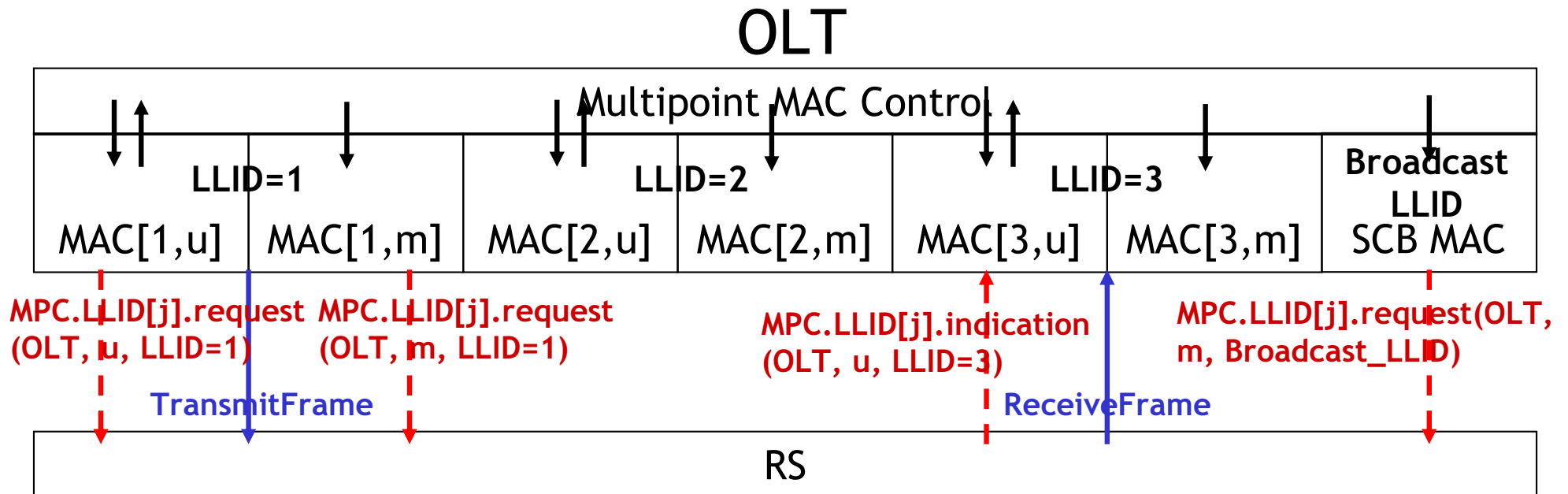# Multiple MAC and LLID mapping in P2MP
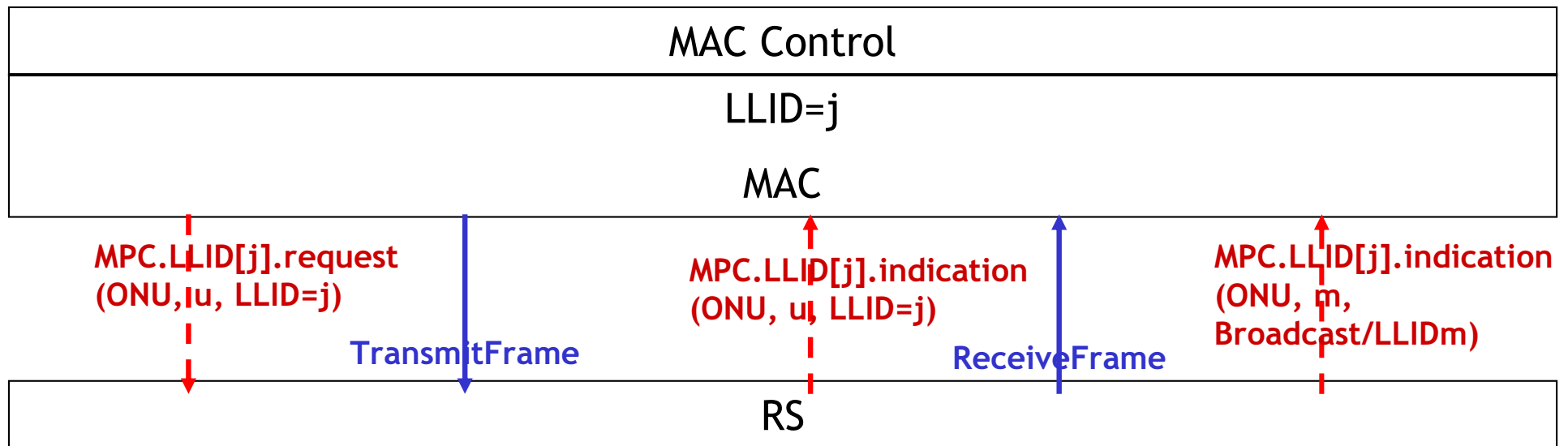

