



WIDE NETWORK SOLUTIONS



Maritime
Solutions
PROPOSAL



Wide Networks Solutions is one of the leading providers of innovative maritime broadband satellite communication solutions Worldwide.

Our integrated communication solutions focus on providing seamless connectivity for maritime industry and customers.

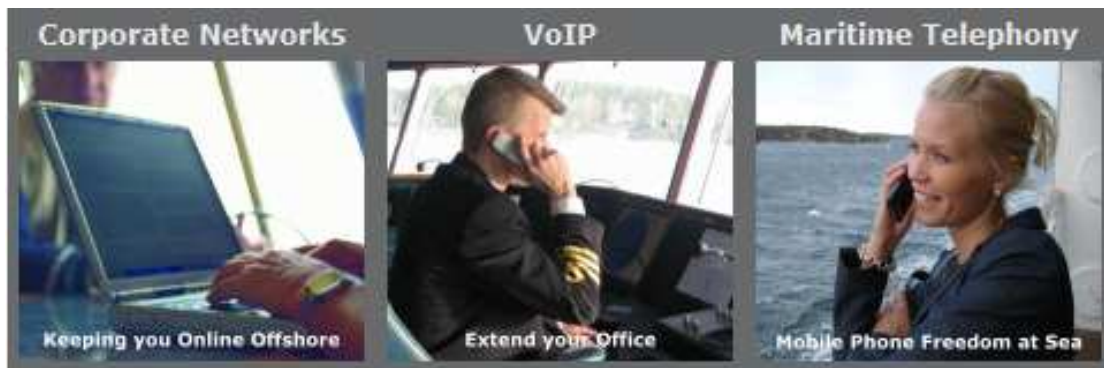
Wide Network Solution's ability to offer a full turnkey broadband service - equipment, satellite capacity, internet connectivity, and support - leaves our competitors in our wake. If the requirement is reliable high-quality communications at sea, we have the advanced dependable solutions you need.

Our experienced staffs have been working in the fields of satellite communication and IP-networking since the technology came into use.

Our solutions combine the latest Maritime Small Aperture Antenna (MSAT) and network technology with superior performance and reliable satellite and support services. We can provide design, procurement, implementation, satellite capacity, 24/7 operational service and support, training and financial services.



The result is a highly effective maritime broadband communication solution, with clear and concise overview of your communication costs.





Corporate Networks over Satellite

Modern business requires reliable and capable Internet connectivity. At sea, this can only be easily provided using satellite communications. Our solutions bring you all the power, security and interoperability of modern IP-driven network technology and services, wherever you are: everything from bank transactions to WLAN, voice and video. We keep you connected.

Key applications:

- Broadband Network Connection
- Ship/shore LAN and exchange integration
- Data transfer for fleet management and database sharing
- Internet access direct to backbone
- VPN and intranet solutions
- Secure transaction/credit card verification
- Passenger and Business WLAN/WAN
- Telephone and fax in internal network
- VoIP connectivity to customer exchange or public network
- GSM connectivity with worldwide roaming
- Payphone services
- Video conferencing
- Streaming/Broadcast Multimedia: TV, Audio, Video, Interactive
- Remote monitoring & diagnostics



Traditional maritime satellite communications suffer from three stumbling blocks – price, throughput and interoperability. Solutions from current service providers tend to focus on narrow bandwidth for a relatively high cost – excellent for on-demand use for emergencies, prohibitive for ‘always on’ commercial connectivity. Satellite communications also suffers from the legacy of a splintered, deregulated market – multiple actors with proprietary solutions, focused on their own niches. This does not provide a satisfactory result for the customer.

WNS, works to meet customer needs by combining all aspects of service, equipment and space segment with a flexible IP-based network approach allowing multiple standards and services to be integrated into the same satellite network. The result is the seamless connection of ships to existing intranets, and the Internet in general, without compromising quality, security or cost.



We have assembled a team of experts and partners to meet your maritime communications requirements, for today and tomorrow, on your terms.

Real turnkey solutions based on a world-class partnership and proactive support – not merely a repackaging of subcontractors. Our solutions meet your combination of maritime broadband communications and networking needs, while retaining the flexibility to work seamlessly with both your legacy systems and your own vision for your systems future.



Key Features:

Corporate Networks over Satellite lie at the heart of our portfolio, and are the key to all our other solutions. You can be sure of the most modern technology, the best service, and the most proactive package to meet your needs.

Core of our Technology:

The core of our technology is the use of IP (Internet Protocol), the ideal basis for providing the latest broadband digital services over satellite. IP is the key to interoperability between the vast, diverse and competitive supply of Internet products and services. Moving to an IP-based satellite communications platform allows WNS to bring these advantages to maritime customers.

