Modular Intelligent Life-Line System (MILS) was planned primarily for safety systems in passages of cruise ships and fast ferries so that in case of an accident, all passengers can find a safe way out of their cabins to ship's deck and lifeboats. This computer-controlled light guidance can be adjusted easily to meet the actual needs and conditions. The intelligent light guidance system also has been installed to airports and aircraft.

Because the Life-Line is produced as strips in reels, it can be installed easily and readily moved in accordance with the needs. Its intrinsic features also make this product suitable for use at the scene of an accident or disaster.

Polyurethane, the basic material for Life-Lines, makes the product easy to handle and offers superior resistance to tearing and abrasion. It can be installed in the field even in extreme situations, because the product is resistant to tension, abrasion, and moisture. It also is essential that the consumption of energy is very small. All of these features make Life-Line a good fit for use in disasters. This light guidance system earns the epithet, "Intelligent", because it can be controlled from a portable computer located in the command centre.

Important and actual alphanumeric information can be transmitted in the form of safety guidance panels. These information texts can be controlled using the computer network. Thus, these texts can form an essential element in leading of different groups and individuals to their targets and goals instead of or beside the use of verbal communication.

Modular Intelligent Life-Line System will improve the coordination and efficiency of different groups engaged in rescue work, thus enabling the more optimal utilisation of resources. This improves the potential for saving human lives and decreasing the prolonged suffering of untreated casualties. There is a need to learn how to utilise this technique of intelligent light guidance in exercises, so that the rescue teams can get maximal benefit from this guidance system immediately as the first rescue groups arrive at a real accident scene.

Keywords: command; communications; computers; control; coordination; disaster; guidance system; information management; lighting in; resource utilisation; verbal communications

G-4
Telemedical Support Onboard a Large Passenger Ferry: Experiences from M/S Stena Germanica

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HECTOR is an European Union-sponsored project aimed at improving management of health emergencies through multimedia and telecommunication. One test site is located on M/S Stena Germanica — a ferry with a capacity of 2,200 passengers sailing between Göteborg and Kiel. About 500,000 passengers are transported annually. The traditional approach in cases of medical emergencies, has been radio contact (VHF) between the ship and MRCC, with medical assistance given by Radio Medical.

In December 1997, a telemedical system was installed on the ship. The system consists of a Mobimed Pegasus unit that can transmit 12-lead electrocardiogram (ECGs), as well as other vital signs (blood pressure, pulse, SaO_2). This unit is interfaced with a video conferencing system, enabling the officer caring for the patient to be in dual voice and video contact with the Emergency Department at SU/Östra Hospital. The physician answering the call can be chosen pending the nature of the emergency. All communications are relayed via the Inmarsat-B satellites to a ground station in Eik, Norway, and from there on by ISDN.

The system was evaluated during 1998. The impression, so far, has been an improvement of diagnostic accuracy and medical decision-making, especially for patients suffering from cardiac emergencies.

Keywords: boats; electrocardiogram; radio communications; satellites; telecommunications; telemedical system; video conferencing

General Session-III
Trauma-I
Monday, 10 May, 13:00–14:15 hours
Chair: ***Carlos M. Santiago, Kunio Kobayashi***

G-10: Medical Assortment of Patients with Multiple and Combined Trauma

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Introduction: In cases of technogenic disasters, car accidents, and earthquakes, the patients with poly-trauma make up from 50% to 80% of all victims. In such situations, the definition of gravity of the patient's condition, diagnostics of injuries, order of priority, and volume of antishock therapy both in the prehospital and hospital stages, play decisive roles and affect the mortality rate. All of these measures together are called medical assortment.

Aim of Investigation: The aim was to make a universal sorting card that could be used at the assembly point on the edge of site of the disaster, in ambulance cars, and in emergency rooms of hospitals. There should be kept sequence and continuity of diagnostics and treatment measures that are based on evaluation of the gravity and shockogenics of the injuries, using primary blocks for the therapy of shock.

Results: The sorting card is being tested in Emergency Hospital No. 2 of Rostov-On-Don, both in sporadic and mass numbers of admissions. Within the period of six years in the Department of Multiple and Combined Trauma, there were treated 9,861 patients with combined injuries. Patients requiring intensive and critical care comprised 72%. Mortality in this group was 25.5%. There were performed 14,480 surgical operations. The differ-