

CGNS Steering Committee Telecon Minutes  
7 December 2000, 2:00 Eastern

1. The meeting was called to order at 2:00 Eastern time. There were 18 attendees, listed in Attachment 1.
2. The minutes of the 25 October meeting were reviewed and approved as posted on the web site.
3. Steering Committee Nominations — There are currently 13 ‘voting’ organizations on the Steering Committee. There have been 3 nominations to be added: Alexandre Corjon from Aerospatiale Matra Airbus, Greg Power from USAF/AEDC/Sverdrup and John Chawner from Pointwise. After some discussion, it was decided to recommend increasing the number of voting organizations called for in the Charter from 15 to 16. Bob Bush will prepare a motion for the January meeting that will increase the number of voting organizations to 16 and put forward the 3 nominations. We will re-address the limit for voting members each year, as the need arises.
4. Logo — John Chawner discussed the proposed logos developed by the design firm The DPC Group (<http://www.dpcgroup.com/>). This firm has offered to create a logo for no cost, provided we acknowledge them on our web site and where appropriate, and provide a letter acknowledging the contribution. There was some concern about the duration of any commitment we make due to the voluntary and transient nature of our organization, and the potential to forget the commitment over a long time period. The suggestion was to limit the duration to 1–3 years, subject to negotiation. There was general agreement that the designs without the ‘swan’ were preferred (reluctantly by some who remember the ‘ugly duckling’ days), and to change the tag line to “CFD Data Standard” for clarity. There was also concern about gray-scale representation of the ‘swirl’. John Chawner will coordinate with the design firm on revisions and present refined choices at the January meeting. We do not feel there is sufficient need to register as a trademark for now. We anticipate a vote to accept a final design in January, and subsequent posting and publicity on the Web site and on documentation.
5. ISO Status — Ray Cosner was not available for the telecon, but sent this summary of the status:

I reviewed our plans on Oct 17 with the ISO Change Management Board, which is the group within ISO responsible for overall scheduling and coordination of standards proposals within the area of Engineering Analysis Tools. I reviewed the current state, and indicated we were planning to present both a New Work Item (Gate 2) and a Committee Draft (Gate 3) at, hopefully, the next meeting in February. That’s an aggressive date, and it easily could slip to the following meeting in June. The review generally focused on the scope of the proposed standard, the plans for the next year, and the current degree of acceptance of the CGNS starting point. This review went well, and the Chair remarked that we were especially well prepared.

In meetings of the ISO Working Group for Engineering Analysis on Oct 16–19, there were no issues with the current content, and it looks like Sweden (Volvo) is back on board as a supporter. However, the Chair of this Working Group (Keith Hunten, Lockheed Martin, Fort Worth) expressed an opinion that all the engineering analysis standards should be grouped in one AP, and that we should not be planning on a separate AP. This is a philosophical point, and as we are the second standard to come forward in this area we are the lightning rod for resolution of this organizational issue.

Up to now, ISO standards all use ASCII data storage. Obviously, that is impractical for CFD data. Therefore, we will have to take on the additional task of defining and “selling” an agreed ISO standard mechanism for binary data storage. CGNS-ADF obviously is an attractive answer, but there is a lot of interest in the ISO community in HDF. I am trying to increase my knowledge of HDF now. If any members of this CGNS committee have detailed knowledge of HDF, I would appreciate getting your comments as to its strengths

and weaknesses in storing CFD data. ISO will insist on a single approach to binary storage for any application, so I am concerned that achieving consensus on this point could end up being a significant diversion of our effort.

We will hold a four-day meeting in Seattle, Dec 11–14, to continue the development of the ISO standard for fluid dynamics and associated sub-elements such as mathematical representations and binary storage. Keith Hunten will attend, and we hope to finally resolve all issues associated with the organization and structure of this standard. The Boeing preference is to have a stand-alone AP for fluid dynamics, but the overarching goal is to get all parties to agree on the course. Without consensus as to how the fluid dynamics standard relates to other ISO standards, we cannot expect to pass Gate 3. We are bringing in a consultant from UK (David Leal), with whom we have worked before, to help us with details of the structure and content of the actual written standard. The chief Boeing information modeler, Peter Wilson, will participate in all four days, as I will. Wilson, by the way, has written a number of books on ISO standards and information modeling (you can review his books at Amazon.Com). As an outcome, at the end of the meeting we expect to have agreement among all parties as to how the standard will be organized, and we expect to make substantial progress in the actual definition and documentation of the standard. I will report on the progress at the meeting of the CGNS committee in Reno, in January.

