

LONG PULLS (AVOID SPLICING)

- PROBLEMS**
- Short pulls are not as cost effective as making single longer cable pulls
- MAXCELL SOLUTION**
- Pull MaxCell through multiple manholes
- GENERAL BENEFITS**
- Reduced overall set-up time as multiple setups are replaced by one
 - Eliminate some cable splices, saving thousands of dollars in labor
 - Faster cable placement
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CELLULAR BACKHAUL

- PROBLEMS**
- Fiber or Ethernet based overrides in occupied ducts
 - Short underground connection to aerial plant
 - Longer connections to underground plant
- MAXCELL SOLUTION**
- Creates pathway(s) for insertion of new cables in already densely occupied smaller conduits
- GENERAL BENEFITS**
- Utilize existing duct structures
 - Avoid new trenching and conduit placement costs
 - Multiple product versions for smaller OD conduits
 - Future proof larger ducts for subsequent installations
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OCCUPIED

- PROBLEMS**
- Existing outer ducts occupied with cables and/or HDPE rigid innerducts
 - Desire not to utilize last empty duct(s) (high congestion)
 - Microducts difficult to blow in occupied ducts with high fill ratio
 - Rigid innerducts may damage existing cables
- MAXCELL SOLUTION**
- Pull MaxCell over existing cables or innerducts (overlay) allowing additional cable(s) to be pulled in dedicated pathway
- GENERAL BENEFITS**
- Avoid new construction of additional outer duct/innerducts
 - Save remaining empty ducts in congested areas for future additions
 - Decrease time required to start up network
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BRIDGES

- PROBLEMS**
- Limited conduit space
 - Limited space to maneuver equipment
 - Exposure to elements causes expansion and contraction of HDPE conduit and microducts
- MAXCELL SOLUTION**
- MaxCell in overlay or new construction
- GENERAL BENEFITS**
- MaxCell optimizes space within existing conduit structure
 - Lower coefficient of expansion eliminates expansion or contraction with temperature changes
 - Provides future pathways

SPACE RECOVERY / RENEWAL

- PROBLEMS**
- Upgrade from copper to fiber can cause network downtime
 - Congested duct typically means copper must be removed prior to placing fiber
 - Single duct in outer duct is wasting space
- MAXCELL SOLUTION**
- Overbuild with MaxCell and place fiber prior to removing copper
 - Pull out copper or duct and pull in MaxCell
- GENERAL BENEFITS**
- Overbuilding allows service to remain intact until network switchover
 - Faster installation with MaxCell
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CURB TO BUILDING

- PROBLEMS**
- Existing PVC or HDPE—short runs <500ft
 - Poor design with numerous sweeps and bends that make placing conduit or microduct difficult
 - Typically congested ducts
- MAXCELL SOLUTION**
- Place MaxCell in empty duct
 - Overlay MaxCell in existing congested duct
- GENERAL BENEFITS**
- Avoid construction
 - Quick deployment
 - No special equipment needed—typical hand pulls
 - Crew of two can do installation
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PREMISE-RISER

- PROBLEMS**
- Congested riser space in buildings or MDUs makes drop cable placement difficult
 - Limited space for new EMT necessitating conduit fill
- MAXCELL SOLUTION**
- Add MaxCell in new construction for pathways
 - Overlay existing cables in riser with MaxCell
- GENERAL BENEFITS**
- Limited disruption in the building
 - Easier installation by hand
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RIGHT-OF-WAY OBSTACLES

- PROBLEMS**
- Railroad crossings require significant permitting cost and time
 - Construction can inhibit traffic and create safety hazards for crew
- MAXCELL SOLUTION**
- Overlay MaxCell and cable in existing conduit
 - “Piggyback” MaxCell and cable to save space
- GENERAL BENEFITS**
- Saves permitting time and cost
 - Minimizes traffic disruption