## NINTH SHIP CONTROL SYSTEMS SYMPOSIUM

BY

## EUR ING D. W. EAST, DIP TECH (ENG), CENG, FIEE, RCNC (Sea Systems Controllerate, Bath)

The ninth symposium in this series was held in Bethesda USA from 10 to 14 September 1990 and was sponsored by NAVSEA.

The venue for the Symposium was The Hyatt Regency Hotel, Bethesda, as conference suites for 400 participants are not easily found within Washington.

The inaugural session was opened by the Honourable Gerald A. Cann, Assistant Secretary of the United States Navy. UK support was once again substantial in that 50 participants from industry and MOD attended and presented 28 UK papers out of a total of 92 in the symposium. In all, engineers from 11 countries were present.

The first technical session was chaired by Rear-Admiral R. B. Horne, USN, at which the overview papers of each of the four organizing countries, USA, Canada, UK and Netherlands were presented. These papers set the national scenes and addressed in general terms national progress in the implementation of digital technology to Ship Control and Surveillance Systems and offering pointers for the future. Two of these overview papers are published in the *Journal*<sup>1,2</sup>.

The symposium then split into parallel sessions and these detailed papers and presentations addressed more closely the theme of the Ninth Ship Control Systems Symposium, that of 'Automation in Surface Ship Control Systems— Today's Applications and Future Trends'. The remaining sessions of the first day were chaired by the four Commodores representing the four organizing nations, Commodore R. F. James (DGME) represented the UK. For the remainder of the symposium, except for the final morning, decisions were required every 90 minutes as to which session to attend, except for some more mobile participants who moved from one session to another at 30 minute intervals to maximize specific interests.

The sessions which I attended were well presented and stimulated lively question periods which often extracted more pertinent facts than the author intended but added to the total information exchange. The organization of the technical sessions and the libations of coffee with doughnuts and 'English Muffins' during the breaks between sessions, which in themselves have great value for the exchange of ideas and opinions, provided an excellent framework within which individuals could pursue their particular forte during the symposium.

In keeping with the tradition of the symposia a banquet was held on the evening of 12 September. Vice-Admiral Peter M. Hekman, Commander Naval Sea Systems Command, was the principal speaker. He reminded delegates of the need to consider the man/machine interface problems and training requirements. The introduction of automation could lead to a greater need for more highly qualified staff than those available to the Navy at present, hence care in designing automation systems with this constraint in mind was imperative. Commodore Rudi Lutje Schipholt RNIN replied on behalf of the previous organizing nation. He gave a witty, wide-ranging and light-hearted personal view of this and past symposia and machinery control in general. He expressed the view that, although a great deal had been achieved, there remained a considerable way to go and looked forward to the next symposium.

The symposium was brought to a formal close by Rear-Admiral R. B. Horne, USN, at the symposium luncheon. In his closing remarks he stressed the international strength of the symposia and the mutual value to the participating nations. His farewell remark was 'see you at the Tenth Symposium' and the symposium gavel and block was then formally handed over to the Canadian organizer for the Tenth Ship Control Systems Symposium, Commander P. J. MacGillivray, CF. Once again this three-year gathering of experts and practitioners in the application of Control and Surveillance Systems to the needs of machinery in the marine environment was voted a great success by all concerned.

Two papers presented at the Symposium are printed in the *Journal*<sup>3,4</sup>, in addition to the overview papers already mentioned, and two other articles<sup>5,6</sup> have been based on papers read there. For those wishing to read other papers in detail, complete copies of Proceedings of the 9th Symposium, and also those of the 8th and 7th, are held in the libraries of RNEC Manadon, MOD Foxhill, University College London, and HMS *Sultan*. Also symposium participants who attended from RNEC have their own copies. Any reader outside these organizations can obtain a complete set from the symposium organization care of Mr J Moschopoulos, Department of the Navy, Naval Sea Systems Command, SEA56Z4, Washington, DC, 20362–5101 at a cost of 75 US dollars.

## References

- 1. East, D. W.: Machinery control and surveillance in the Royal Navy, recent achievements and future aims; *Journal of Naval Engineering*, vol. 32, no. 3, December 1990, pp. 613-618.
- 2. Marshall, D. J.: Ship control automation and the Canadian Navy; Journal of Naval Engineering, vol. 33, no. 1, June 1991, pp. 168-175.
- 3. Powell, D. C.: Rudder roll stabilization-a critical review: *Journal of Naval Engineering*, vol. 32, no. 3, December 1990, pp. 603-613.
- 4. Hawken, M. I.: Future direction for Royal Navy machinery control and surveillance systems; *Journal of Naval Engineering*, vol. 33, no. 1, June 1991, pp. 158-168.
- 5. Bryant, R. G.: Damage command and control—requirements and future trends; *Journal of Naval Engineering*, vol. 32, no. 3, December 1990, pp. 647-655.
- 6. Hawken, M. I., and Elson, J. L.: Control systems specification a new specification guide— SSCP 27; Journal of Naval Engineering, vol. 33, no. 1, June 1991, pp. 175–178.