

Algorithm 1: Handover adaption

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for  $i \leftarrow 1$  to  $\text{length}(\text{trajectory})$  do Adaption loop
    allowedSpeed = MaxSpeed(trajectory[i]);
    c = trajectory[i];
    p = trajectory[i-1];
    n = trajectory[i+1];
    /*speed overrun*/
    if  $\text{Speed}(c) \geq 1.7 * \text{allowedSpeed}$  then
        cDist = Distance(c);
        pDist = Distance(p);
        nDist = Distance(n);
        nominalDist = allowedSpeed * Duration(c);
        SetSpeed(c, allowedSpeed);
        if  $p == \text{NULL} \ \&\& \ n \neq \text{NULL}$  then
            pDist = pDist + (cDist - nominalDist);
            SetSpeed(p, pDist / Duration(p));
        else if  $p \neq \text{NULL} \ \&\& \ n == \text{NULL}$  then
            nDist = nDist + (cDist - nominalDist);
            SetSpeed(n, nDist / Duration(n));
        else
            nTempDist = nDist + (cDist - nominalDist) / 2;
            pTempDist = pDist + (cDist - nominalDist) / 2;
            if  $n\text{TempDist} / \text{Duration}(n) \gg \text{nominalSpeed}$  then
                nTempDist = nDist;
                pTempDist = pDist + (cDist - nominalDist)
            else if  $p\text{TempDist} / \text{Duration}(p) \gg \text{nominalSpeed}$  then
                nTempDist = nDist + (cDist - nominalDist);
                pTempDist = nDist;
            SetSpeed(n, nTempDist / Duration(n));
            SetSpeed(p, pTempDist / Duration(p));
    end
end
```