



UNOLS – RVTEC  
Lamont-Doherty Earth Observatory  
Feb. 13<sup>th</sup>. 2013



# The Company

## World-Link Communications, Inc.

Established 1989 in Massachusetts , USA

Managing & supporting satellite communications for 1,200 vessels worldwide

Our largest customer fleet is 180 ships - 16 years relation.

Offices in Boston, Cyprus, Greece, Miami, Buenos Aires, St. Petersburg, Russia

Commercial fleet of VLCCs, Container Ships, Research and , Oil & gas support vessels.

Develop, operate, and maintain our own systems, services, and Network operations.

**24 x 7 support**





Delivering **Maritime Communications Solutions**  
**Wherever. Whenever.**

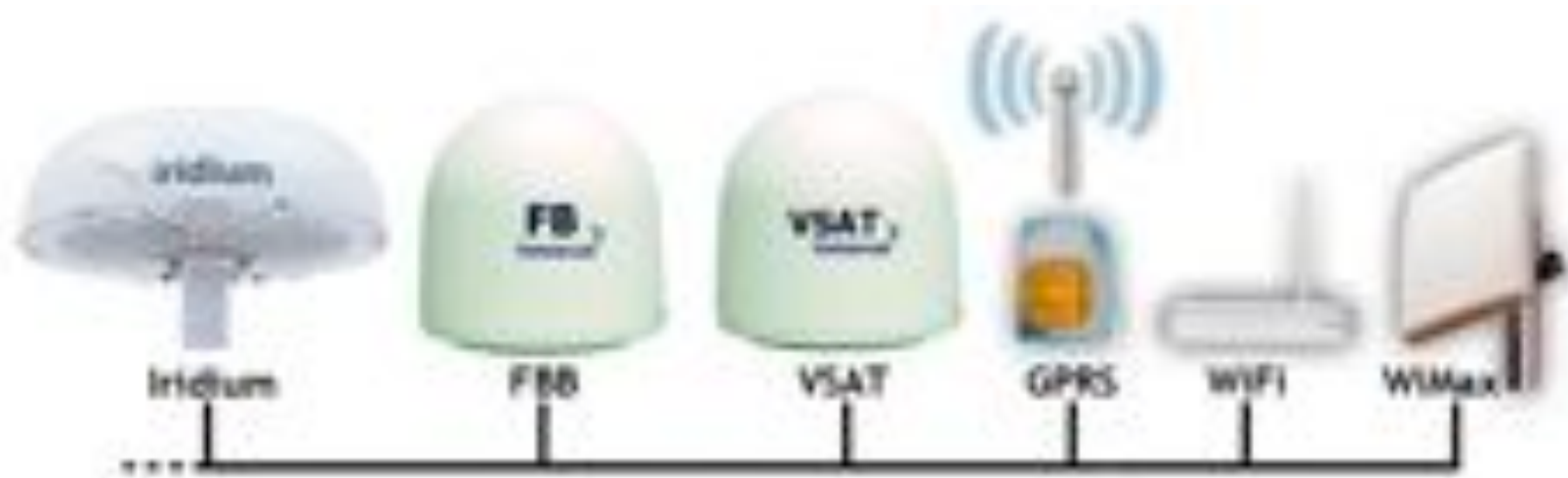
## A leading Portfolio of Value Added Services



