

2007.4.10

Informal Meeting of Cab Strength

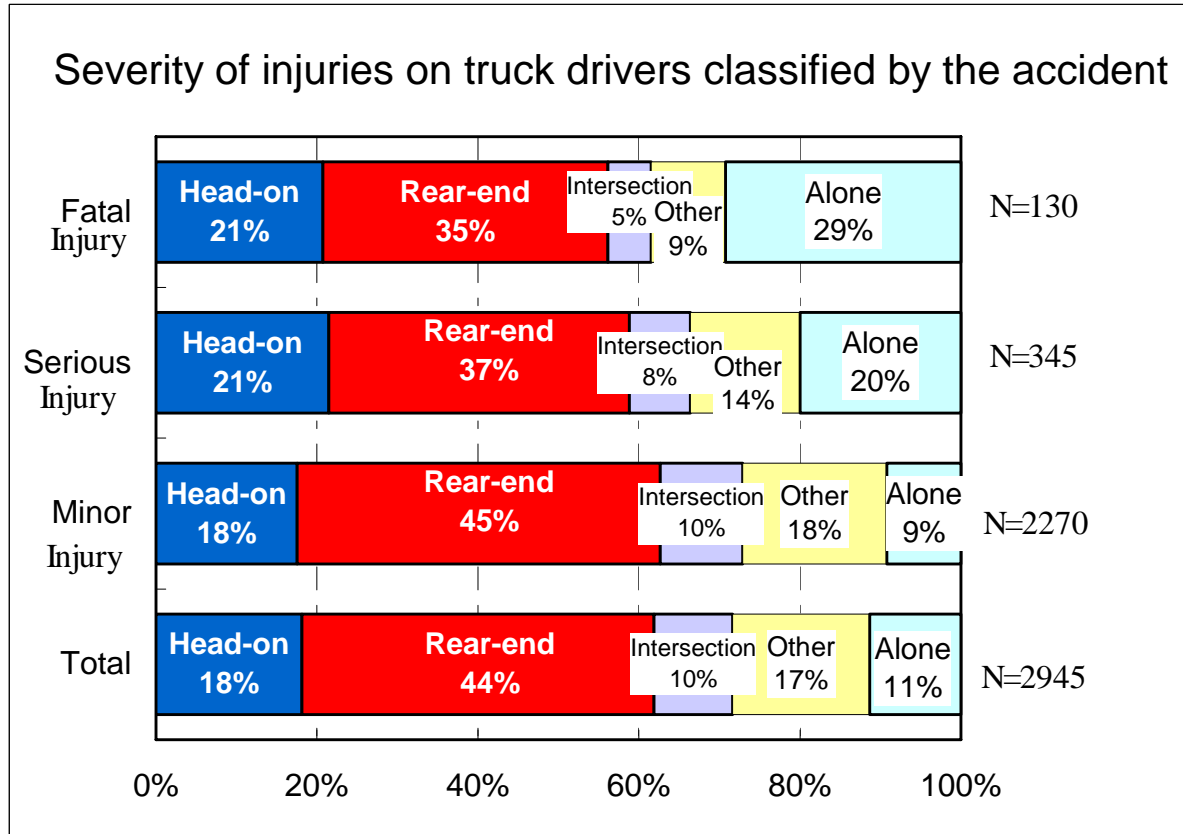


Overview of Truck Accidents in Japan

(Current materials concerning truck accidents)



