Sinhgad Institutes

Sinhgad Technical Educational Society's
SINHGAD COLLEGE OF ENGINEERING
VADAGAON,PUNE-41

Department of Electronics and Telecommunications

Experiment No. – 06

Subject: - Mobile Computing

Name of the Student: Manas P. Patil **Roll No.** 404B041

Date: 27/2/24 **Marks & Signature: -**

Subject Teacher

Aim: To understand the handover mechanism.

Objectives:

To study the effect of handover threshold and margin on SINR and call drop probability and handover probability

Prerequisite:

Operating System: Windows 7

Java Version: 6 only

Mozilla Firefox: version: 47.0.1

Link to download software:

https://drive.google.com/uc?id=0B9mNeu43jUidckFYVTlnenpJRGs&export=download

Virtual Labs

An MoE Govt of India Initiative

Fading Channels and Mobile Communications Virtual Lab

Intructions for simulator use

Prerequisites

- Your PC/Laptop loaded with Java and JRE 6 or 7 only
- If not there kindly install from ORACLE site
- Add the JAVA path to Environment Variables
  - Java runtime environment is needed (may get from java.com)
  - Install downloaded Java and JRE
  - Right click on My Computer/This PC
  - Select Properties
  - Select Advanced System Settings
  - Select Advanced tab
  - Select Environment Variables
  - Select Path under System Variables
  - Click on Edit button
  - In Variable value editor paste this at the start of the line
  - C:\Program Files\Java\ **"jdk_version"** \bin;
  - Click Ok then Ok again
- Go through the steps below to perform the experiment with simulator.

Prerequisites Steps

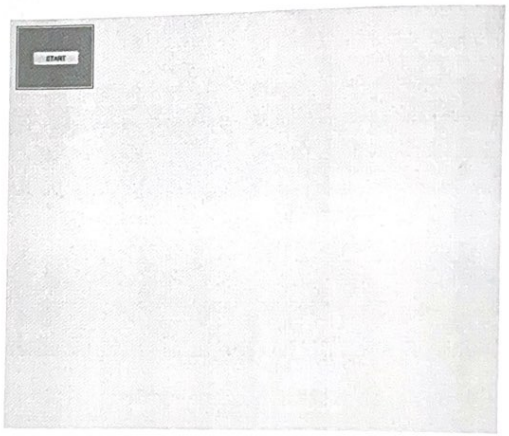
Students conducting the experiment is expected to study the impact of these on h/0. He/She
encouraged to respect the experiment for several sets of values of these parameters these dra
conclusion.

Instruction

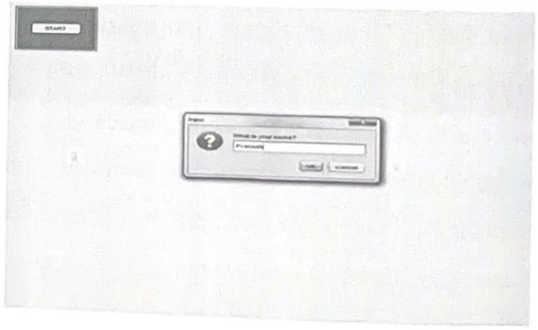
Follow the instructions given below to perform the experiments.

