# IEEE P802.1CS Link-local Registration Protocol Draft 1.4 introduction

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# P802.1CS Clause changes

| Draft 1.3 | Draft 1.4 |
|---|---|
| Same clauses 1-6 | Same clauses 1-6 |
| 7 procedures & state machines | 7 LRP-DT |
| | 8 Portals (LRP-DS) |
| 8 PDU formats | 9 PDU formats |
| 9 App interface | 10 App interface |
| 10 Managed objects | 11 Managed objects |
| 11 YANG | 12 YANG |
| 12 MIB | 13 MIB |

# Obvious changes

- Clauses 6 (introduction) and 7 (LRP-DT procedures, was 7.1, 7.2) are not changed much.  A few changes were required to make proper connection to the new Clause 8.
- New Clause 8 (LRP-DS Portal procedures, was 7.3) are now complete with state machines.
  - Old Hello state machines were flawed.  I think they are right, now.
  - State machines written for:
    - Applicant transmitting Record LRPDUs and receiving Partial and Complete List LRPDUs
    - Registrar receiving Record LRPDUs and transmitting Partial List LRPDUs.
    - Registrar transmitting Complete List LRPDUs.

# Obvious changes

- We no longer send both Portal Numbers in the Record and List LRPDUs; “My Portal Number” is sufficient.
- As expected (and mentioned in earlier editor’s notes), completing the LRP-DS state machines required some changes to the application interface primitives.
  - Parameters added to Enable Portal creation request and Enable fixed Portal request
  - New output parameters added to Portal status indication
  - Remote database overflow indication subsumed by Portal status indication.
  - Delete record request added to Registrar primitives

# Obvious changes

- LRP-DT managed objects defined
- Per-Portal managed objects defined
- MIBs added
- Rev bars are cumulative from the last-balloted Draft 1.2, not from D1.3, which many have not read.  So, essentially the whole document is one solid rev bar.

# New applicant/registrar state machines

- Basic IS-IS Record →, Partial list ← paradigm maintained.
- Re-send of Record NOT done. That's what LRP-DT is for. Timeout waiting for partial/complete list triggers a Portal status indication.
- Periodic Complete List kept as insurance against ECP losses.
- Resetting databases when LRP-DT or physical connection is lost is left up to the application:
  - Application notified of Hello timeout or connection loss.
  - Applicant can change, registrar can delete, records while connection down.
  - First transmission after Hello exchange is a Complete List to re-synch data.

# Managed objects

- Lots of work on managed objects in D1.4.  (The MIBs!)
- I think that managed objects for the data in the database should be provided by the application, not by LRP.  This is not (well, not only) due to laziness on my part; managed objects for the data will be much more useful if they understand the semantics of the data.
- Aside from the ECP MAC address, all of the writeable managed objects are used for creating Virtual LLDP instances for proxy controller systems.  The editor would welcome a claim that this can be punted to the application and removed from P802.1CS, but cannot make that claim, himself.

# MIBs

- Because of the limitations of SNMPv2, a complex set of six tables (lrpVirtPortTable, lrpVirtPortMyEcpAppIdTable, lrpVirtPortMyTcpAppDescTable, lrpVirtNeigborTable, lrpVirtPortNbrEcpAppIdTable, lrpVirtPortNbrTcpAppDescTable) is required to represent the “Virtual LLDP instances” for a proxy controller.
- lrpDtInstanceTable: static read-only info for each LRP-DT Instance.
- lrpPortalTable: static read-only info for each LRP-DS Portal.
- lrpPortalCountersTable: dynamic statistics for each LRP-DS Portal.
- (NOT THERE, YET): AUGMENT to bridge port or interface to configure the ECP MAC address.

# Kinds of comments most needed on D1.4

- **Completeness**: Do we have all of the pieces we need?
- **Readability**: How can the introductions make the details more understandable?
- **Protocols**: Do the protocols supply the right set of features?
- **State machines**: Can we improve the choices made about what to put in subroutine definitions and what to put in diagrams?
- **Gozintas and Cumzoutas***: Is all the necessary information for the state machines coming from the right sources (configuration, administration, application)? Are the users (administration, application) getting the information they need?
- **Terminology**: Portal & LRP-DT instance? LRP-DS & LRP-DT? Applicant vs. application confusion?

* "Goes into"s and "Comes out of"s

# Are we near Working Group ballot?

- Who makes the TCP connection (active OPEN) and who receives it (passive OPEN)? (see 7.2.1)
  - ”Lowest address” may or may not work.  Does Network Address Translation mess this up?
- I think we can close on the checksum issue, and just use the IS-IS checksum as IS-IS uses it (see latest Annex Z).
- Some nearly-boilerplate clauses are needed to introduce the MIBs.
- While writing the MIBs, I figured out that the LRP YANG model will have dependencies on the P802.1ABcu LLDP YANG models.  I’ll need help, here.

# Thank you