

MODULE *AdaptiveBFT\_MainFlow*

EXTENDS *AdaptiveBFT*

Figure-A artifact: high-level *AdaptiveBFT* state-machine excerpt. This module aliases the main transition families used in the full spec.

*M1\_InjectAndValidate*  $\triangleq$

$\vee$  *InjectTxStep*

$\vee$  *PreValidateStep*

$\vee$  *AgeTxStep*

*M2\_APSControlLoop*  $\triangleq$

$\vee$  *DetectAnomaly*

$\vee$  *SampleGrid*

$\vee$  *EstimateGrid*

$\vee$  *ExploreGrid*

$\vee$  *DeployConfig*

*M3\_ConsensusPipeline*  $\triangleq$

$\vee$  *PreOrder*

$\vee$  *GenerateTentativeProposal*

$\vee$  *RecoverFullProposal*

$\vee$  *PrepareVoteStep*

$\vee$  *PrepareQC*

$\vee$  *PreCommitVoteStep*

$\vee$  *PreCommitQC*

$\vee$  *CommitVoteStep*

$\vee$  *DecideBlock*

*M4\_AVCAAndRVS*  $\triangleq$

$\vee$  *Tick*

$\vee$  *CastTimeoutVoteStep*

$\vee$  *StartViewChange*

$\vee$  *BroadcastNP*

$\vee$  *ConfirmNewPrimaryStep*

$\vee$  *BroadcastSyn*

$\vee$  *SendSynAckStep*

$\vee$  *CompleteViewChange*

*MainFlowNext*  $\triangleq$

$\vee$  *M1\_InjectAndValidate*

$\vee$  *M2\_APSControlLoop*

$\vee$  *M3\_ConsensusPipeline*

$\vee$  *M4\_AVCAAndRVS*