Surf the Broadband Wave



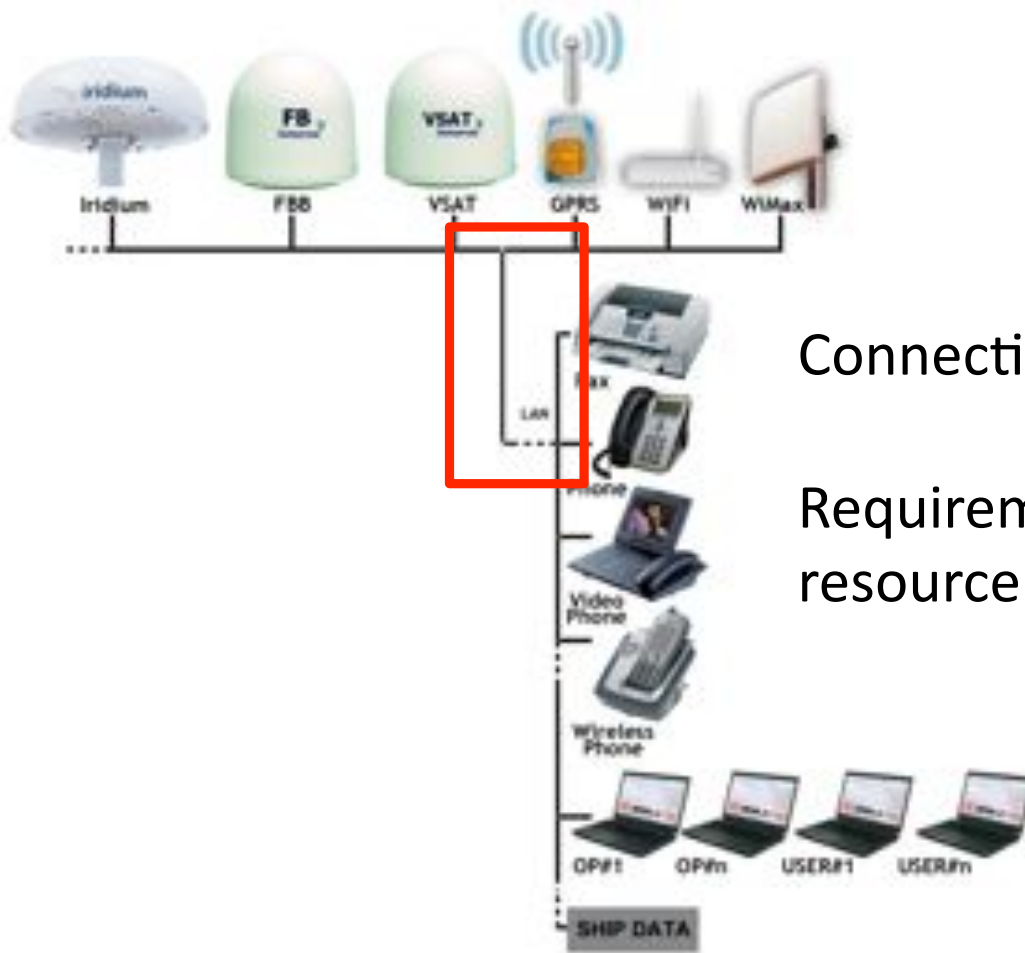
# Broadband Onboard



- Shore based
- Coastal
- Regional
- Global
- Polar



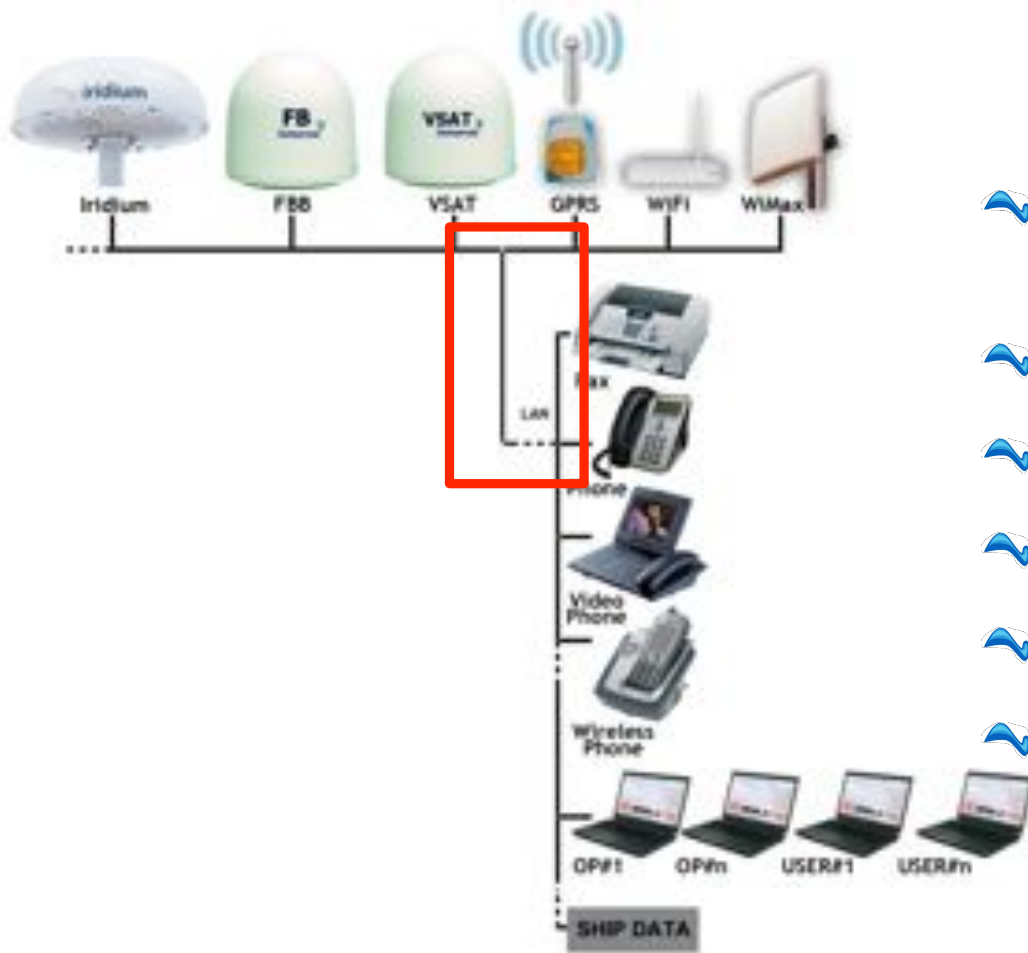
# Network deployment



Connecting the onboard LAN

Requirement for bandwidth control & resource allocation.

# Network deployment



- Access Control  
Who / When / Where / What
- Vessel Operations LAN ?
- Virus & malware
- Cyber-attacks
- Unavailability of the network
- Security Cost

