

UNITED STATES OF AMERICA  
NATIONAL TRANSPORTATION SAFETY BOARD  
OFFICE OF MARINE SAFETY  
QC

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In the Matter of:	*
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MAJOR MARINE ACCIDENT	* NTSB Project ID
COLLISION JAPANESE FISHERIES	* No. 51701
TRAINING VESSEL EHIME MARU AND	* DCA01MM022
U.S. NAVY NUCLEAR ATTACK	*
SUBMARINE USS GREENEVILLE	*
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Interview FT1 SEACREST

Tuesday,  
February 20, 2001

1 P R O C E E D I N G S

2 MR. ROTH-ROFFY: And we are here to interview  
3 Petty Officer 1st Class Seacrest from the Greeneville.  
4 Good afternoon, sir.

5 PETTY OFFICER SEACREST: Good afternoon.

6 MR. ROTH-ROFFY: The reason we have called you  
7 back is to kind of clear up a couple of things about,  
8 about your recollection of what happened onboard the  
9 Greeneville during the hours prior to the collision.

10 I am not sure really how to articulate this.  
11 I would like to really pass it to either Lieutenant  
12 Johnson or Bill Woody.

13 LIEUTENANT JOHNSON: Yeah, this is Lieutenant  
14 Johnson, U.S. Coast Guard. I would like to, we have  
15 got enormous data Commander Caccivio has got some  
16 pointed questions about the data, so we can kind of get  
17 to the heart of the matter.

18 MR. ROTH-ROFFY: Okay. Why don't we begin by  
19 doing that.

20 COMMANDER CACCIVIO: Okay. FT1, I have got  
21 some data here that you may not have seen, some of it I  
22 know you have not seen. Okay.

23 This is the master contact log. Did you  
24 maintain this on your watch?

25 PETTY OFFICER SEACREST: Yes.

26 COMMANDER CACCIVIO: Okay. So, if I looked  
27 down here, these times are Zula.

28 PETTY OFFICER SEACREST: Yes, sir.

29 COMMANDER CACCIVIO: Is there any indication  
30 when watch relief occurred?

31 PETTY OFFICER SEACREST: No, sir. Not on the  
32 master contact log.

33 COMMANDER CACCIVIO: All right. Would we  
34 typically keep a master contact log in this situation?

35 PETTY OFFICER SEACREST: We always keep a  
36 master contact log.

37 COMMANDER CACCIVIO: All right. Did you  
38 designate any contacts as master numbers?

39 PETTY OFFICER SEACREST: No, sir.

40 COMMANDER CACCIVIO: Okay. So, you are just  
41 tracking --

42 PETTY OFFICER SEACREST: That is just a  
43 history of contacts that we gained throughout a 24 hour  
44 period.

45 COMMANDER CACCIVIO: All right. Can you tell,  
46 so do I understand this correctly that you gained  
47 Sierra 13 to the north as a surface contact at  
48 approximately, do my conversion here, this would be  
49 12:32 local?

50 PETTY OFFICER SEACREST: Yes, sir.

51 COMMANDER CACCIVIO: Okay. So, that would be  
52 the only entry unless, do I, do you enter when the

1 contacts are lost or faded?  
2 PETTY OFFICER SEACREST: No, sir.  
3 COMMANDER CACCIVIO: Okay. Just a record of  
4 initial entry at this point.  
5 PETTY OFFICER SEACREST: Yes, sir.  
6 COMMANDER CACCIVIO: Or initial gain.  
7 PETTY OFFICER SEACREST: That is all that is.  
8 COMMANDER CACCIVIO: All right. And the  
9 classification is a surface contact was based on?  
10 PETTY OFFICER SEACREST: Sonar.  
11 COMMANDER CACCIVIO: Okay. When you  
12 initially gained Sierra 13, can you tell me what you  
13 used for an initial solution?  
14 PETTY OFFICER SEACREST: Ten thousand yards  
15 closing, about 10 knots.  
16 COMMANDER CACCIVIO: Can you tell me what the  
17 angle on the bough would be?  
18 PETTY OFFICER SEACREST: No, sir. I don't  
19 remember.  
20 COMMANDER CACCIVIO: Can you tell me why you  
21 choose that 10,000 yards, I am sorry, what knots did  
22 you say?  
23 PETTY OFFICER SEACREST: Ten knots.  
24 COMMANDER CACCIVIO: Can you why you choose  
25 those values?  
26 PETTY OFFICER SEACREST: Standard for gaining  
27 a surface contact, not knowing what it is, 10,000  
28 yards, 10 knots.  
29 COMMANDER CACCIVIO: So, for the gain, an  
30 initial surface contact, you assume a range of 10,000  
31 yards, 10 to 12 knots, based on experience or based on  
32 procedure?  
33 PETTY OFFICER SEACREST: Experience.  
34 COMMANDER CACCIVIO: Okay. Do you assume a  
35 nominal angle on the bough for initial gain?  
36 PETTY OFFICER SEACREST: Always pointing.  
37 Pointing it.  
38 COMMANDER CACCIVIO: Okay. So, is it  
39 reasonable to believe that your initial entry into the  
40 fire control solution would be a zero angle on the  
41 bough for this contact?  
42 PETTY OFFICER SEACREST: Give or take, yes, a  
43 few degrees, always.  
44 COMMANDER CACCIVIO: Right. Okay and I  
45 understand that. I mean, to dial it down exactly zero  
46 is a finesse move. Whereas you may have just dialed  
47 into approximately plus or minus five degrees of zero  
48 angle on the bough.  
49 PETTY OFFICER SEACREST: Yes, sir.  
50 COMMANDER CACCIVIO: Okay. I see, this is a  
51 reconstruction, which I am not sure, you may not have  
52 seen, this is a reconstruction of Greenville's track on

1 this day. So, the first starting time is 12:30. So,  
2 based on what we just previously discussed, it appears  
3 that you gained Sierra 13 approximately two minutes  
4 after my track begins here. And it is annotated here  
5 that the gains here at 13. Given the fact that this  
6 contact was to the north, it appears that the first  
7 significant maneuver by the ship was approximately 10  
8 minutes after the gain to a course of, well, I can  
9 guess, I will just guesstimate because it is not  
10 labeled on the chart, but it appears that it was  
11 something in vicinity of about two, five, zero, two,  
12 six, zero, does that look reasonable?

13 PETTY OFFICER SEACREST: Yes, sir.

14 COMMANDER CACCIVIO: Okay. From this ranging  
15 maneuver here, did this assist you in determining the  
16 range for Sierra 13?

17 (Pause.)

18 COMMANDER CACCIVIO: Let me also show you what  
19 is reconstructed, understand this is a reconstructed  
20 time range chart.

21 PETTY OFFICER SEACREST: Yes, sir.

22 COMMANDER CACCIVIO: All right. So the pink  
23 dots represent what was retracted from the fire control  
24 solution and they actually show your system solutions  
25 that you had entered for Sierra 13, whereas, the purple  
26 line indicates the reconstructed actual range. So, I  
27 see that approximately about the time, 12:30, recognize  
28 these are 15 minutes, so that is about five minutes  
29 there, so, roughly about the time of the gain it  
30 appears you assigned an initial range of 30,000 yards.

31 PETTY OFFICER SEACREST: This wouldn't have  
32 been me. This is probably done by the fire control  
33 system itself, CAST.

34 COMMANDER CACCIVIO: Okay. So that would  
35 have been a CAST solution.

36 PETTY OFFICER SEACREST: Yes, that is, I  
37 didn't put 30,000. I never put 30,000 yards.

38 COMMANDER CACCIVIO: What was the range of the  
39 day for Merchant?

40 PETTY OFFICER SEACREST: We didn't, sonar  
41 never established.

42 COMMANDER CACCIVIO: Did you ask for a range  
43 of the day from sonar?

44 PETTY OFFICER SEACREST: No, sir, I didn't.

45 COMMANDER CACCIVIO: Okay. All right. Just  
46 to clarify that, the CAST, if you ask me I can't tell  
47 you what the acronym stands for, can you?

48 PETTY OFFICER SEACREST: I don't remember off  
49 the top of my head. It is Common Automated --

50 COMMANDER CACCIVIO: Basically CAST is an  
51 automated program that runs in the background of the  
52 fire control solution, fire control program and it will

1 generate its own solutions. So, at any given time if  
2 the operator takes no action, there is a solution being  
3 generated. In some cases it can be very accurate, in  
4 some cases it can be very, very, very inaccurate. And  
5 it all depends on what types of data it gets into it.  
6 So, basically, that first data point there at 30,000  
7 yards, would be a CAST solution and, I think that is  
8 probably accurate, it would not be the FTOW's input to  
9 the system. So, as you can see the range, although it  
10 does appear to be relatively accurate or more accurate  
11 than what we would initial settle on, it is not a real  
12 representative of, I would say that is probably not a  
13 good data point at this point because there is not a  
14 lot of good data going in.

15 Okay. So, I look and I see somewhere in  
16 about the vicinity of 12:35 to 12:40, that I see some  
17 fire control system solutions that show up with ranges  
18 within the vicinity of six, to 8,000 yards. It would  
19 appear that until we make the turns still, these are  
20 single leg ranges. Can you tell us what a single leg  
21 range is and how much accuracy or confidence you place  
22 in its accuracy?

23 PETTY OFFICER SEACREST: Single leg range, I  
24 place no confidence in it in that range.

25 COMMANDER CACCIVIO: Okay. Why is that?

26 PETTY OFFICER SEACREST: Because with the fire  
27 control system, I mean, it is a guess on how far away  
28 it is.

29 COMMANDER CACCIVIO: Is that a specific of the  
30 fire control system or as far as mainly plotting this,  
31 would you place a lot of confidence in a single range?

32 PETTY OFFICER SEACREST: No. Plotting it, no.

33 COMMANDER CACCIVIO: Okay. So, basically  
34 based on the geometry of the problem, it is very  
35 difficult to get an accurate range on a single leg of  
36 data.

37 PETTY OFFICER SEACREST: Correct.

38 COMMANDER CACCIVIO: You are going to have to  
39 say yes or no, because it doesn't work when your head  
40 nods.

41 PETTY OFFICER SEACREST: Yes.

42 COMMANDER CACCIVIO: Okay. All right. So,  
43 now at this time here, approximately 12:42, I now start  
44 my second leg of data when I come to about two, five,  
45 zero to two, six, zero and at this time I see that, as  
46 we move here, you have a range solution right about  
47 this same time of about 6,000 yards. Did you have, can  
48 you tell me what you thought the speed and the course  
49 was at that time?

