Table 9.4—Congestion detection and local fair rate calculation (conservative) state table

Current state		Row	Next state	
state	**condition**		**action**	**state**
INIT		1	initializeVariables()	UNCG

UNCG	agingIntervalExpired && isCongested()	2	localFairRate = (unreservedRate / activeWeights) * localWeight;
			normLocalFairRate = localFairRate / NORMCOEF;
			localCongested = TRUE;
			allowedRate = min(unreservedRate,localFairRate);
			resetRTTCounter();
			setAllowedRateCongested (rcvdFairRate);
			agingIntervalUpdate();
				CGST

	agingIntervalExpired	3	allowedRate += (MAX_ALLOWED_RATE - allowedRate) / RAMPCOEF;
			setAllowedRateCongested (rcvdFairRate);
			agingIntervalUpdate();
				UNCG

Table 9.4—Congestion detection and local fair rate calculation (conservative) state table

Current state		Row	Next state	
state	**condition**		**action**	**state**

CGST	agingIntervalExpired && ((localFairRate/localWeight) >= unreservedRate)	4	localFairRate = unreservedRate;
			localCongested = FALSE;
			normLocalFairRate = localFairRate / NORMCOEF;
			allowedRate += (MAX_ALLOWED_RATE - allowedRate) / RAMPCOEF;
			setAllowedRateCongested (rcvdFairRate);
			agingIntervalUpdate();
				UNCG

	agingIntervalExpired && ((dualQueueMAC&& (STQDepth > STQMediumThreshold)) || (singleQueueMAC && (addRate+fwdRate > rateHighThreshold))) && RTTWorthOfIntervalsHavePassed	5	localFairRatelowerbound = ((lpaddRate+lpfwRate)/activeWeights)*localWeight[a]
			localFairRate = max(localFairRatelowerbound, localFairRate - localFairRate / RAMPCOEF);
			normLocalFairRate = localFairRate / NORMCOEF;
			allowedRate = min(unreservedRate,localFairRate);
			resetRTTCounter();
			setAllowedRateCongested (rcvdFairRate);
			agingIntervalUpdate();
				CGST

	agingIntervalExpired && ((dualQueueMAC&& (STQDepth < STQLowThreshold)) || (singleQueueMAC && (addRate+fwdRate < rateLowThreshold))) && RTTWorthOfIntervalsHavePassed	6	localFairRate = localFairRate + (localWeight*(unreservedRate - lpAddRate - lpFwRate)) / RAMPCOEF);
			normLocalFairRate = localFairRate / NORMCOEF;
			allowedRate = min(unreservedRate,localFairRate);
			resetRTTCounter();
			setAllowedRateCongested (rcvdFairRate);
			agingIntervalUpdate();
				CGST

	agingIntervalExpired	7	if (STQDepth > STQHighThreshold) && (lpAddRate < (lpFwRate / activeWeights)) then localFairRate = min (localFairRate, {((lpaddRate+lpfwRate)/activeWeights) *localWeight})
			allowedRate = min(unreservedRate,localFairRate);
			setAllowedRateCongested (rcvdFairRate);
			agingIntervalUpdate();
				CGST

[a]In Row 5 and Row 7, Implementations that are cost-sensitive, and as a result do not wish to estimate the activeWeights may choose to replace the term: {((lpaddRate+lpfwRate)/activeWeights)*localWeight} by the term: (lpaddRate). This may result in some performance degradation.