

California Maritime Academy Library

Interview with Thomas Stapleton

Oral History Project

Interviewee: Thomas Stapleton
Interviewer: Larry Stevens
Date: June 10, 2009

Place: Cal Maritime Library
Transcriber: Rev.com

Preface

The following oral history is the result of a recorded interview with Thomas Stapleton conducted by Larry Stevens on June 10, 2009. This interview is part of the Cal Maritime Oral History Project.

Readers are asked to bear in mind that they are reading a transcript of the spoken word, rather than written prose.

Harlan Dupuis graduated in the class of 1968, Deck.

Abbreviation

TS: Thomas Stapleton

LS: Larry Stevens

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Interview

[00:00:32]

LS: All right, so we're going to be doing an Oral History interview with Captain Thomas M. Stapleton, graduate from CMA, 1968. Today's date is June the 10th, 2009 and it is 9:50 a.m. All right, so Captain Stapleton, tell me initially why you decided to come to CMA? What was your background prior to enrolling here that gave you the initiative to wanna come to CMA?

TS: My father is involved in small sailboats and I was very active in that. We were raised down in the peninsula, Atherton, Menlo Park area.

LS: Ah, okay.

TS: And as well, I started reading some of these books by Howard Pease. He was a local author and talked about the Merchant Marine and the Third Mate and a mystery and adventures and it hooked my interest to want to go to sea.

LS: They were historical fiction books that he wrote?

TS: They were and like, mysteries.

LS: Oh, okay.

TS: And so I stayed in touch with that author and actually met him and his papers are now at the University of the Pacific in Stockton and he's inspired a lot of people, I found out, to go to sea within the Navy Merchant Marine. So, my father was a Purser in World War II and so my focus was, I wanted to stay local and this was a very good academy and a great reputation, so that's why I came here.

[00:01:47]

LS: Oh okay, all right and you came here to study, what specifically was your major?

TS: The Deck Side Nautical Science and I wanted to pursue a life at sea and in our class of 43 on the deck, I would say there's probably only two or three that were sincerely interested in pursuing a life at sea.

LS: Oh, what were the other ones interested in?

TS: They wanted to go to an academy, stay away from the Vietnam War, get a good education but I would say only two or three of us had a burning passion to go to sea.

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LS: Wow, okay, all right. And you started at CMA, enrolled and started in July of 1965?

TS: July, August of 1965.

LS: And it was a three-year program--

TS: At that time, it was.

LS: And you graduated in July approximately of [19]68 then.

TS: That's correct.

LS: Okay.

TS: Right at the height of the Vietnam War.

[00:02:40]

LS: Uh-huh, okay, all right. So, tell me a little bit about your initial, like your first year here as a freshman at CMA? What memories do you have of that as far as, maybe your day on campus or first few weeks or something like that, that would--

TS: Well the first thing that had occurred, we arrived with our parents and as our parents were being hosted by the dean and had them sipping coffee and eating donuts, we had to then process and get our work clothes, get our stencils for our work clothes and then were told to immediately head for the training ship which was alongside of the dock. And while we're there, we were issued lockers and then everything changed. It was, hurry up, it was just like, two weeks, the beginning of two weeks of hell week and meanwhile, our parents are over there and it was a dramatic transition and they said, "Okay you've got 10 minutes to stencil your clothes, put them on, go out to the pier, and stand in formation." And it was nonstop pressure to try to winnow out those that were not suitable and so that indoctrination week, as they call it, I think there's two weeks of indoctrination, were conducted by our second class which would be those that were a year ahead of us. A select few and they tried to break our spirits and have us get up early and then stand at attention and do all these other things to snap us so that if we weren't fit, they wanted to weed us out early.

LS: So, it's like a quasi-military type of bootcamp in a sense?

TS: Very much so, very much so.

LS: And did some of the cadets get weeded out that early in the--

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TS: There was a great story of a man named Midshipman Mark and he occurred, what happened to him was, he was reported missing in the evening and they found him across the straight in Crockett. He was arrested by the Crockett police. He apparently had put on his dress blue uniform and this might've been after indoctrination week but during that first year and he was stopped about 5:00 a.m. in the morning by somebody at the fishing harbor and they said, "What are you doing?" And he goes, "Shhh, I'm on a secret mission for the Navy." And he was later arrested for burglarizing one of the houses in Crockett, just sorta snapped. And as they looked at that situation, they found the previous day, he was standing a Quartermaster watch on the training ship and he reported to the senior classmate who was in charge of that dag watch, he said, "Sir, there's a dangerous situation." "What is it?" "There's an iceberg floating down the Cardenas Straits" and with that he said, "I'm out of here. It's a very dangerous sea." He jumped over the side and swam ashore and then that next morning, he was then arrested.

LS: So, I guess after that, he was--

TS: Yeah, yeah, he was, you know--

LS: Expelled from being a student.

TS: Yeah, dis-enrolled and then later probably oh, maybe 20 years ago, he passed away and asked for his ashes to be dumped at sea and I was, I presided over that when I was Sailing Master.

LS: Oh really?

TS: Yeah.

LS: Oh, how did that connection come about that you, even though he had left CMA that long ago--

TS: He just made a special request that he wanted to have his ashes dumped at sea and it just so happened the ship I was on was the one, so I did i

[00:06:20]

LS: Oh okay, yeah, all right, okay. Let's see here, while you were attending the CMA here, what courses did you particularly favor that you found most interesting and which ones did you find difficult, challenging for you?

TS: The math classes, the college algebra with Fred Newton, his nickname was Fig Newton.

LS: Oh yes, oh okay.

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TS: He washed out a lot of people and I had a very tough time because you had to have a very strong math background in order to get into his class and he was like the gatekeeper and most people would fail, who flunked out would flunk his class. And in the academy, if you were passing in all your other subjects would offer a retest final examination, four-hour exam, and nobody had ever passed that before. And I was in that situation and I was so determined, I studied like crazy over the Christmas break and just before the ship would sail in January, it sailed in January in 1966, I sat down and passed that examination and made history there. And that was my most difficult but after that, my math foundation was very strong, but I'd say Seamanship, English, I enjoyed those extremely and Meteorology, I enjoyed that as well. Cargo and Stability, I enjoyed that also.

LS: All right and those all of course paid off for you later on in your career, didn't they?

TS: Very much so, yes.

LS: We'll get to those questions in a little while about your career as well. And I assume that because of your programming calculators that you were involved with, that this math that you just, test that you took, helped you, give you a--

TS: Very much so.

LS: Give you a very strong foundation.

TS: It gave me the confidence and a love of mathematics after that and I went on to Trigonometry and Calculus. I did not have a problem with those classes after really, you know, building a strong foundation.

[00:08:27]

LS: Now you mentioned to me when we talked on the phone earlier this week there was a mentor of yours that had graduated from CMA in 1944. His name again was--

TS: Kenneth R. Orcutt.

LS: Orcutt, okay and was he here on campus during the time you attended?

TS: No, he was not. He graduated in 1944 and was a rising star with American President Lines and was Port Captain at age 25 in Hong Kong.

LS: That was quite an accomplishment that--

TS: Very much so--

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LS: At that age?

TS: Yeah and sailed just intensely to raise his license and then he was a Panama Canal pilot for probably 10 to 12 years and then--

LS: Just taking ships through the Panama Canal, back and forth, huh?

TS: That's correct, yes, and then he went back to sea just before the start of the Vietnam War and continued sailing, I think, until about 1983 and his is another fascinating story.

LS: Yeah, and we're gonna get in contact, you're gonna help us get in contact with him because he would be a wonderful person to access--

TS: Yeah so, I'm gonna see him, as a matter of fact, next Friday and he had expressed great interest in the project.

