

MOTOROLA WIRELESS NETWORK SOLUTIONS



# WIRELESS AGILITY





## EDUCATION

# RICHER LEARNING EXPERIENCES

Campuses need to be connected to enhance learning and safety. Students who are growing up connected expect immediate access to information. Lewis University, a fast-growing Midwestern university, found that current demand had outstripped its initial wireless network, installed to supplement and extend the school's legacy wired system. The university redesigned the network to provide reliable, agile connectivity wherever users wanted it. In classrooms, in the library, in dormitories, in common areas, in faculty offices.



## MEDICINE

# FASTER RESPONSE TO PATIENTS

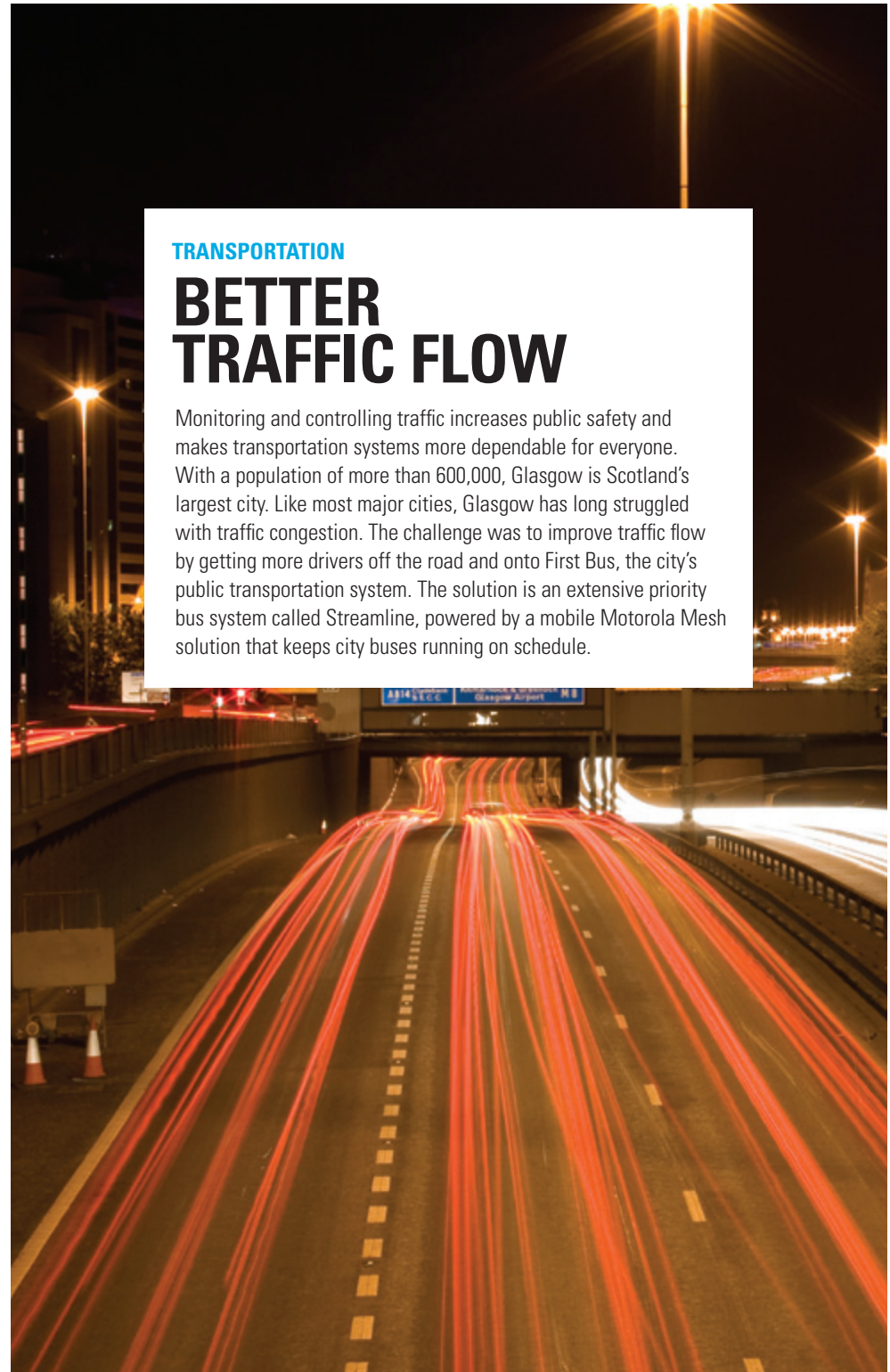
Immediate access to information is critical in health care. Specialists and care givers need to have rapid access while securing patient information. Venezuela's first venture into high-speed wireless tele-medicine was implemented by the 24-Hour Organization, a fast-growing network of healthcare clinics. Recognizing the need for securely sharing patient information and medical data among physicians and specialists at various locations, the organization is streamlining data and imaging exchange. The system offers the agility to quickly transmit data and images to enable more timely, more accurate patient diagnosis and care.



