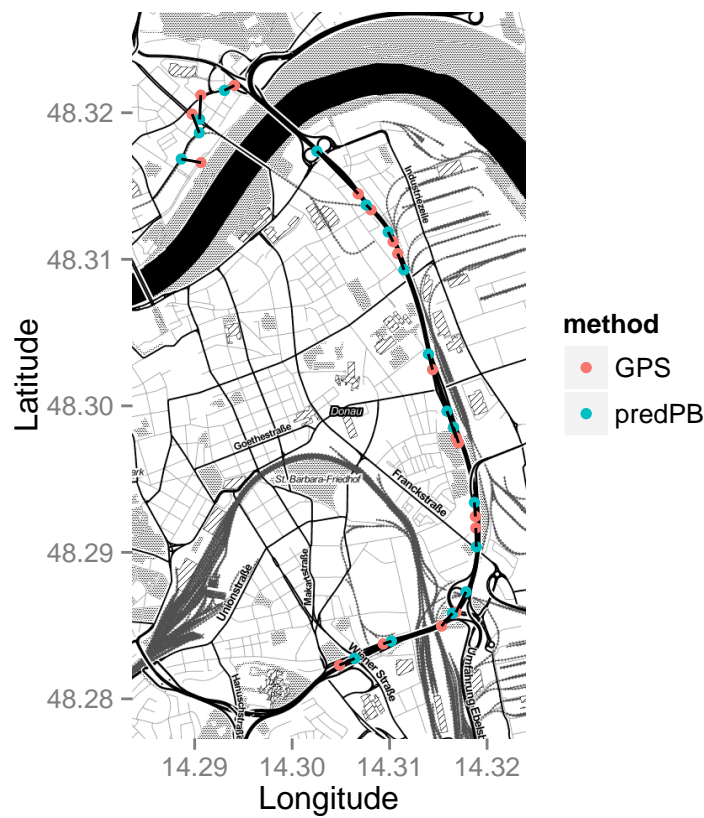# Subscriber 1058

Distance error between observed and predicted handover:
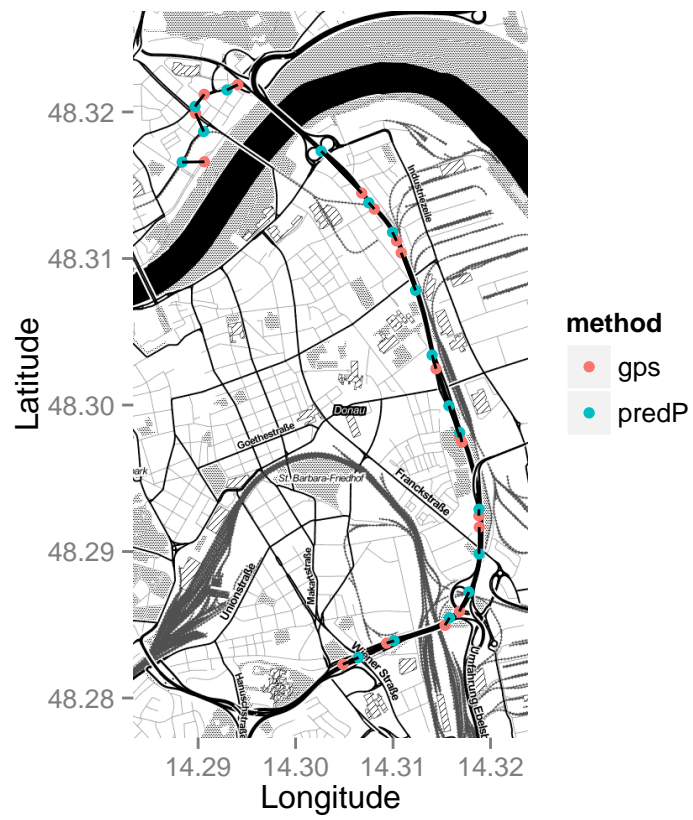
Handover estimation with buildings

