Any switch algorithm will work only if the feedback it generates reaches the sources. The network may set the ACR of ABR sources to MCR (which may be zero) if VBR sources occupy the available bandwidth. In this situation, no RM cells are sent in-rate in the forward or in the reverse direction. The only way to get out of this situation is for the sources to send out-of-rate (OOR) RM cells. Although the TM document describes this use of OOR RM cells, it is a general belief that OOR RM cells are optional, which they are not since there is no other mechanism to get out of this state. Trm is ineffective for ACR=0. It only applies for low non-zero ACR.

If OOR cells are mandatory, then there are multiple possibilities for sending them at 10 cells per second per VC (controlled by the TCR
parameter). It is not clear whether these RM cells have to be equally spaced and if not how is this rate measured. For example, is "100 RM cells every 10 second" a compliant behavior?

At one point the TM document also states that the minimum ACR is 1 cell per second but this point is not included in the source behavior. Even if it was stated, one cell per second would be too slow for most situations where transient VBR overload can frequently cause ABR to be zero (or close to zero).

In addition, we have observed the following inconsistencies between the TM document text and the pseudo code:

1) The OOR Backward RM (BRM) cells are not controlled to 10 cells/s (tcr).

2) When ACR < TCR, no data or in-rate BRM cells are allowed. Only OOR FRMs are continuously sent.

3) ACR is not reset to ICR after idle periods (data-in-queue = 0). The source behavior section does not say anything about idle periods but there are statements elsewhere to this effect.

4) SES rule 3a) should read:

The next in-rate cell shall be a forward RM-cell if and only if, since the last in-rate forward RM-cell was sent

i) either at least Mrm in-rate cells have been sent and at least Trm seconds have elapsed

OR

ii) Nrm - 1 in-rate cells have been sent.

We present alternatives and simulation results in our presentation.