

CGNS Steering Committee
Telecon Minutes
22 May 2007
11:00 AM Eastern Time

1. The meeting was called to order at 11:05 AM. There were 9 attendees, listed in [Attachment 1](#).
2. The minutes of the 21 March 2007 meeting were approved as posted on the web site.
3. Steering Committee Membership changes, updates, and issues
 - (a) Nothing to report.
4. Status of previous action items
 - (a) Hauser to coordinate with Wedan and put parallel HDF-5 version of CGNS on SourceForge as beta release.
 - i. Action item carries. Hauser and Wedan need to determine whether it makes more sense to put into Version 2.5 or into a beta release of Version 3.0. (We are currently at V2.5beta, so a first order of business should be to make V2.5 official. Then, we need to upload V3.0 as V3.0beta.) Hauser is working with the latest HDF5 version: 1.8 beta1. He and his student are benchmarking now.
 - ii. Question about memory leak in V2.5. Has it been repaired yet? Rumsey will contact Wedan to find status of various software issues.
 - (b) Poinot will continue to test and work with HDF5 external link capability.
 - i. Action item carries. As reported in March 2007 minutes, link-of-links works very well (it even follows multiple layers of links), but it gives an error upon closing. Cause of error has not been found yet. Koziol at NCSA is working with Poinot to try to find the problem.
 - (c) Hauser and Alabi will finish completing the AIAA Course Profile Form by March 2007, and will start putting together the course in detail after that.
 - i. Profile form set in to AIAA. We are awaiting their decision.
 - ii. Chawner mentioned a process they went through for a different AIAA short course. He said the instructors started putting together the notes for the course after AIAA began advertising it.
 - iii. Rumsey will e-mail Tricia Carr to get update on status of the CGNS short course.
 - (d) Wedan will make changes to fix problem associated with `NormalIndex` and `cg_boco_normal_write / cgnscheck` for unstructured grids.
 - i. Rumsey contacted Wedan. This fix has been done and checked into latest V2.5 release.
 - (e) Rumsey will arrange mini-telecon among people interested in face-based storage method.
 - i. Rumsey held telecon with Allmaras and Wedan. As a result, the proposal will be revised. Allmaras will send Rumsey revised face-based proposal for posting on website.

- (f) Rumsey will post the new Regions proposal on the website and announce it to allow for a new round of comments.
 - i. Done. Comment period has ended. Rumsey will e-mail to the Committee for a vote on the Regions proposal.
- (g) Rumsey will contact U. Ghia (chair of Committee on Standards) to discuss whether any proceeds from the course can be kept in a CGNS fund for handling incidental expenses.
 - i. Done. CoS has fully approved the idea of holding a CGNS short course. They leave it up to the CGNS Committee to determine what to do with any proceeds donated by the instructors from their honoraria.
- (h) Rumsey will develop a proposal to handle sprays of unconnected points.
 - i. Not done yet. Action item carries.
 - ii. Richard Hann and Earl Duque will ask others at their company about sprays, and will e-mail Rumsey particular needs or issues.
- (i) Wedan will send a copy of new capability for writing HDF-5, ADF, or XML to Hann.
 - i. Done. Hann will evaluate the new capability sent to him by Wedan for writing HDF-5, ADF, or XML and will report about it.
- (j) Rumsey will summarize proposal for tweak to generalized connectivity for the committee and will ask for a vote via e-mail.
 - i. Done. Summary needed to be more extensive, because it was realized that we need definitions for interpolations when abutting unstructured elements. Rumsey and Wedan defined these changes needed for the SIDS and posted on the website in mid-April.
 - ii. Comment period has ended. Rumsey will e-mail to the Committee for a vote on the modified Generalized Connectivity proposal (change to SIDS).
- (k) Rumsey will communicate with Hauser about possibility of Hauser leading a CGNS meeting in Miami.
 - i. Done. Hauser will hold CGNS meeting in Miami on Wed, June 27 at 7PM.

5. Open Items (see number 15 below)

- (a) No discussion

6. Possible CGNS short course for AIAA

- (a) No further discussion beyond discussion held during action items.

7. ISO/STEP

- (a) Nothing to report.

8. Documentation

- (a) Awaiting making V2.5 official, then V2.5 documentation will also come off beta status.