**GOVERNMENT**

# RURAL CONNECTIVITY

Connectivity makes a significant difference for rural businesses and residents. To deliver the social and economic benefits of high-speed Internet access to all citizens, the Province of Nova Scotia, Canada created the Broadband for Rural Nova Scotia Initiative. The system covers 24,000 square miles with only about 40,000 customers, requiring the cost-effectiveness of Motorola's wireless network solutions. The agility of wireless technology rapidly delivers ubiquitous high-speed connectivity at an affordable price.



**TRANSPORTATION**

# BETTER TRAFFIC FLOW

Monitoring and controlling traffic increases public safety and makes transportation systems more dependable for everyone. With a population of more than 600,000, Glasgow is Scotland's largest city. Like most major cities, Glasgow has long struggled with traffic congestion. The challenge was to improve traffic flow by getting more drivers off the road and onto First Bus, the city's public transportation system. The solution is an extensive priority bus system called Streamline, powered by a mobile Motorola Mesh solution that keeps city buses running on schedule.

# THE RIGHT INFORMATION IN THE RIGHT HANDS, RIGHT NOW

Fast, accurate action is important to you and your customers. Once the needs are identified, wireless technology gives you the agility to build that connectivity rapidly and get there first with a solution that is reliable, secure and cost effective. Because solutions are flexible, you can design a system that enables people to communicate and collaborate faster with data, voice and video applications.

## PROVEN WIRELESS RELIABILITY

Wireless communications systems are rapidly becoming the technology of choice for solutions that increase the speed, availability and convenience of customer services while keeping costs down. Only Motorola offers an entire portfolio of solutions to provide for backhaul, distribution and access networks — all proven to interoperate in the most harsh conditions.

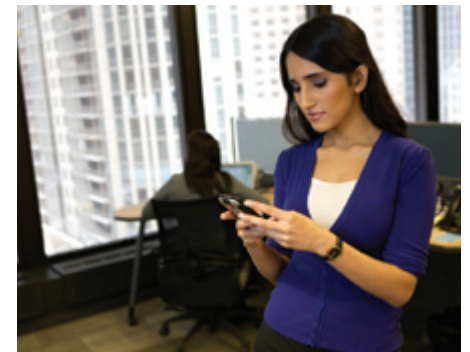
## ANYWHERE AND EVERYWHERE

As competition among companies and communities for growth and advancement grows fiercer, continued success will require super-charged internal processes. To be more efficient and more accurate, you'll need communications systems that empower your people to communicate anywhere and everywhere... indoors and outdoors, fixed and mobile, industry standard and proprietary.

## GETTING IT RIGHT, AND KEEPING IT THAT WAY

Using advanced network planning and design tools, you can ensure that your network will deliver maximum voice, video and data performance, interoperability and cost-efficiency. You can also use wireless to back up critical T1/E1 lines, assuring business continuity. Advanced wireless security systems provide the **high levels of network security** that are becoming more and more critical for business and government network operations. In addition, powerful remote troubleshooting tools provide the ability to resolve issues more quickly, increasing customer and constituent confidence.

As your organization mobilizes to improve response and customer satisfaction, discover the enterprise-wide agility enabled by wireless networking technology.



# MAKE CHANGE WORK FOR YOU



## MOBILIZE WORKERS ONSITE

You can ensure robust performance of onsite Voice over Wireless Local Area Networks (VoWLANs), mobile computers and laptops with the up-front use of Motorola's application-specific design tools. Reliable, secure indoor WiFi access gives workers the freedom to be effective wherever they happen to be. Motorola's integrated voice solutions empower anyone using our Total Enterprise Access and Mobility (TEAM) solution voice-enabled smartphones, voice-enabled mobile computing devices and two-way radios to communicate and collaborate anytime and anywhere.

## EXTEND TO NEW PLACES

As your organization changes and expands, you often need to build new broadband connectivity to distant, hard-to-reach facilities or cover new outdoor areas with WiFi access networks. Motorola's outdoor wireless broadband portfolio will help you quickly establish secure and reliable network presence in even the most difficult outdoor environments. Your workers will be able to respond to customers and citizens more immediately and more successfully, wherever they are.

