

A blue sky with a white contrail from an aircraft. In the bottom left corner, there is a road sign and some trees.

VIVA LOS FLYOVER
STATES

An Uncomfortable
Truth...

How To Cope?

1. R-E-L-A-X
2. Enjoy The Cool Stuff
Flying Over!



RTL-SDR To The Rescue!

RTL-SDR HuhWha?

- Software Defined Radio Receiver
- Cheap (~20 USD / 0.001352 BTC)!
- Originally designed to receive digital TV in Europe
- Tunable from around 20MHz to 2.0 GHz

Total Aircraft: 14
With Positions: 10

Messages: 19.3/sec
History: 385 positions

Units: Aeronautical

Filter by Altitude: ft to ft Filter Reset

ICAO	Ident	Squawk	Altitude (ft)	Speed (kt)	Distance (NM)	Heading	Msgs	Age
ADC03B	N9851J	4542	8,525	78	14.7	252°	229	5
AAC363	N793CG	3361	40,000	394	50.9	267°	1477	1
A6E400	N543KP	1467	24,000	227	11.5	300°	559	0
A57100	N45NS	2721	41,000	496	44.7	88°	553	12
A35206	N313AR	2031	41,000	542	21.2	82°	770	0
A16EC2	UAL1978		38,000	374	12.4	270°	149	3
A89FCF			34,000		24.9		11	3
A4495E			13,000	174	12.5	172°	19	13
A7398E		2671	38,975	522	22.1	82°	375	4
A6AF55			41,000	467	52.8	89°	61	10
ACFDF4			38,000				381	1
A77702			43,850				11	9
A903B8			43,000				49	2
C085E0			36,000	415		338°	10	1

ADS-B MLAT Other TIS-B

N793CG AAC363

[FlightAware.com](#)

Registration: N793CG
Country of registration: United States

Aircraft Type: F900 Source: ADS-B

Squawk: 3361 Speed: 394 kt
Altitude: 40,000 ft Distance: 50.9 NM

Heading: 267° (West) Position: 41.467°, -94.904°
Vertical Rate: -64 ft/min Last Seen: now





GAMES



Kerbal Space Program



PLAY

YOU'VE PLAYED 159 hours

LAST PLAYED 2/8/17

159 Hours Of Excellence!



FRIENDS

You have 8 Friends who play Kerbal Space Program



[VIEW ALL FRIENDS WHO PLAY THIS GAME](#)

RECENT NEWS

Daily Deal - Kerbal Space Program, 40% Off

Today's Deal: Save 40% on Kerbal Space Program! Look for the deals each day on







2.24

Astronauts per Million Citizens!

