

The PC: Practical Control or Potential Chaos?

Author: Russell Hodge, C-MAR Americas (*Houston, USA*).

Abstract

The intent of this paper is to consider the ways in which the PC has affected the development of DP and related system architectures. It will examine some potential hazards that may arise from its use and how technological development may change our expectations for capital equipment in the future.

All modern DP systems employ a PC in some form or other. It may form the computing core of the system or only act as the Man Machine Interface (MMI), nonetheless it is present. Where the PC is the core of the control system potential inherent weaknesses could be critical to operation. In a system where the PC only acts as the human interface any PC fault would not be expected to effect DP position keeping. It shall be demonstrated that this may not necessarily be the case.

Aside from the immediate effects of PC failure there are other influences which could affect long term operability of a DP or a vessel management system. Some of these are technical in nature and have been the subject of speculation for some time. It shall be demonstrated that such speculation is already beginning to be confirmed. Other factors affecting long-term viability are less obvious; these too will be touched upon.

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