COM11.2 — Voice over Internet Protocol (VoIP) in Airport/Terminal

Download Progress Report

This Implementation Objective aims at efficient use of Voice over Internet Protocol (VoIP) by harmonized and coordinated implementation for ground/ground and ground part of ground/air aeronautical communications, ensuring network benefits from VoIP implementation.

The initiative covers inter-centre (encompassing all type of ATM Units) voice communication and the links with the ground radio stations. COM11.2 is applicable to 'Airport' and 'Terminal' Operating Environments. Center-tower voice communications not yet migrated to VoIP are currently performed via analogue and digital circuits.

This legacy ATM voice services will soon no longer be supported by the European telecommunication service providers, making the use of new technology necessary. At present and in order to follow the evolution of the communication technologies, ATM-VoIP is the global standard (ICAO DOC 9896 ed2, based on EUROCAE ED137) for ground telephony and ground segment of the Air-Ground voice. ATM-VoIP industrial standard (EUROCAE ED-137) is maintained and evolved over time to ensure that voice communication requirements are met.

The transition towards VoIP is bringing interoperability. Cross-border aspects need to be addressed appropriately within the network perspective. VoIP in ATM constitutes an essential part of Network Operational Excellence Programme WST13.5 – IP Services and VoIP.

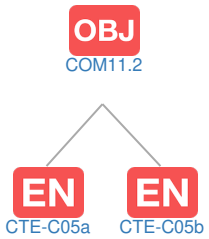
This sub-project aims at efficient use of Voice over Internet Protocol by harmonized and coordinated implementation for ground/ground and ground part of ground/air aeronautical communications, ensuring network benefits from VoIP implementation.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to military authorities.

Edition	2022
Stakeholders	Air Navigation Service Provider
Type	SESAR
Scope	ECAC+
Status	Active

Context

Related Elements



Applicability Area(s) and Timescales

Applicability Area: All ECAC States except: Armenia, Maastricht UAC, Malta. Plus: Israel, Morocco *(All ECAC+ States)*

Timescales	From	By	Applicable to
Initial operational capability	01-01-2013	-	Applicability Area
Full operational capability	-	31-12-2023	Applicability Area

Links to ATM Master Plan Level 2

EN Enablers

Code	Title	IOC	Related Elements
CTE-C05a	VoIP for ground telephony	-	STK OI EN OBJ DS PCP
CTE-C05b	Digital Voice / VoIP for ground segment of Air-Ground voice	-	STK OI EN OBJ DS PCP

SOL Links to SESAR Solutions

Code	Title	Program	Related Elements
No record found			

PCP Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
No record found		

ICAO Block Modules: No associated data

References

Applicable legislation
None
Applicable ICAO Annexes and other references
None
Deployment Programme 2022
-
Operating Environments
Airport
Terminal Airspace

Expected Performance Benefits

Safety	Safety maintained or improved by providing enhanced signalisation functions and by providing a more resilient infrastructure.
Capacity	Capacity maintained or improved by providing enhanced signalisation functions.
Operational efficiency	-
Cost efficiency	Reduced costs by enabling flexible and dynamic use of ANSP resources, leading to long-term savings.
Environment	-
Security	-

Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
ASP01	Develop safety assessment for the changes	01-01-2013	31-12-2023	
ASP03	Upgrade and put into service Voice Communication Systems to support VoIP centre-tower telephony	01-01-2013	31-12-2023	
ASP04	Upgrade and put into service Voice Communication Systems to support VoIP links to the ground radio stations	01-01-2013	31-12-2023	

