

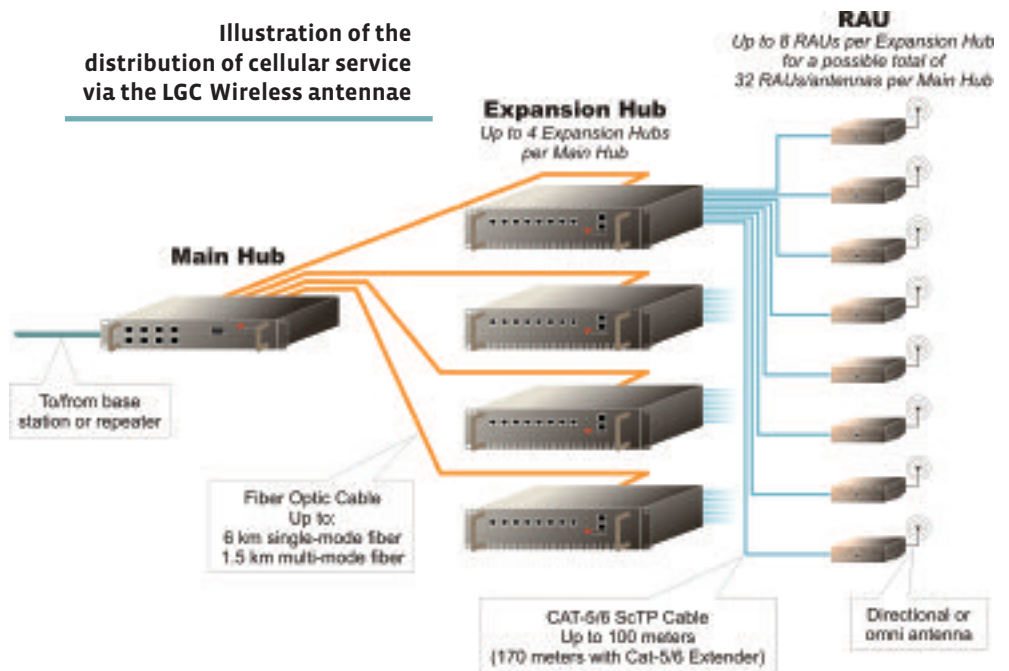
Wireless communications at sea

Communications at sea is no longer limited to ship-to-shore radio signals and costly phone calls. The marine industry has joined with the rest of the world in jumping on the wireless communications bandwagon. A surge in contracts for cellular service onboard ships is keeping companies like LGC Wireless, Wireless Maritime Services (WMS) and Maritime Telecommunications Network (MTN) very busy. The demand for cellular service onboard cruise ships is especially popular as passengers wish to remain connected for various reasons even while they are on vacation.

LGC Wireless, San Jose, Calif., recently announced that WMS, a joint venture of Cingular Wireless and MTN (which was recently acquired by SeaMobile, Inc., Seattle, Wash.), will install its InterReach Unison systems for integration with MTN's satellite network onto cruise ships, making "four bar" CDMA and GSM-based cell phone service available to passengers worldwide. Some of the cruise lines participating include the usual suspects - Carnival, Royal Caribbean, and Norwegian, as well as Holland America, Celebrity Cruises, Orient Lines and Crystal Cruises, among others.

Because of such high demand for onboard cellular service, Rob Marjerison, WMS vice president of deployment and business development, expects the number of ship deployments for LGC and WMS to double by the end of 2006.

Illustration of the distribution of cellular service via the LGC Wireless antennae



LGC Wireless supplies WMS with distributed antenna systems that provide cellular service throughout a ship, despite the all-steel construction. Wireless signals are made available through an LGC ship-mounted satellite antenna that distributes the signal via Unison Main and Expansion Hubs, as well as 60 other strategically placed antennae. Unison uses standard, flexible fiber and Cat-5 cabling that make installation and deployment simple, as opposed to rigid coaxial cabling which can be up to 7/8 inches in diameter.

Over 340 cellular carriers worldwide have roaming partnerships with WMS including Sprint, Cingular, T-Mobile, Alltel, Orange UK, O2 and Vodaphone. A "roaming partnership" simply means that carriers bill a cellular user based on the roaming charges associated with that particular user's service plan.

In fact, while many cell phone users cringe at the thought of roaming charges, calls made at sea will only cost from \$1.00 to \$4.00 per minute, in comparison to ship-to-shore satellite calls that can cost upward of \$7.00 per minute, which can be especially costly for crew and staff. The ships themselves receive a portion of this per-minute revenue for set-up and deployment of the service, which can cost around \$300,000 for a large ship.



The LGC Wireless InterReach Unison

www.LGCwireless.com
www.cellularatsea.com
www.mtnsat.com