50 PETTY OFFICER SEACREST: No, I don't remember.

51 COMMANDER CACCIVIO: Okay.

52 PETTY OFFICER SEACREST: The course I have no

1 idea. I don't remember the course.  
2           COMMANDER CACCIVIO: These are all your logs,  
3 correct?  
4           PETTY OFFICER SEACREST: Correct.  
5           COMMANDER CACCIVIO: Master contact logs.  
6           PETTY OFFICER SEACREST: This will tell you  
7 nothing except when we gained them.  
8           COMMANDER CACCIVIO: Okay.  
9           (Pause.)  
10           COMMANDER CACCIVIO: I apologize for being  
11 slow here. I am going back and forth between Zula time  
12 and local time. Okay.  
13           So, at approximately 22:40, I show through  
14 reconstructed data that the fire control solution was  
15 roughly speed six, a course of one, seven, correction,  
16 a range of 6,000 yards, a course of one, seven, zero,  
17 and a speed four, which would match with what we have  
18 here on the displayed reconstruction, so we see a range  
19 of 6,000 yards, one, seven, zero course, at a speed  
20 four. Is it reasonable to believe the one, seven, zero  
21 course would be result of the initial assumption that  
22 the target is closing on a narrow aspect?  
23           PETTY OFFICER SEACREST: Yes.  
24           COMMANDER CACCIVIO: Okay. The four knots,  
25 what would that speed be based on?  
26           PETTY OFFICER SEACREST: That happened right  
27 here, during the course, possibly due to, when we made  
28 the turn, the bearings will track off, when I center  
29 back up, adjusting the course speed, the encoder could  
30 have brought the speed down.  
31           COMMANDER CACCIVIO: Is it your experience  
32 that merchants typically use speeds of four to five  
33 knots?  
34           PETTY OFFICER SEACREST: Merchants? No.  
35           COMMANDER CACCIVIO: All right. So, did you  
36 have confidence in this speed?  
37           PETTY OFFICER SEACREST: At that time, no.  
38           COMMANDER CACCIVIO: All right. So, did you  
39 attempt any trial solutions at alternate speeds?  
40           PETTY OFFICER SEACREST: Yes, I mean, I  
41 adjusted to speed it up. I adjust speed to speed up to  
42 see if the bearings would still stack.  
43           COMMANDER CACCIVIO: Okay.  
44           PETTY OFFICER SEACREST: But, if they don't, I  
45 leave it until it generates enough out to cause it to  
46 go to the right or to the left and then I do it again.  
47           COMMANDER CACCIVIO: At this point would you  
48 say the contact was more, the solution was more speed  
49 sensitive or more range sensitive?  
50           PETTY OFFICER SEACREST: I couldn't tell you  
51 that.  
52           COMMANDER CACCIVIO: Did you attempt to

1 perform sensitivity adjustments? On the fire control  
2 system to determine the sensitivity of the range of the  
3 speed?

4 PETTY OFFICER SEACREST: I guess specifically,  
5 no, but always playing with it, yeah, I mean, always  
6 adjusting it.

7 COMMANDER CACCIVIO: Right. So, in your, I  
8 mean, I understand it a procedure to do, but you can  
9 adjust the, what do they call those little knobs?

10 PETTY OFFICER SEACREST: Encoder.

11 COMMANDER CACCIVIO: Encoder. When you adjust  
12 the encoder, when you adjusted the course speed and  
13 encoder, did it appear to be very sensitive to  
14 solution, appeared to be very sensitive or insensitive?

15 PETTY OFFICER SEACREST: Insensitive.

16 COMMANDER CACCIVIO: Okay. So, when you  
17 adjusted the range encoder, did the solution appear to  
18 be very sensitive or insensitive?

19 PETTY OFFICER SEACREST: Insensitive.

20 COMMANDER CACCIVIO: So, the fact that both of  
21 them were insensitive, would that imply you had a  
22 reasonably good solution or a bad solution?

23 PETTY OFFICER SEACREST: More on the bad side  
24 than the good.

25 COMMANDER CACCIVIO: Okay. Okay. The ship  
26 then came around to the north again, it appears,  
27 proceeded deep to six, five, zero feet and conducted a  
28 small speed angles and changes in depth for the  
29 civilians that were embarked. At this point here, did  
30 you see any appreciable change in the bearing rate for  
31 zero, one, three?

32 PETTY OFFICER SEACREST: No, sir. Not that I  
33 remember.

34 COMMANDER CACCIVIO: Okay. At this point  
35 here, when we are doing this maneuver, so when I come  
36 to the time 13:00, you have to forgive me again while I  
37 flip through some pages here just to get to the real  
38 time. So, about the time of 23:00, I show through  
39 reconstruction that your fire control solution was a  
40 range of 7,000 yards. Well --

41 (Pause.)

42 COMMANDER CACCIVIO: I guess if you guys can  
43 bear with me here real quick, I am just paging through  
44 some data to find --

45 MR. ROTH-ROFFY: Commander, take all the time  
46 you need.

47 (Pause.)

48 COMMANDER CACCIVIO: Okay. Just prior to one  
49 o'clock, so in the middle of, while Greenville was on  
50 a relatively northerly course here, a long leg, just  
51 prior to one o'clock, four minutes prior to, I have a  
52 reconstructed range of 3,000 yards, course of one,

1 eight, nine and a speed of six knots. At this point  
2 this would appear that your solution had generated into  
3 a range of 3,000 yards. You had adjusted the course to  
4 a course of one, eight, nine and the speed apparently  
5 had been adjusted up to six knots. Do you recall  
6 entering this system solution?  
7           PETTY OFFICER SEACREST: No, I don't recall  
8 hearing that.  
9           COMMANDER CACCIVIO: Do you recall whether  
10 that was a reasonable solution for the contact at the  
11 time?  
12           PETTY OFFICER SEACREST: I didn't believe so.  
13           COMMANDER CACCIVIO: You didn't.  
14           PETTY OFFICER SEACREST: No, that was probably  
15 generated, that wasn't entered. All of these aren't,  
16 all these solutions you see on here, these are not  
17 solutions that I specifically entered into the fire  
18 control system.  
19           COMMANDER CACCIVIO: Okay.  
20           PETTY OFFICER SEACREST: This stuff generates  
21 out on its own. I may enter a system solution and I  
22 let it track for 10, 15 minutes and see if it does.  
23 And then I adjust it.  
24           COMMANDER CACCIVIO: Okay. And so --  
25           PETTY OFFICER SEACREST: I also hit, made a  
26 lot, I don't actually hit --  
27           COMMANDER CACCIVIO: Right.  
28           PETTY OFFICER SEACREST: Enter the system  
29 solution, because if I am not comfortable with the  
30 system solution, I don't feel that it is, that that is  
31 what he actually on. I will just enter mate, and then  
32 I will keep entering mate until I get --  
33           COMMANDER CACCIVIO: And what it is the  
34 significance of entering mate versus entering the  
35 system solution?  
36           PETTY OFFICER SEACREST: When you just enter  
37 mate, it is just, it enters the data in the fire  
38 control system, but it doesn't update the system  
39 solution display in the top right hand corner of the,  
40 of your flit mate display. So, if I enter system, it  
41 will update the contact everywhere throughout the fire  
42 control system, the GO display, the ops summary display  
43 gets updated. If you just enter mate, it doesn't do  
44 that. It just enters it in your own display that you  
45 are looking at, for your specific console. But, it  
46 enters the data in the fire control system.  
47           COMMANDER CACCIVIO: Okay.  
48           LIEUTENANT KUSANO: This is Ken Kusano, I  
49 need to take a break.  
50           (Whereupon, a short break was taken.)  
51           MR. ROTH-ROFFY: Okay. After taking a brief  
52 break, we are back interviewing Petty Officer Seacrest.

1                   COMMANDER CACCIVIO: Okay.    This is Commander  
2 Caccivio.

3                   Let me go back and correct something I said  
4 earlier that FT1 pointed out to me, that is we had to  
5 stop. Basically, the pink dots that are represented on  
6 the reconstructed time range plot that I have here are,  
7 represent actually the data that was available in the  
8 fire control solution as long as the contact was ATF,  
9 by ATF I mean automated target following, which means  
10 that there was actually a sonar tracker assigned in  
11 your receiving data from the contact. So, what we are  
12 really looking at here is we go back to what we  
13 initially estimated as a CAST system solution generated  
14 by the computer, the fire control computer, initially  
15 at about 30,000 yards and it appears that the first  
16 operator entered solution would be at approximately  
17 13:35 with roughly a range of about eight to nine  
18 thousand yards.

19                  Early on, up until time 12:45, there is a  
20 jump in the data, but I am unable to determine whether  
21 that is an update to the system solution or whether  
22 that is the solution generating in. But, each dot  
23 represents one minute and these are the data points  
24 that the combat systems training team entered from all  
25 the pieces of data they got from the sonar logger that  
26 available in the Q10s. So, if I move forward in time,  
27 basically I move up to approximately a point, at about  
28 12, local time 12:53 to 12:55, where the range is  
29 generated into approximately two to three thousand  
30 yards. At that point the system solution is then  
31 updated to a range of approximately 7,000 yards. So,  
32 this is the first indication, a clear indication to me  
33 that the system solution has been updated. This  
34 solution continues to generate at 7,000 yards up until  
35 approximately 13:05 local and then it jumps out about  
36 8,000 yards, and that is really an accuracy of the  
37 reconstruction system, not the solution onboard. It  
38 only moves in 1,000 yards increments. And so that  
39 solution at approximate range of 8,000 yards continues  
40 out to approximately a time of 13:14 local.

41                  At that time, 13:14 local, the system  
42 solution is now updated to effect a system solution  
43 that is approximately 15,000 yards, so this would  
44 indicate another key point where the system solution  
45 was updated manually by the operator onboard the ship.

46                  What is of interest at this point is the fact  
47 that at this time, it actually shows that the solution  
48 is approximately 1,000 yards under the actual solution,  
49 so, within the next two minutes, the solution is  
50 actually right on. So, at about time 13:16 to 17, the  
51 actual range, actually passes through the system  
52 solution range. At this time the system solution has a

1 course of approximately zero, four, five, plus or minus  
2 10 to 15 degrees. It is not so important as to  
3 recognize the fact that the system solution is fairly  
4 broad at this point. The speed is approximately eight  
5 knots. So, at this point, as the system solution  
6 generates out on the parallel course, the range does  
7 not decrease, however, based on the actual course of  
8 one, six, six, the contact, the range continues to  
9 decrease of the closing range rate of approximately 350  
10 to 400 yards per minute.

