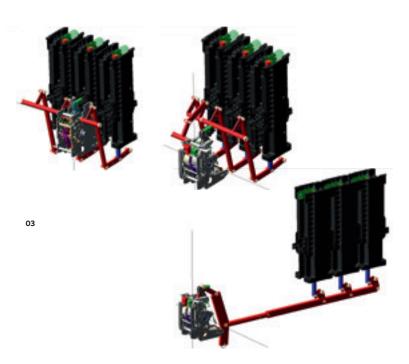
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01 Multibody simulation is invaluable for fast and reliable design of products with complex mechanics, such as this pantograph.

02 Parametric analysis of a mechanical system.

03 Multibody models of different topologies of a medium-voltage circuit breaker. smart and fast option: Simulate the mechanism in a multibody tool and simulate only the critical part in the FEM tool, with input from the multibody simulation.

Circuit-breaker design is one area where ABB puts multibody simulation to good use. Circuit breakers are very complex mechanical systems that can be described by analytic formulas only in a limited way. A multibody tool is a must if the dynamics of such a complex system need to be analyzed →03. Using a multibody tool, it was possible to compare three circuit-breaker topologies within two months. Without the tool, three demonstrators would have had to be built − a costly and lengthy process.

Multibody simulation tools provide valuable support during the development of complicated mechanical systems. The tools accelerate the development process significantly and help avoid any unpleasant surprises during production by characterizing the influence of production tolerances. •

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