

CAORF/JSACC 2000 International Multi-Conference on Instructional Technology

“SIMULATORS AND STCW”

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GOOD MORNING, ADM STEWART, LADIES AND GENTLEMEN, IT IS A PLEASURE FOR ME TO BE HERE TODAY TO ADDRESS THIS CONFERENCE. THE ISSUES AT HAND - INSTRUCTIONAL TECHNOLOGY AND SIMULATION HAVE BECOME MORE IMPORTANT AND WILL CONTINUE TO DO SO, PARTICULARLY AS WE LOOK FOR INCREASED USE OF SIMULATORS AND WEB BASED TECHNOLOGY TO IMPLEMENT STCW 95, AND MAINTAIN STCW 95 MARINER QUALIFICATIONS.

I CAN THINK OF NO BETTER VENUE FOR SUCH A DISCUSSION. MY THANKS AND APPRECIATION TO ADM STEWART AND THE MERCHANT MARINE ACADEMY. SIMULATION CAN BE USEFUL IN AREAS OTHER THAN PURE TRAINING - PASSENGER EVACUATION - KILL VAN KULL.

I APPRECIATE THE OPPORTUNITY TO GIVE YOU AN IDEA OF THE ROLE THAT I SEE INSTRUCTIONAL TECHNOLOGIES PLAYING IN TRAINING IN THE FUTURE. I'LL BEGIN WITH SOME THOUGHTS BEYOND STCW, THEN STCW 95, PROVIDE BACKGROUND AND CURRENT IMPLEMENTATION STATUS IN U.S. AND SUM UP.

SOME OF YOU ARE PROBABLY VERY FAMILIAR WITH STCW. IN 1978, THE INTERNATIONAL COMMUNITY RECOGNIZED THE NEED TO ADDRESS THE HUMAN FACTOR IN THE PREVENTION OF MARITIME ACCIDENTS AND POLLUTION INCIDENTS.

AS A RESULT, THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING 1978, STCW 78, WAS ADOPTED AND ENTERED INTO FORCE IN 1984.

THE '78 CONVENTION WAS DESIGNED TO STANDARDIZE THE TRAINING AND CERTIFICATION OF SEAFARERS. IN 1991, THE UNITED STATES SENATE GAVE ITS ADVICE AND CONSENT AND THE PRESIDENT SUBMITTED THE INSTRUMENT OF RATIFICATION TO INTERNATIONAL MARITIME ORGANIZATION, OR IMO.

BUT THE '78 CONVENTION HAD SERIOUS PROBLEMS. IT WAS TOO VAGUE TO BE AN EFFECTIVE INTERNATIONAL PROGRAM. IT CONTAINED NO CLEAR STANDARDS OF COMPETENCE, NO OVERSIGHT OF INTERNATIONAL COMPLIANCE AND HAD LIMITED PORT STATE AUTHORITY TO ENFORCE THE PROVISIONS OF THE TREATY. IT GAVE COUNTRIES FAR TOO MUCH DISCRETION IN LICENSING AND DOCUMENTATION.

IN 1993, THE IMO DECIDED TO STRENGTHEN THE PROVISIONS OF THE 1978 TREATY. IT PROPOSED A REVISION TO THE TREATY TO ESTABLISH THE HIGHEST PRACTICABLE STANDARDS OF COMPETENCE TO ADDRESS AND REDUCE HUMAN ERROR AS A MAJOR CAUSE OF MARINE CASUALTIES.

BY JULY 7, 1995, A COMPREHENSIVE AND DETAILED REVISION WAS DEVELOPED AND ADOPTED.

THE AMENDMENTS TAKE A NEW APPROACH TO MARINER TRAINING AND COMPETENCY. THE NEW CONVENTION, STCW-95, REQUIRES FORMAL TRAINING AND A PRACTICAL DEMONSTRATION OF SKILL BY OFFICER CANDIDATES BEFORE A PARTY TO THE CONVENTION CAN ISSUE A CERTIFICATE OF COMPETENCY. STCW '95 REQUIRES THE USE OF SIMULATORS FOR BOTH RADAR AND ARPA TRAINING. IT SETS OUT SPECIFIC QUALIFICATIONS FOR INSTRUCTORS AND COMPETENCY ASSESSORS.

