Discovering Provisioning Domain Names and Data

draft-ietf-intarea-provisioning-domains-02

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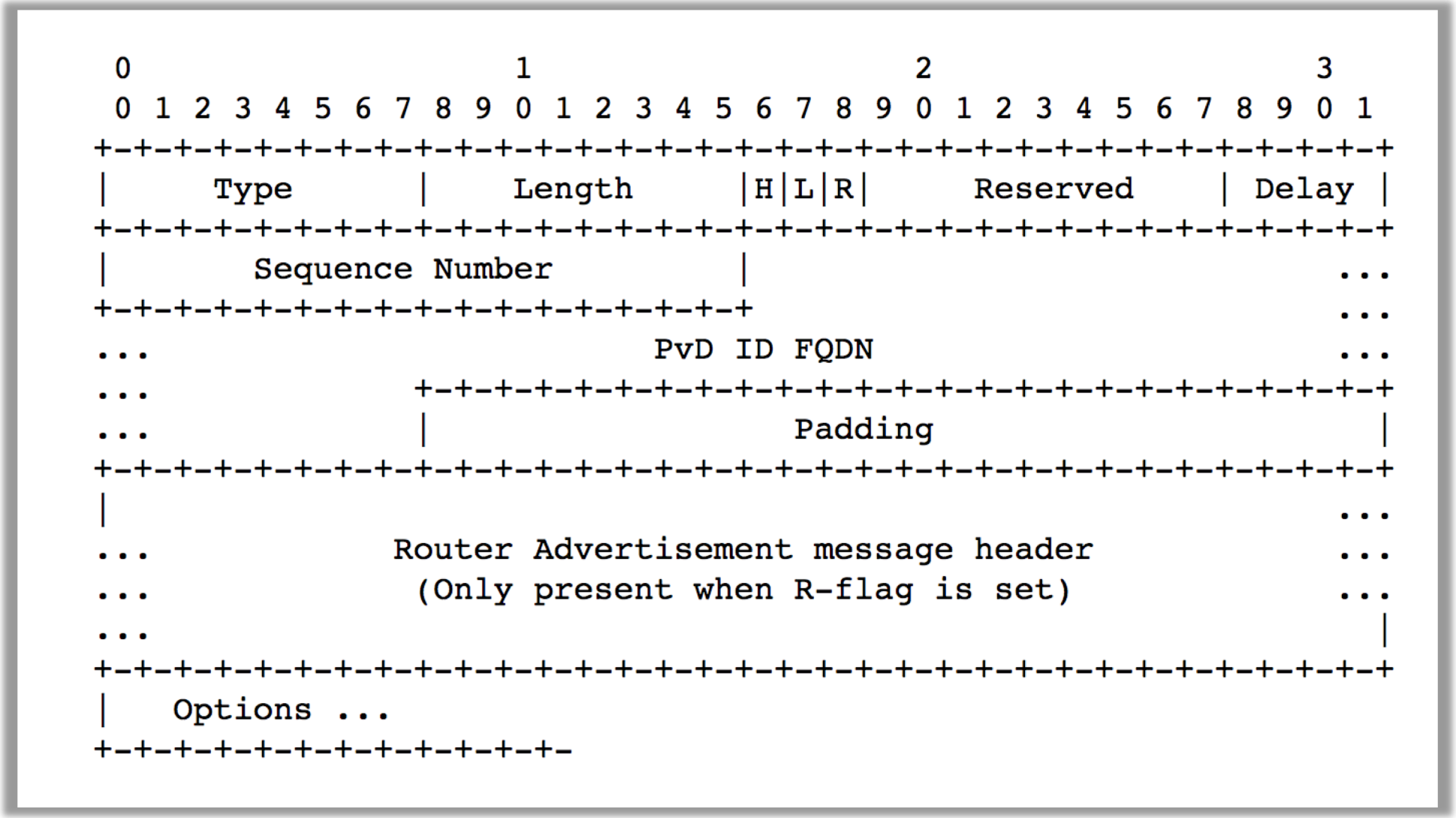
News

- IANA has allocated the value 21 for the PvD Option
- Reviewed by Tim Chown and Zhen Cao (THANK YOU)
- Design team meeting at IETF-101/London
- PvD additional information for captive portal to be presented at IETF-102 Tuesday 9:30

