input : Tracks updated using component update algorithm, marginal probability estimates $\tilde{p}^i(a)$.

output: Re-formed, single hypothesis tracks, each comprising existence probability $r^i_{t|t}$, state estimate $\bar{x}^i_{t|t}$, and covariance $\mathbf{P}^i_{t|t}$.

Form continuing tracks

for $i \in \{1, \ldots, n_{t|t-1}\}$ **do**

  $r^i_{t|t} := \sum_{j=0}^{m_t} \tilde{p}^i(j) r^{i,j}_{t|t}$

  $\bar{x}^i_{t|t} := \frac{1}{r^i_{t|t}} \sum_{j=0}^{m_t} \tilde{p}^i(j) r^{i,j}_{t|t} \bar{x}^{i,j}_{t|t}$

  $\mathbf{P}^i_{t|t} :=$
  $\frac{1}{r^i_{t|t}} \sum_{j=0}^{m_t} \tilde{p}^i(j) r^{i,j}_{t|t} [\mathbf{P}^{i,j}_{t|t} + (\bar{x}^{i,j}_{t|t} - \bar{x}^i_{t|t})(\bar{x}^{i,j}_{t|t} - \bar{x}^i_{t|t})^T]$

end

Form new tracks (already single hypothesis)

for $i \in \{n_{t|t-1} + 1, \ldots, n_{t|t}\}$ **do**

  $r^i_{t|t} := \tilde{p}^i(1) r^{i,1}_{t|t}$; $\bar{x}^i_{t|t} := \bar{x}^{i,1}_{t|t}$; $\mathbf{P}^i_{t|t} := \mathbf{P}^{i,1}_{t|t}$

end