CGNS Telecon Minutes

Tuesday, 5 June 2018, 10:00am Eastern Time

1. The meeting was called to order by Bob Bush. Attendees are listed in Appendix A.

2. 27 March 2018 minutes were approved as published on the website.

3. Steering Committee Issues

    a. None

4. Steering committee attendance:
    a . Committee members (telecon last date attended):

Airbus	03/2018
ANSYS	06/2018
Boeing	06/2018
Cenaero	03/2018
Colo State	06/2018
DLR	06/2018
HDF	06/2018
IL	03/2018
NASA LRC	06/2018
Numeca	06/2018
ONERA	06/2018
P&W	06/2018
Pointwise	06/2018
SAFRAN	06/2018
Sandia	10/2017
Tecplot	10/2017
TTC	11/2016
U Colo	01/2017
U Kansas	06/2018

5. Discussion
    a. The CFDSI Kickoff was held last month at U Colorado, which won a recent NSF grant. Breitenfeld attended. He said the kickoff was primarily trying to determine what the future institute should be about. It was mostly attended by academics; not many industry people in attendance. Ken Jansen of U Colorado may be interested in joining the CGNS committee (or possibly someone else from the institute). Rumsey to contact him about it.
    b. Steve Karman of Pointwise was included this meeting in the discussion on high order. However, Hillewaert was not in attendance, so more discussion will have to happen next time. There are still some disagreements that need to be ironed out. Leicht of DLR introduced himself – he is also interested in the high-order discussion. Karman mentioned some current work for the AF – and how it ties in with CGNS; it is defining a schema so that a downstream user can re-associate things appropriately with the original geometry.
    c. Wang & Karman are recommending including multiple high order approaches, including keeping P4. They recommend one proposal with both elements in it. For the high order extension proposal, we will need the latest official status from Hillewaert before moving forward.

6. Review action items
    a. Continue to review outstanding JIRA items/tasks.

        i. Item carries. Breitenfeld would like to do another CGNS release in the next several months, but need to fix a few things first. In particular: MPI running out of communicators – may be an HDF issue? This is a blocker for NUMECA also. Breitenfeld mentioned that HDF 1.10.3 is due for release soon.
    b. Hillewaert, Poinot, Wang, and others to decide about CAD classification and work toward finalizing high order and related CPEXes.
        i. Still ongoing. The interested parties to continue discussions.
    c. Breitenfeld to update documentation for Intel compilers (serial and parallel) for Windows.
        i. Not done yet, carries.
    d. Guzik to finalize implementation of CPEX 0040.
        i. Not done yet, carries. He would like to get this done prior to the next release.
    e. Baker to perform limited testing of CPEX 0041 implementation available on github.
        i. Done; limited testing worked OK.
    f. Legay to work with Breitenfeld to add a test of the CPEX 0041 related software.
        i. Done. If no conflicts, then this fix can be pulled in.
    g. Hillewaert to specify how the CGNS standard for P4 high-order mesh definitions needs to be changed to be consistent with existing textbook standard.
        i. Item transferred to Baker and Karman of Pointwise.

7. Ongoing action items
    a. Continue to review outstanding JIRA items/tasks.
    b. Hillewaert, Poinot, Wang, and others to decide about CAD classification and work toward finalizing high order and related CPEXes.
    c. Breitenfeld to update documentation for Intel compilers (serial and parallel) for Windows.
    d. Guzik to finalize implementation of CPEX 0040.
    e. Breitenfeld to pull in the new CPEX 0041 related API software.
    f. Baker and Karman to specify how the CGNS standard for P4 high-order mesh definitions needs to be changed in the CGNS docs to be consistent with existing textbook standard. Once they define it, Rumsey to help make the docs change.

8. Baker mentioned recent push at Pointwise to test exascale grids. There is concern about possible performance issues because of all of CGNS's metadata. Breitenfeld said the largest grid he had previously tested was a grid with 8 billion elements on Mira. He is interested to hear more about Pointwise's experiences.

9. The next meeting is tentatively scheduled for Tuesday, 11 September 2018 at 10am Eastern.

10. Adjourn

Appendix A – Attendees

Pat Baker	Pointwise
Scot Breitenfeld	HDF Group
Bob Bush	Pratt & Whitney
Tony Garratt	ANSYS
David Gutzwiller	NUMECA
Stephen Guzik	CSU
Dimitri Kamenetskiy	Boeing
Steve Karman	Pointwise
Pierre Jacques-Legay	ONERA
Tobias Leicht	DLR
Marc Poinot	Safran
Chris Rumsey	NASA Langley
ZJ Wang	U Kansas