

## Why?

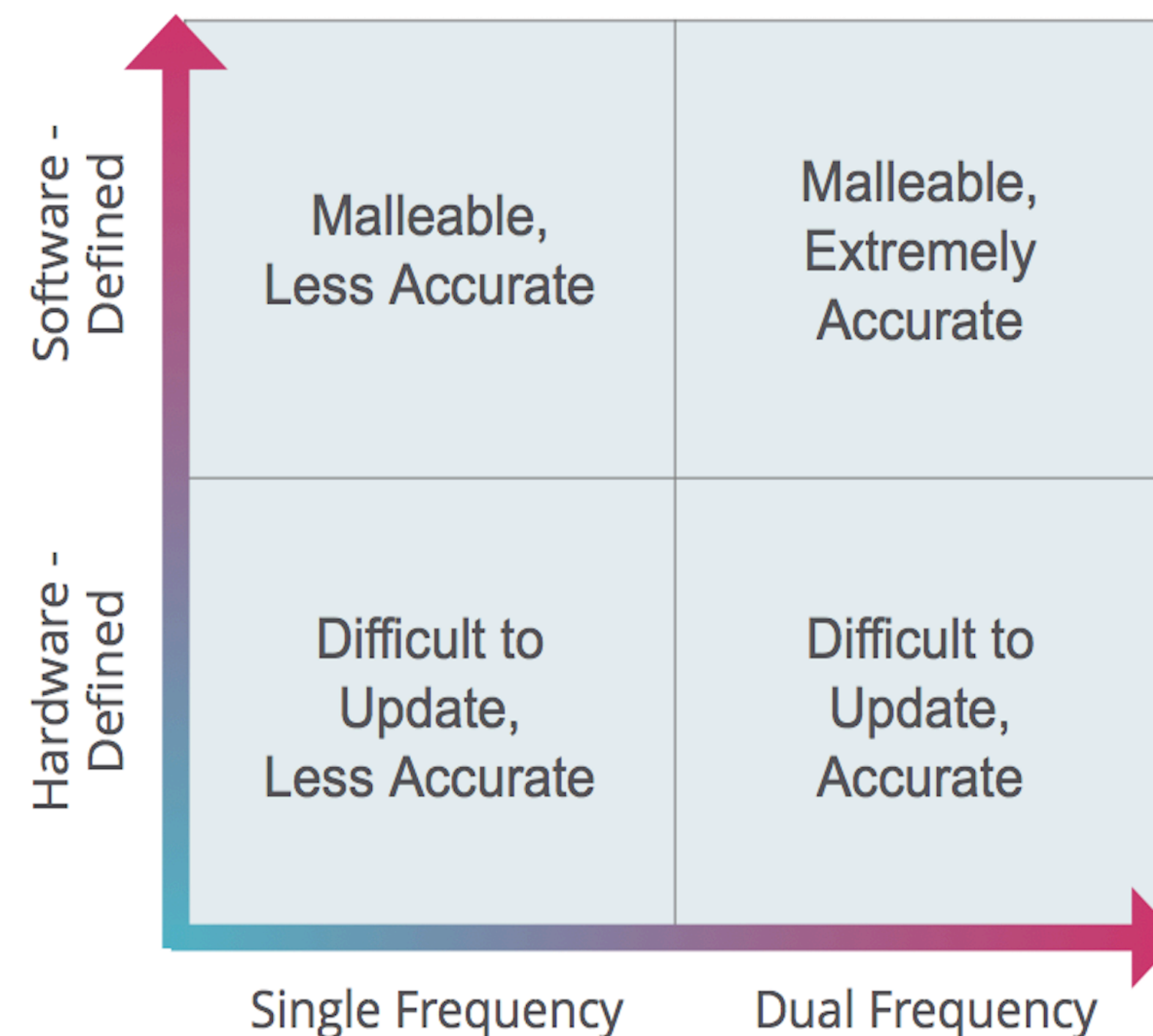
