**PYTHON CONSIDERATIONS**

**MatPulse workspace:**

1. Two types of RF pulses; B1 (constant gradient) and B2 (with modulated gradient)
   * 1. G1 just a value, G2 a file
     2. B1 is mpgb1, B2 is mrgb2, G2 is mrgg2
     3. B1 dwell is mpgdtmu (us); B2 dwell is mrgdweln (us)
2. RF pulses w/o phase modulation; net rotation
3. RF pulses with phase modulation; total rotation
4. Matpulse.m file parameters
   * 1. gamma; dwell resolution; max grad, slew; grad raster time
     2. Should have separate min dwell time, min dwell incr., etc
5. Master Parms
   * 1. Positions and offsets
     2. Calculation resolution (Special consideration for Re-mapping)
     3. Pulse Bandwidth Conventions (Need new definitions; new default for bb pulses
     4. Zero padding still needed for Siemens pulses
     5. Filter function options (needs further investigation)

**Additional considerations**

1. Python standards for parameter names??
2. Pulse files with MatPulse header: B2/G2, F2 with offset, net and tot rot, max uT, ??
3. Parameter files – included in pulse file
4. How to handle gradient refocusing (SLR, Bloch Equas) –Automate refocussing
5. Gradient slew (fixed or variable)
6. Gradient max (two values?)
7. Crushed spin echo the default format
8. Semilog plots (SLR Pulses, Bloch Equas, – adv user only
9. Re-do Interpolation; add decimation, net and tot angles
10. Polynomial calc for root reflection on import?
11. Separate menu for Optimal control with ‘modulated’ gradients
12. Add options for contour plots
13. Phase cycle for spin echo relaxation; include B2G2 optiions
14. Test Pulses needs total re-write, with option for BIR4 pulse
15. Re-think Re-Map for simpler layout
16. Re-work Cancatenate, with B2G2 option
17. Siemens Save (and others) to separate directory
18. Figures