n8's Three Step Plan

For Flyover st8 gr8ness

1. **Find An Easy Target**
2. Find A Less Easy Target
3. Automate Mercilessly

GEOSYNCHRONOUS

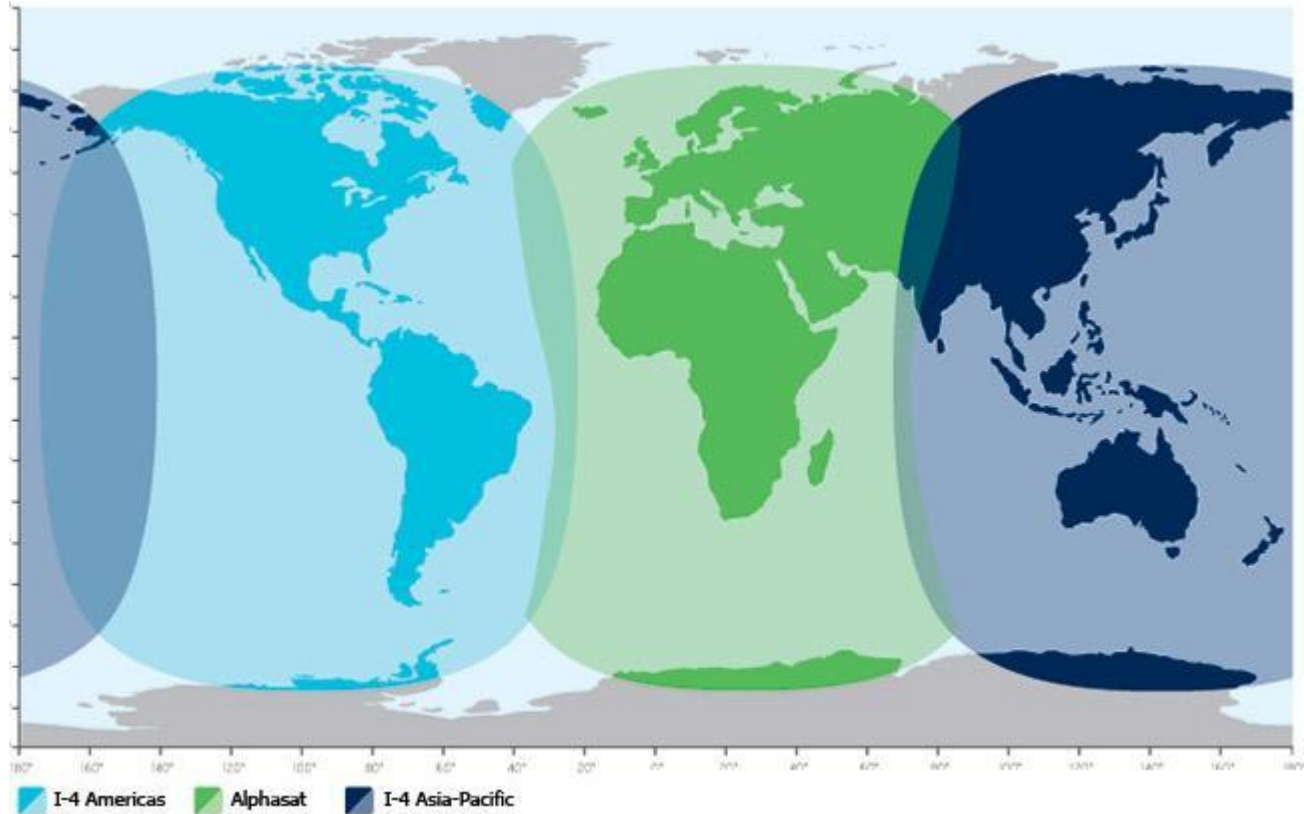
Easy because they don't move!

35,790 km

Outernet

- Broadcasts free content. From space!
 - Weather
 - Wikipedia Articles
 - News articles (BBC, Voice of America, others)
 - APRS
- Uses INMARSAT satellites
- Blisteringly fast speed of **2 *kbps* wheeeee!**
- <http://outernet.is>

Outernet Coverage



Outernet Parts List

- L-Band Antenna
- RTL-SDR Dongle
- Amplifier
- CHIP PC



Load Bearing Stapler Optional

Outernet Benefits And Problems

+

- So easy n8 could do it!
- Great mission

-

- CHIP or nuthin'
- Closed source binaries
- Who controls the content?

n8's Three Step Plan

*For Flyover st8 gr8ness
We may need more steps...*

1. Find An Easy Target
2. **Find A Less Easy Target**
3. Automate Mercilessly

POLAR ORBITS

Look At Those Things Move!

Polar Satellites

- ISS
- NOAA Weather Satellites
- CubeSats, etc.

Where Are They?

TLE Is The Key!

