ADVANCED COMPUTER NETWORKS
Assignment 5: Mobility

Assigned on: 28th March 2013
Due by: 4th April 2013

Question 1:
List the differences and similarities between UMTS and GSM.

Question 2:
OVSF is an example class of orthogonal codes which can be used for CDMA. Is the following set of codes a proper OVSF code set? If yes, explain why that is. If no, what changes are required to obtain a proper OVSF code set?

- (1, -1)
- (1,-1,-1,1)
- (1,1,1,1,1,1,1,1)
- (1,1,1,1,-1,-1,-1,-1,1,1,1,1,-1,-1,-1,-1)
- (1,1,1,1,-1,-1,-1,-1,-1,-1,-1,-1,1,1,1,1)

Question 3:
What is triangular routing? Why is it a problem in Mobile IP? How is it solved?

Question 4:
What advantages does the use of IPv6 offer for mobility?
Question 5:

List the differences and similarities between Mobile IP and SIP in terms of what they provide for mobility.

Question 6:

The paper *Peer-to-Peer Communication Across Network Address Translators* by Bryan Ford et. al (USENIX’05) discusses hole punching, as one of the most simple and robust NAT traversal techniques. Read the paper and summarize the differences between UDP and TCP hole punching.

Hand In Instructions

This is a paper exercise. Please hand it in during the exercise session or email to your assistants by the due date.