LS: Oh wonderful, excellent, good, okay. And so, you had contact with him in your career then is that what--

TS: He was, when I sailed, when I first sailed as Chief Mate on a vessel called the Transoneida. It was a converted container ship. He was the Master on there and I sailed on that ship for six months straight and he was my mentor and subsequent, when I eventually sailed Master myself on other vessels, he gave me the guidance and he was truly the one that showed me the way and I try to model my life after his presence onboard ship.

LS: He was a great role model then, huh?

TS: Excellent role model.

LS: Did you know he was on the ship as a CMA graduate before you were--

TS: No clue, I took a job right off the open board, as they called it, on the union hall and had no knowledge.

LS: Oh okay, so just a fluke that you had him--

TS: Fluke that we met.

[00:10:30]

LS: Someone else, now over your career though, have you crossed paths with other CMA graduates also?

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TS: All the time, even female graduates as well and they enjoy a very strong reputation and they generally stay at sea longer than some of the other academy graduates such as Kings Point.

LS: Ah and that's out of where, New York?

TS: That's New York, that's a federal academy, yes.

[00:10:58]

LS: Okay, all right, okay, excellent. Now back to the courses that you took here. Were there any professors or instructors that were influential for you as well during your three years while you were here from 1965 through [19]68 that you remember?

TS: I think Fred Newton was a remarkable man. He was feared but he was firm but fair and a great sense of humor. I think there were many great instructors, but I think each of them had something to offer us, but it wasn't a friendly environment. It was, we were trying so hard to pass and to graduate so it wasn't easy to build up a close rapport.

LS: Sure 'cause the focus was on study and learning and getting past your exams so you were gonna be qualified once you graduated.

TS: Exactly and then four years compressed into three, so we didn't have a lot of free time but no, there were many. Bill Aguilar, he was the Navigator, a wonderful man as well and taught us so many things.

LS: And he eventually became a Captain of the training as well.

TS: He did, yes.

[00:12:05]

LS: Yes, I remember that. So then with the being here on campus, you lived in the dormitory at the-

TS: Typically, there were four divisions. Deck and engine and they would rotate of the two shore side trimesters a year, the third, one of the trimesters, everybody would be at sea.

LS: Mm-hmm, sure.

TS: But one division would be assigned to live onboard the vessel so you had approximately 80 to 100 people that would live on the vessel for that period of time.

LS: Oh, okay and the other ones are living at the--

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TS: Residence hall.

LS: Dormitory at the very top of the hill. The original one, okay, all right. So, you lived both on the ship and in the residence hall during your three years here?

TS: I spent, yeah, one trimester on the training ship as I recollect.

[00:12:50]

LS: Oh okay, all right. And then the classmates that you met in your first year, did you continue to develop a friendship with them throughout the next three years and then after graduation, keep in contact with any of the particular--

TS: Even to this day, yes, very strong. As a matter of fact, tomorrow I'm going to a military retirement in my honor and in my classmate's honor, one of my roommates. And so, we've maintained close contact as I'd say, probably a dozen of my classmates, maintain very close contact.

LS: And who is the other person's retirement?

TS: Ken Arravie.

LS: Who graduated in [19]68 also?

TS: Yes, he is in Alameda, lives in Alameda and spent most of his career ashore in shore side jobs but at graduation, at the height of this Vietnam War instead of going and sailing with Merchant Marine, he went active Navy, as did two others, very unusual. And then he left the Navy after about three or four years and then worked ashore, and he's been ashore ever since but got back in the Naval Reserve and got his retirement points and retired as a full Captain in the Naval Reserve.

[00:14:08]

LS: Well this was one of the questions you had given me, that you mentioned that you were in the Reserves for a long period of time. This was the Navy Reserve that you were in?

TS: I have done something that I don't know if anybody's ever done it before but at graduation, we all were given a commission as an Ensign in the Naval Reserve and some of those three I mentioned, the classmates, decided to activate that and go active Navy on their commission but the rest of us just sailed in the Merchant Marine and did some correspondence courses and after a year or two, got a promotion to Lieutenant JG, Lieutenant and on up. But at about the Lieutenant level, or Lieutenant Commander, if you didn't do anything or drill or do correspondence courses, you were thrown out. I just had a sixth sense to, when I was getting close to those periods, to start doing some

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correspondence courses and just keep my commission alive rather than just being tossed out. And then I came ashore for 10 years and I actively drilled with a unit and I then was able to eventually become promoted to Captain Naval Reserve.

LS: Was that here in the Bay area?

TS: It was, it was in San Francisco, the Merchant Marine unit of the Navy and then what happened was, I was assigned overseas when I was working ashore and I had a very different time getting qualifying points for good, what's called, retirement year. So eventually in 1998, a law was passed by the federal government that said, if you've been in the Reserves as an officer in any branch of the service, 30 years, and whether you have your 20 years for retirement or not, you're out. We're just gonna throw you out and I was only 52 at the time and I wrote to several senators and it all came back to the same point of contact at the Pentagon. We have enough officers, don't worry about it, thank you very much for your service, goodbye. And I said, "That's not good enough." And I said, "I have skills, I was a Sailing Master on a ship as well as Captain in the Naval Reserve." So, I contacted the Army Reserve who has a large fleet of ocean-going vessels and they said, "Yeah, we'll welcome you and you can stay until you're 62 years old. We'll bring you in as a lowly Warrant Officer One." And so, I did that 'cause I only had 14 years out of 30, good years out of 30 and I said, "I'm not gonna give up." And so, I did that as an Army Reserve Officer and that's the equivalent low rank that an academy graduate, if they went into the Army Reserve, they would be given as a Warrant Officer One. Stayed in there for nine years, was promoted to Chief Warrant Officer Three and then I retired two years ago with 39 years combined Navy and Army Reserve time to get the 20 years and there's a proviso which I knew about that you retire at the pay grade of the highest rank honorable obtained. So, I retired at the pay grade of an O-6, which is equivalent to like a Navy Captain and then I wrote a letter saying I'd also like the equivalent rank. So, I was made a full Colonel in the United States Army at retirement. So, I was a Captain in the U.S. Navy and an Army Colonel.

LS: Wow so that's--

TS: 39 years, a long time.

[00:17:35]

LS: Yep, okay let's see here. When you were here attending school, what were some of the activities, if you had time, outside of study, classroom, et cetera, that you and your classmates would've done and participated in either on campus or off campus even?

TS: Okay, that's a good one. I was on the basketball team.

LS: All three years?

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- TS:** All three years and I can remember once we played Western Baptist Bible College students.
- LS:** Where were they from?
- TS:** They were, I guess, somewhere in the Valley or the Bay.
- LS:** Oh okay, somewhere, huh?
- TS:** And what I remember fondly was I had given somebody elbows as we're coming down after, you know, getting a rebound and as the guy is running back from the opposing team, he says, "I thought they taught you to be officers and gentlemen at the academy?" "No" I said, "Only officers."
- LS:** So, he learned a lesson there, didn't he?
- TS:** Yes, so it was basketball and I was also active in the sailing club and was commodore of the sailing club in my last year, my senior year. And also, was president of the Catholic Newman club.
- LS:** Oh, okay, all right. And you were also in the camera club as well--
- TS:** Yes.
- LS:** You mentioned earlier to me.
- TS:** was.
- LS:** Okay and some of the photographs that were in the [19]68 yearbook you--
- TS:** Yes, I contributed some of those.
- LS:** Contributed, so we made note of that.
- TS:** And they were developed and enlarged onboard the training ship in a very hot, hostile environment in a darkroom.
- LS:** Which film is usually not very adaptable to, the heat, right?
- TS:** Very sensitive to heat, that's right.
- LS:** As a side note, did you see that Kodak has just recently they're discontinuing their Kodachrome from production?

