Signal-Free LISP Multicast
draft-farinacci-lisp-signal-free-01

LISP WG
Honolulu IETF
November 2014

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Document Status

- Initial Idea for signal-free

  - Presented at Berlin MBONED WG July 2013

- *draft-farinacci-lisp-signal-free-multicast-00*

  - Published in Feb 2014

  - Presented at London LISP WG March 2014

- *draft-farinacci-lisp-signal-free-multicast-01*

  - Published in June 2014

  - After implementation experience

Problem Statement

- Can we get a multicast overlay to connect multicast distribution trees at LISP sites?

- Can we do it with zero xTR signaling?

- Simpler alternative to RFC 6831 and `draft-farinacci-lisp-mr-signaling`
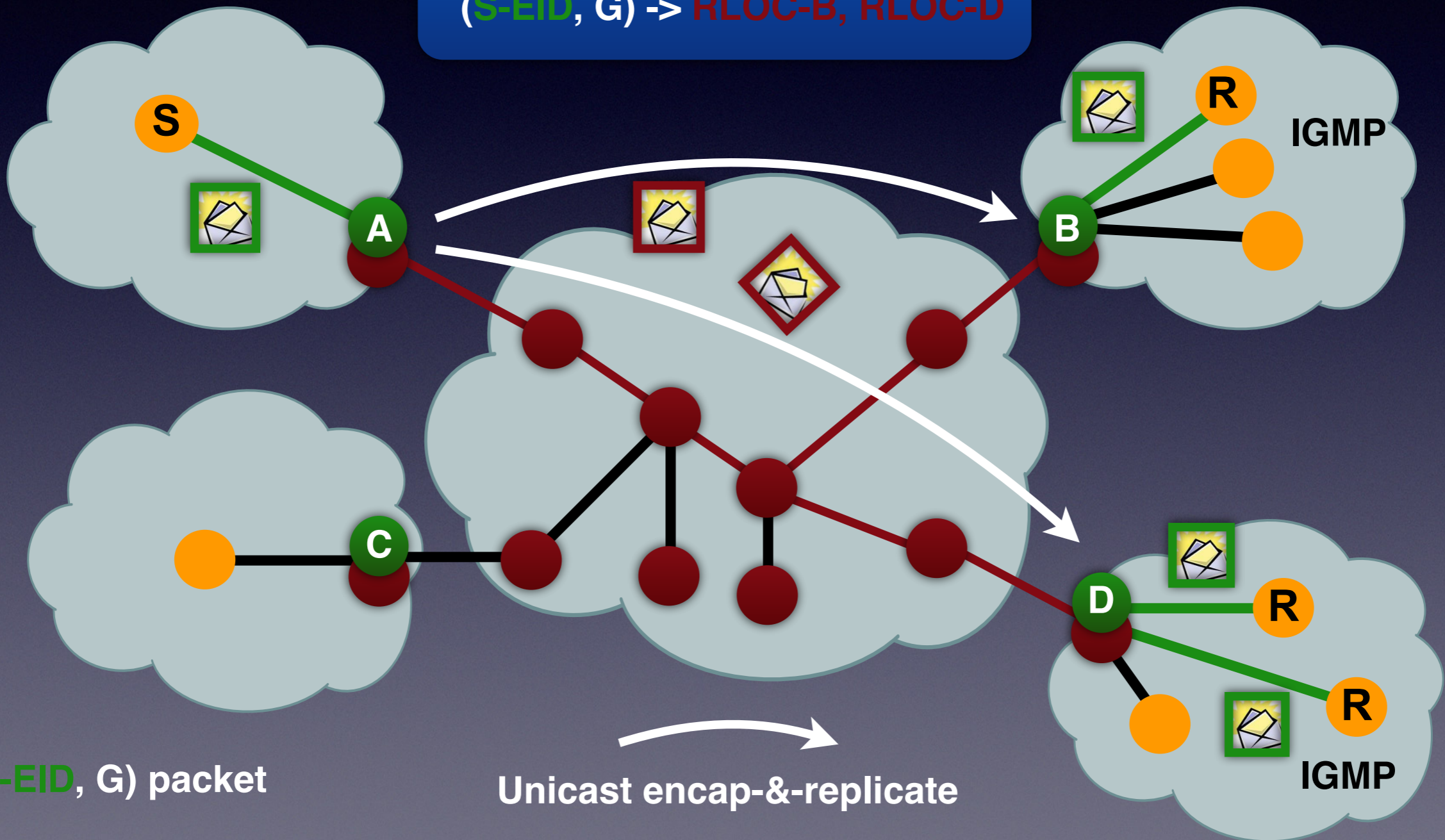
Solution

