

Phone and PA systems

January 9, 2011

Originated from Thomas Widgeon (LUMCON) on Sun, 9 Jan 2011

Hi all,

We're thinking of updating our phone and PA systems aboard the R/V Pelican. I was hoping to get some input on what some of you guys were using on your vessels.

Thanks,
Thomas

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Thomas Widgeon
Marine Technician
Louisiana Universities Marine Consortium
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Reply From: Scott Hiller on Sun, 9 Jan 2011

Thomas,

We use the AIPHONE systems and they work really well. ([see attached](#)) Hands free communications, group calling, PA interface, etc.

Scott

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Scott Hiller
Shipboard Technical Support
Scripps Institution of Oceanography
La Jolla, CA

Reply From: David O'Gorman on January 10, 2011

We use a linux TrixBos based system on the Wecoma.

It is basically one server with the pabx software (trixbox-ce):
<http://www.trixbox.com/products/trixbox-ce>

VOIP phones:

<http://tinyurl.com/wecomavoipphone>

(those are the ones we use, you can use any of a wide variety of voip phones)

And some VOIP analog line to network bridges to service both our analog phones lines (like the on ship fax machine) and our analog service lines (dock main phone line, satellite service lines, etc)

<http://tinyurl.com/wecomavoipanalogbridge>

It works pretty well overall, the phone handsets are powered via power over ethernet which allows them to all be powered by our rack UPS', and the phones have integrated speakerphones which lets us use them as intercoms (these particular speakerphones don't so amazingly well with background noise, but they are passable).

The software keeps track of calls, and you can set up the off-the-ship lines to require the use of pin numbers and the trixbox software automatically generates a comma deliniated call log.

We have had a few problems interfacing the trunk lines (off-the-ship lines) to the VOIP bridges, but I have a feeling that you may run into those sort of things with any pabx system. The sort of problems we have had include:

- An impedance mismatch between the interface and the iridium analog line caused an annoying local echo, which has been difficult to fully stamp out
- Trouble with different trunk lines (the satellite analog lines and our cell phone to analog line bridge) passing through dtmf tones properly (for sending button tones to off-ship phone trees and for people off the ship accessing the incoming voice tree). That being said, setting up a voice tree was simple and built in to the PABX "Press one for the bridge", and so on.

The distributed nature of the system makes it precisely scaleable to your installation, and one great feature was that we could add interfaces (phones and analog line bridges) anywhere that we had network connections. The phones that we used even have a small internal switch and an extra jack on the back of the phone, so we didn't even loose a connection when we installed a phone. The "trixbox" pabx installation was super straightforward. It came as a cd image, we just ran the install and configured it through the built in webpages.

It looks like there are some VOIP loudspeaker options available as well:

http://www.voiplink.com/VoIP_Loudspeaker_Paging_s/121.htm

The best part of this system really is that you can find all kinds of voip compatible interfaces:

<http://www.geeky-gadgets.com/star-trek-usb-communicator/>

Dave

David O'Gorman

Marine Instrumentation Engineer - COAS

130 Burt Hall

Corvallis, OR 97331

Reply from: Marc Willison on January 10, 2011

Thomas,

If PELICAN is ABS class (which your website implies), the system you install may have to be ABS-approved if it interfaces with ship's safety systems (PA/General Alarm). The normal phone system should not be affected by ABS class, just the safety/emergency systems. Worth a double-check before you leap.

Marc

Marc Willis
Special Marine Projects, OSU-COAS
SIKULIAQ Shipyard Project Office
Marine Science Technical Director

Reply from: David O'Gorman on January 10, 2011

We have the RA-A units on our ship. They have worked well over many years of hard service, but replacement parts are no longer available.

Dave

**David O'Gorman
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