9. Software

- (a) Rumsey contacted Wedan. Valgrind had complaint in API software (solution found by Reveille in a CGNSTalk correspondence). Wedan will make fix associated with Valgrind complaint in V2.5, and will take 2.5 off beta status.
- (b) Windows XP 64 bit problem (discussed on CGNSTalk) apparently was resolved previously by Wedan in a fix to V2.4. (The issue was that longs are still size 32 bit even though pointers are 64 bit.)
- (c) VISIT plugin status — also apparently has been resolved. It is mostly a matter of re-linking to V2.5. They were building a DLL by modifying the CGNS MLL. But Wedan added the option to build a DLL to Version 2.5, so they should be able to build CGNS 2.5 as a DLL with HDF5, and then replace the VISIT DLL with the new version.

10. HDF-5

- (a) No further discussion beyond discussion held during action items.

11. Extensions

- (a) Face-based storage proposal — ongoing (Allmaras has action item)
- (b) Regions proposal — will be put to e-mail committee vote (Rumsey action item)
- (c) Generalized Conectivity — will be put to e-mail committee vote (Rumsey action item)

12. Other issues:

- (a) Next meeting is face-to-face at AIAA meeting in Miami, led by Hauser (Wed, June 27 at 7PM).

13. Meeting was adjourned at 11:45 AM.

14. Summary of **action items**:

- (a) Hauser to coordinate with Wedan and put parallel HDF-5 version of CGNS on SourceForge as beta release, either in V2.5 or in V3.0.
- (b) Pointot will continue to test and work with HDF5 external link capability.
- (c) Rumsey will e-mail Tricia Carr to get update on status of the CGNS short course.
- (d) Allmaras will send Rumsey revised face-based proposal for posting on website.
- (e) Rumsey will e-mail to the Committee for a vote on the Regions proposal.
- (f) Richard Hann and Earl Duque will ask others at their company about sprays, and will e-mail Rumsey particular needs or issues.
- (g) Rumsey will develop a proposal to handle sprays of unconnected points.
- (h) Hann will evaluate the new capability sent to him by Wedan for writing HDF-5, ADF, or XML and will report about it.
- (i) Rumsey will e-mail to the Committee for a vote on the modified Generalized Connectivity proposal (change to SIDS).
- (j) Wedan will make fix associated with Valgrind complaint in V2.5, and will take 2.5 off beta status.

15. Summary of **open items** from prior meetings (these are different from action items, in that they are open or unresolved issues that we want to keep track of, but there are no specific actions required of anyone at this point in time):

- (a) Keep track of/resolve HDF-5 “to-do” list ([Attachment 2](#)).
- (b) Keep track of progress with ISO/STEP.
- (c) Need for official certification process (test for compliance)
- (d) Need to add Karman’s additional PYRA element type to allowed list (in software and in SIDS). Need to wait until V3.0 for this due to compatibility issues.
- (e) Need to upgrade/update *User’s Guide* as appropriate (such as additional specific examples)
- (f) Need to resolve slow behavior and larger file sizes that can occur in CGNS files when there are many (thousands) of nodes.

Attachment 1: Attendees

Steve Allmaras	Boeing
John Chawner	Pointwise, Inc.
Earl Duque	Intelligent Light
Urmila Ghia	U. Cincinnati
Richard Hann	ANSYS/CFX
Thomas Hauser	Utah State
Marc Poinot	ONERA
Chris Rumsey	NASA Langley
Charlie Towne	NASA Glenn

Attachment 2: Tentative to-do list in association with HDF-5 switchover

- Complete and test parallel implementation
 - under development
- Complete and test API capability to automatically detect and switch between ADF and HDF-5 (transparent to user?)
 - under development
- Assess/minimize impact on software vendors using CGNS
 - under development (success with automatic detection transparent to user will minimize impact)
- Make changes recommended by HDF-5 to improve usability with HDF-5 (e.g., character strings as opposed to character arrays)
- Assess compression capability of HDF-5
- CGNS configure scripts will need to be modified to check for availability of appropriate HDF-5 libraries.
- Possibly add flag-based options when opening CGNS files. For example: “follow links” vs. “don’t follow links”; “use ADF” vs. “use HDF-5”; “translate file automatically” vs. “leave the file as-is”; “compress” vs. “don’t compress”.
- Look into eliminating need for ID’s from MLL
- Resolve “link-of-links” problem: will require HDF-5 fix by NCSA
 - under development