, system monitoring.

Driving considerations of DST projects are

(Federal) Criminal Justice Information System (CJIS)

(Federal) Health Insurance Portability and Accountability Act (HIPPA)

(State) Law Enforcement Automated Data Systems (LEADS)

(Local) Commission on Accreditation for Law Enforcement Agencies (CALEA)

5-Year Goals

- New CAD & Records Mgt Support
- New Mobile Data Computers (MDCs)
- Upgrade/maintain systems

The Divisions of Telecommunications

Data Systems Team | Division Head: Gary Estes | 7 employees

	MDC QTY	RSA Token	Law RMS	Law FBR	Fire RMS	ePCR	Remote Access	Wide Area Network Support
Law Enforcement								
CARLISLE Police	6	8	x	x			x	
CLEARCREEK Police	13	21	x	x			x	
FRANKLIN City Police	8	26					x	
HAMILTON Twp Police	11	22	x	x			x	
HARVEYSBURG Police	2	2	x				x	
LEBANON Police	11	21					x	
MAINEVILLE Police	3	5	x	x			x	
MASON Police	20	24					x	
MORROW Police	3	4	x	x			x	
SPRINGBORO Police	16	36	x	x			x	
WAYNESVILLE Police	4	20	x				x	
WCSO	80	121	x	x			x	
Fire								
CARLISLE Fire	0	2			x			
CLEARCREEK Fire	21	55			x	x	x	
DEERFIELD Twp Fire	15	28			x	x	x	
FRANKLIN Twp Fire	5	2			x	x	x	
HAMILTON Twp Fire	10	19			x	x	x	
HARLAN Twp Fire	4	3			x	x	x	
JEMS	9	15			x	x	x	
LEBANON Fire	2	1					x	
MASON Fire	15	18			x	x	x	
MASSIE Twp Fire	2	3			x	x	x	
SALEM Twp Fire	5	7			x	x	x	
TURTLECREEK Twp Fire	4	14			x	x	x	
UNION Twp Fire	5	15			x	x	x	
WAYNE Twp Fire	10	6			x	x	x	
Non-Public Safety								
Clearcreek Admin								x
Clearcreek Road								x
Clearcreek Twp Admin								x
Warren County Departments								
Commissioner's Office							x	
Educational Service Center		x						
Emergency Services		x					x	
Garage								x
Telecom		x					x	
Water/Sewer							x	x

MDC: mobile data computer in vehicles used for one or more of the following: receiving dispatched incidents from Emergency Services, messaging, wants & warrants, mapping, RMS, FBR, ePCR, etc.

RSA Token: a two-factor authentication keychain with a 6-digit code required to access certain files.

Law RMS: Law Records Mgt System - program to retrieve incident details, report to State.

Law FBR: Field-Based Reporting software maintained by Telecom.

Fire RMS: Fire Records Mgt System - program to retrieve fire incident details, report to State.

ePCR: Electronic Patient Care Reporting software for EMS workers.

Remote Access: a money-saving measure allowing communities to access the WCPSN without expensive infrastructure.

Area Network Support: the canopies and data systems that ride on the County's microwave system.

The Divisions of Telecommunications

Radio Systems Team | Division Head: Gary Hardwick 3 employees

Purpose	5-Year Goals
<p><u>Radio Shop</u> We continue our daily focus to provide 'state of the art' communications capabilities for our Public Safety and Public Works radio users. By maintaining a stock of repair parts and batteries, we provide outstanding 'in house' service and support. Our 'always ready' cache of 'Hot box' portable radios provide 'instant' communications support for disaster remediation or special event direction & control.</p> <p><u>Systems Management, Infrastructure</u> Provide 24/7/365 'first call' response to Maintain/ Improve Systems & capabilities at our 10 tower sites & provide dependable Voice communications (Radio, Telephone) & Data backbone & backhaul (IP, ROIP, VOIP & TDM) with maximum reliability & minimum downtime. (communications path availability exceeding 99.999%) Support Emergency power capabilities for all RST crucial systems.</p>	<ul style="list-style-type: none"> ▪ Continue to upgrade Microwave Data distribution network to provide more links & better bandwidth for Water, Wastewater, WCPSN, County Data, Radio & Telephone users that depend on fast, reliable, Ethernet, Internet, Scada, RoIP, VoIP & TDM service connections. ▪ Continue to expand the County wide School Emergency network to saturation. ▪ Maintain & adapt our digital radio systems capabilities to mesh with our Regions developing communications technology. ▪ Stay cognizant of changes in the State & Region, continue to provide support & programming to keep our subscribers radios current with the changing interoperable communications environment.

