Local Grant Identification for EPOC TDD (baseline proposal amendment)

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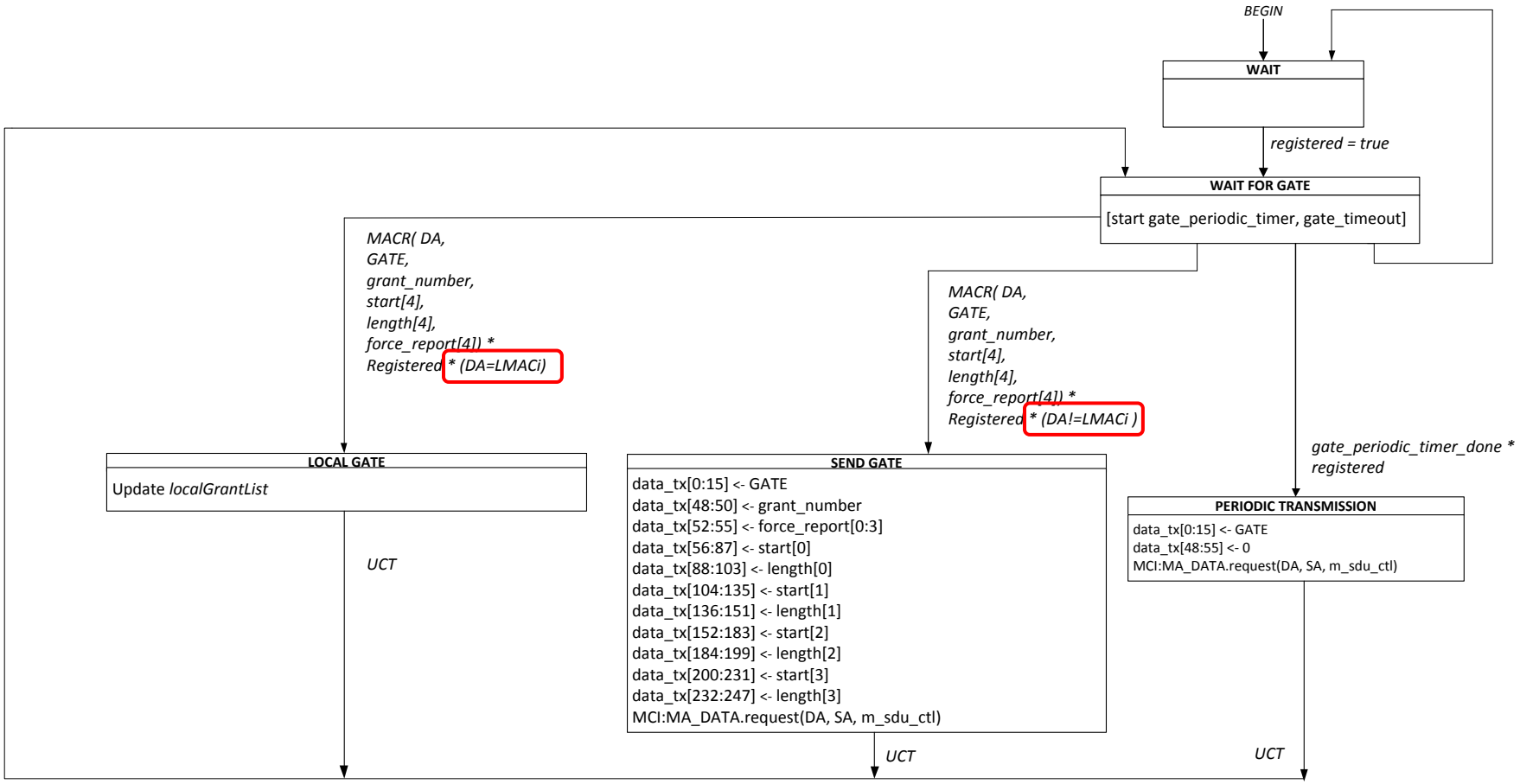
Introduction

- During the last IEEE 802.3bn meeting, a baseline for EPoC TDD was approved by the Task Force (garavaglia_3bn_02a_0313 – [1])
- During the discussion, comments were given about the way the Local Grant introduced by the proposal for the downstream side is identified
  - The current proposal uses the Destination Address field (DA) to discriminate between CLT and CNUs – see next slide
- In this presentation we address the comment and revise the proposal

Gate processing in CLT for local (TDD) grant



In the current design, the DA is used to identify a Local Grant from a CNU Grant (see red boxes above).