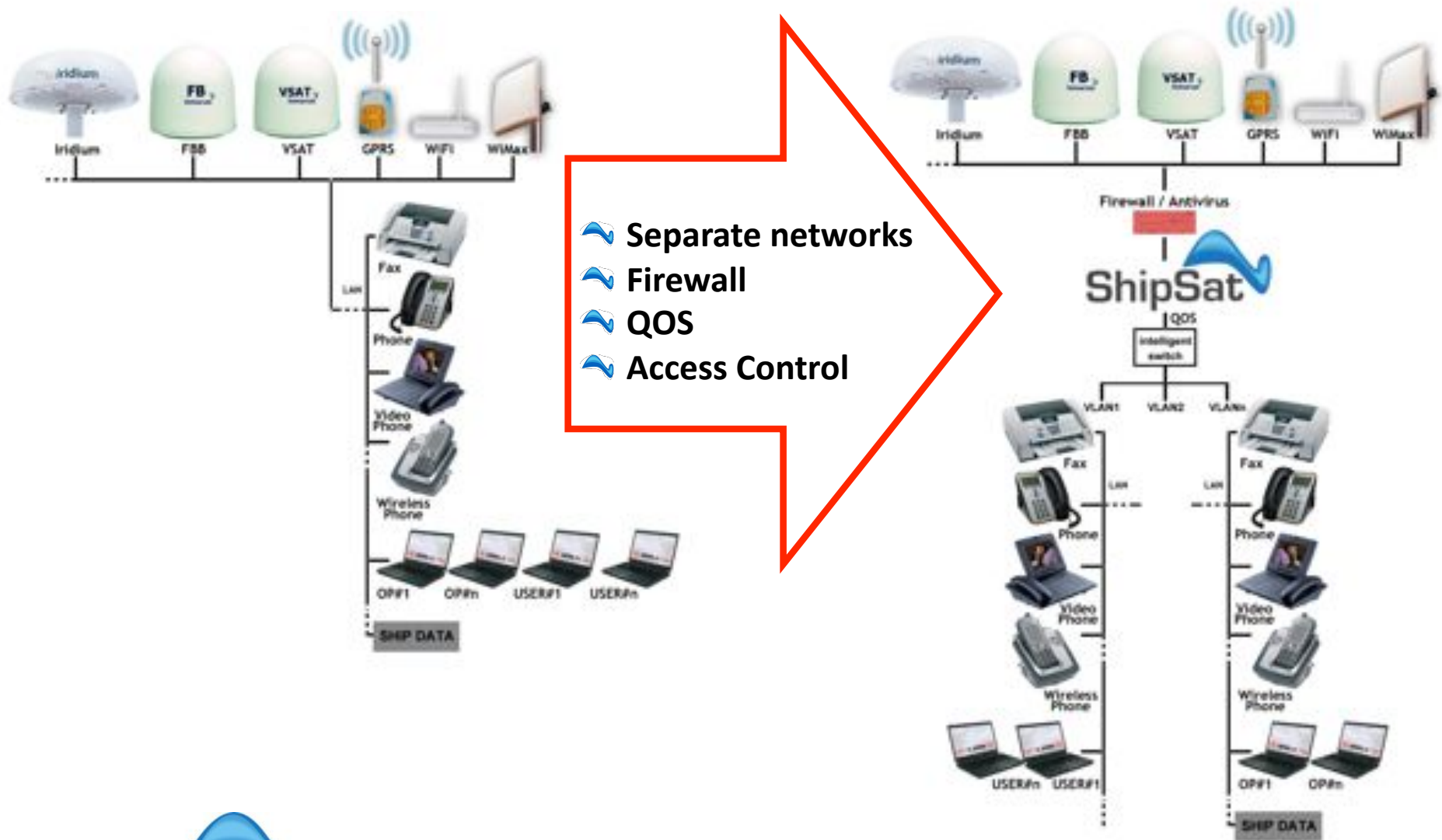
# Network Management



- Communication cost control
- Bandwidth Accounting
- SATCOM optimization
- Enterprise security
- Access to onboard network
- Fleet Network Support



