Boundless Security Systems, Inc.

sharper images with better access and easier installation

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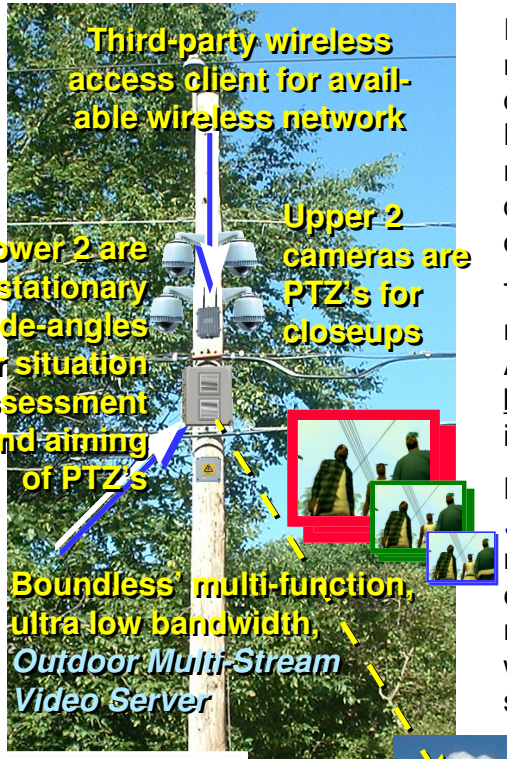
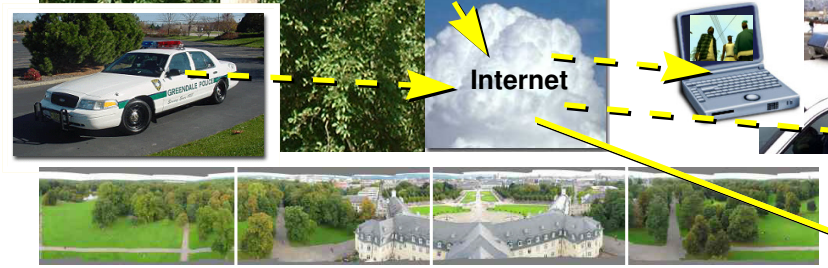
Ultra Low Bandwidth, *Boundless Security System™* Solves Cities' Video Bandwidth Problem, Enabling Public Wireless Networks to Handle Large Numbers of Cameras





Four video cameras and Boundless' ***Multi-Stream Video Server*** on a pole or in a vehicle provide continuous, autonomous, 360-degree panoramic views for full situational awareness. Multiple different digital video streams for each camera are recorded internally, and simultaneously satisfy competing needs for investigations, monitoring, situation assessment and content analysis.

Public, city-scale and municipal-scale WiFi / Wi-Fi wireless networks typically provide 10 to 15 Mbps per square mile of communications capacity for users to access the Internet. Many cities want to leverage WiFi and cellular wireless networks to improve public safety economically by making it quick, easy and economical to install video surveillance cameras in fixed and temporary locations, and in vehicles.

The problem is that conventional IP-video streaming requires 2 to 3 Mbps per camera of continuous video traffic. A mere 5 cameras per square mile can require the entire bandwidth of a public WiFi wireless network, making it impossible for users to access the Internet.

Boundless' multi-function, ultra low bandwidth, ***Multi-Stream Video Server*** reduces the video load on wireless networks 100-fold. The large reduction in bandwidth enables public Wi-Fi, 1xRTT, EV-DO and other wireless networks to be used instead of expensive, dedicated wireless video networks and optical fiber. The cost and time savings pay for the ***Boundless Security System™***.

Boundless can help towns keep an eye on thugs. Not a bandwidth-hogging, video streaming system, Boundless' advanced IP-based, ***ultra low bandwidth, Multi-Stream Video Servers*** internally digitize, scale, MPEG-4 compress, record, and search video, and send live and recorded video only upon demand (not continuously).

How much bandwidth does video need ?

- Raw, standard definition, 8-bit digital video requires 250 Mbps / camera, but HDTV 1080i is 6x = 1.5 Gbps
- With advanced compression, most vendors call 3 to 6 Mbps / standard definition camera "low bandwidth" -- small compared to 250 Mbps but large compared to most wireless wide area network infrastructure
- Boundless' ultra low bandwidth, *situation assessment* stream is as little as 8 Kbps, typ. 32 to 64 Kbps / camera, just 1% of others' "low bandwidth," making Boundless' video streams compatible with wireless wide area networks and enabling many cameras to be carried simultaneously with multiple frames / sec / camera, with no video being sent except upon request
- Ultra low bandwidth is essential for not only moving video from stationary and mobile cameras to the Internet for distribution, but also for moving video from the Internet to a multitude of stationary and mobile forces

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- Boundless enables outdoor, mobile and temporary wireless digital video surveillance systems to be installed and operating in hours not months or years
- Outdoor video surveillance is a communications problem ***first***, and a video problem ***second***
- Boundless is a communications company with wide, system-level experience
- Boundless uses multiple technologies to provide future-safe, advanced IP-based, ultra low bandwidth, outdoor, digital video surveillance systems
- Boundless' x86, Linux-based system uses CCTV cameras and optionally USB HDTV-resolution cameras, and is different from others' IP-based systems
- Boundless' ultra low bandwidth streamlines securely sending video from stationary and mobile cameras to the Internet, and from the Internet to mobile users
- Boundless' fully distributed, ***Storage Operating System™***, with near-camera recording and off-peak remote archiving, multiple different video streams/camera, and on-demand transmission are essential for 100:1 reduction of bandwidth
- Boundless' bandwidth management enables mobile use of inexpensive, omnipresent, public wireless networks (Wi-Fi, 1xRTT, EV-DO, GSM…), instead of expensive, dedicated, high speed, stationary, point-to-point wireless networks
- Boundless greatly simplifies IP-network configuration of large systems
- Boundless' small ***Multi-Stream Video Server Subminiature Fanless*** can be concealed under custom-designed, lamp pole base covers for esthetics