11 Now, so, at 13:14 the system solution was  
12 updated and that range was approximately 15,000 yards.

13 And just to make sure I get the right data point, I  
14 want to back up and just make sure I have got the right  
15 course and speed, so I didn't mistake anything. It  
16 looks like to me, right, the system solution at this  
17 point was updated to a range of 15,000 yards, a course  
18 of zero, two, four and a speed of 11. So this places  
19 the contact broad to, on ship's track, however the  
20 speed is actually fairly accurate to actual ship's  
21 speed. So, just given data point, two of the variables  
22 are actually set. One being the speed and one being  
23 the range. So, the only thing that is really off is  
24 course.

25 From 13:15 to approximately 13:35 and you  
26 have to recognize the fact that I have my increments  
27 are in 15 minute, my blocks are in 15 minute increments  
28 and I am trying to interpret this, it appears the  
29 system solution remained unchanged at that point as the  
30 FWO indicator previously, and please correct me or cut  
31 in any time I misspeak, that he may have been updating  
32 the mate solution, however, the system solution remains  
33 the same. And at this point the system solution begins  
34 to diverge in range from the actual solution.

35 If I look at this, what time did you begin  
36 preparations for going to periscope depth?

37 PETTY OFFICER SEACREST: I have no idea.

38 COMMANDER CACCIVIO: Do you recall what time  
39 you went to periscope depth?

40 PETTY OFFICER SEACREST: No.

41 COMMANDER CACCIVIO: Okay. From the  
42 reconstruction and I have to point out that there is  
43 approximately what I can guesstimate about a minute  
44 difference between the reconstruction data that I have  
45 from the submarine logger and the ship's records and  
46 this is due to some timing issues between the submarine  
47 logger and the ship's combat control system. But, it  
48 appears to me that we preceded to periscope depth in  
49 the vicinity of 13:37. To the ship, to account for  
50 that error, I think that would have appeared to be  
51 13:38. So, at 13:38 in the vicinity of that time, is  
52 when we make a change in the systems solution. My

1 question is which system solution, or what was the  
2 system solution that you used for evaluating the  
3 surface contact situation in preparation for going to  
4 periscope depth?  
5 (Pause.)  
6 COMMANDER CACCIVIO: I have for you, I am not  
7 sure if this helps at all, this is the printout of the  
8 time bearing displays at the time or probably not at  
9 the time, but it shows the time.  
10 (Pause.)  
11 PETTY OFFICER SEACREST: I am trying to  
12 remember, but I can't.  
13 COMMANDER CACCIVIO: Okay. Do you remember,  
14 did the officer of the deck in preparation for coming  
15 to periscope depth, come over and look at either the op  
16 summary or the individual contact solution?  
17 PETTY OFFICER SEACREST: I don't remember him  
18 coming over, no.  
19 COMMANDER CACCIVIO: Did he ask you what any  
20 of the solutions were on the contacts?  
21 PETTY OFFICER SEACREST: No.  
22 COMMANDER CACCIVIO: In preparation for coming  
23 to periscope depth, did you advise him of any of the  
24 system, the contact solutions?  
25 PETTY OFFICER SEACREST: No, I don't believe I  
26 did.  
27 COMMANDER CACCIVIO: Would it be reasonable to  
28 expect that if you thought you had a contact at 3,000  
29 yards for preparation to coming to periscope depth that  
30 you would have advised the officer of the deck prior to  
31 proceeding to periscope depth?  
32 PETTY OFFICER SEACREST: Yes.  
33 COMMANDER CACCIVIO: In your mind, would that  
34 give you indication that the solution you had at the  
35 time would not have indicated 3,000 yards?  
36 PETTY OFFICER SEACREST: Yeah.  
37 COMMANDER CACCIVIO: And so, would it be  
38 reasonable to expect that the decision to go to  
39 periscope depth was made based on this solution with a  
40 range of, basically a range of 15,000 yards and a  
41 course of zero, two, four, and a speed 11?  
42 PETTY OFFICER SEACREST: Yes.  
43 COMMANDER CACCIVIO: Okay. If the solution,  
44 at that point if the solution was, it appears to me  
45 that the solution was on in speed, off in course and  
46 off in range significantly, at that point can you  
47 briefly tell me what the system, what the display, let  
48 me rephrase this. What the target solution display  
49 would look like?  
50 PETTY OFFICER SEACREST: As far as the  
51 bearings?  
52 COMMANDER CACCIVIO: How would the bearing

1 different dots appear it was, if I were to tell you  
2 that your solution as I can create it, was 15,000  
3 yards, course of zero, two, four, speed 11, with a  
4 starboard one, six, three angle on the bough and the  
5 actual system solution, the actual solution was a range  
6 of 3,000, I am sorry, was a range of 2,000 yards, a  
7 course of one, six, six and a speed of 11? How would  
8 the bearing difference dot stack appear?  
9           PETTY OFFICER SEACREST: How would they  
10 appear? Well, it should have been ramping off to  
11 the --  
12           COMMANDER CACCIVIO: To the right or the left.  
13           PETTY OFFICER SEACREST: Yeah, either right of  
14 left, yeah.  
15           COMMANDER CACCIVIO: Okay. And that ramped  
16 off to the right would then be indicative of what?  
17           PETTY OFFICER SEACREST: Your solution is not  
18 accurate. Your range of being off or your course of  
19 speed being off.  
20           COMMANDER CACCIVIO: Would the, if it was a  
21 straight line ramp, would that be an indication of  
22 course speed error or would that be an indication of  
23 range error?  
24           PETTY OFFICER SEACREST: Range.  
25           COMMANDER CACCIVIO: Okay. If it was also a  
26 course speed error how would that ramping differ?  
27           PETTY OFFICER SEACREST: It should look like a  
28 bow almost.  
29           COMMANDER CACCIVIO: Okay. Do you remember  
30 when you made the preparation for periscope depth, when  
31 you reviewed the contact solutions, was there any  
32 indication of a range error or a course speed error for  
33 Sierra 13?  
34           PETTY OFFICER SEACREST: Not that I remember.  
35           COMMANDER CACCIVIO: Okay. Were the system  
36 solution that was off by over 10,000 yards and a course  
37 that was off by 130 degrees, would this have been,  
38 would this have created such a ramp or bow that it  
39 would be easily detected on the fire control screen?  
40           PETTY OFFICER SEACREST: It depends.  
41           COMMANDER CACCIVIO: It depends on what?  
42           PETTY OFFICER SEACREST: The initial solution  
43 accuracy. How good was the system solution beforehand.  
44           COMMANDER CACCIVIO: That is what I am saying.  
45           The system solution is off by, we know now the system  
46 solution was off by 12,000 yards and a course of, and  
47 at least 130 degrees.  
48           PETTY OFFICER SEACREST: Right. But, it is  
49 also based on, how many times did you, how many  
50 different ranging maneuvers did you make on it.  
51           COMMANDER CACCIVIO: Okay. Based on a  
52 reconstructed here, can you tell me how many of these

1 legs you would consider to be a ranging maneuver?  
2 PETTY OFFICER SEACREST: I believe right  
3 through here is when we were doing our high speed  
4 angles and dangles.  
5 COMMANDER CACCIVIO: Okay.  
6 PETTY OFFICER SEACREST: Our angles, we didn't  
7 hold them at all through here.  
8 COMMANDER CACCIVIO: And what time --  
9 PETTY OFFICER SEACREST: From what I entered.  
10 COMMANDER CACCIVIO: If we look at the time  
11 bearing plot, can you show me?  
12 PETTY OFFICER SEACREST: Actually no, I don't  
13 see it on here anywhere.  
14 COMMANDER CACCIVIO: Which contact is Sierra  
15 13?  
16 PETTY OFFICER SEACREST: Right here.  
17 COMMANDER CACCIVIO: And where is he in  
18 history at time 23:40?  
19 PETTY OFFICER SEACREST: I don't know.  
20 COMMANDER CACCIVIO: Who was this contact  
21 here?  
22 PETTY OFFICER SEACREST: This would -- That is  
23 Sierra 14. That is what it looks like.  
24 COMMANDER CACCIVIO: Here is Sierra 14 up  
25 here.  
26 PETTY OFFICER SEACREST: That is what you have  
27 the selected to, when they printed this, so.  
28 COMMANDER CACCIVIO: Do you remember seeing  
29 this display prior to going to periscope depth?  
30 PETTY OFFICER SEACREST: Yes.  
31 COMMANDER CACCIVIO: So, which contact on here  
32 did you think was Sierra 13?  
33 PETTY OFFICER SEACREST: I don't know when  
34 they printed this. This doesn't look like when I, when  
35 I went to periscope depth, this doesn't look like,  
36 because we didn't have any of these, that I remember.  
37 COMMANDER CACCIVIO: It appears to me this is  
38 just printed Julian Date 41. I am not even going to,  
39 there we go, it is printed on 10 February --  
40 PETTY OFFICER SEACREST: Oh, one.  
41 COMMANDER CACCIVIO: These times in Zula  
42 times, aren't they?  
43 PETTY OFFICER SEACREST: Yes.  
44 COMMANDER CACCIVIO: So, that is actually 9  
45 February --  
46 PETTY OFFICER SEACREST: Nine February, yes.  
47 COMMANDER CACCIVIO: So, this was actually  
48 printed, if I come back 10 hours, from midnight 48,  
49 this was actually printed one hour after the collision.  
50 PETTY OFFICER SEACREST: Yes.  
51 COMMANDER CACCIVIO: So, it is reasonable to  
52 expect that this screen right here would be the same

