

Unified CPE provisioning

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SOFTWARE

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Goals of this preso

- Describe the details of DHCP provisioning of MAP/LW4o6
- Agree on Unified CPE scope

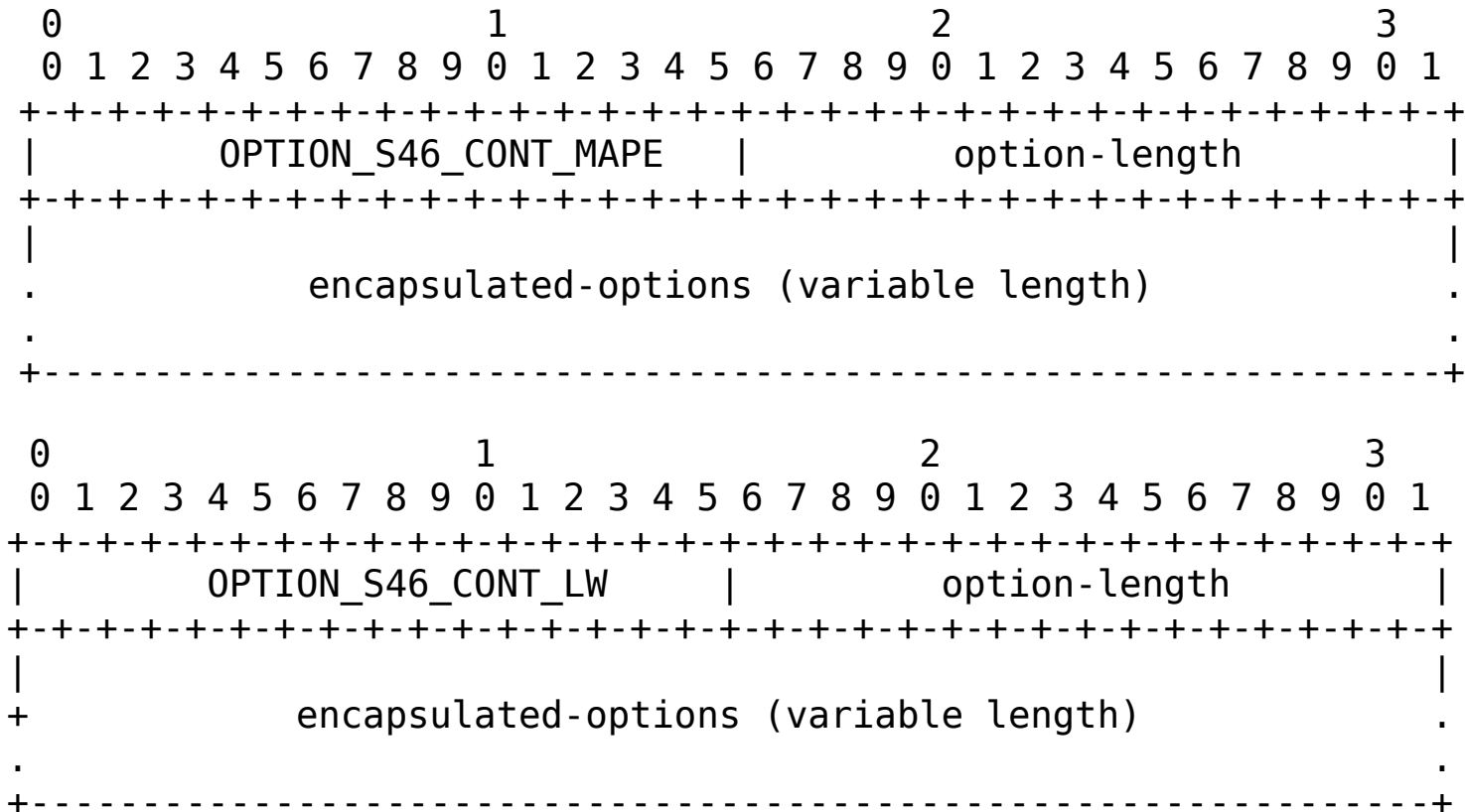
Progress since IETF 87

- Private discussions (hundreds of emails, one virtual meeting) between draft authors.
 - Discussion was kept private to make quick progress toward an agreement on the general principles.
 - Like a design team.
 - Now we're back to public discussions on the WG list.
- Results :
 - draft-ietf-softwire-map-dhcp-05 (now not only about MAP)
 - Agreement on the general principles.

map-dhcp-05

- Explicitly applies to MAP-E, MAP-T, and LW4o6.
- General principles (what we expect consensus on) :
 - DHCP options containing sub-options
 - Containers are protocol-specific
 - Sub-options are shared
 - The **presence** of options depend on the request (ORO).
 - The **contents** of options do not depend on the request.
- This is as unified as it gets. (!!!)

