



Project Selection and Use Committee

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Mandate

- The Purpose of the PS&U committee is
 - Review Proposed amateur radio projects for deployment onboard the ISS
 - Recommend the acceptance or non acceptance of those projects to the international delegates.



Questions proposals need to address

- Name of organization with a brief description of organizations activities
- Detailed description of Project including length of time needed to develop
- Estimate of funding including the expected source of funding
- Proposed certification procedure for the project
- Preliminary block diagram and sketches of the project



Questions proposals need to address cont.

- What involvement will the crew have in the project (development, deployment, set up and operation)?
- What facilities or support is required for this project including ISS support (example a computer, power cooling etc.) and ground support (example downloading of mail, downloading files, uploading files etc.) ?
- What is the specific educational outreach purpose of the project and how will that be implemented?
- How will the Amateur Radio Community benefit from the project?



Questions proposals need to address cont.

- If the proposal is to fix a perceived problem, What is the problem and what happens if we do nothing. What are the alternatives to this proposal.
- What Amateur Radio frequencies will the project utilize?
- Any other comments that will help the Committee evaluate this project.



Additional Criteria For Proposals

- Equipment must be capable of operating unattended for extended periods (weeks).
- Equipment should be designed to power on into the default state. A reset of the Equipment must restore it to a desired default state.
- Crew interfaces must be very simple .
- Procedures must be provided for equipment operation prior to being approved for flight.
- Systems capable of being controlled from the ground will be given preference.
- There is no assurance that equipment will be returned or brought back down.



Projects proposed at Last meeting Oct 2006

- | | |
|--------------------------|-----------------|
| ■ FT100 vs FT 817 | Recommended |
| ■ HF antenna | Recommended |
| ■ Icom ID800 Project | Not Recommended |
| ■ Packet Upgrade project | Not Recommended |
| ■ Packet Fan Project | Not Recommended |
| ■ Turbo Fan Project | Not Recommended |
| ■ Cubesat deployment | Recommended |



Projects proposed Moscow 2008

- IcomID800ProjectV2 Recommended for further study
- DCI Filter Not recommended
- Emergency power system Recommended for further development
- VC-H1 for Richard Garriott flight Flight qualification in process
- Node 3 Antenna Negotiation is proceeding for inclusion of ARISS type antennas on the Node.



Columbus module DATV

- On behalf of ARISS-Europe, I submit to the approval of the ARISS Selection and Use Committee the principle of installing in the ISS Columbus module a wideband L/S-band transponder and to provide also (D)ATV facilities, at least on downlink. (Gaston)
- Feasibility, technical and financial, has not yet been fully established.
- This concept has been proposed in 2005, but has not yet been formalized. Therefore I ask for approval of the principle so that we can safely proceed with further studies.

Columbus S & L band Antenna



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Icom D-Star Project:

- Can be used for all common Analog Voice activities, including Public Voice Access, School Schedules, Family schedules and as backup for emergencies communications.
- The Digital mode will allow a whole new dimension to Amateur radio communications by allowing the ISS crew to selectively choose which Digital Repeater they wish to use and can even make Person to Person digital calls from ISS through the Digital repeater network.



Development:

- - Off the shelf Transceiver, no development time required. Will require Flight qualified Microphone cable and Power cables
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Deployment:

- The ISS crew will need to perform the typical deployment associated with installing a new transceiver to the existing antenna ports and power supply.
- The total installation time required for the initial setup will be 1 hour or less.
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Setup and Operation:

- Same as the Kenwood for Analog operations.
- Advanced features for the Digital mode, just as easy to use as Analog modes.
 - Channel knob operation for easy of use, No function keys.



PS&U

- Recommend that the proposal be studied and reported back the PS&U committee with recommendation.



DCI filter

- The committee does not recommend this proposal be implemented unless its need is demonstrated.



Emergency Power Capability for ISS Ham

- One of the justifications ham radio on ISS is it's possible use during an emergency.
- In order to meet that requirement, there needs to be a way to operate from batteries.
- The Makita Flashlight power system meets that requirement.

