GARP Maintenance Point Registration Protocol (GMPRP) for 802.1ag

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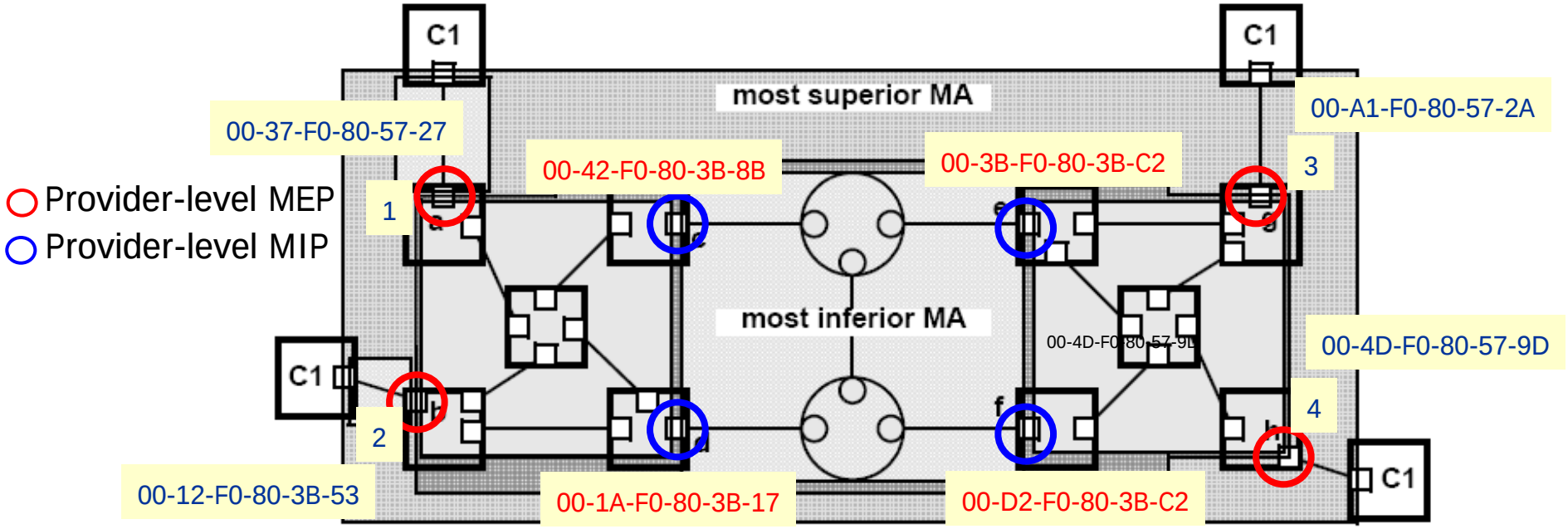
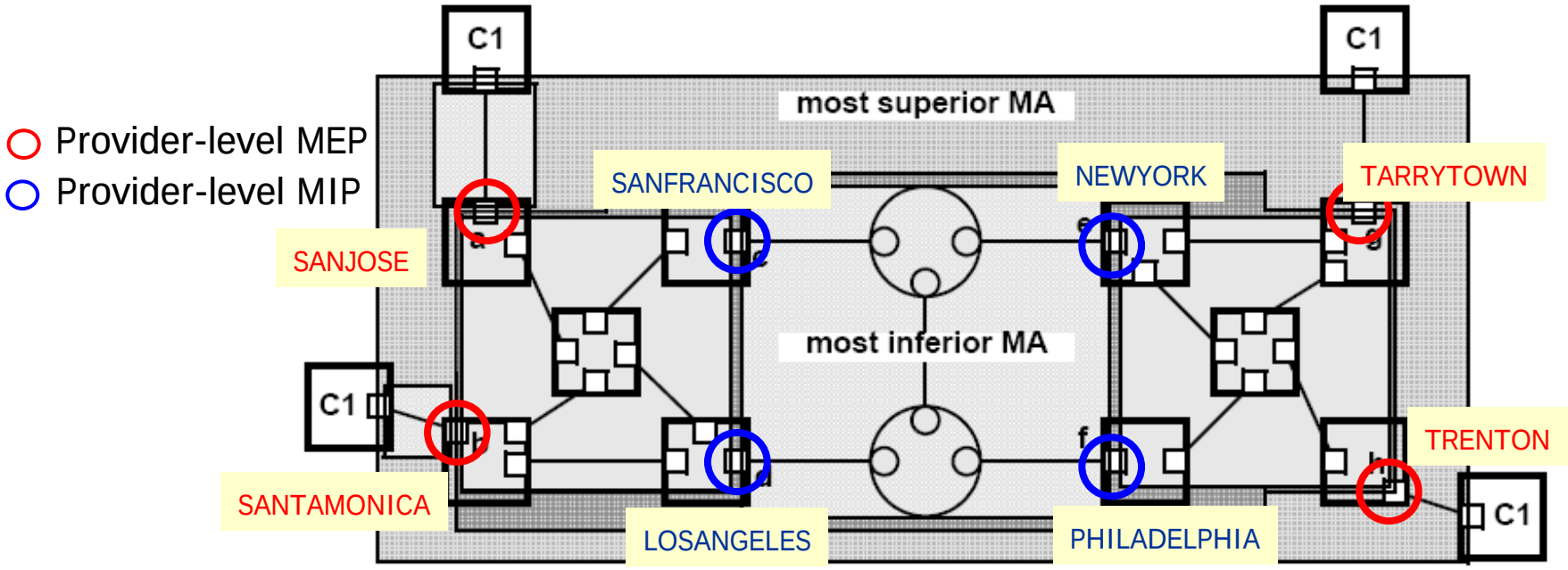
Referencing MP by MAC Address or MEPID