1.1 Starting the Experiments: -

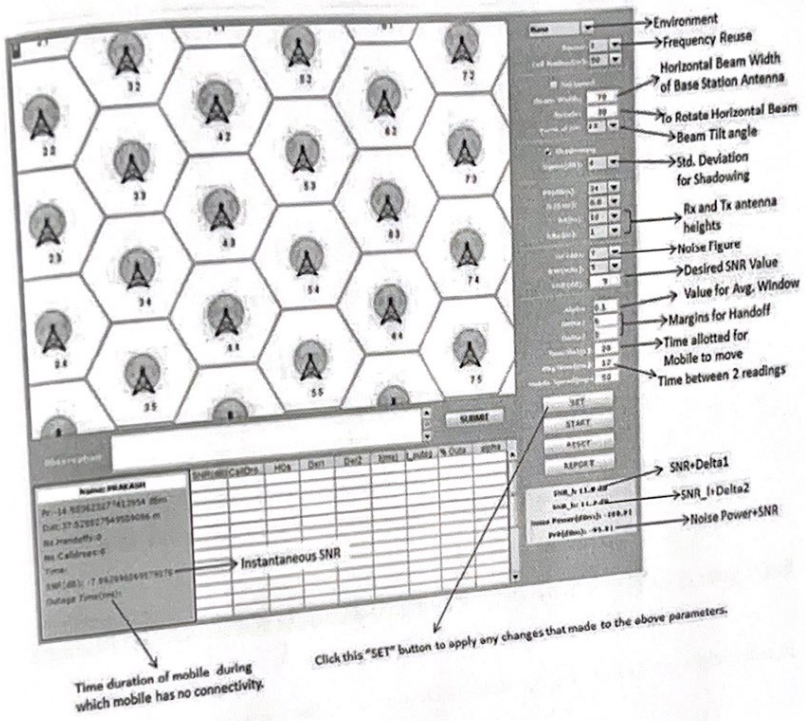
- . Step1: Click on START button to start experiment.



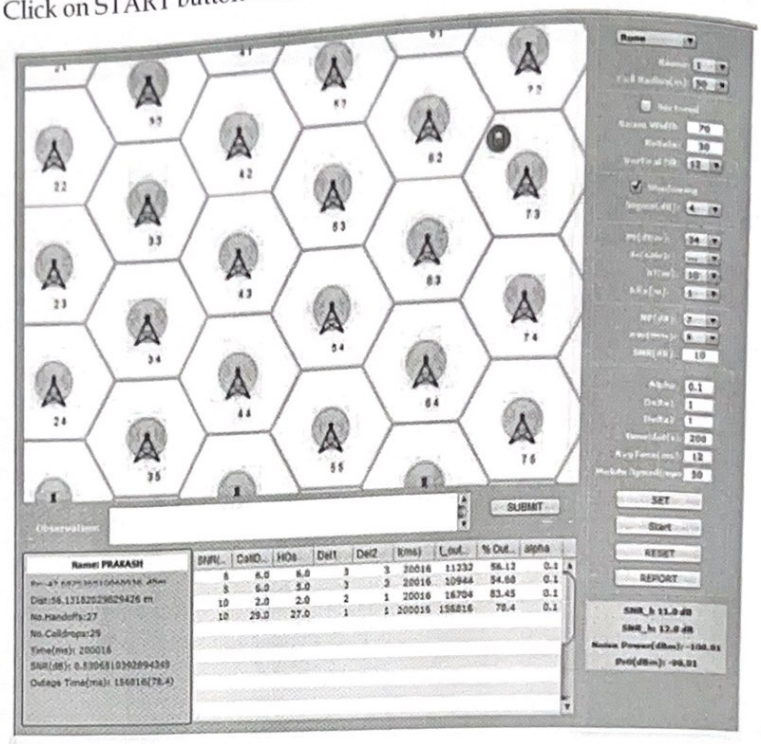
- Step2: Enter your name then click OK button.



Step3: Select the parameters (e.g.: Reuse, Environment, Beamwidth, Carrier frequency etc.)

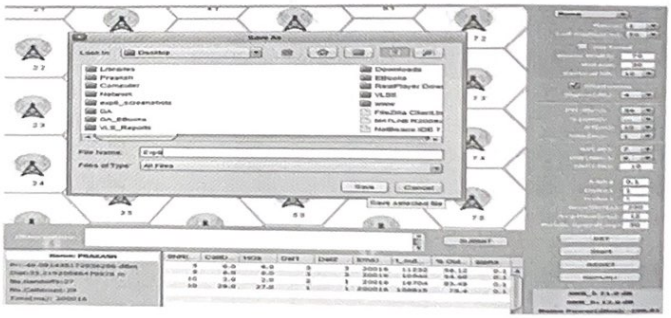


- Step4: Click on START button and observe No. of Call Drops and No. of Handoffs.

