Participants: ~40

Date: 2024 July 16
Brent's presentation
1. Self-introduction of subgroup leaders

2. Overview of working group page, geometry page, grid page

3. OAT15A grid updates:
   - HeldenAero update: 2D OAT15A mesh overview. Produced unstructured family of meshes from CAD with 230mm chord and 780mm span. Mixed-elements, hexes and prisms. Following global coarsening vs global refinement, starting from medium resolution grid (Y+=1). Outer-boundary at 20 chord lengths. Mesh width is 10% span, but one-cell wide. Tiny (30,000 nodes) to ultrafine (26 Mil nodes), with medium (430,000 nodes). Upper surface refinement with triangular shape. Mesh layer split near TE corners to reduce cell count.
   - Comments:
     ① Fulvio: we obtained good results with much lower cell count by lowering the average Y+. Worried the grids are too fine, especially for unsteady calculations where the smallest cells will have an impact on the time step.
       Brent: based on historical best-practices provided to HeldenAero and Cadence.
       Rick & Carolyn: the feedback is good, we can always iterate.
       Andrew: ideally one would do adaptive mesh refinement for each angle of attack. These should be considered as a starting point.
     ② Ilyas: 1) maybe specific to ONERA, but the wake is not well resolved; 2: the outer boundary is too small in ONERA's experience, we have seen impact on drag and 500 chord lengths were even considered; 3: anisotropic refinement might be problematic for some more academic solvers.
       Rick: we did not have problems in the past with either anisotropy stretching and 20 chords outer boundary, but we can always iterate.
   - Update from Cadence: grid based on ONERA provided paper. C-H grid, outflow is 100semi-span, 39,000mm (~170 chord lengths). Provided both structured and unstructured (prisms, hexa) grids. Structured cell count (L1, 52K) to (L6, 1.3M). Unstructured cell count (L1, 57K) to (L6, 909K).
4. Description of cases, presentation of subgroup structures, and schedule.