

PREPARING FOR WAR

Providence a mixture of modern, mature

By ROBERT A. HAMILTON
Day Staff Writer

Aboard the USS Providence — This submarine was built 18 years ago at Electric Boat, but over the years so many things have been changed that it's hard to characterize it as either modern or mature.

It was the first submarine to get a super-fast communications link. It has the newest photo suite in the fleet, and an internal computer network that allows anybody, on any deck, to get information on ship operations.

The system that could prove most important on this trip, when war looms with Iraq, is also one of the oldest on the submarine: the Combat Control System Mark I, which will allow fire control technicians, or FTs, to launch weapons.

"At battle stations, one guy will sit here and do everything — the same guy who did it last time, probably," said FT2 Kevin Bojanowski. "Isn't it sad? All this new stuff on the boat just sets you up to use the oldest gear on board."

"We generally tend to think of ourselves as the stars of the team — what's the sense of taking out a submarine if you can't push weapons around?" said FT1 Jon Niedzielski. "And that's our job."

"There are other people who complain that's not true, but they're not FTs," Bojanowski said. "This is the business end of the submarine."

Right now, there are 12 push buttons that represent the final step in firing the 12 vertical launch missiles the submarine carries in its bow, and four others that control the torpedo tubes, which can launch missiles horizontally from beneath the waves.

"There's something about pushing a button," Bojanowski said. "If a flat screen goes bad, how do you fix it? If a button doesn't work, there's a wire behind it."

During a major repair period that will begin after the Providence returns home this summer, the CCS Mk1 will be replaced with a new system, known as the Block I Charlie, which will be more automated, and more advanced.

"I prefer this," Niedzielski said. "I've seen the other stuff, and I've used the other stuff, and I still like this. I think simple is better. But maybe that's just because this is what I'm used to."

Not that the FTs don't appreciate some of the improvements that have been made to the Providence.

"This is probably one of the most important modernizations on board," Bojanowski said, pointing to a toilet paper holder mounted over the combat system. "This gives us tissues. Screen cleaner, and paper towels to clean up after a spill."

Some of the other equipment on board Providence, however, represents the newest Navy technology.

It was the first submarine to get the HDR (high data rate) antenna, which gives

it a high-speed telecommunications connection to the other ships of the battle group and a top-secret military Internet, capabilities that submarines have long lacked.

While submariners still don't have the connectivity of surface ships — it can't use any of the high-speed communications services when it is submerged, or operating in a sensitive area — HDR represents a huge leap forward for the boats.

Lt. JG Josh Powers was put in the unfavorable position of having to qualify on the newest photography system for the submarine force, without being able to go through the school for it. It's so new, Naval Submarine School was still renovating its photo classroom to be able to teach it when Providence was in the final stages of its pre-deployment workup.

But with the help of his petty officers and some intensive study of the manuals, Powers was able to prepare a package of video and still prints for evaluation.

"Basically, we sat down at the pier and took a bunch of pictures, and figured out what settings worked best in what light, and prepared our package," Powers said.

The executive officer, Lt. Cmdr. Thad E. Nisbett, proudly notes that Powers ranked 9 on a scale of 9 his first try.

The old system used 35-millimeter film that was exposed using fingertip controls on the periscope. The new system is all digital, and takes pictures without film,

transferring still photos directly to a computer and video to a standard VHS recorder.

"As soon as we got this system, all those chemicals and the wet film went away," Powers said. In addition, having the computer three feet away from the 'scope allows him to evaluate the images within seconds.

"Before you used to have to wait and go through the photos to see if they were good or not," Powers said. "Now, you look at the photos immediately and if they're not good, you reshoot them immediately."

Nisbett and the Captain, Cmdr. Jon Kan, are two of the key beneficiaries of another new system on board, an interactive display system.

During his department head tour on USS Atlanta out of Norfolk, the captain and executive officer could monitor speed, depth and course from their staterooms. Other officers could go to the wardroom for that information.

With the new system on the Providence, any officer can call up the radar, sonar, periscope view and navigation displays from stateroom terminals, or display them on the large flat-screen television in the wardroom.

"You can get the big picture immediately, and begin to analyze it before you ever get to the bridge," Nisbett said. "It gives you a lot more confidence in the operation of the ship when you're not in the control center."



TIM COOK / The Day

Officer of the Deck Lt. j.g. John Killila directs the USS Providence during operations in the eastern Mediterranean on Friday.

