Multi Disciplinary Crash Investigation: US Examples
National Motor Vehicle Crash Causation Survey

Figure 6: Distribution of critical reasons for intersection-related crashes
Data Source: NMVCCS 2005-2007
Case Study: Pedal Misapplication

Figure 3. Percentage of Crash-Involved Drivers by 5-Year Age Groupings, for Drivers Who Made Pedal Application Errors (n=2,399) Versus All Drivers in Other Crashes (n=2,228,056)
Case Study: Pedal Misapplication

Figure 5. Distribution of Drivers in Pedal Misapplication Crashes by Height and Sex (N=2,141)
(North Carolina State Crash Database, 2004-2008)
Case Study: Impairment Detection

Proportion of Persons Killed, by Highest Driver Blood Alcohol Concentration (BAC) in the Crash, 1982-2009

- Percent of Total Fatalities

- Highest BAC in the Crash
  - .00
  - .01+
  - .08+

- Year:
  - 1982
  - 1985
  - 1990
  - 1995
  - 2000
  - 2005
  - 2009
Case Study: Impairment Detection

DADSS Technologies

Distant Spectrometry
- Breath-based system
- Close correlation between BrAC and arterial BAC
- Extensive real world experience

Tissue Spectrometry
- Touch-based system
- Extensive human subjects testing done
- BAC measurements closer to capillary (arterial) blood than to breath