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TS: That's sad, I'm not surprised.

LS: Yeah, after what did they say, how many years? Almost 70 years or 60 years or something like that--

TS: It's all digital now. What a shame.

LS: The sales have just fallen off to the point where they--

TS: I just sold of my cameras. I've had some, several film cameras and yeah, I see it. Nobody wants to accept collectors.

LS: Yeah, right.

TS: It's too bad.

LS: When you were on the basketball team those three years, did you have good, good winning years each one of those or was it mixed or--

TS: It was mixed, I would say. We played some very tough teams, especially like the Navy at Mare Island.

LS: Oh really, oh okay.

TS: We had some tough, tough competitors and I remember one of the cruises, I think it was the second cruise, we went down to the west coast of South America and we played some Naval Cadets in Valparaíso, Chile and they cleaned our clock.

So, they were playing with the international key which disfavors tall people, pushes them farther away from the basket. It's not a parallel key. It flares out as you get closer to the basket so you can't get close and under the basket for a rebounds. So, there you are.

LS: Oh, oh different rules and different countries, huh, okay. And then as far as any activities off campus, do you have any memories of any particular places of business or restaurants or anything like that in Vallejo or Benicia, Napa, anything like that?

TS: Well there was, the only thing I would say was, you know, we were all basically underage 'cause you had to be basically 17, 18, 19 to enter the academy and we'd always try to, whenever we could break away, go up like to the M and M market up there. And I remember one time and trying to fake our age, and I remember it 'cause we rarely had any civilian clothes and mine were not hung up and they were like, stuck into a small drawer, just crammed together, and I put them on hurriedly and went up to the M and M market and grabbed the first bottle of wine I could. I was only maybe 20, trying to pretend I was older, and it was like a bottle of Tokay, that dessert wine. And the man made a comment,

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"Son, where did you come from? With your outfit, you look like you crawled out from under a rock." So needless to say, I drank a little bit of the Tokay and then that was it.

LS: Oh, he still sold it to you anyway.

TS: Yeah, he did, he did.

LS: Okay, let's see here. And then what about any social events on campus?

TS: Most of all the social events were at the other, let's say, all girls' colleges or universities. For example, Holy Name is over in San Rafael. No, that was Dominican and Holy Name was off in the hills of Oakland.

LS: Oh okay, okay and you'd usually go off campus for those?

TS: Always yeah, there was never an activity and a dance like that on campus. Only went on during the training ship would they have, like in San Diego, they would invite the coeds from University of San Diego onboard the vessel.

LS: Oh, oh okay, all right. If you have any one particular memory of the three years you were here, what are your favorite or something that stands out to you during the three years you were here that, you know, makes you feel good. You know, is there any particular one that you would have that you think of at this moment or--

TS: The one that I would just simply say is that going back to that first day when our parents were sipping coffee and eating donuts and smiling and here, we were, being herded in these trucks like cattle back to the training ship. I would say for the first five or six months, I looked at this polyglot group we had, and I kept saying to myself, "I have nothing in common with these people. "They've come from all over California. "Some places from the east coast. "They're very strange people. "I just, there's nothing that I have in common." And yet, three years later, as we were getting ready to graduate, I looked at all of them as brothers and said, "Boy, we are so close."

LS: So, your point of reference changed--

TS: So, they all changed.

[00:23:40]

LS: Oh, they all changed, not you, but they did. Okay, now I know physically, the campus has changed tremendously since you were here. You graduated in [19]68. You know, this being 2009. Is there any particular, when you come back on campus now, is there anything that you, when you observe, you make a comment to yourself about this or that on campus?

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TS: Good question, I notice many more buildings, new buildings. I notice that the old Naval Science buildings that were on the left side as you enter the academy, they've been torn down. They were like war year buildings and there was always--

LS: Those wooden barrack like buildings, right?

TS: Yes, and there was always a horrible smell of sewer gas in that area from the, used to be the tennis courts to that location. Now that you have, you have the pistol range as you go up the hill. That area was just sort of odd, but the facilities and the opportunities now and the library and that's one especially. The library, while I went here, was literally probably a 10 by 15-foot afterthought.

LS: It was in the dormitory.

TS: It was up in the dormitory and it was just tiny and not conducive. There was a librarian, unusual chap named Davey Hunter, and he was there but he was basically not in the mainstream with the staff. He was just left to his own devices and so he did the best he could.

LS: Yeah, so there's no place for study in the library because it was just a small room that basically had a few books or--

TS: Exactly.

LS: It was a lending library, basically.

TS: Yeah, that's all it was, tiny.

[00:25:25]

LS: Oh okay, let's see here. Okay so let's move on then to after you graduated, you have your degree, tell me then what happened after graduation? How your degree helped you start off with your career and what was your first job that you had after you left the campus?

TS: Okay we graduated with a Bachelor of Science degree either in Engineering or Nautical Science depending on what you based your designation--

LS: And yours was in Nautical Science, right?

TS: Nautical Science and dock side, a Reserve Officer commission in the Naval Reserve as an Ensign and a third mate's Coast Guard license. So, lots of opportunity and when we graduated, we were right at the height of the Vietnam War and the sea lift buildup. And I always remember that in the San Francisco Union Hall of the Deck Officer's Union, which was the masters, mates and pilots, there were 82 ships, 82 third mate jobs on what

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they call the open board where you didn't have to have any seniority and yet the ships, probably 40, 45 were waiting for third mates before they could sail. So, they were so desperate, and this was repeated all throughout the United States and other companies that were not of the same union, whether it be private or smaller maritime unions, were all vying for the academy graduates before we even got out. And they would, one guy was a graduate from CMA, Larry Denevue, in the early [19]60s and he was only like 24 years old and he came to speak to us. He said, "I'm already Sailing Master, I'm 24 years old." And our jaws just dropped. "And I can guarantee you any run that we're on, any ship, just join our company." And I was enamored with sailing in the Mediterranean and so I took him up. I was one of six that went with that company. It was called American Export Isbrandtsen Lines.

LS: Oh okay.

TS: So they flew us first class back to the east coast, had us stay on various ships while they were working in port until our ship that we had requested arrived and then we were dispatched as a third mate on the vessel or if they were engineers, they'd be third engineers.

LS: And they would be going across the Atlantic to the Mediterranean which you had hoped to do?

TS: Yes, yes.

[00:27:57]

LS: Okay just to backtrack real quick since we're right in that timeframe, one of the questions that I wanted to ask you since we're talking about 1968, first of all, in reference to the caricature drawing in your graduation book here, and I'll just hold it up there, can you just give us a little background as to why this particular cartoon was drawn for you on your graduation page?

TS: Sure, it actually goes back to 1967.

LS: Okay.

TS: During that time, it was a very aggressive period. The Vietnam War was raging. There was a lot of demonstration against the war, a lot of frustration, a lot of anti-military feeling and that spilled over into the academy and that caricature came from what I was trying to do. Our morale was sinking very low as we were required to wear our uniform sometimes and sometimes not. Now we wore them while we were at the academy but they really, they relaxed the rules where you did not have to wear your uniform when you were going off campus.

