Layer 2 Relay Agent Information
draft-ietf-dhc-l2ra-00.txt
DHC WG

Bharat Joshi

Infosys Technologies Ltd.

Layer 2 Relay Agent

- Describes the basic Layer 2 Relay Agent functionality in different network scenarios.
- Few comments were received and draft has been updated based on these comments.
- More review in Working Group?

Extensions to Layer 2 Relay Agent
draft-kurapati-dhc-l2ra-extensions-00.txt

History

- Previous draft draft-joshi-dhc-layer2-relay-agent-01
  - This draft explained L2RA and also suggested extensions to support Leasequery, prevent flooding between l2ra and l3ra etc.

- Chicago IETG WG meet saw favourable response for L2RA and subsequent discussions in WG mailing list resulted in conclusion that we should split the drafts into 2 categories
  - An informational draft explaining basic Layer 2 Relay Agent functionality. This informational draft was accepted as Working Group item in Vancouver IETF WG.
  - All extensions to L2RA in separate drafts after the informational draft is published.

Extension to Layer 2 Relay Agent

- Extending RFC 4388 to Layer 2 Relay Agent
  - Some Layer 2 Relay Agents glean lease information from DHCP messages and use it for anti-spoofing, MAC forwarding.
  - This information is lost when Layer 2 Relay Agent reboots.

- Prevention of flooding of DHCP messages between L3RA and L2RA
  - Layer 2 Relay Agent would broadcast a DHCP request message to all ports except on which it was received.
  - Layer 3 Relay Agent would broadcast A DHCP reply message towards the Layer 2 Relay Agent.

