

CGNS Steering Committee
Meeting Minutes
7 January 2004
7:00 PM Pacific Time

1. The meeting was called to order at 7:05 PM. There were 17 attendees, listed in [Attachment 1](#).
2. The minutes of the 20 November 2004 telecon meeting were reviewed and approved as posted on the web site.
3. Status of previous action items:
 - (a) Check in latest HDF-5 software to SourceForge (Wedan):
 - A version was posted to SourceForge earlier, but Bruce has since worked on it more. The latest version will be posted to SourceForge (under CVS) soon, after Marc Poinot has had a chance to look at it. It can do links OK now. It is basically complete, although Bruce identified a bug in the HDF-5 software, which he reported to them.
 - (b) Add home page to SourceForge (Wedan):
 - Done.
 - (c) Proposal for reinstating removed element list and range (Wedan):
 - Committee decided to reinstate this without formal proposal review, as of official release of Version 2.3 (see #7 below). Rumsey to check with Towne to see if SIDS documentation exists for this capability already.
 - (d) Problem with ADF children's IDs between 2.2 and 2.3 (Poinot, Wedan)
 - Resolved.
 - (e) Experiment with disk block size (Alonso, van der Weide)
 - 4096 = standard
 - Biggest speed-up was maybe 25%, usually it was 5-10%
 - Decided to leave as-is; maintains backward compatibility
 - (f) Do links cause slowdown? (Alonso, van der Weide)
 - Yes, when many linked nodes are present
 - Problem is number of zones in link — there are a lot of links to `GridCoordinates` when there are a lot of zones — when you open the file, it goes through all the tree
 - Bruce will look into this issue further (perhaps can modify open call so it does not follow links).
 - (g) Prepare/prioritize extensions (Bush, Rumsey)
 - Done (discussion later)
 - (h) Post charter for comments (Rumsey, Edwards):
 - Done (discussion later)
 - (i) Proposal for partial read/write posted to website (van der Weide):
 - Done.

4. Charter (Rumsey)
 - (a) Only 2 minor comments were made via e-mail during the last 2 months.
 - (b) Vote was taken, charter was accepted.
 - (c) Rumsey will finalize and send to Towne to post.
5. ISO status/discussion (Cosner):
 - (a) Rumsey reported for Cosner: no formal change of status. Boeing funding for 2004 remains unresolved. With regard to parts 52, 53, and 110, Ray has received several formal comments from several countries, but they are low-level and easily addressed.
6. Documentation issues and CGNSTalk issues (Towne):
 - (a) Rumsey reported for Towne: for the updated AIAA recommended practice, AIAA will send a ballot to the CGNS committee sometime soon. `ElementList` and `Range` will need to be added into the SIDS when that functionality is turned back on (see #7 below). Regarding spam problem on CGNSTalk, it is not bad enough yet to warrant any action.
7. Software status/discussion (Wedan):
 - (a) Discussion took place about releasing CGNS V2.3 (removing from beta status). This was formally voted on and accepted by the committee.
 - (b) It was also decided to put back in the `ElementList` and `Range` capability, but this will require modification to the SIDS.
 - (c) Bruce will prepare V2.3 for official release - need to coordinate with change to SIDS for `ElementList` and `Range`.
 - (d) Bruce will look into formally archiving all old versions of the software.
 - (e) Bruce will remove the webpage containing binaries - in the future, all software must be obtained through SourceForge.
8. HDF-5 status/discussion (Poinot, Wedan, Power):
 - (a) Thomas Hauser described his work (Reno AIAA paper 2004-1088) regarding CGNS with HDF-5 for parallel (created new calls in API) — a start, still needs more work.
 - (b) Power, Alonso, agreed to help test new software.
 - (c) Edwards and Hauser will coordinate their efforts in this area.
 - (d) At some point, Bruce will put preliminary version of Hauser's software on SourceForge.
 - (e) Noted that HDF-5 is slower than ADF for small files (< roughly 1 million points). The file size is also bigger.
 - (f) Committee decided that it is still too early to officially switch over to HDF-5 (from ADF). We will work toward it. When we go, it will be a "major" release (3.0).
 - (g) There is already a translator ADF -> HDF-5 available. When we go to V3.0, it should probably automatically make the translation for the user (in much the same way that the current software automatically upgrades earlier versions to the latest).
9. Extensions status/discussion (Bush, Rumsey)

- (a) Extensions were discussed and prioritized, regarding possibility for immediate implementation by Intelligent Light (as part of their SBIR contract). See [Attachment 2. Rumsey to send a summary to Edwards.](#)

10. Other issues:

- (a) Poinot plans to submit a proposal relating to SIDS changes needed in conjunction with an XML CGNS “compiler” he has been developing.

11. Meeting was adjourned at 9:15 PM.

12. Summary of action items:

- (a) Wedan to post latest and greatest HDF-5 version (including link capability) to SourceForge.
- (b) Rumsey to check with Towne to see if documentation still exists for `ElementList` and `Range` (removed prior to V2).
- (c) Wedan will look into issue of links further (perhaps can modify open call so it does not follow links).
- (d) Rumsey will finalize updated CGNS Charter and send to Towne to post.
- (e) Wedan will prepare V2.3 for official release - need to coordinate with change to SIDS for `ElementList` and `Range`.
- (f) Wedan will look into formally archiving all old versions of the software.
- (g) Wedan will remove the webpage containing binaries - in the future, all software must be obtained through SourceForge.
- (h) Rumsey to send a summary of priority list of Proposals for Extension to Edwards.

Attachment 1: Attendees

Juan Alonzo	Stanford
Steve Barson	Boeing
Bob Bush	Pratt & Whitney
David Edwards	Intelligent Light
Thomas Hauser	Utah State University
Bill Jones	NASA Langley
Todd Michal	Boeing
Chris Nelson	ITAC
Marc Poinot	ONERA
Greg Power	USAF/AEDC
Chris Rumsey	NASA Langley
John Steinbrenner	Pointwise
Greg Stuckert	Fluent
Stephane Viala	AIRBUS
Edwin Van der Weide	Stanford
Bruce Wedan	ICEM CFD
Andreas Wierse	VirCinity

Attachment 2: Prioritization of Proposals for Extension

Extension	Recommendation for near-term implementation	Changes needed to SIDS?	Comments
1) Partial read/write	H	N	API only (5 functions) — see <code>cg_coord_read</code>
2) Family extensions	H	Y	Simple
3) <code>GridConnectivity</code>	M	Y	Simple
4) <code>BCDataSet</code>	L	Y	Implementation similar to #5
5) <code>UserDefined</code>	H+	Y	Highest priority — need to include <code>UserDefined</code> as child, and limit to 10 layers
6) New BC types	L	Y	Some already exist — interior BC types should not be BCs
7) & 9) Elements/Chemistry	L	Y	Needs more definition — also, make consistent with existing Chemistry — get more buy-in from chemistry community
8) Regions	L	Y	Important, but need to add similar capability for Structured also (in consistent fashion)
10) Soln specific BCs	L	Y	Transition still needed; need for others may not be justified
11) Electromagnetics	H	Y	Simple, already used by Wind code; need to rename “Sigma”, change label names
12) Multiphase	L	Y	Important, but not ready yet
13) Hierarchical	L	Y	Important, but not ready yet