Accident type of truck driver

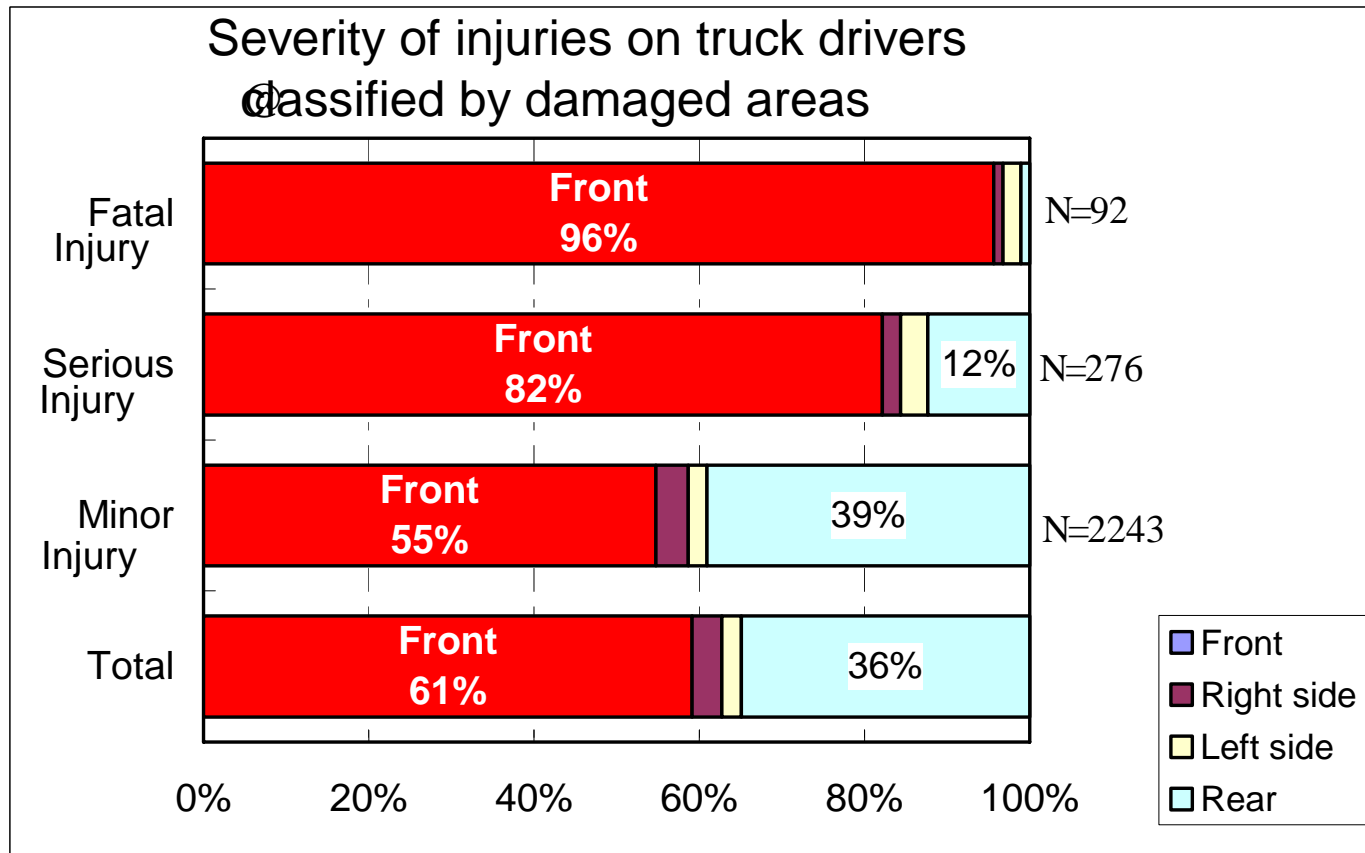


. National traffic accident data in 1995.

* Object truck model : 12ton < GVW

* Except 3rd concerned truck in pile up accidents.

