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Freiburg, 13 July 2007
Due until 20 July 2007

Exercises of lecture

Mobile Ad Hoc Networks

Summer 2007

Sheet 12

SECTION 1:
Mobility models

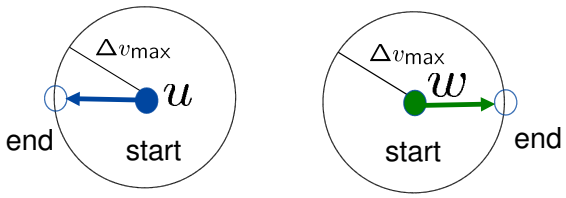

Figure 1: Pedestrian Mobility

1. Let u and w be two pedestrians with a link established between them. Both of them can move at the maximum speed of 2.0 m/s with the aid of a transport mean. The transmission range of their mobile devices are 50 meters.

   (a) Based on V_{max}, explain how can the transmission power be dynamically changed to maintain the link between them.

Table 1: Pedestrian location, with 1 unit: 1 meter

Time	**u(x,y)**	**w(x,y)**
0	(2,2)	(4,3)
2	(1,3)	(5,4)
4	(1,5)	(6,5)
6	(1,7)	(7,6)
8	(1,9)	(8,7)
10	(1,11)	(9,8)

   (b) If the actual position of u and w over 10 seconds are as indicated in Table 1, argue if the method used in the previous question is efficient in terms of energy consumption.