

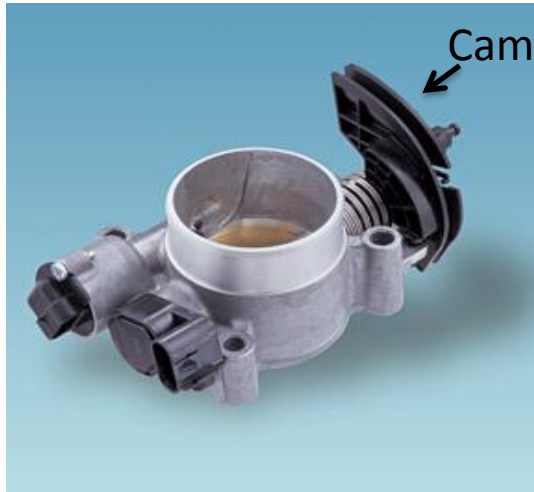
# Electronic Throttle Control

Dr. Qi van Eikema Hommes

4/17/2012

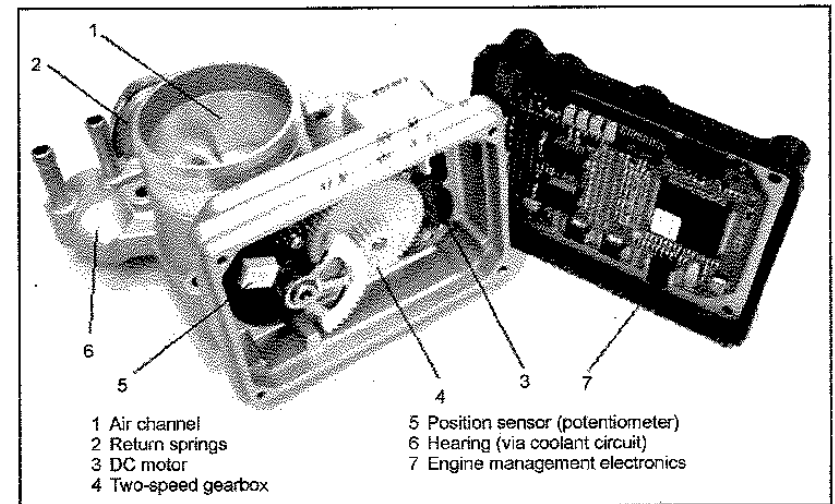
# Throttle Body Evolution

## Mechanical Throttle Body



- Cam hardware design is on critical path to deliver drive characteristics.
- Cable from gas pedal to throttle body affects under hood packaging.

## Electronic Throttle Body



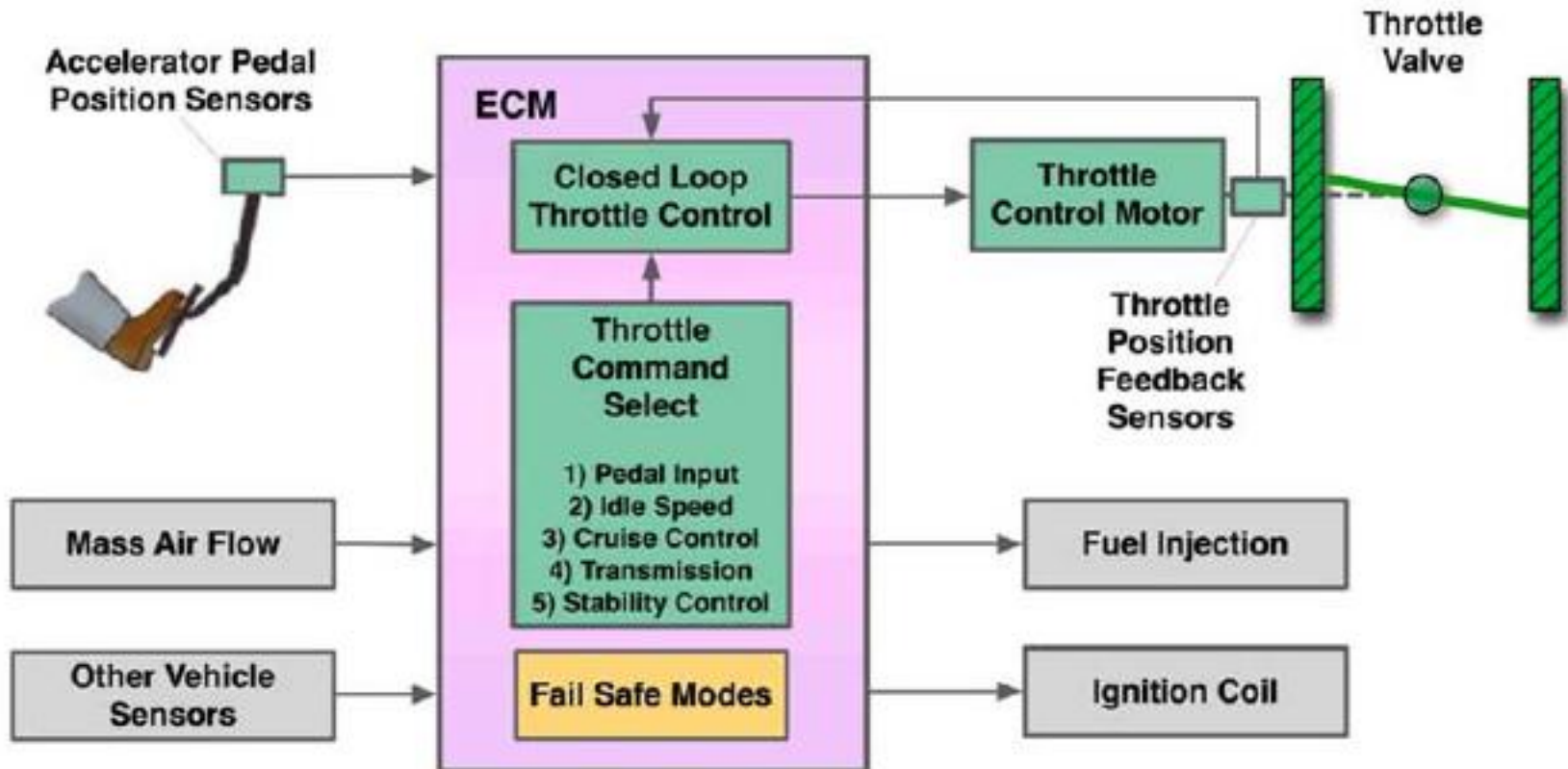
- Easy to change software calibration to deliver any drive characteristics desired.
- Eliminates cable packaging issue and mechanical degradation.
- Drive by Wire.

# Mechanical Throttle Body



# How Does ETC Work





Source: NASA Technical Report for NHTSA Toyota UA Investigation