Collision part of truck

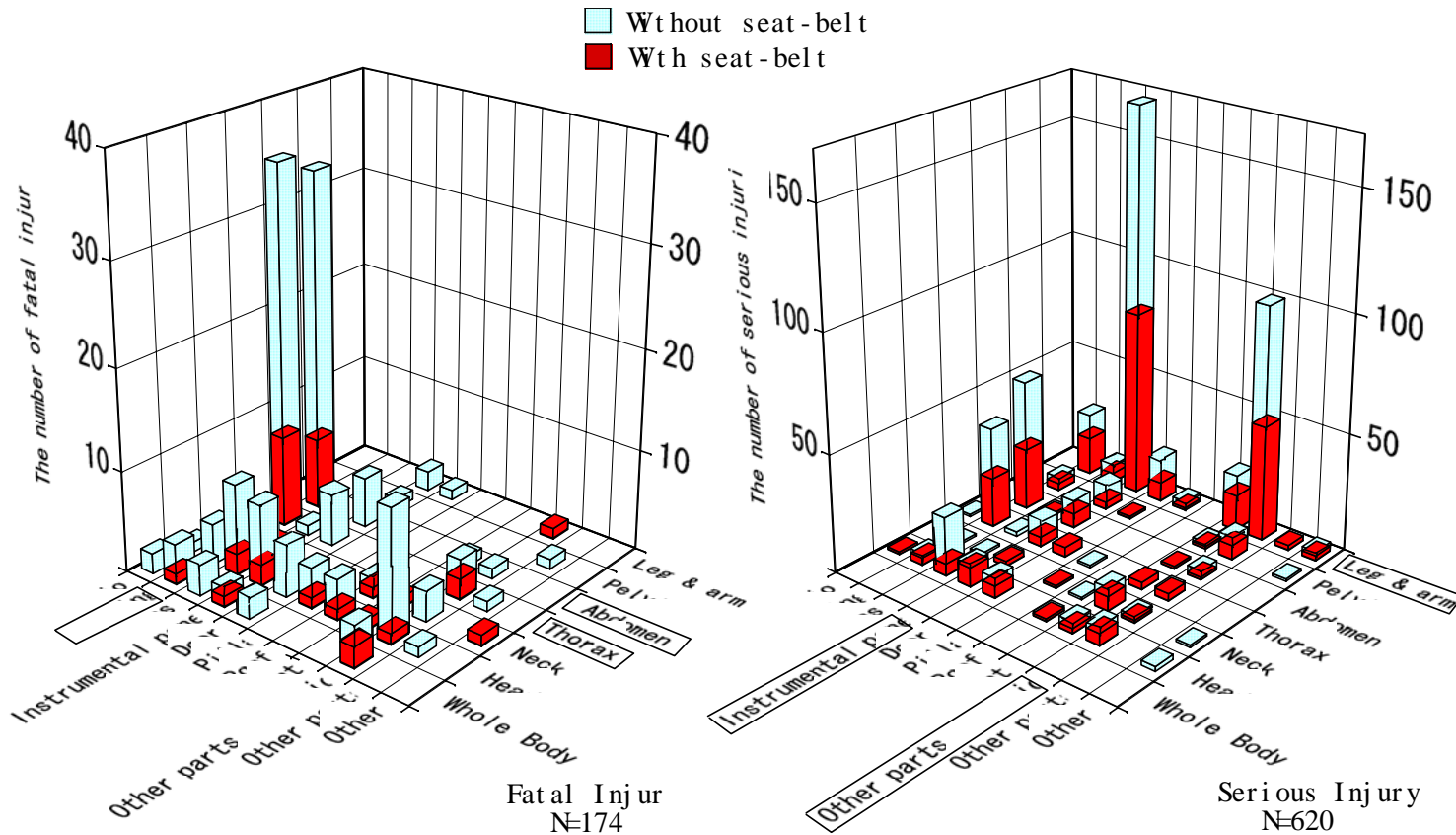


.National traffic accident data in 1995.

*Vehicle to vehicle collision except 3rd concerned truck in pile up accidents.

*Object truck model : 12ton < GVW

Injury region and contact point



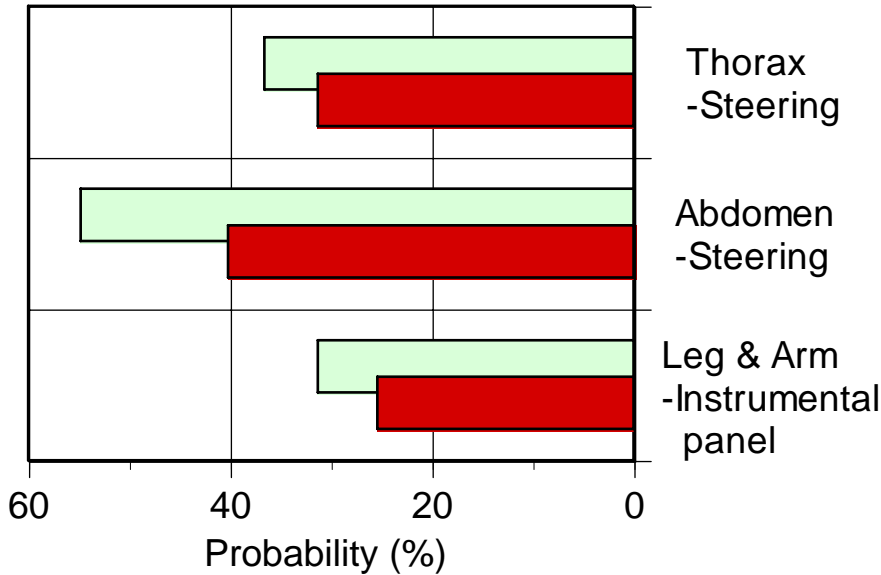
. National traffic accident data in 1992-96.

