

What is integrated terrestrial and satellite maritime communication system?

Abstract: In this article, we present an integrated terrestrial and satellite maritime communication system, where a shore-based terrestrial base station (TBS) and a low Earth orbit (LEO) satellite cooperatively provide wide-area communication services to maritime users.

How are maritime radiocommunication and navigation frequencies protected?

The protection of maritime radiocommunication and navigation frequencies is ensured through special provisions in the Radio Regulations (RR). The Radio Regulations allocate radio frequencies to maritime radiocommunication services to ensure their protection from harmful interference from other types of radiocommunication services.

How can a satellite communication system help a ship?

Most satellite communication systems are structured so ships are required to share channels with others which is perfectly fine for simple communication needs but highly inefficient when dealing with the large quantities of data that some operators generate. This can be overcome by making use of a very small aperture terminal (VSAT) service.

Why are maritime communications important for mariners?

While ships are at sea or aircraft cross the oceans, they are out of reach of terrestrial networks providing services on land. This is when maritime communications are essential for mariners.

What is GMDSS coastal radio solution?

Danphone's GMDSS Coastal Radio Solution is a complete, flexible and scalable IP-based radio communication system primarily for coast stations, ports and off-shore installations and designed specifically to comply with ITU, IMO and international maritime specifications.

What does a coast station do?

The main purpose of the coast station is to monitor and coordinate the maritime traffic and radio communication. In some cases, the coast stations are also required to send out maritime safety information (MSI) to ships, for example meteorological forecasts, navigation information and piracy warnings via NAVTEX.

This concept is based on the interconnection of ships and shore facilities by communication links, including high speed broad band data links, to ensure safe navigation particularly in coastal ...

GMDSS Regulations: Mandatory Requirements for Safe Communications on All Ships. Discover how to comply with these regulations to keep your ship safe.

As an alternative, shore & island-based base stations (BSs) can be built to extend the coverage of terrestrial networks using fourth-generation (4G), fifth-generation (5G), and beyond 5G ...

The emergence of new technologies in the early twentieth century caused a sharp increase in maritime trade, which led to more traffic and the consequent need to monitor such traffic. This ...

List of United States Coast Guard radio stations The United States Coast Guard maintains radio stations for communication between Coast Guard units, Coast Guard units and other ...

Subsequently, the Sub-Committee finalized the revision of the GMDSS Coast Station Operator's Certificate (CSOC) syllabus to ensure that staff on duty in rescue coordination centres (RCCs) ...

Discover how to ensure uninterrupted maritime communication even in the most remote areas by leveraging advanced satellite and cellular technologies.

tivity going above and beyond current deployments, which are mainly relying on shore-based base stations with limited coverage and satellite links with high latency. Considering the ...

In response to these challenges, this paper puts forward a ship-to-shore communication system using relay ships to extend the coverage of ...

How to assemble a shore-based AIS receiver A very simple diagram of the operation of a shore-based AIS station is shown in Figure 1 Fig. 1. Scheme of ...

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Governments have undertaken to ensure that the necessary shore installations will be in place in order to provide the required communication services. ...

To tackle this problem, we establish a nearshore network by collaboratively using on-shore terrestrial base stations (TBSs) and tethered unmanned aerial vehicles (UAVs).

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In the vast expanse of the sea, ships remain interconnected with shore-based authorities through a sophisticated network of communication systems. From ...

Automatic Identification Systems (AIS): A tracking system used for identifying and locating vessels by electronically exchanging data with other nearby ships and IAS base ...

In order to improve the economy and people's lives, in this work, we propose to enhance services offered in maritime logistics. To do this, a communications system is designed on the deck of ...

GMDSS is an international system that uses land-based and satellite technology and ship-board radio systems to ensure rapid and automated alerting of shore-based communication and ...

So the International Maritime Organization (IMO), a United Nations agency specializing in safety of shipping and preventing ships from polluting the seas, ...

The system alerts shore-based rescue and communication personnel via the coast radio station or Rescue Coordination Centres (RCC) in cases of distress and emergency and makes calls to ...

Ships communicate with each other and shore-based authorities, such as harbor control and pilot stations, to exchange navigational information, request ...

The two-way communication capability of AIS also facilitates seamless data exchange between vessels and shore stations. Authorities can use AIS ...

In this article, we present an integrated terrestrial and satellite maritime communication system, where a shore-based terrestrial base station (TBS) and a low Earth orbit (LEO) satellite ...

Ships communicate with each other and shore-based authorities, such as harbor control and pilot stations, to exchange navigational information, request assistance, or report any emergencies.

Marine radio was the first commercial application of radio technology, allowing ships to keep in touch with shore and other ships, and send out a distress call ...

In response to these challenges, this paper puts forward a ship-to-shore communication system using relay ships to extend the coverage of terrestrial base stations. A ...



Maritime communications shore-based base stations

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