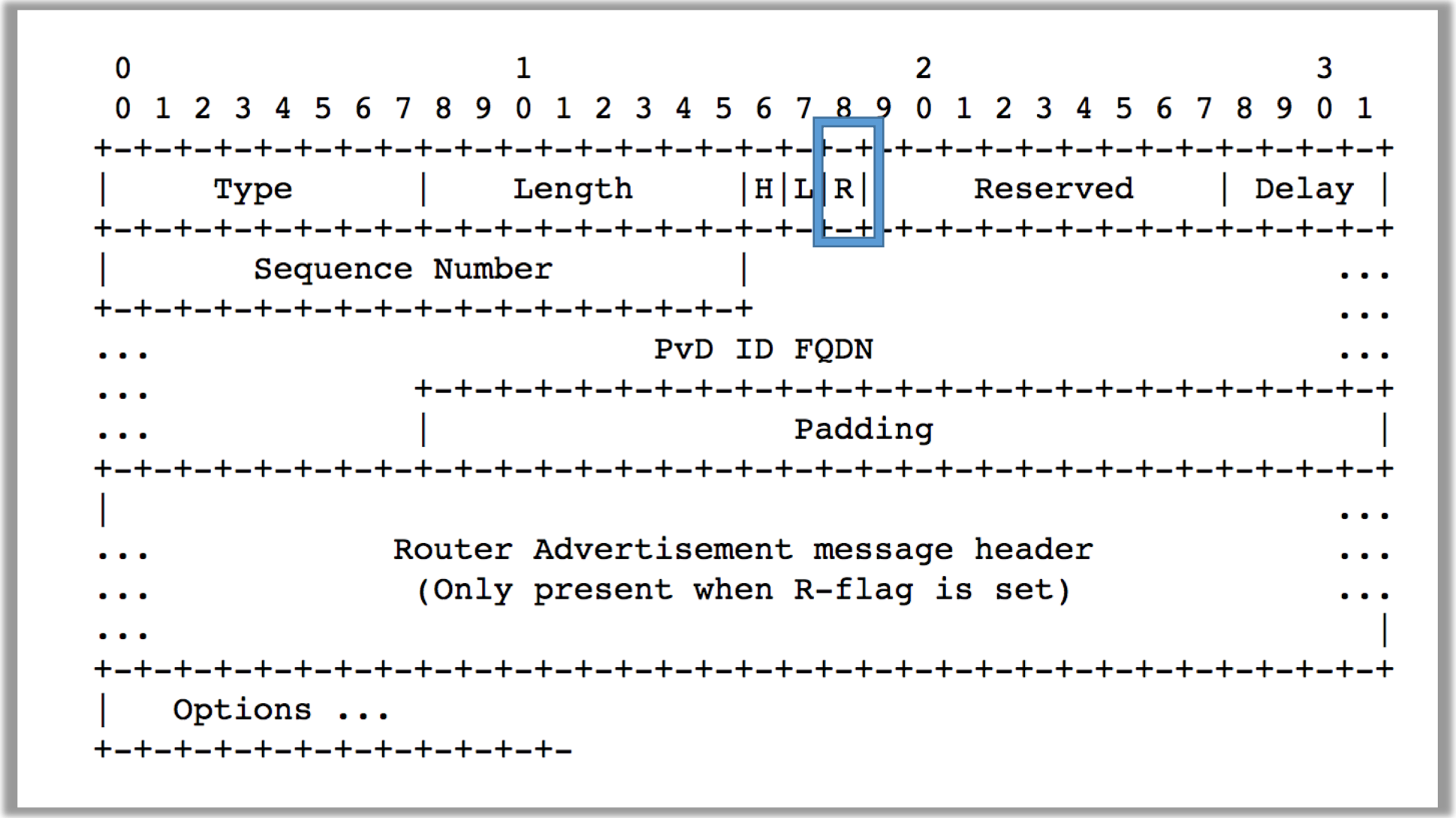
Changes in -02

- Use IANA PvD Option value of 21 and update the IANA considerations
- Delay field to avoid the thundering herd effect
- rename A-flag in R-flag to avoid A-flag of PIO
- use the wording "PvD Option” rather than “PvD ID Option” as it now contains more than a simple ID
- Added a section "Non-PvD-aware Host Behavior"

