



**Efficient Resource Management and QoS Policy Control
for On-demand Content Delivery using heterogeneous
Mobile Networks and Broadcast Media**

**European – Latin America (Brazil) Cooperation for advanced mobile
content delivery applications in aircrafts
based on DAIDALOS IPv6 Mobile Architecture Framework**

**Interested Partners in a STREP proposal
EU: DAIDALOS Consortia,
Brazil: ITA (Inst. Techn. Aeronautico), Embraer (Aircraft fabricants),
ATECH (Software Developer)**

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Objecives (1)



- ▶ **Development of on-demand content delivery applications for Aeronautical Telecommunication Network based on DAIDALOS mobile IPv6 based infrastructure**
- ▶ **Business and application scenarios**
 - Integration of IPv6 mobile broadcast platform for heterogeneous mobile networks and broadcast media in ATN including QoS, security and accounting components
 - Peer-to-peer and content delivery application infrastructure for ATN
 - Content on-demand applications for Aerolines companies including video-on demand, voice and data
 - New Air Traffic Control (ATC) applications
- ▶ **Implementation based on DAIDALOS framework**
 - Terminal mobility
 - QoS broker and resource management architecture
 - Mobile Ad-hoc Networking and Multiple Path Routing
 - Security
 - Mobile broadcast framework
 - Access Routers supporting IPv6 Mobility and Fast Handover for Mobile IPv6
 - Mobile multicast supporting group communication (MLD2) and multicast routing (PIM-SM) and reliable mobile multicast
 - Context transfer and context-aware user interfaces
 - Candidate Access Router Discovery



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Objectives (2)



- ▶ **Implementation of Scenarios and Performance Analysis**
 - Testbed considering ATN infrastructure with integration of DAIDALOS technology
 - Heterogeneous mobile network interconnection including wireless hotspots based on IEEE 802.11b technology and satellites
 - Setup and evaluation of scenario involving DAIDALOS services for policy based resource management, security and QoS control considering developed aircraft applications
 - Seamless handover scenarios
 - Multipath routing scenario
 - Performance studies based on established testbed aimed at cost efficient resource utilization and enhanced QoS support for the aircraft applications
- ▶ **Standardization support**
 - IETF Standardization considering RFC developed in DAIDALOS framework
 - RFC 4066, "Candidate Access Router Discovery"
 - RFC 4067, "Context Transfer Protocol (CXTP)"
 - RFC 4068, "Fast Handovers for Mobile Ipv6", RFC 4068
 - Further RFCs considering the developed applications



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