



X.msr Ad-Hoc Report

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Summary of Ad-Hoc

- Review open questions from joint meeting report from January 2003 meeting in Atlanta
 - 12 items
- Determine best way forward to align 802.17 to allow X.msr to be a client layer
- Generate comments on D2.1 or provide explanations on why comments are not needed
- Meet with Dr. Yu tonight to close on all details



Issue-1

- Tributary Multicast can use group addresses for multicast and broadcast. 802.17 to determine if the standard has to define a primitive to support the setting/delete of a GA in the MAC or whether this is an implementation detail.
- Resolution: This is an implementation option beyond the scope of RPR. 802 MACs do not provide group address filters.



Issue-2



- Topology Database Interaction MA_CONTROL.indicate is a sufficient protection trigger to X.msr as it delivers a new database on topology changes. Request for a method to get the database from the MAC on client demand. 802.17 to determine best method for achieving this (MA_CONTROL.request or some other method)
- Resolution: Raise a comment against D2.1 to add an opcode to MA_CONTROL.request and MA_CONTROL.indicate called TOPOLOGY_STATUS. When MA_CONTROL.request is invoked with TOPOLOGY_STATUS it causes MA_CONTROL.indicate to return the current topology and status database.



Issue-3

- Tributary Based Protection requires MAC to inform X.msr of a protection events on a period basis.
- Resolution: The draft assumes that all indications are reliable and sent once. The issue of creating a periodic indication (that repeats until acknowledged) is an implementation option beyond the scope of RPR.
 - Raise a comment against D2.1 to add an informative note that recommends this implementation in support of X.msr with a specific example. DVJ will draft the example.



Issue-4



- Broadcast Network - single fiber uni-directional chain or ring may be supported by 802.17 depending on topology/protection mechanisms being disabled. MA_DATA.request is currently specified to allow a packet to be sent with Wrap Disable, Protection Disable, and Steering Disable by explicitly requesting a particular ringlet with no protection. Requires further study to determine if other MAC mechanisms would prevent this request from being fulfilled..
- Issues discussed by the group: Ethernet PHYs are inherently bi-directional, if the incoming light is lost, the transmit laser is shutdown. This is not the case for SONET PHYs. Lack of a topology image means that the MAC cannot transmit any packets. A possible solution is to allow a manual configuration of the database along with an override so that the topology sublayer does not clobber it. Fairness will not work, given the lack of a return path
- Resolution: The group feels that this is a unlikely enough case in terms of deployment and does not justify the work to make the necessary changes to the draft. At most, an informative Annex might be considered.



Issue-5



- Need to provide specification for Manual Protection Switch invocation
- Resolution: PAH asked to determine what interface is used to cause the invocation to occur (Possibilities are LME, MA_control.indicate). However, it is possible that the MIB already covers this, though it is not explained.
- PAH suggests that this be raised as a D2.1 comment for clause 0 to address how configuration commands communicate to the MAC. Manual switch and force switch command shall follow the same interface.
 - John Lemon will submit a comment to propose PAH suggestion.
 - Leon will suggest text to explain MIB usage for this.



Issue-6



- Plug and Play versus Pre-planned. RPR actually does both, Plug and play operation guarantees that topology / protection works automatically. The LME system allows the provisioning of bandwidths to be done.
- Resolution: The resolution of 5 applies here as well, notably that it is covered by the MIB. A consistency check, however, is currently out of scope. Is that what is needed?
 - Raise a comment against D2.1 to define the provisioning of BW and addition of consistency check.
 - David will phrase this comment.



Issue-7



- Need Fairness Algorithm (FA) of MAC to support services of Class B and C.
- Resolution: Given the change in X.msr to support fairness (and not just A0) there is no change required



Issue-8



- Support for both local address and OUI MAC addresses. (MAC address will be sent from MAC layer.)
- Resolution: This is supported, as all MAC address checks are done using the full 48 bits. The setting of the MAC address within the MAC layer is an implementation detail.



Issue-9



- Client needs the following additional opcodes: the supported floodingForm (FF) (bi-directional or uni-directional), pastSource (PS), strictOrder (SO), remote forwarding, single-queue / dual-queue (primary or secondary), various shaper opcodes and chosen center wrap / edge wrap for the data path. The supported fairness algorithm, including each station in proportion to its relative weight, unused bandwidth, single-choke, multi-choke, basic status, variables and parameters of FA. A sub-clause in section 9 (FA) is needed to describe interface to client. The supported topology database and the related opcodes. The supported wrapping status opcodes, path indicator (PI), opcodes of protection message request type (PMRT), basic status, variables and parameters in section 11.



Issue-9



- Clarified issue by Dr. Yu:
 - (a) Client needs to know a floodingForm (FF) is used or not if a packet will be sent from a FIFO. If floodingForm is used, client should know it is bi-directional or uni-directional.
 - (b) To support QoS, client should know that single-queue or dual-queue is used, and in which case client will use single-queue, in which case client will use dual-queue.
 - (c) Many shaper or streams will reach client at the almost same time at the sink side, so sink client needs to know which one is important according to QoS requirement, just like class A or B. So client should have another opcode to reflect Strict or Relaxed, just like strictOrder (SO).
 - (d) The same idea for other opcodes if MAC sub-layer can do.
- Resolution: Raise a comment against D2.1 to add FF to MA_DATA.indicate
- Single/dual queue is transparent to the client and does not affect QOS so does not need to be passed up.
- StrictOrder, ClassesA,B,C and Fairness Eligible are already passed to the client. These are believed to be sufficient for X.msr.



Issue-10



- Annex added to current draft of P802.17?
- Resolution: It was confirmed that none of the changes to the draft are needed to be in an annex and were likely more suited to being part of the existing clauses.



Issue-11



- Add X.85/Y.1321 (IP over SDH using LAPS) as a SONET/SDH Physical Layer and Reconciliation layer. Requires a liason letter to ITU SG17 TSB for a new SAPI value for RPR.
- Resolution: A motion must be made to the WG to adopt X.85. Assuming that the group were to accept this, then Dr. Yu must work with the Editor to create the changes to all affected sections.



Issue-12



- Assignment of Ether-type codes
- Resolution: Dr. David James to contact IEEE 802 RAC and provide some helps for Ether-type public codes assignment of X.msr-rpr.
 - Dr James will contact Dr. Yu to discuss.



Next Steps

- Make decisions on requested changes
- All comments to be pulled out on Thursday for explicit vote
- Motions based on Ad-hoc with Dr. Yu
- Motion on inclusion of X.85