IP-based platforms allow us to create a network as complex and secure as any on land. All applications are digitized, existing within your network as data streams, to be routed and dealt with as you wish. This means you can create virtual private networks and sub-domains, control access and determine quality of service. Ideal for customers with varied services coexisting on the same network, spread out over a wide and varying geographic area. Customers like you.

A typical MSAT (Maritime Small Aperture Terminal) is an enhanced version of a land-based satellite terminal and can be easily integrated with existing networks. WNS has enhanced traditional terminals to meet the added demands of operating at sea. Our advanced, stabilised and agile MSATs, together with robust link budgets, master the challenges of heavier weather conditions and varying satellite coverage. We feature intelligent data caching and IP acceleration to give a data transparency unparalleled on land. Whether using legacy, off-the-shelf, or new MSAT terminals, WNS has the expertise to keep you online offshore, in all weathers.

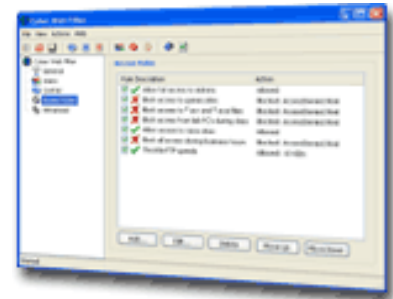
Bandwidth Management System

The Solution is gaining an HTTP and SOCKS 5 proxy which can **share**, **monitor** and **filter** Internet access.

You can create access rules controlling what activity is allowed and which should be blocked, based on the username, time, domain name, or filename.

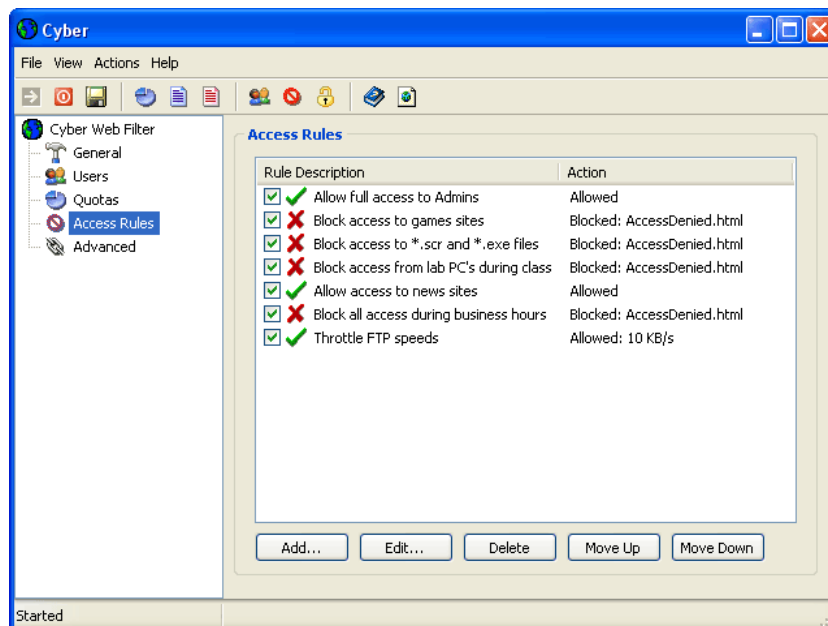
You can also speed throttle certain requests to a slower speed so that they do not congest your network.

A usage counter records how much bandwidth and time each user has spent on the Internet.



In conclusion this system :

1. Shares your Internet connection.
2. Records a log file of Internet activity (web sites visited).
3. Block access based on the URL, time or username.
4. Speed throttle connections to prevent network congestion.
5. Restrict users bandwidth and time spent on the Internet.
6. Built-in advertisement and adult content filters (if required).
7. Supports Active Directory and NT domain authorization.
8. Runs as a Windows service, and settings are password-protected.