Extension of RFC 4388 to Layer 2 Access Networks

STB

Local Loop

RG

Ethernet Aggregation Switch

• Generate Reply based on the query and send it to Layer 3 Relay Agent

DHCP Server

L3 Relay Agent

Service Provider's IP Network

STB

Access Concentrator L2 Relay Agent

Local Loop

RG

• Forward Leasequery similar to DHCP message

• Forwards reply based on giaddr or state information

• Generates LEASEQUERY
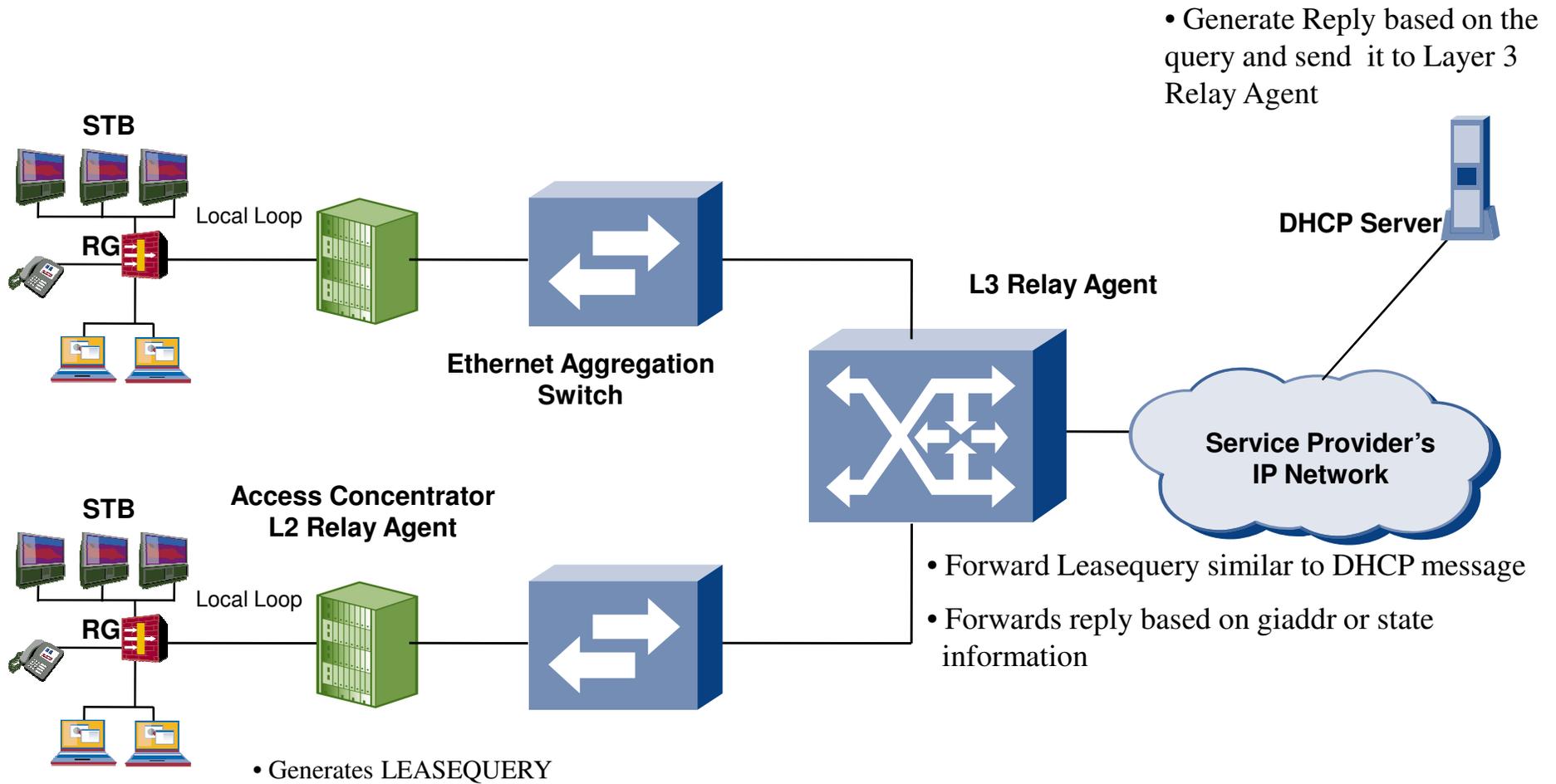
Flooding between L3RA-L2RA
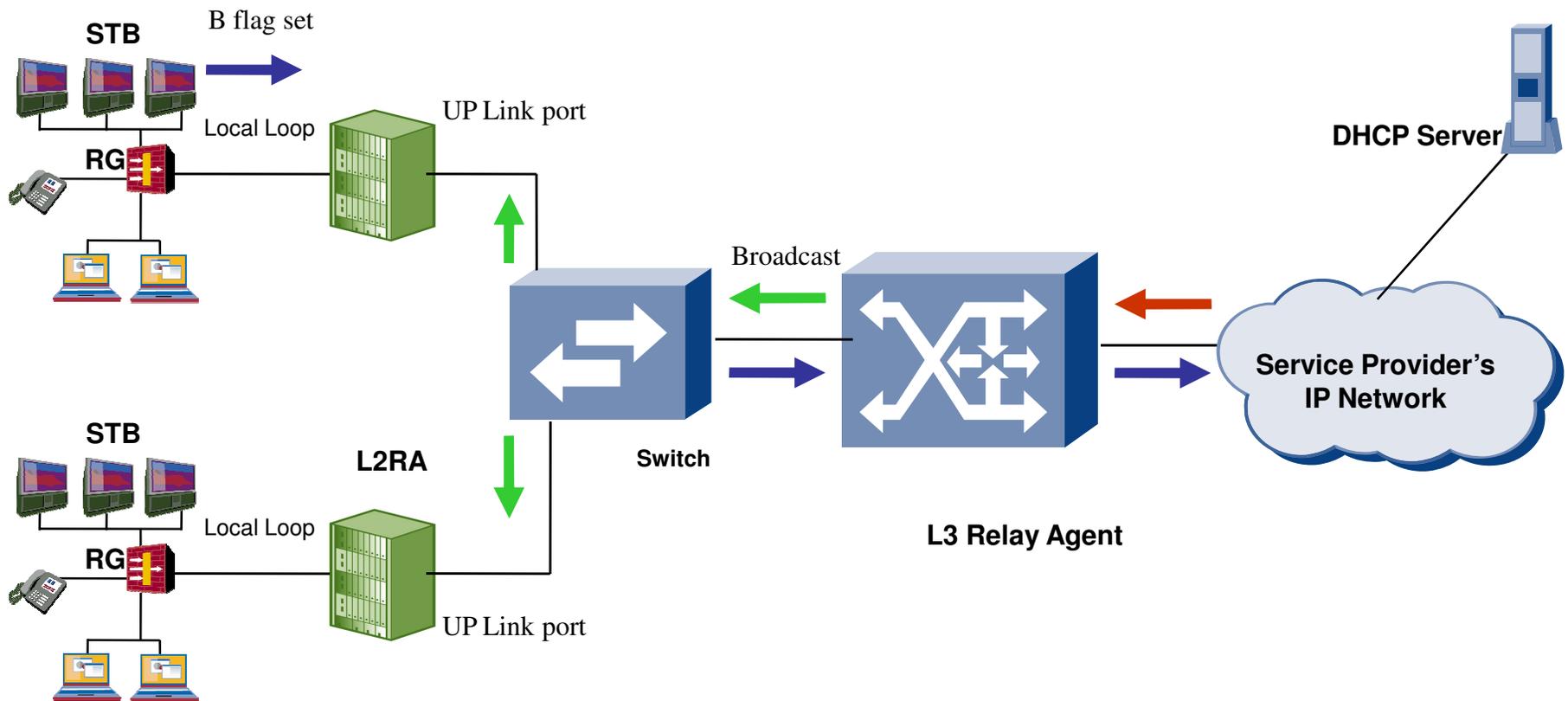
Prevention of flooding between L3RA-L2RA

