Review
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Abstract—This is the review of two papers, Techniques for Multiprocessor Global Schedulability Analysis and New Response Time Bounds for Fixed Priority Multiprocessor Scheduling.

1 Techniques for Multiprocessor Global Schedulability Analysis

1.1 Topics and Ideas
The major topic in this paper is the scheduling of hard real-time sporadic task systems on a multiprocessor. This paper derives a schedulability test for global earliest-deadline-first (EDF) schedule. Also, this paper gives us example to prove that partitioned fixed job priority scheduling and global fixed job priority scheduling are incomparable.

1.2 Intellectual merit
To derive the schedulability test, this paper first consider the necessary condition for a job to miss it deadline, which means if task system violate this condition then no jobs will miss deadline. After this, the paper derive a task by task test to check whether a task system can meet the condition.

1.3 Strength
First, this paper prove that partitioned FJP scheduling and global FJP scheduling are incomparable. Previously, from the first glance we may take partitioned FJP scheduling as a special case of global FJP scheduling. However, with this paper we know that there are task systems that are schedulable under global FJP while not schedulable under partitioned FJP; there are also task systems that are schedulable under partitioned FJP while not schedulable under global FJP.

Then, this paper derives a schedulability test for global EDF. With some new trick, the test derived in this paper is more accurate than those in previous work. And the time complexity of the new test is pseudo-polynomial. In some cases, pseudo-polynomial test is efficient than polynomial test.

1.4 Weakness and improvement
One of the weakness is that pseudo-polynomial is only efficient when the parameters of the system are small. Also, the new test is more complex in practice. In fact, as the paper says, this test is designed for specific systems.

2 New Response Time Bounds for Fixed Priority Multiprocessor Scheduling

2.1 Topics and Ideas
This paper considers the response time bound of the sporadic task systems and give the methods to determine response time bounds for constrained-deadline system and arbitrary-deadline system under the fixed priority scheduling.

2.2 Intellectual merit
For constrained-deadline system, by analyzing the workload of jobs with higher priority, this paper derives an equations of the response time bound and shows how to solve the equations. For arbitrary-deadline system, with the same idea, this paper analyze the response time bound with some technicals. The details can be seen in the paper.
2.3 **Strength**
This paper significantly improves the analysis precision compared to the previous work. And this is the first work on response time analysis for global multiprocessor scheduling with arbitrary-deadline task system.

2.4 **Weakness and improvement**
First, this paper derives equations to get the response time. However, it does not analyze the complicity of the iterative process solving.

Then, we may use the new RTA technical to the analyze suspension or heterogeneous platform.

**References**