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- LS:** Oh, prior to that, you had to wear it off campus even?
- TS:** You did, you did.
- LS:** Oh okay, so that made you a focal point of the--
- TS:** Exactly.
- LS:** Military personnel.
- TS:** So, they said, and so then there was a group that said, "Hey are we quasi-military? Let's just end the whole uniform thing." But that was all dedicated on or predicated on funding from the Naval Science and so there was that group that says, "Yeah, we're against the war." And some were smoking pot and they said, "Let's just do what we wanna do. We don't want any of this stuff." And so, I was very--
- LS:** This was the CMA?
- TS:** At CMA and there was a group and on one Sunday, I was a second classman, I sat down and talked to a couple of close friends and said, "Let's come up with some ideas on how to improve the academy. What's wrong?"
- LS:** This because the morale was so low.
- TS:** The morale was so bad. It was like a love hate relationship and to me, you know, it was a wonderful, wonderful, you know, college. Let's stay here and make it the best we can. So, we wrote down a whole bunch of ideas on ideas how to improve the academy morale, et cetera and one of 'em was, let's have required calisthenics in the morning when you get up all together. Secondly, wear your uniform when you go off campus. Have some pride and some other things and you know, be definitive of pride in the academy and these were probably 10 or 12 different bullets. And what happened on that weekend changed my life as far as my views politically forever. And that was, well after we wrote it, we went to lunch and we came back, and all of those papers were stolen. And at dinnertime, there was about six of us that had sat down on our own to draft it, and when I got to dinner, the word had spread that I was trying to militarize this thing and so free speech was out the door, intolerance toward free speech. And I was shunned from that period and I was shocked. People that were real close friends, I'm not talkin' to you, you know, you're just too extreme. So just the free market of ideas was threatening. So, I want to this Lieutenant Kwas, Kwast, he was our Navel Science instructor and I said, "Here's the dilemma." And by that time, it's just a couple days later, we were down from six people who contributed to this project down to maybe three 'cause the rest were strongly intimidated just on ideas alone. And I said, "What should we do?" And he says, "No, I think stick with your guns, "You know, turn it in to us." And we did.

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LS: So, you rewrote it and--

TS: Rewrote it, turned it in and heard nothing and this was probably around the May timeframe.

LS: Of [19]67?

TS: [19]67 and then in Halloween, October 31st, that night, some midshipman broke into the shed where the fire truck was stored, broke in, started the engine, started going around the campus with the siren on and having like water fights and they went down to the training ship and were shooting water at the training ship and they were starting up their hoses and going around. The Admiral, Williamson, at the time, lived up on the hill. He heard the commotion. He got in his truck and everybody abandoned the fire truck and just disappeared but from one of the residence's windows, somebody yelled out, "Hey you short little F-whatever" and just horrible things.

LS: At Williamson?

TS: At the Admiral.

LS: At the Admiral--

TS: At the Admiral.

LS: Really?

TS: It was just a complete breakdown of order and the next day, all classes were suspended, and they basically had everybody meet in groups with the academy officials and said, "This is unacceptable. This behavior is way over the top." And they instituted eight out of the 10 recommendations that I had helped draft and the remarkable thing was I would say in three months, the morale was at the top. And so that little caricature was from that abortive purge. I think it was penned by Jerry Mahoney who was one of my classmates and he was one of the ones that ostracized me at that time. And since that, we're on good terms.

LS: So, you made changes on the campus that were very positive and showed changes within a few months.

TS: Well yeah, and so full circle, it changed my political beliefs of the intolerance on the left of the market of free ideas and that troubled me deeply and I've always believed in ideas on either side and respect for ideas.

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LS: Well you didn't do a knee jerk reaction when those papers disappeared, which a number of people could have done and like, looked for revenge or a way to get back. Rather than that, you went to your superiors and said, "This is the situation."

TS: Yeah, "What do I do?"

LS: Asked for their advice, "What do I do?"

TS: Wisdom and that lowly Lieutenant in the Naval Reserve, he went on to become an Admiral in charge of military sea lift command, so interesting.

[00:34:35]

LS: Oh, oh fascinating, well then that will segue into the other question with, you know, in the spring of [19]68, which was politically a very turbulent time in the United States with the assassinations Martin Luther King, Robert Kennedy and of course the Vietnam anti-war protests and university campuses being in turmoil across the country. So, in relationship to what story you just told, do you have any specific memories of perhaps, where you were at the time that Martin Luther King was assassinated, or Robert Kennedy was assassinated? That had any effect to you while you were on campus.

TS: I saw it on the news probably in the residence hall, the evening news. That's the only time we really got a snapshot of TV but by then, it was the early spring of graduation year, we were so focused on all the final examinations that we sorta filtered some of that out. Not to ignore it but I'll tell you a quick little sideline which is interesting. On one of the weekends that I left the academy to just go home or go to San Francisco wearing my uniform, I drive in my Volkswagen down San Francisco on one of the streets--

LS: Little bug?

TS: Yeah, a little bug, and I recognized somebody I went to high school with and it was my best friend in the eighth grade and I go, "Hey Bob" and this guy wearing a buckskin jacket saw me jump out of the car wearing a full uniform and "Ahhhhhhh". He was my friend Bob Weir of the Grateful Dead.

LS: No kidding.

TS: Yeah, so there you go.

LS: Oh my gosh, small world.

TS: Small world.

LS: You went to school in Atherton?

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TS: Yes, we went to Menlo School and then later Menlo Atherton High School.

LS: Oh okay, so have you kept in contact with Bob Weir?

TS: No, I haven't really, maybe I'll do that, yeah.

[00:36:24]

LS: Oh okay, all right, wonderful, okay. And one more thing before we move into your career which is the major emphasis of this interview as well. You did all three cruises during the three years you were here at CMA. Can you tell me about some of the experiences? Of course, you'd only do it once I'd assume with the crossing the equator ceremony initiation. You did that on your very first cruise?

TS: First cruise 'cause we went down through the Panama Canal down to Rio de Janeiro.

LS: Oh okay, oh okay, so you--

TS: East coast to South America.

LS: Okay so what was your experience like in--

TS: Well what we did, the night before, they would select the, have a court of the ones that they wanted to punish, extra punishment if you will, but it was all in fun. And they would find some excuse and so they used these short pieces of canvas fire hose and they fashioned us a short, like a whip, if you will. A paddle might be a better term. And they would bring you before the king's court for various trumped up charges. Everybody would laugh but you have to hold a straight face and that was a prelude. And so, I was in on that special one and then the next day was the equator crossing. And so, what they made you do is go through about an eight-foot-long, canvas sewed tube full of several days' worth of garbage. And you crawl through there and as you're crawling through this soft canvas tube, people on the outside would stomp on the tube to flatten it and so make sure you're definitely getting in there. And then after you, actually just before that, you went to the royal court and the fattest, largest members of this steward's department, the cooks, would be bare chested and they would put bacon grease on their belly and they would take your face and rub it in their belly and do other things which--

LS: Okay, that's why I was wondering where these photographs, I was wondering about what those could be.

TS: Oh, couldn't do that today.

LS: Okay.

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TS: So, then you'd, so that was phase two would be going to the garbage and then the third phase, they had probably about 100 plus midshipmen facing each other in a long column on either side and like a fire hose--

LS: Like a gauntlet, right?

TS: Gauntlet and with a water pressure running down the deck from this gauntlet and you had to basically crawl on your hands and knees up the deck--

LS: Against the water pressure?

TS: Against the water pressure and they would, every one of 'em had these canvas paddles, these soft paddles and they whack your rear end and you'd like, lurch forward each time that they whacked you. And then at the end of that, they would take you over to the edge of the vessel, which was stopped at sea on the equator, and they had a boom hanging out over the side with a block and tackle with a bosun's chair. They would fasten you in the bosun's chair, hoist you to the top by hand and then let the line go and you'd plummet all the way down into the water and get cleaned off by the sea. That's your initiation. They got everybody. I think we had probably 90, 95 people in our class that had to be indoctrinated, but the last three, they had to stop the ceremony because they spotted sharks so they wouldn't get the immersion. The royal baptism.

LS: This is not shark bait initiation. Okay but then on the next two cruises that you did, you were the giver rather than the receiver.

TS: Exactly, yeah, we were participants.