Offshore Networks Examples

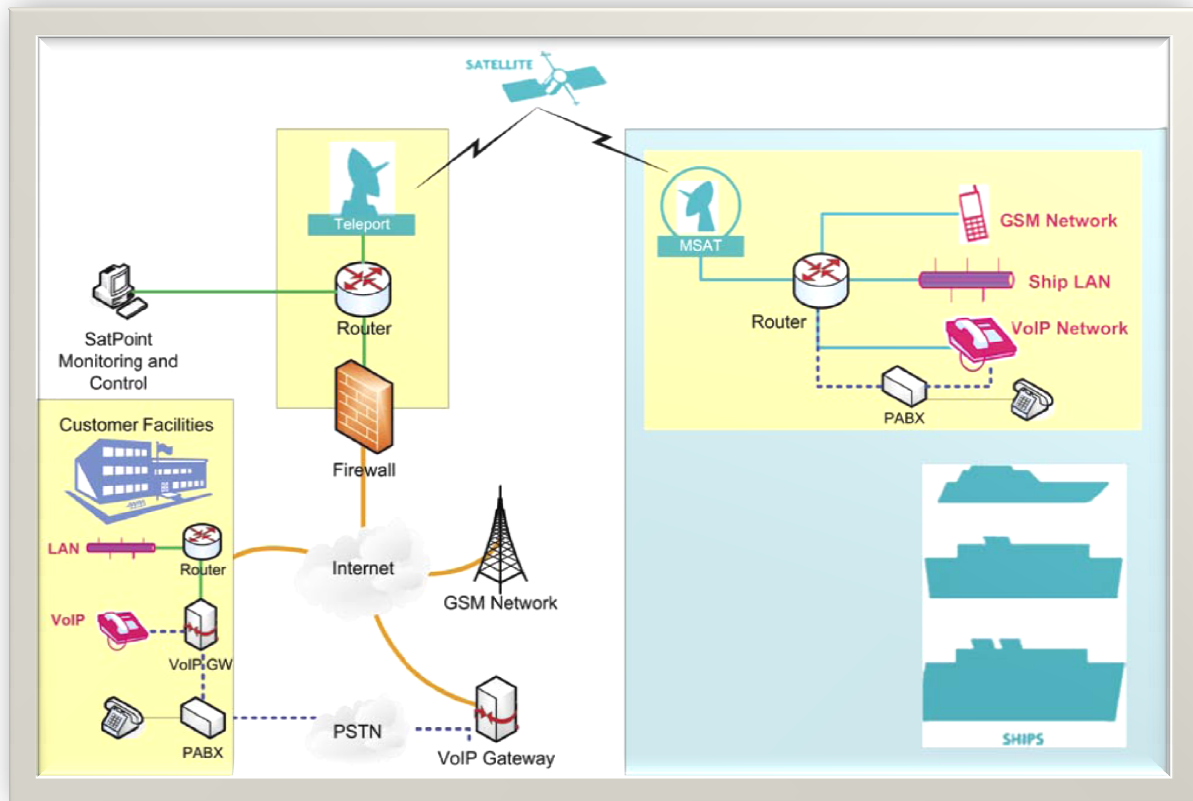
Corporate Networks

When your goal is to provide a reliable, "always on" broadband link between your ships, shore facilities, offices and headquarters, WNS can provide the solution for a variety of architectures and operating frequencies. Wide Network Solution's networks are robust, scalable, and packaged with reliable satellite capacity and backbone connection, offering the best balance between performance and cost for your particular needs. Our broadband links can support all your business-critical online services, such as credit card purchases, fleet management, and communications, without having to break out of virtual pipelines into the general Internet. We extend your corporate LAN to wherever you are!

On-demand broadband

The service works in the same way as an onshore ADSL, with the added advantages of stability, robustness and data transparency. WNS maritime broadband satellite communications networks feature much fewer users per gateway that terrestrial networks, so lower contention levels.

The result? An unprecedented cost-effective data service: an important potential source of revenue for commercial operators, an important facility for engineers and agents who have to be on board for a long time who also rely upon 'always on' access, an important enhancement to crew wellbeing.





VoIP over Satellite

Voice over IP is the next generation technology emerging to power corporate communications. It combines the feature and performance of corporate telephony systems with the cost-effectiveness, flexibility, scalability and oversight of the Internet. Based on our Corporate Networks over Satellite, WNS's VoIP over Satellite solution allows you to extend the advantages of VoIP offshore.

Extend Your Office

Communications are the key to modern business success. Many businesses operate in multiple locations over a wide geographical area, and are increasingly mobile, yet they still require core office functions – voice, fax, conference calling and messaging. This provides a cost and quality challenge that conventional solutions – line rental, analogue telephony, exchanges and paging – cannot meet.

The IP-telephony revolution, spearheaded by Skype, involves transferring from traditional telephony to an IP-based solution, Voice over IP. VoIP creates a huge potential for cost savings for private and business customers alike, and on top of this saves companies further money by making exchanges virtual and accessible online – without losing the power of corporate communications architecture such as security, exchange management, voicemail and conferencing. This works well with traditional Internet connections, but current solutions leave marine customers adrift.

WNS provides marine business with a unique and powerful suite of VoIP solutions, combined with the unique geographic coverage provided by satellite communications and our reliable teleport services. Our VoIP platform offers hosted IP-telephony with an unprecedented level of scalability, transparency, control and quality - all backed by our World Class Support. From Centrex solutions for small operations to Hosted exchange and Call Center solutions for large customers, we extend your office, hassle-free, to wherever your facilities and assets are.