1 data that was available to you?  
2 PETTY OFFICER SEACREST: That is reasonable.  
3 COMMANDER CACCIVIO: Okay. Is this the data,  
4 does this data appear to be the data that was available  
5 to you?  
6 PETTY OFFICER SEACREST: Yes, but I don't  
7 remember Sierra 13 being way up here.  
8 COMMANDER CACCIVIO: Where do you remember  
9 Sierra 13 being?  
10 PETTY OFFICER SEACREST: Over here.  
11 COMMANDER CACCIVIO: Okay. What was the  
12 bearing to Sierra 13 in preparation for periscope  
13 depth?  
14 PETTY OFFICER SEACREST: I don't remember, I  
15 just knew he was over here.  
16 COMMANDER CACCIVIO: Can you generalize, was  
17 he relative to the north, the north, northeast?  
18 PETTY OFFICER SEACREST: Actually to the  
19 northwest. Over this way.  
20 COMMANDER CACCIVIO: Okay.  
21 PETTY OFFICER SEACREST: Because they were  
22 lined up, 14, 12, 13.  
23 COMMANDER CACCIVIO: Would it be possible that  
24 this screen has now been, I mean, this screen can  
25 actually be adjusted to center the north anywhere we  
26 would like. Would it be possible that you were on a  
27 south center display or you had adjusted the bearing so  
28 that possibly Sierra 15 would be here, and this contact  
29 you are looking at right here, would be the one you are  
30 thinking over here?  
31 PETTY OFFICER SEACREST: It is possible, but.  
32 COMMANDER CACCIVIO: So, which contact is this  
33 right here, that I see the bearing cursor on?  
34 PETTY OFFICER SEACREST: Fourteen.  
35 COMMANDER CACCIVIO: And how do you know that?  
36 PETTY OFFICER SEACREST: Because I am looking  
37 right up here, console selected display 14, that cursor  
38 will be on 14.  
39 COMMANDER CACCIVIO: I am just laughing, I  
40 should have known, I asked the question, I should have  
41 known the answer, myself.  
42 Okay. So, show me, can you show me which  
43 data you believe is associated with Sierra 13?  
44 (Pause.)  
45 PETTY OFFICER SEACREST: I just want to see if  
46 there anything different between these two or something  
47 or this is just the same copy, two copies of the same  
48 thing.  
49 PETTY OFFICER SEACREST: It appears to be two  
50 copies of the same thing.  
51 COMMANDER CACCIVIO: The same thing.  
52 Did you observe the bearing rates of, did you

1 check the bearing rates of all the contacts in  
2 preparation for periscope depth?  
3 PETTY OFFICER SEACREST: Yes. That is why,  
4 that is why I know Sierra 13 was over here. And they  
5 were all going this way. They all had bearing rates  
6 like this to the left.  
7 COMMANDER CACCIVIO: So, on a course of one,  
8 two, zero, for targets to the north, unless they had a  
9 higher speed than you, would you expect a left or right  
10 bearing rate?  
11 PETTY OFFICER SEACREST: Course of one, two,  
12 zero.  
13 COMMANDER CACCIVIO: When the ship came to PD,  
14 periscope depth, when you got ready to come to  
15 periscope depth, at 13:37, you were already lined up on  
16 course one, two, zero. So, on a course of one, two,  
17 zero, coming to periscope depth, you believe the  
18 contacts had a left bearing rate.  
19 PETTY OFFICER SEACREST: Yes.  
20 COMMANDER CACCIVIO: So, now if the ship were  
21 to turn, and come back to the north, how would this  
22 effect your bearing rate?  
23 PETTY OFFICER SEACREST: It should have drawn  
24 to the right.  
25 COMMANDER CACCIVIO: Okay. But, that would,  
26 in effect, would that put the contact on the left  
27 drawing right?  
28 PETTY OFFICER SEACREST: It would, but it  
29 didn't, because I didn't see him draw to the right. I  
30 didn't see any of my contacts drawing to the right when  
31 I went to periscope depth.  
32 COMMANDER CACCIVIO: Okay. So --  
33 PETTY OFFICER SEACREST: This is also, this is  
34 where we came to one, two, zero, right, and we came  
35 back around before we started coming up to periscope  
36 depth.  
37 COMMANDER CACCIVIO: Here is periscope depth  
38 right here, this leg.  
39 PETTY OFFICER SEACREST: You are saying we  
40 came to PD. I remember us coming back around when we  
41 came --  
42 COMMANDER CACCIVIO: See, you were on a course  
43 right here for approximately three, four, zero.  
44 PETTY OFFICER SEACREST: Yes.  
45 COMMANDER CACCIVIO: Three, four, zero, to  
46 clear baffles.  
47 PETTY OFFICER SEACREST: This is north  
48 oriented, right?  
49 COMMANDER CACCIVIO: Correct.  
50 PETTY OFFICER SEACREST: Okay.  
51 COMMANDER CACCIVIO: Here is Honolulu Harbor.  
52 PETTY OFFICER SEACREST: Right, so we came up,

1 we came around to one, two, zero.  
2 COMMANDER CACCIVIO: Correct.  
3 PETTY OFFICER SEACREST: To clear our baffles.  
4 COMMANDER CACCIVIO: Well, you maneuvered to a  
5 course of three, four, zero to clear baffles and  
6 initially gained Sierra 13 at 008, so that is why when  
7 I look on here and I see a contact, I look for 008 at  
8 this time, it appears to be right on where you have  
9 Sierra 14, that is the combat control system.  
10 PETTY OFFICER SEACREST: Right.  
11 COMMANDER CACCIVIO: Okay. So, now on a  
12 course of three, four, zero, this contact has what  
13 appears to be, if you look at the time a zero bearing  
14 rate.  
15 PETTY OFFICER SEACREST: Well, it is hard to  
16 tell through that.  
17 COMMANDER CACCIVIO: Right. Okay. And now,  
18 we come around to a course of one, two, zero, if this  
19 contact had a slight left bearing rate on the three,  
20 four, zero leg, and now I came to a course of one, two,  
21 zero, would I expect a bearing rate to increase or  
22 decrease left?  
23 PETTY OFFICER SEACREST: Decrease.  
24 COMMANDER CACCIVIO: Based on the solution?  
25 PETTY OFFICER SEACREST: Based on the  
26 solution.  
27 COMMANDER CACCIVIO: But, based on your  
28 solution, which was zero, two, four at a range of  
29 24,000 yards, what would I expect the bearing rate to  
30 do?  
31 PETTY OFFICER SEACREST: Increase to the left.  
32 COMMANDER CACCIVIO: Okay. Did it increase to  
33 the left?  
34 PETTY OFFICER SEACREST: From my memory, no,  
35 it didn't do, it stayed the same.  
36 COMMANDER CACCIVIO: And so, if it stayed the  
37 same, what would that indicate to you?  
38 PETTY OFFICER SEACREST: That we didn't drive  
39 his bearing rate at all.  
40 COMMANDER CACCIVIO: But, had you made  
41 sufficient course maneuver to drive his bearing rate?  
42 PETTY OFFICER SEACREST: No.  
43 COMMANDER CACCIVIO: So, coming from three,  
44 four, zero to a course of one, two, zero, is not  
45 sufficient to drive the bearing rate?  
46 PETTY OFFICER SEACREST: It should have been.  
47 COMMANDER CACCIVIO: Okay. And the speed,  
48 so, is there some other course that could have given us  
49 sufficient, is there another course maneuver that could  
50 have driven the bearing rate to give you the change you  
51 expected to see?  
52 PETTY OFFICER SEACREST: From one, no. From

1 that course? Coming to three, four, no, we should have  
2 saw it.

3 COMMANDER CACCIVIO: Okay. So, when I am  
4 looking at this right now, I am looking at this on a  
5 baffle clearing leg, a course of one, two, zero at a  
6 speed of approximately six knots. So, based on your  
7 system solution, a course of zero, two, four, I would  
8 expect a right bearing rate. And I don't see a right  
9 bearing rate anywhere on the combat control system  
10 here.

11 PETTY OFFICER SEACREST: No.

12 COMMANDER CACCIVIO: Okay. So, at this point  
13 is this an indication that your solution isn't holding?  
14 PETTY OFFICER SEACREST: Yes.

15 COMMANDER CACCIVIO: Okay. So, I have got to  
16 stop saying so.

17 You indicated previously that you believe  
18 that this was the solution you had in the fire control  
19 system that you based going to periscope depth on with  
20 a range of 15,000 yards, a course of zero, two, four  
21 and a speed of 11, is that correct?  
22 PETTY OFFICER SEACREST: Yes.

23 COMMANDER CACCIVIO: All right. At what time  
24 did you adjust the system solution to the indicator  
25 range I see here, which corresponds to a range of 3,000  
26 yards, course, one, four, one, speed 8?  
27 PETTY OFFICER SEACREST: I don't ever remember  
28 doing this.

29 COMMANDER CACCIVIO: Okay. So, this time  
30 right here to me, now if I take into, there is, I can  
31 take into account about a minute difference between the  
32 sonar logger data, and the actual fire control data,  
33 but still this is right in the vicinity of going to  
34 periscope depth. Based on, this indicates to me that  
35 at 13:37 we proceeded to periscope depth, and based on  
36 the sonar logger data, at 13:38, excuse me, at 13:37:48  
37 is when the system solution was updated to a range of  
38 4,000 yards, course one, four, one, speed 8. So, this  
39 was, that is obviously delivered operator actions.  
40 But, do you remember making this update to the system  
41 solution?  
42 PETTY OFFICER SEACREST: Honestly, no, I  
43 don't.

44 COMMANDER CACCIVIO: Were there any other  
45 FTOWs assisting you with plotting the solutions?  
46 PETTY OFFICER SEACREST: No.

47 COMMANDER CACCIVIO: System solutions.  
48 PETTY OFFICER SEACREST: No.

49 COMMANDER CACCIVIO: Is it reasonable to  
50 believe that the officer of the deck didn't update your  
51 solution?  
52 PETTY OFFICER SEACREST: It is, yeah, he

1 didn't.

2           COMMANDER CACCIVIO: Okay. So, how, how  
3 would this system solution have gotten changed by --

4           PETTY OFFICER SEACREST: Well, obviously I did  
5 it. I just don't remember doing it.

6           COMMANDER CACCIVIO: Okay. As you proceeded  
7 to periscope depth with the system solution of, roughly  
8 three, to four thousand yards and a course of one,  
9 four, one, was there any concern on your behalf for  
10 aboard contact?

11          PETTY OFFICER SEACREST: I said I didn't  
12 remember doing it. So, I don't remember it. I don't.

13          COMMANDER CACCIVIO: When we proceeded up to  
14 periscope depth, what were you watching?

15          PETTY OFFICER SEACREST: Perivis.

16          COMMANDER CACCIVIO: So, the whole way up to  
17 periscope depth you were watching the perivis, you  
18 didn't look at the fire control screens at all?

19          PETTY OFFICER SEACREST: Well, it is right in  
20 front of my fire control screens, so I am somewhat  
21 glancing at it.

22          COMMANDER CACCIVIO: Okay. So, at any time  
23 in the --

24          PETTY OFFICER SEACREST: I look at the time  
25 bearing, I don't look at my flit mate screen anymore.  
26 My bearings will update faster in time bearings than  
27 they do in my flit mate screen, in this one. So, I  
28 will see, if we have a close aboard contact, I will see  
29 it here on this before I will.

