CFDB – CFD Software GmbH:
- SME based in Berlin, Germany
- Technology provider for high-fidelity CFD and CAA using state-of-the-art methods

Technical contribution:
- **KGT2; Advanced simulations for drag & noise reduction**
  - Robust hybrid RANS-LES for turbulent flow prediction
    - Drag prediction for challenging, separated flows
    - Airframe noise source prediction
  - Efficient solvers for low-Mach number flows
  - Methods and best-practice for low spurious noise
  - Simulation of flow control devices (passive and active)
  - Industrialised methods for complex configurations

Projects:
- **Go4Hybrid** (coord)
  - EU FP7, L1, 2013-2015
  - Further improvement of hybrid RANS-LES models
- **JERONIMO**
  - EU FP7, L1, 2013 – 2018
  - Study of jet / wing interaction noise
- **HELIDES** (coord)
  - EU CleanSky, 2011 – 2013
  - DES for drag prediction of highly-complex helicopter geometry

Previous experience of CFDB personnel:
- **ATAAC**
  - EU FP7, L1, 2009 – 2012
  - Improvement of hybrid RANS-LES
- **VALIANT**
  - EU FP7, L1, 2009 – 2013
  - Validation of tools for numerical prediction of broadband noise

Future activities:
- Development of modelling and numerics strategies for aeroacoustic prediction with low spurious noise on unstructured grids
- Development of improved hybrid RANS-LES methods to reduce Grey Area problem
- Simulation & analysis of jet / wing interaction noise using unstructured meshing strategy
- Development of discrete adjoint optimisation methods (collaboration with RWTH-Aachen)
  - Optimisation of AFC parameters for high-lift configurations with DES
  - Shape optimisation
  - Acoustic liner design optimisation
  - Optimisation of vortex generator configuration
- Hybrid parallelisation strategies
- Industrialisation of CAA solver on GPU hardware (factor 250 speed-up relative to CPU achieved for 2D solver)

Selected Publications:

Contact Data:
- Prof. Frank Thiele, [frank.thiele@cfd-berlin.com](mailto:frank.thiele@cfd-berlin.com), +49 30 8090 7893, Wolzogenstr. 4, 14163 Berlin, DE
- Dr. Charles Mockett, [charles.mockett@cfd-berlin.com](mailto:charles.mockett@cfd-berlin.com), +49 30 5900 83 320