TD3

1. As a mobile node gets farther and farther away from a base station, what are two actions that a base station could take to ensure that the loss probability of a transmitted frame does not increase?

2. Describe the role of the beacon frames in 802.11.

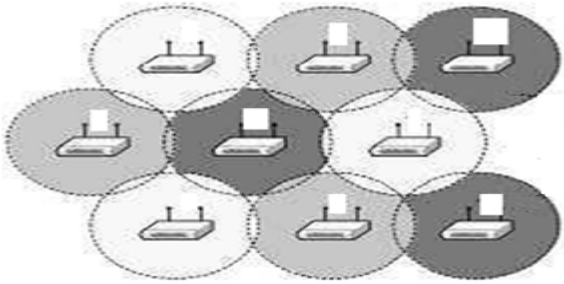
3. True or false: Before an 802.11 station transmits a data frame, it must first send an RTS frame and receive a corresponding CTS frame.

4. Describe how the RTS threshold works.

5. Suppose the IEEE 802.11 RTS and CTS frames were as long as the standard DATA and ACK frames. Would there be any advantage to using the CTS and RTS frames? Why or why not?

6. Supposez que vous avez un réseau 802.11b où les nœuds ont tirés des valeurs aléatoires différentes (backoff). L'ordre d'envoi des trames sera-t-il toujours du nœud ayant tiré la plus petite valeur jusqu'au nœud ayant tiré la plus grande valeur du backoff ?

7. Répartir les canaux 2,7 et 12 sur le réseau sans fils constitue des neuf points d'accès ci-dessous.



8. Suppose there are two ISPs providing WiFi access in a particular café, with each ISP operating its own AP and having its own IP address block.

   a. Further suppose that by accident, each ISP has configured its AP to operate over channel 7. Will the 802.11 protocol completely break down in this situation? Discuss what happens when two stations, each associated with a different ISP, attempt to transmit at the same time.
   b. Now suppose that one AP operates over channel 1 and the other over channel 7. How do your answers change?

9. For IEEE 802.11a, show how the modulation technique and coding rate determine the data rate.