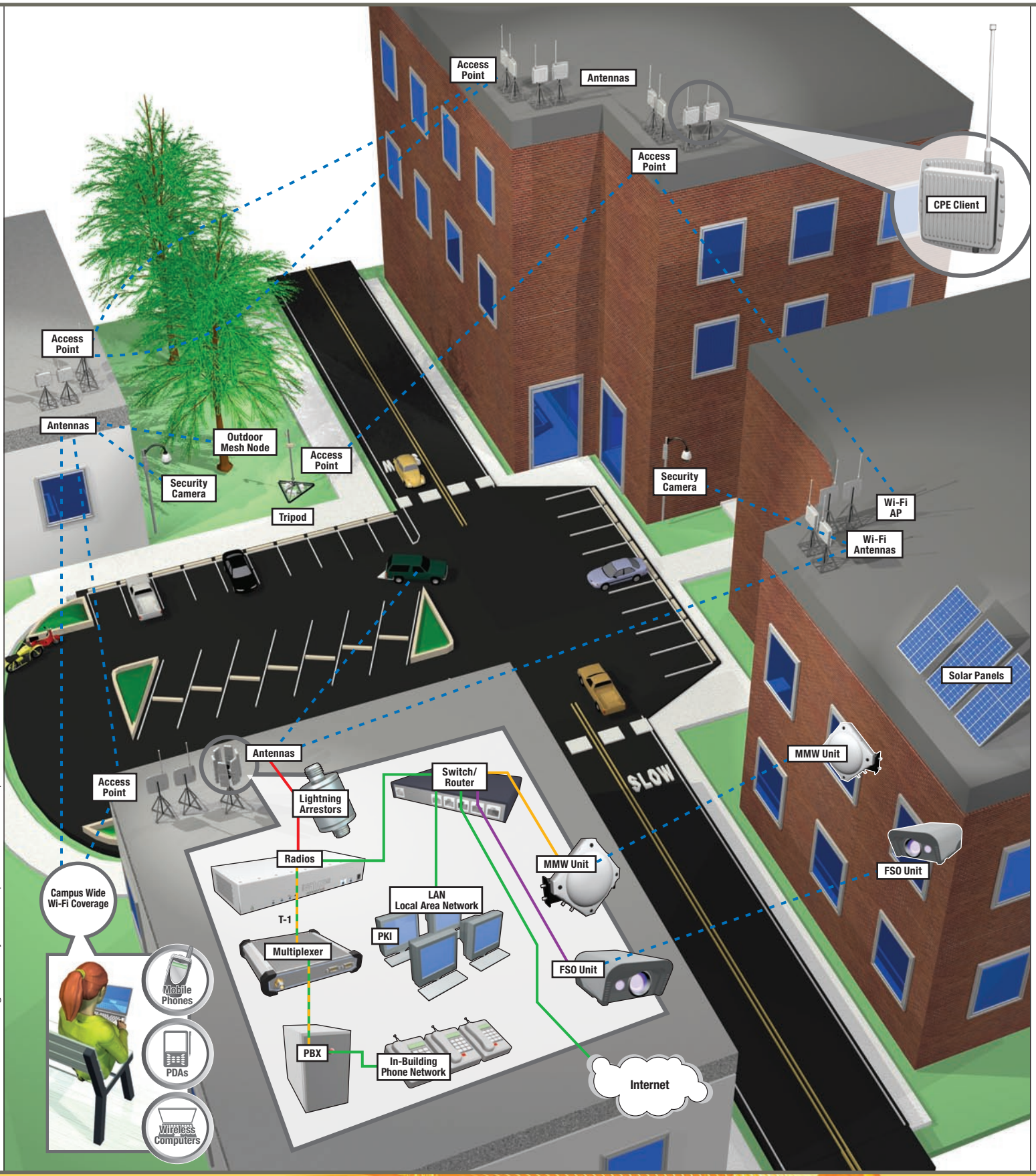
TESSCO

Solution: City & Campus Networks

Application: Campus Coverage—Business, Education, & Healthcare



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SUMMARY

Any organization with multiple buildings in a common geography is considered a campus. Typical examples include education, healthcare, enterprise, and industrial complexes. Campuses have a powerful need to provide an interconnected network of communication equipment that transmits and receives voice, video, and data to all locations in the campus. The increasing availability of advanced applications is driving the constant addition of new technologies to expand the capabilities of existing infrastructure.

FEATURES

- Basic voice and data
- Combination of wired and wireless technologies
- Building-to-building connections
- Network availability in all locations
- Physical diversity
- Several available bandwidths
- Wireless point-to-point, multipoint, mesh topologies
- Internet access in all locations
- Leased line replacement
- Coverage for buildings and areas not easy to cable

BENEFITS

- Improves efficiency of employees by allowing operational service at any location
- Saves cost of purchasing service from carrier
- Reduces cost by running a converged network capable of supporting any type of service or application
- Wireless deployments provide flexibility and fast installation

REAL WORLD EXAMPLES

Situation: A large university installed a network between all buildings on campus except for a few that were currently used as archive buildings with very little student activity. They had recently decided to begin allowing students to use the buildings for studying and research, requiring that the network be extended to all areas within the buildings.

Problem: Many of the buildings that were being added to the network were built in the late 1800s. It was impossible to run cable throughout them.

Solution: A site survey determined that a wireless solution would easily penetrate the building walls. In-building equipment was installed to allow for wireless network coverage in most locations. In a few buildings, the school installed broadband over power line interfaces using the existing electrical infrastructure to pass data traffic.

Situation: A large global distribution company had several buildings located in the same metropolitan area, between 1 and 3 miles apart. The company was currently paying the local exchange carrier (LEC) for connections between the buildings.

Problem: The bandwidth of the current network was not large enough to support the needs of the company as it grew. They wanted to upgrade from 45 Mbps to 250 Mbps. The quote from the LEC was a huge increase in monthly payments, making the bandwidth change cost prohibitive.

Solution: The company installed unlicensed wireless systems between several of the buildings, providing for speeds of 255 Mbps and above. The upfront cost of all of the radio equipment showed an ROI of four months compared to what they had been paying for slower service from the LEC.

ADDITIONAL CONSIDERATIONS

- What types of traffic will be traversing the network?
- Is the connection to the outside world over leased lines?
- How many users will be supported?
- What is the size of the coverage area?
- Is it indoor, outdoor, or both?
- What applications are running on the network?
- What are the bandwidth needs?
- Is mobility important?
- What are the security requirements?
- What is the growth plan?
- What test equipment is needed?

PRODUCTS

- Enclosures
- Broadband radios
- Antennas
- Routers
- Switches
- Access points
- Rooftop, wall, and tower mounts
- Cables and connectors
- Tools and installation supplies
- Test equipment
- Power solutions and backup power
- IP cameras
- VoIP equipment
- Training