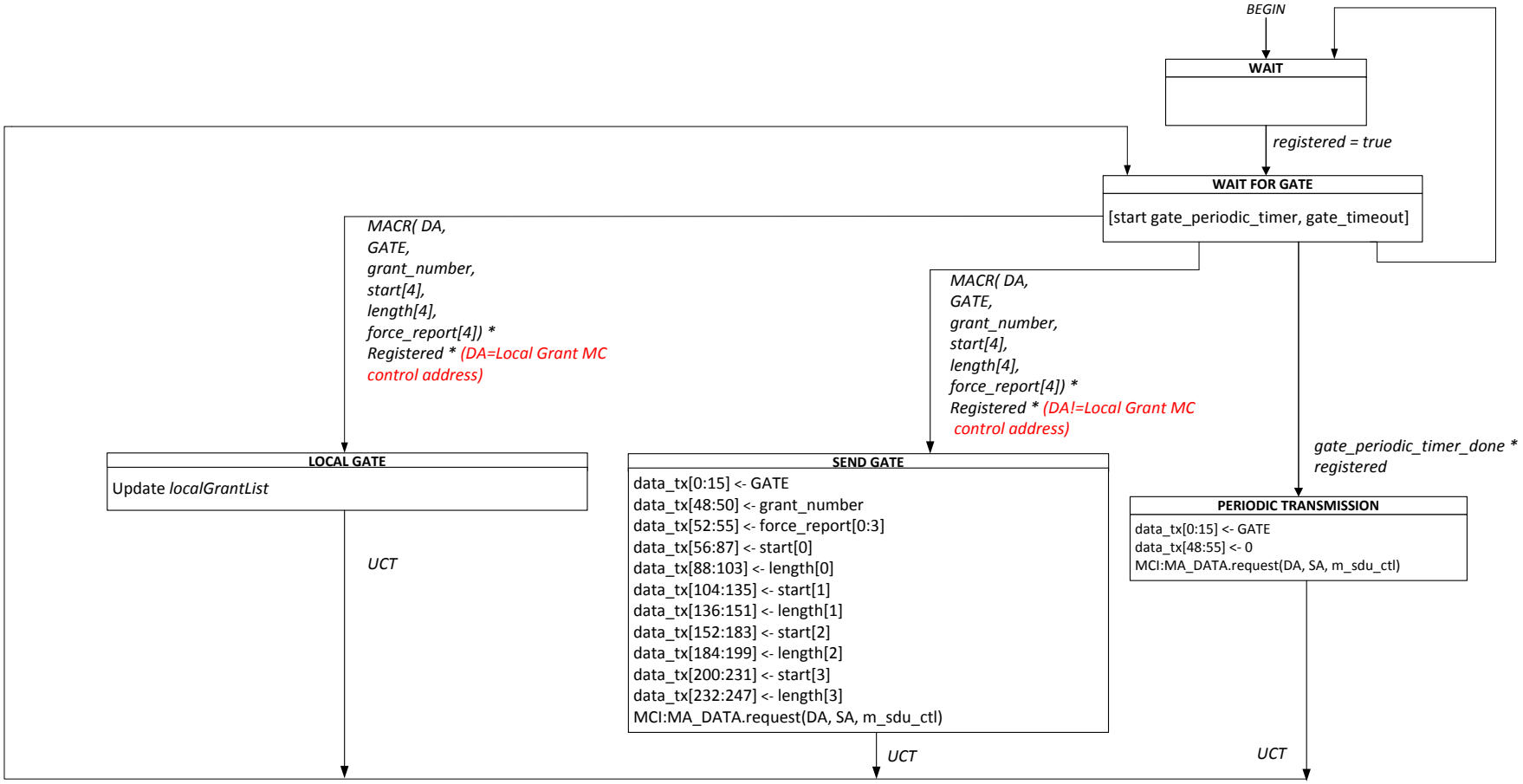
Comment: the Destination Address (DA) for non-discovery GATE in the *MA_CONTROL.request* primitive is defined in IEEE 802.3 Clause 77.3.3.5 as “Multicast MAC Control address as defined in Annex 31B”.

Comment Resolution proposals

Two possible solutions are identified:

1. Definition of a new MAC control address for local grant
   - E.g. similar to the MAC control multicast address 01-80-C2-00-00-01.
2. Definition of a new primitive
   - Extend Gate *MA_CONTROL.request* primitive for local grant gating

Solution #1: definition of a new MAC control address



Definition of new MAC control multicast address (e.g. 01-80-C2-00-00-02) and extension of the *MA_CONTROL.request* primitive