30          COMMANDER CACCIVIO: Okay. Well, it is  
31 apparent to me that at some point right in here, we  
32 updated the system solution so you must have been  
33 looking at the flit mate display.

34          Just for a point of reference, flit mate  
35 display is actually the name for the display in which  
36 all those bearing difference dots we have been  
37 referring to is actually displayed.

38          That is not the actual display, but, I mean,  
39 so, it doesn't, basically this would be representative  
40 of the bearing difference plot, what I am holding up in  
41 front of me now, and what it shows is from about time  
42 13:15, the bearing rate increased significantly to the  
43 right, and then at 13:30 bearings continued to come  
44 back to the previously existing solution. So from the  
45 time 13:30 to about 13:43, where there is no more data,  
46 there are several data points that have the contact  
47 basically lined up with the original solution.

48          This, can you tell me what, what I am looking  
49 at right here, can you tell me what this means, to you  
50 as the FT operator?

51          PETTY OFFICER SEACREST: Well, it will mean  
52 one of two things. Either it is tracking off or

1 contact maneuvered.  
2           COMMANDER CACCIVIO: Do you remember the  
3 tracker for Sierra 13 tracking off during the high  
4 speed maneuvers?  
5           PETTY OFFICER SEACREST: No, I don't remember.  
6           COMMANDER CACCIVIO: Do you ever remember a  
7 point where you felt, I mean, do you remember during  
8 high speed maneuvers whether you were able to track  
9 Sierra 13?  
10          PETTY OFFICER SEACREST: No, I don't remember  
11 that, either.  
12          COMMANDER CACCIVIO: So, when you are  
13 updating, so, from time 13:15 to 13:30 do you remember,  
14 do you remember evaluating your system solution at all?  
15          PETTY OFFICER SEACREST: No, because frankly  
16 time means nothing to me right now. I have no idea at  
17 what times I did anything. So, you are saying, 13 --  
18          COMMANDER CACCIVIO: I am trying to tie it to  
19 events, so if you tie it to events --  
20          PETTY OFFICER SEACREST: I know.  
21          COMMANDER CACCIVIO: -- I would say 13:15  
22 would be, it appears 13:15 was where we did the,  
23 started into large angles. I see several high speed  
24 maneuvers. I see one, two, zero, I see one back to  
25 three, four, zero. I see one back to roughly one, two,  
26 zero again. In your previous testimony, you indicated  
27 that those high speed maneuvers would be good. Would  
28 be advantageous to the fire control algorithms in terms  
29 of updating system solution, is that correct?  
30          PETTY OFFICER SEACREST: Correct.  
31          COMMANDER CACCIVIO: Okay. Would these in  
32 effect help you also develop a solution provided you  
33 could maintain track on the contact?  
34          PETTY OFFICER SEACREST: Provided you could  
35 maintain track, yes.  
36          COMMANDER CACCIVIO: Okay. So, given these,  
37 these maneuvers, which would be a significant aid to  
38 developing an accurate solution, would, would I expect  
39 FTOW to be paying attention to tracker SNR, and whether  
40 his tracker was tracking off?  
41          PETTY OFFICER SEACREST: Yep.  
42          COMMANDER CACCIVIO: And do you, so at any  
43 time here do you remember having a discussion with the  
44 sonar supervisor about whether the tracker had tracked  
45 off or any trackers had tracked off?  
46          PETTY OFFICER SEACREST: No, I know I didn't  
47 have a discussion with the sonar supervisor. I  
48 couldn't get to the sonar.  
49          COMMANDER CACCIVIO: Okay. At any point in  
50 here, did, okay, could you have talked to the sonar  
51 supervisor on 27 MC?  
52          PETTY OFFICER SEACREST: At this point in

1 here?  
2 COMMANDER CACCIVIO: Right.  
3 PETTY OFFICER SEACREST: During the angles?  
4 COMMANDER CACCIVIO: Right.  
5 PETTY OFFICER SEACREST: No.  
6 COMMANDER CACCIVIO: Why not?  
7 PETTY OFFICER SEACREST: Because we are doing  
8 this through the water. That ship keels over pretty  
9 good while we are doing angles, full rudder going 20  
10 some odd knots.  
11 COMMANDER CACCIVIO: So, were you sitting down  
12 at this point on the bench lockers?  
13 PETTY OFFICER SEACREST: Was I? No. I was  
14 holding my bench lockers in place.  
15 COMMANDER CACCIVIO: Okay. So, in the rate  
16 for high speed, did we not lock down the bench lockers?  
17 PETTY OFFICER SEACREST: They do lock down.  
18 But, you never know if they are going to come out or  
19 not.  
20 COMMANDER CACCIVIO: Okay. So, you were  
21 standing up at this point?  
22 PETTY OFFICER SEACREST: Yes.  
23 COMMANDER CACCIVIO: Okay. So, where is your  
24 27 MC relative to where you were?  
25 PETTY OFFICER SEACREST: Right here.  
26 COMMANDER CACCIVIO: Okay. Just for the  
27 record, just point, that was to just to the right of  
28 the FTOW.  
29 All right. So, I really need to ask you  
30 again, when I get to this point here where we have  
31 updated the system solution for a range of 3,000 yards,  
32 and a course of one, four, one and the speed 8, how  
33 much confidence did you have in the solution?  
34 PETTY OFFICER SEACREST: I don't know.  
35 COMMANDER CACCIVIO: Okay. It appears at  
36 this time here, approximately time 13:43, that the  
37 system solution is now updated for a range of 9,000  
38 yards, a course two, four, zero, and it appears the  
39 speed of nine, nine knots.  
40 PETTY OFFICER SEACREST: Nine, nine knots.  
41 COMMANDER CACCIVIO: Right. Okay. Basically,  
42 I approach, I get to periscope depth, I start to  
43 proceed to periscope depth at time 13:37, although it  
44 is not reflected on this reconstruction, I can tell you  
45 that the time at periscope depth was roughly 13:38.  
46 So, so, at periscope depth did the Officer of the deck  
47 indicate to you, did he make a report of no close  
48 contacts?  
49 PETTY OFFICER SEACREST: Yes.  
50 COMMANDER CACCIVIO: He did. Did you ask him  
51 to look down the bearing of any contacts?  
52 PETTY OFFICER SEACREST: The officer of the

1 deck?  
2 COMMANDER CACCIVIO: Yes.  
3 PETTY OFFICER SEACREST: No, sir. I did not.  
4 COMMANDER CACCIVIO: Okay. Is that a  
5 standard routine on the boat to look down the bearings  
6 of no sonar contacts?  
7 PETTY OFFICER SEACREST: Yes, sir.  
8 COMMANDER CACCIVIO: So, why did we not look  
9 at the bearing of sonar contacts on this trip with  
10 periscope depth?  
11 PETTY OFFICER SEACREST: The Captain took the  
12 scope before I could ask him to do it.  
13 COMMANDER CACCIVIO: Okay. So, is, would it  
14 be reasonable to ask the Captain to look down the  
15 bearing of the contacts?  
16 PETTY OFFICER SEACREST: I was going to, yes.  
17 COMMANDER CACCIVIO: Okay. And so, why  
18 didn't you not do that?  
19 PETTY OFFICER SEACREST: Because he had  
20 already, he already did.  
21 COMMANDER CACCIVIO: So, how did he find out,  
22 how did he know what bearing to look down?  
23 PETTY OFFICER SEACREST: Beats me, he knew.  
24 COMMANDER CACCIVIO: Did you assist him in  
25 ensuring that he looked down the right bearing at all?  
26 PETTY OFFICER SEACREST: Yeah, I was watching  
27 the OSDS when he was looking on the scope.  
28 COMMANDER CACCIVIO: Okay. You have to  
29 correct me how it works on Greeneville, but I am used  
30 to having my eye on the scope, because I am train never  
31 to take it off, and so having the FTOW coax me into the  
32 actual bearing to a contact by telling me he is on  
33 bearing 080, come left 10, come left 10, come left and  
34 I keep moving.  
35 PETTY OFFICER SEACREST: Correct.  
36 COMMANDER CACCIVIO: Is that the way it worked  
37 with the Captain on this time or did the Captain look  
38 at the bearing himself and push the scope around to the  
39 bearing?  
40 PETTY OFFICER SEACREST: I had my back to the  
41 Captain, because I was looking at perivis, fire control  
42 and OSDS in the corner. So, I don't know what he did.  
43 COMMANDER CACCIVIO: Okay.  
44 MR. ROTH-ROFFY: What is OSDS?  
45 PETTY OFFICER SEACREST: Own ship display  
46 system.  
47 MR. ROTH-ROFFY: Okay.  
48 COMMANDER CACCIVIO: Is, what bearing did you  
49 think Sierra 13 was on at that time?  
50 PETTY OFFICER SEACREST: To the north.  
51 Somewhere up to the north.  
52 COMMANDER CACCIVIO: Okay. I asked that

1 because when we looked at the time bearing display, you  
2 indicated something to the west.  
3 PETTY OFFICER SEACREST: Yeah, well, yes.  
4 Over here.  
5 COMMANDER CACCIVIO: Okay. So, which is it,  
6 is it the west or the north?  
7 (Pause.)  
8 PETTY OFFICER SEACREST: Take your time.  
9 (Pause.)  
10 PETTY OFFICER SEACREST: Up here to the  
11 northwest.  
12 COMMANDER CACCIVIO: In the vicinity of three,  
13 zero, zero, three, one, zero.  
14 PETTY OFFICER SEACREST: Yes.  
15 COMMANDER CACCIVIO: All right. What bearing  
16 did the Captain look down when you saw it on the OSDS?  
17 PETTY OFFICER SEACREST: From, right from  
18 here.  
19 COMMANDER CACCIVIO: Here being three, zero,  
20 zero.  
21 PETTY OFFICER SEACREST: About three, zero,  
22 zero, all the way over to about three, zero, four,  
23 zero.  
24 COMMANDER CACCIVIO: To about zero, four,  
25 zero.  
26 PETTY OFFICER SEACREST: Yes.  
27 COMMANDER CACCIVIO: So, did he make a  
28 deliberate, it sounds to me like what you have here is  
29 a sweep vice a look down a bearing to a contact.  
30 PETTY OFFICER SEACREST: He was stopping, he  
31 didn't actually, he was stopping at point, you know, he  
32 would start it, he would stop, go to the high power,  
33 look and then he would move over and stop.  
34 COMMANDER CACCIVIO: Could you hear the  
35 clicking of the handle, is that how you knew he was in  
36 high power or from looking at the perivis?  
37 PETTY OFFICER SEACREST: The perivis.  
38 COMMANDER CACCIVIO: Okay. When you were  
39 looking out the perivis, did you see a significant  
40 amount of waves crashing over the periscope?  
41 PETTY OFFICER SEACREST: No.  
42 COMMANDER CACCIVIO: So, what percentage of  
43 the time would you say the scope was covered? I guess  
44 when I say percentage, I mean, I mean, doing a full  
45 sweep. Were there waves crashing over the periscope?  
46 PETTY OFFICER SEACREST: Not that I remember  
47 at five, eight feet.  
48 COMMANDER CACCIVIO: Okay. How about at six,  
49 zero feet?  
50 PETTY OFFICER SEACREST: We were taking hits  
51 on the scope.  
52 COMMANDER CACCIVIO: Okay. Was it a lot of

