

The Telkonet iWire System™

The Queen Mary, Long Beach, California



Type of building	Ocean liner / tourist attraction
Location	Long Beach, California
Date launched	September 26, 1934
Overall length	1,019.5 feet
Number of decks; portholes	12 decks; over 2,000 portholes
Passenger capacity	1,957 passengers
Telkonet installation date	May 2006

Challenge

Find an Internet system that could penetrate this historic ocean liner's thick metal walls to deliver reliable wired and wireless Internet access.

Launched in 1934, the world famous Queen Mary has played many roles – from the grandest ocean liner ever built to World War II troopship. The historic Queen Mary, larger and better known than the Titanic, is now permanently docked in Long Beach, California, and has emerged as a favorite attraction, historic hotel, floating museum, meeting facility, and world-class entertainment destination. Acclaimed at its launch as a state-of-the-art vessel, the Queen Mary continues to set new technology standards today – providing guests with broadband connectivity.

Aaron Okajima, the IT Manager for the Queen Mary, recognized the need to offer business and leisure guests with high-speed Internet access in the boardrooms, meeting rooms, decks, restaurants and gift shops. His challenge was to find a system that could be easily installed and would work throughout the entire ship, providing wired Internet access in the guest rooms and wireless communications in meeting rooms and the common areas, such as on the deck. Given the construction of the ship's hull, Aaron knew it was clearly going to be a tall order to find a system that would provide the necessary coverage and enable the Internet signal to penetrate it, as he had been searching for a company that could meet this challenge for six years.

Various Internet access systems were evaluated through a mix of comprehensive site surveys and tests, and in the end, only one system proved to be viable – the Telkonet iWire System, which could be installed without disruption, preserving the integrity of the vessel. A single wireless system throughout the ship proved unable to deliver adequate coverage, with the signal incapable of penetrating effectively through the thick metal walls, and a single wireless access point would only deliver coverage to a few rooms. Using VDSL, Internet over the phone lines, was also considered, and could have been implemented, but this would have been a very lengthy and costly process. In addition, there were concerns about the quality of the phone lines due to the salt air. With wiring CAT-5 cable, there would be length limitations and the installation would have been challenging, due to the difficulty of running cable through the metal ship and because drilling through the original wood paneling and extravagant décor inside the hallways and cabins was unacceptable. Preservation of the décor and artwork on board the Queen Mary is a high priority and every care is taken when selecting any kind of upgrade to ensure that the historic fabric of the ship is preserved.

Aaron was anxious to identify an alternative solution, turning to Hotel Internet Services, a Telkonet reseller, to try a different, revolutionary technology that might provide the answer. The answer lay in the Telkonet iWire System's different approach. It provides high-speed Internet access over existing internal electrical wiring, saving costs and

enabling Internet access from any outlet, in any room. After conducting a half-day site survey and some testing to make sure Telkonet's system would function over the ship's electrical system, the test results clearly illustrated that Telkonet offered the ideal solution, as the system strength was strong and consistent throughout the entire ship, and the speed was fast, getting 5 – 6Mbps from the rooms to the Router.

Solution

The test results illustrated that Telkonet's system delivered a strong, consistent Internet signal throughout the ship.

Telkonet's system was clearly the best way to light up the entire ship with broadband Internet access, as the signal maintained its integrity throughout the 350-plus suites and staterooms. Aaron commented, "The Telkonet solution that was presented to me as the only solution that would work here – as soon as I heard this concept I knew that it would work fine." Aaron and Steve Dobbe, Vice President of Hotel Internet Services, installed the Telkonet iWire System within one week, enabling every electrical outlet with high-speed Internet and network access within the 365 hotel rooms spread over 3 different decks and public areas, including the very large promenade deck and the hotel lobby.

The installation consisted of cabling between the Telkonet Gateway and sixteen Telkonet Couplers to connect the ship's power circuits, which together provide the Internet backbone. Wireless access points (WAPs) were also installed, using Telkonet's iBridge unit to energize the WAPs, providing wireless hotspots in multiple areas of the ship. Using the Telkonet system as the backbone for WiFi reduces the amount of cabling necessary to enable the WAPs, which can be placed anywhere there is an electrical outlet. Additionally, the Telkonet iBridges are being offered to the many gift shops that have not been able to enjoy high-speed Internet access for their businesses.

Aaron commented, "If we had installed conventional CAT-5 cable throughout the ship, we would have had to run a single cable to every hotel room and through various public areas. It would have taken at least three months, with a crew of from 4 to 6, and would have probably cost somewhere in the neighborhood of \$300,000. With the Telkonet system, it took two men five days to wire a 70-year old ship with 365 hotel rooms. If anyone thinks they have a hard property to wire, nothing could be more difficult than this."

Hotel guests can enjoy wired Internet access in their staterooms by simply connecting their laptop to Telkonet's iBridge unit, while wireless Internet access is available in common areas and on the decks. For guests traveling without laptops, wireless Internet is available in several stand-alone Internet kiosks, located on the promenade deck, and next to the bakery, coffee shop, and the business center. Internet access was first offered to guests on June 1, 2006, and has become an instant success and revenue generator. Guests can be seen in the lobby areas using their laptops and printing out their boarding passes in the business center.

"With the Telkonet system, it took two men five days to wire a 70-year old ship with 365 hotel rooms."

**Aaron Okajima
IT Manager, The Queen Mary**

In addition to delivering reliable Internet connectivity, Telkonet's system will be used to support printing from the staterooms to the business center, as well as any applications that the Queen Mary may need in the future, such as IP cameras. The Queen Mary recently celebrated the 70th anniversary of her maiden voyage. In 1936 her communication system was state of the art. Now, her classic décor invisibly shelters today's modern technology demanded by travelers and guests.

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