Containers



(similar for MAP-T)

Sub-options

Option	MAP-E	MAP-T	Lightweight 4over6
OPTION_S46_RULE	M	M	-
OPTION_S46_BR	M	-	M
OPTION_S46_PORTPARAMS	0	0	0
OPTION_S46_DMR	-	M	-
OPTION_S46_IPV4ADDRESS	-	-	M

M - Mandatory, 0 - Optional, - - Not Applicable

Negotiation

- There is no negotiation.
- Client asks for options. Server returns what it has.
 - Need to not modify existing DHCP server-side logic.
- Container option goes in ORO. Not sub-options.
- No priority between mechanisms.
 - CPE does what it wants. Multiple at the same time, just one that it prefers, complex selection heuristic, whatever.
- **MAYBE** : a way for the ISP to signal its preference to the CPE. **NOT UP FOR DISCUSSION NOW.**

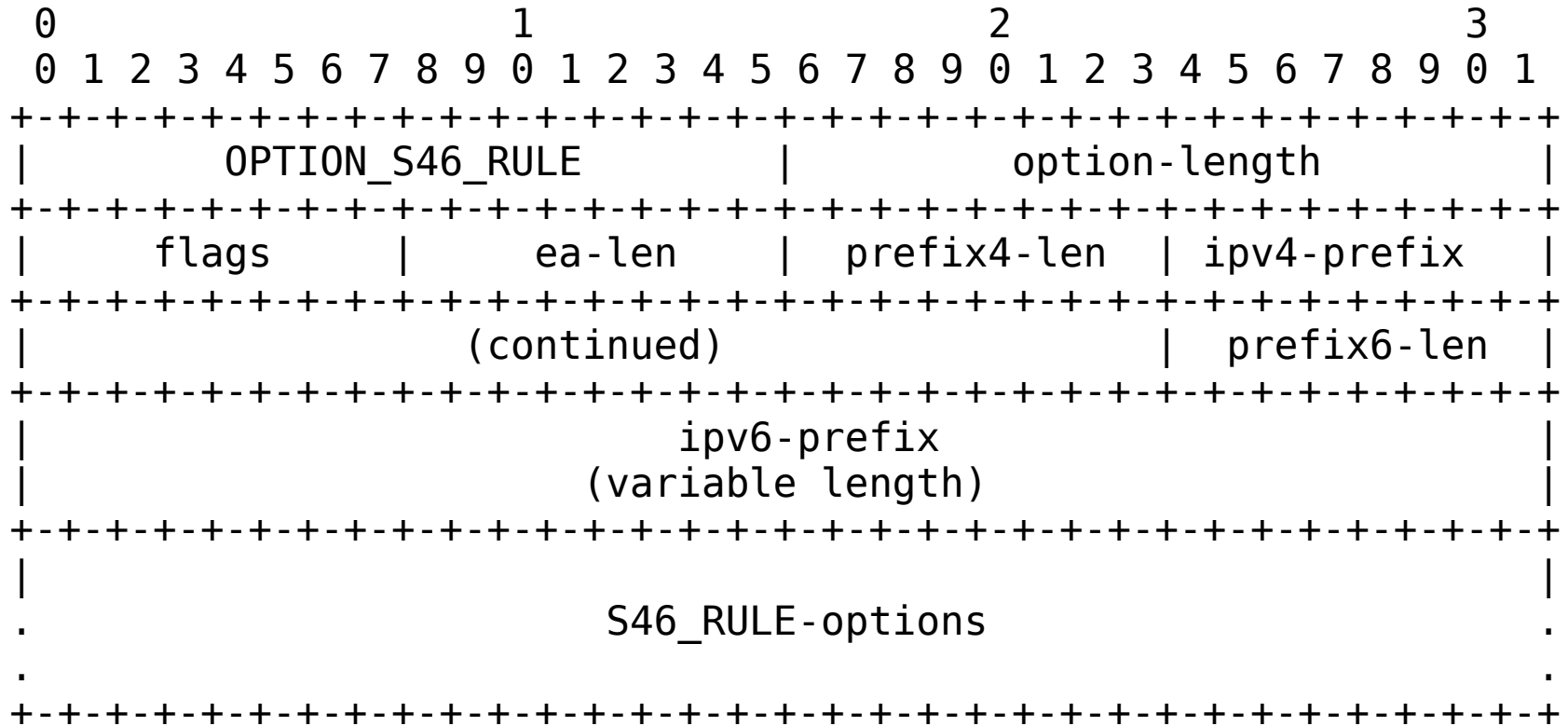
Scope of Unified CPE

- Implementation advice relating to MAP, LW4o6, and DS-Lite
 - How to intelligently implement a CPE that speaks all protocols
- How to make use of ...
 - DHCPv4 over DHCPv6
 - Dynamic IPv4 address provisioning
 - Other options
 - PCP
- ... for further provisioning.
- MAYBE : prioritization mechanism

Questions?

