

Assignment 5, CSci 330, Fall 2006

Due: Nov 17, 2:10pm. Value: 40 pts.

Every network must address the issue of how to resolve conflicts: That is, what happens when two stations happen to decide that they want to send a message on the network at the same time? A station can't magically know about the other station without some form of communication, so some form of conflict resolution must be employed.¹

Your assignment is to write a Web tutorial about how one of the following handles conflict avoidance and resolution.²

token ring networks (802.5)	broadband wireless (802.16)
wireless (802.11)	Universal Serial Bus
Bluetooth (802.15)	FireWire

Note that some of the protocols enumerate several alternatives (such as 802.11g versus 802.11n). Your paper should discuss only one of the alternatives.

Nov 15, 2:10pm (That's this Wednesday.) Because I don't want everybody writing tutorials on the same topic, I must approve your selection from the above six choices beforehand. (You need not indicate an alternative within the choices.) E-mail me with at least two choices; if you'll e-mail me sooner, I'll respond promptly, and you'll get priority over those who e-mail later. And, besides, you'll get more time to work on the next deadline. . . .

Nov 17, 2:10pm The first submission of the tutorial is due. This should be a complete submission. (See the criteria below.) Please submit paper printouts for this, so I can mark them.

Nov 20, 2:10pm I'll have comments to send back. Note that I'll be away during Tuesday, Nov 21, unavailable for further help. So if you want to talk to me about the comments, you'll need to do that either on Nov 20, or wait until after Thanksgiving.

Nov 29, 2:10pm The final submission is due. Please submit the relevant file(s) electronically. If you have several files, I encourage you to ZIP them into a single archive, which you attach. (A Linux command to do this is `zip submit.zip *.html *.png`.)

A guideline for a reasonable length is about 1,000 words. You are welcome to make it longer; this may even be necessary, if you can't explain it well within 1,000 words.

Your submission will be evaluated based on the following components.

First submission (20%) It should be complete, resembling what you might plausibly submit as your final submission. If your first submission is poor, and your final submission is flawless, you'll lose points in this category.

Bibliography (20%) Your bibliography should be broad and include some authoritative sources.

Research (20%) Your presentation should demonstrate a thorough understanding of the technology.

Presentation (20%) Your presentation should be written so that computer science students with little background in networking can understand it.

Style (20%) The tutorial should be engaging, well-composed, and well-written.

¹Actually, conflict resolution isn't necessary if there is a wire (or frequency bandwidth) connecting every pair of stations; but this requires $O(n^2)$ wires, which simply isn't practical for large networks.

²You don't need to upload the files into any Web space; just create them in your own directory and open them as regular files within a Web browser. I'll post your final version on the course Web page, though, for others to read.