Block Diagram of Powertrain Forward-Looking Model
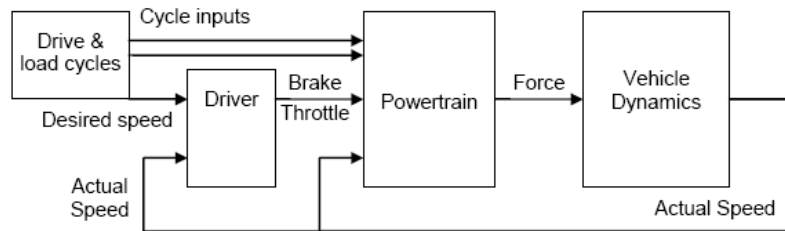

(a) Vehicle level

Force/torque information propagates from prime mover (through wheels) to vehicle dynamics

Driver command

Frc — Wheel — Trq — Axle — Trq — Transmission — Trq — Torque Converter — Trq — Engine → **FUEL**

Spd — Ang spd — Ang spd — Ang spd — Ang spd

Speed information propagates from vehicle dynamics (through wheels) to prime mover
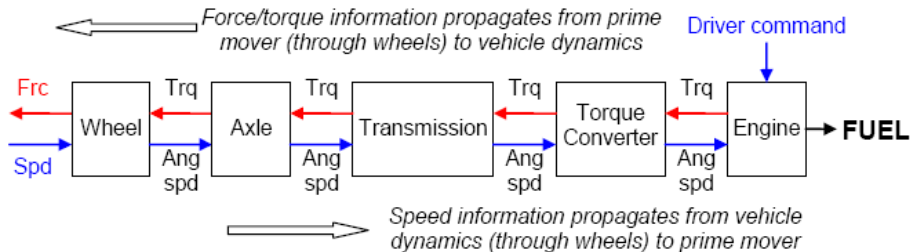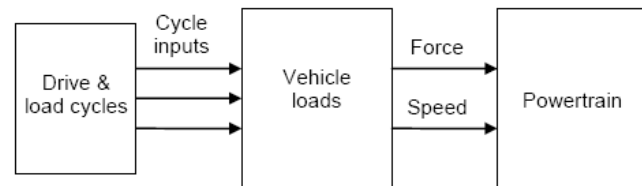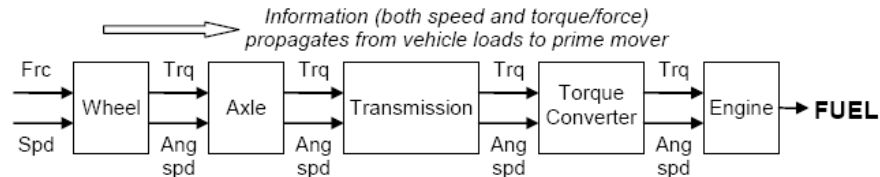
(b) Powertrain level

Block Diagram of Powertrain Backward-Looking Model

(a) Vehicle level

Information (both speed and torque/force) propagates from vehicle loads to prime mover

Frc — Wheel — Trq — Axle — Trq — Transmission — Trq — Torque Converter — Trq — Engine → **FUEL**

Spd — Ang spd — Ang spd — Ang spd — Ang spd

(b) Powertrain level