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RF Aperture Fee Tool Training

Glen Elliott, Serj Zadourian, Erik Monson

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Agenda

- Reasons for updating the RF Aperture fee tool
- New tool location
- New tool rules of usage
- Tool Inputs and Output
- Demonstration of RF Aperture Fee Tool

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Reasons for updating the RF Aperture fee tool

- The old tool was outdated in form and function
  - Form:
    - Excel spreadsheets that were easily duplicated without any CM
  - Function
    - Costing algorithm updated in 2018 with DSN PO approval and published in MOCS
      - MOCS = (SCaN) Mission Operations and Communications Services
        - This document was updated in early 2018 and forms the SCaN basis of communications services to all users of the SCaN networks
          - DSN
          - NEN
          - SN
      - Owned by Mission Commitments Office (MCO) at SCaN – John Hudiburg Manager

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New tool location

- The new RF aperture Fee tool is located on a JPL externally accessible server:
  - https://dse.jpl.nasa.gov/ext/
- This server is owned by Mark Johnston – PDM for SPS/SSS
- The new tool forms part of the updated LAPS tool

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New tool rules of usage

- The new RF Aperture Fee tool is:
  - Based on scheduling rules so the output is of higher fidelity
  - Outputs a ULP as part of the package
    - Several advantages from this pairing of outputs: 1) RF Aperture cost, and 2) ULP
      - Customer can create what was previously two outputs by a single tool
  - A web-based tool with quicker updates and ability to be shared across users
  - Applicable to both proposal teams and Phase E projects including SMD Senior Reviews
  - Blends work previously performed by the MIM (cost) and Scheduling (ULP) allowing both teams to work in a common environment

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Tool Inputs

- Input
- Users will note that in using the new tool three inputs are required to allow a valid output for both cost and ULP:
  1. Services (Service Editor)
     1. Selection of antennas and service types, e.g. – MSPA, DDOR, standalone
  2. Events (Events Editor)
     1. Time ordered sequence of activities over the entirety of the project's life
  3. Requests (Request Editor)
     1. Pairing services with events, e.g. – antenna configurations with time ordered activities
     2. Note: Best practice is to match the mission name per Ops 6-21 (DSN SCID) designation for spacecraft abbreviation. This will aid in using the file generated as input to LAPS tool.

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Tool Outputs

- Output
  1. xxx.apfee file stored on local hardrive (currently) in your Downloads folder through your browser
     1. Sharable to any user of the tool
     2. User must manually update version
     3. Includes RF Aperture fee and ULP
     4. The .apfee file can be ingested directly into the LAPS tool where the ULP will be processed for further scheduling processes
        1. Once the .apfee file is ingested all future work is directly translatable using LAPS capabilities
  2. Naming convention of output (currently)
     1. SCID*_v0_x.apfee – early working versions of RF Aperture fee
     2. SCID_v1.x.apfee – final version agreed to by project and IND. Good for Phases C-E.
     3. SCID_v2.x.apfee – Extended mission version. Good for Phase E extended.
- * scid in this case equals the spacecraft abbreviation, e.g. – Insight = NYST