*Hear-on and Rear-end collision accidents

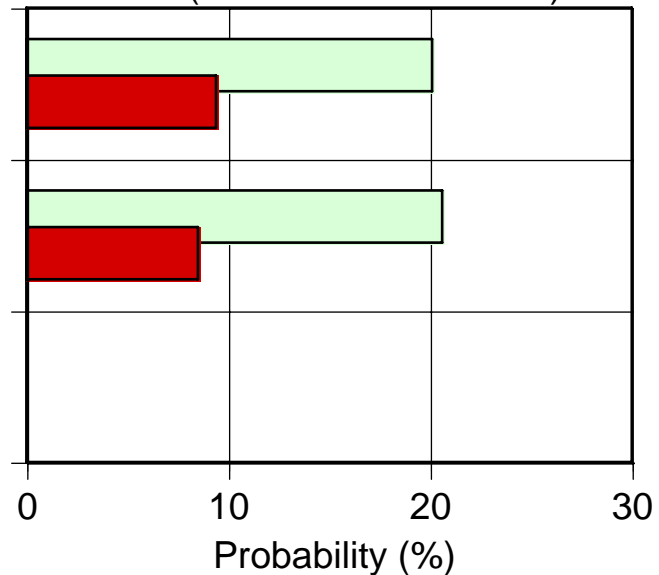
Effect of wearing seatbelt



Fatal-serious injury rate
 $(\text{Fatal} + \text{Serious}) / (\text{Fatal} + \text{Serious} + \text{Minor})$



