# Time Management Working Group Minutes

August 17, 2021 teleconference

## Attending

* Jon Hamkins
* Beau Blanding
* Christian Stangl
* Eric Pitts
* Robert (Lee) Pitts
* Stanley Cooper
* Yukio Yamamoto
* Marina Ohara
* Carlyn-Ann Lee
* Sinda Mejri

## Agenda:

* Introduction and review of the agenda
* Time calibration packet formats
* Mission survey tables
* Green Book status
* Other action items
* Conclusion/wrap up

The working group met virtually August 17, 2021, 2-5 pm UTC. Documents related to the meeting are stored in CWE, in the Meet Materials/2021/2021-08-17 teleconference folder.

## Minutes

## Review of action items

AI\_20\_01. Christian Stangl described the format of time calibration packets for EDRS-A and EDRS-C. EDRS-C follows the ECSS-E-70-41A telemetry and telecommand packet utilization standard. A specific time report telemetry packet is generated, including the rate of generations and the satellite onboard time. The onboard time is absolute time CUC format. EDRS-C is synchronized to GPS.

NASA and ESA has no input yet on this action item.

AI\_20\_02. JAXA has uploaded survey information from two missions, and is waiting on one more mission for the information. It is expected to be complete in one month.

AI\_20\_03. ESA has completed its mission survey input and it has been placed in the spring 2021 CWE folder.

AI\_21\_02. Sinda has not heard back from Zhang Cuitao about the completion of the Compass/BeiDou section 4. She will send another email, and in the absence of a response will restructure section 4.

AI\_21\_03. Sinda has completed a draft of section 3.6 on national and international organizations.

A1\_21\_04. Beau confirmed that the section was incorporated properly, with a few mistakes. Ref 13 should be 34. Artemis I should be Artemis. These changes were made during the meeting.

AI\_21\_01. Jon has gone through the first 50 pages of the Green Book to make edits, and compliance review. He produced an updated Green Book Draft, dated Aug. 16, 2021 and placed it in the CWE folder. It includes the following updates:

* Conformance to the required sections was checked using the CCSDS Publications Manual (<https://public.ccsds.org/Pubs/A20x0y4c1.pdf>), and minor updates to the front material were made.
* Sinda’s Green Book updates from May 24, 2021 were incorporated. (Sinda, please check that this was done properly.)
* A full read through was made of sections 1-4, with many updates made for clarity and grammar.
* All figures and tables have been renumbered and formatted consistently.
* All references previously contributed have been incorporated into the single reference list.

AI\_21\_05. Beau has completed writing section 7.1, and it is going through the release process.

AI\_21\_06. Carlyn has completed the mission survey input. She will produce a set of tables to incorporate into the green book.

## Fall meeting

Meeting in person (face to face) or remotely has not yet been decided.

### Other business

### Next meeting

The Working Group tentatively agreed to meet on September 23. The main topic will be for each author to review their sections in light of Jon’s recent edits.

## Action items

Open action items are listed in the table below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **AI#** | **Action** | **Assignee** | **Due Date** | **Status** |
| AI\_20\_01 | Each space agency to detail format of time calibration packets used in missions | NASA: Jon; ESA: Sinda; ~~JAXA: Yukio~~  ~~DLR: Christian~~ | Dec 2020: determine what can be released.  Est. Sep 2021. | Open. Agencies may be limited in what can be released. JAXA: closed  DLR: closed 8/17/2021 |
| AI\_20\_02 | Determine what/whether mission survey data can be publicly released | ~~NASA: Carlyn~~  ~~ESA: Sinda~~  ~~DLR: Christian~~  JAXA: Yukio | ~~Dec. 2020~~ Sep. 2021 | Open  NASA: closed DLR: closed ESA: closed |
| AI\_20\_03 | Complete mission survey | NA~~SA: Carlyn~~  ~~ESA: Sinda (in spring meeting folder)~~ JAXA: Yukio (1 more coming) | ~~May 2021~~ Sep 2021 | Open NASA: closed DLR: closed |
| ~~AI\_20\_04~~ | ~~Write section 2.1~~ | ~~Jon Hamkins~~ | ~~December 2020~~  ~~June 2021~~ | Closed 8/17/2021. |
| ~~AI\_20\_05~~ | ~~Write 3.5.4~~ | ~~Sinda Mejri~~ | ~~December 2020~~ | ~~Closed~~ |
| ~~AI\_20\_06~~ | ~~Write 3.5.5~~ | ~~Lee Pitts~~ | ~~December 2020~~ | ~~Open~~Closed |
| ~~AI\_20\_07~~ | ~~Write section 6 (time synchronization section)~~ | ~~Lee Pitts~~ | ~~December 2020~~ | ~~Open~~. ~~Update 1/21/2021: To-do: Provide updates on fig 3; upload refs to CWE~~  Closed. |
| ~~AI\_20\_08~~ | ~~Rework the introduction in Section 5 to remove any NASA-specific terminology~~ | ~~Jon Hamkins~~ | ~~December 2020~~ | ~~Open~~  Closed. |
| AI\_21\_01 | Prepare Green Book draft for initial WG review | Jon Hamkins | ~~March 2021~~  Oct 2021 | Open. Section 5-6 left to do. |
| AI\_21\_02 | Draft section on BEIDOU (section 4.4) | Sinda Mejri | ~~March 2021~~  June 2021 | Open.  Section is partially written. Sinda to contact Zhang Cuitao for some missing information. |
| ~~AI\_21\_03~~ | ~~Section 3.6 on international organizations~~ | ~~Sinda Mejri~~ | ~~June 2021~~ | ~~Open.~~  Closed 8/17/2021. |
| ~~AI\_21\_04~~ | ~~Double-check wording and references in Section 4.1 (move references to section 1.5)~~ | ~~Beau Blanding~~ | ~~June 2021~~ | ~~Open.~~  Closed 8/17/2021. |
| AI\_21\_05 | Write section 7.1 science activities | Beau Blanding | ~~June 2021~~  Sep. 2021 | Open. |
| AI\_21\_06 | Merge mission survey tables and add “early operations” column | Carlyn-Ann Lee | ~~June 2021~~  Sep. 2021 | Open. |
| AI\_21\_07 | Create acronyms list | Jon Hamkins | Oct 2021 | Open |
| AI\_21\_08 | Write new section 4.1.2 | Beau Blanding | Sep 2021 | Open |