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.132   0.260   0.346   0.399   0.524   0.884
```
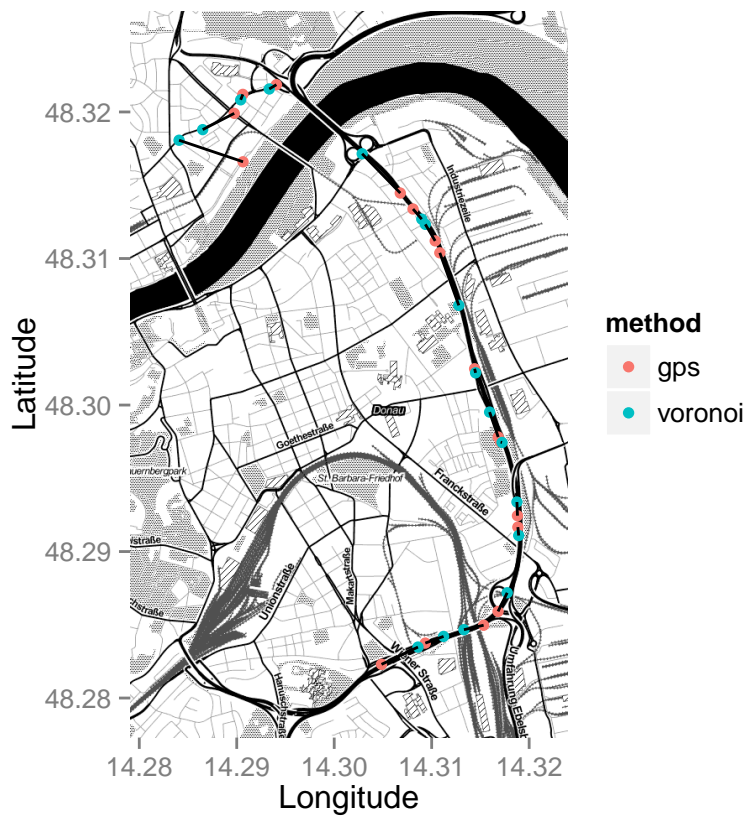

Handover estimation without buildings

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.219   0.286   0.320   0.401   0.483   0.900
```

Handover estimation Voronoi diagrams

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.048   0.229   0.343   0.386   0.482   0.900
```
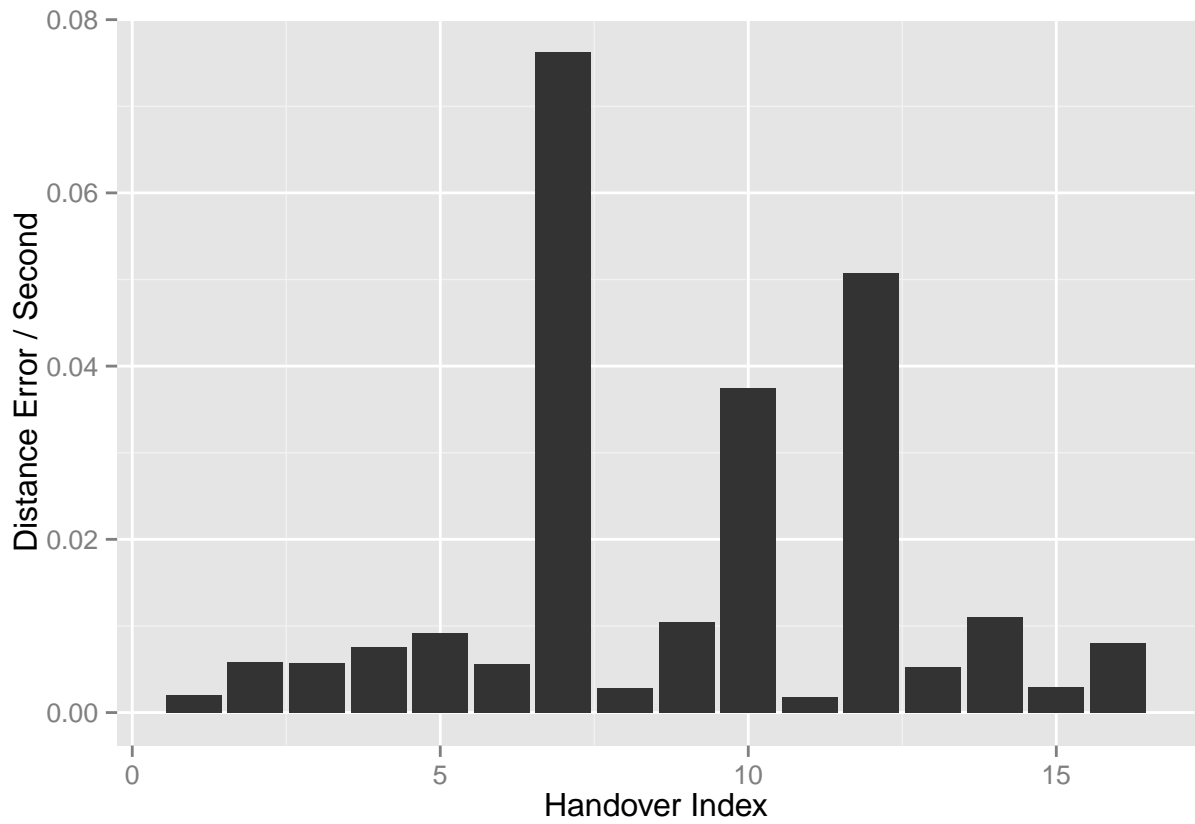
Handover deviation

