B03901161 電機三 楊耀程

3-1

arrange of cell IDs
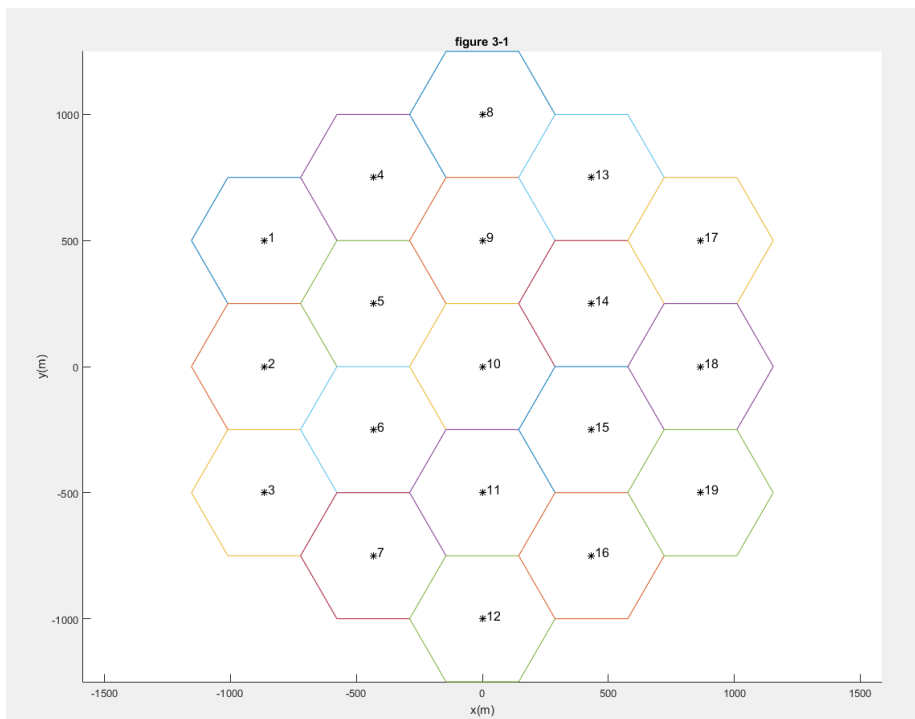
3-2 List of the Handoff Events (complete data in file "3-1.xls")

|	A	B	C
1	time(s)	Source cell	Destination cell
2	42	10	15
3	79	15	14
4	85	14	15
5	88	15	14
6	159	14	10
7	811	10	15
8	829	15	10
9	857	10	15
10	858	15	10
11	867	10	15
12	881	15	10
13	892	10	11
14			

handoff criterion:

Coordinate based. For MS, always choose the nearest BS. For example, if the MS moves from a cell A to another cell B, the MS change connection from BS of cell A to BS of cell B.

3-3 There are 12 handoff events in this simulation. (see the number of rows of data in 3-1.xls)

B-1 arrange of cell IDs

figure B-1
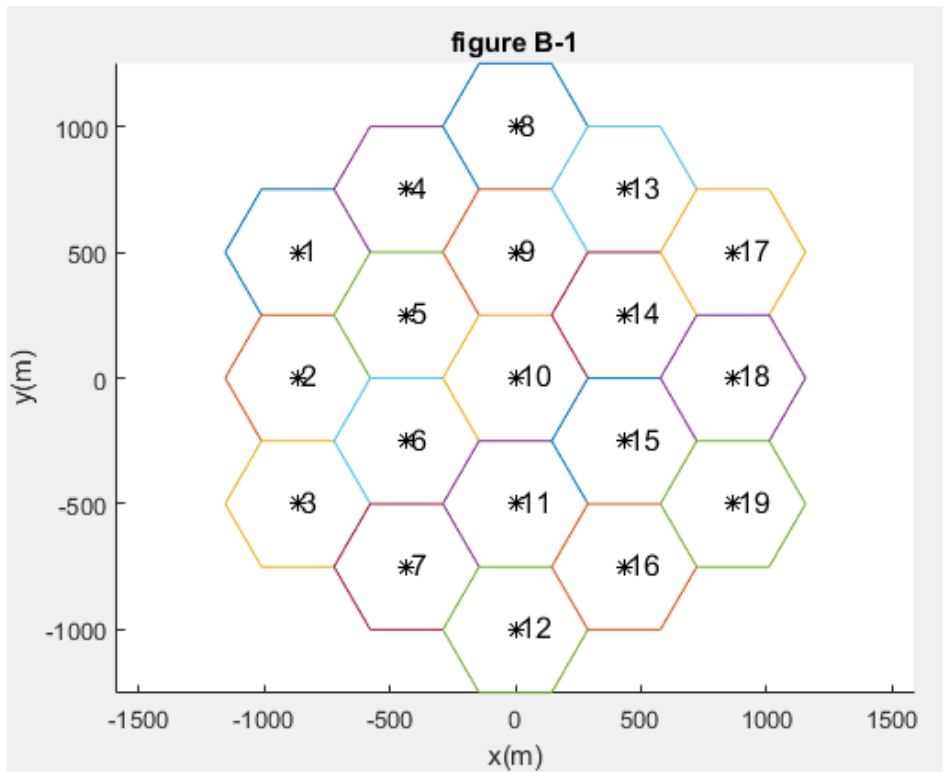
B-2 Initial location of all MS

