

Hey SurfUrbia! No Wires, No Plugs, No Kidding.

A System Designer's Perspective on WiFiHermosa
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Big Picture

Whatever enchantingly whimsical qualities wireless may hold, these are effectively foam in comparison to its future economic impact. Just as mechanical transportation was once reinvented with the inauguration of air travel so too will electronic communications with the launch of digital wireless.

Long considered a wildcard by mainstream communication pundits, digital wireless is now considered a technology and service inevitably poised to come into its own among the technologies of electronic communications. Mainstream communication pundits today say that the stage has been set for digital wireless to make a revolutionary impact in our everyday lives. This impact will be in the form of mobile connectivity, last mile connectivity to the home, and other ways that we still cannot altogether imagine. Even the pundits.

How it works

Someone's client computer initiates a communication session by receiving a radio signal from one of [WiFiHermosa's](#) 802.11G radios using their own 802.11G radio or 802.11B radio. This communication session is injected into the [WiFiHermosa](#) Mesh and wirelessly retransmitted by way of 802.11A radios encrypted using AES (Advanced Encryption Standard) to an ISP (Internet Service Provider) in Hawthorne.



Why its Different

A major difference comes down to delay and bandwidth of the communication session. Along the way to Hawthorne there are several wireless links, or hops. Three wireless hops as in Cerritos would for example mean nine times more delay and a third less throughput than in the [WiFiHermosa](#) system. This happens because [WiFiHermosa](#) uses a multi-radio approach instead of the single radio approach of Cerritos. Not to mention that [WiFiHermosa](#) radios are 802.11G (speeds up to 54 Mbps) instead of 802.11B (speeds up to 11 Mbps).

Another difference is coverage. [WiFiHermosa](#) provides coverage using sectorized, multi-polarized, multi-band antennas instead of ones that are omni-directional, vertically-polarized, and single-band. This means less interference, better access, and increased value in the years to come.