# Hardening the infrastructure





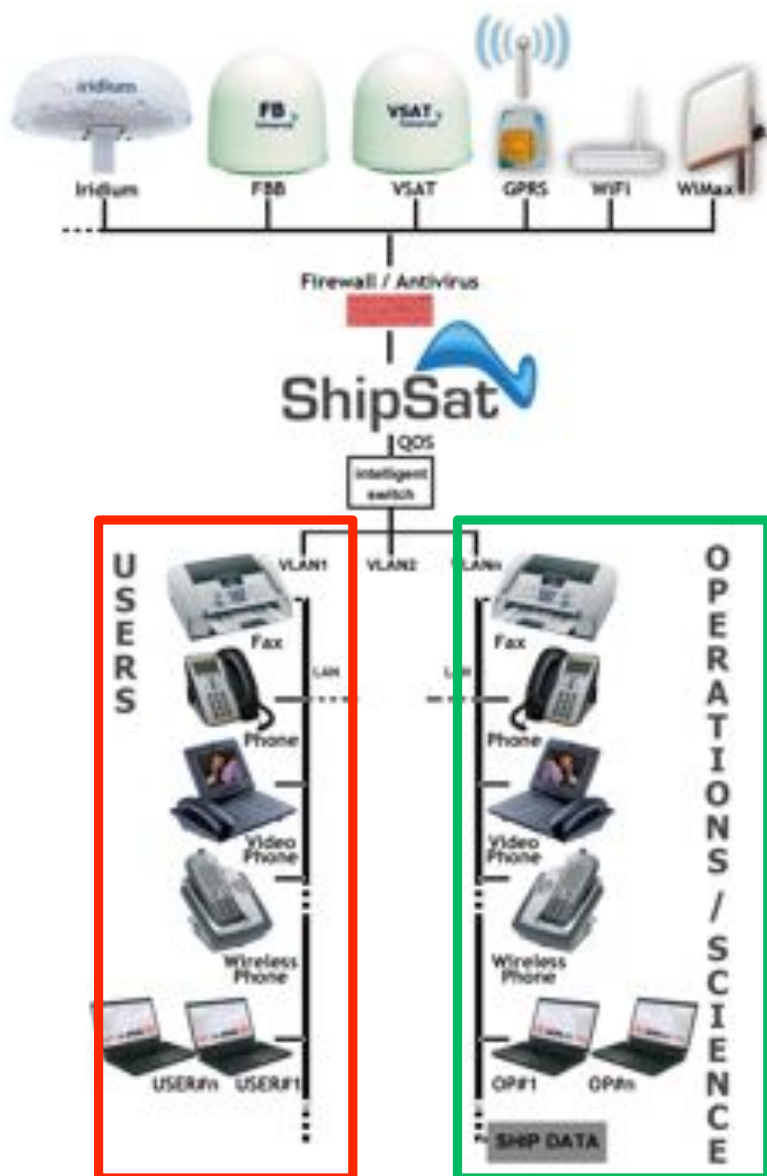
# QOS – Ensuring bandwidth availability



- MAC address
- IP Protocol
- Application
- Sub-net



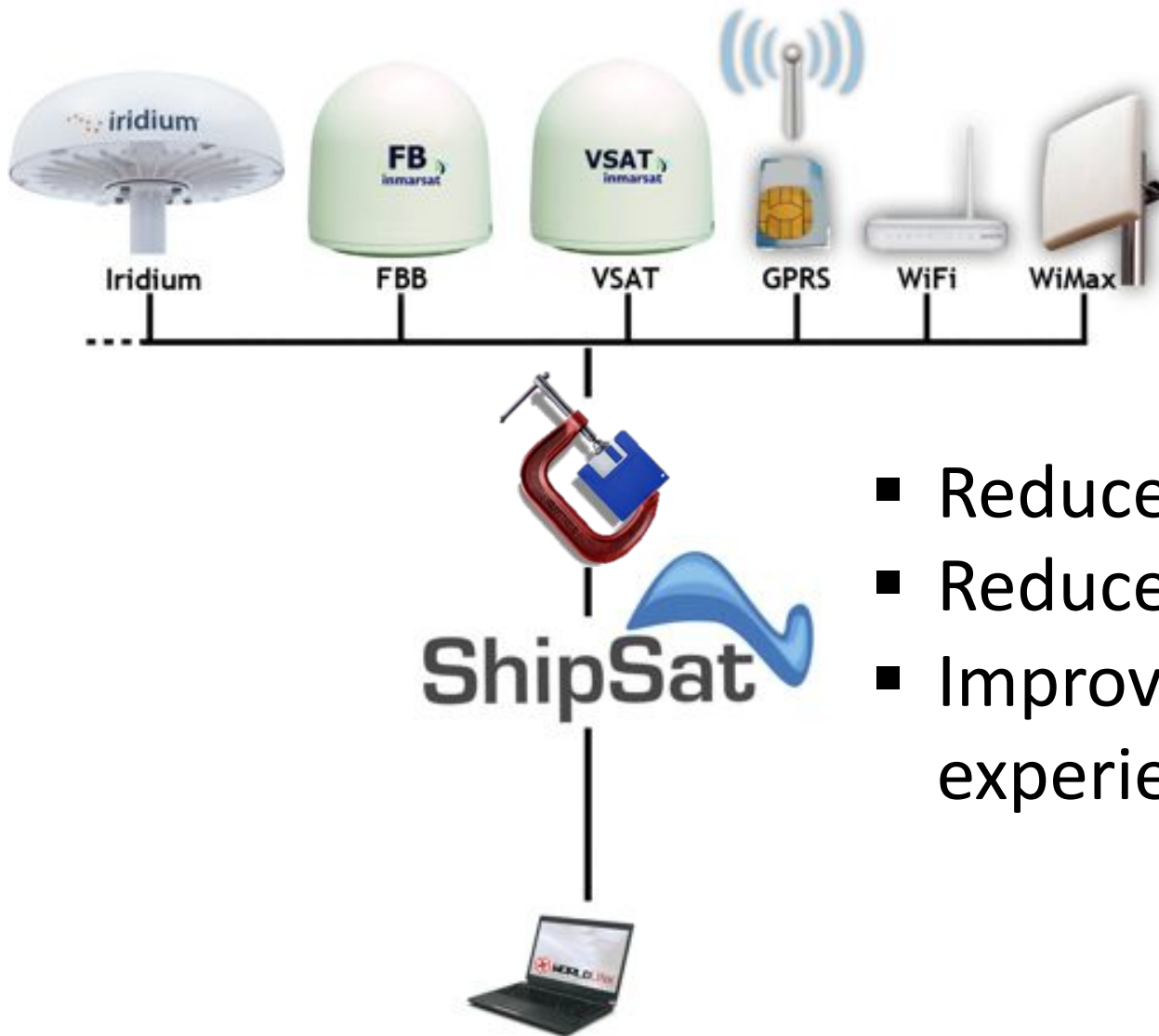
# Operation & Science Network segregation.



Through the VLAN feature, ShipSat allows the setup of different networks for vessel operation / science and the crew, keeping the two worlds logically and physically separate.



# On-the-fly data compression



When you browse using ShipSat, all inbound / outbound traffic is compressed. This means:

- Reduced consumption
- Reduced latency
- Improved navigation experience





## Web content filter

☐ Enable filtering
 Marlow
vlan-3
Save

Groups	Categories		
Child protection <a href="#">Select All</a> <a href="#">Clear All</a>	<input type="checkbox"/> Chat <input type="checkbox"/> Gambling <input type="checkbox"/> Sex	<input type="checkbox"/> Weapons <input type="checkbox"/> Hacking <input type="checkbox"/> Violence	<input type="checkbox"/> Drugs/Alcohol <input type="checkbox"/> Hate speech
Leisure <a href="#">Select All</a> <a href="#">Clear All</a>	<input type="checkbox"/> Advertisements <input type="checkbox"/> Games <input type="checkbox"/> Hobbies <input type="checkbox"/> Travel	<input type="checkbox"/> Streaming media <input type="checkbox"/> Sports <input type="checkbox"/> Lifestyle <input type="checkbox"/> Photo Searches	<input type="checkbox"/> Food <input type="checkbox"/> Health <input type="checkbox"/> Motor Vehicles <input type="checkbox"/> Shopping
Business <a href="#">Select All</a> <a href="#">Clear All</a>	<input type="checkbox"/> Web mail <input type="checkbox"/> Politics	<input type="checkbox"/> Finance <input type="checkbox"/> Real Estate	<input type="checkbox"/> Job Search/Career <input type="checkbox"/> Search Engine
Others <a href="#">Select All</a> <a href="#">Clear All</a>	<input type="checkbox"/> Education <input type="checkbox"/> News	<input type="checkbox"/> Sex education	<input type="checkbox"/> Religion