Radiomen in 'The Shack' control a digital wonderland of data communications devices

From A1
in "The Shack" who will receive the order to launch missiles, and distribute it to the people who will execute the command.

"You don't think about it that much," Gilly said. "You just do your job."

The Shack is responsible for bringing the rest of the world into the boat. Back when Gilly arrived on his first submarine, it was all done through teletypes and punched tape, method so slow that sailors were limited to receiving just one 40-word "familygram" a month from back home, and they could not send any messages off.

"Back when I did my first WestPac (Western Pacific Deployment) in 1986, we used to talk about what the radio room of the future would look like, and we definitely never imagined something like we have today," Gilly said. "My first chief wouldn't even recognize The Shack today, so much has changed."

Digital radio equipment and circuit miniaturization means the submarine force can jam a lot more gear into the same small space, allowing it to transmit and receive over an amazing array of frequencies, allowing it to "widen the pipe" — to increase bandwidth to the point where a message that would

have taken days to receive at the old rates can now be downloaded during a quick pop to periscope depth.

That's a critical point for submariners, because the longer they spend on the surface receiving communications, the more the ship risks detection.

A ship wide computer network allows the radio room to quickly distribute routine messages without printing them out.

The Shack downloads news and sports scores on a daily basis, for instance, and distributes them around the ship via e-mail.

"Personally, I hate baseball and football, but everybody else seems to like them so I get as much as I can," Gilly

said. "I actually pay more attention to news out here, at sea, than I do at home. Not as many distractions."

The Shack can even tune in CNN and beam the signal directly to monitors in the wardroom and crew's mess.

"Course, we still don't have it made like the skimmers (submariner slang for surface Navy ships), who have Inmarsat, and can phone home every day," Gilly said with a grin. "But it's a vast improvement."

Sensitive messages still require that the captain be called to The Shack, however.

Being the submarine's link to the outside means Gilly and his co-workers

are often the called upon to impart news of a tragedy, such as when they delivered news of the Space Shuttle Columbia's demise earlier this year.

And on Sept. 11, 2001, Gilly was the first one to find out about the terrorist attacks — and even he got the news six hours late, because that was when the boat surfaced to copy radio traffic.

"The first message that came in told everything that happened told everything that happened, and my first reaction was that it had to be a drill, but there was nothing on the message that said 'drill' or 'exercise,'" Gilly said.

The captain stood in the radio room, a small room aft of the control center

lined with high-tech communications equipment, and wordlessly read the messages.

"It was a total shock," Gilly said. "The captain told the radio supervisor to call Group 7, but before the call went through he had given the order for us to turn around."

But Gilly said everybody on board recognizes they are just the bearer of bad tidings, and they get none of the blame.

"Sometimes it's good news," Gilly said. "One time, on my first boat, we got turned around and pulled back early — I was the radioman of the watch on that one, too."

ALL STORES OPEN AT 11AM*

TAKE AN EXTRA 60% OFF

EVERY WINTER CLEARANCE PURCHASE**

ALL APPAREL • ALL SHOES • ALL ACCESSORIES**

PLUS, LAST DAY! TAKE AN EXTRA 15% OFF**

FOR TOTAL SAVINGS OF 70-80%

HERE'S JUST ONE EXAMPLE OF THE INCREDIBLE STOREWIDE SAVINGS:

LADIES' ALREADY-REDUCED MERINO WOOL SWEATERS

ORIG.	\$43-\$58
SALE	19.99-28.99
AFTER EXTRA 60% OFF	7.99-11.59
PLUS, EXTRA 15% OFF.....	6.79-9.85
TOTAL SAVINGS OF 80%	

Clearance event ends Sunday, March 16, 2003. **Excludes Designer Collections. Merchandise selection may vary by store. Intermediate markdowns may have been taken. Entire stock savings offered only where indicated. Regular and Original prices are offering prices only and may or may not have resulted in sales. Advertised merchandise may be available at sale prices in upcoming sale events.

***TODAY, ALL STORES OPEN AT 11AM EXCEPT PROVIDENCE & WARWICK, RI OPEN AT NOON.**

CHARGE IT WITH FILENE'S
WE ALSO WELCOME VISA
MASTERCARD AND DISCOVER

FILENE'S

GIFT CARDS AVAILABLE
AT ALL STORES, PLUS
FILENEGIFTS.COM

All the right choices