```
## tikz output
##             2
```

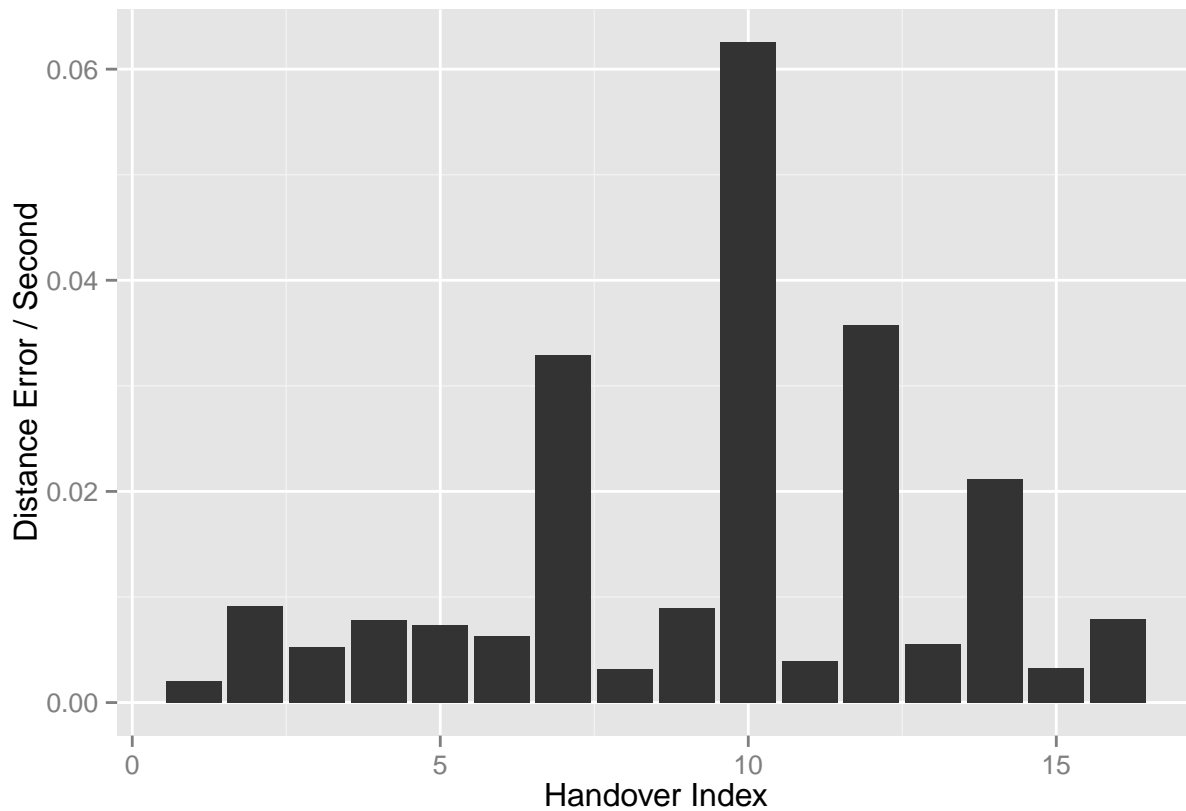## Handover difference prediction without buildings

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.0486  0.0726  0.1160  0.1480  0.1690  0.4420
```

