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Dynamic Task Load Scheduling for Platform Control and Navigation on a Naval Ship

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In process control, the ongoing automation and application of new technologies caused a radical change in the position of the operator. Due to this change, increasing manning constraints and the pressure to maximize the operational capability in the Navy, naval operators need personalized and dynamic support which can differ in time: the system should accommodate the user with the right task support at the right time. This paper presents the design and user evaluation of an interface with task allocation support. This kind of support enables the operator to redirect the alarm (system or operator initiated). Evaluation with 34 navy students shows positive results on performance and general usability. Performance increases because the most important problems are solved faster. However, performance on a less important task decreases and can be interpreted as 'reallocation costs'. Results on questionnaires show an increasing insecurity on the predictability of the system.