CGNS Telecon Minutes

Tuesday, 31 January 2017, 10:00am Eastern Time

1. The meeting was called to order by ZJ Wang. Attendees are listed in Appendix A.

2. 29 November 2016 minutes were approved as published on the website.

3. Steering committee issues:
   a. Committee members (telecon last date attended):
      a. Airbus   01/2017
      b. ANSYS   12/2015
      c. Boeing   01/2017
      d. Cenaero   11/2016
      e. Colo State   09/2016
      f. HDF   01/2017
      g. IL   09/2016
      h. NASA LRC   11/2016
      i. ONERA   11/2016
      j. P&W   01/2017
      k. Pointwise   01/2017
      l. SAFRAN   01/2017
      m. Tecplot   01/2017
      n. TTC   11/2016
      o. U Colo   01/2017
      p. U Kansas   01/2017
   b. Scot Breitenfeld is in contact with the DoD HPC Modernization Program (https://www.hpc.mil/) and indicated that they are exploring joining the Steering Committee as they have several uses for CGNS and are interested in parallel improvements. The committee would welcome their participation.

4. Discussion
   a. Software status (Breitenfeld)
      Low activity – no change in status to report

   b. Parallel NGON read/write extension (Legay)
      Legay was not available for the telecon – he sent an e-mail that he hopes to report progress on the NGON extension soon.

   c. Storage of high order solutions extension (Hillewaert)
      Hillewaert was not available for the telecon. Not much activity in this area. Report next meeting.

   d. Potential NSF proposal status (Breitenfeld)
      Scot has been working on the proposal, due early March. He re-wrote the previous proposal de-emphasizing usability and maintenance, and is instead proposing extensions to improve parallel performance. The proposal is to assign a core to perform I/O (using the software packages Damaris, http://damaris.gforge.inria.fr/doku.php) by aggregating the I/O from the compute nodes to a single cgns file, or to a series of mini-cgns files with a global cgns file that are linked using the HDF5 VDS feature so that an application sees a complete file, but it is spread over several files. Some technical questions and discussions from Imlay and Wang. Scot needs letters of support and collaborators. He will send a draft letter suggesting collaborative benchmarking at different organizations computer systems to national labs, PW and Boeing. Bush (PW) and Kamenetskiy

(Boeing) will ping their organizations to see if they can get approval to submit letters.

    e.   Geometry storage in CGNS (ZJ Wang)

ZJ has detected continuing interest in the community for CGNS to support geometry storage. He has an idea to use the higher order surface patches already defined in CGNS to represent the surface. Some discussion on who would do the surface fitting (generate the patches) and the need to maintain the existing relationship between Families and their connection to CAD. ZJ will draft a short description of his proposal to circulate in the Steering Committee to gauge interest in this approach (before writing a more formal extension proposal).

5. Review action items

    a. Continue to review outstanding JIRA items/tasks.

We should consider releasing a new version soon. There have been a few minor updates, but there are a few outstanding items that should be completed before release. Carry item

    b. Breitenfeld to follow up on "too many communicators" issue.

No action since last meeting – carry item

    c. Rumsey to continue to communicate with Garratt (Ansys) about his work to fix compilation of Fortran on Windows.

Chris was not available – carry item

    d. Legay to revise NGON proposal to final form, which will be made into a new CPEX for final consideration, voting, and implementation.

Legay was not available, but there has been progress and he hopes to have something soon. – carry item

    f.   Hillewaert will work to wrap up a proposal for storage of high-order grids and data.

Hilewaert was not available. Not much activity - Carry item

    f. Breitenfeld to take the lead for revising and submitting a new NSF proposal by March 2017.

Actively pursuing. – Carry item

6. New business

    a. None.

7. Ongoing Action Items

    a. Continue to review outstanding JIRA items/tasks.
    b. Breitenfeld to follow up on "too many communicators" issue.
    c. Rumsey to continue to communicate with Garratt (Ansys) about his work to fix compilation of Fortran on Windows.
    d. Legay to revise NGON proposal to final form, which will be made into a new CPEX for final consideration, voting, and implementation.
    e. Hillewaert will work to wrap up a proposal for storage of high-order grids and data.
    f. Breitenfeld to take the lead for revising and submitting a new NSF proposal by March 2017.
    g. Wang to draft short proposal for storing geometry in CGNS via higher order patches for circulation through the committee.

8. The next meeting is tentatively scheduled for Tuesday, 25 April 2017 at 10am Eastern.

9. Adjourn

Appendix A – Attendees

Pat Baker	Pointwise
Scot Breitenfeld	HDF Group
Bob Bush	Pratt & Whitney
Simone Crippa	Airbus
Stephen Guzik	Colorado State
Scott Imlay	Tecplot
Dimitri Kamenetskiy	Boeing
Marc Poinot	SAFRAN
ZJ Wang	U Kansas