About Forney Independent School District
Located 20 miles from Dallas, the Forney Independent School District has a total enrollment of over 8,000 students. The district includes 15 sites spread out across more than 79 square miles.

The Challenge
In support of their digital learning initiatives, the Forney Independent School District needed to increase Wi-Fi® performance and scalability while enabling access for thousands of devices, centralized network management, simplified guest access, and user location tracking.

The Solution
The Forney Independent School District implemented ADTRAN's Bluesocket® virtual Wireless LAN (vWLAN®) control and management solution with integrated guest access, and 700 Bluesocket 1800 series, 802.11n access points.

The Benefit
The Bluesocket vWLAN solution delivered centralized control and management of hundreds of access points to support thousands of users spread across the district area of 79 square miles. The school district gained increased scalability, and greater capacity to ensure optimal network performance critical to successful digital learning .

Bluesocket vWLAN Enables Forney Independent School District's 1-1 Computing and eBooks Technology Initiatives

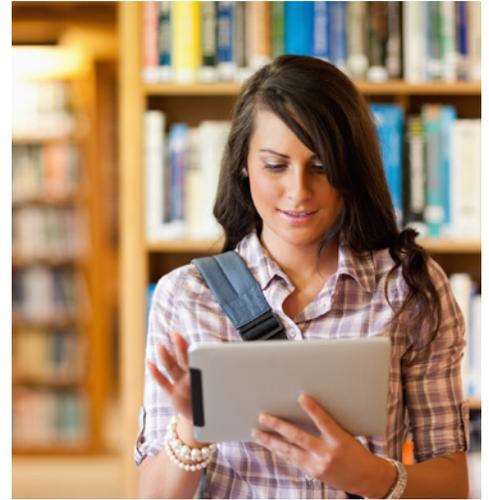### One of the Fastest Growing School District in Texas
Forney Independent School District (ISD) has been ranked as one of the fastest-growing school districts in the State of Texas. The Forney ISD has a total enrollment of more than 8,000 students in K-12 and more than 1,100 teachers and staff. The district includes nine elementary schools, two middle schools, two high schools, one alternative school and the Ellen Brooks Memorial Library, spread out across the district which spans more than 79 square miles.

Inspiring Students Through Innovative Education
"Inspiring Students Through Innovative Education" is the motto of the Forney Independent School District. Recognized as a Texas Education Agency (TEA) Exemplary School District, Forney ISD is known for its innovative, educational programs and achievements inside and outside the classroom. Whether it is using mobile labs, wireless Internet access, electronic textbooks, streaming video or video conferencing, the district strives to provide the tools students and faculty need to combine technology into everyday classroom life.

A Leader in Education Technology
Forney ISD was the first in the nation to pilot a 1:1 student notebook initiative to overcome a continual shortage of text books. The 1:1 notebook program, known as E-Books provides a student with a Wi-Fi-enabled notebook, pre-loaded with curriculum-specific course materials including electronic text books, homework

"We needed a solution that would provide significant scalability and performance and vWLAN was ideally suited to meet our needs."

**– Mark Hunter,
Network Engineer**

assignments and in-class testing. In the years following the successful pilot, the program continued to be steadily rolled out until every student from the 5th through the 12th grade had a district issued laptop as an educational resource for use in both the classroom and at home.

Focus on the Lesson Plan – Not Access Issues
A major factor in the success of any 1-1 computing/E-book program is adoption by teachers and students, which is dependent on ease of use. A class's lesson plan can not be interrupted due to network access issues. Included in Forney ISD's criteria for a wireless solution was the ability for the network to handle a high volume of simultaneous logins. This was necessary since multiple classes start at the same time with thousands of students requiring concurrent access.

Bluesocket vWLAN surpassed tough competition during an extensive 3 month test period, both in product performance and onsite support. One instance of vWLAN effortlessly supported over 5,000 concurrent users with the ability for continued growth.

With the success and continued growth of the E-Book program, the District recognized the need for advanced network management capabilities and user location tracking. Fast, reliable and automatic network access would continue to be a key requirement. Since the program was to span across the entire District, IT needed an efficient and effective way to administer the technology and monitor network usage.

vWLAN Addresses All Digital Learning Demands

Applying virtualization to Wi-Fi networks, solves critical capacity and scaling burdens, simplifies management, enables centralized control and provides increased reliability. ADRAN's Bluesocket vWLAN is the only wireless LAN solution with control and management virtualized on software residing on a hypervisor (e.g. VMware). Rather than deploying hardware controllers to operate a wireless network, vWLAN leverages virtualization to eliminate the scale and cost constraints of physical hardware controllers. The vWLAN solution also reduces the total cost of ownership (TCO) of the Wi-Fi network.

Efficient Network Management and Monitoring

vWLAN provides centralized software-based control and management of all access points—in any location. vWLAN frees the Wi-Fi network from the LAN, now IT staff can enjoy more flexibility since the control function does not have to reside on the same LAN as the access points.

Increased Reliability

Separating the control and data plane, vWLAN is inherently more reliable than the conventional hardware-based controller architecture. vWLAN's reliability advantage ensures that an interruption in the control plane does not interfere with the data plane. Reliability is based on the dependency of the data center as opposed to a single purpose hardware controller.

> "The vWLAN solution was a great fit with simple licensing, massive scalability and robust performance."
>
> **– Mark Hunter,**
> **Network Engineer**

Abundant Scalability

vWLAN, designed as a distributed architecture, separates the control and data plane to allow for separate scaling and greater capacity. Adding more users, locations and access points within a vWLAN solution is done easily through software and does not require additional investments in the control plane.

With vWLAN scaling the network is cost effective and only limited by the size of the data center capacity. Typically, a large hardware controller can only support 150 access points and about 4,000 users. The Bluesocket vWLAN solution can support 1,500 access points and up to 48,000 users per software instance.

Simplified Guest Access Services

Forney ISD is taking full advantage of vWLAN's integrated guest access solution, which allows administrators to securely manage both internal and guest networks. Based on user access needs, the front desk at each school can issue temporary guest access passes to substitute teachers, visiting parents, attendees at extracurricular events, and vendors conducting onsite faculty training. Additionally, the high school library is open to the public and is now able to provide a new service to the community by offering secure Internet access. Librarians are able to set up user IDs with set expirations. IT administrators are thrilled to push out guest access management to the end users, reducing the number of support tickets and freeing up the help desk.

Future Plans

Forney ISD is ready to address any future expansion and increased network demands with the flexible vWLAN architecture now in place. vWLAN's control and management software enables the district to leverage and extend the lifecycle of their Wi-Fi network, improve network security with location-based controls and secure guest access, and reduce IT administrative time through a single, centralized management platform.

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