ECDS-MIB Update
draft-nguyen-manet-ecds-mib-00

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Background

- RFC6621 - Simplified Multicast Forwarding (SMF)
  - a mechanism that provides an appropriate multicasting forwarding capability
  - allows for a variety of distributed algorithms for forming Connected Dominating Sets (CDS) to optimize the simplified data flooding and relaying process amongst routing peers:
    - Classical Flooding (CF)
    - Source-specific Multipoint Relay (S-MPR)
    - Non-source-specific MPR (NS-MPR)
    - Essential CDS (E-CDS)
    - MPR-based CDS (MPR-CDS)

- SMF-MIB managed objects, which are being defined, are only common to all CDSes:
  - In order to manage a specific CDS, e.g. E-CDS, a specific CDS MIB is required, e.g. ECDS-MIB.
Essential CDS

• A Method for implementing selection of Multipoint Relay nodes
  – using a nodal metric known as “Router Priority” for all one-hop and two-hop neighbors
• Produces a common shared set of relay nodes for all the nodes in MANET network
• Does not require knowledge of previous node discovery for multicast forwarding
To Do

• Need more inputs
• Implementing ECDS-MIB
Questions
• An extension to SMF-MIB

• Define Managed Objects for Essential CDS:
  – Control Objects:
    • ecdsAdminStatus
    • ecdsRouterID
    • ecdsConfiguredRouterPriority
    • ecdsConfiguredMember
    • ecdsConfiguredRtrPriMethod
  – State Objects:
    • ecdsOperationStatus
    • ecdsCurrentRtrPri
    • ecdsCurrentInEcds
  – Performance Objects:
    • ecdsAdminStatusChange
    • ecdsCurrentRirPriValueChange
  – Notification Objects:
    • ecdsAdminStatusChange
    • ecdsConfiguredMemberChange
    • ecdsRtrPriChange
    • ecdsRtrPriMethodChange