

Wireless VoIP Readiness Assessment

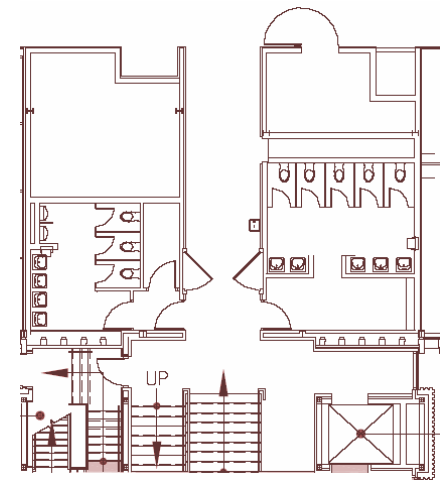
Wireless Voice over IP has become an increasingly attractive wireless network application. It also happens to be a kind of litmus test for inadequate network design and performance. No other network application suffers so noticeably from poor performance. Wireless VoIP as a networked application introduces unique requirements and stresses on a WLAN design.

Wireless LAN's designed to support more traditional devices and applications often fail to meet the requirements of Wireless VoIP applications, leading to unacceptable performance. In addition, VoIP also requires that the network extend into areas generally neglected when deploying data-only WLANs. Areas such as bathrooms, staircases, and elevators, which are all valid areas for a voice application, usually receive only minimal coverage, if any, in traditional WLAN deployments.

Wireless VoIP devices that rely on voice recognition for operation are even more susceptible to poor voice quality. Inadequate voice quality impedes a user's ability to interact with the device making it impossible to place a phone call or even log into the device.

Why is VoIP different?

Few network applications dictate WLAN design the way VoIP does. Common networked applications such as email and web browsing have mechanisms to deal with problems like network latency, and often these problems go largely unnoticed by users. However, when network problems are present with a VoIP application they are audibly detectable as poor voice quality or result in dropped and missed calls. Problems which are simple nuisances for wireless laptop and PDA users become critical barriers to VoIP usage.



Areas such as bathrooms, staircases, and elevators typically require coverage in wireless VoIP deployments.

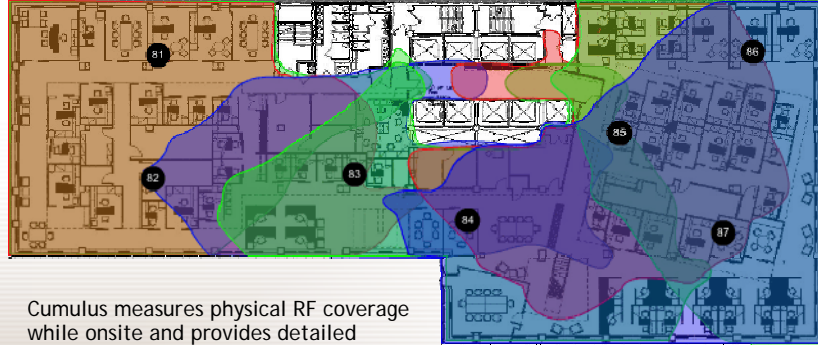
What does Cumulus do differently?

We focus first on your needs and goals, then we design the solution around them. We know the products that are available and understand their strengths and limitations. We also know that a wireless network design needs to go beyond the infrastructure. With wireless clients ranging from PC's to cameras to phones, planning for the wide range of security, performance, and management capabilities is equally critical. No matter the scale or complexity of the project, our first step remains the same, a thorough and well thought out examination of your specific needs. Our consultants will work with you to develop your business and security needs into a set of technical requirements. These requirements provide the benchmark by which network designs and infrastructure devices will be measured.

Having deployed many wireless networks in support of VoIP from several different vendors over the last few years, we have developed a set of "best practices" which we feel are both comprehensive and unique. Whether designing a wireless network from the ground up to support VoIP, or adding VoIP capabilities to an existing network, our consultants draw on their vast experience to provide a solid foundation for wireless VoIP.

What do we provide?

- RF coverage check highlighting areas with insufficient coverage including areas with insufficient overlap
- Network configuration recommendations
- Suggested access point moves and additions
- Additional network remediation recommendations
- Documentation detailing all observations and recommendations



Cumulus measures physical RF coverage while onsite and provides detailed documentation including coverage gaps.

Designing for voice

Designing a WLAN in support of VoIP requires specific attention in several key areas. First, every area within the facility that users occupy must be provided with WLAN coverage. From a site survey perspective, the minimum signal strength that might be acceptable for a data-only network is not necessarily adequate in a data/voice network. Finally, the overlap of individual AP coverage cells must be sufficient to allow for seamless roaming.

About Cumulus

Cumulus Consulting Group fills a void within the networking industry. While there are many network design and consulting firms in the market, our depth of experience in the wireless industry is unique. This experience uniquely positions us to deliver on your business and technical goals.

Our consultants have been involved in the design, deployment and support of thousands of indoor and outdoor mobility solutions across virtually every business environment including enterprise, government, pharmaceutical, healthcare, logistics and education. Having seen the wireless industry grow from its humble beginnings into the truly powerful technology it is today, our consultants have deployed countless generations of products from early proprietary narrowband UHF technologies through modern standards-based 2.4GHz and 5GHz technologies.



Cumulus Consulting Group
 866.338.8015 • 215.774.9883
 215.359.1818 Fax
<http://www.cumulusgroup.com>