STCW 95 STRESSES INCREASED MARINER COMPETENCE TO REDUCE OR MITIGATE IMPACTS OF MARITIME ACCIDENTS AND MARINE POLLUTION, THUS ACKNOWLEDGING THAT THE HUMAN ELEMENT IS KEY.

THE TRAINING MANDATED BY THE TREATY IS OUTCOME BASED.

APPLICANTS FOR STCW ENDORSEMENTS ARE EXPECTED TO BE ABLE TO "DO" WHAT THEY WERE TRAINED AND CERTIFIED TO DO. IT IS NOT ENOUGH THAT SOMEONE SITS THROUGH A CLASS OR PASSES A WRITTEN TEST.

CONSIDERING THE BROAD AND SIGNIFICANT RESPONSIBILITY OF THE MARINER, IT IS NOT SURPRISING THAT THE INTERNATIONAL MARITIME COMMUNITY HAS EMBRACED OUTCOME-BASED TRAINING.

THEREFORE WE ARE DEVELOPING A COMPREHENSIVE SET OF PERFORMANCE MEASURES AS A GUIDELINE FOR ASSESSOR AND TRAINING INSTITUTION USE IN EVALUATING MARINERS TO EFFECTIVELY ADDRESS THIS ELEMENT OF THE CONVENTION CODE.

STCW-95 CAME INTO FORCE ON FEBRUARY 1, 1997. IT PROVIDES PARTIES TO THE CONVENTION FIVE YEARS TO FULLY IMPLEMENT THE REQUIREMENTS. AS WE GET CLOSER TO THE END OF THE CONVENTION'S TRANSITION PERIOD ON FEBRUARY 1, 2002, SHIPPING COMPANIES, ACADEMIES, TRAINING ORGANIZATIONS AND THE COAST GUARD ARE WORKING DILIGENTLY TO COMPLETE THE FULL IMPLEMENTATION OF THE TREATY.

THE CONVENTION RIGHTLY FOCUSES ATTENTION ON EFFORTS TO REDUCE THE HUMAN FACTOR AS A CAUSE OF MARITIME ACCIDENTS. YOU CANNOT PREVENT ACCIDENTS BY JUST ADDRESSING DESIGN AND EQUIPMENT ISSUES, BUT MUST ADDRESS THE TRAINING AND QUALIFICATIONS OF MARINERS AS WELL. IF IT IS UNTHINKABLE TO SEND MARINERS TO SEA IN SUBSTANDARD UNSEAWORTHY SHIPS, IT IS JUST AS BAD TO SEND THEM TO SEA WITHOUT THE TRAINING AND SKILL NEEDED TO MEET THE DEMANDS OF TODAY'S SHIPS.

THE COAST GUARD BEGAN WORK ON REGULATORY REVISIONS IMMEDIATELY AFTER THE STCW CONFERENCE. THE FIRST OF THREE PUBLIC MEETINGS TO DISCUSS NEW REGULATIONS AND POLICY WAS HELD IN AUGUST 1995

IN MARCH 1996, WE PUBLISHED A NOTICE OF PROPOSED RULEMAKING TO REVISE ALL LICENSING AND DOCUMENTATION REGULATIONS. THEN, IN 1997 WE PUBLISHED AN INTERIM FINAL RULE AND 5 NAVIGATION AND VESSEL INSPECTION CIRCULARS TO PROVIDE GUIDANCE ON IMPLEMENTATION ON THE FOLLOWING SUBJECTS:

- COMPANY ROLES AND RESPONSIBILITIES UNDER STCW
- ACCEPTANCE OF TRAINING RECORD BOOKS
- POLICY ON QUALIFIED INSTRUCTORS AND DESIGNATED EXAMINERS
- QUALITY STANDARDS SYSTEM
- ISSUANCE OF STCW CERTIFICATES AND ENDORSEMENTS

WE ISSUED ADDITIONAL NVIC'S IN 1998 AS WELL TO ADDRESS MARINER FITNESS FOR DUTY RELATED TO PERFORMANCE CRITERIA, AND ON STCW PORT STATE CONTROL PROCEDURES.