Handover difference prediction with buildings

```
##     Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0516  0.1070  0.1270  0.1460  0.1520  0.4510
```

Handover difference voronoi

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0116  0.0641  0.1480  0.1850  0.2690  0.5120
```

```
## tikz output
##           2
```

Deviation Comparison

```
##      predP            predPB           voronoi
##  Min.   :0.0486   Min.   :0.0516   Min.   :0.0116
##  1st Qu.:0.0726   1st Qu.:0.1068   1st Qu.:0.0641
##  Median :0.1156   Median :0.1268   Median :0.1477
##  Mean   :0.1478   Mean   :0.1463   Mean   :0.1854
##  3rd Qu.:0.1691   3rd Qu.:0.1517   3rd Qu.:0.2692
##  Max.   :0.4417   Max.   :0.4508   Max.   :0.5121
```

Difference between raw and adaption:

Summary of estimated speed without adaption

Coverage prediction without buildings

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    13.6    51.7    73.4   135.0   178.0   427.0
```

Coverage prediction with buildings

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    11.6    60.3    71.2   116.0   146.0   303.0
```

Voronoi diagrams

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     9.4    47.4    52.7   148.0   237.0   598.0
```

```
## tikz output
##              2
```

Speed Comparison

```
##      predP           predPB          voronoi
##  Min.   : 13.6   Min.   : 11.6   Min.   :  9.4
##  1st Qu.: 51.7   1st Qu.: 60.3   1st Qu.: 47.4
##  Median : 73.4   Median : 71.2   Median : 52.7
##  Mean   :135.1   Mean   :115.7   Mean   :147.6
##  3rd Qu.:178.5   3rd Qu.:145.7   3rd Qu.:236.6
##  Max.   :426.9   Max.   :303.0   Max.   :598.5
```

Summary of estimated speed with adaption

Coverage prediction without buildings

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    13.6    66.4    79.9    75.4    80.8   147.0
```

Coverage prediction with buildings

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    11.6    69.7    79.6    74.3    82.9   115.0
```

Voronoi diagrams

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    9.42   60.90   72.60   69.50   80.00  100.00
```

```
## tikz output
##              2
```

Speed Adapt Comparison

```
##    predPAdapt       predPBAdapt      voronoiAdapt
##  Min.   : 13.6   Min.   : 11.6   Min.   :  9.42
##  1st Qu.: 66.4   1st Qu.: 69.8   1st Qu.: 60.87
##  Median : 79.9   Median : 79.6   Median : 72.56
```

```
## Mean   : 75.4   Mean   : 74.3   Mean   : 69.53
## 3rd Qu.: 80.8   3rd Qu.: 82.9   3rd Qu.: 80.00
## Max.   :146.8   Max.   :115.4   Max.   :100.00
```

Summary of speed errors without adaption:

Coverage prediction without buildings

```
##    Min. 1st Qu. Median    Mean 3rd Qu.   Max.
##     0.5     3.9   23.7    81.3    90.1  336.0
```

Coverage prediction with buildings

```
##    Min. 1st Qu. Median    Mean 3rd Qu.   Max.
##    2.05   12.80  22.40   61.00   66.70 226.00
```

Voronoi diagrams

```
##    Min. 1st Qu. Median    Mean 3rd Qu.   Max.
##    10.3    26.0   37.0   114.0   156.0  507.0
```

```
## tikz output
##           2
```

Speed Error Comparison

```
##      predP          predPB         voronoi
## Min.   :  0.5   Min.   :  2.05   Min.   : 10.3
## 1st Qu.:  3.9   1st Qu.: 12.83   1st Qu.: 26.0
## Median : 23.7   Median : 22.43   Median : 37.0
## Mean   : 81.3   Mean   : 60.96   Mean   :114.0
## 3rd Qu.: 90.1   3rd Qu.: 66.69   3rd Qu.:155.8
## Max.   :335.9   Max.   :225.52   Max.   :507.5
```

Summary of speed errors with adaption:

Coverage prediction without buildings

