Motivation

- Using multiple receptors allows us to determine the direction of an incoming signal.
- Reversely, the utilization of multiple sources brings the possibility of sending a signal towards a given direction.

\[ D(\theta, \phi) = \frac{U(\theta, \phi)}{P_{rd}} \]

DEGREES OF FREEDOM
- Amplitude
- Phase
- A shape of the radiator
- Array layout

Challenge

- Try our circuitry for setting feeding weights.
- Play with the array to steer its beam.

\[ E = \sum_n A_n e^{i\phi_n} E_n \]

More...

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Other topics: EM theory, fundamental bounds, synthesis