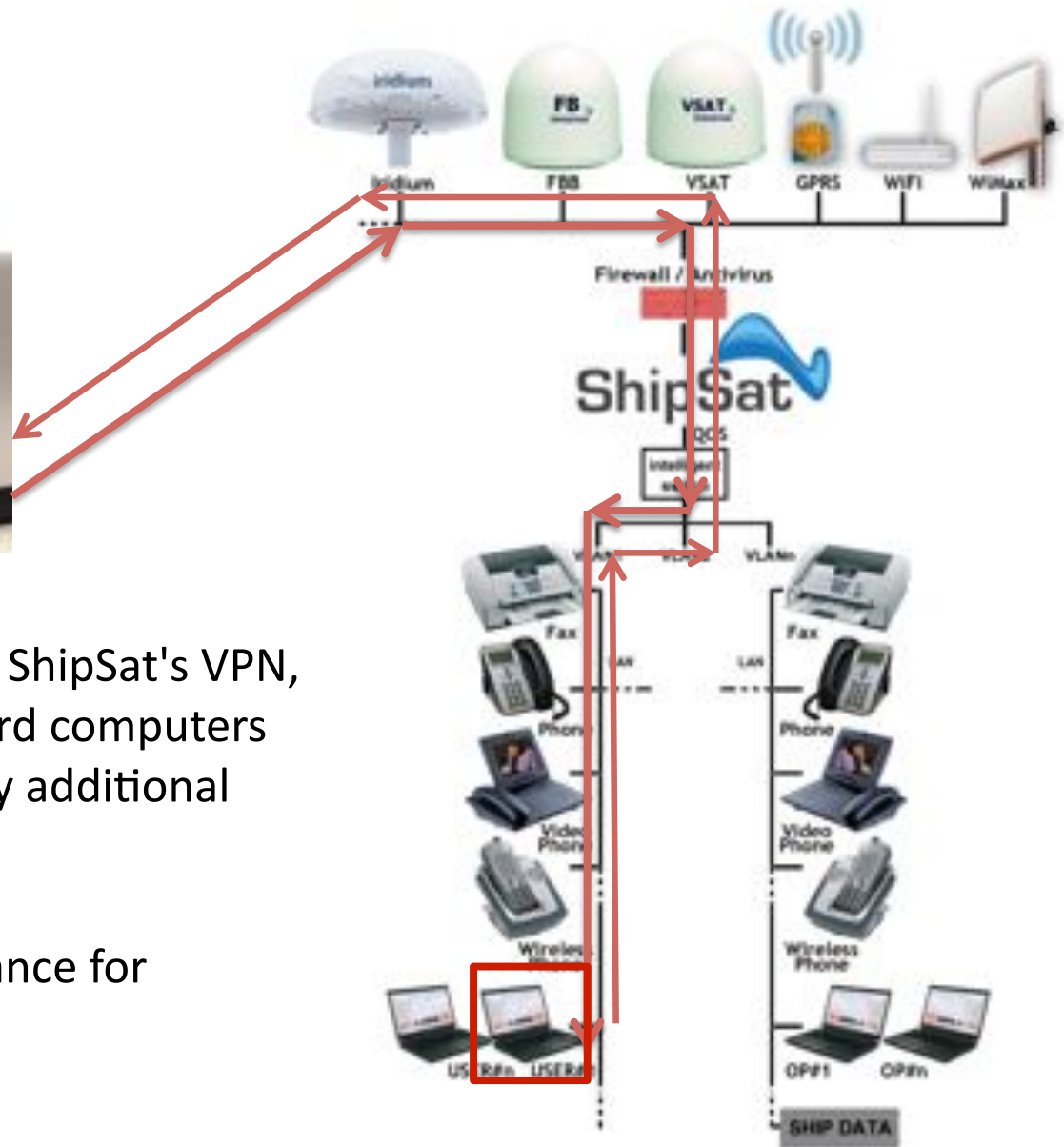


# Manage your onboard computers.



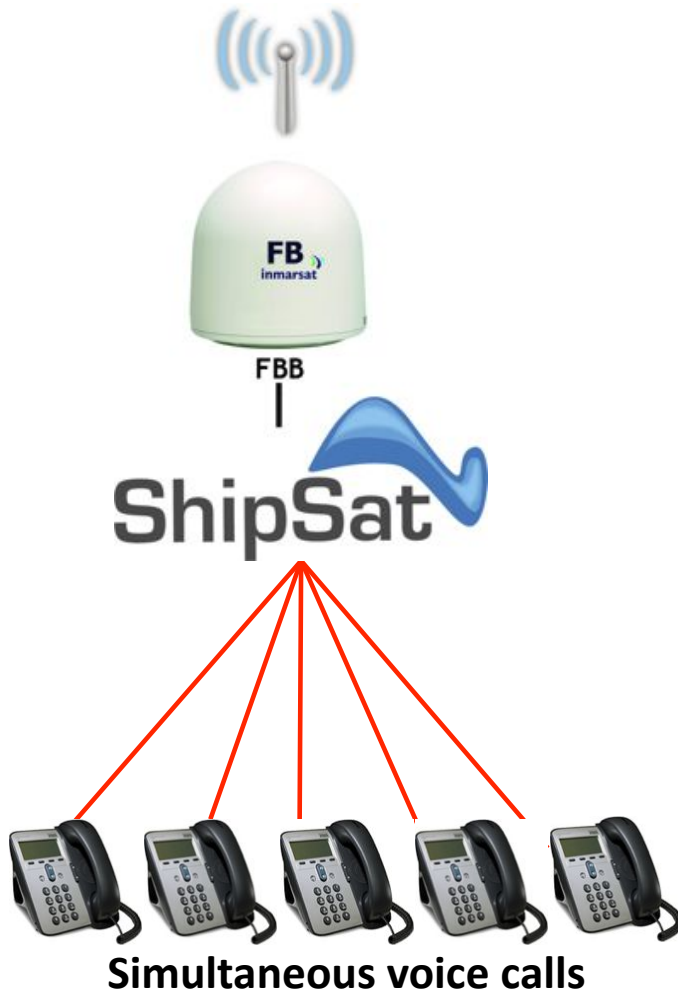
By connecting your computers to ShipSat's VPN, you can manage ALL your onboard computers and devices remotely without any additional hardware.

Reduce the cost of vessel attendance for computer repair!!





# Built-in PBX



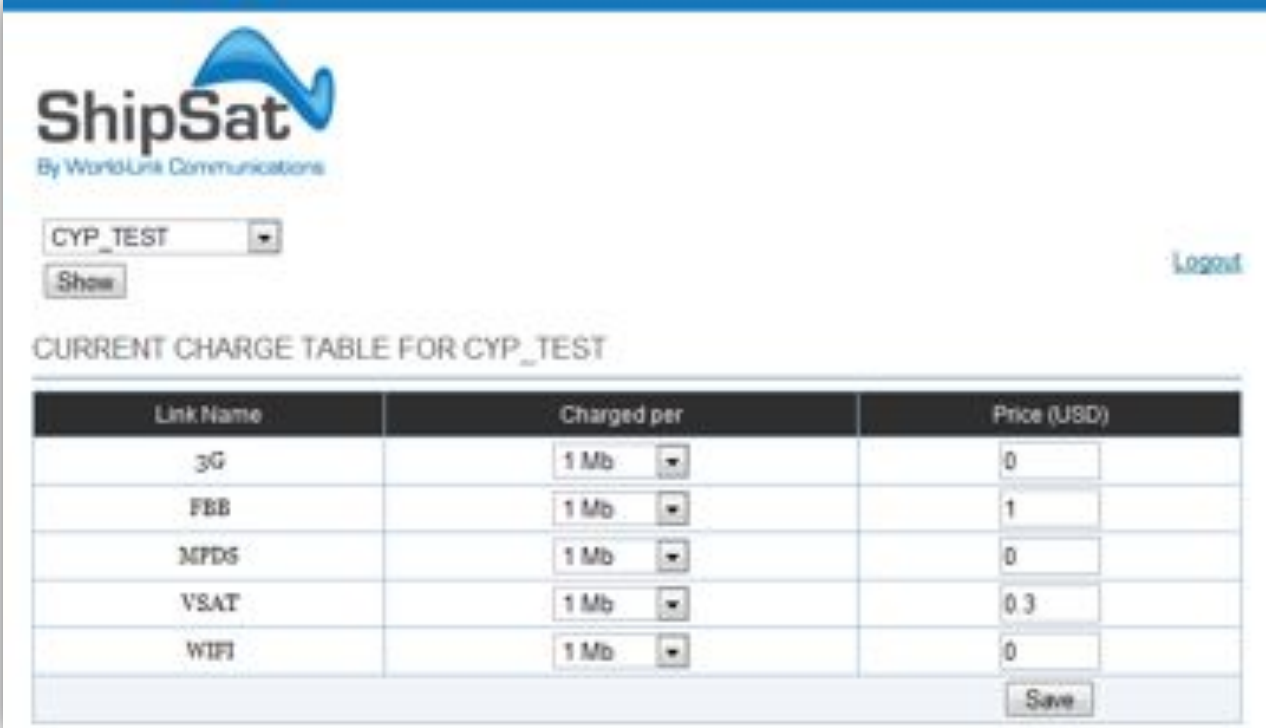
ShipSat features a built-in PBX, which allows you to handle several voice calls at the same time over the same FBB link!

There is no need to overspend on expensive hardware or extra antennas to have all the voice you require.



# Cost Management

## Pricing based on link used & least cost routing



The screenshot shows the ShipSat web interface. At the top left is the ShipSat logo with the tagline 'By WorldLink Communications'. Below the logo is a dropdown menu set to 'CYP\_TEST' and a 'Show' button. On the right is a 'Logout' link. The main section is titled 'CURRENT CHARGE TABLE FOR CYP\_TEST' and contains a table with three columns: 'Link Name', 'Charged per', and 'Price (USD)'. The table lists five links: 3G, FBB, MPDS, VSAT, and WIFI. Each link has a '1 Mb' dropdown in the 'Charged per' column and a corresponding price in the 'Price (USD)' column. A 'Save' button is located at the bottom right of the table.

