ECE G 364 Wireless and Mobile Networking
Spring 2004

Homework 3: Due Wednesday March 24 2004

- This test contains 4 questions about a research paper. They allow you to earn 100 points.
- Show your work, as partial credit can be given. You will be graded not only on the correctness of your answer, but also on the clarity with which you express it. **Be neat**.
- **No late submissions will be accepted.**
- Only homework returned in a 9in $\times$ 12in envelope will be accepted. (If you cannot find such envelope, ask the Instructor.) Please, write your name and the class name (ECE G205) on the envelope (write clearly, please).

Write your name here: _____

- The following question refers to the paper [1] which has been distributed either in class or via e-mail (ask the instructor for a copy of it in case you haven't received it).

    1. Write at most a page that summarize the paper. In particular, describe what is the main contribution of this paper, and why it introduces something that is innovative.
    2. What are the main difference, in terms of applicability and algorithmics, between the version that starts at a single node and the one with distributed "BlueTrees."
    3. What are the strengths and the weaknesses of the paper, i.e., the strengths and weaknesses of scatternet formation as performed by BlueTree.
    4. The first algorithm as described in this paper could generate a deadlock situation when implemented as described. Find such a situation, and propose the needed, implementation solution.

References

[1] G. Záruba, S. Basagni, and I. Chlamtac. BlueTrees—Scatternet formation to enable Bluetooth-based personal area networks. In *Proceedings of the IEEE International Conference on Communications, ICC 2001*, volume 1, pages 273–277, Helsinki, Finland, June 11–14 2001.