News - Week of 1/8/19

- FCC Reaches \$900,000 Settlement in Unauthorized Satellite Launch Case
- FCC Suspends Operations on Thursday 1/3 due to Government Furlough
- https://hackaday.com/2019/01/05/google-assistant-now-available-on-ham-radio/

Intro to Ham Radio

Amateur Radio and RF Club @ OSU (W8LT)

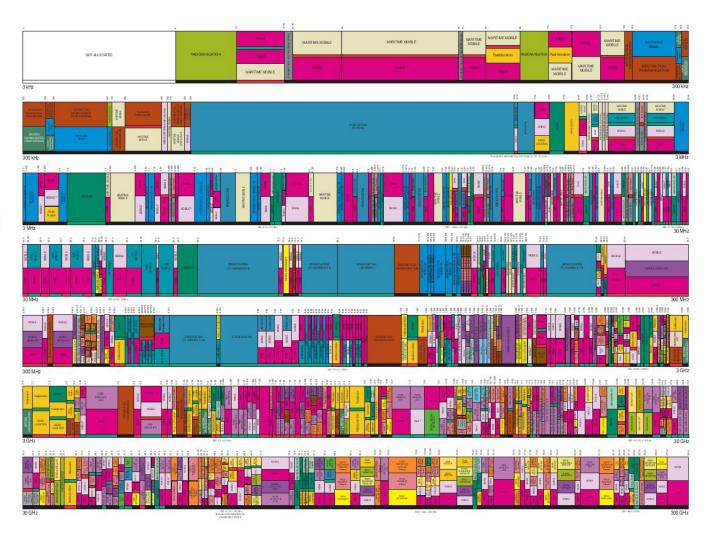
UNITED

STATES FREQUENCY

ALLOCATIONS

THE RADIO SPECTRUM



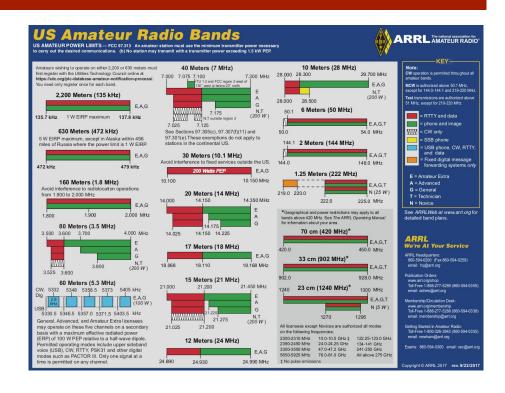


Spectrum Auctions

- FCC 2008 Wireless Spectrum Auction:
 - Spectrum in the 1700 and 2100 MHz range for a total of \$45 billion
- Canada 2008 Wireless Spectrum Auction:
 - 105 MHz of spectrum auctioned for \$4 billion CAD
- Spectrum is valuable

Amateur Radio

- Requires a license (free)
- Unlocks near-limitless usage of many bands
- Digital and voice modes are allowed



UNITED

STATES FREQUENCY

ALLOCATIONS

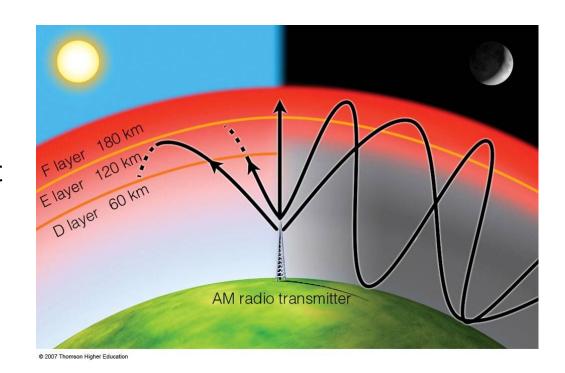
THE RADIO SPECTRUM





Ionospheric Propagation

- Active in the 3-30 MHz range
- Effectiveness is dependent on sunspot cycle, day/night cycle, etc.
- Allows global comms



What can I do with Ham Radio?

- Contesting
- Nets (essentially weekly chatrooms)
- Antenna design
- DXing (and country hunting)
- QRP (<5 Watt transmissions)
- Emergency groups

Licensing

Don't worry about it for now!

Planning for SP19

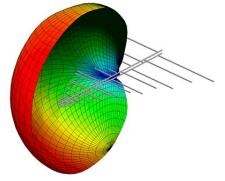
Amateur Radio and RF Club @ OSU (W8LT)

Possible Workshop Ideas

Date	Meeting Topic
1/8/2019	Introduction to Ham Radio
1/15/2019	Hacking Home Automation
1/22/2019	WSPR QRP with the Raspberry Pi
1/29/2019	Talk/Tour
2/5/2019	Foxhunt
2/12/2019	Satellite Communications
2/19/2019	School Club Roundup
2/26/2019	Digital Communication Modes
3/5/2019	Software-Defined Radio Deep Dive
3/12/2019	SPRING BREAK
3/19/2019	Exam Night (still need Laurel VE status)
3/26/2019	Talk/Tour
4/2/2019	Weeknight On-Air Event
4/9/2019	Microstrip Implementation using ADS
4/16/2019	Antenna Simulations using FEKO



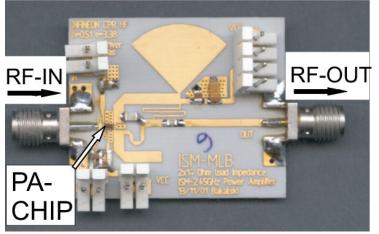




Possible Project Ideas

- Antenna building
 - Large-scale
 - Microstrip implementations
- DIY Microwave Transmitter / Reciever Pair
 - Learn how Wi-Fi hardware works!
- Anything you'd like to suggest!





Possible Tour/Event Ideas

- ESL Anechoic Chamber (largest academic anechoic chamber in the US!)
- Nonlinear Vector Network Analyser (NVNA) Demo
- Company Talks (e.g. Harris, Northrop Grumman, Garmin, etc.)
- On-the-air events
- Again, anything you'd like to suggest!