Link Name	Charged per	Price (USD)
3G	1 Mb	0
FBB	1 Mb	1
MPDS	1 Mb	0
VSAT	1 Mb	0.3
WIFI	1 Mb	0



# Cost Management



## Pre-paid & Post paid end user accounts

A screenshot of a web application interface titled "Users list". At the top right, there are links for "Add Users Amount" and "Logout". Below the title is a search bar containing the text "mary\_3". Below the search bar is a table with two columns: "User" and "Amount (USD)". The table contains two rows of data:

User	Amount (USD)
mary_3_pres@WorldLink	\$21.75
mary_3_reg@WorldLink	\$8

At the bottom of the interface is a button labeled "OK / Close".

## Automated & on-line re-loading of accounts

A screenshot of a web application interface titled "Prepaid Billing Form". At the top right, there are links for "Requests History" and "Logout". Below the title is a table with three columns: "User", "Connection", and "Amount (USD)". The table contains one row of data:

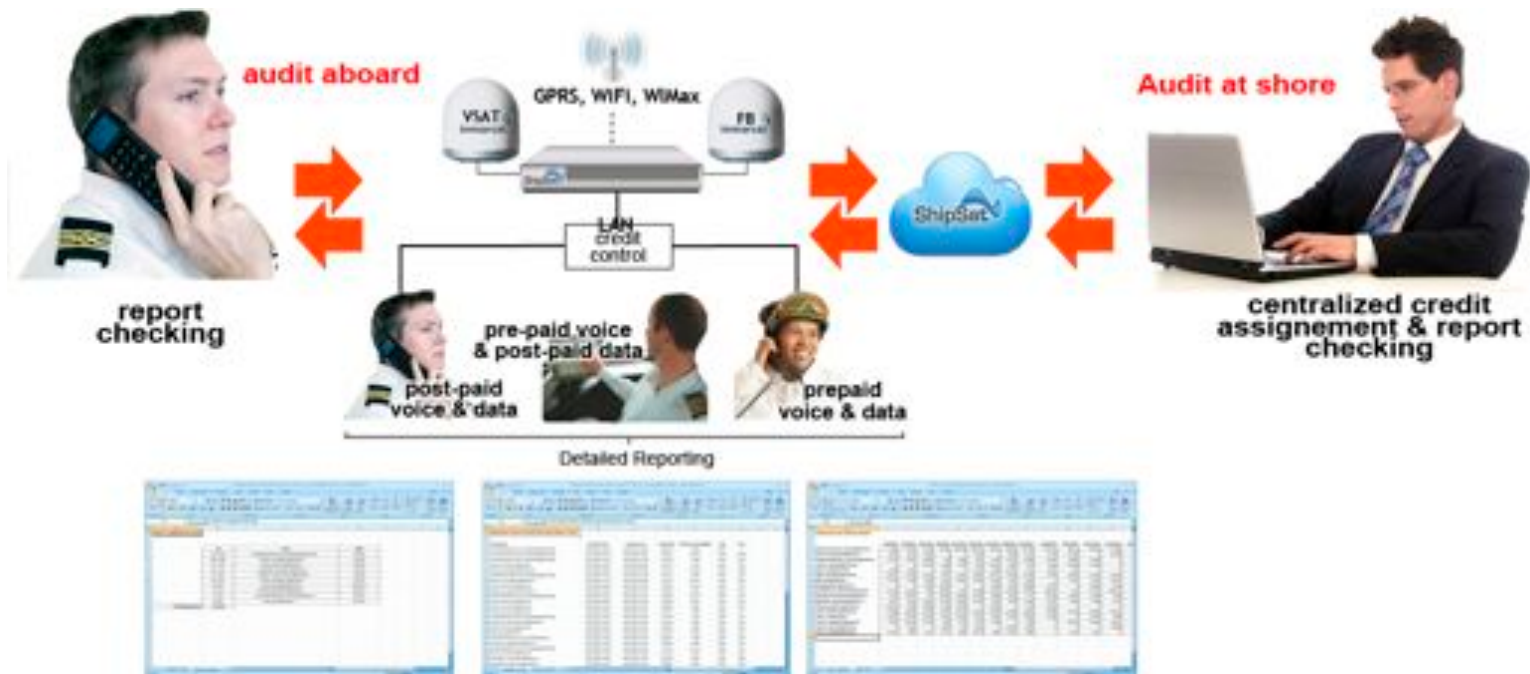
User	Connection	Amount (USD)
Me	VSAT	10 USD

At the bottom of the interface is a button labeled "Request".



Auditing.

