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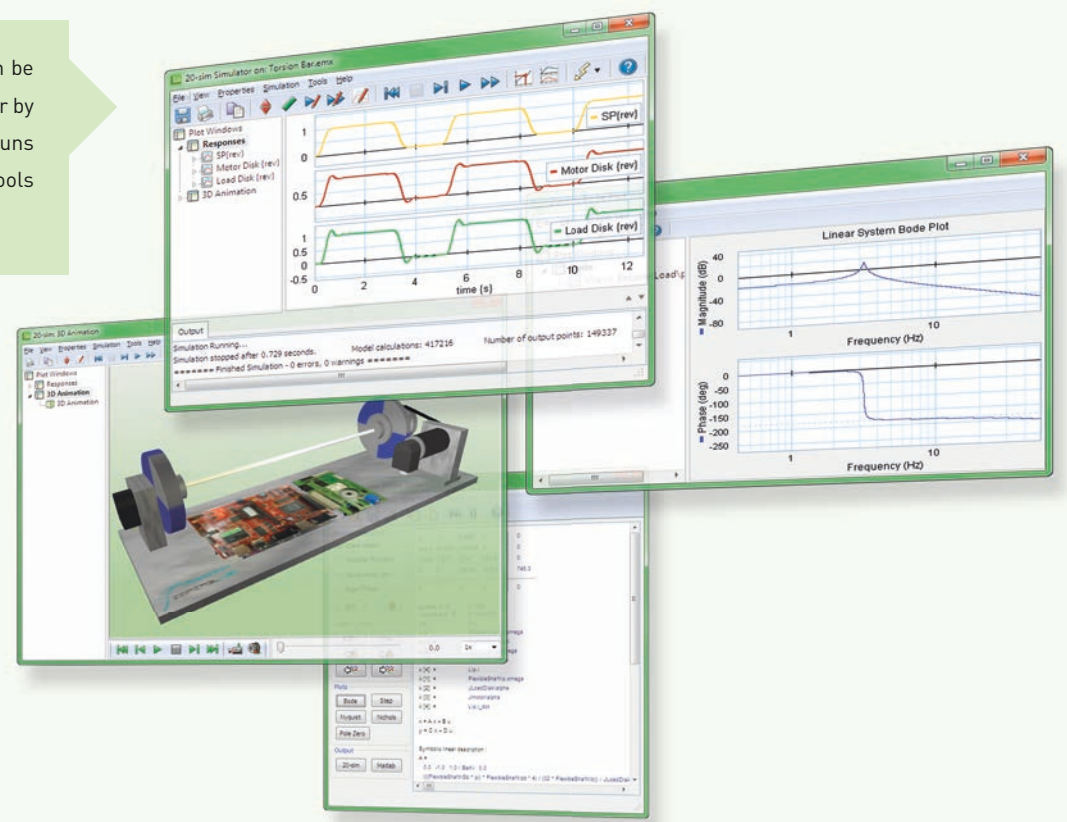
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The power in modeling

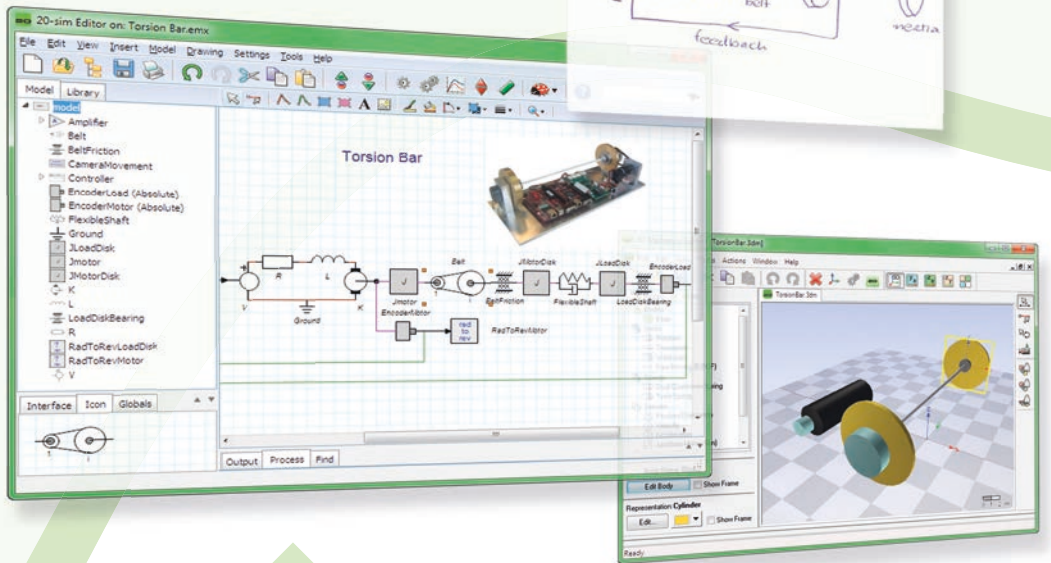
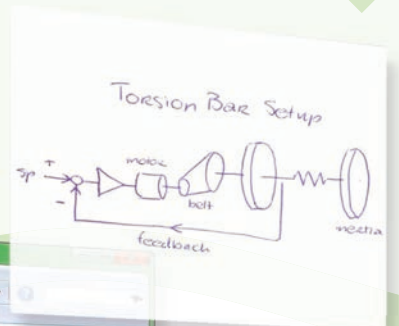
# 20-SIM

20-sim is a modeling and simulation program that allows you to enter models graphically, similar to drawing an engineering scheme. With these models you can simulate the behavior of multi-domain dynamic systems, including computer control loops. You can even generate C-code and run this code on hardware for rapid prototyping and HIL-simulation.

The complete model can be analyzed in the Simulator by performing simulation runs and using dedicated tools for analysis.



Every model starts with a sketch of the system.



The sketch is converted into a model by dragging and dropping library blocks.

C-code is generated automatically out of any 20-sim model.

```

stateDynamic (void)
{
    factor = 1 / (expTime + PIDtauD + PIDbeta);
    // 1.0 / (kk_step_size + xx_P[1]) + xx_P[1];
    // time = dtime mod SPperiod;
    // XXIntegrator(kk_time, xx_P[1]);
    // fmodtime < SPstart_time;
    // f[0] < xx_P[1];
    // xx_V[10] = 0.0;
}
// If SPmodtime < SPstop_time;
if (xx_V[10] < xx_P[1])
{
    // SPu = SPmodtime - SPstart_time / SPsize_time;
    xx_V[10] = (xx_V[10] - xx_P[1]) / xx_V[10];
}
// If SPmodtime < SPstart_time;
if (xx_V[10] < xx_P[1])

```

Every 20-sim model can be exported as C-code and deployed on hardware.