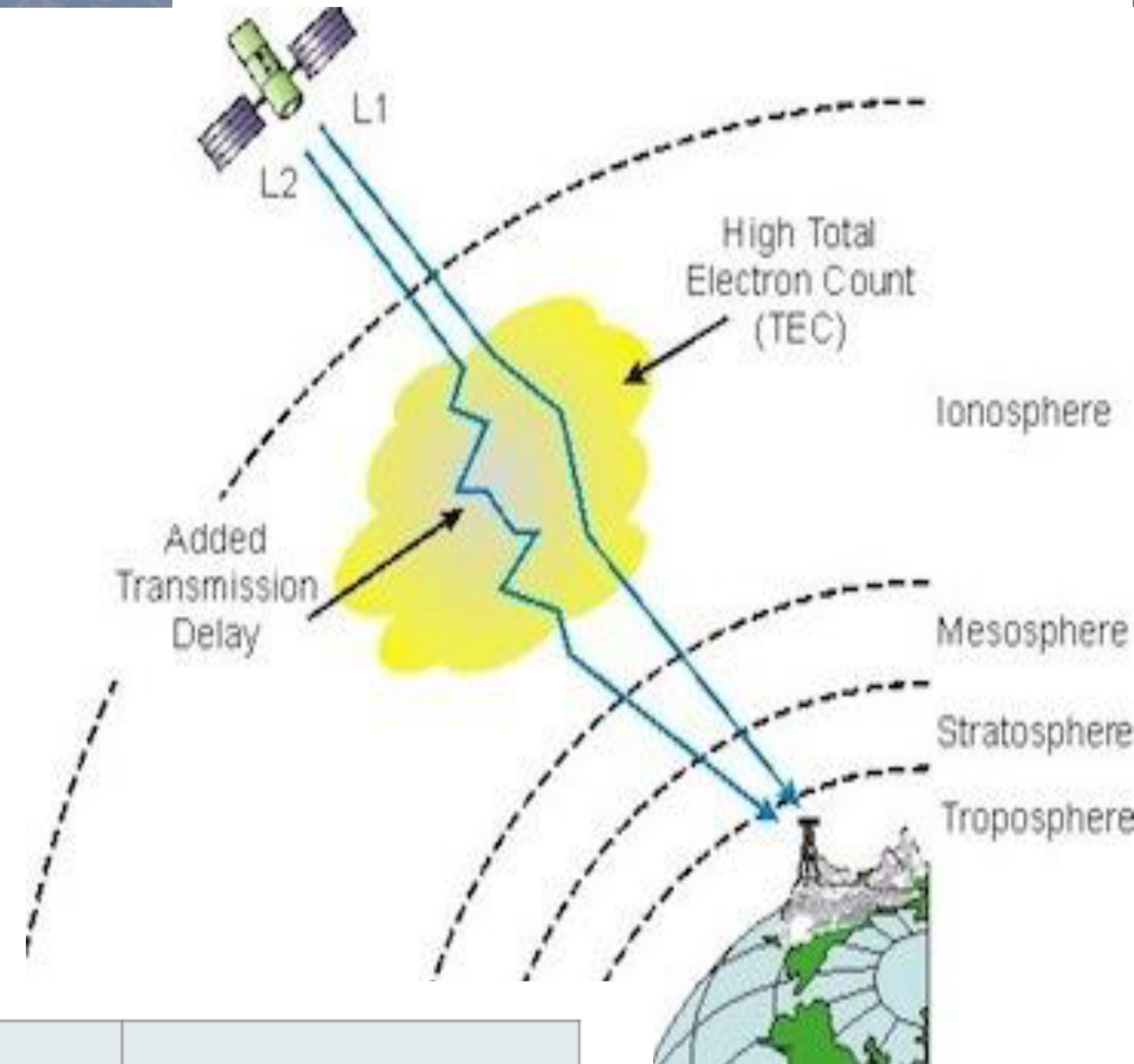


