

论文

双航母编队C³I系统Petri网建模与分析研究

朱森^{1,2};李志武¹

(1. 西安电子科技大学 机电工程学院, 陕西 西安 710071;
2. 海军大连舰艇学院, 辽宁 大连 116018)

摘要:

基于着色Petri网(CPN)的基本理论和航母编队C³I系统的情况,重点分析了双航母编队作战特点.建立了双航母编队C³I系统作战指挥的CPN模型,并对该模型在无优先级和有优先级的条件下进行了仿真分析研究,设计了提升系统协同作战效能、系统科学合理决策、以及优化作战效费比的方法.

关键词: C³I系统 航母编队 着色Petri网 时延分析

On the colored Petri net model of the C³I system of the double aircraft carriers group

(1. School of Mechano-electronic Engineering, Xidian Univ., Xi'an 710071, China;
2. Dalian Naval Academy, Dalian 116018, China)

(1. School of Mechano-electronic Engineering, Xidian Univ., Xi'an 710071, China;
2. Dalian Naval Academy, Dalian 116018, China)

Abstract:

Based on the basic theory and property of the colored Petri nets(CPN) and C³I system, such features of the aircraft carrier groups arrangement as the battle order, area, and power are analyzed. The work focuses on the use of colored Petri nets to establish a model for an aircraft carrier's air battle C³I system according to the battle arrangement and configuration of the group with double aircraft carriers. By using the CPN tools, the model is simulated and analyzed under priority and random inputs. This paper can find some efficient way to improve the command system's battle efficiency by cooperation, make the scientific and reasonable decisions, and minimize the war cost.

Keywords: C³I systems aircraft carrier groups colored Petri nets time delay analysis

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通讯作者: 朱森

作者简介:

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