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Reducing aircraft noise during approach and departure by efficient operations

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Reducing the noise from aircraft around airports is a serious challenge. Apart from making the noise source, the aircraft, more silent, by advanced engines and aerodynamics, additional noise reduction can be achieved by moving the noise source away, as well as by a more silent operation of the aircraft. One of these innovative approach procedures is the Continuous Descent Approach. The principle is that aircraft approaching an airport follow a continuous descent profile at low thrust setting instead of making gradual altitude steps. The higher altitude and the lower thrust of the aircraft allow decreasing significantly noise exposure around the airport. First results show considerable noise reduction from 3dB to 8dB compared to conventional practices. Additionally, this procedure allows reducing fuel consumption and emissions. To make CDA procedures operationally feasible however, efforts are needed to develop * CDA operating procedures so that they can be flown in busy traffic * improved onboard systems to fly the CDA * accurate planning and sequencing tools for air traffic controllers * better interaction and interoperability between aircraft and air traffic control systems The presentation will discuss progress made in EU projects such as Sourdine II, OPTIMAL and ERAT.