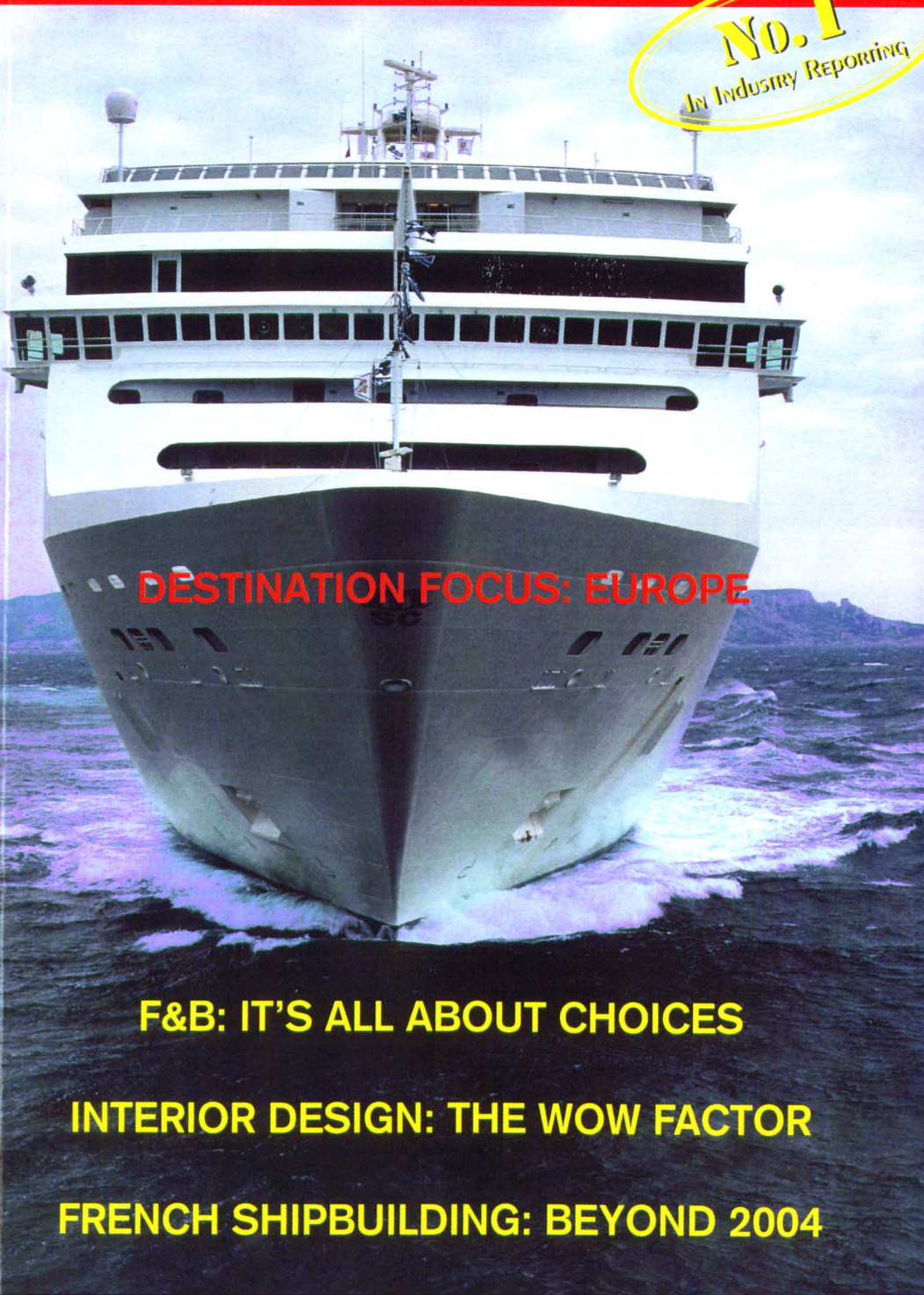


Cruise Industry News

Q U A R T E R L Y

No. 1
In Industry Reporting



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THE CRUISE EXPERIENCE: HOW GOOD IS IT?

At Sea But Never Out Of Touch

Passengers watching the land recede into the distance beyond the ship's wake can be increasingly confident of staying in touch — using their laptops connected to the ship's LAN and satellite communications network. The use of C-Band, the growing use of Ku-Band and new shipboard installations of Wi Fi wireless Internet capabilities are steadily improving cruise ships' communications infrastructure. Supplying the evolving communications infrastructure needs of the cruise industry are two high-tech suppliers. Maritime Telecommunications Network (MTN) is headquartered in Miramar, Florida.