# Auditing



# Auditing.

## Details per User/Vessel

1	SHIPBOARD TRAFFIC DETAILS PER USER (APRIL 21 2012)						
2							
3	Username	Session start	Session end	Total time	Traffic amount(Mb)	Link	Cost
4	anonymous_undefined	4/21/2012 23:02	4/21/2012 23:03	0:00:07	0.004	VSAT	0
5	anonymous_undefined	4/21/2012 22:19	4/21/2012 23:01	0:41:54	16.534	VSAT	10.96
6	anonymous_undefined	4/21/2012 21:51	4/21/2012 21:58	0:07:14	1.944	VSAT	0.58
7	anonymous_undefined	4/21/2012 20:19	4/21/2012 20:32	0:12:27	1.119	VSAT	0.34
8	anonymous_undefined	4/21/2012 18:47	4/21/2012 20:59	2:11:47	33.352	VSAT	10.01
9	anonymous_undefined	4/21/2012 17:35	4/21/2012 17:58	0:22:17	8.536	VSAT	2.56
10	anonymous_undefined	4/21/2012 17:32	4/21/2012 18:46	1:13:15	29.877	VSAT	8.96
11	anonymous_undefined	4/21/2012 16:58	4/21/2012 19:59	3:00:53	13.116	VSAT	3.93
12	anonymous_undefined	4/21/2012 16:31	4/21/2012 17:32	1:00:40	0.741	VSAT	0.22
13	anonymous_undefined	4/21/2012 16:23	4/21/2012 17:17	0:53:08	18.123	VSAT	5.44
14	anonymous_undefined	4/21/2012 16:01	4/21/2012 16:02	0:00:58	0.091	VSAT	0.03
15	anonymous_undefined	4/21/2012 15:43	4/21/2012 15:47	0:04:00	0.644	VSAT	0.19
16	anonymous_undefined	4/21/2012 15:10	4/21/2012 15:23	0:13:13	1.009	VSAT	0.3
17	anonymous_undefined	4/21/2012 14:50	4/21/2012 16:22	1:32:33	3.514	VSAT	1.05
18	anonymous_undefined	4/21/2012 14:31	4/21/2012 14:56	0:25:18	1.804	VSAT	0.54
19	anonymous_undefined	4/21/2012 14:05	4/21/2012 14:33	0:28:35	1.469	VSAT	0.44
20	anonymous_undefined	4/21/2012 13:59	4/21/2012 14:21	0:21:53	4.079	VSAT	1.22
21	anonymous_undefined	4/21/2012 13:48	4/21/2012 13:53	0:05:03	2.298	VSAT	0.69
22	anonymous_undefined	4/21/2012 13:26	4/21/2012 13:35	0:08:53	1.485	VSAT	0.45
23	anonymous_undefined	4/21/2012 13:20	4/21/2012 14:37	1:17:10	23.772	VSAT	7.13
24	anonymous_undefined	4/21/2012 12:41	4/21/2012 13:02	0:21:13	1.053	VSAT	0.32
25	anonymous_undefined	4/21/2012 12:39	4/21/2012 13:07	0:28:18	2.802	VSAT	0.84
26	anonymous_undefined	4/21/2012 12:17	4/21/2012 12:24	0:06:57	---	---	---



# Auditing.

## Summary per User/Vessel

1	TRAFFIC SUMMARY PER USER		
2			
3			
4		MB	USER
5		131.961	afkassaschouti_casings@casings
6		106.484	brass_marg@casings
7		27.236	note_@casings
8		11.731	lign@casings
9		11.653	lign@casings
10		10.255	note_@casings
11		8.656	note_@casings
12		6.277	lign@casings
13		5.316	lign@casings
14		4.079	lign@casings
15	Total(Megabytes)	323.648	
16			
17			
18			
19			
20			

# Auditing.

## Daily Traffic report by Vessel

1	DATA TRAFFIC REPORT										
2											
3		4/1/2012	4/2/2012	4/3/2012	4/4/2012	4/5/2012	4/6/2012	4/7/2012	4/8/2012	4/9/2012	4/10/2012
4	allanapada, bangladesh	75.284	75.653	87.149	49.442	159.039	188.572	100.22	86.546	99.785	158.725
5	blaka, bangladesh	2.561	11.54	8.384	0	0	4.954	0	6.058	1.511	5.778
6	chapanapada, bangladesh	10.724	12.651	64.065	7.88	5.848	9.762	10.84	47.513	33.844	12.091
7	chaka, bangladesh	0	0	14.135	5.016	4.279	2.837	24.237	8.186	2.776	4.162
8	chaka, bangladesh	2.983	4.333	0	7.345	0	6.374	7.089	21.553	5.53	5.641
9	chaka, bangladesh	80.314	37.168	35.332	6.421	17.837	40.851	41.127	24.205	50.796	14.193
10	chaka, bangladesh	11.234	6.788	2.065	9.515	23.041	12.818	17.382	1.933	1.629	0
11	chapanapada, bangladesh	0	0	4.554	14.282	0	0	1.494	12.04	10.004	0.001
12	chapanapada, bangladesh	47.797	15.155	54.9	86.901	5.233	11.608	21.283	34.206	11.928	103.361
13	chapanapada, bangladesh	5.919	28.391	7.25	20.828	18.803	14.499	6.896	9.258	12.1	29.218
14	chapanapada, bangladesh	4.597	5.916	18.055	13.595	24.058	11.086	6.593	8.899	11.929	11.097
15	chaka, bangladesh	28.213	30.98	10.486	8.136	12.509	0	12.736	0	3.96	15.361
16	chaka, bangladesh	17.049	46.156	23.169	27.787	34.138	33.305	18.383	13.788	18.422	30.566
17	chaka, bangladesh	16.257	13.554	15.075	8.231	16.193	6.734	5.651	17.567	8.595	6.504
18	chaka, bangladesh	0.307	29.136	10.782	6.66	1.791	97.25	5.184	0	2.726	0
19	chaka, bangladesh	0	7.462	0	0.053	5.37	0.643	0	20.937	3.942	0
20	chaka, bangladesh	23.118	2.987	12.25	11.77	0.865	19.115	7.893	14.472	1.686	1

# GPS

## World Link Communications

<< first < prev 1 2 3 4 5 6 7 8 9 10 next > last >>

Latitude	Longitud	Date and Time	Link
47.81	-47.81	2011-10-06 00:57:21	<a href="#">See the map</a>
26.46	-91.45	2011-12-15 00:02:11	<a href="#">See the map</a>
29.16	-94.56	2012-01-21 00:12:58	<a href="#">See the map</a>
9.48	-79.82	2012-02-22 00:14:12	<a href="#">See the map</a>
20.46	-84.11	2012-03-25 00:12:56	<a href="#">See the map</a>

<< first < prev 1 2 3 4 5 6 7 8 9 10 next > last >>



With ShipSat's GPS you, can track your fleet through the ShipSat portal.

The application is fully integrated with Google maps to display positions.





[www.shipsat.com](http://www.shipsat.com)

