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Sommario/riassunto	"The use of simulation has become an integral activity in many branches of engineering, particularly in aerospace, where flight simulation is recognised as an essential part of training and checking for airline and military pilots. Less well known is the development of engineering flight simulators, mostly by aerospace companies, who have invested in simulation to support the design, development and testing of aircraft and systems, prior to manufacturing, reducing the development costs and increasing the design options. Nowadays, the components of a flight simulator are mostly commercial off-the-shelf items. The situation is very different for flight simulation software. Although it may be possible to connect simulator hardware to flight simulation games, the software may be proprietary, restricting access to the code and obscuring simplifications in the aircraft dynamics. Alternatively, simplified models of aircraft dynamics can be developed using modelling packages to visualise outputs. However, complex models produced by such methods are likely to run far too slow for interaction with a human pilot. In order to achieve real-time performance, a third option is to develop the software based on open software, where the simulator modules are compiled to executable code. While this approach is advocated in this textbook, it is not

without its challenges. Producing software for a flight simulator, the developer is confronted with the breadth of engineering, covering aerodynamics, propulsion, mechanics, avionics and electronics and the depth of software covering mathematics, software engineering, distributed computing, real-time systems, computer graphics and control engineering"--

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