Many **military missions** require position, velocity, and time data that is

- ✓ Immediate
- ✓ Accurate
- ✓ Reliable

### Dual-Frequency:

The receiver latches on to multiple frequencies emitted by the satellites. This allows the receiver to correct for noise caused by travelling through the ionosphere.

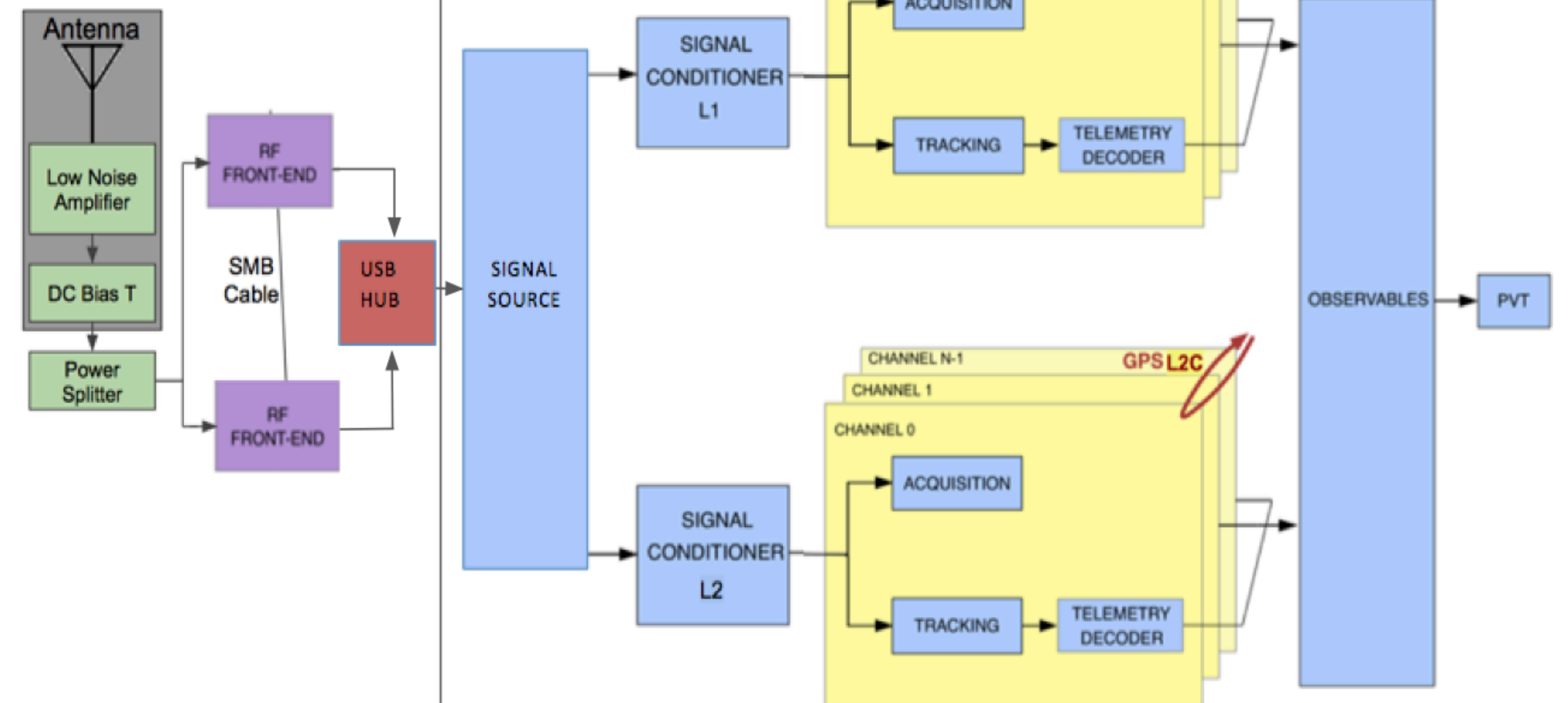


### Software-Defined:

The receiver can run on any standard processor because the algorithms are all code-based. This also means specific functionality can be turned on or off and quickly updated.

