DSN Check List

(To be used as a Guide only)

- **Launch minus 2 years: DSN Task Plan**
  - DSN User Loading Profile (ULP) provided by Mission
  - DSN Aperture Fee (Attributed cost only, not paid by Mission) developed together by Mission and MIM
  - DSN Tracking Telemetry & Command (TT&C) Costs provided by MIM
  - DSN MIM Costs provided by MIM
  - RF Compatibility costs provided by MIM
  - Communication Line (data/voice interface to JPL) cost if applicable provided by MIM
- **2 years out: Frequency Spectrum License submission (submitted by Mission, with DSN Spectrum office assistance dependent upon frequency band – DSN or Near Earth?)**
  - Spacecraft Trajectory information provided by Mission Navigation
  - Ground Stations that possibly may support provided by Mission
    - (recommend including Morehead State 21-meter antenna)
- **2 years out: Spacecraft ID** (DSN MIM can coordinate request)
  - CCSDS Spacecraft ID request
    - Reference http://sanaregistry.org/r/spacecraftid/spacecraftid.html
  - CCSDS version number
    - Reference CCSDS 320.0-B-6 Blue Book
    - Recommend version 1 (version 2 acceptable)
  - DSN Spacecraft ID
    - Reference DSN Doc 8201-13 Ops-6-21
- **2 years to 1 year: out DSN Service Agreement** (DSA) developed together by Mission and MIM
  - Draft DSA at Preliminary Design Review (PDR)
    - Includes Spacecraft Telecommunication parameters
    - Includes selection of DSN services
    - Includes DSN Costing
  - Final DSA prior to Critical Design Review (CDR)
- **2 years to 1 year out: reserve DSN Compatibility time with the DSN**
  - Input provided by Mission to the MIM who will negotiated resources as appropriate
- **1 year out DSN Operations Interface Control Document (OICD)**
  - Need Mission Flight to Ground ICD (FGICD) for DSN OICD input
  - Finalization of Mission interface to DSN services
    - Final selection of interface for tracking data
    - Final selection by Mission of what entity is doing scheduling
- **1 year to 6 months out, Mission Operations Center (MOC) available to interface with the DSN for data flows**
  - Communication lines in place for data flows (data/voice), this is worked between the MIM and the Mission
  - Project Scheduling representative start working with DSN for scheduling data flows, and DSN support request
- **1 year to 6 months out RF Compatibility test**

    - DSN RF Compatibility Information sheet filed out by Mission
    - Mission provide RF Compatibility test plan
    - Mission provide files for commands and telemetry to DSN
        - Used for preparing DTF-21 and DSN configuration tables also may be used for GDS and MOS data flows
    - DSN provide RF Compatibility test plan
    - End to End data flow with Mission Operations Center (MOC) and DSN included during this RF compatibility test period
    - DSN Compatibility test results test results released 30 calendars for signature after test completion.
- **5 months out start of Ground Data System (GDS) and Mission Operation Support (MOS) tests**
    - Usually done after DSN RF Compatibility test which includes the End to End data flow
    - Mission provided GDS test plan and requirements
        - Usually First tests will be with DSN DTF-21 followed by GDS tests with actual DSN stations
    - Mission GDS Schedule inputs for DSN Station tests about 1-2 months of starting GDS and MOS tests
- **1 month out launch rehearsal**
    - Submit schedule request to DSN for rehearsal about 2-3 months out
    - About 2 months out submit to DSN rehearsal plan (draft)
- **1 month out DSN Small Sat Readiness Review (SSRR) at JPL**
    - This is a DSN Peer review for readiness of the DSN to support launch/first acquisition of spacecraft