

# Smart Education Requires a Smart Wireless Platform



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## Using Mist to Deliver Amazing Wireless Experiences to Students, Teachers, Administrators and IT Personnel

Gone are the days when mobile Internet access is enough for students, teachers and administrators. With smart devices at everyone's fingertips, educational institutions have a unique opportunity to take learning to the next level. As the types of services deployed by educational institutions has changed, so too has the underlying wireless infrastructure. Old Wireless LANs (WLANs) that were designed before the Smartphone era are being replaced by more modern wireless platforms, which bring new levels of scale, reliability, and simplicity to educational institutions facilities - plus high accuracy location services to take advantage of the unique attributes of Smartphones, tablets and computers. More specifically, they can now leverage location services and machine learning to optimize student/teacher interactions, lower IT costs, and deliver more personalized services across campuses and between classrooms.

This is the value proposition of Mist's intelligent wireless platform, which takes a unique user-first approach to wireless. Built from the ground-up to deliver amazing wireless services for the Smart Device Era, Mist combines unprecedented insight into wireless user behavior with proactive actions for simpler operations and incredible mobile experiences.

The Mist platform lets you think centrally and act locally through a combination of cloud-based intelligence and on premise Access Points. Top attributes of the Mist platform include:

- **A purpose-built cloud architecture.** The Mist Intelligent Wireless Cloud (IWC) is designed to provide unprecedented visibility and control at web scale, with a micro services architecture for extreme agility when rolling out new features/services.
- **Data science meets wireless wizardry.** Mist uses machine learning, event correlation, and automation to ensure the wireless network is always optimized for constantly changing user requirements and device capabilities (with minimal manual IT intervention.)
- **Integrated high accuracy location.** The same platform used for business critical Wi-Fi delivers highly contextual location services using enterprise grade BLE. With Mist, you can see where mobile users are at all times, and deliver high value location services with the click of a mouse. No physical beacons or site surveys are required.

In addition to classic WLAN functions (e.g. internet access, online courses, and collaboration) the Mist platform enables educational institutions to offer services never before possible in a simple, seamless, and secure manner. Examples include:

## Amazing Student Experiences:

- **A consistent experience across all devices.** The Mist platform is constantly learning in real-time to optimize wireless performance for every student across all device types (e.g. Chromebook, iPad, laptop, iPhone, Android, etc.) In addition, automated load balancing ensures the wireless network is always optimized for changing traffic patterns.
- **Online debit system.** Use phones or tags to pay for items in cafeteria and stores, eliminating the need for cash and enabling parents to easily track spend. Check out books from library, equipment from A/V department, and other supplies.
- **Automated gym and hallway locks.** Unlock storage units when in close proximity; ensure units are locked when not around.
- **Stay on Schedule.** Students stay on schedule with location-aware alerts for upcoming classes, the time it takes to get there from their current location, and turn-by-turn navigation.
- **Orientation assistance.** Easily find cafeterias, libraries,



bathrooms and more; Guided tours help new students and parents find their way around; Get info about specific classes, buildings, events, and teachers nearby.

- **Navigation across campus.** Find open labs, conference rooms, and quiet rooms across campus. Provide navigation specifically for disabled students.



## Amazing Teacher Experiences:

- **Stay on Schedule.** Help teachers stay on schedule with location-aware alerts for upcoming classes, the time it takes to get there from their current location, and navigation.
- **Navigation across campus.** Find labs, meeting rooms, cafeterias etc. across campus.

## Amazing Guest Experiences

- **Find/Navigate.** Easily find cafeterias, dorm rooms, rec centers, sports facilities, shops, and more.
- **Self-guided tours.** Guests can choose the sites they want to see with detailed descriptions and background information pushed to their smart devices.
- **Push Messages / Promotions.** Highlight current and future events on campus; Push coupons or promotions for school store or local restaurants/bars/hotels.




## Amazing Administrator Experiences

- **Locate students and faculty in an emergency.** Ensure student and faculty are out of harm's way during an evacuation or emergency situation. Quickly route emergency responders to the necessary locations for quick action.
- **Automatic roll call.** Track which students are in which rooms during given periods of time.
- **Track school bus usage.** Make sure the right students are on the right buses; Track bus usage to ensure proper resource allocation.
- **Location-based security.** Identify if students are entering unauthorized areas; Monitor if younger children are leaving rooms unsupervised.
- **Manage staffing levels.** Make sure security and support staff are in the best locations to handle concerts, sports games and other events.
- **Asset location.** Monitor location of Wi-Fi and BLE-enabled devices.



- **Detailed analytics.** Better understand traffic flows at on-campus facilities and provide user information, such as real-time cafeteria line wait times, open cubicles in the library, potential security risks, etc.

### Amazing IT Experiences

- **Predictive recommendations.** The Mist platform provides recommendations to fix Wi-Fi problems before they arise, ensuring the best experience across mobile devices.
  - **Quick problem remediation.** Proactive Analytics and Event Correlation (PACE) identify Wi-Fi problems as they happen and identify root causes easily for rapid troubleshooting (i.e. is it a connection, capacity, or time to connect issue? Is it a wired or wireless problem? Is it specific to individual users or groups of users?)
  - **Easily assign resources and filter content.** IT staff can provide access to the Internet, printers and other resources to wireless users with the click of a mouse. In addition, it is easy to filter or block unwanted content from the wireless network.
  - **No physical beacons; No BLE site surveys.** IT administrators have a painless BLE experience with Mist, as there is no need to hang beacons, replace batteries, move beacons, or do site surveys. With Mist, virtual beacons and zones are setup in seconds with the simple click of a mouse.
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- A photograph showing two IT staff members in a server room. A woman is seated at a desk with multiple computer monitors, looking at the screens. A man is standing next to her, leaning over her shoulder and pointing at one of the monitors. The room is filled with server racks and more monitors in the background.
- **Best accuracy and performance.** People and items can be located to within 1 m (with sub second latency) using Mists' sophisticated location algorithms that constantly adapt to changing RF and user/device conditions.

### Smart Wireless for Smart Education

Modern education needs modern wireless technology. If Internet access and remote connectivity to student records are all that are required, legacy WLAN solutions get a passing grade. But if scalability, ease of use, automation, and high accuracy locations services are required to deliver amazing student, teacher, guest, administrator and IT experiences, then Mist is at the head of the class.

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## About Mist

Mist built the first wireless platform for the Smart Device era. By taking a user-first approach to networking, the Mist Intelligent Wireless Cloud (IWC) eliminates the operational burdens of legacy wireless architectures by replacing human interaction with machine learning and proactive automation. In addition, Mist takes unique advantage of user location and behavior to deliver a superior experience for wireless users.

The Mist team consists of leading experts in wireless, machine learning, and cloud, who are responsible for building the largest and most advanced networks in the world. Founded in June 2014, the company is based in Cupertino, CA. For more information, visit [mist.com](http://mist.com).

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