Flexible Remote Data Collection for CAN Networks

Objective
To remotely access the CAN network of an automobile, experiment with live or realistically collected data in the lab, and anticipate future experimental needs.

Architectural Strongpoints
Modular
- New functionality can be added (or removed) without redefining the architecture
- This gives rise to a plug-and-play architecture
- This has been done with User Interfaces and CAN protocols
Hierarchical
- True object oriented design
Abstraction
- Hierarchical design hides lower level details

Underlying Software Architecture

ALBANS
- A Java I/O Library to interface applications with the CAN bus
- Streams based objects maximize communication flexibility

LUDFORD
- Intelligent interfacing with the car for local and/or remote access
- Different pluggable user interfaces available

MORTIMER: A Demonstration of Gracefully Degradable Auto Navigation
- Can applications survive the loss of a critical sensor?