
Integrated Safety System Design and Future Developments of Large Commercial Airplanes

Earl F. Weener, Boeing

The accident rate for transport category airplanes has improved substantially since the introduction of jet transports in the late 1950s. However, the rate has become approximately constant over the last 15 years. The number of airplanes operated in the airline fleets is projected to double over the next 20 years. This could result in a gradual increase in the number of accidents per year and eventually reach an unacceptable level. Because of this, improvements are required in the safety of large commercial airplanes. I will discuss the changes in integrated systems safety design that will provide a portion of the necessary improvements for new developments. Systems engineering principles, implemented in close coordination with improvements in system safety assessments are key factors in this improvement strategy.