Generating Time and Frequency Domain Separated Signals

From n transmitters, for n frequencies each separated w.r.t each other by at least m Hz

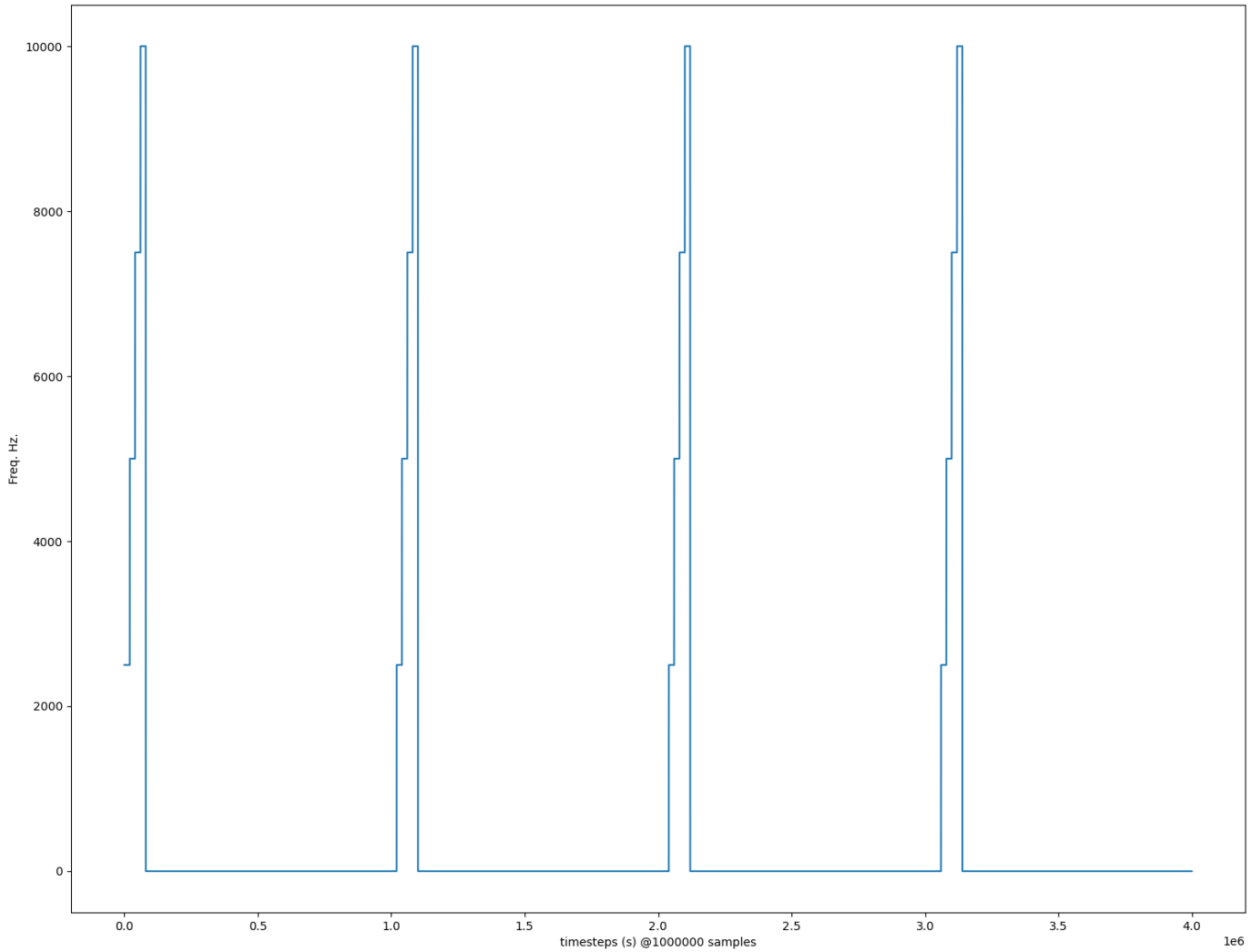
M=2500Hz, 2<=n<=15, and for central frequency 172MHz, frequencies f (nonzero)→ -0.5MHz <=f <= 0.5MHz (+/- 0.5 of sampling Frequency of 1MHz)

Each signals applies for 20ms, with a 1s gap, with amplitude gain -96dB (and AWGN constant noise gain of -60dB)