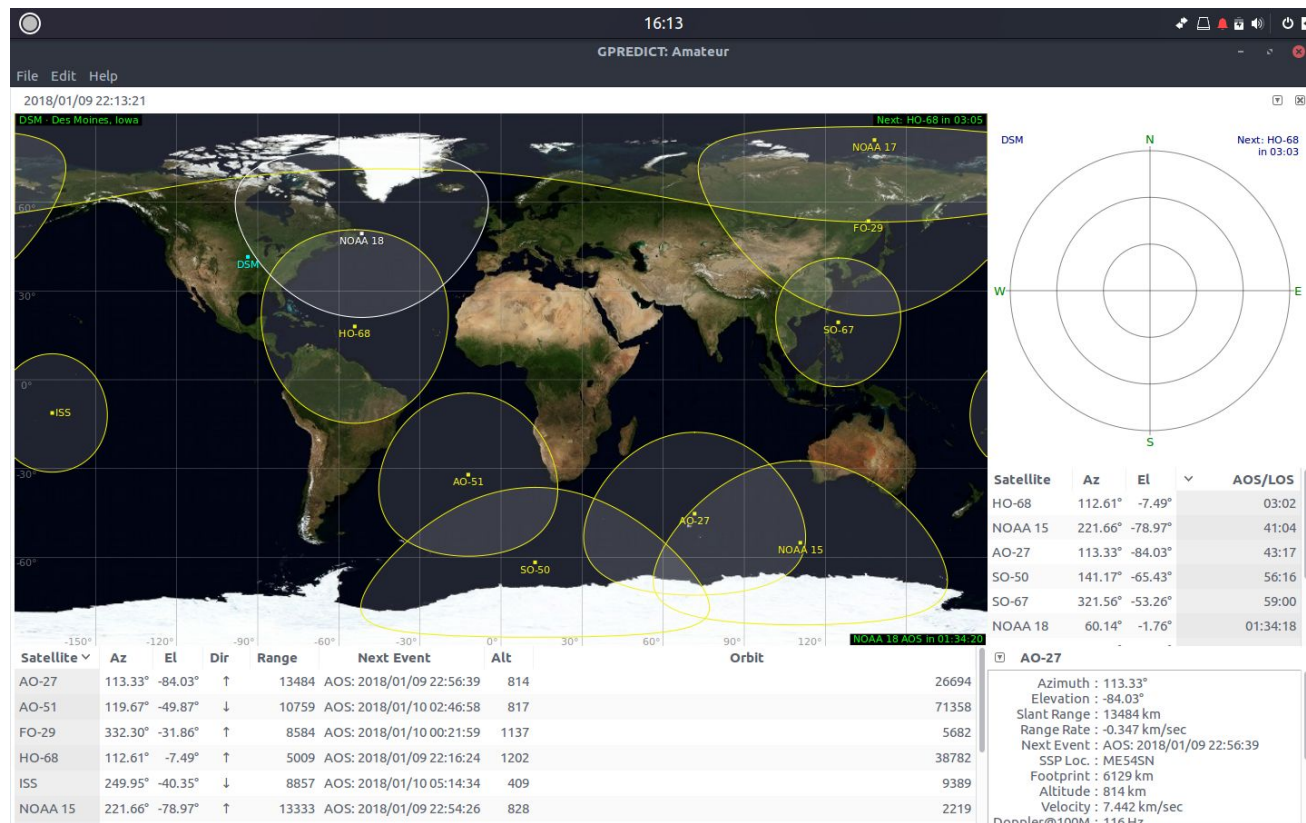
NOAA 15

1	25338U	98030A	17048.56430155	.000000012	00000-0	23797-4	0	9995
2	25338	98.7851	59.2190	0010426	188.4885	171.6120	14.25777570975961	

Thanks, NORAD!

Software To The Rescue!

- gpredict
- n2yo.com
- Orbitron
- Libraries
 - pyorbital







RSOISS



Konstantin E. Tsiolkovsky



**120th anniversary of birthday
of founder of cosmonautics**

8 септя 3/12

SSTV ME ASAP!

NOAA Satellites

- NOAA 15, 17, 18
- Transmit data at around 137MHz
- APT - Automatic Picture Transmission
- Right Hand Circular Polarized

NOAA Satellites, Benefits And Problems

+

- Really cool!

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- Need a weird antenna
- Short time overhead (10 - 15 minutes)
- Format is going away, someday



n8's Three Step Plan

*For Flyover st8 gr8ness
Make flyover st8s gr8 again!*

1. Find An Easy Target
2. Find A Less Easy Target
3. **Automate Mercilessly**

Automation!

- Homebrew Stuff
- SatNOGs

Lemme Try This...

- Get RTL-SDR dongle on Amazon
- <http://www.rtl-sdr.com>
- <https://www.reddit.com/r/RTLSDR/>
- <http://flightaware.com/adsb/piaware/>
- <https://outernet.is/>

Thanks!

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