

**Algorithm 1:** Handover adaption

```
for  $i \leftarrow 1$  to  $\text{length}(\text{trajectory})$  do Adaption loop
    allowedSpeedi=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  $p == \text{NULL} \&\& n != \text{NULL}$  then
            pDist=pDist+(cDist-nominalDist);
            SetSpeed(prev,pDist/Duration(p));
        else if  $p != \text{NULL} \&\& n != \text{NULL}$  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
```