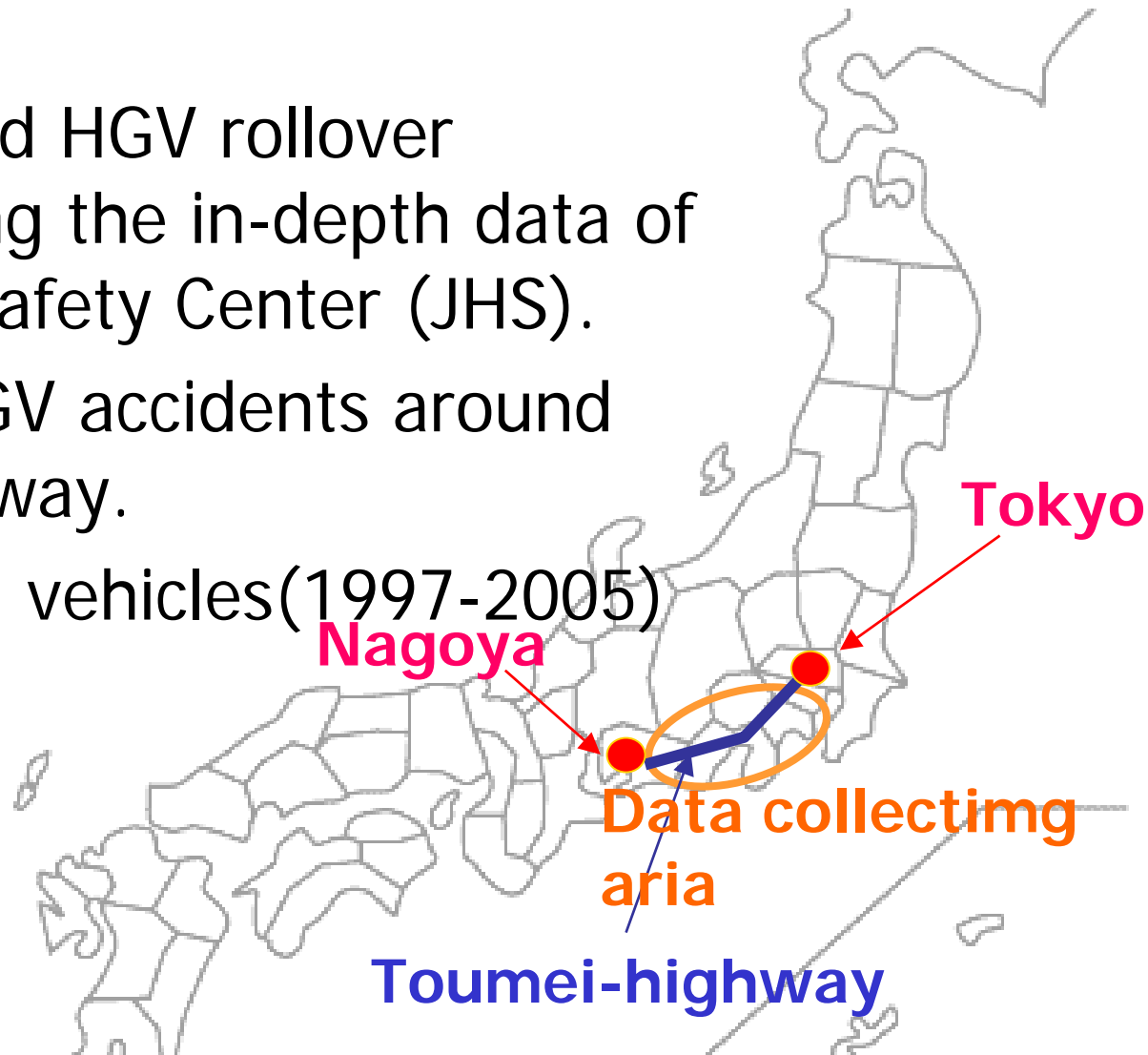
Fatal injury rate
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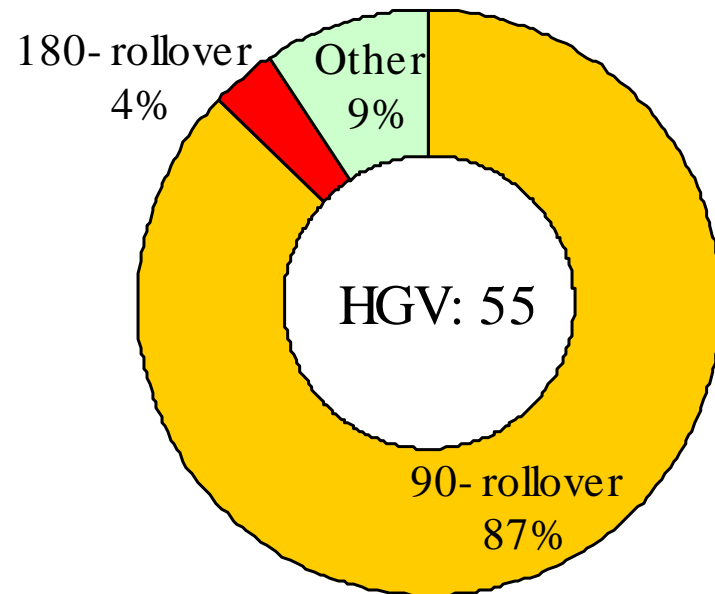
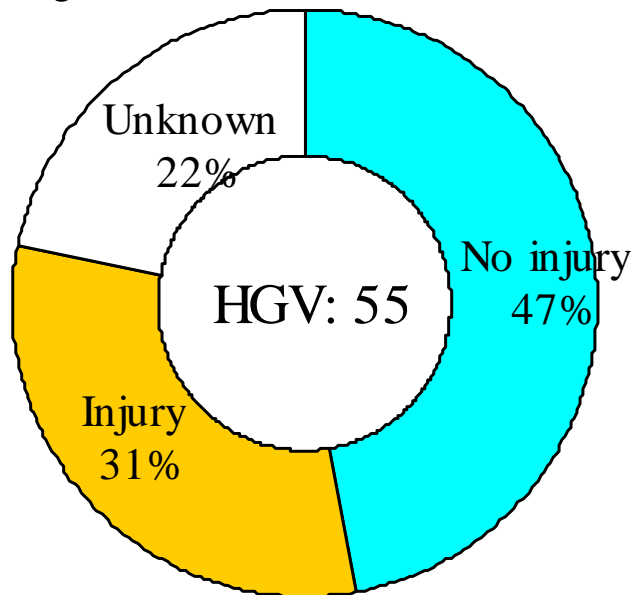
In-depth data