1 hits? Did you feel you could see, or did you feel it  
2 was just normal, a wave comes over, you get a good  
3 look, a wave comes over, you get a good look?  
4 PETTY OFFICER SEACREST: A wave comes over,  
5 you get a good look. We weren't constantly taking hits  
6 on the scope.  
7 COMMANDER CACCIVIO: Okay. Once we come down  
8 from periscope depth, the range goes out, the system  
9 solution gets updated to a range of about 9,000 yards.  
10 Can you tell me what this system, this range was  
11 updated based on?  
12 PETTY OFFICER SEACREST: Holding no visual  
13 contacts.  
14 COMMANDER CACCIVIO: Okay. And so, what was  
15 your visual range to the horizon at that point?  
16 PETTY OFFICER SEACREST: I would say between  
17 eight and ten thousand.  
18 COMMANDER CACCIVIO: All right. So, based on  
19 no visual contacts, you felt that this contact was  
20 outside of, he was out of the range of eight to 10,000  
21 yards at a minimum?  
22 PETTY OFFICER SEACREST: Yes.  
23 COMMANDER CACCIVIO: When you adjusted that  
24 range out to eight to 10,000 yards, the course came all  
25 the way around to two, four, zero. I have to read this  
26 correctly. The course came to two, four zero, and the  
27 speed went to 99. Can you tell me what the 99 speed  
28 indicates?  
29 PETTY OFFICER SEACREST: That I have no idea.  
30 COMMANDER CACCIVIO: Well, if I saw 99, a  
31 speed of 99 on a fire control system, what would that  
32 indicate to me and do I ever see that?  
33 PETTY OFFICER SEACREST: Yeah, normally when  
34 CAST is up. CAST --  
35 COMMANDER CACCIVIO: Is it possible for a  
36 trial solution to ever show 99?  
37 PETTY OFFICER SEACREST: Possible.  
38 COMMANDER CACCIVIO: And when does that  
39 typically happen?  
40 PETTY OFFICER SEACREST: When you initially  
41 gain a contact.  
42 COMMANDER CACCIVIO: Would it also be possible  
43 when I dial in trial solution that just doesn't work  
44 for speed?  
45 PETTY OFFICER SEACREST: Possible, I guess,  
46 yes.  
47 COMMANDER CACCIVIO: Okay. Is it conceivable  
48 that there are contacts that operate in the Pearl  
49 Harbor area at 99 knots?  
50 PETTY OFFICER SEACREST: No.  
51 COMMANDER CACCIVIO: Is 99 knots the limit of  
52 the display?

1                   PETTY OFFICER SEACREST: No.  
2                   COMMANDER CACCIVIO: It will record higher?  
3                   It will show higher, DMHO?  
4                   PETTY OFFICER SEACREST: Yes.  
5                   COMMANDER CACCIVIO: What is the limit?  
6                   PETTY OFFICER SEACREST: I have seen it 300,  
7                   400 knots.  
8                   COMMANDER CACCIVIO: Okay. Is it reasonable  
9                   to enter a system solution with 99 knots?  
10                  PETTY OFFICER SEACREST: No.  
11                  COMMANDER CACCIVIO: Okay. Did you have any  
12                  indications that this contact zigged?  
13                  PETTY OFFICER SEACREST: No. Not that I  
14                  remember.  
15                  COMMANDER CACCIVIO: So, would it be  
16                  reasonable to expect that a contact would go from a  
17                  course of zero, two, four to a course of two, four,  
18                  zero, which is roughly 180 degrees out without  
19                  indications of a zig? And by zig, for the record, I  
20                  mean, a change in course for speed.  
21                  PETTY OFFICER SEACREST: No.  
22                  COMMANDER CACCIVIO: So, how, so, can you  
23                  explain to me why, how we would, in your mind, you  
24                  arrived at the conclusion that the course was two,  
25                  four, zero and the speed was 99 knots.  
26                  PETTY OFFICER SEACREST: I didn't. I don't  
27                  know where that came from.  
28                  COMMANDER CACCIVIO: Okay.  
29                  PETTY OFFICER SEACREST: I don't know how ARCI  
30                  pulls the data out of fire control. So, that --  
31                  COMMANDER CACCIVIO: What it does is it  
32                  actually takes and on air, it records whatever you have  
33                  in the combat control system, whatever you have in  
34                  sonar. Right. But, what I can tell is that the range  
35                  that came out here to 10,000 yards, regardless of the  
36                  course, the speed had to have been pretty high at this  
37                  point based on the fact that I know the range to be  
38                  less than 1,000 yards. Okay. So, in order to take  
39                  this range out to 10,000 yards, the contact had to have  
40                  a very, very, very high speed, all right. It appears  
41                  that we have updated, do you recall updating the system  
42                  solution at this time? When you updated system  
43                  solution, can you tell me what your system solution  
44                  was?  
45                  PETTY OFFICER SEACREST: No, I can't tell you,  
46                  but I know it wasn't 99 knots because I never put a  
47                  contact in at 99 knots. And if you are saying this is  
48                  recording, how often does this record, every minute?  
49                  COMMANDER CACCIVIO: It appears to record  
50                  every 14 seconds.  
51                  PETTY OFFICER SEACREST: Well, okay. So,  
52                  probably at one time, at a point while I was adjusting

1 it, it went up to 99 knots.  
2 COMMANDER CACCIVIO: Okay. Well, we can look  
3 at that but it is my understanding that this data  
4 actually can only, it doesn't reflect the trial  
5 solutions. It just reflects, and it doesn't reflect  
6 the mate solutions. It just reflects the system  
7 solution.  
8 MR. ROTH-ROFFY: What was the hold for 99  
9 knots?  
10 COMMANDER CACCIVIO: The time 43:48 to 44:49,  
11 so roughly a minute.  
12 MR. ROTH-ROFFY: See 99 in there.  
13 PETTY OFFICER SEACREST: Same thing.  
14 COMMANDER CACCIVIO: Oh, I am sorry. You are  
15 right.  
16 MR. ROTH-ROFFY: So, it is still holding it  
17 longer.  
18 COMMANDER CACCIVIO: Yeah.  
19 (Pause.)  
20 COMMANDER CACCIVIO: Pass the point of  
21 collision.  
22 PETTY OFFICER SEACREST: So, I don't know  
23 where that came.  
24 COMMANDER CACCIVIO: So, what speed did you  
25 think, and then what did you think the speed was at  
26 that time?  
27 PETTY OFFICER SEACREST: I had, I believe  
28 eight to 10 knots, that is where I had him at.  
29 COMMANDER CACCIVIO: Okay. And what did you  
30 think his course was?  
31 PETTY OFFICER SEACREST: That I can't  
32 remember.  
33 COMMANDER CACCIVIO: Okay. So, before you  
34 went periscope depth did you, I mean, you had him on a  
35 course of one, four, one, is that what you thought he  
36 was doing to the southeast.  
37 PETTY OFFICER SEACREST: Yes.  
38 COMMANDER CACCIVIO: Okay. So, assuming that  
39 the machine is wrong, the date recorder, would it be  
40 reasonable, I mean, would you believe that the contact  
41 was still doing a course of roughly to the southeast of  
42 one, four, one, if all we did was adjust the range?  
43 PETTY OFFICER SEACREST: After being a  
44 periscope depth and not seeing the guy.  
45 COMMANDER CACCIVIO: So, when I, if I look at  
46 this, at time 13:38, so if I come back here to 13:38  
47 and you have to forgive me while I do a little bit of  
48 addition here. I have a relative bearing of two, six,  
49 one. Can you tell me what the true bearing would be?  
50 PETTY OFFICER SEACREST: That --  
51 COMMANDER CACCIVIO: At 13:38, from this  
52 course of one, two, zero?

1                   PETTY OFFICER SEACREST: That would be, what,  
2 zero, eight, one. Yeah.  
3                   COMMANDER CACCIVIO: Okay.  
4                   PETTY OFFICER SEACREST: True. No -- It would  
5 be --  
6                   COMMANDER CACCIVIO: It would be a true  
7 bearing of zero, two, one.  
8                   PETTY OFFICER SEACREST: Zero, two, one.  
9                   COMMANDER CACCIVIO: Okay. So, at this time  
10 at periscope depth, you know the contact is roughly to  
11 the north of you.  
12                   PETTY OFFICER SEACREST: Sure. I don't  
13 remember any of this. To the honest to God truth, none  
14 of it. You could ask me about any contact, I know  
15 roughly I had them out between eight and 10,000 yards.  
16 I know roughly what their speed was, and I know they  
17 were pointing us, because that is what I put in. And  
18 that is what I always put in until I can prove  
19 different. And when we went to periscope depth, and we  
20 didn't see any contacts, I pushed them all out to,  
21 between eight and 10,000 yards. And that is, that is  
22 what I did.  
23                   COMMANDER CACCIVIO: Okay. Well, I  
24 understand the assumption at the beginning, but now we  
25 have had quite a few legs of being able to update that.  
26 And it appears to me that you were able to evaluate  
27 this data and come up with a solution that had them on  
28 a course to the southeast and a speed of about eight to  
29 10 knots, which is consistent with the merchant, the  
30 speed that is. So, at this point here, all right, when  
31 you, you indicated that you had your time bearing  
32 display up and the time bearing gives you the bearing  
33 and that is what you are concerned about, so, at this  
34 point here, it is apparent to me based on the data,  
35 that the bearing was roughly somewhere to the north,  
36 okay, at a range of somewhere in the vicinity of 9,000  
37 yards, okay, at a speed of roughly 10 knots. Okay.  
38 Now, if I were to turn to a course of three, four, zero  
39 and do an emergency blow, how would that contact's,  
40 assuming those are rough solutions, how would that blow  
41 affect your relationship to that surface contact?  
42 Well, let me ask this. How would coming to three,  
43 four, zero, impact your, what would you expect the  
44 solution to generate?  
45                   (Pause.)  
46                   COMMANDER CACCIVIO: Is it reasonable to  
47 believe at this point here you hold him bearing zero,  
48 two, one, and now I am going to come to a course of  
49 three, four, zero, that now you are going to get, he is  
50 going to come down the right hand side pretty close?  
51                   PETTY OFFICER SEACREST: Yeah.  
52                   COMMANDER CACCIVIO: Okay. So, did you have