[00:40:00]

LS: Participants, okay, all right so let's move on now and emphasize your career after you left CMA because you have a very interesting career and some of the things that I hear that you have submitted to us, very unique and original in your career. So, you mentioned when you first went to sea, it was with the American--

TS: I started out at the very beginning, I went to sea in July of 1968, American Export Isbrandtsen Lines.

LS: Brandtsen okay, that was across the Atlantic and into the Mediterranean.

TS: Correct.

LS: And how long did you do that for?

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TS: I was with them for almost two months and then I got off the vessel and then came back to the west coast and joined the Master, Mates and Pilots, a large union which had more opportunity, more ships, et cetera.

LS: Here in the Bay area?

TS: Yes, and then grabbed another ship going to the Central America and then--

LS: Oh prior to west coast.

TS: Santa Adela was the name of it.

LS: Santa Adelo?

TS: Adela.

LS: Adela, okay, all right, okay. Now while you were doing this, when you would come back here, were you living at home with your family or did you have your own place at this point?

TS: I was living with my folks until March of 1969 when I got married the first time.

LS: Oh, okay, all right, and the lady that you married, a high school sweetheart or--

TS: I met her at one of the dances--

LS: CMA dances?

TS: CMA dances, she was a Portuguese girl from the island of Madeira and so we got married in March and then lived in a small apartment in Menlo Park for a few months and then moved to San Carlos and other places.

LS: Okay and since then, with your married life, you've had how many children?

TS: I had one by that first wife and then I got remarried in 1980 to my current wife and we've been married 29 years and we have two more children.

LS: Oh, okay so you have three children all together now and they're all adults now?

TS: All adults, yes.

[00:42:15]

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LS: Okay, all right, so at some point in your career, you became interested in programmable calculators.

TS: Correct.

LS: So, tell me how that came about and what you did with this in your career?

TS: Okay in 1968 when we graduated, all we really had were slide rules and everything was on the ship, in tabulation or in tables except stability. That had to be all done by longhand. So, I had one of the early what's called context adding machine with a plunger back in 1969, 1970, but I was always fascinated on ways to make it easier and more efficient. And programmable calculators basically came out about 1975 so from Hewlett-Packard--

LS: Oh, not Texas Instruments, it was Hewlett-Packard.

TS: Hewlett-Packard was probably among the first but they had scientific calculators a few years earlier and so when they had the HP-45, I bought one of those and you could do all the same things as a programmable calculator but by hand and have to have written steps. But that was when I was on the Hawaiian Citizen vessel for Matson. You had to do the stability calculations and typically they would take about an hour and a half to do and if one ballast tank or fuel tank changed, you had to then do all the calculations all over again. And I became fascinated by there's gotta be an easier way and I wanted to do what airliners do is have what's called the loading envelope. That is where you tell the cargo planners what your permissible parameters are and you only have to look at a couple of key numbers. And you could then automatically say, "Am I in the window or out of the window?" And if I'm out of the window, then something bad is gonna happen and that came to light when we were loading on the Hawaiian Citizen in Portland, Oregon.

We were gonna go back out of the river, up to Seattle and then down to Honolulu and I was doing the calculation and I told the Captain, "This is inadequate stability. "The ship is gonna be unstable." He said, "Never mind, it's good enough. "I don't believe that calculator stuff. Forget about that." Well, we went and loaded out of Seattle and I warned him and as soon as we sailed, the tugboat made up on our offshore bow and took a strain to pull us off the dock and the vessel flopped from the port list to a starboard list which is a clear indication of negative stability. And the ship, in a heavy sea wave, could've actually capsized. Luckily with calm seas, we went all the way down to Hawaii without incident.

But that called my attention after that and with those handheld calculators, I then progressed into programmable, the HP-65. And how I got into that really was when I joined Matson, what I did was, in 1973, I was with Captain Ken Orcutt, who later became the Commodore. We were on the ship, the Transoneida. It was owned by Hudson Waterways, which was part of Sea Train and we were running from Oakland to

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Honolulu, back and forth on a two-week schedule but the company, the ship was sold to Matson. So, our deck union was the same that transferred over to Matson but the unlicensed were a different union. They were District Two SIU engineers as well as unlicensed and lots of resentment from the engineers who were losing their job from one union and going to another union. And they actually painted out a whole bunch of the valves in the engine room and tried to sabotage it so it would make it very difficult for the engineers of the MEBA, that were gonna sail the ship, to figure out what's going on. And as a matter of fact, they did because after we sailed, they had engine casualty. The boilers were soldered up and we had to be towed back in about 1200 miles back to Oakland because the boilers were damaged.

During that time, I was with Captain Ken Orcutt. He had lots of times on his hands as we were being towed and he looked at my scientific calculator HP-45 and became fascinated by it. And when we got into port, he went uptown and bought an HP-45 like I had and got a brochure for the programmable one, the next better model. And he looked at it and he said, "This programmable one looks better." So, he went back to the emporium that sold 'em, got his money back and took the programmable one. And he started, actually, these programmable calculators, now some may argue they were called computers but they really were programmable calculators but he started his path and stayed with that many years developing that and buying the better models but went into the personal computers later. I went into personal computers at an earlier period of time and basically, 1977. Radio Shack developed what's called the TRS-80 model one and it was video monitor in black and white, keyboard and I'd heard about this, read about it in "Popular Science" and go, "I gotta find out about this." And went down there and it was \$600.00, no printer, all separate components and came with 4K of RAM.

And I asked the woman, "Can you show me something?" And she wrote a three-line program. What's your name and thank you very much. I typed my name in there and it said, "Hi Tom" and I was just amazed and so I bought it right away and a few months later, started to read what limited books there were on BASIC programming and started writing the first shipboard program. And that was on a vessel called the President Polk. He was the American President-elect and I started writing that in late [19]77, I mean late, let's see, late, let me do that again. Wrote that one in late [19]77 and completed it in early [19]78. And because I was sailing chief mate, I wanted to do the stability calculations quickly and easily and I have copies of that code that I wrote.

And senior vice president of APL visited the ship in Hong Kong, heard about the program, and said, "Could we get rid of all of our shore side computers and just use this?" And "No, this is really shipboard application." But to backtrack, you could upgrade this computer to 16K from the 4K. And so, when I wanted to do that, I asked someone, "How do I do it?" "Oh here" and they gave me a little plastic tube. It looked like what you buy a toothbrush in with all the chips. "I just plug 'em in?" "Yeah, open it up and just do it." Well they didn't tell me about grounding and static and everything else and so, you know, all the chips were no good and I got a refund but they wrote a company bulletin saying,

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"You have to ground yourself with a proper cuff" et cetera. Don't just give it the customer anymore after that.

So, I did that, but the interesting thing was, with that shipboard computer system on the TRS-80, I was able to take and put in characteristics as the ship would be loaded. If it was submerging the summer load line, it would indicate that on the screen. It had rolling period as well in there and you could do quick calculations and that made it so much easier.

LS: And of course, it sounds like you had total support from the, your superiors or your hierarchy in the owners of the cruise line, shipping line, to do this as well because they could see the benefit in this.

TS: Well at that point, they said, "Oh that's nice" but they didn't bother me, just let me do my own thing and, of course, we have to remember back then, we did not have floppy disks. This system for mass storage was a simple cassette player that you put a cassette in, and it would record the audio sounds of the actual program code in there. And so, it wasn't where you could save the program and then repeatedly. You had to find a clean stretch of this tape to save you work, so it was--

LS: Sounds so antiquated now, doesn't it?

TS: Very much so, very much so.

LS: So that's when you were, that's part of when you were writing these computer programs at sea because of this working with the Matson--

TS: Yeah well, I was with APL at that time and I was with another mentor who had come over from one of the break bulk ships. They had these five break bulk ships which are the ships with booms.