- Use Mapping Database System to rendezvous ITRs and ETRs per (S-EID, G) entry

- Centralized control for access and policy

- Encoding

  - Use Multicast Info LCAF for EID encoding of (S-EID, G)

  - Use Replication-List-Entry (RLE) LCAF for RLOC encoding of <u>unicast</u> or <u>multicast</u> addresses

Simple Case

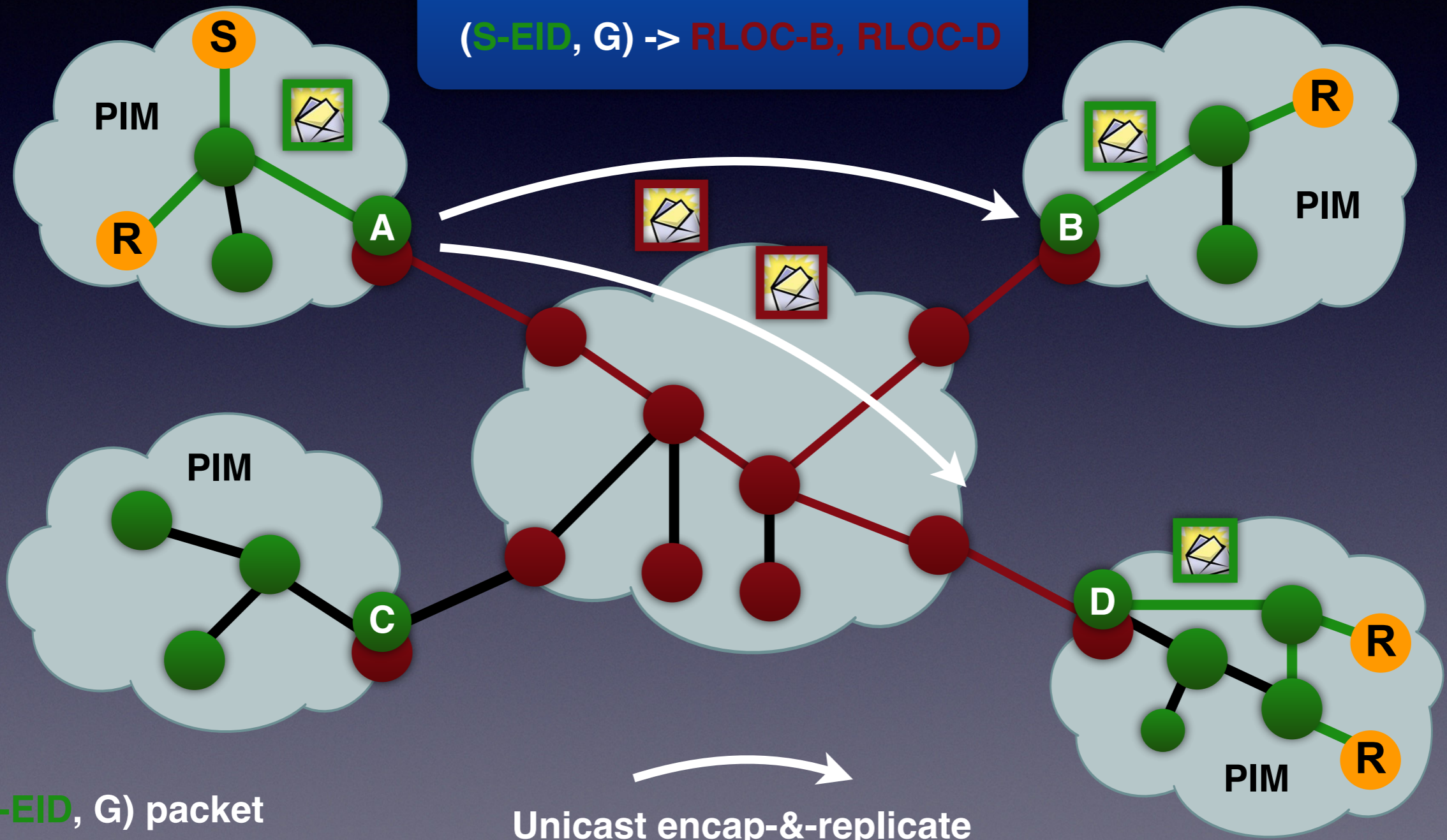Mapping-Database

(S-EID, G) -> RLOC-B, RLOC-D

IGMP

IGMP

(S-EID, G) packet

(RLOC-A, RLOC-{B, D}) packet

Unicast encap-&-replicate

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Complex Case

Mapping-Database

(S-EID, G) -> RLOC-B, RLOC-D

(S-EID, G) packet

Unicast encap-&-replicate

(RLOC-A, RLOC-{B, D}) packet
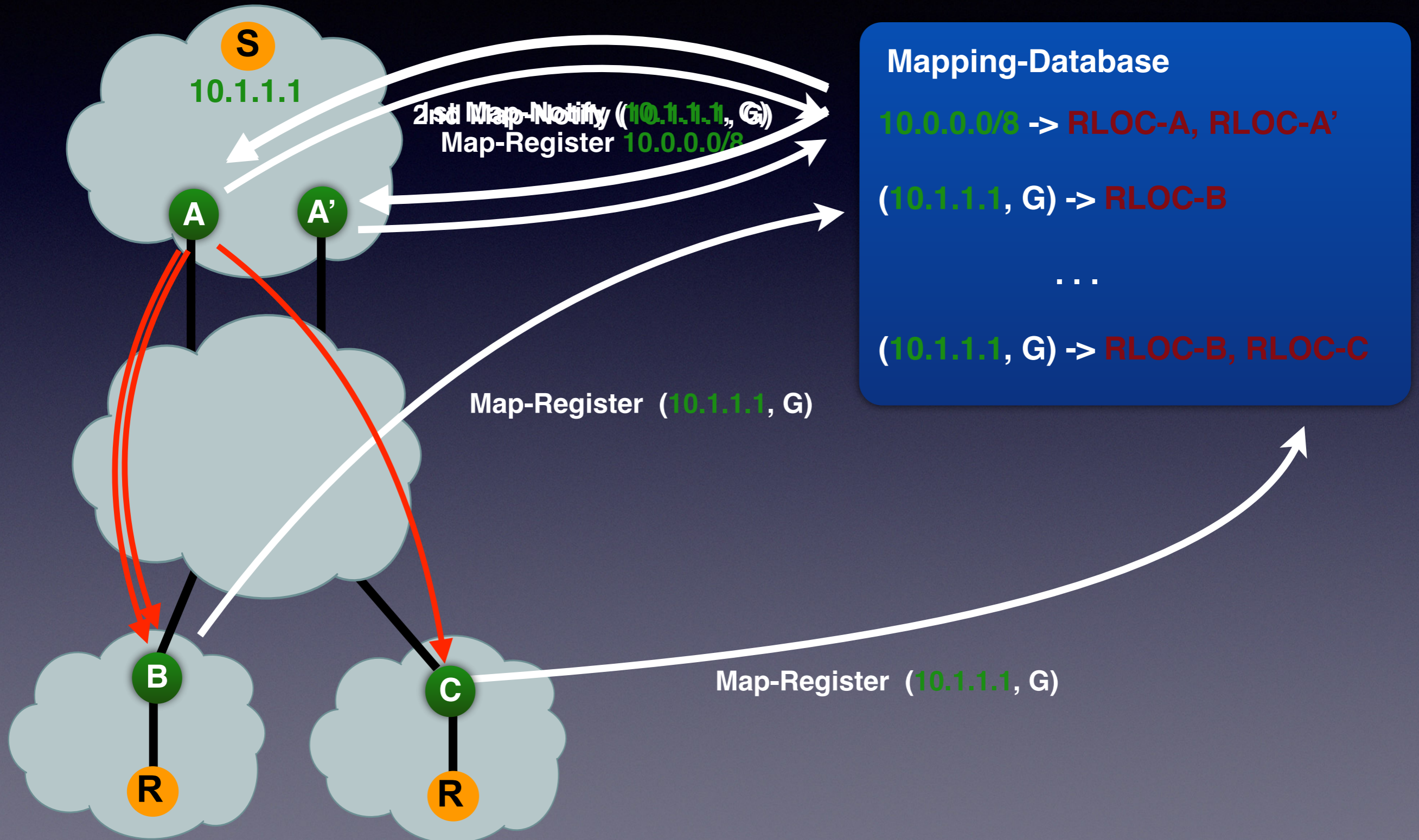
Diff from -00 to -01

- Reduce requirement for ASM support

  - Recommend RP resides in source site

- Notification Procedure Change

  - Source site gets Map-Notify messages when the RLE changes

    - Via the registration of its site's EID-prefix (versus an (S-prefix, *) documented in -00)

  - By doing this we get an optimization

    - The Map-Notify has the new RLE so the ITR doesn't need to do a new mapping system lookup

RLE Change

EID-prefix: 10.0.0.0/8

Mapping-Database

10.0.0.0/8 -> RLOC-A, RLOC-A'

(10.1.1.1, G) -> RLOC-B

. . .

(10.1.1.1, G) -> RLOC-B, RLOC-C

S

10.1.1.1

2nd Map-Notify (10.1.1.1, G)
1st Map-Notify (10.1.1.1, G)
Map-Register 10.0.0.0/8

A   A'

Map-Register (10.1.1.1, G)

B

C

R

R

Map-Register (10.1.1.1, G)

Questions?