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### 实时网络系统可靠性建模研究

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### Research on the Reliability Model of Real-time Network Systems

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摘要

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**摘要** 针对实时网络系统对任务完成时间有严格约束的特点,首先建立了实时网络系统中的任务模型,然后通过在网络系统可靠性模型中引入时间权函数建立了基于任务的实时网络系统可靠性模型,建立了系统的可靠度矩阵,最后针对JAST计划中的航空电子蝶型网络给出了建模实例。

**关键词:** 实时系统 网络 可靠性模型 任务

**Abstract:** The real-time network system is a kind of system in which the completion time of a task is strictly bounded. In the paper a task-based model of this kind of systems considering timing issue is proposed. The model of the task is introduced and the emphasis is laid on how to include the timing factor in the model. An illustration of modeling avionics butterfly network in JAST program is also presented.

**Keywords:** real-time system network reliability model task

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