[00:51:21]

LS: Okay so I just wanted to ask you, is that, I personally know this and for anybody that's watching this, what is a break bulk vessel?

TS: A break bulk vessel are the vessels we typically saw up to the late 1950's, before the age of containers. Cargo would be loaded in slings into a vessel with cargo boats and with wires connecting the two booms through pulleys or blocks and they would load these things or discharge it via slings or pallets. Order magnitude maybe a gain of 16 to 20 longshoremen in one of these hatches, would load maybe 30 tons an hour at a high clip. You compare that today where they can load probably 1200 tons an hour with containers along with one crane and with a crew of maybe six at that particular location.

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So, the break boats were being on the way out because people saw containers as the future but the C-5's and the C one through five, six, seven eight, nine, 10, that's a measure of length determined by the Maritime Administration. So, it's a range of size. For example, C-5 might be 600 feet to 680 feet, for example. The C-5s were the finest break bulk ships ever built in the United States. There were built in the late 1960's. They were built in Newport News where the aircraft carriers were built. There were five of 'em and they were amazingly large. They had a one billion cubic feet under deck space. They could carry containers on deck, some smaller 20-foot containers in the squares in the hatches down below and break-bulk cargo.

And so, I sat down after I had this TRS-80. I wanted to get over on those vessels because the mentor, who had sailed Master on one of those vessels said, "You've gotta get over there. That's the future, you gotta get that experience." So, I took my computer and I was assigned over there. People thought I was crazy taking a nice job on container ship to go over there and because those ships would be gone for three, four months at a time on remote places in the world. And to me, it fascinated me so I sat down and I took my skills from the President Polk stability program and I crafted it for this break bulk and added some extra features including, we had a bow thruster, and that's like a propeller up forward that, as you're coming into the dock, it would push you toward the dock or away from the dock. And if that's partially out of the water or the tunnel, it was partially a wash, then it's not gonna be efficiently, it's not gonna work very well. It has to be fully submerged. So, I had that in there as you're loading, if that was partially a wash, it would show you that. So, you would probably have to order an extra tugboat for the bow or if the propeller was partially a wash, you would have some cavitation and it wouldn't be as efficient. I had that as well and so I took what I learned and improved the program.

And so, I had this really nice program on the TRS-80 for the C-5s and in late 1979, I had some difficulty, personal problems in my family so I came ashore and was a break boat cargo planner. And APL bought that program from me, the software, for \$3000.00 and I took that. And then Hewlett-Packard came out with a new product that had an internal printer, did graphics. It had a mass storage device with a little tape and the whole thing was just perfect and rugged and robust. It could also support a printer and floppy drives and whatever, so I bought that and then I studied it 'cause it was a different dialect of BASIC programming language. So I sat down and I rewrote that thing and so finally about 1981, in March, I went up to Lake Tahoe and I finished the program on vacation and wrote it completely and brought it to work, showed it to my boss and he said, "Let's put the paperwork in to get justification to buy one of these for the office because you've been using your own, let's just do it."

And I did that and then all of a sudden, the word came down from one of the senior VP's, "We don't want one. We want you to change that. We wanna make that six full installations." And I said, "What?" "We want you to install it on every one of the five vessels and have it also in the office." And so, I went down to Los Angeles where the President Jackson was one of the C-5's they were loading, and Captain Robison was on

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there. He had seen the computer, was enamored by it, and he said, "Look Stapleton, we're sailing in a couple of days. Give me yours and you can take ours 'cause yours hasn't been, you know, the order hasn't "been shipped yet." Okay, so he took it and they were the first one with that piece of software. And that software stayed with the ship for probably about eight years even after some of those ships were transferred to Life Brothers. They were using that software as well and it added tremendously to the profitability of the APL break bulk operation.

[00:57:02]

LS: And you mentioned here too, now this is also at the point when you were on this first American cargo vessel that carried the containers from China? And did they use this program as well that you're talking about?

TS: That's correct and yes, it was. We were on the President Wilson and on that memorable voyage, I met my current wife down in Mazatlán, Mexico and we took bales of cotton to China, Red China.

LS: This was what year approximately?

TS: It was 1979 and we were the second American cargo ship to call Communist China in 30 years. The first to call the northern ports which served Beijing, went to a port called Zhanjiang and Captain Norman Johnson was the Captain. I was the Chief Officer, Chief Mate, and I took my Radio Shack computer at the time, the TRS-80 with me and we're doing all the stability. We took the first container load out of China on any vessel in the world and we were there for about four days loading and discharged the cotton and then loading back. And the Chinese planners worked on board in a little room and they were using their abacus to do all the calculations as fast as possible and I was sittin' there with my computer 'cause I had mastered doing the numeric keypad and they were just blown away that stability calculations could be done so quickly on the screen.

[00:58:40]

LS: Did you have any opportunity on this voyage while you were in China to go on land?

TS: We did, the Captain and myself and the Purser were taken on buses and then took a train to Beijing. That was probably a four-hour ride and we were given a state dinner where the U.S. Ambassador, Leonard Woodcock, was there. And we got to see the Forbidden City, the Great Wall of China. We were there when everybody wore the blue Mao outfits and very remarkable. Then years later when I went back to see everybody wearing modern clothes and cellphones a very changed world.

LS: But you were treated with respect and welcoming--

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TS: Very much so, very much so, and then it was such nice dinners. And so, our Captain was a character. He decided that he would give a little Americana back and help them and what he did was, he invited the senior officials down to the vessel for this meal and it was hamburgers and hotdogs and he was showing John Wayne cowboy movies. And he wore his blue Mao on it.

[00:59:49]

LS: That's very good. Interesting, all right, so tell us about the installing these mini-computers aboard the largest container ships built in the USA.

TS: When I was working ashore for the break bulk group as a planner and installing software on these cargo vessels, I became recognized because at that time, APL was, they were in the process of building the three largest container ships ever built in the United States and they wanted to have computer systems onboard, bigger than what we had on these little break bulk ships. The break bulk ships were C-5's and these were C-9's and the new ships were 860 feet long, being built in Avondale, Louisiana. So, they said, this Charlie Deering who was the Vice President of Marine Operations, this hard-fisted, hard-ranking former engineer, seagoing engineer, said, "Tom, I want you to be in charge of this project. I want you to help select the computers. I want you to install it. I want, we want lots of software something beyond anybody had ever imagined." It wasn't just stability. We could've had a small desktop computer if that was what it was. "Now, we wanna have planned preventative maintenance for engine maintenance. These are gonna be diesel ships. They have large engines, 12 cylinders, 43,000 horsepower, just monster vessels and we also wanna have spare part inventory where we can track the 8000 spare parts and reorder them and do all the stuff." So, the shopping list of applications he wanted kept growing. "Oh, and by the way, we want it to do overtime. We wanna track overtime." "We wanna make it simple."

So, first thing is, I wanted to figure out what computer would be appropriate, and I like Hewlett-Packard because of the robustness and the reliability and the quality. So, I contacted them and Hewlett-Packard, at that time, they had business products and scientific products as far as computers, and it boiled down to two. One was the HP 250, which had a BASIC programming language built into it, could support up to four users, maybe six users, but probably six, I think. And the HP 1000, which was a scientific computer that you use Fortran, et cetera and so it was a dilemma because we liked the sales rep on the scientific side but the guy on the business side was sorta so-so but we liked the hardware. I liked the hardware 'cause of ease of use. I realized hey, most people going to sea at that time were adverse to using a computer. So, we had a dilemma here.

Our port engineers and this Senior Naval Architect, Paul Wood, liked the HP 1000 'cause he had written his stability programs in Fortran and he thought that would be a better deal. So, he knew I liked the HP 250, the business friendly one and there was another company that was just installing it on a bulker, a bulk ship, on a very small limited basis.