The Proof is in the Numbers

The Radio System consists of **1** Radio System Network Operations Center (NOC) with layered redundancy and Emergency power. **10** major Tower Sites with equipment, shelters & emergency power. **13** major Microwave links for the Data Backbone. **38** minor Microwave links for Backhaul. **1200** Handheld Portable radios. **700** Mobile radios. **230** Fixed Base stations. **161** Control base stations (including School Emergency net). From the inception of our digital system on **May 13, 2014** through 2014's end, our radio subscription base of **70** agencies made **3,024,491** total calls with **250,174** minutes of conversation (equivalent of continuous talk for **174** days!)

Telephone Systems Team | Division Head: Adela Dingman | 6 employees

Purpose	5-Year Goals
<ul style="list-style-type: none"> ▪ Work Orders - installation, operation, configuration, maintenance and repair of all county-owned telephone / communications equipment and circuitry. ▪ Telephone Service - Voice Mail, Fax Lines, Automated Attendant, Automatic Call Distribution, and interactive informational Recordings. These are billed to the agencies. ▪ Telecommunications Equipment/Services Invoicing and recording of accounts receivables for all related equipment and services billed by Telecom's divisions. ▪ Cellular/Pager Service Receivables - non-commissioner funded, billed directly to the agencies. ▪ IC Solutions Inmate Services - Warren County receives commission revenue based on the amount of calls completed by inmates at the County Jail. We have significantly increased our call volume and revenue without impacting the family/friends of our inmates by switching to IC Solutions in 2004. ▪ Engraving - accountability tags, signs, radios, fire passports and miscellaneous engraving for County and Public Safety Departments. 	<ul style="list-style-type: none"> ▪ Replace 9-1-1 Phone System in 2015 (end of life is Q1 - 2015). ▪ Replace current County phone system with VoIP, including new switchboard. ▪ Convert Warren County's government buildings to new VoIP system as funds allow. ▪ Be IP (internet protocol) and NexGen ready for when state is able to support it in 3-5 years.

The Telephone Division of Telecommunications processes the majority of its work orders as an On-Call basis serving over 100 County, State, Federal and Private Agencies. The Telephone Division wires all telephone and data drops in all County buildings as well a manages all moves, changes and installing of temporary service to those displaced by construction. The division also provides all cellular and alpha paging services to county offices as well as assists Fire and Police Agencies of Warren County in obtaining contracts and maintenance of existing units.

Engraving - The Telephone Division engraves various types of signage and identification badges/plates for County Agencies, Police and Fire Agencies as well as other Political Subdivisions.

AGENCY	ACCOUNTABILITY	SIGNS	RADIOS	PASSPORTS	MISC
COUNTY		44			38
FIRE	1131		23	145	
POLICE	80				
CITY/TWP/VIL	390			112	
1963 TOTAL	1601	44	23	257	38

IC Solutions Inmate Services - Warren County receives commission revenue based on the total amount of calls completed by inmates at the County Jail. We have significantly increased our call volume and revenue without impacting the family and friends of our inmates by switching to IC Solutions in 2004.

January	\$10,443.91	July	\$10,649.73
February	\$10,332.54	August	\$10,105.43
March	\$10,991.67	September	\$9,900.08
April	\$10,225.91	October	\$11,652.17
May	\$11,620.14	November	\$9,721.39
June	\$10,276.84	December	\$10,243.75
TOTAL:	\$126,163.56		

Telecommunications Equipment/Services Invoicing
The Telephone Division is responsible for the invoicing and recording of accounts receivables for all related equipment and services billed by Telecommunications Divisions.

MONTH	TST	DST	RST
January	\$584.92	\$776.00	\$1,169.00
February	\$989.38	\$1,149.00	\$960.00
March	\$262.43	\$685.00	\$125.40
April	\$333.62	\$3,226.00	\$2,111.00
May	\$773.88	\$994.00	\$7,169.12
June	\$1,491.29	\$2,308.00	\$6,876.00
July	\$1,272.37	\$1,405.00	\$24,001.59
August	\$790.55	\$715.00	\$21,665.65
September	\$2,111.13	\$1,083.77	\$1,743.60
October	\$2,723.70	\$1,655.83	\$2,047.10
November	\$1,594.74	\$104.00	\$1,753.00
December	\$2,139.80	\$178.00	\$9,231.60
TOTAL:	\$15,067.81	\$14,279.60	\$78,853.06

Telephone Service - Voice Mail, Fax Lines, Automated Attendant, Automatic Call Distribution, and interactive informational Recordings to solve our customer's needs. These are non-commissioner funded and billed to agencies.

