

# Examination for contact risk during merging using vehicle trajectory data observed

Takashi Kodama<sup>1)</sup> Pencreach Yoann<sup>2)</sup> Shin Hashimoto<sup>3)</sup> Masakazu Nakanishi<sup>3)</sup> Jun Tanabe<sup>3)</sup>

1) Hanshin Expressway Company Limited  
3-2-4, Nakanoshima, Kita-ku, Osaka, 530-0005, Japan (E-mail: takashi-kodama@hanshin-exp.co.jp)

2) FORUM8 Co., Ltd.

2-15-1, Konan, Minato-ku, Tokyo, 108-6021, Japan

3) Regional Futures Research Center

1-5-17, Dojima, Kita-ku, Osaka, 530-0003, Japan

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Since the past year, Hanshin Expressway Company has been studying a method to evaluate the contact risk due to lane changes, targeting straight sections of the expressway without merging, using a wide range of vehicle trajectory data observed from certain positions (Fig.1).

It was. Now, as the next step, we propose a method that address issues sepecific to merging and purevious issues to evaluate the contact risk during merging by probabilistic expression (Fig.2).

And as the contact risk utiliation, we focus on the relative relationship between the main lane vehicle and the merging vehicle at the time when the risk is maximum, and organize the view point about the classification of "coordinated driving behavior for the contact risk at the time of merging" based on the order at the time of merging and the relationship.

At the time of merging, it is confirmed that coordinated driving behaviors are taken to avoid the contact risk from the time when the contact risk is maximum (Fig.3).

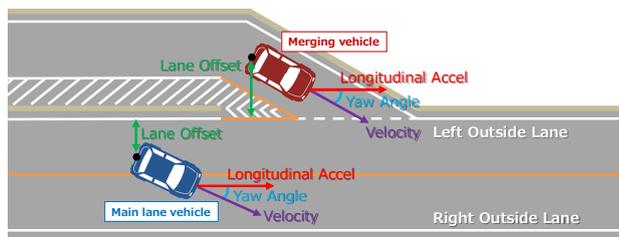


Fig.2 Unification of standards for variable calculation

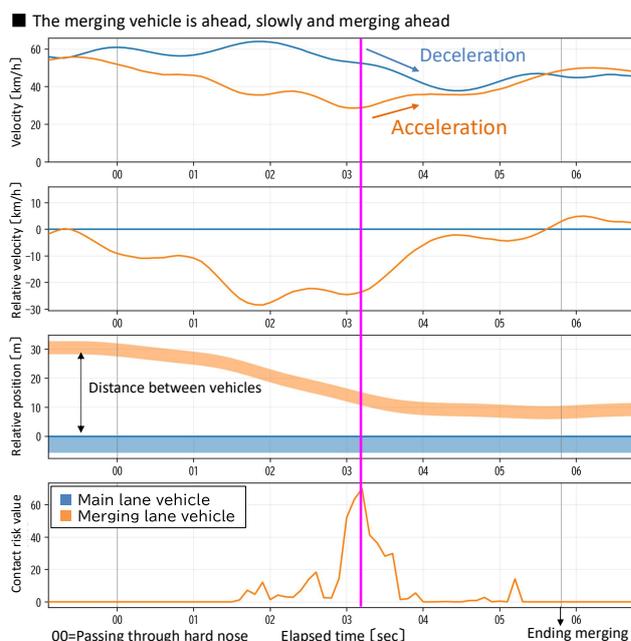


Fig.3 Coordinated driving behavior for contact risk

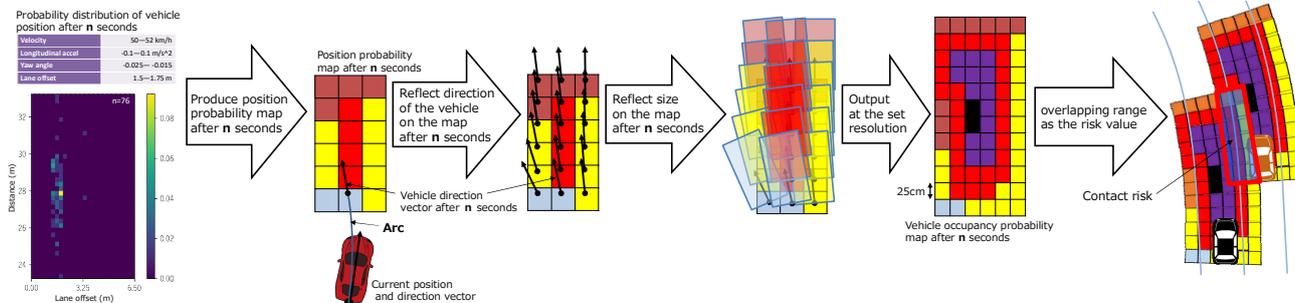


Fig.1 Image of contact risk calculation flow