## SHARE VIDEO

At Motorola, we help you take maximum advantage of video by giving you the flexibility to place cameras wherever they're needed for security, incident response and collaboration. Video can be captured and shared in real time with any and all users with wireless devices on the network. From temporary mesh wireless camera pods at events to indoor WiFi cameras in hard-to-reach locations, our WLAN access points and outdoor wireless broadband links offer superior QoS that supports even heavy video streaming applications.

## REPLACE LEASED LINES

For significant cost reductions, many organizations use our industry-leading wireless Point-to-Point Ethernet bridges to reduce recurring expenses by serving as T1/E1 replacements. Our wireless networks can also help ensure business continuity by serving as a cost-effective redundant back-up network. In each use case, our powerful network design tools help determine in advance the type of equipment and the deployment locations that will provide maximum reliability.

## MANAGE THE NETWORK

For enterprise and government networks, it's crucial to maximize uptime through vigilant network monitoring and management. Our network management tools leverage key information from network design software and powerful map-based visualization technology to make network management easier and more efficient. We help you maximize uptime through earlier issue identification and faster response and recovery, giving your users greater confidence in your wireless network. Advanced troubleshooting tools also give the Level 1 helpdesk staff the ability to resolve issues faster and more effectively.

## SECURE THE NETWORK

Safeguarding your network and proprietary information has never been more important. Whether detecting vulnerabilities or defending from a malicious attack, our industry-leading indoor and outdoor wireless intrusion protection software and hardware-embedded security features help you keep your wireless network running smoothly, eliminating or minimizing the impact of an event on users and operations.

# WIRELESS AGILITY YOU CAN COUNT ON



Motorola's unparalleled wireless solutions portfolio provides the agility needed to reduce costs and increase productivity today, while positioning your organization for future growth.

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## UNPARALLELED PORTFOLIO

At Motorola, our wireless portfolio ranges from indoor to outdoor wireless access networks. It includes WLAN and outdoor Mesh Wide Area Networks as well as Fixed Wireless Broadband. The portfolio also spans from network infrastructure to a broad range of wireless devices including enterprise and public safety handheld devices known for superior ruggedness and smarter usability. We complement our wireless network solutions portfolio with powerful network design tools developed to help deploy the most cost-optimized and reliable networks. Working together, our broad set of solutions delivers greater interoperability, smoother, faster deployments and superior cost-efficiency.

## TRUSTED NETWORKING

Once your network is deployed, you can holistically manage it for maximum uptime through the Motorola Wireless Manager for outdoor networks and the AirDefense Infrastructure Management solution for indoor WLAN. We make network management easier and more efficient with breakthrough map-based visualization capabilities. These include real-time network status in live Google maps, flexible configuration templates and informative performance reporting plots and dashboards. We also ensure the security of your network and proprietary information. Our AirDefense advanced troubleshooting module empowers you to address user issues quickly and efficiently. And the 24/7 gap-free vigilance and wireless intrusion protection of our AirDefense Solutions guard the network from attacks and security policy violations. These management and security tools make our wireless network a strong yet flexible base for building new wireless-enabled agile operations and services.

## ANYWHERE ACCESS

For organization-wide agility, you need to get real-time information into the hands of users at the point of work. To that end, we extend the wireless access network with the right devices and applications. Our TEAM VoWLAN solution provides integrated mobile access to critical communication services; at the same time, it creates interoperability with voice-enabled mobile computing devices and two-way radios. The results of this ubiquitous access go directly to your bottom line; they include increased responsiveness, enhanced collaboration, faster and better decision-making, significantly increased efficiency and improved productivity.

# PUT IT ALL TOGETHER

For your wireless solutions to deliver their full potential, you need the right software. At Motorola, we help you with smart, integrated wireless network design and management tools for indoor and outdoor deployments. Working together, they create a smooth, efficient flow from design to operation to security, delivering robust, secure network performance you can trust.

## POINT-TO-POINT

Unite your satellite offices, campuses and remote locations with solutions engineered for challenging environments. They're also designed to reduce cost with small footprint and power-over-Ethernet capabilities that require less tower space, and remote link management solution that helps lower operating costs.

[LEARN MORE: motorola.com/ptp](http://motorola.com/ptp)

## POINT-TO-MULTIPOINT

Deliver reliable, high-speed connectivity to multiple locations, whether you're connecting residents, businesses, institutions or municipal facilities. Our PMP solutions provide industry-leading interference tolerance, unique GPS-synchronized timing and easier and faster installation.

