



# Spectrum Collaboration Challenge

The world's first collaborative machine-intelligence competition to overcome spectrum scarcity



## Driving Applications

Today, RF Spectrum is managed by dividing it into rigid, exclusively licensed bands. This human-driven process is slow, inflexible, and cannot exploit the full potential capacity of the spectrum. In SC2, competitors will reimagine a new, fully autonomous wireless paradigm in which radio networks autonomously collaborate to dynamically determine how the spectrum should be used moment to moment. To achieve the goal of true wireless spectrum autonomy SC2 is combining the fields of software defined radio (SDR) and Artificial Intelligence (AI).

The team whose radio design most reliably achieves successful communication in the presence of other competing radios could win as much as \$3,500,000.

### THE GAME

5 competing radio networks dynamically optimize the spectrum usage without human planning

Team 1  
10 VOIP links

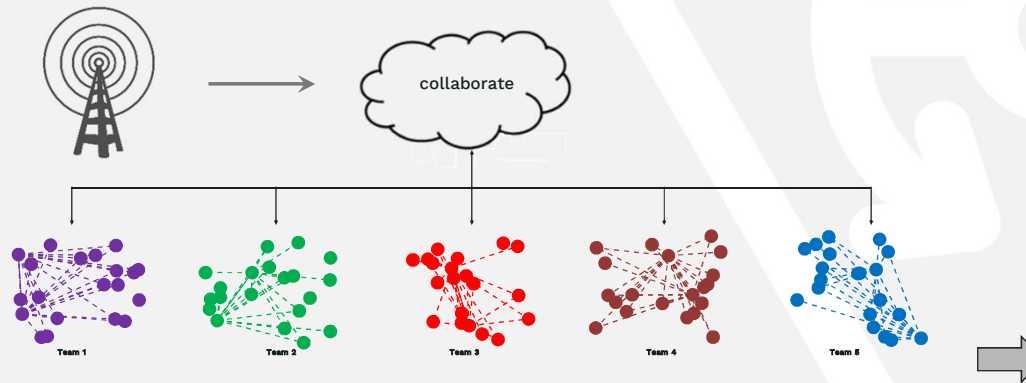
Team 2  
UAV surveillance

Team 3  
Sat. imagery

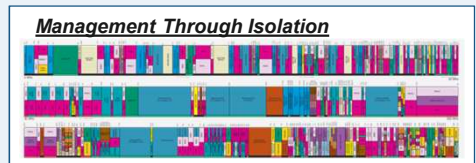
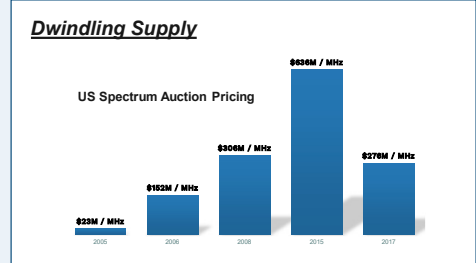
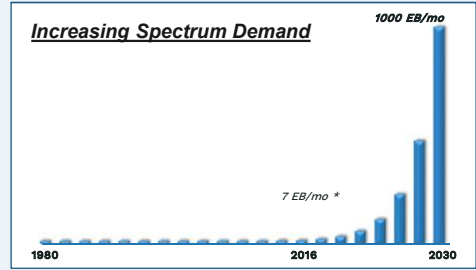
Team 4  
GPS Positions

Team 5  
Helmet Cam Video

ALL  
Protect Incumbent



Today:  
The "Spectrum crunch"



Tomorrow:  
Autonomous Collaborative Spectrum Sharing