

coverage scheduling [15], [16], [9] are extensively studied in the literature. eTrack differs from them in that it (i) provides adaptive coverage, (ii) addresses the problem of meeting the coverage requirements for multiple events simultaneously with the limited resources of clusters, (iii) approximates the cover-

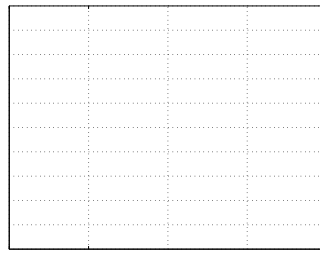
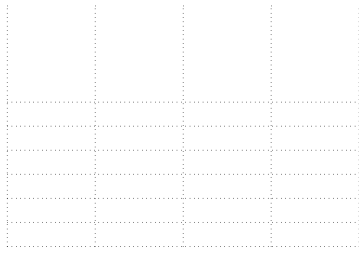
a mixing region. Within the context of a mixing region, the tracking error depends on how accurate the target identities are determined at exit points. In particular for the m^{th} mixing region, the entries of the output matrix $G^{(m+1)}$ represent the *estimates* for the identities of targets at the exit points of the MR. The *actual* target identities at exit points, however, are defined by the entries of the input matrix b . The tracking error

Algorithm Trail Based Belief Assignment (Im-
plementing at its entry points and

by the cluster-head for each MR)

e:





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(a) eTrack provides the miss-ratios of multiple events as required if there are sufficient network resources. Otherwise, the achievable event miss-ratios are relaxed in proportion with the required event miss-ratios to ensure fairness among multiple events.