The Makita battery as emergency power source

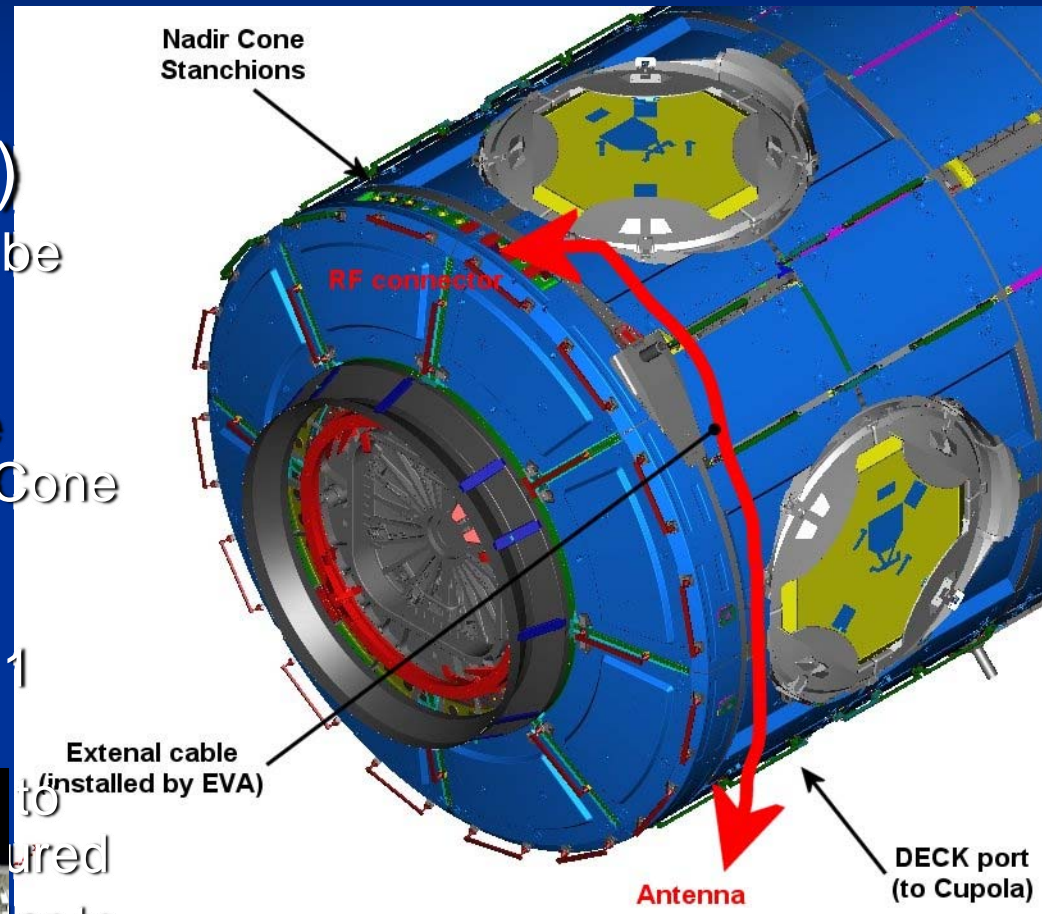
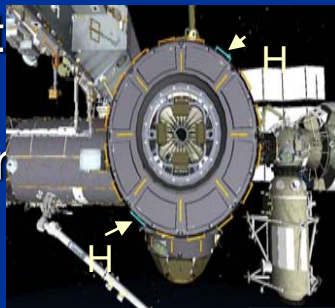
- The Makita battery system is used in many places on ISS.
- If a connector is installed in the side of the flashlight
- It could be used as a connector for this emergency power source.



TASI Solution 3 (con't)

External cable path identification (EVA section installed only)

- External cable path to be created from Antenna (assumed installed on Cupola, or in any case facing Nadir) to Nadir Cone feed through
- External cable length increased wrt solution 1 (similar to solution 2)
- Complete Node#3 to Cupola
- Tie down similar to solution 2



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