AUGUST 1, 1998 WAS A CRITICAL DATE FOR ANYONE WHO WANTED AN STCW '95 CERTIFICATE AS AN OFFICER IN CHARGE OF A WATCH OR A RATING FORMING PART OF A WATCH CERTIFICATE, AND FOR SCHOOLS OFFERING TRAINING LEADING TO THESE CERTIFICATES.

THOSE WHO BEGAN SERVICE BEFORE THAT DATE QUALIFY UNDER OUR EXISTING LICENSING AND DOCUMENTATION SCHEME AND RECEIVE A 1978 STCW ENDORSEMENT AS LONG AS THEY ACQUIRE THE LICENSE BEFORE THE END OF THE TRANSITION PERIOD, FEBRUARY 1, 2002.

TO ACQUIRE AN STCW '95 CERTIFICATE, THEY MUST, RECEIVE TRAINING OR ASSESSMENT IN THE SUBJECTS NOT MENTIONED IN STCW '78 TO CONTINUE IN SERVICE AFTER JANUARY 31, 2002.

FOR INSTANCE, THE STCW CODE WILL REQUIRE US TO CLOSE THE GAP BETWEEN '78 CONVENTION AND '95 AMENDMENTS BY RECEIVING TRAINING IN THE ADDITIONAL SUBJECTS BEFORE FEBRUARY 1, 2002. TO CLOSE THE GAP, DECK OFFICERS WITH A '78 CERTIFICATE MUST RECEIVE TRAINING IN BASIC SAFETY, ARPA (IF THEY WISH TO SAIL ON SHIPS FITTED WITH AN ARPA), GLOBAL MARITIME DISTRESS SAFETY SYSTEM, AND DEMONSTRATE THAT THEY CAN APPLY THE PRINCIPLES OF BRIDGE RESOURCE MANAGEMENT.

ALL APPLICANTS FOR AN STCW '95 CERTIFICATE AS AN OFFICER IN CHARGE OF A WATCH OR A RATING FORMING PART OF A WATCH CERTIFICATE, WHO BEGAN THEIR SERVICE ON OR AFTER 1 AUGUST 1998 MUST SATISFY ALL THE REQUIREMENTS OF THE '95 AMENDMENTS AND CODE.

RIGHT NOW WE ARE HALFWAY THROUGH OUR TRANSITION PERIOD, WHICH ENDS ON FEBRUARY 1, 2002 AND THERE IS MUCH YET TO BE DONE.

WHERE WE ARE TODAY:

THE REGULATIONS AND POLICY ON OUR MARITIME LICENSING AND DOCUMENTATION PROGRAM HAVE BEEN SUBMITTED TO IMO AND ARE BEING REVIEWED FOR SUFFICIENCY. WE'VE RESPONDED TO SEVERAL INQUIRIES FROM THE PANEL REVIEWING OUR SUBMISSION AND I RECENTLY RECEIVED A LETTER FROM IMO SECRETARY GENERAL, BILL O'NEILL, INDICATING THAT IMO HAS ALL OF THE INFORMATION NECESSARY TO MAKE A DETERMINATION AS TO WHETHER OUR APPROACH GIVES "FULL AND COMPLETE AFFECT TO THE CONVENTION."

IN 1998, I CHARTERED A TEAM TO EXAMINE THE ELEMENTS OF THE STCW AND IDENTIFY THE STEPS WE NEED TO TAKE TO FULLY COMPLY WITH THE CONVENTION, BUT MORE IMPORTANTLY, ENSURE THAT WE PROVIDE THE MEANS FOR OUR MERCHANT MARINE TO REMAIN QUALIFIED AND OPERATIONAL AFTER FEBRUARY 1, 2002.

