

## Radiation Pattern of Millimeter Wave Team members: Xinyao Li, Iat Keong Wong, Yili Chen, Joseph Dexter Bacon

# Introduction

Our project is used to measure the radiation pattern of millimeter wave. It consists of a structure that supports an antenna, and another one that supports a motor and a rotating aluminum arm where a receiving open-ended waveguide is mounted. A Raspberry pi is used to communicate to a motor and at the same time control a network analyzer to take measurements while the

analyzer scan an open-ended waveguide over a semicircle above the antenna at a specific distance. Millimeter wave is important for wireless applications, anti-collision systems, imaging systems, and future 5G communications







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# New equipment and Design



Our challenge that we faced the most is to pick the right equipment with the limited budget and experience. Now we have got the equipment that we need and are working on constructing and finalized programming.

#### Reference

5G. (2019, March 04). Retrieved from https://en.wikipedia.org/wiki/5G Stutzman, W. L., & Thiele, G. A. (2013). Antenna theory and design: By Warren L. Stutzman and Gary A. Thiele. Hoboken, NJ: Wiley.





# Block Diagram

#### Challenge and Working Progress

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