There was some discussion, initiated by Michel Delanaye, on the need to define the binary format for the data. There was general consensus that the CGNS committee should be primarily concerned with the intellectual content of the data — i.e. the SIDS information. The actual implementation and representation in binary format may evolve as the technology evolves (e.g. Oracle database, HDF, XML, others). The CGNS committee does not have the expertise to define the binary standard, and we do not wish to take a stand on what the appropriate binary format should be. However, it is recognized that ISO does not currently support binary data, and ASCII data is not viable for CFD data. Thus the ISO working group may be forced to define a standard, and this definition could hold up adoption of the AP on Fluid Dynamics. We would like to encourage the ISO working group, but keep the focus of the CGNS committee on the SIDS content.

6. Documentation — Charlie Towne reported that the SIDS V2, Beta 2 is on the web. Rather than combining the SIDS and File Mapping documents, we are now looking at having separate documents, but closely cross-linked on-line. The Draft User's Guide is on the web, no comments to date. Steve Legensky is working the paper, and has collected survey results. We requested a summary of the results at Reno.
7. User Support — There was discussion of the need for 1/2 to 1 person effort as Software Focal Point. Diane Poirier has provided this support in the past, sponsored by ICEM-CFD Engineering. First the committee wants to recognize and express its appreciation for this support for the past 3 years. ICEM will be scaling back this support and we need to define alternative ways to provide this support. Several options were considered: cycling through various organizations on a 1 year basis, collecting dues from Steering Committee Members to pay for this support, and various combinations. This should be a prime focus for discussion at the January meeting.
8. Extensions — Michel Delanaye discussed the Hierarchical structures proposal, and the response from M. Aftosmis. The points in the response were well-taken, and further refinement and participation by other organizations is encouraged. One general point of discussion was trying to keep the standard restrictive vs. general with many possibilities to check. We are leaning toward restrictive with applications responsible for re-constructing data. In this case, it may lead to the requirement to store the history of refinements, so there are still issues to be worked out. Michel Delanaye will try again to reinvigorate the discussion, including more timely responses and broader participation (e.g. Aftosmis, Fluent, ADAPCO).

Other extensions are in implementation for V2, or preparation. Diane will try to get the Chemistry extension implemented for V2, but it may slip beyond the freeze date. There is also a new proposal for `UserDefinedArrays` which would be valid children of many nodes. We will discuss these issues at the January meeting.

9. Additional Items — The January Meeting is currently scheduled for Tuesday night of the Reno conference. Due to potential conflicts, we have altered the start time to 8:00. Bob Bush will attempt to notify AIAA and have the change published. We will also try to post a sign indicating the change. Current agenda items include:

- Steering Committee Changes
- Logo disposition
- CGNS 2.0 release sequence
- Survey Results - Legensky
- Developer Focal Point
- Extensions Status

Attachment 1: Attendees

Bob Bush	UTRC
Chris Rumsey	NASA Langley
Dave Schowalter	Fluent
Don Roberts	Ametec
Charlie Towne	NASA Glenn
Dan Dominik	Boeing
Diane Poirier	ICEM CFD Engineering
Francis Enomoto	NASA Ames
David Edwards	Intelligent Light
Doug McCarthy	Boeing Commercial
Todd Michal	Boeing Phantom Works
Michel Delanaye	Numeca
John Chawner	Pointwise
Kevin Mack	ADAPCO
Theresa Babrauckas	NASA Glenn
Bill Jones	NASA Langley
Armen Darian	Boeing Space
Ed Hall	Rolls-Royce-Allison