THE TEAM SOLICITED INPUT FROM ALL STAKEHOLDERS THROUGH PUBLIC MEETING LISTENING SESSION HELD IN DECEMBER 1998 AND BEGAN WORK IN EARNEST ON AN IMPLEMENTATION PLAN.

ONE ALSO ESTABLISHED AN STCW WEB SITE TO PROVIDE INFORMATION ON IMPLEMENTATION WITH LINKS TO POLICY DOCUMENTS. IT INCLUDES A FREQUENTLY ASKED QUESTIONS SECTION AND WE ALSO RESPOND TO EMAIL QUESTIONS ON A REGULAR BASIS. A MARINER CAN ACCESS THE SITE AND DETERMINE STCW REQUIREMENTS FOR HIS OR HER SPECIFIC LICENSE OR DOCUMENTATION AND ENDORSEMENTS.

THE ADDRESS IS [WWW.USCG.MIL/STCW](http://WWW.USCG.MIL/STCW) IF YOU CAN REMEMBER THAT.

ON MAY 31, 1999, AFTER CONSIDERING THE INPUT FROM THE VARIOUS STAKEHOLDERS THE STCW TEAM DESIGNED AN IMPLEMENTATION PLAN WHICH IDENTIFIED AND PRIORITIZED ALL THE MANDATORY AND DESIRED TASKS TO BE ACCOMPLISHED. – SOME 90 TASKS – MOSTLY FOR THE COAST GUARD. I REVIEW STATUS WITH MY STAFF MONTHLY AND WE ADJUST OUR EFFORTS AND FOCUS AS NEEDED.

WHAT DOES ALL THIS MEAN?

IMPLEMENTATION OF THE STCW 95 CONVENTION IS AN INTEGRATED EFFORT REQUIRING A VITAL PARTNERSHIP BETWEEN INDUSTRY, MARINERS, SHIP OWNERS AND OPERATORS, TRAINING PROVIDERS, MERPAC, THE MARITIME ACADEMY REVIEW COMMITTEE, MARAD, THE COAST GUARD NATIONAL MARITIME CENTER AND REGIONAL EXAM CENTERS, AND COAST GUARD HEADQUARTERS.

THE MARINERS' ROLE WILL BE TO CONCENTRATE ON MEETING THE REQUIREMENTS, OF COURSE. THE EMPLOYERS WILL BE REQUIRED TO EMPLOY ONLY QUALIFIED MARINERS, AND ASSIST EMPLOYEES IN GETTING THE TRAINING NEEDED TO MEET THE REQUIREMENTS.

THE TRAINING PROVIDERS' ROLE WILL BE TO DEVELOP AND PROVIDE EFFECTIVE, COMPREHENSIVE TRAINING THAT WILL PREPARE MARINERS TO MEET THE NEW STANDARDS.

MERPAC HAS BEEN PLAYING A LARGE ROLE IN ADVISING THE COAST GUARD ON HOW THESE REGULATIONS AND POLICIES ARE AFFECTING MERCHANT MARINERS.

THE MARITIME ACADEMY REVIEW COMMITTEE, COMPOSED OF MARAD AND COAST GUARD PERSONNEL IS PROVIDING OVERSIGHT FOR THE PRIMARY SOURCES OF UNLIMITED WATCH OFFICERS. – THE MARITIME ACADEMIES.

OUR ROLE IS MANAGING THE PROCESS, SETTING REASONABLE STANDARDS AS QUICKLY AS POSSIBLE, AND COMMUNICATE STCW INFORMATION AND REQUIREMENTS.

SO WHAT EXACTLY WHAT ARE WE DOING?

