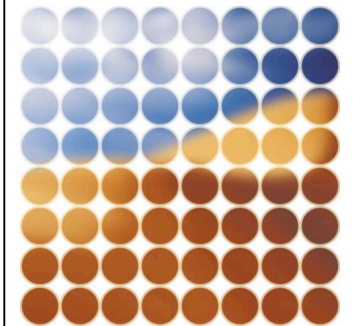




Dynamic MANET On-demand Routing Protocol

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Goals



- Create a unicast route
- Simple, small
 - Easy to implement
- Extendable
 - Enhancements & optimizations
- IPv4 and IPv6
- Basic internet connectivity
- Use what we know



Fixed Element Header



- Generic element and packet handling
 - Extendible via new element types
 - Known behavior for unsupported elements
 - Simple implementation



Generic Processing



- Element handling - Type
 - M-bit, first bit in Type field
 - Notify unsupported element (UERR)
 - H-bits, 2nd and 3rd bits in Type field
 - Skip element and continue
 - Set ignored bit, skip and continue
 - Remove element and continue
 - Drop packet

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Packet Transmission



- MANETcast
 - All MANET nodes, multicast or broadcast
 - IPv4 255.255.255.255
 - IPv6 ff02::2
- Hop-by-hop unicast
 - TargetAddress supplied in first element

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Route Discovery



- Routing Element (RE)
 - Simple, common processing
 - REBlock
- RREQ => RE A=1 MANETcast
- RREP => RE A=0 Unicast hop-by-hop
- Path accumulation
 - Optional accumulation, processing and transmission

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Route Maintenance



- Avoid expiring good routes
 - Update reverse route lifetime on data reception
 - Update forward route lifetime on data transmission
- Inform sources of broken routes quickly
 - Active links must be monitored
 - Several mechanisms available
 - Route Error (RERR)
 - Optional additional invalid routes

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DYMO Short Term Goals



- dymo-00 available
 - Great comments already received
 - More comments please
 - dymo-01 in a few weeks
- MANET list discussion
- Simple, quick implementation
 - Looking for DYMO implementers
 - Simulators and various OS
 - Please contact us



Open Discussion



**Questions
Comments**

<http://moment.cs.ucsb.edu/dymo>

