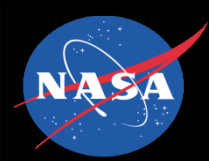




Common Instrument Interface (CII) Project Overview

NASA Earth System Science Pathfinder (ESSP)
Program Office (PO)
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CII Overview Agenda



- CII Purpose and Goal
- Approach
- Products:
 - Guidelines Document
 - Hosted Payload Opportunities Document
- Contact Information



CII Purpose and Goals



Purpose

- NASA's Earth Science Division (ESD) will be developing secondary payload Earth Science instruments that will need to be matched up with a future mission or Hosted Payload Opportunity (HPO).
- How can the probability of this matching be improved?
- If these Earth Science instruments have common instrument to S/C interfaces, then the likelihood of a match is improved.

Goals

- To develop a set of common instrument interface guidelines for secondary Earth Science instruments that will improve the matching with hosted payload opportunities.
- Identify potential hosted payload opportunities that the secondary Earth Science instruments could be matched with

Proposers are NOT REQUIRED to comply with CII guidelines



Approach



Approach

- CII working group has been working with industry, academia, and other government agencies to develop instrument interface guidelines and to identify potential hosted payload opportunities to help the matching of instruments with hosted payload opportunities
- CII has held two workshops to engage instrument developers and spacecraft bus owner / operators to solicit feedback and to develop the CII guidelines.
- Feedback is requested and welcome by filling out the feedback form from this website:
 - <http://science.nasa.gov/about-us/smd-programs/earth-system-science-pathfinder/common-instrument-interface-workshop/>



CII Products



CII Guidelines document

- LEO version referenced in the EVI-1 PEA to the SALMON-2 AO and found here:
 - http://essp.larc.nasa.gov/EV-1/evi_programlibrary.html
 - Seven top level guidelines:
 - Instrument should be classified as a hosted payload
 - Mass of the instrument should be less than or equal to 100 kg
 - Power of the instrument should be less than or equal to 100 Watts
 - The instrument data rate should be less than or equal to 10 Mbps
 - The instrument should be thermally isolated from the spacecraft
 - The instrument should be electrically grounded to a single point on the spacecraft
 - The instrument should be designed based on a mission risk classification of class C in accordance with NPR 8705.4
- Guidelines are based on historical data and workshop feedback. Future updates will reflect capabilities of defined hosted payload opportunities
- GEO guideline development has started



CII Products



CII Hosted Payload Opportunity Database

- 1/3/2012 version referenced in the EVI-1 PEA to the SALMON-2 AO and found here:
- http://essp.larc.nasa.gov/EV-1/evi_programlibrary.html
- Lists the hosted payload opportunities we have identified to date
- Includes civil space agencies and commercial opportunities for LEO and GEO
- POC for attached payload opportunities on ISS is:

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Summary / Questions



- Developed CII guidelines as a way to increase likelihood of matching instruments to hosted payload opportunities
- NASA is making a long term commitment to developing CII guidelines for secondary Earth Science instruments by forming CII team
- CII workshops provide a means to engage spacecraft and instrument developers in the generation of the guidelines
- We would appreciate your feedback

CII POC:

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