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So, I went to my boss, this Charlie Deering, and I said, "Here's what I'd like to propose that we have like a bake off. We both look at 'em and then have a committee look at it and then make the decision so it's not just me making a solo decision because then we could work on trying to find a software vendor to help do all this."

So, I went to each of the sales reps, Tom Spain for the technical and whoever the other guy was for the HP 250 and I said, "Look, the answer is we really need to have some equipment to look at it." And he said, "You don't understand. Hewlett-Packard doesn't bring equipment to the customer. You go down to Cupertino and you can see our facilities and we'll show you." And so, I went to the other rep and I said the same thing and he said, "Nope, that's the way, that's the way it goes. I'm sorry, I just can't do it." I said, "Not good enough." I picked up the phone, dialed Hewlett-Packard and I said, "I wanna talk to Mr. Paul Ealey." The number two man in the world for Hewlett-Packard. He answered the phone and I said, "Look, here's the scenario. We're putting the largest computer system in the world on these vessels, about 1982 will be when they're actually up and running and I've tried to steer this thing so it's gonna be HP equipment." And I laid the whole thing out to him.

And he says, "Well, what do you need?" I said, "In a perfect world, I'd like to have both pieces of equipment set up at our APL headquarters in Oakland and we have a bake off. Show all the features, then we vote on it and go from there. HP wins no matter what." "I'll take care of it." I get a phone call 20 minutes later and this guy named Tom Spaces says, "What the hell did you do, Stapleton?" I said, "What do you mean?" He says, "We got two semi-trucks coming on Monday with eight million dollars' worth of equipment and we're gonna set up in your facility." So, these guys set up dutifully in one of our conference rooms, all the equipment and they're showing each of the 10 people at our shore side, engineers and also port captains, all the features on everything. And Charlie Deering said, "We're gonna take a vote." And I had prepared the ballot. Everybody turned in the secret ballot. I add the results and I look at it. It was a five, five split. Five for the 1000, five for the 250 and go. So, and my boss knew I liked the 250.

LS: You were gonna be the deciding vote then?

TS: Well no, I was part of the mix.

LS: Oh, you were part of the mix, okay, all right.

TS: And he's a rough, hard drinking, you know, former engineer and he goes, "Tom, let me see the results." So, I hand him the paper and I go, "Here you go, Charlie." He says, "So be it, it's the 250." So, a man decision and then from there, we had this company called Hans Weinholtz and they developed most of the software. We did the in-house software for the stability and it was a very difficult thing. And then we had to train everybody that was gonna go and use it and nobody had ever had this large project underway before. So, when the first ship, which was the President Lincoln, was being built, they were probably

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staggered, of the three ships, maybe three, four months apart, and delivery in 1982, I went on board. I had the crates delivered to Avondale shipyard in New Orleans and I'm making sure they're being installed because this ship had a bridge all the way forward where everybody lived and 700 feet aft in the engine room, they wanted to have another monitor so lots of wire being run.

And so, I went to hook the thing up and to try it out and check it and it wouldn't work. We'd go do an access and at that time, Hewlett-Packard announced that they were gonna upgrade and have a 27-megabyte hard drive. And so, that was like \$16,000.00 per installation and so the sales rep said, "These aren't gonna survive at sea." I go, "What? I mean, we were counting on these things." "No, you've got this thing mounted up near the bow. "You have heavy vertical forces of gravity, g-forces, head's gonna crash. If the head crashes, you'll lose all your data. It'll wipe it out."

And I'm thinking ugh, you know, when you're pioneering something nobody's ever done before and these are called mini-computers, I think it was six, six users and it would support a matching 64K per user. They'd use a common hard drive. So, I'm just sitting here wracking my brain, "What am I gonna do here?" And I said, "Okay I'll tell you what. I called the Maritime Administration and I said, I want to get permission to have access time on the Nassau simulation down in Moffett Field, California. They had a Boeing 747 simulator they used for space. It was hydraulically operated, and I got permission to have four hours usage of that simulation to have them test this hard drive to see if it would survive.

And so, when I'm lining this all up, I called Hewlett-Packard and I said, "Okay, here's the deal guys. You bring that in on a Monday morning and we're gonna give you four hours. Let me check with the boys in the lab." They came back and said, "You don't have to do that test. "The hard drive will survive." Being so cautious and conservative, they didn't wanna reveal that it would survive, and it did survive. And then after that thing was installed, and I'll go back to that first installation, I was testing everything, and we do a disk access and the computer would get lost. It would just go to and endless thing and then just time out. I go, "What's wrong?" And I'm trying to think, "What is wrong with this thing? I mean, it should work on a ship." And I'm walking around, and I see this Xerox technician installing a copy machine on the vessel and I started commiserating with him and he said, "Oh, the problem is on a ship you have what's called a floating ground." Okay, I call Hewlett-Packard, get to the technical people inside of the lab, they said--

LS: 'Cause you didn't know what a floating ground was at this point?

TS: No, no I'm not an electrician.

LS: Sure, okay.

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TS: And I'm asking our shipyard supervisors and the yard, "What's the problem?" And they go, "Yeah, it's a floating ground. That's the way it is." And I talked to Hewlett-Packard and they said, "With our interface bus that talks to each of the various pieces of equipment, we have to have dedicated ground." I said, "We don't have one on a ship. "All the legs are hot on the plug."

So, I met this guy from Xerox who was installing, and he said, "Oh yeah, you have to put what's called an isolation transformer onboard." He explained it to me basically. So I got a hold of one and I had the yard electrician explain some things to me and so from that, I did it, rewired it, and then asked the yard to, you know, sell us more of these. They miswired 'em. I had to then write a service bulletin, which I have a copy of, for Hewlett-Packard and it solved the problem completely. So, I mean, those are the kind of trials and tribulations that you go through on a first time, and like I said, we had the largest installation in the United States. Probably not the first with a mini-computer but the largest and they were the largest container ships ever built in the United States even to this day.

LS: And you did a lot of troubleshooting that other people probably were able to pick--

TS: And the interesting thing, yes, and the interesting thing was full circle, in my career, I then sailed Master on each of those three sea lines. There you go.

LS: And there's your little babies right there in front of you while you're doing that. Okay anything else you wanted to add to that story.

TS: I just want to add is that while I was doing that, my boss came to me, the engineer who tried it and then retired, we had another boss, Tom Haller. He said, "Oh listen, we're putting two C-6 "container ships in a Far East shuttle and we need you "to take an HP 85 and want you to write a stability "program for this." While I'm doing this large project, overseeing it, "Yeah okay, how much time do I have?" "Well the first one sails overseas in 30 days." So, I had to write for these ships would carry what's called 1120-foot equivalent units, TEUs.

The problem is these HP 85s were constrained by memory. The RAM was only 32K but it's interesting. A human being under pressure can become creative and I was thinking, "How am I gonna do this?" I'll give you an example. Take one container. If you take a cross section of the container and it's stacked on the vessel, the vertical distance up from the keel is called the vertical center of gravity. From the center line between port and starboard, that offset, either to port or to starboard, that's transverse center of gravity. And then from the stern or the bow to where that container is along the length of the vessel, that's called longitudinal center of gravity. So, for any unique storage location of these 1100 containers, you have three pieces of identification, vertical center of gravity, transverse center of gravity, longitudinal center of gravity, that identified exactly where it

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should be. But I didn't have the memory to store three times 1100, 3300 pieces of information. It didn't have the memory and I'm wracking, "How can I do it?"