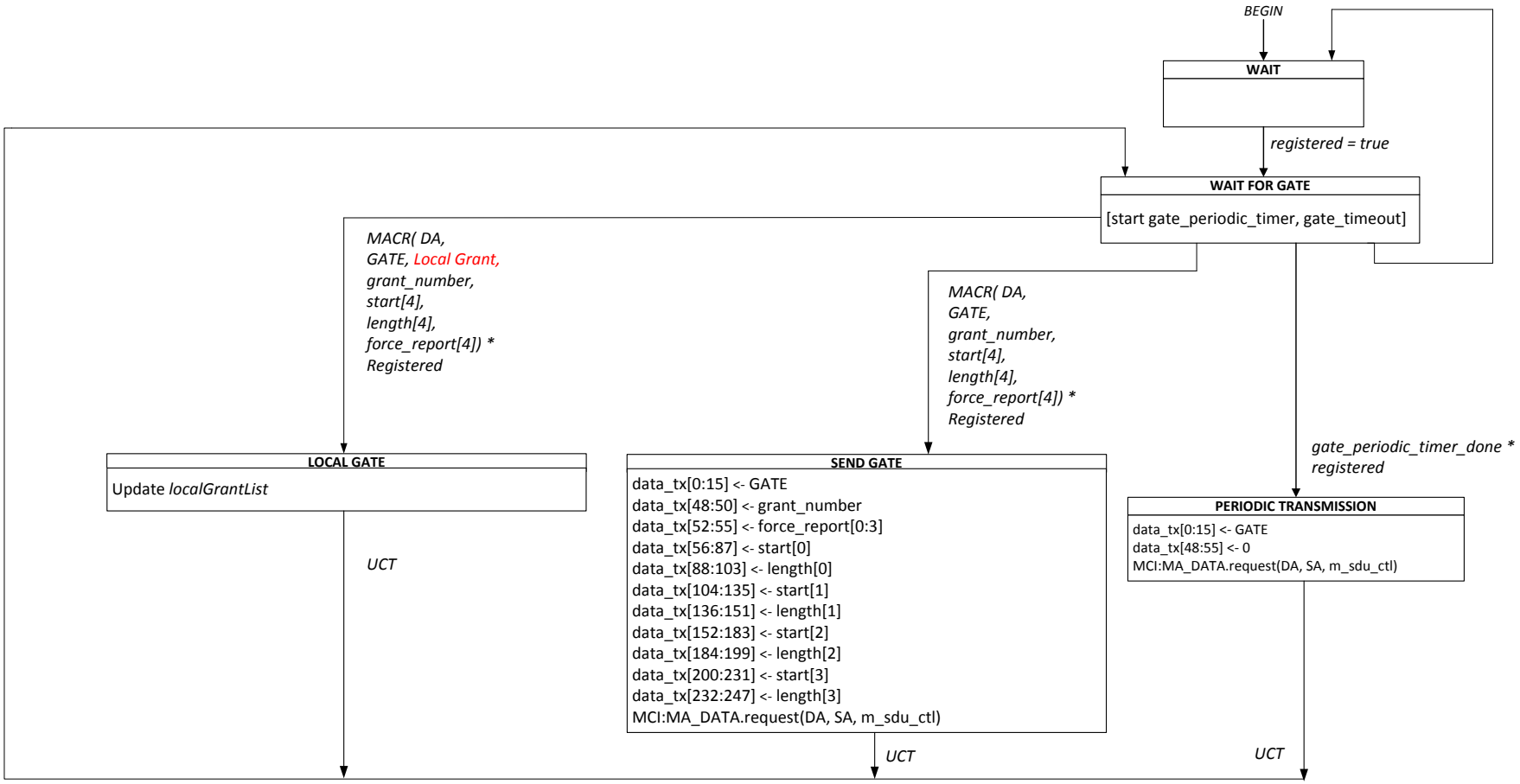
Solution #1: required changes to TDD MPCP clause

MA_CONTROL.request (DA, GATE, grant_number, start[4], length[4], force_report[4]). This service primitive is used by the MAC Control client at the CLT to issue the GATE message to an CNU and to issue local grants for downstream transmission in TDD mode.

This primitive takes the following parameters:

- DA: Multicast MAC Control address as defined in Annex 31B (if the primitive is used to issue the GATE message) or Multicast MAC Control address as defined in XX (if the primitive is used to issue the local grant GATE)
- GATE: Opcode for GATE MPCPDU as defined in Table 31A–1.
- grant_number: Number of grants issued with this GATE message. The number of grants ranges from 0 to 4.
- start[4]: Start times of the individual grants. Only the first grant_number elements of the array are used.
- length[4]: Lengths of the individual grants. Only the first grant_number elements of the array are used.
- force_report[4]: Flags indicating whether a REPORT message should be generated in the corresponding grant. Only the first grant_number elements of the array are used.

Solution #2: Definition of a new primitive



New primitive for local grant is defined in a similar way as discovery gate primitive

Note: the state machine for local grant *MA_CONTROL.request* service primitive may be defined separately

Solution #2: required changes to TDD MPCP clause

MA_CONTROL.request(DA, GATE , local_grant, grant_number, start[4], length[4]). This service primitive is used by the MAC Control client at the CLT to issue local grants for downstream transmission in TDD mode.

This primitive takes the following parameters:

- DA: Multicast MAC Control address as defined in Annex 31B
- GATE: Opcode for GATE MPCPDU as defined in Table 31A–1.
- Local_grant: flag specifying that the given GATE message is to be used for local grant only
- grant_number: Number of grants issued with this GATE message. The number of grants ranges from 0 to 4.
- start[4]: Start times of the individual grants. Only the first grant_number elements of the array are used.
- length[4]: Lengths of the individual grants. Only the first grant_number elements of the array are used.

Straw Poll

- In order to address the comment about identification of the local grant for EPoC TDD approved baseline, what solution do you prefer?

- Solution 1:
- Solution 2:
- Undecided:

References

[1] **garavaglia_3bn_02a_0313**: “Multipoint MAC Control for EPoC – TDD Mode” – Andrea Garavaglia and Patrick Stupar (Qualcomm)