Telenor Satellite Services, based in Rockville, Maryland, is a subsidiary of Telenor, headquartered in Norway. The cruise industry knows

the company by the names of its two specialized business units, Marlink and Sealink.

Wi Fi

For the cruise industry, Wi Fi wireless and the associated "hotspots" offer the latest growth potential and technical challenges for expanding passengers' use of Internet satellite communication to stay in touch with their homes and businesses. As on land, hotspots are rather specific areas on a ship such as a lounge and are connected by hard-wired coaxial cables to the ship's satellite communications hardware and the antenna for transmission to a satellite. Passengers' laptops can be made compatible to the hotspot with a wireless notebook card and within the hotspot almost any number of laptops can be connected to the wireless system. Wireless Internet is still an emerging technology and even landside hotspots are not trouble-free. Shipboard hotspots require very thorough location evaluations and testing for signal reliability. The primary reason is simple: "The Wi Fi signal does not go through steel very well," noted Carl Novello, North American program manager for Telenor's Sealink. Wireless signals are degraded or can be blocked by a ship's steel construction, especially by the heavy watertight bulk-

heads or fire barriers. "Weird things can happen with signals on ships. Signals can tend to ricochet up and down stairwells. Or a deck below and 50 feet away from the designated hotspot can get a strong signal but you can't count on that. So you have to give the users a deck plan showing what areas have coverage," explained Rob Marjerison, director of new product development at MTN.

Running the cables from the primary Wi Fi server and satellite antenna to local hotspots can be challenging, especially on existing ships. According to Marjerison, among MTN's cruise ship clients, which include Carnival Cruise

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Lines and Holland America Line, only Norwegian Cruise Line at this time has invested in running the cables to create multiple specific hotspots in such areas as Internet Cafes, meeting rooms, open pool areas and crew mess rooms. Some major cruise lines with Wi Fi installations have generally run the cables to a selected single area, typically adjacent to the Internet Café or atrium, for a ship's hotspot.

Previous attempts at providing passengers with laptop compatibility to a ship's satellite communications such as with dial-ups from cabins were "unsatisfactory because people are generally dissatisfied with a 14K dial-up speed connection," noted Marjerison.

"Satellite bandwidth is expensive," added Marjerison. Among the factors affecting passengers' access to the satellite network was finding the workable method of charging passengers for the actual time they used the ship's satellite communications. One of the features MTN's Wireless Solution incorporated was their billing solution for the cruise lines' passenger usage of the systems. With it passengers can purchase blocks of time in minutes and they do not have to be used at one time but can be carried over to other days of the cruise.

Whatever the means for accessing

the ship's satellite antenna, data transmission, reception and bandwidth are the important technical considerations. For maritime applications, the C-Band remains the primary satellite communications technology used on a global basis. Cruise lines such as Radisson Seven Seas Cruises, Cunard Line and Seabourn Cruise Line, with their ships equipped with Marlink's Sealink package, rely on C-Band due to their global itineraries. The Ku-Band has been found to be well suited to the overnight ferry operations sailing within defined areas such as Scandinavia and the North Sea. Expanded use worldwide is predicted although Ku-Band has its limitations, one disadvantage being its smaller footprint.

Business Travelers

The real potential attraction for business travel planners could be the availability of shipboard wireless systems with multiple hotspot capabilities and enhanced satellite communications providing more bandwidth. In the past, the lack of easy, reliable computer access for business people effectively ruled out holding most conferences and training meetings on cruise ships unless special arrangements could be made. "Salespeople in particular will not want to be out of touch for a week. They can't. Now you can take them on a ship with their laptops, and they can attend the meetings and still be in touch," said Marjerison.

Both MTN and Marlink have long histories of working with cruise lines to provide the latest satellite communication technologies and data packages attractive to the passengers, and their visions for the future are similar. Marjerison at MTN predicted that with wireless networks the cruise lines have an important tool that will attract new business through individual bookings as well as corporate and incentive travel groups. Both companies agreed that one of the ultimate beneficiaries will be the cruise lines' technically orientated passengers, who will come aboard satisfied they will be at sea and not lose touch with their landside activities. — *Richard Aichele*