

September 13, 2004

WirelessCabin Test Flight demonstrates GSM, WLAN and Bluetooth in Airbus A340-600

Weßling – On September 13, 2004 a flight test demonstrated multiple simultaneous wireless technologies on board an A340. The flight culminated the two years research program of the Wireless Cabin project, working towards designing and specifying a system demonstrating connectivity in-flight. The demonstrator used technologies based upon emerging standards including GSM/UMTS for mobile telephony, with IEEE 802.11 and Bluetooth for mobile computing services. An Inmarsat Swift-64 satellite terminal was used to connect the onboard networks with networks on ground.

Test flight passengers could make and receive calls with GSM handsets or VoIP equipment. Typical IP services such as web browsing, email, VPN to company intranet and streaming application have been shown. Onboard servers held airline specific content such as destination information. The cabin crew used personal digital assistants (PDAs) for crew communication but also for airline specific services such as in-flight shopping and credit card billing. Also a simulation of an emergency situation was performed with wireless telemedicine equipment. During such emergency the system automatically gave priority to the telemedicine equipment and the crew communication, while passenger services were shut down.

The WirelessCabin project, co-ordinated by the German Aerospace Center (DLR), consists of a diverse and market leading cross section of companies including Airbus, Ericsson Telecomunicazioni S.p.a, ESYS plc, Inmarsat Ltd., KID-Systeme GmbH, Siemens AG Austria, TriaGnoSys GmbH and the University of Bradford.

Axel Jahn, project coordinator at DLR, said: "This project has developed a network technology pushing the boundaries of innovation in the airline sector. Increasingly, passengers are demanding to be able to access communications networks wherever they are. When the WirelessCabin technology is implemented, airlines will be able to adopt different communication services according to the corporate image of comfort and quality."

The WirelessCabin demonstrator implemented an advanced network control technology that supports IP multimedia services together with GSM telephony. The core component is a cabin service integrator offering the control of services for crew or operator to enable or disable the multimedia or GSM services, e.g., incoming calls could be blocked during defined flight phases in order to inhibit ringing of mobiles for noise comfort in the cabin, while data services are allowed. Furthermore, the system supports quality of service across the different air interfaces of GSM, WLAN or Bluetooth. The system can also provide priority to specific user groups such as the crew or emergency applications. An advanced authentication and billing system supports airline specifics such as support of mileage and partnership programs.

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