Thanks for hanging in there with us! We've been working to include many of your suggestions and advice into a full new version of *RhinoCFD.* Here are the major improvements we've made to the software so far:

Rhino 6 Compatibility

All the features will work with the same ease as you are used to in the past, while enabling many of Rhino6's new features to be compatible with *RhinoCFD*.
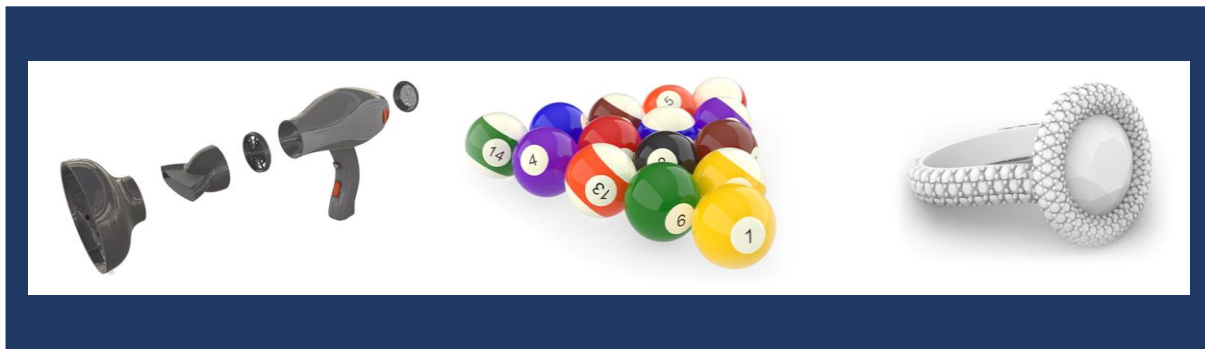
Simplified Menus

One of the key goals of *RhinoCFD* is to bring CFD to a host of new users that, typically, are not familiar with fluid simulations. With that in mind, we have further simplified our Main Menu (and updated the font) so that you are shown only the most relevant options needed to perform a simulation. In case they are needed, the old full Menus are still there, simply hidden under a "more" button.

MiniRes

One of the key problems with CFD is that it is not always straightforward to determine whether your simulation has converged (worked) or not, and, hence, if you can trust the results produced. That is why after every simulation we have created a MiniRes (ult) file which displays the error in each equation solved. More importantly, it colour-codes the errors so you know what sort of levels *should* be acceptable for your run. This is not a guarantee, but it should give you a good idea of what is happening.

CHAM

Convergence information for run completed at 16:56:09 on Friday, 21 September 2018

on sweep 48

Title: 4 P

Variable	Source Sum	Residual Error (%)	Max Correction	Location (IX,IY,IZ)
P1 (Continuity)	-7.194234E-06 (kg/s)	0.997329	14.338472 (Pa)	(19, 52, 35)
U1 (X Velocity)	N/A	4.466197	0.425517 (m/s)	(39, 11, 9)
V1 (Y Velocity)	N/A	4.051003	0.732193 (m/s)	(41, 11, 8)
W1 (Z Velocity)	N/A	4.020025	0.260834 (m/s)	(18, 21, 20)
KE (Turbulent Kinetic Energy)	N/A	7.671095	0.166598 (J/kg)	(19, 22, 22)
EP (Rate of Dissipation of KE)	N/A	7.475048	431.278168 (J/kg/s)	(22, 33, 21)
TEM1 (Temperature)	4983.80957 (W)	9.718517E-10	124.245735 (°C)	(11, 36, 10)

CPU time of run 25 s

Colour Maps

Rainbow colourmaps have always been popular for displaying data, but recent research has uncovered several problems with them. How bright a colour is can affect how it is perceived and, because rainbow colourmaps do not typically control for brightness, they often include perceptual flat spots (where the change in colour is hard to distinguish) and perceptual bright spots (where the colour appears to change more quickly than it should). An ideal colourmap is one where the perception of the change of colour is the same throughout. These perceptually uniform colourmaps give a more accurate representation of the underlying data, and will work even for colour-blind users. This latest version of *RhinoCFD* contains a number of perceptually uniform colourmaps as well as our traditional rainbow colourmap. Those included will be particularly useful for heating and particle dispersion simulations.
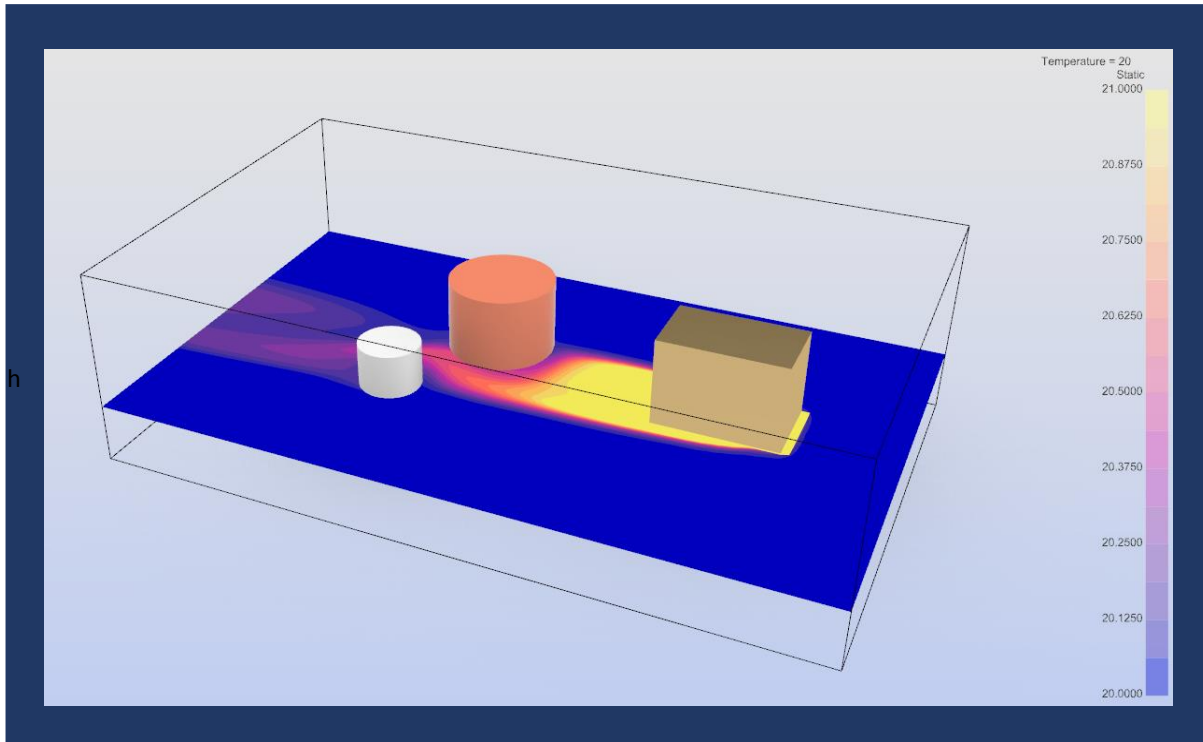
Looking to the future

Here is a brief indication of (near) future developments:

• Improved and simplified results panel and probe display
• PHISUM: combine wind results to obtain probabilistic wind conditions for pedestrian comfort
• Faster surface contouring
• Improved solar radiation modelling
• Faster solver time
• Wave Inlets