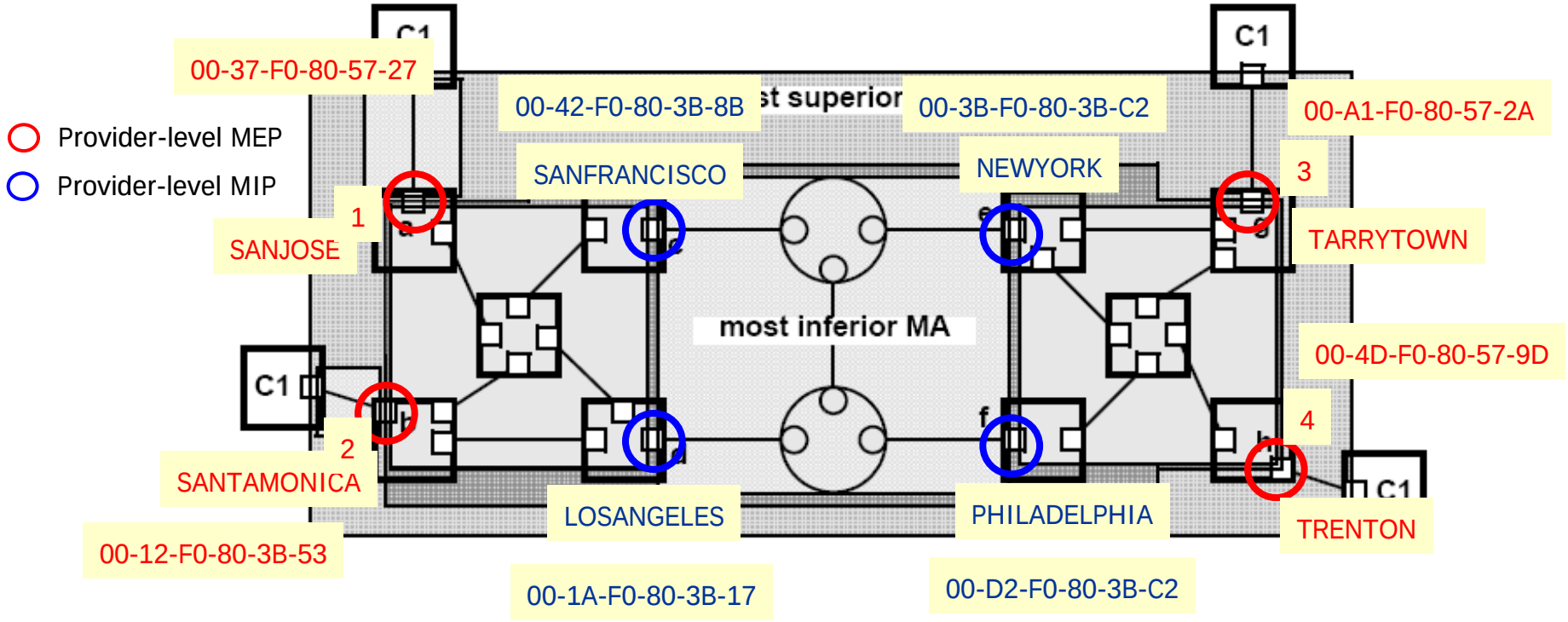
- Maintenance Point is identified by MAC address
  - or by MEPID (only in case of MEP for CCM)

Use of PortID Allows Mnemonic Reference



- Optional use of Port ID allows more mnemonic reference to MP.
- Administrator issues LBM(PortID=SANFRANCISCO, MAID=C1)
- MAC address of SANFRANCISCO placed in DA field of LBM

How are these Relationships Distributed?