1 any concern for coming to course three, four, zero?  
2 PETTY OFFICER SEACREST: I don't remember that  
3 bearing being zero, two. I don't remember any of it.  
4 COMMANDER CACCIVIO: Okay. Well, do you  
5 remember this contact being here?  
6 PETTY OFFICER SEACREST: Sierra 14? Yes.  
7 COMMANDER CACCIVIO: Were you concerned about  
8 him?  
9 PETTY OFFICER SEACREST: Initially before we  
10 came to PD.  
11 COMMANDER CACCIVIO: So, at periscope depth.  
12 PETTY OFFICER SEACREST: But, see this bearing  
13 scatter here, this looks worse when you are looking at  
14 it at flit mate screen.  
15 COMMANDER CACCIVIO: Okay.  
16 PETTY OFFICER SEACREST: This is actually,  
17 when you put this and you transfer it over to my flit  
18 mate screen, this looks 10 times worse than it looks  
19 right here.  
20 COMMANDER CACCIVIO: Okay.  
21 PETTY OFFICER SEACREST: So --  
22 COMMANDER CACCIVIO: Interesting, the solution  
23 for Sierra one, four, was at a range of 10,000 yards,  
24 which would be consistent with what you indicated from  
25 moving him out and not being visual. A course of one,  
26 nine, seven and a speed of 12, which would give us a  
27 port zero, two, seven angle on the bough. So, coming  
28 to course three, four, zero, would this have actually  
29 put you on a collision course with Sierra 14?  
30 (Pause.)  
31 COMMANDER CACCIVIO: I am just looking at the  
32 time bearing display here now. I am just looking at  
33 this guy right here, whether this is Sierra 13 or  
34 Sierra 14, we have every reason to believe this is data  
35 on Sierra 14, because that is what is displayed in the  
36 console.  
37 PETTY OFFICER SEACREST: Yes, it is.  
38 COMMANDER CACCIVIO: And this contact here --  
39 PETTY OFFICER SEACREST: Yeah, would have,  
40 three, four, zero would have --  
41 COMMANDER CACCIVIO: Okay. So, I will ask  
42 you again, would you concerned about coming to three,  
43 four, zero in preparation for emergency blow with  
44 Sierra 14 on that track?  
45 PETTY OFFICER SEACREST: No.  
46 COMMANDER CACCIVIO: Why not?  
47 PETTY OFFICER SEACREST: Because we didn't see  
48 him, his range was far enough out.  
49 COMMANDER CACCIVIO: But, assuming this  
50 contact has a speed of 10 knots, which we know from  
51 this morning discussion, 10 knots equates to  
52 approximately 1,000 yards every three minutes. So, we

1 are closing a half mile every three minutes. And now I  
2 am going to turn and do an emergency blow at a two  
3 thirds bell, two thirds bell being 10 knots, and so now  
4 I have 20 knots of closing, which means I am closing  
5 one knot per mile a minute. At a range of 10,000  
6 years, which is five nautical miles, which means now I  
7 am going to close him in five minutes. Can I get the  
8 bridge manned in five minutes?  
9 PETTY OFFICER SEACREST: No.  
10 COMMANDER CACCIVIO: So, is there a potential  
11 that I am going to collide with this gentleman before I  
12 can even see him or I can get the bridge manned?  
13 PETTY OFFICER SEACREST: Yeah, I guess.  
14 COMMANDER CACCIVIO: Okay. So, are you, I  
15 mean, we are talking about a contact now that roughly I  
16 am going to close in five minutes. Is this, did this  
17 concern you at the time we got ready to do our  
18 emergency blow?  
19 PETTY OFFICER SEACREST: I am done. I am not  
20 feeling comfortable about this right now.  
21 COMMANDER CACCIVIO: Okay. Do you want to  
22 take a break?  
23 (Whereupon, a short break was taken.)  
24 MR. ROTH-ROFFY: Okay. The time is about  
25 13:50. And we are returning to our interview with  
26 Petty Officer Seacrest after a couple minute break.  
27 Commander Caccivio, are you, did you have any  
28 further questions?  
29 COMMANDER CACCIVIO: No.  
30 MR. ROTH-ROFFY: Okay. I will go ahead and  
31 ask a couple and then we can --  
32 MR. WOODY: I have a couple.  
33 MR. ROTH-ROFFY: Let me just ask mine first,  
34 Bill.  
35 Can you give me an idea of your level of  
36 confidence and familiarity with this equipment that we  
37 are talking about, you know, manipulating these  
38 controls and interpreting the data?  
39 PETTY OFFICER SEACREST: Very confident.  
40 MR. ROTH-ROFFY: How much experience do you  
41 have in doing this?  
42 PETTY OFFICER SEACREST: Let's see, seven,  
43 eight, nine, nine of my 14 years I have been on  
44 submarines, so.  
45 MR. ROTH-ROFFY: And has it been essentially  
46 the same operator interface?  
47 PETTY OFFICER SEACREST: yes.  
48 MR. ROTH-ROFFY: During those years.  
49 PETTY OFFICER SEACREST: Yes.  
50 MR. ROTH-ROFFY: And how much training have  
51 you had, could you describe the training you had in  
52 operating this equipment?

1                   PETTY OFFICER SEACREST: Sure, I went through  
2 117 operator school back in 1989. I went to CCS Mark 1  
3 operator school back in 1993. And all the various  
4 attack centers that I have gone through.

5                   MR. ROTH-ROFFY: Okay. These two schools  
6 that you mentioned, what was the duration of those  
7 schools and what portion of your total school time was  
8 devoted to say tracking targets?

9                   PETTY OFFICER SEACREST: The first one was, I  
10 believe the first one was two weeks long, and we  
11 probably spent a full week in the trainer. And the  
12 second one was two weeks long and spent a full week in  
13 the trainer, actually operating.

14                  MR. ROTH-ROFFY: So, you have had a lot of,  
15 would you consider a good deal of training in operating  
16 this equipment?

17                  PETTY OFFICER SEACREST: Yes.

18                  MR. ROTH-ROFFY: Such that you feel confident  
19 in your ability to properly operate the equipment in  
20 tracking the contacts.

21                  PETTY OFFICER SEACREST: Yes.

22                  MR. ROTH-ROFFY: How would you rate your own  
23 ability in comparison to, now this is just a  
24 subjective, in comparison to other people on the boat  
25 and other people you know, you know, other fire control  
26 men? Average, above average?

27                  PETTY OFFICER SEACREST: I would say above  
28 average.

29                  MR. ROTH-ROFFY: Okay. And who is your  
30 supervisor?

31                  PETTY OFFICER SEACREST: Chief Thomas.

32                  MR. ROTH-ROFFY: Chief Thomas and he is a, E7  
33 type.

34                  PETTY OFFICER SEACREST: Yes. He is an E7.

35                  MR. ROTH-ROFFY: Okay. And if we were to ask  
36 him what he thought of how you did your job in  
37 comparison to others on the Greenville, would it be  
38 average, above average or any idea?

39                  PETTY OFFICER SEACREST: I would think he  
40 would say above average.

41                  MR. ROTH-ROFFY: Okay. So, probably you are  
42 a pretty good operator. And --

43                  PETTY OFFICER SEACREST: Yes, I like to think  
44 of myself as a pretty good operator.

45                  MR. ROTH-ROFFY: Okay. Because, you know,  
46 again, our investigation is to determine how this  
47 accident happened and if you can shed any light to it,  
48 you know, how in your mind you may have been confused,  
49 or other environmental factors might have affected your  
50 judgment, or your ability to make decisions, we would  
51 certainly like to hear about that. So, at this time,  
52 can you think of anything that might have distracted

1 you from your concentration or your ability to operate  
2 the equipment?  
3 PETTY OFFICER SEACREST: I can't think of  
4 anything.  
5 MR. ROTH-ROFFY: Did you feel like you were  
6 distracted when you were trying to track these  
7 contacts?  
8 PETTY OFFICER SEACREST: No, I don't think so.  
9 MR. ROTH-ROFFY: Were you thinking about  
10 something else? Was something going on at home that  
11 maybe you would have been thinking about?  
12 PETTY OFFICER SEACREST: No.  
13 MR. ROTH-ROFFY: Not any attractive women in  
14 the control you might have been looking at?  
15 PETTY OFFICER SEACREST: No.  
16 MR. ROTH-ROFFY: Okay. All right. Well, if  
17 you would just, you know, after you leave here, if  
18 there is anything that comes to your mind, that might  
19 help us, we would certainly appreciate if you would  
20 give us a call. Again --  
21 PETTY OFFICER SEACREST: Yes.  
22 MR. ROTH-ROFFY: All we are aimed at is, you  
23 know, trying to, you know, obviously there is a lot of  
24 factors coming together here at the same time. Your  
25 performance was not, did not cause this accident, but  
26 you know, there is a lot of other things happening here  
27 and we are just trying to piece it altogether. And if  
28 there is something that comes to your mind after you  
29 leave this room, we would certainly appreciate you  
30 giving us a call. And I will give you my card in a  
31 moment here. I would like, I believe Bill Woody has  
32 some questions.  
33 PETTY OFFICER SEACREST: Sure.  
34 MR. WOODY: We have heard from someone that,  
35 Bill Woody. We have heard from somewhere that the  
36 Captain announced that he had a good picture of the  
37 sonar situation or words to that effect. Do you recall  
38 that?  
39 PETTY OFFICER SEACREST: Yes.  
40 MR. WOODY: Okay. Had he gone into sonar and  
41 come back out?  
42 PETTY OFFICER SEACREST: I don't see how he  
43 could have.  
44 MR. WOODY: Okay.  
45 PETTY OFFICER SEACREST: I mean, with all the  
46 people standing right there.  
47 MR. WOODY: Had someone briefed him to give  
48 him information which caused him to feel he understood  
49 it?  
50 PETTY OFFICER SEACREST: That I don't know.  
51 MR. WOODY: You don't know that.  
52 PETTY OFFICER SEACREST: No.

