Algorithm 1 Mobility Pattern Generating

Description:

Phase 1 — Building calculating structure

Construct a parsing tree used for calculating the probability

\[ f(r_i^k) = Pr(r_{i+k-1}^k | r_i^{k-1}) \] (\( i, k \in N \)) following LZ78 algorithm

Phase 2 — Generating patterns

0: \( P = \emptyset \)
1: For every current road \( r_c \)
2: For \( k : 0 \) to \( K-1 \) do
3: Form possible patterns \( r_{c-k}^k r_c \rightarrow r_{c+1} \) satisfying \( r_l \in Adj(r_{l+1}), \ (c-k < l < c) \)
4: If \( f(r_{c+1}) = Pr(r_{c+1} | r_{c-k}^k r_c) \geq \sigma \)
5: \( P = P \cup (r_{c-k}^k r_c \rightarrow r_{c+1}) \)
6: End If
7: End For
8: End For