MPC.LLID[j].indication(type, mode, LLID) for OLT

- Type – OLT or ONU
- Mode – unicast, multicast
- LLID – source LLID

Multiple MAC and LLID mapping in P2MP

ONU

MAC Control
LLID=j
MAC

MPC.LLID[j].request
(ONU, u, LLID=j)

TransmitFrame

MPC.LLID[j].indication
(ONU, u, LLID=j)

ReceiveFrame

MPC.LLID[j].indication
(ONU, m,
Broadcast/LLIDm)

RS

MPC.LLID[j].indication(type, mode, LLID) for ONU

- Type – OLT or ONU
- Mode – unicast, multicast
- LLID – destination LLID

Multiple MAC and LLID mapping in P2MP

- At the OLT, the rules for setting the mode and LLID parameters:

  a) External Broadcast frame : (mode=1, Broadcast_LLID)

  -> MPC.LLID[7FFF].request(OLT, m, 7FFF)

  b) External Unicast frame to known LLIDn : (mode=0, LLIDn)

  -> MPC.LLID[n].request(OLT, u, LLIDn)

  c) External Unicast frame to unknown LLID : (mode=1, Broadcast_LLID)

  -> MPC.LLID[7FFF].request(OLT, m, 7FFF)

  d) Internal Unicast frame from LLIDn to LLIDm : (mode=0, LLIDm)

  -> MPC.LLID[n].indication(OLT, u, LLIDn) (from RS to MAC)

  -> MPC.LLID[m].request(OLT, u, LLIDm) (from MAC to RS)

  e) Internal Broadcast frame from LLIDn : (mode=1, LLIDn)

  -> MPC.LLID[n].indication(OLT, m, LLIDn)

  -> MPC.LLID[n].request(OLT, m, LLIDn)

  f) Internal Unknown frame from LLIDn : (mode=1, LLIDn)

  -> MPC.LLID[n].indication(OLT, m, LLIDn)

  -> MPC.LLID[n].request(OLT, m, LLIDn)

Multiple MAC and LLID mapping in P2MP

- At the ONU, the rules for setting the mode and LLID parameters:
  - upstream frame : (mode=0, the corresponding_LLID=j)
    -> MPC.LLID[j].request(ONU, m, LLID=j)

- At the ONU, the rules for filtering incoming frames:
  - (mode=0, the corresponding_LLID=j)
    Internal Unicast frame from LLIDn to LLIDj
  -> MPC.LLID[j].indication(ONU, u, LLID=j)
  - (mode=1, not the corresponding_LLID)
    External Broadcast frame : (mode=1, Broadcast_LLID)
    Internal Broadcast frame from LLIDn : (mode=1, LLIDn)
    External Unicast frame to unknown LLID : (mode=1, Broadcast_LLID)
    Internal Unknown frame from LLIDn : (mode=1, LLIDn)
  -> MPC.LLID[j].indication(ONU, m, LLID=n)
  -> MPC.LLID[j].indication(ONU, m, Broadcast_LLID)

Multiple MAC and LLID mapping in P2MP

- Questions
    - Multicast in 'Multicast MAC' means SCB except the corresponding ONU? If so, DA= Broadcast MAC address or SCB multicast address of EFM defined?
    - We should define MPC.LLID[j].indication primitive
    - We should add primitives into the layer block diagram in Clause 64.