RIGHT NOW, WE ARE WORKING TO APPROVE TRAINING COURSES AND PROGRAMS THAT SATISFY THE TRAINING REQUIREMENTS OF THE STCW AND THE TECHNICAL COMPONENT OF THE TREATY, THE STCW CODE. THESE INCLUDE BASIC SAFETY TRAINING, TANKSHIP FAMILIARIZATION, SURVIVAL CRAFT PROFICIENCY, OFFICER IN CHARGE TRAINING, AND RATINGS TRAINING. IN ADDITION, WE ARE WORKING TO:

- APPROVE TRAINING PROGRAMS APPLICABLE TO TRADE SPECIFIC VESSELS AND SMALL VESSELS LIMITED TO DOMESTIC NEAR COASTAL SERVICE.
- INITIATE A REGULATORY PROJECT TO IMPLEMENT STCW REQUIREMENTS FOR PERSONNEL ON PASSENGER SHIPS.
- DEVELOP A MODEL NATIONAL PROGRAM FOR U.S. MERCHANT MARINERS TO BECOME OFFICERS IN CHARGE OF A NAVIGATIONAL OR ENGINEERING WATCH

WE ARE DEVELOPING A PLAN TO ENSURE THAT INSTRUCTORS AND ASSESSORS ARE APPROPRIATELY QUALIFIED FOR THE PARTICULAR TYPES AND LEVELS OF TRAINING OR ASSESSMENT THEY PERFORM. HISTORICALLY, MARITIME TRAINING SCHOOLS LOOKED FOR AN INDIVIDUAL WITH AN APPROPRIATE LICENSE AND RELEVANT EXPERIENCE. SCHOOLS HOPED FOR THE BEST WHEN LOOKING FOR TEACHING ABILITY. STCW REQUIRES MORE.

WE WILL NOW REQUIRE INSTRUCTORS AND EXAMINERS TO BE QUALIFIED IN THE TASK FOR WHICH THE TRAINING OR ASSESSMENT IS BEING CONDUCTED AND RECEIVE GUIDANCE IN INSTRUCTIONAL METHODOLOGY.

MORE PERTINENT TO THIS WEEK'S WORK AT THIS CONFERENCE, WE ARE DEVELOPING STANDARDS FOR SIMULATOR SPECIFICATIONS AND USE IN TRAINING. WHICH IS WHY I AM EXCITED ABOUT THE WORK THAT YOU ALL HAVE BEEN DOING.

FURTHERMORE, THE CONVENTION REQUIRES US TO ENSURE A CREDIBLE QUALITY STANDARDS SYSTEM (QSS) PROCESS EXISTS TO ENSURE THE INTEGRITY OF THE CERTIFICATION OF MARINERS. IT ALLOWS PARTIES TO USE QUALITY STANDARD ORGANIZATIONS TO REVIEW AND ACCEPT COURSES ON THEIR BEHALF AND MONITOR THAT TRAINING.

A QSS ORGANIZATION CAN BE ANY COMPANY WITH THE RESOURCES TO CARRY OUT THE EVALUATION AND OVERSIGHT OF MARITIME TRAINING COURSES AND TRAINING PROGRAMS. THE CONVENTION ALSO REQUIRES OVERSIGHT OF THESE ORGANIZATIONS AND ANY ORGANIZATION WHICH APPROVES TRAINING PROGRAMS AND COURSES.

WE ARE ESTABLISHING AN OVERSIGHT MECHANISM AND PROCESS TO OVERSEE OUR OWN ACTIVITIES AS THE GOVERNMENT AGENCY THAT PERFORMS ON THESE ACTIVITIES UNDER THE TREATY.

