SB Drive ties up with Nishi - Nippon Railroad to provide new AI service for lowering in-vehicle bus accidents

～Dawn of AI-based passenger monitoring and driver performance evaluation～

SB Drive Corp., the venture start-up developing fleet management systems for autonomous vehicles has released a new AI service "DaiLY by dispatcher" aimed at lowering in-vehicle accidents for bus operators. A key partner for developing "DaiLY by dispatcher" was Nishi - Nippon Railroad Co., Ltd. who already has implemented the service for daily use on one of their operating buses. The service features automated passenger monitoring, warnings, driver performance evaluations and generating a report on how safe the bus driver drove each day. "DaiLY by dispatcher" will be available for all bus operators nationwide starting January 11, 2019.

"DaiLY by dispatcher", was developed as a spin-off of SB Drive's main product line "Dispatcher", currently under development for autonomous vehicle fleet management. By installing multiple cameras and a mobile communications unit on-board, any existing or new bus can utilize this service. "DaiLY by dispatcher" offers two main features: Firstly, the on-board cameras detect human movement while the vehicle is moving to warn the driver and passengers. Second, a feature designed mainly for bus operators, is automatic evaluation report generation. Divers can review their driving safety record on a daily basis. The service focuses on alerting the driver and passengers on movement and actions that may lead to in-vehicle accidents such as abrupt stops, accelerations and passenger movement while the vehicle is in motion. These alerts and evaluation reports will effectively allow the driver to review his or her performance in order to provide a safer and smoother ride for their passengers.

"DaiLY by dispatcher" has already gone through extensive testing and improvement, being installed on one of Nishi - Nippon Railroad's buses from May of 2018 to September and Nishi - Nippon Railroad confirmed that the has helped improved driver consciousness for safety. Enoshima Electric Railway Co., Ltd. has stated that they will also start utilizing the service from February 2019.

Main features of "DaiLY by dispatcher"
1. Real time passenger monitoring
   - On-board AI cameras detects human movement and automatically warns passengers to refrain from moving while vehicle is in motion.
   - Alarms set off if the bus accelerates before all passengers have been seated.

2. Automatically generates driver evaluation report
   - At the end of every day's operation, an evaluation report is generated based on the 7 criteria below. Drivers and bus operators can see how many incidents happened for each criteria and compare with previous operations and company wide averages. This will be an effective tool to help each driver understand their driving tendencies and habits.
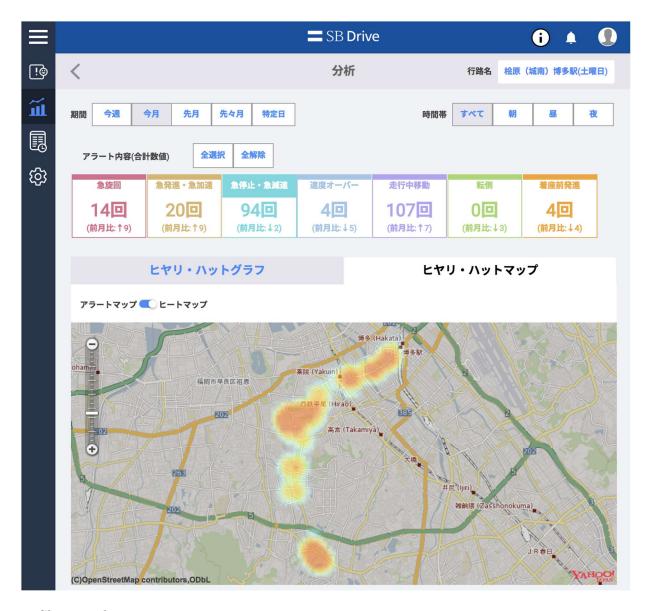
Driving situation	Rapid turns, rapid acceleration, abrupt stops, speeding
State of passengers	Walking while the bus is in motion, falling down, bus acceleration before all passengers seated

＜Evaluation report example＞

	ヒヤリ・ハット	今回	あなたの 先月の平均との差異		会社全体の 先月の平均との差異	
あなたの運転	急旋回	1回	☹	+1 (0回)	☺	-1 (2回)
	急発進・急加速	4回	☹	+4 (0回)	☺	-8 (12回)
	急停止・急減速	1回	☹	+1 (0回)	☺	±0 (1回)
	速度オーバー	0回	☺	±0 (0回)	☺	±0 (0回)
お客様の状況	走行中移動	9回	☹	+9 (0回)	☺	-7 (16回)
	転倒	0回	☺	±0 (0回)	☺	±0 (0回)
	着座前発進	0回	☺	±0 (0回)	☺	-1 (1回)

3. Alert Map
・Recorded alerts will appear on a map of the operational area.
・Each individual incident such as moving while the bus is in motion or passengers falling down
  is recorded and can be reviewed later by clicking on the alert map.
・Heat maps for various alerts are also available.

＜Alert map example＞

4. Chart analysis
    ・All recorded data will automatically be organized into a chart which can be referenced by the 7
      criteria, by week or month and can be used for efficient feedback to the driver.

Please contact SB Drive for more information:
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