



FEELING THE CAPACITY PINCH

Today's mobile consumers have a growing appetite for streaming video, social media and rich, digital communication. This mobile-first era has brought about widespread use of performance-intense applications which also require more bandwidth. These converging demands leave Service Providers, under pressure to increase network capacity. This near insatiable and ubiquitous demand for bandwidth presents unique challenges and opportunities for Service Providers, who are looking to enhance the quality of existing services and monetize new features for facilities such as:

- MDUs & Hotels: Improve loyalty and upsell premium features
- Businesses: Attract new customers who stay longer and spend more
- Venues: Track locations, push ads and leverage apps to take fan experiences to the next level
- Public spaces: Provide high-quality connectivity for enhanced social engagement

Upgrading the network and adding capacity without thorough research, proper planning, sound network design and expert installation practices, can negatively impact the end user experience and the Service Provider bottom line. Providers must manage costs and improve

Wireless technologies supported:
Small Cell, eFemto, iDAS, CBRS, Wi-Fi

WirelessWeek, "ARRIS Completes Ruckus Wireless Acquisition," December 1, 2017

efficiencies as they grow capacity, so they can be in position to capitalize on new revenue opportunities across vertical markets – all while maintaining quality of service for existing subscribers. It's no small feat but they don't have to do it alone.

ABOUT ARRIS

ARRIS International plc is a global leader in entertainment, communications and networking technology. Our innovations combine hardware, software and services to enable advanced video experiences and constant connectivity across a variety of environments— for service providers, commercial verticals, small enterprises, and the billions of people they serve.

ARRIS collaborates with it's customers across core business units including:

- Customer premises equipment (CPE), featuring access devices such as video set-tops and gateways, and broadband modems, gateways and routers
- Network & cloud, combining broadband and video infrastructure with cloud-based software solutions

WEB <https://arris.ly/vztuf> **BLOG** arris.com/arriseverywhere



YOUR TRUSTED WIRELESS PARTNER

Consumer desire for a life without wires is a key objective that occupies us at ARRIS. With 20 years of Wi-Fi and wireless innovations, we've become accustomed to an untethered world.

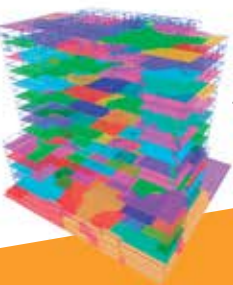
For decades, we've been a trusted partner of global and regional Service Providers who are facing wireless network capacity and cost challenges. We help scale their businesses while delivering a high-performing, reliable wireless experience to subscribers in a cost-effective manner. We help Service Providers successfully pursue new revenue streams.

ARRIS has extensive experience designing wireless projects with more than 50,000 devices designed at stadiums, hotels, campuses, MDUs, small and large businesses and institutions. This unique vantage point coupled with the fact that we have design and installation resources nationwide, enables us to custom develop and deliver vertical market solutions to meet specific needs and business goals - fast.

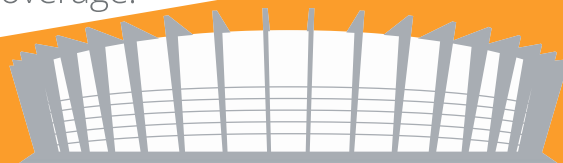
ARRIS skilled designers have certifications with all major design packages giving us the ability to tailor our design work to each Service Provider's requirements for customized, in-building wireless solutions.

Analysis, engineering and planning

Creating a superior wireless system requires thorough analysis and planning. ARRIS has the long-standing expertise to guide you through these complex stages such as conducting detailed site audits and connecting wired and wireless systems to deliver the desired coverage.



Heat maps predict and determine optimal coverage.



Design and layout

The network design is based on several factors such as desired coverage, estimated number of users, bandwidth requirements and the number and types of devices connecting to the network. We identify potential causes of interference such as building materials and large obstacles, and take advantage of existing broadband infrastructure to keep installation time and costs to a minimum and ensure high levels of efficiency.

Installation

ARRIS installation teams work with owners and managers, as well as third-party providers, to meet the specific requirements of each site. We install access points and other wireless components in optimal locations to maximize coverage and throughput and to minimize interference.

Management and monitoring

The ARRIS team manages and monitors the wireless system freeing up IT staff. Once the system is online, we observe and track coverage, security levels, system usage and network health, as well as provide technical support when issues arise. Our full suite of in-building wireless services includes:

- Feasibility studies
- Requirements development
- Solution design and heat maps
- System integration
- Site surveys
- Construction drawings
- Portal development
- Custom dashboards
- Program management
- Managed services
- 24/7 support
- Field installation, testing, commissioning

MARKET LEADER IN WIRELESS

- First wireless broadband gateway
- Innovations - beamforming and adaptive antennas for stronger signals, better coverage
- Carrier-grade call center for end user support
- Full spectrum of hosted and turnkey solutions

MAJOR LEAGUE SPORTS VENUE

Wi-Fi for 20,000 seat-stadium
APs: 440 (primarily indoor)

- Intelligent AP placement to accommodate convertible seating and movable scoreboard
- Protected under-seat AP enclosures
- Flexible radio frequency (RF) coverage for temporary seating layouts and suites
- Wireless mesh APs for movable point-of-sale kiosks