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Standard 1. "IEEE Standard for Information technology—Telecommunications and information exchange between systems Local and metropolitan area networks—Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications," in *IEEE Std 802.11-2016 (Revision of IEEE Std 802.11-2012)* , vol., no., pp.1-3534, 14 Dec. 2016, doi: 10.1109/IEEESTD.2016.7786995.

1. This standard comes from IEEE. IEEE was founded in the 1963 as a combination of the American Institute of Electrical Engineers and the Institute of Radio Engineers. These two organizations had been around since the early 1900s(in the case of the AIEE, the 1880s). They currently have members in 160 countries, and attempts to help advance electrical, electronic, telecommunications, and computer knowledge. They are trustworthy because they are so diverse, and all of their information can be peer reviewed.
2. This standard was found on IEEE's website, which was found by clicking on the link at the bottom of this assignment, and clicking IEEE explore. Searching for L-Band knowledge and filtering the results to show only standards yielded this standard on cheap dual band antennas(since they are printed transmission lines).
3. **IEEE Standard for Information technology—Telecommunications and information exchange between systems Local and metropolitan area networks—Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications,** Std. #802.11-2016
4. This standard provides specifications for wireless broadcasting and receiving stations that are either fixed or mobile.
   This is essential for our design since they wish this device to have wireless capability. This standard provides the necessary legal information on how to make a portable broadcasting station, and how to avoid interfering with other signals, and to keep other signals from interfering with our data stream.
5. According to table E.1, the best method for wireless transmission is to use 2.407 GHz. as this has little to no restrictions, and is a band with little influence outside of major areas where this project will likely to be set up. .
6. If more information is required on this topic, I will search for WIFI standards on IEEE's website. If none is available, I can search for papers concerning 2.407 GHz band usage, and how to properly use it on IEEE's website where this standard was found.

Standard 2. "IEEE Guide for Microwave Communications System Development: Design, Procurement, Construction, Maintenance and Operation," in *IEEE Std 1404-1998* , vol., no., pp.1-36, 22 July 1998, doi: 10.1109/IEEESTD.1998.87818.

1. This standard comes from IEEE, seeing as how the first source I found was trustworthy, it stands to reason that this one, which came from the same source, is also trustworthy.
2. This standard was found in the same way as the first.
3. **IEEE Guide for Microwave Communications System Development: Design, Procurement, Construction, Maintenance and Operation**, std. #1404-1998
4. This standard outlines the construction standards for large scale microwave communication projects. This will help us because that this type of signal is what we are trying to receive, and therefore, the information for the safety of these projects should still apply.

5. A particular part of this standard that applies to this project is 6.7.5.1, which states that “Transmission lines are vehicles for lightning for lightning transients, so each transmission line should be installed such that the path to ground is tolerant of lightning currents.” So the design should have grounds that can absorb lightning levels of current for a microsecond before any sensitive hardware. This will be especially true for this project, as it will likely be used at night, and outside where lightning strikes are more likely to happen.
6. If more information is required, I will search for lightning grounding on IEEE standards, as it will have more information on how to properly go about this subject. If a more detailed search is required, I should probably search for how to protect a computers hardware from a lightning surge. All of this should be done on IEEE’s website in order to ensure authenticity.