Key Features

A marine VoIP over Satellite solution has several elements:

On-Board Technology: Installing VoIP technology on board your vessels and at your facilities could not be simpler – all IP terminals simply plug into your existing LAN. We can provide you with a wide variety of IP terminals to suit your taste and needs – everything from simple desk phones, to palmsets and videocon terminals.



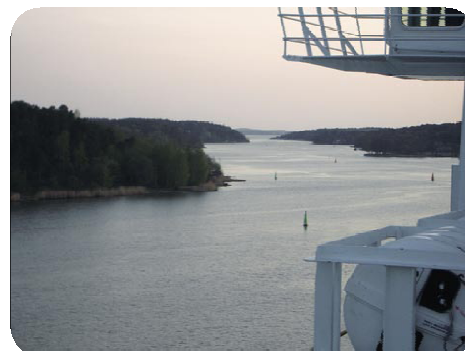


Satellite Link: WNS's onboard system is transparent, operating seamlessly with the marine satellite link of your choice - whether WNS or legacy. Your VoIP traffic is bundled with the rest of your IP traffic and backhauled via satellite to a teleport onshore. All that is required for the service to operate is a minimum bandwidth and quality of service for that part of the satellite link.

Naturally if you choose a WNS integrated Corporate Networks over Satellite solution, you will gain the peace of mind of WNS's integrated approach, including state-of-the-art IP-over-satellite technology, and amongst the world's most reliable satellite services access via teleport direct to the internet backbone.

Onshore Gateway: Once your IP traffic has been backhauled to a teleport, the final stage is to connect it to a gateway, the heart of the VoIP solution. Here virtual exchange services switch individual calls internally inside your own network, or terminate it to PSTN or other operators. The Gateway also contains the sophisticated service monitoring and administration functionality that makes our solution unique.

Service Administration: Using our unique service administration platform gives you access to the level of monitoring and control of your service you desire – or WNS can provide that service for you. From simple statistics reporting and static configuration, the systems capabilities extend all the way to full remote administration and cost monitoring, all accessed from wherever you happen to be via a powerful but simple web interface. Cost and control, at your fingertips.



Specifications

Service Form:	VoIP Turnkey Solution including Satellite Backhaul
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User services:	Toll-quality / carrier-class voice over satellite Online administration and monitoring interface
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Signalling and Traffic:	SP / Skinny / MGCPH.323 as option IP or TDM routing at Gateway
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Compression:	G.722 or G.723
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Optional services:	Full hosted digital exchange capability Integration with legacy PBX, 3G, GSM, WiFi Call center with autchelp, routing, call monitoring and supervision Video over IP, multimedia support under development
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Additional Features:	Open Platform Fully scaleable and unlimited capacity Centralised service management Enhanced digital features
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As every network is different, we can only present the most general specifications for our Corporate Networks over Satellite solutions. These give an idea of the variety of solutions WNS can provide, all backed by our integrated approach. WNS also has an extensive in-house development team and capabilities, which can work with you to meet customised requirements outside the specifications listed here. Please contact us for more details.

General Specifications:

Network Topology: Point-to-point, Star, Mesh

Network Access Scheme: SCPS; DAMA; iDirect; (F/T/C)DMA (DVB-S and S2)

Satellite Operating Frequencies: Ku, C and Ka

Satellite Operating Frequencies: Ku (C and Ka as options)

Applications: Any IP based – Internet, FTP, VoIP, Video over IP, Streaming, VLAN, GSM backhaul, ClearChannel, Broadcast and more

Bitrates Up to 8 MBps

(Standard package - Bitrates available depend on satellite coding scheme used and availability via satellite link budget)

Key Features

- Complete integrated turnkey solution – equipment, Satellite capacity, Internet connectivity, support, installation, financing.
 - "Always on" Broadband Access, monitored and logged 24/7.
 - Uptime and reliability figures among industry best.
 - IP transparency – mobile terminals are treated as any other LAN client, extending corporate LAN, allowing VLAN and VPN.
 - Fully compatible with existing corporate internet, and telephony exchange (PABX).
 - Tested and proven digital service functionality for VoIP, GSM, and a whole host of applications.
 - Superior contention rates compared with traditional land-based solutions.
 - Simple access scheme - access at fixed cost, no variable costs, no night and day rates, no bitrate thresholds. Fixed amount, periodical service invoice – no surprises, no hidden costs.
 - Scalable – incremental bitrate increase a phone call away, contract extension lowering traffic costs.
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