



Preliminary Event #1 Results



Driving Applications

The DARPA Spectrum Collaboration Challenge (SC2) Preliminary Event #1 was held at Johns Hopkins Applied Physics Lab on 12/13/2017.

- 19 of 30 Teams qualified to participate
- Competition ran 475 matches in 6 challenging spectrum coexistence scenarios
- Best performing matches showcased adaptive coexistence that outperforms traditional dynamic spectrum access
- Top 10 teams awarded to participate in phase 2
- 2 additional phases of competition
- 2019 finale held at Mobile World Congress Americas

Teams Winning Funding

- | | |
|----------------------|---|
| 1. MarmotE | |
| 2. SHARE THE PIE | |
| 3. Zylinium | |
| 4. Erebus | 3 independent engineers and software developers |
| 5. SCATTER | IDLab, imec research group @ Ghent University & University of Antwerp, & Rutgers University |
| 6. GatorWings | University of Florida |
| 7. Sprite | Northeastern University |
| 8. Strawberry Jammer | Northrop Grumman |
| 9. Optical Spectrum | consisting of two independent LIDAR engineers |
| 10. BAM! Wireless | Purdue University and Texas A&M University |

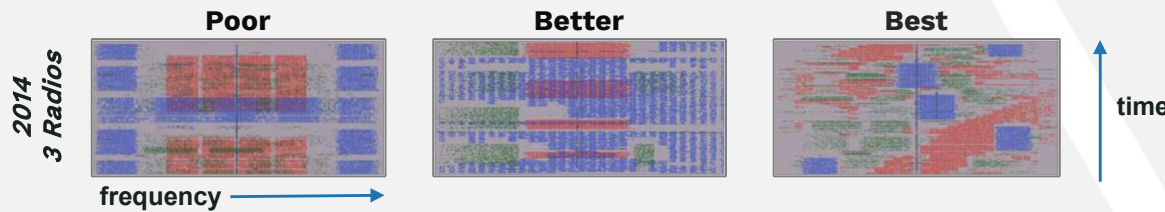
Top 10 Teams

- | |
|--|
| Vanderbilt University |
| BAE Systems with Eigen LLC |
| A Maryland-based startup |
| University of Florida |
| Northeastern University |
| Northrop Grumman |
| Purdue University and Texas A&M University |

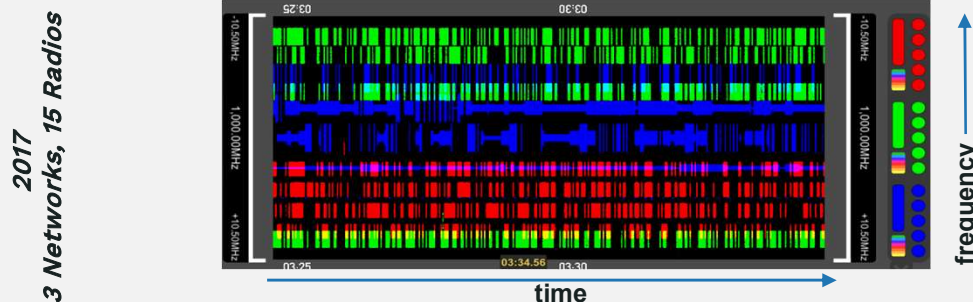


Example Motivating Scenario: Handling First Responder Spectrum Needs

Can emergency responders coordinate a wildfire response without time to coordinate their spectrum usage?



2014 winning strategy employed dynamic sense-and-avoid (DSA). This result was unlikely to scale to realistic network sizes.



Preliminary evidence suggest that collaborative spectrum usage outperforms DSA