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**RESEARCH ON INCIDENT ANALYSIS USING DRIVE RECORDER
PART4: ANALYSIS ON DRIVING BEHAVIOR BASED ON NEAR-MISS
INCIDENT DATA WHILE CROSSING NON-SIGNALIZED
INTERSECTION**

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ABSTRACT - In order to reduce the traffic accidents, it is necessary to clarify the cause of accidents as well as to emphasize the incident analysis, which is the state before the accidents will occur. In this study, in order to clarify the incident mechanism of traffic accidents based on “Near-Miss Incident data while crossing non-signalized intersection” database. The number of the near miss incident between vehicles is 1090 among 32354 as the near-miss incident data. There is 438 distinguished data that are similar to accidents.

We analyze the relationship between the driving behavior and the traffic circumstance collected by using drive recorder in Tokyo metropolitan area. 70 near miss incident data are classified into the relationship driving behavior and traffic circumstance in this paper. As a result, it is clarified that there are many incident factors related to existence of parked vehicles and pedestrians in the road. Assuming that the factor of excessive speed affects the driving behavior in regulating the vehicle velocity while crossing intersections, and this may relate to the hazardous risk of road accidents. The incident data are classified into the road with right of way and the road without right of way based on the traffic regulation of Japan, assuming that the driver would reduce situation awareness to the intersection. In the case of the road without right of way, we focus on the time to intersection. Similarly, in the case of the road with right of way, we focus on the reaction time for braking. The reaction time is defined as the time from the instant that the existence of crossing vehicle to the instant that the host-vehicle driver steps on the brake pedal.

From the experiments using the driving simulator, it also shows the trend that the existence of a parked vehicle and pedestrians just before the intersection affects the driving behavior as they might reduce situation awareness during crossing the intersection.