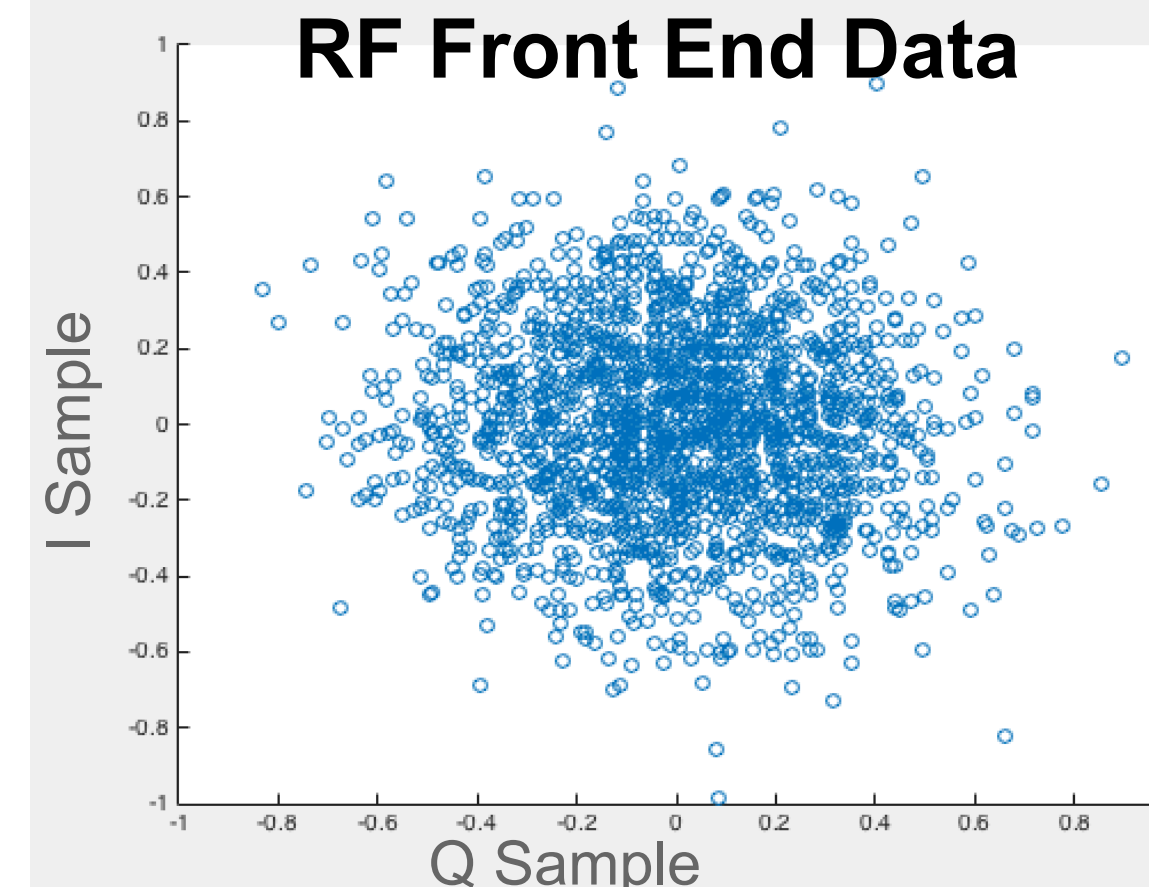
## Our Solution

### System Diagram



## Results

### RF Front End Data



### Software-Defined Receiver Output

NAV Message: received subframe 2 from satellite GPS PRN 11 (Block IIR)  
NAV Message: received subframe 2 from satellite GPS PRN 17 (Block IIR-M)  
Current input signal time = 49 [s]  
Position at 2013-Apr-04 06:24:11 UTC is Lat = 41.2748 [deg], Long = 1.98761 [deg], Height= 81.8961 [m]  
Position at 2013-Apr-04 06:24:12 UTC is Lat = 41.2748 [deg], Long = 1.98762 [deg], Height= 79.1091 [m]