Sub-opt	Len	htype(1)	hwaddr		Unicast-address sub-option

82	Len	I1	I2	I3	In

STB   B flag set

RG

L2RA

Local Loop

STB   **L2RA**

RG

Local Loop

Unicast to Layer 2
Relay Agent

Switch

L3 Relay Agent

DHCP Server

**Service Provider's
IP Network**
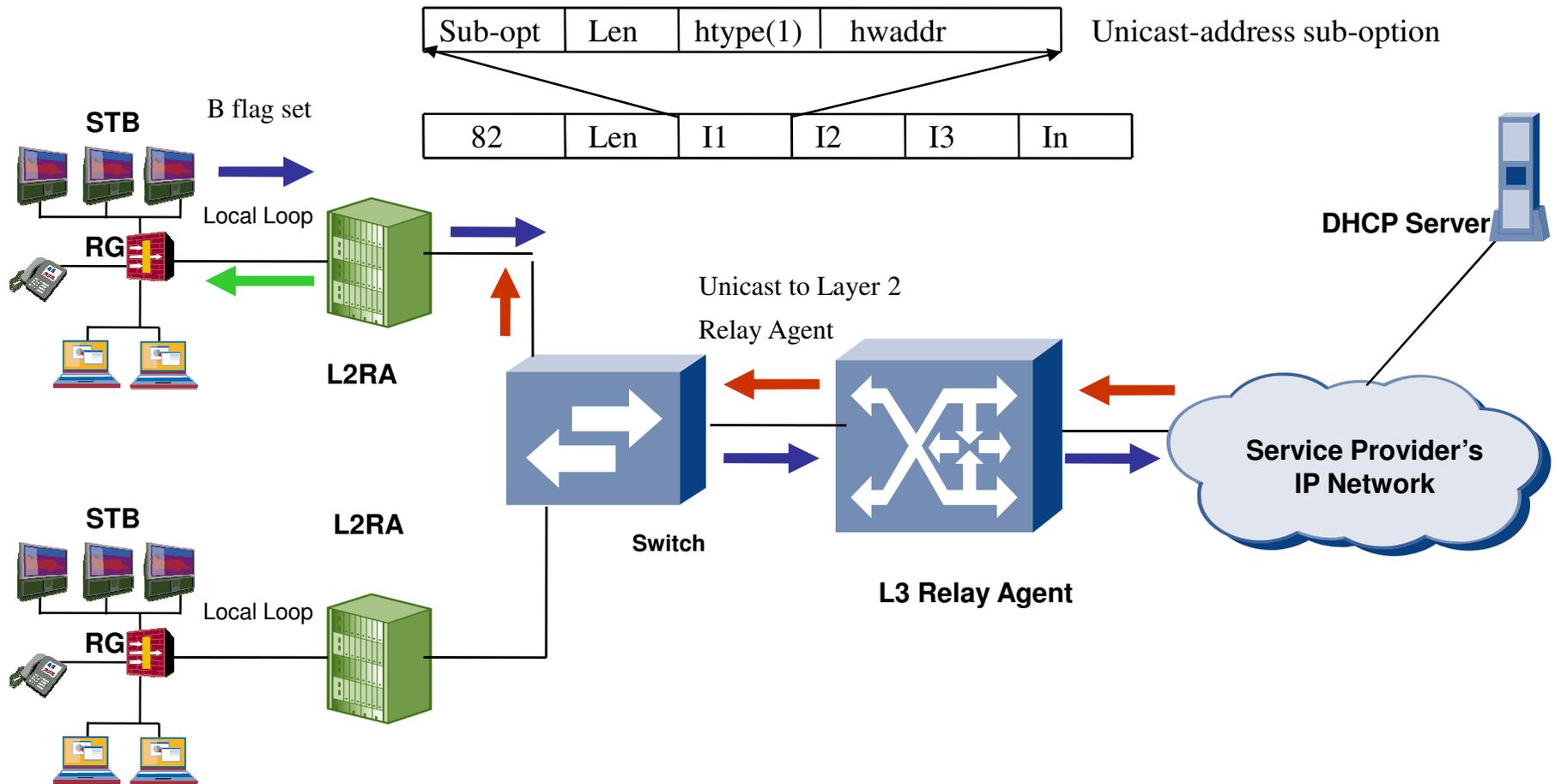
Next step

- More review in Working Group
- Accept as a working group item?