- JAMA investigated HGV rollover accidents by using the in-depth data of Japan highway Safety Center (JHS).
- JHS collects a HGV accidents around the Toumei-highway.
- Rollover data: 55 vehicles(1997-2005)



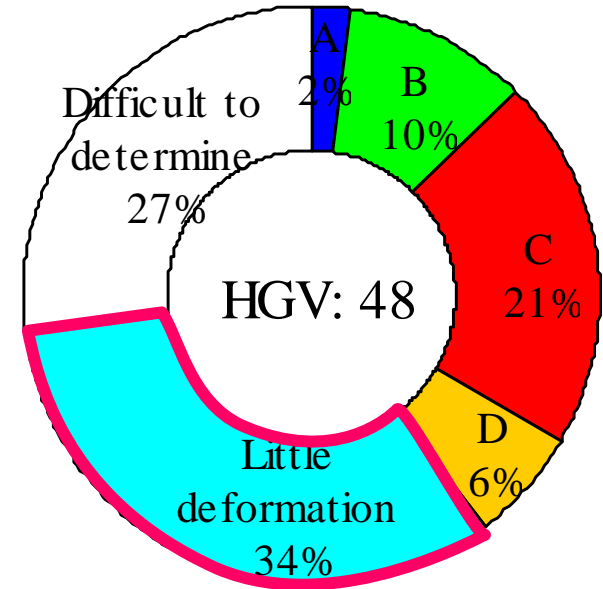
Truck rollover accidents

- The rollover accident occurs also in Japan.
No injury:47% Injury (almost slight injury):31%
- Therefore, serious rollover accident is few in Japan.
- 90-rollover is 87% of all rollover accident. 180-rollover is only 4%.

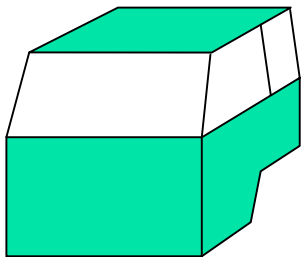


Deformation mode of 90 rollover

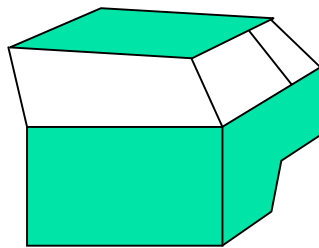
- Little deformation : 34% (Front guard frame or van body greatly contributed to the restraint of the cab deformation).
- Most many deformation : C-type (21%), these thinks 90-rollover with subsequent impact.



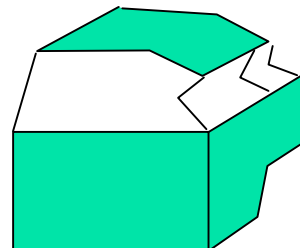
Little deformation



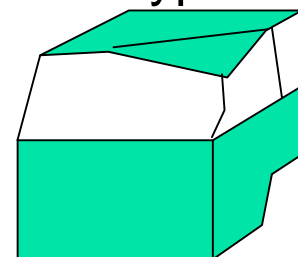
A type



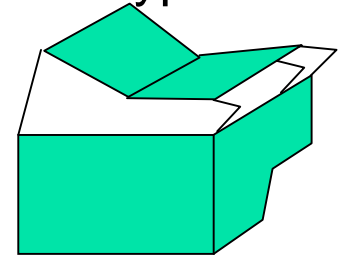
B type



C type



D type





Summary

- Most important cases of the truck crew's injury .
 - Frontal accident
 - 1) Rear-end (front / rear)
 - 2) Head-on (front / front)
- Rollover accidents are few in serious injuries of truck drivers.



Thank you !