- How is the MAC address / PortID / MEPID relationship distributed?
  - How is naming duplication detected?

Current Network Management Solution

Maintenance Association C1		
MAC address	PortID	MEPID
00-37-F0-80-57-27	SANJOSE	1
00-12-F0-80-3B-53	SANTAMONICA	2
00-A1-F0-80-57-2A	TARRYTOWN	3
00-4D-F0-80-57-9D	TRENTON	4
00-42-F0-80-3B-8B	SANFRANCISCO	-
00-1A-F0-80-3B-17	LOSANGELES	-
00-3B-F0-80-3B-C2	NEWYORK	-
00-D2-F0-80-3B-C2	PHILADELPHIA	-

- Currently SETs values via NMS
- Reliance on NMS for troubleshooting activities is exposure
- Need control protocol to register/deregister Maintenance Point

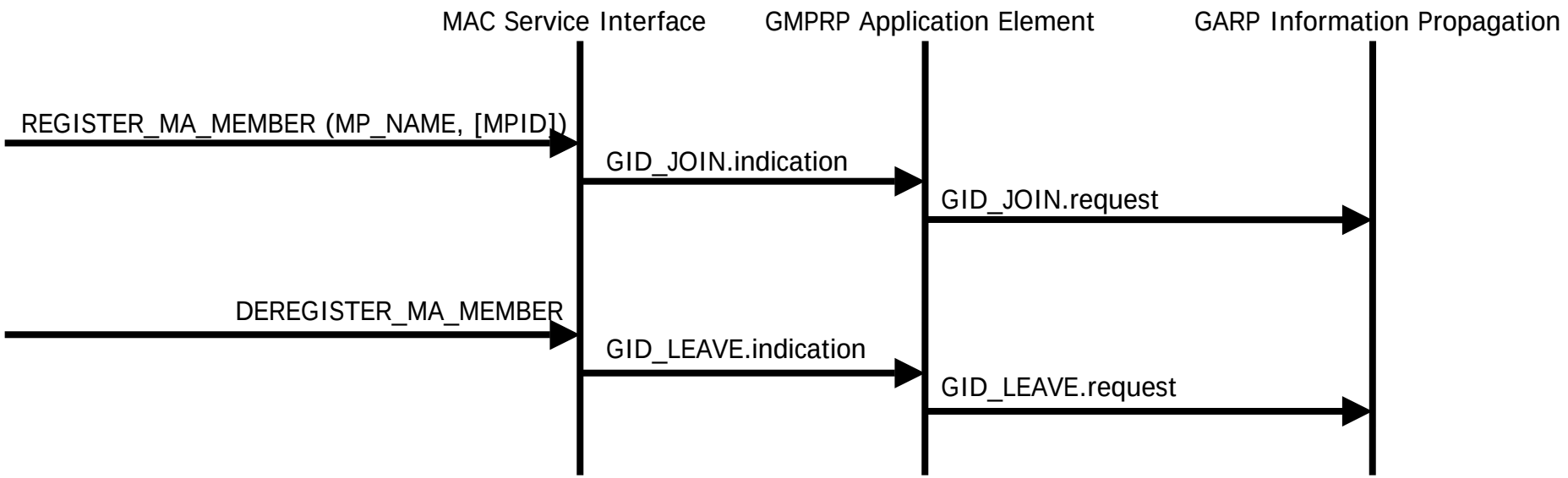
A Job for GARP?

- GVRP: Register a MAC for VLAN membership.
- GMRP: Register a MAC for Multicast Group membership.
- GMPRP: Register a MAC/VLAN (Maintenance Point) for Maintenance Association membership.
- "The Generic Attribute Registration Protocol allows participants in a GARP Application to register attributes with other participants in a Bridged Local Area Network. The definition of attribute types, their values, and the semantics associated with values when registered, are specific to each GARP Application."

GARP Suitability

- Applications where it is desirable to form “reachability” trees are generally good candidates for the use of GARP. For example, if the attribute in Figure 12-3 is a Group MAC Address that carries the semantics “I wish to receive details of the final score in the Superbowl,” and it is deemed desirable for those results to be sent only to the subset of the active topology that contains end stations that have declared that attribute, then an end station that has these results available could use the presence or absence of a registration as an indication of whether or not to send the results on the LAN to which it is attached, and any Bridge receiving the results could determine on which Ports the results should be forwarded.
- Maintenance Point attributes need only be distributed to members.
  - Difference is filtering on control messages instead of data frames

Any Reason Not to Use GARP?



☞Are there technical reasons not to use GARP?