Backup slides

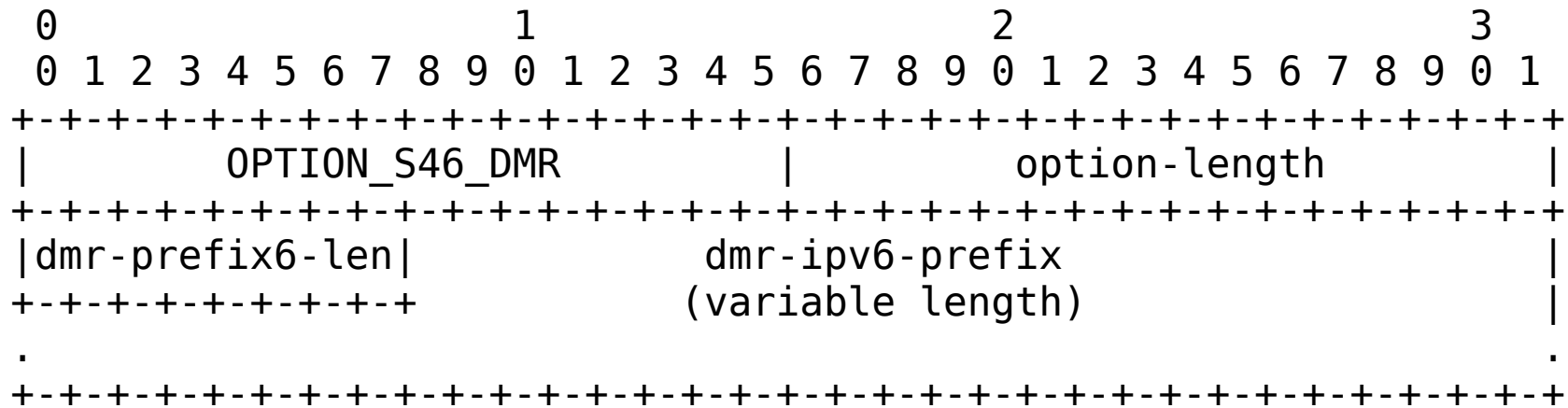
Rule sub-option



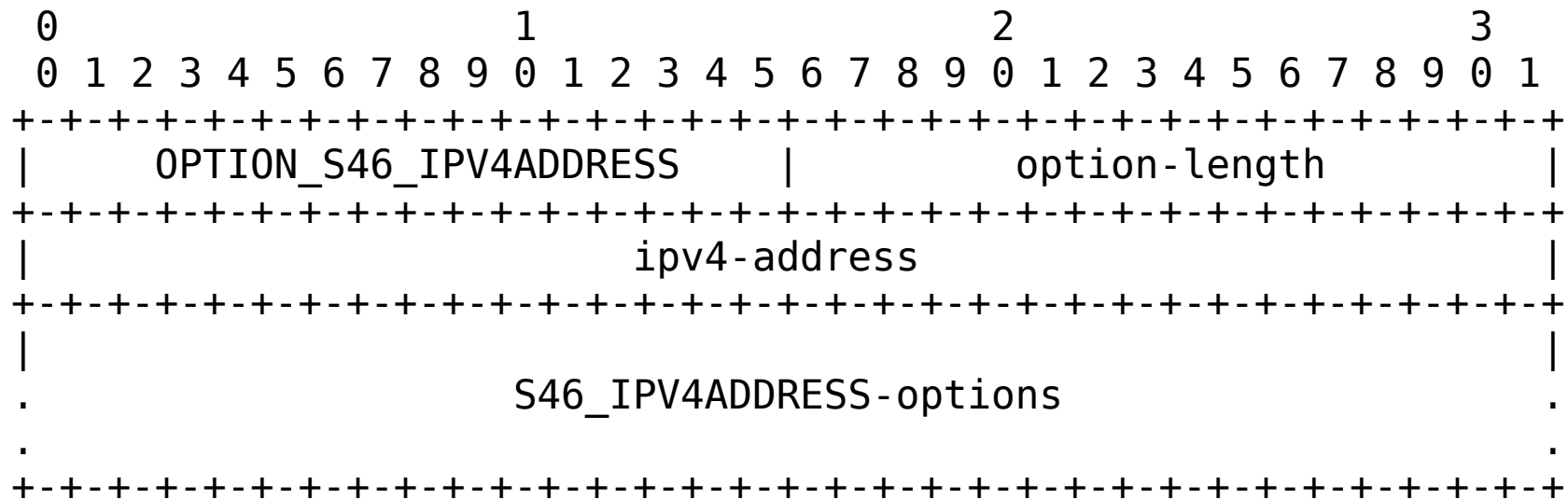
Border relay sub-option



Default mapping rule sub-option



IPv4 address sub-option



Port parameters sub-option