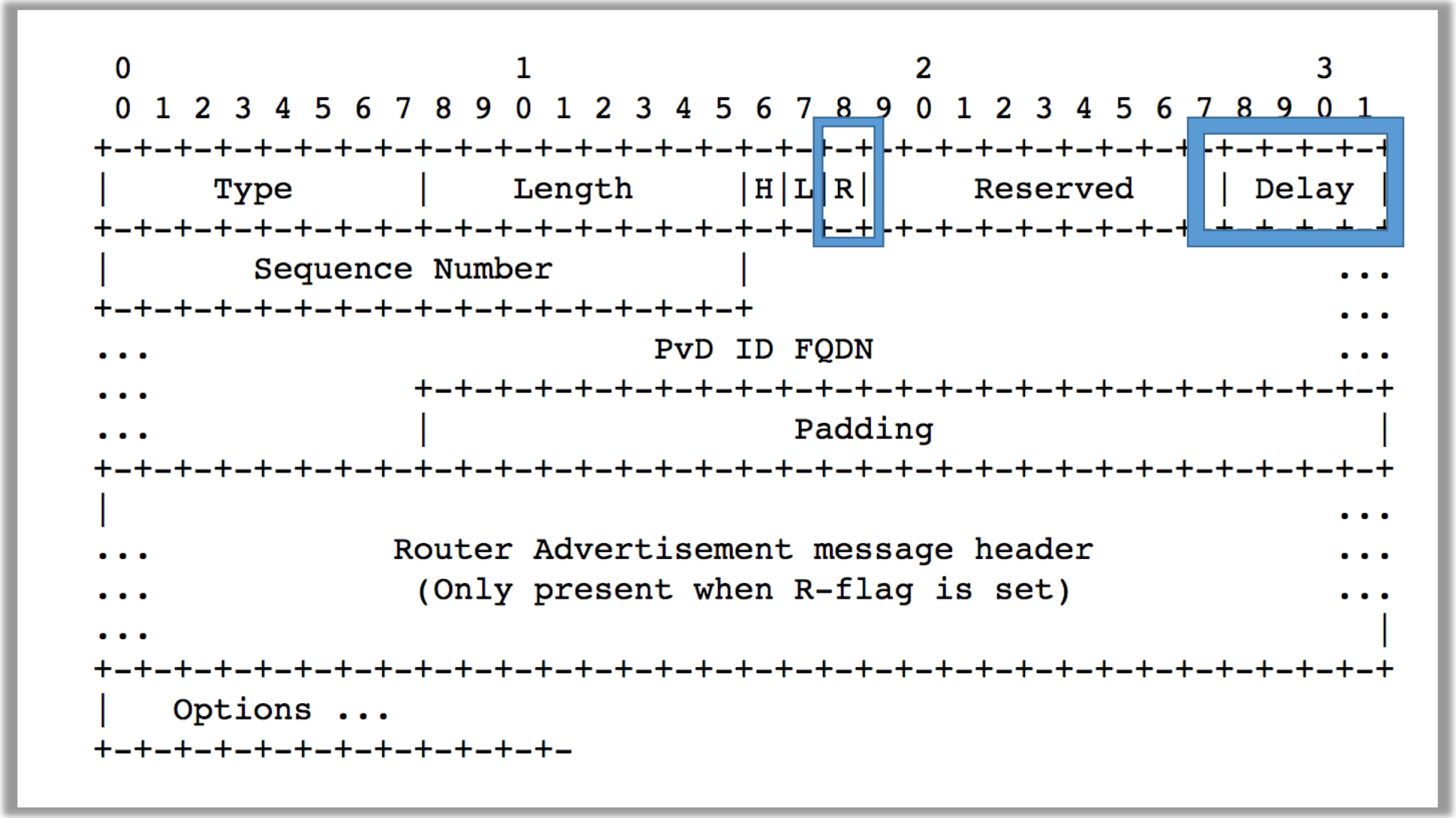
PvD Option Format



PvD Option Format



PvD Option Format



Thundering herd effect

- To avoid all hosts fetching the additional information at the very same moment, the field ‘delay’ is used
  - When sequence number in PvD Option is changed: delay the query by a random time between zero and 2**(Delay * 2) milliseconds
  - When a host last retrieved an object at time A including a validity time B, and is configured to keep the object up to date, it MUST perform the update at a uniformly random time in the interval [(B-A)/2,B]

Implementation status

Linux - https://github.com/IPv6-mPvD

- pvdd: A Daemon to manage PvD IDs and Additional Data
- Linux Kernel patch for RA processing
- iproute tool patch to display PvD IDs
- Wireshark dissector
- RADVD and ODHCPD sending PvD ID

Next steps

- Review is still welcome of course

- Present the I-D to 6MAN & V6OPS WG
- Then go WGLC