~Informal Discussion, Arya Keni (DSP, RCT)

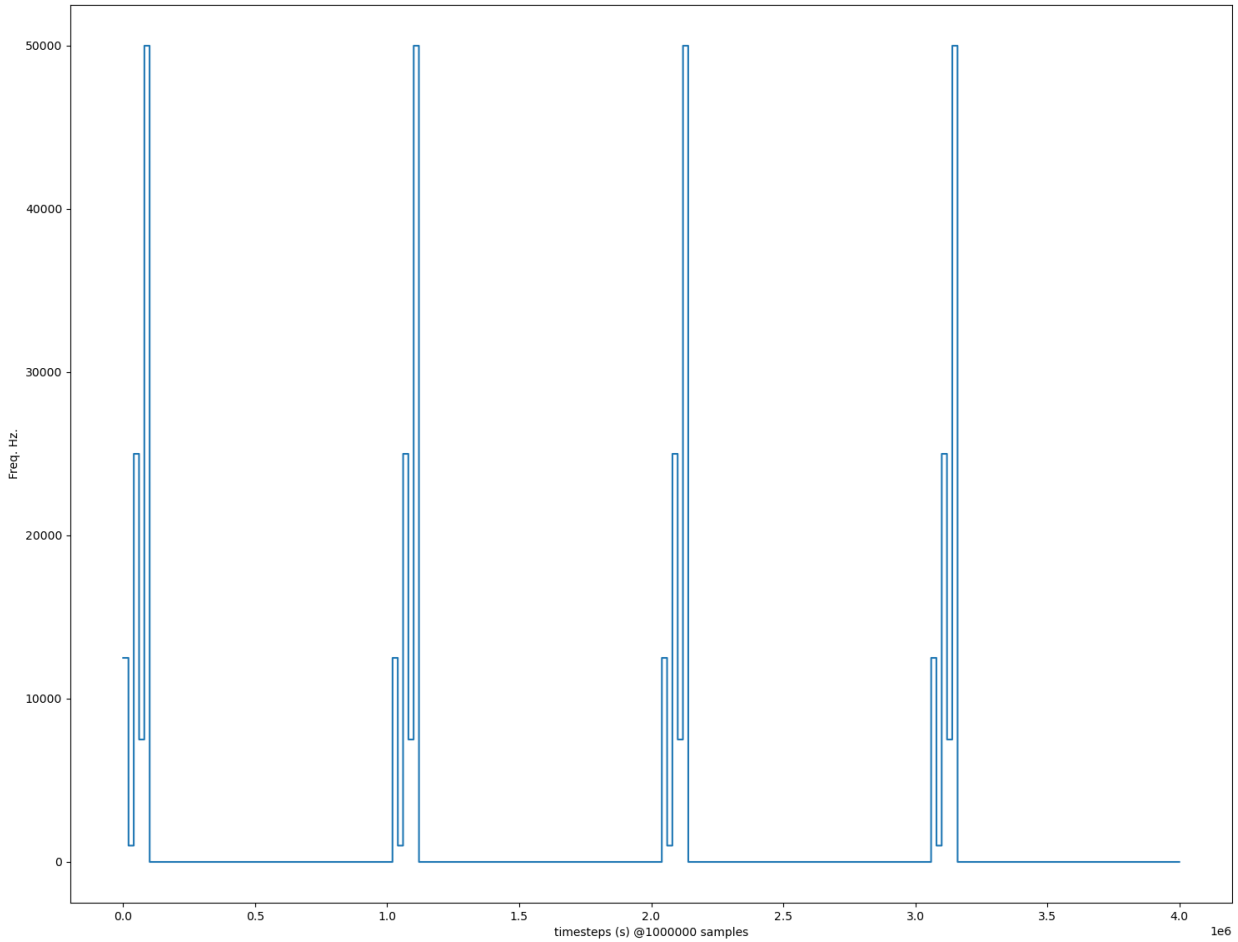
- ***Example 1a: Frequency – Time Domain Analysis***

Simple case: n=4, set=[2500, 5000, 7500, 10000] #Hz



- ***Example 1b: Frequency – Time Domain Analysis***

Complex case: n=5, set=`[12500,1000,25000,7500,50000]` #Hz



- *Utilization:*

For correct sequence generation of CFO simulation test data

To use for further testing, verifying that the signal actually represents close to real conditions