TERMS OF REFERENCE
Special Committee (SC) 237
Helicopter Terrain Awareness Warning System

(Revision 3)

REQUESTORS:

This committee is being established at the request of EUROCAE for RTCA to form a joint committee.

Organization	Person

SC LEADERSHIP:

Position	Name	Affiliation	Telephone	email	Change
Chair	**Michael Deer**	**Bell**	**1-514-248-0338**	**mdeer@bellflight.com**	
EUROCAE Chair	**Yasuo Ishihara**	**Honeywell, Inc**	**1-425-885-8588**	**Yasuo.ishihara@honeywell.com**	
GAR	**Rich Adler**	**FAA, AIR 600**	**1-202-267-9834**	**richard.adler@faa.gov**	Charisse Green
Secretary	**Mark Prior**	**Prior Consulting**	**44(0)1437 787415**	**mark@mpriorconsulting.com**	

BACKGROUND:

Working jointly with EUROCAE WG-110, RTCA SC-237 has developed MOPS for Helicopter Terrain Awareness and Warning Systems (HTAWS) for offshore[1] helicopter operations which embodied "classic modes". The MOPS have been published in ED-285 and DO-376. The joint Working Group/Sub Committee now proposes to develop equivalent MOPS for onshore helicopter operations (Onshore HTAWS). The justification for the tasking includes:

- The expansion of the scope to onshore helicopter operations is in accord with the original approved ToR for WG-110 - *"On completion of the above tasking and publication of HTAWS MOPS for offshore helicopter operations, WG-110 may consider the production of MOPS for improved HTAWS for onshore helicopter operations and/or Search and Rescue (SAR) helicopter operations."*

[1] Commercial Air Transport excluding SAR.

- Arising from EASA Rule Making Task RMT.0708 "Prevention of controlled flight into terrain with helicopters and helicopter terrain awareness and warning systems", EASA has proposed the development of MOPS for onshore helicopter operations.

- There is currently no mandate for HTAWS for onshore helicopter operations in Europe, and CFIT accidents continue to occur. The mandate of HTAWS is to be considered by EASA RMT.0708 but will require a suitable HTAWS standard to be available. The only existing standard for onshore HTAWS is DO-309/ETSO-C194 which comprises Forward Looking Terrain Avoidance (FLTA) functionality only; the "classic modes" employed for ED-285/DO-376 are not included but are equally relevant. In addition, there is no minimum standard or specification for the terrain and obstacle data bases employed by the FLTA function.

DELIVERABLES:

Product	Description	FRAC Completion Due Date*	Change
MOPS DO-376 Change 1	**Minimum Operating Performance Standards for Helicopter Terrain Awareness and Warning Systems (HTAWS) for Offshore Helicopter Operations**	**5/2022**	
MOPS DO-XXX	**Minimum Operating Performance Standard for Helicopter Terrain Awareness and Warning Systems (HTAWS) for Onshore Helicopter Operations**	**6/2023**	

*Note: Final Review and Comment (FRAC) Completion Due Date refers to the date that the committee plenary approves the document after completing the FRAC Process. SCs should submit the final document at least 45 days before the PMC meeting where it will be considered for approval.

SCOPE and COORDINATION:

MOPS DO-376 Change 1:

Inconsistent information was discovered in DO-376 in Figure 3-9. To remove any confusion prior to being called out in the new EASA ETSO for Offshore HTAWS, a Change 1 is appropriate since the figure is referenced as a SHALL from a requirement.

SC-237 will work with WG-110 to begin DO-376 Change 1/ED-285 Change 1 FRAC/OC immediately with Plenary approval. After they resolve any comments received through joint plenary April 26-28, 2022, the group would like to request an Out of Cycle approval of the Change 1 to expedite its availability for regulators to reference.

Onshore MOPS for HTAWS:

The objective will be to generate new MOPS for Onshore HTAWS; the existing MOPS published in DO-309/ETSO-C194 and ED-285/DO-376 are to remain unmodified. The MOPS are to normatively reference DO-309/ETSO-C194 and ED-285/DO-376. The following additional inputs are to be considered:

1. Any customisation of the ED-285/DO-376 "classic modes" required to adapt them for onshore operations.
2. Other improvements, supported by adequate evidence, that may be proposed by members of WG-110/SC-237.

Another objective is to recommend possible improvements to the DO-309/ETSO-C194 FLTA modes, including the possible addition of a minimum standard or specification for the terrain and obstacle data bases.

The membership of SC-237 should include:

- HTAWS equipment manufacturers
- Helicopter manufacturers
- Onshore helicopter operators
- Aviation safety regulators

On completion of the above tasking and publication of HTAWS MOPS for onshore helicopter operations, WG-110 may consider the production of MOPS for improved HTAWS for Search and Rescue (SAR) helicopter operations.

ENVISIONED USE OF DELIVERABLE(S)

The final regulatory use of the MOPS has not yet been determined. However, the EUROCAE TOR indicates it is intended to be used as a Means of Compliance by EASA for Aviation Safety Regulations.

SPECIFIC GUIDANCE:

In the development of the MOPS, the committee will take the following steps:

1. Review of relevant input documents

2. Consider evidenced proposals for additional or alternative "Classic Mode" alert functionality.

3. Draft MOPS based on the output of 1 and 2 above.

4. Coordinate with SC217/WG44 regarding terrain databases

This committee is established for the purpose of working jointly with EUROCAE WG-110 to produce the MOPS. No changes to DO-309 or DO-376 are expected as a result of this work.

Initial Documentation:

Document	Intended Use
RTCA DO-309, Minimum Operational Performance Standards (MOPS) for Helicopter Terrain Awareness and Warning System (HTAWS) Airborne Equipment.	**Normative reference**
TSO/ETSO-C194, Helicopter Terrain Awareness and Warning System (HTAWS).	**Reference Document**
ED-285/RTCA DO-376, Minimum Operational Performance Standard for Offshore Helicopter Terrain Awareness & Warning System (HTAWS).	**Normative reference**

TERMINATION: When the scope of this Terms of Reference is complete, the committee will recommend either that the committee Sunset, going into Active Monitoring Mode, or spend a period of time in Hiatus. If additional documents are identified by the committee as beneficial and useful, the group is expected to propose adding them to the PMC before initiating development.