Comparative Safety Analysis of Wireless Communication Networks in Avionics

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Motivation

- The Airbus A380 has around $\sim 100,000$ wires totaling 470 km and weighing 5,700 kg.

Source: Catalogue of Catastrophe - IPLA
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Reduce wiring so as to decrease aircraft weight by **at least a ton**.
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Second Goal
The wireless network needs to be at least as reliable and fault tolerant as the existing wired network.

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The framework builds upon existing model checking and safety assessment tools, and is plug-and-play.