Online interactive course

GVF 561

Fundamentals for Marine VSAT Operators

Why should VSAT operators be trained?

Marine VSAT terminals offer global broadband coverage to ships at sea. But for maximum up-time, crew members must be able to perform critical ongoing operational tasks after the installation technician has departed.

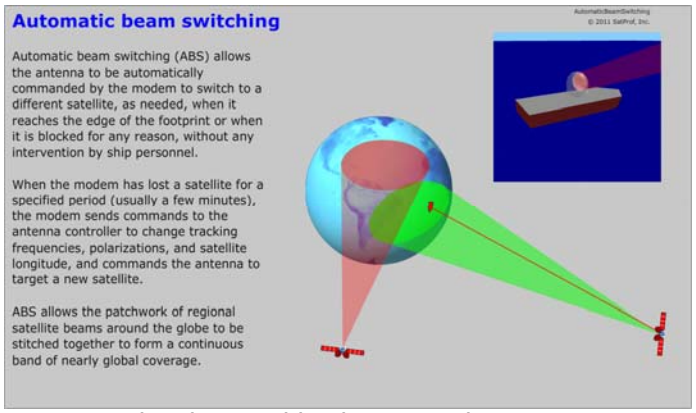
What will you learn in the course?

In this course, you will learn fundamental aspects of how to monitor, operate, and perform at-sea maintenance of marine VSAT systems.

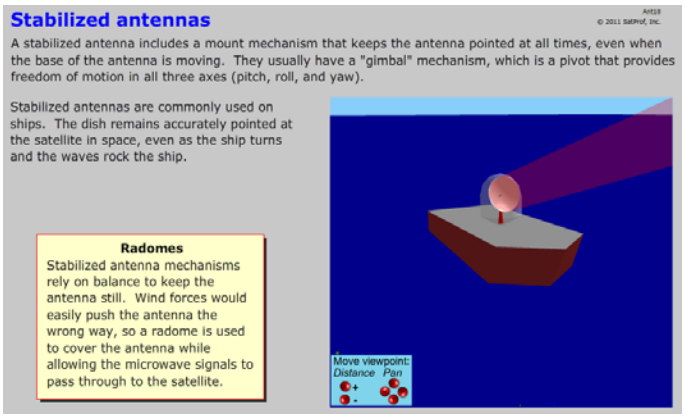
Topics covered include concepts of VSAT communications, microwave signal characteristics, satellite coverage zones and pointing angles, beam switching, stabilized antennas, blockage, interconnections to ship's navigation systems, safety issues, critical licensing questions, preventing interference, and comparing VSAT with other marine communications services.

Who should take this course?

This course is ideal for all radio operators, IT technician, or other crew members who are responsible for a VSAT system while underway. The course also serves as the first step towards GVF Specialist Operator and advanced Marine VSAT Installation and Maintenance Certifications, as well those who simply need a solid introduction to broadband maritime satellite communications.



Animation teaching how a marine VSAT might change satellite beams



Interactive 3-D animation teaching antenna stabilization concepts

Global VSAT Forum
The association of the global satellite industry.

Visit online:
www.gvf.org

SatProf, Inc.
Animated, interactive technically-accurate online training for satellite professionals.

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GVF Certification

GVF's award-winning VSAT Installation Certification training program is delivered via a combination of online, interactive, simulator-driven training modules developed by SatProf, Inc. (www.satprof.com) and formal hands-on skills testing, all managed through the GVF training portal at www.gvf.org/training. Hands-on skills testing and supplementary classroom sessions are supported by GVF Instructors and Regional Training Centers located in every major region of the world.

GVF 561 Course Specifications

Summary: Necessary knowledge and skills for technicians responsible for operating and monitoring a VSAT terminal at sea. Animation and simulator-based interactivity are used throughout the course to explain critical skills and concepts.

Certification: Students who successfully complete this course are awarded the GVF Basic Marine VSAT Operator Certification. GVF561 also serves as the first step towards GVF Specialist Operator and advanced Marine VSAT Installation and Maintenance Certifications.

Prerequisites: General familiarity with computer and voice communications

Duration: Contains over 75 animated & interactive pages, requiring 5-10 hours study. Includes review quizzes for each lesson.

Reference materials included: PDF printable copy of the course pages.

Delivery: Animated & interactive HTML/Flash, self-paced, on-line format requiring internet access while studying the course material. High speed access is preferred but is NOT required. Current versions of browser and Adobe Flash player must be installed on student's computer.

Contents:

1. Maritime communications
2. Satellite basics
3. Stabilized antennas
4. VSAT basics
5. Connecting to other ship equipment
6. Bands and beams
7. Blockage and safety
8. Interference

Learning Objectives:

Describe basic concepts of geo satellites, signals and networks; identify the VSAT components. Explain why and how VSAT compensates for ship roll, pitch, and yaw; relate AZ/EL/POL to location, heading, and satellite; describe the functions of the antenna controller. Compare heading and location and describe which ship's navigation systems (GPS, gyro compass, etc.) provide each to the VSAT and why. Describe typical IP applications on board that would rely on the VSAT, including WiFi. Describe satellite footprints and compare C-band and Ku-band. Explain how rain and clouds affect the link. Describe how different geographic regions might use different downlink frequency plans. Explain how ship structure can block the signal and how blockages can be predicted. List outage non-fault reasons including blockage, keyhole effect, and safety zone muting. Describe radiation hazard compliance. Explain when and why beam switching is required. Compare automatic and manual beam switching. Explain interference issues including radars and mobile satellite transmitters. Explain how inaccurate dish pointing, cross-pol, and transmit power cause interference. Explain why the transmitter must be inhibited under certain scenarios, per FCC rules. Describe international and domestic regulatory factors that govern marine VSAT operation. Compare geographical coverage limits of VSAT with terrestrial wireless services. Describe the key differences between MSS satphones, BGAN, and VSAT. Describe how an alternative-path link is used to remotely configure and troubleshoot a VSAT.

GVF Satellite. Solutions. The World.

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The association of the global VSAT industry.
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For further information, fees, schedules, and to register for this and all GVF courses, visit the GVF Training Portal at
www.gvf.org/training

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