[LEARN MORE: motorola.com/pmp](http://motorola.com/pmp)

## MESH WIDE AREA NETWORKS

Transform cities, campuses and other locations into high-speed mobile networks with our self-forming, self-healing MWAN. We offer the critical applications you need to stream video, enhance traffic control, read meters, deploy video surveillance and more, helping to improve safety, services and operations.

[LEARN MORE: motorola.com/mesh](http://motorola.com/mesh)

## TEAM

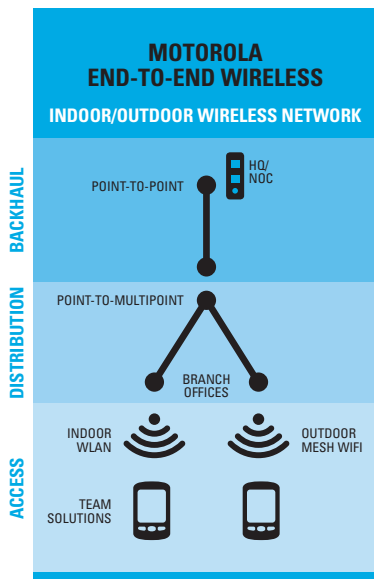
Bring everyone on your workforce together with our TEAM Solutions. Our integrated voice solutions provide interoperability between two-way radios, VoWLAN devices and mobile computers, connecting your workers to each other to maximize collaboration.

[LEARN MORE: motorola.com/team](http://motorola.com/team)

## WIRELESS LAN

Break down the barriers to real-time anywhere, anytime communications. Your workers need voice and data access whether they're inside, outside or on the move. Count on Motorola's WiNG 5 WLAN solution to give you higher capacity and better resilience so you can deliver the best quality of experience to your users.

[LEARN MORE: motorola.com/enterprisewlan](http://motorola.com/enterprisewlan)



## INDOOR WLAN DESIGN & MANAGEMENT

- **LANPLANNER** Leverage Motorola's powerful WLAN predictive design and survey tool to develop optimized networks. LANPLANNER includes 802.11n throughput predictions and application specific design tools that offer superior support for VoWLAN, video and locationing.
- **AIRDEFENSE INFRASTRUCTURE MANAGEMENT** Manage your WLAN remotely with our AirDefense WLAN Management Central and Centralized Management Console modules. These powerful tools enable you to more efficiently manage large multi-vendor networks with thousands of devices.
- **AIRDEFENSE NETWORK ASSURANCE** Monitor your WLAN with our vendor-agnostic tools including Advanced Troubleshooting for testing end-to-end client connectivity, Spectrum Analysis for interference identification, LiveRF for coverage monitoring and Advanced Forensics for real-time and historical data.
- **AIRDEFENSE SECURITY & COMPLIANCE** Safeguard your network and data with our advanced analytics and automated threat mitigation tools. Our solutions include Wireless Intrusion Protection, Vulnerability Assessment, Mobile Workforce Protection and Legacy Encryption Protection.

## OUTDOOR NETWORK DESIGN & MANAGEMENT

- **BROADBANDPLANNER** Quote, design, measure and troubleshoot large-scale multi-vendor mesh and PMP networks with our powerful BroadbandPlanner, including BroadbandPlanner SE for small- and medium-size Motorola networks and the portable survey tools of BroadbandScanner.
- **PTP LINKPLANNER** Determine your PTP network's optimal equipment mix with our free PTP LinkPlanner tool. The tool is based on non-line-of-sight RF prediction that considers terrain, obstructions and antenna height; it also integrates with Google Earth for enhanced visualization of multi-link networks.
- **WIRELESS MANAGER** Visualize your multi-vendor outdoor networks (PTP, PMP and mesh) in one live Google map view. Wireless Manager uses color-coding to show you real-time link status and metrics, and customizable alarms immediately alert you if a problem is developing.

## A LEADER IN WIRELESS

No one knows wireless like Motorola. A pioneer in wireless communications, we bring you more than 80 years of expertise in wireless technology and customer support. As an acknowledged global leader in the industry, we've earned the trust of a wide range of organizations around the globe, with more than 10,000 networks now in operation in more than 120 countries. Our customers include many of the most progressive and successful organizations in the world, including state and federal agencies, shipping companies, service providers, automobile manufacturers, medical organizations, colleges and universities, retailers and hundreds more.

To learn more about our products visit [motorola.com/wns](http://motorola.com/wns)

For news and comments on the industry join the conversation at [wirelessnetworkpulse.com](http://wirelessnetworkpulse.com)

To see how customers use our solutions check out the World Tour [motorola.com/wirelessagility](http://motorola.com/wirelessagility)

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