



Castro Theatre

- Reliably supported 5,000 attendees' network needs at Lesbians Who Tech summit
- Installed Meraki equipment in less than three days
- Increased engagement with the LWT Conference app (35% increase in active users and 51% increase in bookmarked talks)



With its large red marquee towering over San Francisco's historic Castro District, the Castro Theatre has served as a landmark for generations of city dwellers since its construction nearly a

century ago. The movie theater has borne witness to seismic changes within the neighborhood and the broader San Francisco area, from the gay rights movement that began in the 1970s to the rise of the tech boom.

The theater's intricate Spanish Baroque architecture has attracted the interest of many people looking for a beautiful space to host events like technology conferences, lecture series, film festivals, comedy shows, and more. In fact, most of the Castro Theatre's revenue today comes not from the wide variety of movies and stage performances it hosts, but from outside event organizers who rent out the grand facility.

Problems with the Old Network

Though the venue's staff worked hard over the last few decades to upgrade the theater's projection equipment, sound system, and seating arrangements to keep up with the desires of modern audiences, the Wi-Fi network was largely left neglected since its installation years ago. Richard Hildreth, who has been involved with the theater since 2002, was all too aware of the shortcomings of the theater's network. That's because he had set it up.

"All we had were two or three consumer-grade, home-style Wi-Fi

routers, one on each floor of the theater," Hildreth explained. "They weren't logically connected into a single network; we actually had three separate networks, none of which provided a particularly strong signal." The unreliability of the network disrupted the theater's everyday operations. For example, the theater's box office booth just outside the lobby uses an electronic point-of-sale device to sell tickets, and when the network failed or couldn't reach the booth, ticket sales would slow to a crawl.

The theater's poor Wi-Fi connectivity wasn't just a huge headache for staff and visitors. It also threatened the Castro Theatre's ability to continue attracting event organizers, whose events frequently fill the theater's capacity of around 1,400 people and require stellar wireless connectivity. For Hildreth and the rest of the theater's management team, that was the primary driver for starting the search for a new solution. "We have to constantly make sure we're keeping up with the times and meeting our clients' needs," Hildreth said. "We could no longer deny that the demand for a more stable and secure Wi-Fi network was there."

The Meraki Magic

Right around the time that the Castro Theatre team knew a new network was in order, they were approached by Cisco Meraki to test a deployment of some new high-density Meraki MR53E and MR42E indoor access points (APs). These APs are purpose-built to ensure connectivity for high density users in small zones, like event venues. They have 4x4:4 antennas and a spatial stream architecture that, when combined with their ability to automatically connect to new

Meraki narrow patch antennas, ensure service for the largest possible number of concurrent clients.

The enormous space of the theater's auditorium, coupled with the need to provide 1,400 people with wireless connectivity at any given time, made the Castro Theatre an ideal setting for Meraki to deploy these new access points. In particular, Hildreth knew that theatergoers would benefit from more targeted coverage, made possible by the narrow patch antennas' ability to focus coverage toward clusters of mobile device users. He gladly welcomed Meraki into the theater. "My familiarity with Cisco from way back in the day gave me confidence in Meraki, and I was looking forward to a solution that was much simpler to manage," he said.

Installing the new Meraki equipment took less than three days, a process that Hildreth said went "as smoothly as it could have possibly gone." In total, 20 APs and antennas were installed throughout the theater; most were in the main auditorium, with others installed behind the movie screen, backstage, in the mezzanine, and in the lobby to ensure wireless coverage regardless of a user's location. Hildreth was pleased with the speed and ease of installation, explaining that "The installation process didn't impact theater operations at all."

Time to Stress Test

After deploying Meraki, there was only one thing to do: put it to the test. In March 2018, Lesbians Who Tech held flagship events for its fifth annual summit at the Castro Theatre, bringing in 5,000 attendees for three days of keynote sessions, networking, and sponsor-attendee meetings.

Lesbians Who Tech (LWT) was founded to bring new opportunities to LGBTQ non-binary and gender non-conforming women and allies, as well as the organizations who would benefit from hiring these smart, talented individuals. According to Lindsey Frischer, Director of Business Development and Growth at LWT, the organization gives members "a stage where they can present their expertise."

LWT's 2018 summit was its most ambitious yet, with more than 170 speaking sessions, dozens of events taking place around the Castro neighborhood, and over 100 partners set up within pavilions to showcase their brands and innovations to attendees. Speakers including Facebook COO Sheryl Sandberg and Uber's chief brand officer, Bozoma Saint John, inspired and educated audiences. But there was one small problem: the Castro Theatre, where most of the key sessions were held, wasn't big enough to hold all of the people interested in watching these sessions.

"As an organization that preaches the importance of diversity and inclusion, we wanted to make sure the events were available to everyone," said Michelle Skoor, Managing Director at LWT. "We knew the Castro Theatre couldn't accommodate the number of people who wanted to watch the events. That's why we chose to live stream

our keynotes and sessions and encouraged attendees to share their thoughts about the conference through social media. All of that required a rock-solid Wi-Fi network."

The Results

The newly installed Meraki equipment was up to the task. "People were really excited about the Wi-Fi this year," Frischer, the Director at LWT, said. Thanks to on-stage announcements and signs around the theater promoting the Wi-Fi network, users were able to log right on and start using the network.

Right before the start of the conference, the LWT team decided to position a huge LED screen right in front of the theater's movie screen. This had the unfortunate side effect of largely blocking the wireless signal emanating from three key access points located right behind the screen. As a result, only nine APs were available to support the load of around 1,000 audience members at any given time — about 100 people per AP. Nevertheless, the APs performed with aplomb.

Two newly introduced Meraki wireless capabilities ensured peak network performance at the summit. Meraki Wireless Health helped the installation team closely examine users' experiences on the network and the performance of individual access points. Additionally, the team used RF profiles to configure all of the APs for an auditorium setting. Rx-SOP (Receive Start of Packet) settings, a part of RF profiles, helped mitigate any potential interference stemming from having so many APs located close together.

In the end, the network provided attendees with a reliable way to connect and share their experiences with the world around them. And that's exactly what they did. Over 10,000 tweets were posted using the official #lwts summit hashtag, garnering 1.2 million impressions. The Lesbians Who Tech Facebook page saw a large increase in followers and post engagement during the conference. And compared to the year prior, the LWT conference app experienced a 35% increase in active users and a 51% increase in bookmarked talks.

The Lesbians Who Tech summit was the first event to take advantage of the Castro Theatre's new Meraki Wi-Fi solution, but there will undoubtedly be many more. Hildreth is thrilled to have a reliable and easily configurable network infrastructure in place. "It's not just about serving our clients, though that matters a great deal, of course," he said. "It's also about what the network can do for us as a theater, whether that's making it easier to sell tickets or using location analytics to better understand how many visitors come to the theater everyday and which events prove to be the most popular ones. Meraki is about so much more than Wi-Fi, and that's what excites us the most," Hildreth said.