TO DATE WE HAVE ACCEPTED THE AMERICAN BUREAU OF SHIPPING, DET NORSKE VERITAS, LLOYD'S REGISTER OF SHIPPING, AND THE AMERICAN COUNCIL ON EDUCATION ARE ACCEPTED AS QSS ORGANIZATIONS

IN ADDITION TO THESE ITEMS WE CONTINUE TO:

- REVIEW AND REVISE OUR OWN LICENSE EXAMS, AND INCORPORATE THE SUBJECT MATTER REQUIREMENTS OF STCW WHERE NECESSARY. I EXPECT TO ELIMINATE PORTIONS OF OUR EXAMS WHERE ADEQUATELY ASSESSED BY ON-BOARD PRACTICAL DEMOS.
- CONSIDER PHYSICAL QUALIFICATIONS OF SEAFARERS AS REQUIRED BY STCW. AT THE PRESENT TIME, A 'FIT FOR DUTY' ON A COAST GUARD FORM WILL SATISFY THE REQUIREMENT. IN ADDITION, WHILE STCW IS NOT A MANNING CODE, BUT IT DOES PROVIDE MINIMUM REST HOUR STANDARDS.

AS I SAID EARLIER, WE SUBMITTED OUR INITIAL REPORT TO IMO IN JUN 1998. THIS REPRESENTS A NEW INSTRUMENT OF INTERNATIONAL OVERSIGHT NOT USED PREVIOUSLY. AFTER THAT, THE CONVENTION WILL REQUIRE A REPORT OF EVALUATION CONDUCTED BY A QSS CONCERNING THE CONTINUED EFFECTIVENESS OF OUR CERTIFICATION PROGRAM TO BE SUBMITTED TO IMO EVERY FIVE YEARS.

AS YOU CAN TELL STCW IMPLEMENTATION IS A VERY COMPLEX PROCESS. IN FACT, STCW 95 IS CONSIDERED SECOND ONLY TO THE OIL POLLUTION ACT OF 1990 FOR COMPLEXITY IN IMPLEMENTATION AND LEVEL OF EFFORT REQUIRED ACROSS THE BROAD SPECTRUM OF STAKEHOLDERS INVOLVED. IT HAS TAKEN 10 YEARS TO IMPLEMENT OPA 90.

IN ADDITION, STCW IS IMPACTING THE US MARITIME TRAINING AND EDUCATION INDUSTRY MUCH MORE THAN WE EVER ANTICIPATED.

VIRTUALLY EVERY TRAINING PROVIDER WILL BE IMPACTED BY STCW IN SOME MANNER. EACH COAST GUARD APPROVED COURSE IS BEING REVIEWED UPON RENEWAL TO ASSURE COMPLIANCE WITH THE CONVENTION, IF APPLICABLE AND THE SEVEN RECOGNIZED FEDERAL AND STATE MARITIME ACADEMIES' PROGRAMS MUST BE AUDITED TO ENSURE COMPLIANCE.

THIS IS WHY THE USE OF INSTRUCTIONAL TECHNOLOGY IS BECOMING SUCH A VITAL TOPIC OF INTEREST.

THE COAST GUARD HAS ALWAYS ENCOURAGED SIMULATION TRAINING AS AN EFFECTIVE MEANS OF EDUCATION AND ASSESSMENT OF MARINER COMPETENCY. TO THAT END WE HAVE PROVIDED SEA SERVICE CREDIT AND SPECIFIC TRAINING CREDIT SUCH AS RADAR AND ARPA IN PLACE OF EXAMINATION. THERE ARE CURRENTLY APPROXIMATELY 200 USCG APPROVED COURSES USING SIMULATORS INCLUDING RADAR, ARPA, GLOBAL MARITIME DISTRESS SAFETY SYSTEM, BRIDGE RESOURCE MANAGEMENT, SHIP HANDLING, AND ENGINEERING AUTOMATION.

THERE ARE NUMEROUS OTHER APPLICATIONS CURRENTLY BEING EMPLOYED WHICH MAY NOT BE REQUIRED OR APPROVED HERE IN THE U.S. OR ABROAD, BUT ARE NONETHELESS ENHANCING MARITIME SAFETY THROUGH THEIR EMPLOYMENT. PILOTS ASSOCIATIONS ARE USING SIMULATION TO IMPROVE THE CRITICAL INFORMATION EXCHANGE REQUIRED BETWEEN THE PILOT AND THE SHIP'S CREW.