January	\$26,584.34	July	\$24,609.28
February	\$24,824.60	August	\$24,244.40
March	\$25,914.11	September	\$24,404.26
April	\$24,401.49	October	\$24,524.97
May	\$25,280.30	November	\$23,821.76
June	\$24,804.38	December	\$23,698.60
TOTAL:	\$297,112.49		

Telephone Systems Team | Division Head: Adela Dingman | 6 employees

520 Justice Drive Work Completed

We were kept busy at end-of-year with the the building's communications needs. Cable had to be pulled and terminated in the telephony closets in order to supply communication needs for Warren County Court Services, Prosecutors, Board of Elections, Emergency Services and the 9-1-1 Dispatch Center.

250 Pr Cable	Pulled and terminated from 500 Justice to lower level telephony closet at 520 Justice
Cable TV	Pulled cable from 500 Justice to 520 Justice to supply service for 21 TV's (ES/DISP/EOC/PROS)
100 Pr Cable	Pulled and terminated from lower level telephony closet to Dispatch Data Closet
100 Pr Cable	Pulled and terminated from lower level telephony closet to 2nd floor telephony closet
50 Pr Cable	Pulled and terminated from the lower level telephony closet to 3rd floor telephony closet
CAT-6 Drops	Pulled and terminated drops for 19 Network Controlled Clocks in Emergency Serv/Disp/EOC
CAT-6 Drops	Pulled and terminated/Moved 41 lines for Court Services
CAT-6 Drops	Pulled and terminated/Moved 28 lines for Emergency Services and 9-1-1 Dispatch Center
Cable TV	Installed (4) 8-port Cable TV Amplifier's for Emergency Services/Dispatch/EOC/Prosecutor's
CAT-6 Drops	Pulled and terminated 16 drops for phones/time clock/etc for Emergency Services
CAT-6 Drops	Pulled and terminated 13 drops for Prosecutor's Office
CAT-6 Drops	Pulled and terminated 12 drops for wireless access points for 520 Justice Drive
CAT-6 Drops	Pulled and terminated 14 drops/Moved 16 drops for Board of Elections
CAT-6 Drops	Pulled and terminated 5 extra drops/Moved 36 drops for Court Services

Mobile Data Receivables	
QUARTER	AMOUNT
1st Quarter	\$27,126.69
2nd Quarter	\$24,783.71
3rd Quarter	\$25,457.90
4th Quarter	\$25,537.80
TOTAL:	\$102,906.10

Cellular/Pager Service Receivables	
<i>Non-commissioner funded and billed directly to the agencies.</i>	
MONTH	CELLULAR
January	\$5,001.91
February	\$5,151.18
March	\$5,163.78
April	\$5,132.41
May	\$5,107.57
June	\$3,448.06
July	\$4,344.44
August	\$4,574.27
September	\$4,908.41
October	\$5,263.43
November	\$4,896.82
December	\$4,283.89
TOTAL:	\$57,276.17

Cellular/Mobile Data /Pager Service Expenditures		
<i>Although the quantity of wireless devices increased for Commissioner-funded agencies, we once again implemented a new service plan resulting in a savings for the county.</i>		
MONTH	CELLULAR	MOBILE DATA
January	\$20,752.62	\$10,768.51
February	\$21,280.58	\$10,798.37
March	\$21,197.84	\$10,979.33
April	\$21,515.66	\$10,999.02
May	\$21,152.47	\$10,768.32
June	\$16,091.27	\$10,603.81
July	\$18,827.24	\$10,990.54
August	\$19,261.82	\$11,322.04
September	\$20,069.35	\$11,101.83
October	\$20,863.06	\$11,305.18
November	\$20,575.95	\$11,469.77
December	\$18,793.30	\$11,473.11
TOTAL:	\$240,381.16	\$132,579.83

EQUIPMENT	
DEVICE	COUNT
Smartphones	230
Aircards	34
Cell Phones	89
Tablets	51
TOTAL:	404

Work Orders	
<i>installation, operation, configuration, maintenance and repair of county-owned telephone/communications equipment and circuitry.</i>	
Telephone	1023
Cellular	719
E911	38
Data Drops	82
Voice Mail	147
Call Records	32
Mobile Data	110
Total	2151