Comps Proposals

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I have had an interest in things related to technology for a long time which is part of the reason why I decided to major in physics; I wanted to be able to explain the things around me that I use. Thus, all three of my topics are very applied and topics that relate to technology I use everyday.

1. My first topic would be to do the physics of digital data storage/memory. Computers are something I use constantly and data storage is an important, and I think interesting part, of it. I would plan to talk about the progression of the technology used from first optical storage to electrical storage in hard drives and ram to the potential switch back to optical storage because of holography. It would cover topics in optics, E and M, electronics.
2. My second topic would be about the physics of wireless communication. I would talk about the different forms like radio and free space-optical (light propagation). I would talk about how these different forms of communication also account for objects such as walls that are in the way. So, this would cover topics such as E and M, waves, and material science (to account for propagation through objects).
3. My last topic would be the physics of displays. I would talk about the progression of display technology and make comparisons between the different technologies such as CRT, LCD, Plasmas, and possible future advancements. The topics it would cover would be E and M, material science, and optics.

As for advisors, I would prefer to not have Bill Titus as my advisor and would prefer to have Marty or Melissa as an advisor. As for times, I would prefer to do it around 7th or 8th week winter term, and I am fine with both 1a and 6a.