THERE IS A WIDE RANGE OF SIMULATORS IN USE WORLDWIDE. THE CAPABILITY OF COMPUTER-BASED SIMULATORS CONTINUES TO GROW EXPONENTIALLY. THE 200 OUT OF THE 860 OR SO COURSES THE COAST GUARD HAS APPROVED TO DATE WITHIN THE U.S. COVER THE SPECTRUM OF SIMULATION, SPECIFIC TASK SIMULATORS TO MULTI-TASK SIMULATORS, TO FULL MISSION SIMULATORS OF THE MOST SOPHISTICATED DESIGN.

THEY ARE ALL USED IN SUBSTITUTION OF EITHER APPROVED SEA SERVICE, IN LIEU OF ELEMENTS OF EXAMINATION, OR TO MEET SPECIFIED REGULATORY TRAINING REQUIREMENTS. I SEE THIS AS A GROWTH AREA AND AS A GOVERNMENT, WE ARE PROBABLY BEHIND IN THE EFFORT.

WE NEED TO FOCUS THE GROWTH IN AREAS TO ADDRESS TRAINING IN A HOLISTIC MANNER. BY THIS I MEAN WE MUST ENSURE THAT WE INTEGRATE THE SIMULATOR IN A TRAINING PROGRAM TO ACHIEVE SPECIFIC OBJECTIVES VERSUS FORCING THE SIMULATOR INTO A TRAINING PROGRAM WITHOUT AN APPRECIATION FOR WHETHER THE SIMULATOR ACTUALLY CONTRIBUTES TO THE MARINERS' LEARNING.

I CONSIDER SIMULATION AS EXCEPTIONALLY VALUABLE IN BOTH PREPARING AND ASSESSING MARINER ABILITY TO DEAL WITH STRESS IN THE MARINE ENVIRONMENT IN A MUCH COMPRESSED TIMEFRAME. SUCH TRAINING, I SUGGEST, MAY FAR EXCEED THE LIKELY EXPERIENCES EVIDENCED IN REAL SHIP OPERATIONS OVER SEVERAL MONTHS OR YEARS.

THINK ABOUT IT: WHAT SHIPOWNER WOULD PLACE THEIR MULTI-MILLION DOLLAR ASSET AT RISK TO SEE WHETHER THEIR MARINERS HAVE WHAT IT TAKES TO NAVIGATE THEIR SHIPS AND TRANSFER THEIR CARGOES UNDER CONTINUOUS PRESSURE TO MEET SCHEDULES AND BOTTOM LINE PROFIT MARGINS?

THE ADVANTAGE OF SIMULATORS OVER ACTUAL PLATFORMS IS THAT THEY:

- ◆ PROVIDE A RISK-FREE TRAINING ENVIRONMENT
- ◆ ARE A LESS COSTLY ASSET FOR TRAINING AND ASSESSMENT
- ◆ CAN TRAIN FOR CATASTROPHIC EVENTS
- ◆ PRESENT A VARIETY OF SCENARIOS OVER SHORT PERIOD
- ◆ CAN REPLAY THE SCENARIOS FOR DEBRIEFING/CRITIQUING
- ◆ CAN REPEAT SCENARIOS FOR CONSISTENT ASSESSMENT

THE MARINER'S WORLD IS A TASK-ORIENTED ONE. THOSE IN EDUCATION UNDERSTAND THAT WE LEARN PROCESS AND PROCEDURES BEST BY OBSERVATION AND PRACTICE; IN OTHER WORDS, **DOING!** I BELIEVE THAT EFFECTIVE, REALISTIC SIMULATIONS ARE THE FUTURE OF MARITIME TRAINING WORLDWIDE. I LOOK TO YOU TO FIND NEW AND BETTER WAYS TO USE SIMULATORS TEACH AND ASSESS OUR MARINERS AND WORK TOWARD THE ULTIMATE GOAL TO ENHANCE SAFETY AND EFFICIENCY OF SHIPBOARD OPERATIONS.

