Performance model verification of autonomous-vehicle group control algorithms

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Abstract

Automatic driving technology has been rapidly development in recent years. For safety and efficient cities with a lot of such autonomous-vehicle, we need to consider not only control systems for individual vehicles but also those for a group of vehicles. In this article, we investigate a way to modeling and verification of autonomous-vehicle group control algolithms using a model checking technique UPPAAL.

1 Introduction

Automatic driving technology is more and more developing. Automatic driving is divided into level 5 depending on technology installed. In Japan, general car install level 2 supporting driver. In the future, Japan government set a goal that the vehicle installed level 4 become popular. If a lot of automatic driving cars are used in a city, some problems may be occurred. Thus, we need autonomous-vehicle group control algorithms. In this paper, I verify the autonomous-vehicle group control algorithms with formal method.

2 Past research

Autonomous-vehicle have been researched long time.

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References

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