

Symbol	Meaning
\mathbb{Z}	The raw data matrix from RFID readers
\mathcal{S}	The sample set
\vec{C}	The current sample in the Markov chain
\vec{P}	The proposal sample in the Markov chain
C_j	The j^{th} dimension of \vec{C}
P_j	The j^{th} dimension of \vec{P}
E	The number of effective samples
B	The number of samples in the burn-in phase
S	The step length for the uniform proposal distribution
D_{object}	The total number of monitored objects
D_{zone}	The total number of zones
$Jitter$	A random number between 0 and 1
$Rand(a, b)$	Generate a random integer between a and b based on uniform distribution
$Post(\hat{H} \mathbb{Z})$	The posterior probability of the sample \hat{H} given raw data \mathbb{Z}