Moving-Target TSP in two-orthogonal-axes

Pseudocode-BF

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Algorithmus 1 Brute-Force-Algorithmus für zwei-orthogonale Achsen beim MT-TSP

Input: Targets Z, pursuer

Output: Targets Z Targets Z in order of nondecreasing intercepting time

Sort Z in order of nonincreasing absolute values of the respective velocities

Let $currentTargets$ be the current target order (partial permutation)

Let t be the time-array, which represents the intercepting time for each
    target $z_i \in currentTargets$

$\tau_{min} \leftarrow \infty$

$current \leftarrow z_0$

$prev \leftarrow origin$, which is determined by the start position of the pursuer

while there are possible permutations remaining **do**
    $current \leftarrow$ the target just intercepted
    $prev \leftarrow$ the target previously intercepted
    $t[current] \leftarrow t[prev] + \pi[prev \rightarrow current]$
    if $t[current] \geq \tau_{min}$ or at least one target of $Z \backslash currentTargets$ is located
    between $current$ and $prev$ **then**
        Step back and follow the next possible permutation-path
    else
        if $currentTargets$.length $\neq Z$.length **then**
            Choose the next target z_i, $z_i \notin currentTargets$
        else
            $t[current] \leftarrow t[current] + \pi[current \rightarrow ursprung]$
            if $t[current] < \tau_{min}$ **then**
                $\tau_{min} \leftarrow t[current]$
                Step back and follow the next possible permutation-path
            end if
        end if
    end if
end while