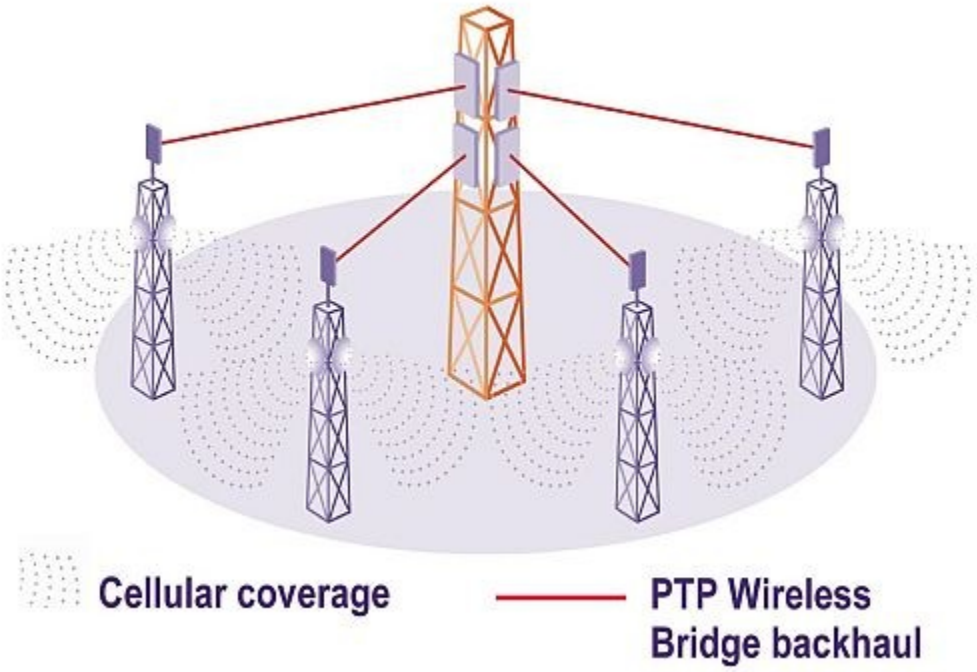
Super WiFi = Smart Antenna WiFi + Cellular Architecture

Cellular Architecture

Cellular backhaul is in the form of point-to-multiple point architecture to connect the radio access network back to the core network. It has been proven for years as the most efficient and scaleable backhaul network with simple network management. Nowadays over 2 billion users worldwide are supported by 2G/3G cellular network.



Outdoor WiFi Network

The public WiFi network is firstly implemented as WiFi hotspots (indoor APs installed in café, shopping malls and airports, etc.) As driven by the increasing WiFi user population and the popularity of WiFi devices, the public WiFi network is extended from hotspots to hotzones and even citywide WiFi.

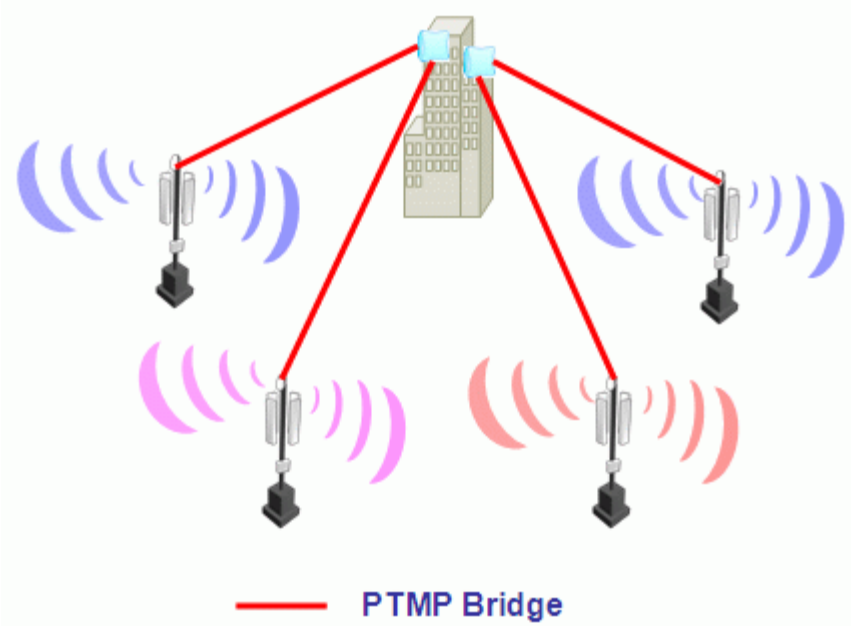
There is a growing market demand for outdoor WiFi deployment. For the WiFi network going to deploy in outdoor, the cellular network as proven in the market serves a good reference model in network design. The cellular and WiFi network share the following similarities:

- Support mobile users with multimedia applications;
- Reuse of limited channel resources;

- Radio access network connected to the core network through the wired/wireless backhaul link.

One fundamental difference between cellular and WiFi technology is that a cellular base station can provide a larger coverage than standard WiFi AP, hence standard WiFi requires more backhaul links. The backhaul costs are substantial if a separate backhaul link is installed at each standard AP.

Altai implements patented smart antenna technologies to develop the WiFi base station, so that it can provide super WiFi coverage (micro-cellular coverage). The cellular backhaul architecture can be applicable to Altai WiFi base station, so as to build a cost-effective, high performance and scaleable outdoor WiFi network.



Key Benefits

The adoption of cellular architecture proves to be a robust, scaleable backhaul in wireless communications. By providing the cellular backhaul to the Altai A8 WiFi base station, the key benefits include:

- Minimize latency for improvement of real-time applications - Unlike mesh, cellular architecture can reduce traffic latency and it is better to support real-time applications. Mesh network induce latency due to multiple hops problem;
- Lowered capital expenditure and operating expenses in building out the outdoor WiFi network due to less installation sites;
- Reduced interference effect caused by 5GHz mesh cell overlap.