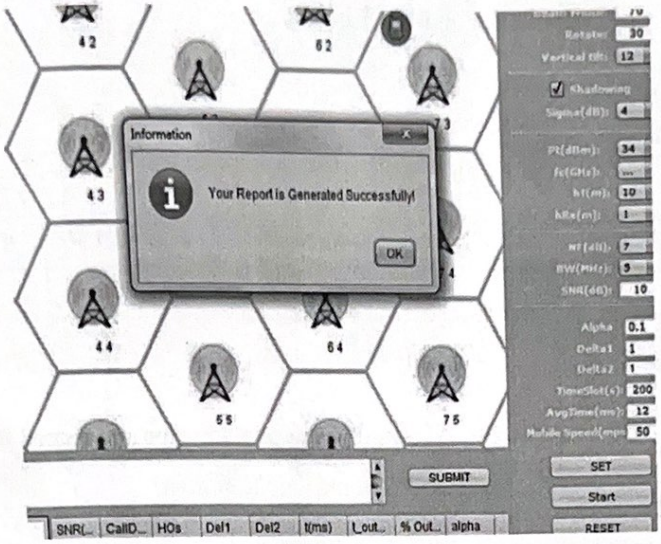


- Step5: Enter your observation in the OBSERVATION box and Click on SUBMIT button.

- Step6: Finally, click on REPORT to generate PDF report of the experiment.



- Step7: After PDF report generation you will get following message.



- Step8: PDF report will appear like this.

Fading Channels &Mobile Communications
IIT Kharagpur
Date: 22/Feb/2013

Exp 8: Handoff
Name: PRAKASH

Input Parameters

Reuse: 1 ,Model: Rure	Pt(dBm): 34
fo(GHz): 0.8	Beam Width(deg): 70
Rotate(deg): 30	Cell Radius(m): 50
hT(m): 10	hM(m): 1
Sigma(dB): 4	Vertical Tilt(deg): 12
SNR(dB): 10	Band Width(MHz): 5
Noise Figure(dB): 7	Noise Power(dBm): -100.01
Pr0(dBm): -90.01	Time Slot(s): 200

Exp. Results

SNR	No.Calldrops	No.Handoffs	Delta1	Delta2	Reading Time(ms)	Outage Time(ms)	% Outage	Alpha
5.0	6.0	6.0	3.0	3.0	20016.0	11232.0	56.12	0.1
5.0	6.0	5.0	3.0	3.0	20016.0	10944.0	54.68	0.1
10.0	2.0	2.0	2.0	1.0	20016.0	16704.0	83.45	0.1
10.0	29.0	27.0	1.0	1.0	200016.0	156816.0	78.4	0.1

Observation

Observation not entered

(Signature of PRAKASH)

(Signature of Faculty)

- Step9: To redo experiment click on RESET button.

Observation Table:

Reuse	No of Hand Off	Mobile Speed	Outage	Outage Percentage
1	1	50	16.4640	8.71
3	1	50	0.00	0.0

Keep reuse ratio 3 and set mobile speed to 50 mps and 100 mps and record the below data. What do we observe after increasing the speed of the mobile station?

Reuse	Mobile Speed	No of Hand off	Outage	Outage Percentage
3	50	30	0.0	0.0
3	100	100	392.0	1.94

FAQ:

1. What is handoff?
2. What is the condition for handoff?
3. Explain Handoff and its types.

Marks (Out of 20)				Signature of Faculty with Date
MR (6)	MP (6)	MU (8)	Total (20)	
3	3	3	9	5/3/24

MR – Marks for Regularity, MP – Marks for Presentation, MU – Marrk for Understanding