THERE ARE STILL A FEW QUESTIONS REMAINING FOR OUR CONSIDERATION AS WE TRANSFER THE TRAINING TO PERFORMANCE OF TASKS IN THE REAL WORLD:

- ◆ DOES A TRAINING COURSE USING SIMULATORS REASONABLY REPLICATES PROCESSES?
- ◆ ARE THE NAMES THE SAME, THAT IS, DOES THE SIMULATOR USE SIMILAR TERMINOLOGY?
- ◆ ARE VISUAL CUES REALISTIC ENOUGH TO TRIGGER RESPONSES SIMILAR TO THOSE IN REAL LIFE?
- ◆ DOES THE SYSTEM REACT REALISTICALLY? HOW MUCH REALISM IS REQUIRED TO HAVE TRAINING EFFECTIVELY TRANSFERRED?

- ◆ CAN WE EQUATE A SEA SERVICE EQUIVALENCE VALUE?  
YOU MAY ALREADY REALIZE THAT WE HAVE ALREADY GRANTED THE MARITIME ACADEMY GRADUATES 30 DAYS SEA SERVICE FOR 5 DAYS OF SIMULATOR TIME.
- ◆ SHOULD WE EXTEND THAT EQUIVALENCY CREDIT ACROSS THE BOARD? WITHOUT EMPIRICAL COMPARISON OF PERFORMANCE OF THOSE TRAINED VIA SIMULATORS AND THOSE TRAINED SHIPBOARD IT WILL BE DIFFICULT TO RATIONALIZE OUR DECISIONS.

I KNOW WE DON'T YET EVEN KNOW ALL OF THE QUESTIONS RELATED TO STCW IMPLEMENTATION, MUCH LESS DO I HAVE THE ANSWERS TO ALL THE QUESTIONS WE HAVE IDENTIFIED. NONETHELESS, WE DO INTEND TO SOLICIT ASSISTANCE IN RESEARCH AND DEVELOPMENT ON THE DEGREE OF REALISM NECESSARY FOR THE TRANSFER OF PRACTICAL SKILL USING PERFORMANCE ASSESSMENT GUIDELINES BEING DEVELOPED FOR EACH OF THE STCW MARINER RATING COMPETENCIES.

LIKEWISE, I ANTICIPATE WE WILL ENGAGE EXPERT ADVISORY GROUPS SUCH AS MERPAC, AND CONTINUE PARTICIPATING IN IMPORTANT FORUMS LIKE THIS TO EXPLORE SIMULATOR TECHNOLOGY FURTHER AS A MEANS FOR ASSESSMENT.

SO, IN SUMMARY, STCW PRESENTS BOTH CHALLENGES AND OPPORTUNITIES FOR US. THE CHALLENGE TO FULLY IMPLEMENT A COMPLEX AND FAR-REACHING INTERNATIONAL CONVENTION FULLY INCORPORATING EFFECTIVE USE OF INSTRUCTIONAL TECHNOLOGY AND SIMULATION NOW AND AS WE PROGRESS INTO THE FUTURE. AND THE OPPORTUNITY TO BRING MARITIME SAFETY TO NEW HEIGHTS.

I'VE GIVEN YOU SOME THOUGHTS WHERE SIMULATION FITS INTO STCW TODAY AND MIGHT IN THE FUTURE – BUT WE HAVE A LONG WAY TO GO. A LONG VOYAGE, IF YOU WILL – AND WE MUST MAKE THAT VOYAGE TOGETHER – THE REGULATORS, THE MARINERS, THE TRAINING INSTITUTIONS, AND VESSEL OPERATORS --IF WE ARE TO SUCCESSFULLY COMPLETE IT.

THIS CONFERENCE IS A “WAYPOINT” ON THAT VOYAGE AND AN ESSENTIAL ONE – ALLOWING US TO TAKE STOCK OF WHERE WE ARE AND POTENTIALLY MAKE SOME COURSE CORRECTIONS AS WE EXCHANGE VIEWPOINTS AND INFORMATION.

PLEASE MAKE THE MOST OF IT.