Supporting Material

Title	Related SLoAs
EC - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 - (OJ L 62, 8.03.2017, p. 1) - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011 03/2017 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0373&from=EN	ASP01
EUROCAE - ED-136 - Voice over Internet Protocol (VoIP) Air Traffic Management (ATM) System Operational and Technical Requirements 02/2009 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP03, ASP04
EUROCAE - ED-137/1B - Interoperability Standards for VoIP ATM Components - Volume 1 Radio https://eshop.eurocae.net/eurocae-documents-and-reports	ASP04
EUROCAE - ED-137/1C - Interoperability Standards for VoIP ATM Components - Volume 1: Radio 04/2017 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP04
EUROCAE - ED-137/1C Change 1 - Interoperability Standards for VoIP ATM Components - Volume 1: Radio 05/2020 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP04
EUROCAE - ED-137/2C - Interoperability Standards for VoIP ATM Components - Volume 2: Telephone 03/2019 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP03
EUROCAE - ED-137/2C Addenda 1 to 8 - Interoperability Standards for VoIP ATM Components - Volume 2 Addenda: Telephone 03/2019 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP03
EUROCAE - ED-137/2C Change 1 - Interoperability Standards for VoIP ATM Components - Volume 2: Telephone 05/2020 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP03
EUROCAE - ED-137/4B - Interoperability Standards for VoIP ATM Components - Volume 4 Recording 01/2012 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP04
EUROCAE - ED-137/4C - Interoperability Standards for VoIP ATM Components - Volume 4: Recording 03/2019 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP03, ASP04
EUROCAE - ED-137/5B - Interoperability Standards for VoIP ATM Components - Volume 5 Supervision 01/2012 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP04
EUROCAE - ED-137/5C - Interoperability Standards for VoIP ATM Components - Volume 5: Supervision 03/2019 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP03, ASP04
EUROCAE - ED-138 - Network Requirements and Performances for Voice over Internet Protocol (VoIP) Air Traffic Management (ATM) Systems - Part 2 Network Design Guideline 02/2009 https://eshop.eurocae.net/eurocae-documents-and-reports	ASP03, ASP04

Title	Related SLoAs
EUROCONTROL - EAM 4 - ESARR 4 - Risk Assessment and Mitigation in ATM - Edition 1.0 / 04/2001 https://www.eurocontrol.int/publication/esarr-4-risk-assessment-and-mitigation-atm	ASP01
EUROCONTROL - GUID-137 - EUROCONTROL Guidelines on conformity assessment for the interoperability Regulation of the single European sky - Edition 3.0 / 02/2012 https://www.eurocontrol.int/publication/eurocontrol-guidelines-conformity-assessment-interoperability-regulation-single	ASP03, ASP04
EUROCONTROL - SIP v ATS-QSIG Gateway Interworking Test Specification - Edition 2 / 12/2013 https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents	ASP03
EUROCONTROL - SIP v ATS-R2 Gateway Interworking Test Specification - Edition 2 / 12/2013 https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents	ASP03
EUROCONTROL - VOTER 4.0.x Test Description - VOL 5 - Interoperability - Edition 3.1 / 12/2021 https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents	ASP03, ASP04
EUROCONTROL - VOTER 4.0.x Test Description - VOL 6 - Performance for GRS-VCS Interfaces - Edition 3.1 / 01/2020 https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents	ASP03, ASP04
EUROCONTROL - VOTER 4.0.x Test Description - VOL 7 - Supervision - Edition 3.2 / 01/2020 https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents	ASP03, ASP04
EUROCONTROL - VOTER 4.1.x Test Description - VOL 2 - VCS Radio Interface - Edition 3.7 / 10/2021 https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents	ASP04
EUROCONTROL - VOTER 4.1.x Test Description - VOL 3 - VCS Telephone Interface - Edition 3.9 / 10/2021 https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents	ASP03, ASP04
EUROCONTROL - VOTER 4.1.x Test Description - VOL 4 - Recorder Interface - Edition 3.6 / 12/2014 https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents	ASP03, ASP04
EUROCONTROL - VOTER 4.1.x Test Description -VOL 1- GRS Radio Interface - Edition 3.9 / 10/2021 https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents	ASP04
EUROCONTROL - VOTER Test Tool - version 4.x.x (ED-137C) -	ASP03, ASP04
EUROCONTROL - VoIP in ATM Cross-Reference Matrix for ED-137C – VOTER 4.x.x 12/2021 https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents	ASP03, ASP04
ICAO - Doc 9896 - Manual for the ATN using IPS Standards and Protocols - Edition 2.0 / 2015 https://store1.icao.int/	ASP03, ASP04

Consultation & Approval

Working Arrangement in charge	CNS / COM SG
Outline description approved in	-
Latest objective review at expert level	12/2018
Commitment Decision Body	Provisional Council (PC)
Objective approved/endorsed in	06/2019
Latest change to objective approved/endorsed in	-