

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  $p \neq \text{NULL} \ \&\& \ p \neq \text{NULL}$  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
```