figure B-2
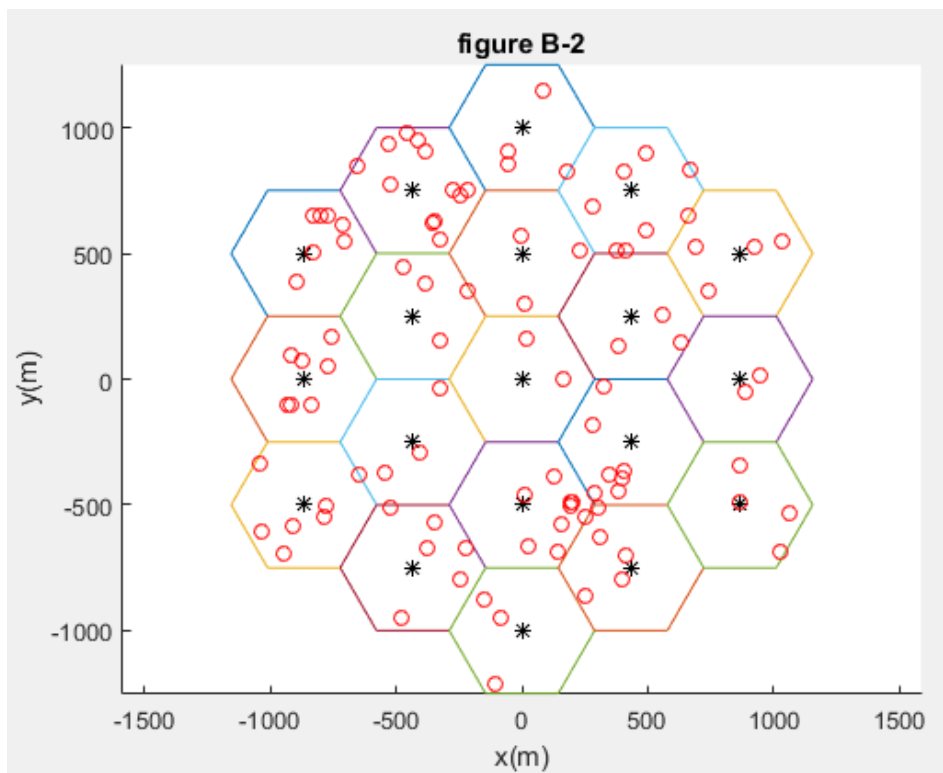
Method to decide the initial location: generate 100 MSs randomly in central cell and shift them to the 19 cells ramdomly.

B-3 List of the Handoff Events (complete data in file "3-b.xls")

time(s)	Source cell	Destination cell
2	1	4
5	4	12
5	15	19
6	15	19
6	15	11
7	12	4
7	15	19
7	3	8
7	13	7
8	10	15
9	13	17
11	3	13
11	15	16
12	4	12
12	4	16
13	16	4
14	19	3
14	8	3
889	17	7
890	4	8
891	8	4
892	12	1
892	5	10
894	13	7
895	1	2
896	8	9
896	16	11
896	2	18
897	1	12
897	8	4
897	1	4
899	12	4
899	18	2
900	7	13

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handoff criterion:

SINR based. First, update the position of MS. Second, Calculate the current SINR for each MS. (knowing the connected BS, we can get SINR). Also calculate the best possible SINR for each MS. (for each MS, calculate SINR with all 19 BSs, and then we can get the largest possible SINR)

1. If the largest possible SINR is larger to current SINR than 10dB, then handoff.

(idea: if the difference between them are big enough(>10dB), handoff should occur.)

2. If the current SINR is too small(<-30dB) and largest possible SINR is larger to current SINR than 3dB, then handoff

(idea: if the SINR is too small, it should try to handoff. As a result, the threshold between largest possible SINR and current SINR decrease from 10dB to 3dB.)

B-4 There are 1696 handoff events in this simulation. (see the number of rows of data in 3-b.xls)