1 MR. WOODY: Did he come over to the fire  
2 control area and to your knowledge look at things?  
3 PETTY OFFICER SEACREST: No.  
4 MR. WOODY: Would you have known if he did?  
5 PETTY OFFICER SEACREST: Oh, yeah.  
6 MR. WOODY: Okay. And in my understanding of  
7 the past questions, is you provided no verbal  
8 information to the Captain?  
9 PETTY OFFICER SEACREST: Did I provide verbal  
10 information to the --  
11 MR. WOODY: Yes.  
12 PETTY OFFICER SEACREST: No, I didn't.  
13 MR. WOODY: Okay. If there had been a brief,  
14 for going to periscope depth, what kind of input do you  
15 remember or think you might have given to the, I  
16 presume this is a two way, where you have a brief,  
17 people input to the Captain as well as, did the OD, I  
18 suppose you have a briefing, with you.  
19 PETTY OFFICER SEACREST: Yes, correct. We  
20 would have discussed the contact situation.  
21 MR. WOODY: Okay. With whom would you have  
22 discussed the contact situation?  
23 PETTY OFFICER SEACREST: The officer of the  
24 deck.  
25 MR. WOODY: Officer of the deck. Sorry.  
26 Now, kind of going back, along the same line,  
27 do you recall any kind of speed changes for the  
28 contact, for Sierra 13? And we do know, for example,  
29 that it came out at port at one speed, and increased  
30 speed. Is there anything in your analysis that  
31 indicates there was a speed change?  
32 PETTY OFFICER SEACREST: No.  
33 MR. WOODY: Okay. In some of the, according  
34 to the data here, it indicates that the angle was, it  
35 was for a vessel that was heading away from you. Was  
36 that something that you became, that you were aware of  
37 at any time that there was a solution where the target  
38 was going in a different direction? Is your best  
39 recollection is that the target was coming toward you?  
40 PETTY OFFICER SEACREST: Yes. That is my best  
41 recollection, is he was coming toward us.  
42 MR. WOODY: Okay. Now, we have heard  
43 depending on the shape of the dots, it indicates  
44 whether he is course speed or a range thing. Does any  
45 thing come to mind to indicate he made range  
46 corrections or course corrections? For example, I know  
47 you --  
48 PETTY OFFICER SEACREST: Well, it is a  
49 constant process when you pick the contact up. It is  
50 always changing. Even, because unless you have it  
51 exactly, it is always going to change, move to the  
52 right or to the left. So, you are constantly updating

1 and changing your solution, as the whole process goes.  
2 MR. WOODY: Okay. Now, in your fire control  
3 system, what particular presentations were ongoing at  
4 that time? We know, for example, that you had the one  
5 that looks like, this here, bearing differences. So  
6 you have bearing difference --  
7 PETTY OFFICER SEACREST: Do you want to know  
8 what my displays were set on?  
9 MR. WOODY: Exactly, right.  
10 PETTY OFFICER SEACREST: Okay.  
11 MR. WOODY: We understand what they are now  
12 better, so maybe it will --  
13 PETTY OFFICER SEACREST: This was set up to my  
14 left, the screen on my left.  
15 MR. WOODY: Okay. Could you describe that?  
16 PETTY OFFICER SEACREST: Yes, this is the time  
17 bearing display.  
18 MR. WOODY: Time bearing.  
19 PETTY OFFICER SEACREST: Yeah. The one in  
20 front of me was my flit mate display.  
21 MR. WOODY: Say again, please?  
22 PETTY OFFICER SEACREST: The flit mate  
23 display.  
24 MR. WOODY: Flit.  
25 PETTY OFFICER SEACREST: Yes.  
26 MR. WOODY: Two words, flit mate.  
27 PETTY OFFICER SEACREST: And the screen next  
28 to me on the right was in the op summary display. And  
29 the far left screen was line of sight.  
30 MR. WOODY: The line of sight would be, that  
31 would be this one here, or is that bearing difference?  
32 PETTY OFFICER SEACREST: No, that is the  
33 actual flit mate display.  
34 MR. WOODY: Flit mate.  
35 PETTY OFFICER SEACREST: That is what that is.  
36 MR. WOODY: Okay. I just want to make sure I  
37 have --  
38 (Pause.)  
39 COMMANDER CACCIVIO: This is Commander  
40 Caccivio. If you think back to yesterday display, flit  
41 mate, sorry, line of sight display, is the display you  
42 saw. It basically had the two pictures of the ship  
43 hulls that rotated like this. Basically that there is  
44 a bearing between the two and you see their relative  
45 angles on the bough, relative to each other.  
46 MR. WOODY: Okay. Were you aware that the,  
47 the system on your ship produced data like this?  
48 PETTY OFFICER SEACREST: ARCI.  
49 MR. WOODY: Yes. Okay.  
50 (Pause.)  
51 MR. WOODY: When you, when you periscope up  
52 was made, and you increased the range for the problem

1 in the fire control system, is that something you have  
2 permission to do automatically, and if so, do you  
3 report having doing it to anyone or can you tell us  
4 about that? Is it expected, you know?  
5 PETTY OFFICER SEACREST: It is expected, I  
6 think. I think it is just something that is done. No,  
7 I don't report it to anybody when I do it.  
8 MR. WOODY: Okay. All right. Just trying to  
9 get a feeling for how you operate.  
10 You say you were looking at the perivis, is  
11 there, is that one of the things you are suppose to do  
12 or are you suppose to watch the solution? Can you tell  
13 us about that little bit?  
14 PETTY OFFICER SEACREST: I am suppose to watch  
15 the perivis.  
16 MR. WOODY: You are suppose to watch the  
17 perivis. All right.  
18 PETTY OFFICER SEACREST: Yes.  
19 MR. WOODY: Okay. When the scope broke the  
20 surface, did you get any kind of impression as to the  
21 visibility or sea state?  
22 PETTY OFFICER SEACREST: Yeah, as I said  
23 before, the sea state was about three, sea state three.  
24 MR. WOODY: Sea state three.  
25 PETTY OFFICER SEACREST: You could see the  
26 swells and you could see the rolling.  
27 MR. WOODY: I realize you are seeing this on  
28 television monitors, so, it is, it is at best an  
29 estimate.  
30 PETTY OFFICER SEACREST: Yeah. Visibility  
31 looked pretty good.  
32 MR. WOODY: Visibility looked good.  
33 PETTY OFFICER SEACREST: Yeah.  
34 MR. WOODY: Can you tell much on your scope  
35 about visibility? I am not sure, I am trying to --  
36 PETTY OFFICER SEACREST: I can.  
37 MR. WOODY: -- ask you a good question or  
38 not.  
39 PETTY OFFICER SEACREST: Well, I guess what  
40 visibility is. And that day I guessed about 8,000,  
41 between eight and 10,000.  
42 MR. WOODY: Is that an estimate that you made  
43 or is that an estimate that --  
44 PETTY OFFICER SEACREST: That is an estimate  
45 that I made.  
46 MR. WOODY: That you made.  
47 PETTY OFFICER SEACREST: Yes.  
48 MR. WOODY: Do you customarily make such  
49 estimates yourself?  
50 PETTY OFFICER SEACREST: For myself, yeah.  
51 MR. WOODY: Do you check with the person  
52 making the visual and see if you are on target?

1                   PETTY OFFICER SEACREST: Sometimes I do.  
2                   MR. WOODY: Okay. On that day did you have  
3 any conversation with the Captain or the OD to ask them  
4 how, what they saw, what it looked like, the conditions  
5 were?  
6                   PETTY OFFICER SEACREST: No, not on that day.  
7                   MR. WOODY: But, you felt confident based on  
8 your look there and the fact that they didn't see  
9 anything that you could increase the range on the  
10 target?  
11                   PETTY OFFICER SEACREST: Yes.  
12                   MR. WOODY: Okay. Is there anything that you  
13 can think of that would help us to understand this  
14 better?  
15                   PETTY OFFICER SEACREST: Honestly, no.  
16                   MR. WOODY: Okay. And as Mr. Roth-Roffy  
17 said, if you do think of something let us know.  
18                   PETTY OFFICER SEACREST: Yes, I will.  
19                   LIEUTENANT JOHNSON: This is Lieutenant  
20 Johnson, United States Coast Guard.  
21                   There is two questions. Did you at any time  
22 during the day's activities pass any contact  
23 information to the Captain or the OD that was ignored  
24 or not, did you feel like you were getting a brush off  
25 at any time by them, by passing any kind of contact  
26 information?  
27                   PETTY OFFICER SEACREST: No. I didn't, well,  
28 no, I didn't pass them any contact.  
29                   LIEUTENANT JOHNSON: You didn't pass them  
30 anything.  
31                   PETTY OFFICER SEACREST: No.  
32                   LIEUTENANT JOHNSON: Okay. At any time were  
33 there civilians, I have been onboard the Greeneville as  
34 well as some other submarines. I know where you FT  
35 alley, I guess, is what you call it, were civilians  
36 ever seated behind any of the computers or in that area  
37 to have access to, touched any of your knobs or to  
38 inadvertently --  
39                   PETTY OFFICER SEACREST: Well, they weren't  
40 seated, but they were all up against the first two  
41 consoles there by the sonar door.  
42                   LIEUTENANT JOHNSON: Right. Were they being  
43 supervised, I guess what I am getting at, in your  
44 opinion could anyone have ever touched any of that  
45 equipment or entered any erroneous data into it not  
46 knowing?  
47                   PETTY OFFICER SEACREST: They could have.  
48                   LIEUTENANT JOHNSON: Yes, I know sometimes  
49 people get, they just have to touch something or see  
50 something.  
51                   PETTY OFFICER SEACREST: Well, during the  
52 angles and the turns, too, they could have, their hands

1 could have came down on top of the console and pressed  
2 a button or turned a knob or --  
3           LIEUTENANT JOHNSON: Could that have altered  
4 anything in the pictures that you had been looking at  
5 without your knowledge?  
6           PETTY OFFICER SEACREST: It depends on the  
7 screen that was displayed and what buttons they hit.  
8           LIEUTENANT JOHNSON: Okay. Thank you. That  
9 is all I have.  
10          MR. WOODY: Petty Officer Seacrest, just a  
11 couple of questions. Your first name?  
12          PETTY OFFICER SEACREST: Patrick.  
13          MR. WOODY: I think I have asked this before,  
14 but I --  
15          Would you mind giving us your address and  
16 phone number? And this will not be public record.  
17          PETTY OFFICER SEACREST: [Complies]  
18          MR. ROTH-ROFFY: Thanks very much for coming  
19 down. We appreciate it. This concludes the interview.  
20 The time is 14:07.  
21          (Whereupon, the interview was concluded.)