And then I was reading, it had like 12 digits of precision, so I thought, "Let me see if I can "take all of those digits and put 'em in together "and pack into one long number and use a plus "or a minus if it's port or starboard, "and then have a routine that will strip this all away." So I had to take tape from the tables and write all these numbers and long things, then key them in, not knowing if I keyed it in properly or if I screwed up the number or anything else, so then I thought, "This computer has graphics." So what I did, Larry, I had it where it would read the data for one cross section of a cargo row and what it would do, if you could imagine the outline of container, just a cross section, it would on the screen turn off the light pen, go to the center and then it would go to a corner with the light pen turned off, turn on the pen and then draw a rectangle, turn off the pen, grab the next data and do the same thing.

So that if I had these rectangles, if they were overlapping each other, there's some data that was incorrect. So, it drew the proper stack of where all these rectangles were showing the containers and so I knew that the data was valid. And on one of them, back near the stern, there were three under deck that were not on the center line, a stack. And I went to the Naval Architect the next day. I said, "Is the data incorrect?" "Oh no, that's how the ship was built, configured when it was converted to a container ship." You only see that graphically. So, it enabled me to validate data using graphics quickly and easily and that to me is very satisfying. And so, in three days, I had a manual written for those things, I had them installed and off and running.

LS: Wow.

TS: So that was very satisfying.

LS: Well you were working with three different dimensions so the creative program that--

TS: Yes, to validate the data.

LS: Yes, exactly.

TS: So that was very, very satisfying. And then after that, I was involved with the Reserves. You probably have a question on that one or just?

[01:14:54]

LS: Yes, yes so you do have a question here though about later you returned to sailing. Please tell us about some of the other software that you wrote for cargo vessels that you sailed as a Master?

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TS: I was on the C-9s and C-8 vessels. The ones I put the computers on were C-9's and so I then got into writing in Pascal. All these were self-taught, the programming because the academy never had programming classes at that time. So I wrote it in Pascal and I wrote a program called Fuel Saver and this is back in like 1985 even and what this would do, it had all of the characteristics in ocean currents for the run we were on and it would allow you where you would put in what time you were going to depart a port and what time you were gonna arrive and it would show you the amount of fuel you would burn and if you just slowed down or sped up during that time, how much fuel you would need to save or burn extra and how much it would cost you to do that which was fascinating, and at that time, I offered that free to Matson and the Marine Superintendent, who is no longer there, said, "No, we're not interested."

And it would've saved them countless tens of thousands of dollars. Then another one I did on a war ship, you cannot increase your speed beyond, let's say, full ahead to the higher steaming speeds quickly. They have a computer program which is called a load indicator, a load program and it loads up one RPM increase in speed every minute and a half. So, there's not thermal shock and heating the engine too quickly. The problem you have is if you're going inter-port between maybe a short distance of maybe five, six hours, you can't go all the way up to your maximum sea speed and then back down again. You have to cut it off as you're loading up to then start your loading down again in reverse. So that's an interesting mathematical calculation to try to figure out hey, how far up? So, I had that program to do that as well.

LS: And those were instituted on the ships that you work--

TS: Yes, I would do it on my free time, all on my free time.

LS: When you were doing this, you said a lot of this stuff was self-taught. Were you learning this while you were on the ship?

TS: I would, and it was also, and when I was on vacation. I would take programming books and read it and be highly motivated to learn more and to solve problems.

LS: So, this is all prior to the internet and the web existing, and so you didn't have access to this information by the internet. You were doing this all through books and--

TS: All through books and it was fascinating to me to do that and yeah, so I enjoyed it.

[01:17:40]

LS: All right, and then one final question you've submitted here is, that you were in the Reserves for a long period of time and so tell us about how that contributed to your computer skills?

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TS: Okay, well I was actively interested in Go For One in the 1990s, when they were activating ships and I was always a resource to APL when they would break ships out to help them supervise as a Port Captain and when that war occurred, the Maritime Administration notified APL, we want a few vessels activated right away and bring war materials out to the Far East. So, they brought me in as a Port Captain to basically oversee the ships being broken out and to set up a structure in doing that. So, for about three months, I was an active Port Captain but what caught my attention was one vessel and I have a photograph in the archives of the Cape of Borda. It was a Far East Gulf clipper that used to be owned by Likes Brothers.

Now the interesting thing that caught my attention because stability calculations have always fascinated me and when the Captain on that ship when it sailed from the Pacific coast, out to the Far East via Singapore, and then to the Middle East, into the Gulf, he made a request for taking fuel in Honolulu, another request for Guam, another one for Singapore and then also Fujira and then into the Gulf. And I go, "I had no knowledge of that ship. This doesn't sound right." "No, that's the way it is." And in their stability program was written in like Excel, a spreadsheet, "No, that's the way it is." I thought something was wrong.

Well, that first skipper, I relieved him back in Bayonne, New Jersey at the end of his four-month assignment, three- or four-month assignment. And so, I got to look at their stability program in detail and there was flaws written in that program that indicated less stability than you actually had. And I went in there, changed it, and changing the steaming radius from like 2500 miles before refueling again changed it to about eight or nine thousand miles. So saved all those fuel costs. So that to me was personally very satisfying.

And then the other one was, when I got transferred into the Army Reserves, they have a fleet of about 35 what's called LCU 2000. They're landing craft, ocean going landing craft that carry a crew of maybe 16 and they have a bridge, machinery house aft and then a long loading deck, if you will, a well deck. The vessel's only 172 feet long with a big flat ramp that comes down and I thought, "Where's the stability program for this?" "Oh, we don't have it, we do it manually." And they never did. They would not do it. These are located all over throughout the world. So, I thought, "I'm gonna write a "trim stability program for the Army, for these vessels." And here was the challenge. You had this wide-open deck with roll on, roll off cargo, wheeled cargo coming onboard. But the problem you have again is there are no defined boundaries or markings on the deck as to how far is its longitudinal center of gravity from the bow, transverse, how?

It's all the same height about the keel pretty much. So, I was looking around trying to get ideas and all of a sudden, I saw that they had all of these, what's called, cloverleaves, holes in the deck where you can hook lashings. They're like stars and I thought, "I can use those as references." So, what I came up with was, tape the deck from the bow back to the all over the well deck with these various stars and locate and map their locations. And like a

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spreadsheet where you have A to infinity or A to Z if you will as columns and rows from one to 22, for example, and so I mapped every one of those cloverleaves. Like A1, B3, B4, whatever, and then I said, "Okay if a vehicle, a tank or anything is straddling over those, if I take the position of one of the cloverleaves at the far end and the opposite diagonal and I take their transfer center of gravity for each of those two reference points and the transverse and average it, it'll be the midpoint between." And that's what I did for the rolling stock. You know, so it was a clever way so nobody had to sit there and all they'd have to do is, if it's a real tall load, use a tape measure because we knew how high the deck was for the vertical center of gravity.

So, I wrote that program and some were intimidated by it, some of the skippers didn't wanna use it and this one chief engineer said, "Tom, this is great. I love it, but you have the input for the tonnage, it's tonnage but we do everything in gallons." So I put a feature in there where you could type in either a pure number, which would be tons, or if you had a number with a letter G right after it, then it would automatically recognize the G and convert it to gallons.

So now when I had my first command, I was sent to Florida, Tampa, Florida and had the California crew and I was a lowly Warrant Officer One, just low rank, but they put me with this guy who was a Chief Warrant Officer Four, very experienced, lots of seniority, and for the first time, he was my chief mate. And so, it was an awkward situation 'cause here's a guy who knew all about these vessels but kinda grumpy that he was in this position. So, he looked at my stability calculations and he saw what the forward draft is and the after draft that we calculated. He goes, "Tom, see your program's no good. It doesn't match. Come out here, let's take a look at that forward after drafts." And I said, "Charlie, have you ever known an engineer that's honest with where they tell you the liquids are on a ship?" "Oh, that's right, let's go down and look at the tanks themselves." And so, we got the correct numbers. They were off.

[End of interview]