Ultra Low Bandwidth, *Boundless Security System™* Avoids Overloading Metropolitan-Scale WiFi Wireless Mesh Networks

- **Advanced** IP-based, bandwidth-saving video-on-demand, multi-stream architecture with distributed storage, not bandwidth-wasting video streaming to central storage, avoids continuous traffic on networks
- Avoids need to custom design each WiFi Wi-Fi mesh network with increased mesh node density, reduced number of hops to backhaul, and high speed fiber backhauls to handle high bandwidth of IP-cameras
- Distributed storage near cameras maintains continuous, uninterrupted recording even when network is impaired, inoperable or reconfiguring
- Provides ability to quickly and easily add cameras when and where needed without adding mesh nodes or degrading user performance
- Viewing typical live video stream, with 15 fps, requires $< 10\%$ of bandwidth of MPEG-4 IP-camera without sacrificing recorded video quality
- Mobile-originated tunneling from distributed Boundless video servers simplifies setting up IP addresses, avoids need for mobile IP addresses for roaming mobile video uploads, avoids additional loads on the mesh network when multiple users view same live or recorded video, restores video communications after mesh reorganization, avoids point-to-point tunnels between mesh network nodes, and increases network security