```
##    Min. 1st Qu. Median    Mean 3rd Qu.   Max.
##    0.49    1.03   3.71    8.97   10.20  55.80
```
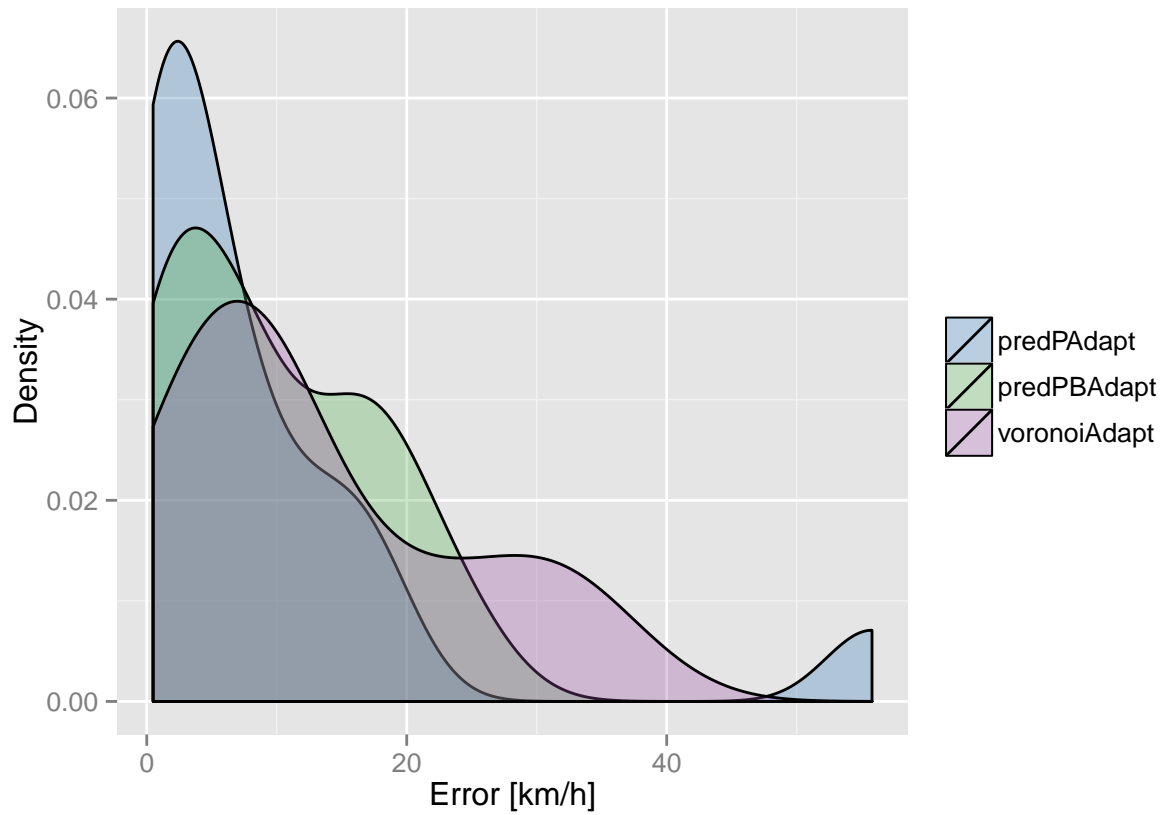
Coverage prediction with buildings

```
##    Min. 1st Qu. Median    Mean 3rd Qu.   Max.
##   0.567   2.520  7.750   9.440  16.300 24.500
```

Voronoi diagrams

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.57    5.79    9.22   13.00   20.40   35.50
```

```
## tikz output
##           2
```


Speed Adapt Error Comparison

```
##    predPAdapt      predPBAdapt       voronoiAdapt
## Min.   : 0.49   Min.   : 0.567   Min.   : 0.57
## 1st Qu.: 1.03   1st Qu.: 2.517   1st Qu.: 5.79
## Median : 3.71   Median : 7.747   Median : 9.22
## Mean   : 8.97   Mean   : 9.436   Mean   :13.03
## 3rd Qu.:10.15   3rd Qu.:16.344   3rd Qu.:20.40
## Max.   :55.79   Max.   :24.450   Max.   :35.47
```