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Agenda item [[2]](#footnote-2) n.n

Technical Domain / Task Number 2 …………………………………

Author(s) / Submitter(s) DWG

Definition of Availability

# Summary

Availability is defined in the IALA Dictionary and in a variety of IALA Documentation. There are conflicts between these definitions. This paper summaries the various definitions and requests the ARM Committee to provide a definitive definition for the Dictionary.

## Related documents

DWG5-4.2 (VTS41-12.1.3) 1111 update 2 dictionary definitions new 20160311.

IALA Recommendation O-130 on Categorisation and Availability Objectives for Short Range Aids to Navigation.

IALA Guideline 1035 on Availability and Reliability of Aids to Navigation.

# Background

The Dictionary Working Group (DWG), through input from the VTS Committee, has identified the need to review and rationalise the definition of availability in the IALA Dictionary.

# Present definitions of availability

The Dictionary contains a number of definitions of Availability:

* **5-1-025**. “The property of a device or system of being ready for use when required.”
* **5-1-030.** “The probability that a system will be available for operation at an arbitrarily chosen instant in the future. It may be expressed as the ratio MTBF/(MTBF + MTTR).”
* **Under cat. 10. (e-Navigation), sub 1 (General e-Navigation terms)**: “The percentage of time that an aid, or system of aids, is performing a required function under stated conditions. Non-availability can be caused by scheduled and/or unscheduled interruptions.
* – Signal availability. The availability of a radio signal in a specified coverage area.
* – System availability. The availability of a system to a user, including signal availability and the performance of the user’s receiver.

The definition of availability in Rec 0-130 availability is the same as the definition in the Navguide and in Guideline 1035:

* O-130: The probability that an AtoN or system of AtoN, as defined by the Competent Authority, is performing its specified function at any randomly chosen time. This is expressed as a percentage of total time that an AtoN or system of AtoN should be performing their specified function.
* Navguide: The probability that an aid to navigation or a system of aids to navigation as defined by the Competent Authority is performing its specified function at any randomly chosen time. This is expressed as a percentage of total time that an aid to navigation or a system of aids to navigation should be performing their specified function.
* Guideline 1035This is the probability that an aid to navigation or a system of aids to navigation as defined by the Competent Authority is performing its specified function at any randomly chosen time. This is expressed as a percentage of total time that an aid to navigation or a system of aids to navigation should be performing their specified function. This is a measure of the service provided to the mariner.

# Proposal

## Definition of availability

It is proposed that the definition in Recommendation O-130 be adopted and combined with elements of the definition in the Dictionary under cat. 10. (e-Navigation), sub 1 (General e-Navigation terms) as follows. The definitions of system and signal availability are special cases of availability which add to the clarity of the definition for DGNSS.

*The probability that an AtoN or system of AtoN, as defined by the Competent Authority, is performing its specified function at any randomly chosen time. This is expressed as a percentage of total time that an AtoN or system of AtoN should be performing their specified function (MTBF/(MTBF + MTTR). Non-availability can be caused by scheduled and/or unscheduled interruptions.*

* *Signal availability. The availability of a radio signal in a specified coverage area.*
* *System availability. The availability of a system to a user, including signal availability and the performance of the user’s receiver.*

## Dictionary definitions

* It is proposed that the definition in 4.1 replace the existing definition of availability number **5-1-025** in the Dictionary.
* It is proposed that definition of availability in number **5-1-030** and **under cat. 10. (e-Navigation), sub 1 (General e-Navigation terms)** be removed from the Dictionary.
* It is proposed that the definition of availability in Rec 0-130, Guideline 1035 and Navguide be amended to comply with the approved definition in the Dictionary.

# Action requested of the Committee

The Committee is requested to:

1. Agree the proposed definition of availability. DWG will arrange for amendment of the Dictionary with the agreed definition.
2. Implement the amendment of the definition of availability in Rec O-130, Guideline 1035 and the Navguide.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Leave open if uncertain [↑](#footnote-ref-2)