Monarch DSR QoS Demo

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1999 DSR Implementation and Testbed

Tested and demonstrated regularly from Dec 1998 through Mar 1999:

- 5 cars as mobile nodes, driving 20–25 MPH, looping between A and B
- 2 stationary nodes (E1 and E2) about 3 radio hops apart using WaveLAN
- All routing done with DSR
- Integrated into Internet and Mobile IP, allows nodes to join ad hoc network
- Traffic included ftp, telnet, UDP CBR audio, real-time kinematic (RTK) GPS correction packets, real-time statistics and position logging
- Logged position, packet signal strength and quality, TCP and DSR state
- **All aspects of DSR routing operation successfully demonstrated**
- Measured route setup time typically less than 100 ms in all cases
- **Greater than 90% of all originated IP packets delivered successfully (some protocol optimizations are not yet in the implementation)**
2000 DSR Preliminary QoS Demo

Audio/video using Windows NetMeeting over DSR ad hoc network:
- Demonstrated at DARPA GloMo meeting, Eatontown, NJ, July 11–13, 2000
- Preliminary QoS DSR features + QuickCam Pro USB, microphone, and speakers
- Also now using IEEE 802.11 WaveLAN, with ACK for Route Maintenance
  - Clear, continuous audio & video over up to 6-hop moving DSR routes
The Stationary End
The Moving Car with Camera
Laptop and Antenna Setup
Screen Shot During the Demo
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