SUMMARY:

- This communication link utilizes tropospheric scattering.
- The channel was established successfully at 50 MHz, but SNR < 10 dB because of manmade noise.
- We chose to operate at higher frequency where noise is lower.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Path loss</th>
<th>Manmade noise</th>
<th>SNR</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 MHz</td>
<td>162</td>
<td>-110 dB</td>
<td>1.5 dB</td>
</tr>
<tr>
<td>432 MHz</td>
<td>195</td>
<td>-8 dB</td>
<td>5.5 dB</td>
</tr>
<tr>
<td>1270 MHz</td>
<td>207</td>
<td>-1 dB</td>
<td>2 dB</td>
</tr>
</tbody>
</table>

FUTURE WORK:

- Measure the path loss and compare it to the simulation results.
- Achieve the needed SNR by controlling: transmitted power and antenna gain.
- Establish a communication link using the modified modems so that the two ends can communicate and exchange information with each other.

Supervisors: John Steininger.
Professor: Rockey Luo.
Professor: Ali Pezeshki.

Students: Rashed Al-mohannadi
Naif Alhujilan
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