cradlepoint TECHNOLOGY

wipipe POWERED

The CradlePoint PHS300 instantly creates a Wi-Fi hotspot that any Wi-Fi enabled device can connect to—laptop, camera, PDA, etc. The PHS300 then connects those devices to the Internet via 3G mobile broadband, providing high-speed web access virtually anywhere. The size of a handheld PDA, the PHS300 can operate on battery power for up to 2 hours.

CradlePoint Helps College Researchers Complete Experiments for NASA

PHS300 Personal WiFi Hotspot Provides Internet Connectivity for Student Engineers / Scientists

SITUATION

Engineering students from Boise State University (BSU) were part of a group of eight university research teams selected by NASA to conduct experiments at the Johnson Space Center. With a return to the moon planned for 2020, NASA asked these research teams to test lunar traction concepts—how different wheels on lunar rovers would perform in lunar soil under the moon's lower gravity. The "lab" for the students' experiments was "G-Force One," a Boeing 727 that briefly creates a reduced-gravity/ weightless environment for astronaut training and experiments. Prior to taking off in the "G-Force One," the teams prepped their experiments in the aircraft hangar at Ellington Field.

CHALLENGE

Due to NASA network security, the student researchers were restricted to one computer for Internet access. The computer was located in a small office situated off the hangar floor, which made it inconvenient for teams to use.

IN ACTION

Dan Isla, team leader of the BSU contingent, picks up the story: "Everyone had their laptops, but no Internet access. So dozens of student researchers were forced to wait in line to use one lone computer to get drivers, look up research and exchange email in order to finalize their experiments. And while they were on that computer, they had to be supervised by NASA people. It was chaos."

SOLUTION

Fortunately, Dan had brought his CradlePoint PHS300 Personal WiFi Hotspot with him. The PHS300 converts 3G / mobile broadband into a Wi-Fi hotspot. "I fired up the PHS300," recounts Dan, "plugged in my AT&T 3G air card and in less than five minutes, I had a Wi-Fi hotspot set up that everyone with laptops could use to access the Internet. I changed the SSID to 'BSU Microgravity' so it was easy for users to discover and log in. Pretty quickly, I had all the available Wi-Fi slots subscribed. People were sending emails and downloading drivers to get their experiments ready."

> "People were saying: 'He's got the Internet in his pocket!'"

"People thought it was great," continues Dan. "They were saying 'He's got the Internet in his pocket!' and asking "Where do I get one of those?" At the end of the first day, people were joking: 'Are you going to bring the Internet with you tomorrow?' Barbara Morgan, a former shuttle astronaut who works for BSU as a Distinguished Educator in Residence, was part of the project and she was impressed with the CradlePoint. Even the NASA guys thought it was cool."

In addition to facilitating research work in the hangar, the PHS300 also provided Internet connectivity for after-hours work by the students. "A number of teams were in one hotel, and when all the guests would jump on the Internet after dinner, the hotel's whole system would bog down," Dan recalls. "But the people in my end of the hotel were able to use the Wi-Fi hotspot I had going [using the PHS300]. They got on the Internet with no problem."

BENEFITS

"An important part of this project was outreach…sharing our work," Dan points out. "With the PHS300, we were able to do that. For example, we had a journalist who works for BSU with us reporting in real-time. Another example: As soon as I stepped off "G-Force One," we were able to upload video and photos of our reduced-gravity experiments to our blog (www.microgravityu.blogspot.com), where others—including BSU engineering students—could access them immediately.

- **Easy.** "There were times when I wasn't going to be at the hangar," Dan reports, "but the teams there still needed Internet access. So I gave the PHS300 to another team member who was going to be at the hangar. Even though they hadn't used the PHS300 before, they just turned it on and it worked."
- **Fast.** "Obviously, your data can only go as fast the 3G signal allows," says Dan. "But the CradlePoint itself was fast. You couldn't tell there were 15 other people sharing the hotspot with you."
- **Reliable.** "We used the PHS300 at the hangar every day from 7 am to 5 pm for about a week," notes Dan, "and never had a single problem."
- **Superior Coverage.** "The hangar was a pretty big area and we were all spread out," says Dan, "But there were no problems connecting to the PHS300, even for people who were 50 feet away."
- **Great Investment.** "I'm a college student without a lot of money," says Dan, "but the $60 a month AT&T mobile broadband service is a worthwhile investment, especially paired with the CradlePoint. I don't know how many times I've been with a group studying or working on a project and used the PHS300 to connect us all to the Internet."

Dan sums up the experience: "Without the PHS300, it would have been very difficult to complete our work in the hangar. It just made things so much easier. In fact, our team finished before some of the other teams did, so we left a day early and they were kind of pleading with us, 'please don't take the Internet away!'"