# Software design suite designed for wide range of machines

The new CD-Adapco SPEED 2012 software design suite release consisting of the following 5 main machine programs

1. PC-BDC Brushless PM Motors (issue 9.1)
2. PC-IMD Induction Motors (issue 4.2)
3. PC-DCM DC Brush Motors (issue 3.9)
4. PC-WFC DC and AC Wound Field Motors (issue 2.7)
5. PC-SRD Switched Reluctance Motors (issue 8.8)

are now available with

- a floating license system using FlexLM and
- a link that was established to STAR-CCM+ (the CFD program of CD-adapco) to exchange the data needed from SPEED (mainly geometry and losses) to STAR-CCM+ to setup the CFD 3D model and run an advanced thermal calculation of the entire electrical machine (see 3 figures below).

Each SPEED program itself is intended for designing and calculating a wide range of electro-magnetic machine performances. The design processes used in all of SPEED's programs are fast and efficient. A number of templates are used to establish the machine's dimensions, to assist in laying out the winding, to select the desired materials, and to compute the machine's performance at a single operating point, or over a whole speed/torque range. A strong link to SPEED's own FEA program PC-FEA gives accuracy, a high confidence level and offers the analysis of fine details or even solve difficult problems. Finally the scripting facilities (via ActiveX) ease and widen the use of the SPEED software.

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