

Human Factors in Defense

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Abstract

The defense industry has recognized the importance of human factors for system design. Some processes and procedures are available to address these needs. In this paper we provide a brief overview of ongoing *Human Factors* or *Human Systems Integration* activities in Defense.

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1 Human Factors in Defense

The defense industry is one of the major drivers behind systems engineering and architecture frameworks, see for instance [4]. These frameworks tend to focus on more technical and operational aspects, while human factors do not yet get much attention. However, the defense industry and their sponsors are changing.



Figure 1: Human Systems Integration DoD Acquisition

For example, the acquisition group of the Department of Defense (DoD) published this presentation [2] and this instruction [1]. Figure 1 is taken from this presentation and shows an inventarization of human factors to be taken into account.

1. Mission Analysis
2. Requirements Analysis
3. Function Analysis
4. Function Allocation
5. Task Design and Analysis
6. Human Interface and Team Development
7. Performance, Workload, and Training Level Estimation
8. User and Requirements Reviews

from ONR (Office of Naval Research)/SC-21 Manning Affordability Initiative
[www.hf.faa.gov/docs/508/docs/Human_System_Engineering_\(NSWC\).pdf](http://www.hf.faa.gov/docs/508/docs/Human_System_Engineering_(NSWC).pdf)

Figure 2: Human Engineering from Naval Perspective

The different divisions of defense are working on the human factors, see for instance the navy document [5]. Figure 2 shows the Navy perspective.



Figure 3: Human Views for MODAF

British defense is also active, as can be read in [6]. In this document a set of complimenting views is proposed for MODAF, see Figure 3.

2 Acknowledgements

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