

Analysis of the Degree of Information Exchange Among Team Members in a Ccontrol Cabin

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Abstract. The communication and collaboration of team members is essential for the effective implementation of the work within a ccontrol room. In this study, a 1-h navigation mission for six positions (sound operator, motion analyst, vehicle controller, operating officer, watch officer, and leader) in a ccontrol room was designed. Social networks is used to obtain the information exchange degree of each team member during the mission. The analysis showed that the communication level of each member of the team was different; and the communication level between the members of the team increased during the high demand condition. The frequency of communication between the members of the ccontrol team depends on the ccontrol team role and demand level. This provides a basis for further study of the task load of key personnel within the ccontrol cabin team.

Keywords: Vehicle · Team work · Social network · Information exchange degree

1 Introduction

The task work inside a vehicle compartment is diverse, and its various tasks require the collaboration of various personnel inside the compartment, especially when special failures are encountered or emergency situations occur, which require the collaboration of members within the team [1]. Therefore, the coordination and communication of a team is inseparable within a ccontrol compartment [2].

Communication within the team is a key element for the success of the team task [2]. However, during the communication process, it also takes up the cognitive resources of the team members. Therefore, for experienced teams, their communication regulates the workload within the team [3], while for less experienced teams, too much communication overloads their cognitive resources, thus increasing the team workload [4].

The cognition within the ccontrol compartment is distributed to each team member in the ccontrol compartment [5]. When performing a specific task, roles with different divisions of labor within the team generate communication through internal communication links or the external environment, and this flow of information contributes to an overall improvement in the team's macroscopic perception of the task situation and thus the completion of the task [6].