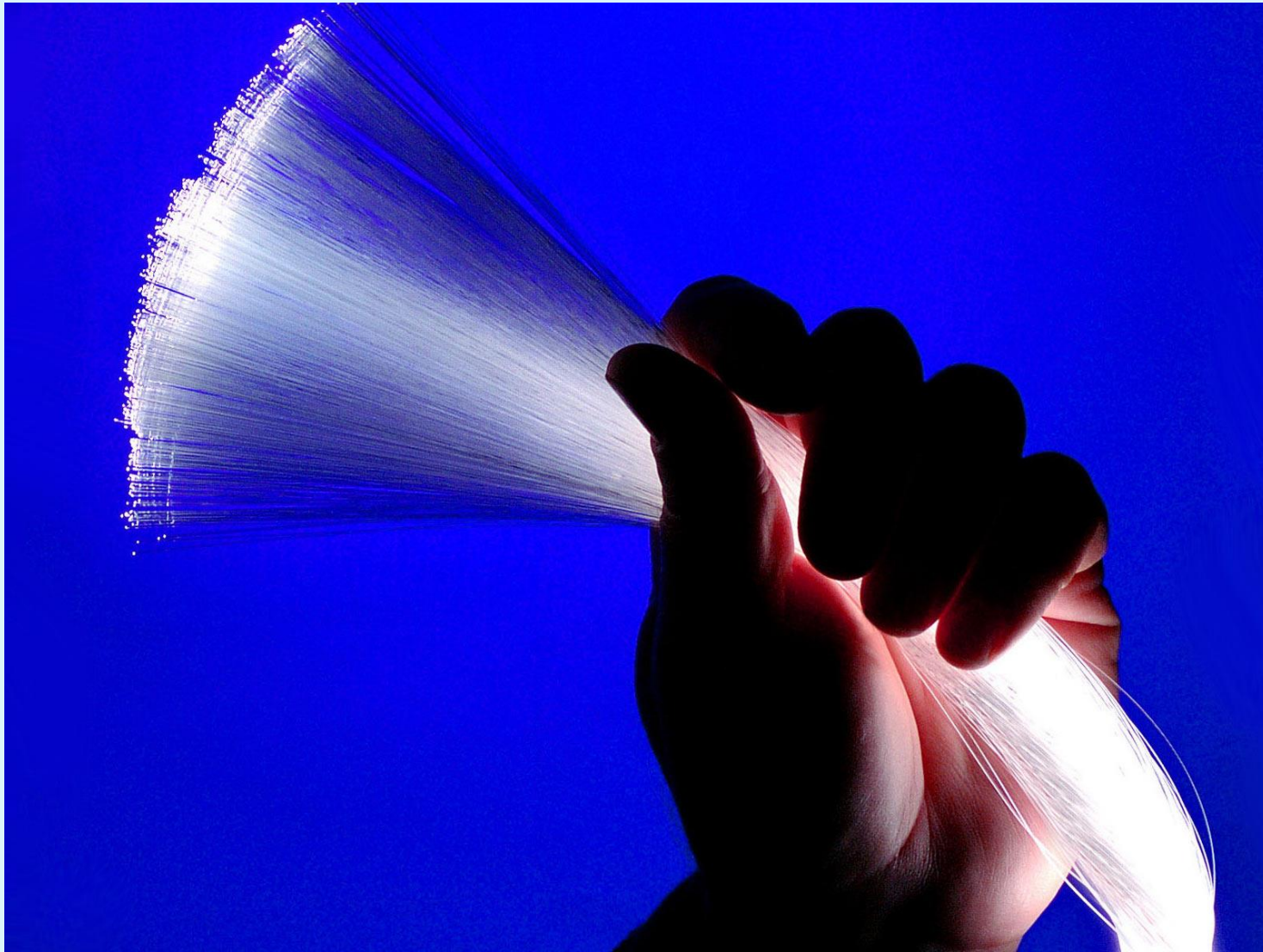


City of Milwaukee
DOA - ITMD
February, 2013

Public Safety Communications Program



ITMD/DPW Telecommunications City-Wide Area Network

| | ITMD | DPW |
|-----------------------------|---|------------------------------|
| City Data Network | Design, installation, records, operation, & maintenance of all hardware | |
| City Phone System | Design, records, & operation | Installation and Maintenance |
| City Cable Plant | Design & Records | Installation and Maintenance |
| City Communications Conduit | Lease Management 2011 - \$725,000 2012- \$787,000 2013 - \$832,000 (est) | Installation and Maintenance |

Capital Program Funding Elements

- Copper cable – small projects for remote facility connections
- Fiber optic cable –
 - extend network: Housing Authority, libraries, water booster stations, remaining City buildings
 - network redundancies: critical facilities
- Phone hardware – upgrade, maintain phone system
- Network hardware – upgrade, maintain core networks

2013-2014 Capital Projects

- Phone System Upgrade – Started 2012
- 27th St construction projects - avoidance and diverse paths
- Zoo Interchange construction avoidance and diverse paths
- Cable restoration from 2012 construction projects (e.g. Capitol Dr and Morgan Ave)

Migration off of Copper Cable

- Copper migration strategy
 - fiber optic cable provides more reliable service, higher bandwidth capacities, and lower overall maintenance costs
 - existing copper cabling can cost-effectively serve the needs of low-bandwidth, remote sites
 - For new systems, use of copper beyond the nearest City network presence will not be allowed, unless exceptional circumstances require it
 - For existing systems, they are to be migrated to fiber or copper to the nearest City network presence as the systems are upgraded or replaced

Cabling Condition

- Copper
 - 498 Active repair tickets
 - 2012 – 79 added, 69 closed
 - 2011 – 112 added, 33 closed
 - 2010 – 137 added, 70 closed
- Fiber
 - 4 fiber damages in 2012
 - 3 fibers with damage in need of repair

The need for diverse facilities - 2012

