Output paper: [[1]](#footnote-1) ENG5-11.1.19

Query re definition of Dictionary terms

# Summary

The IALA Secretariat is reformatting existing IALA Recommendations and Guidelines to comply with the new IALA corporate image. Queries have arisen regarding definitions found in some of the Guidelines.

The definitions are relevant to the work of WG1 and WG2 and this query is therefore addressed in the first instance to both WGs. The ENG Committee should approve any amendments to definitions.

## Purpose of the document

This is the output document following the review of the terms pertinent to WG1.

# Background

The IALA Secretariat is reformatting existing IALA Recommendations and Guidelines to comply with the new IALA corporate image. Queries have arisen regarding definitions found in some of the Guidelines.

Additional terms have been added to the table following discussions at ENG5.

# Discussion

Definitions found in IALA Guidelines 1037 and 1048 have been removed from the Guidelines and replaced in the Guidelines with a reference to the IALA Dictionary.

The table in Annex A shows the definitions removed from the Guidelines and the existing definitions in the Dictionary where they exist. The definitions shown in the “proposed definition” column are taken from the Guidelines. However, following the review, it is necessary to bring some definitions in-line with CIE, and these are highlighted in yellow below.

Two additional terms have been added on the end to clarify the terms “effective intensity” and “luminous range” in order to bring them in line with CIE definitions. It is noted, however, that the terms differ slightly from the CIE definitions due to the different threshold of the illuminance of the eye.

# Action requested

The Secretariat is requested to submit the updates to the DWG for approval and update IALA Dictionary accordingly.

1. Dictionary amendment proposal

| **Term** | **Dictionary Number** | **Source**  **(meeting/**  **document/**  **person)** | **Old definition** | **Definition from Guideline /**  **Proposed definition** | **Reason for change** | **Propose**  **Date** |
| --- | --- | --- | --- | --- | --- | --- |
| Failure | 5-1-000 | IALA Sec | The termination of the ability of an item to perform its required function. | Proposed definition English:  A failure is defined as the unintentional termination of the ability of a system or part of a system to perform its required function. This means failure to display its correct characteristics or to be on its assigned position for proper use by mariners.  Définition propose French:  Definición propuesta Spanish: | Guideline 1037 | WG2 |
| Fault | 5-1-015 | IALA Sec | That condition of an element of a system which may result in a failure of either the system or part of it. | Proposed definition English: A fault is the failure of part of a system that does not affect the ability of the AtoN to perform its required function.  Définition propose French:  Definición propuesta Spanish: | Guideline 1037 | WG2 |
| Correlated colour temperature: | 2-1-505 | IALA Sec | The colour temperature corresponding to that point on the line representing full radiators of different colour temperature which is nearest to the point representing the chromaticity of the illuminant, considered on an agreed uniform-chromaticity-scale diagram.  Unit: kelvin (K)  Reference: C.I.E. (modified)  Note: For further information on the agreed uniform-chromaticity-scale diagram, see Reference: C.I.E. | Proposed definition English: Used to describe the temperature at which a Plankian Blackbody Radiator and an illumination source appear to match, usually specified in Kelvin (K).  Définition propose French:  Definición propuesta Spanish:  ENG5 Proposed definition:  Temperature of the Planckian radiator having the chromaticity nearest the chromaticity associated with the given spectral distribution on a diagram where the (CIE 1931 standard observer based) http://eilv.cie.co.at/sites/default/files/images/258-1.pngcoordinates of the Planckian locus and the test stimulus are depicted.  Reference: C.I.E | Guideline 1048 | WG1 |
| Organo-metallic vapour phase epitaxy |  |  | None | Proposed definition English: Organo-metallic vapour phase epitaxy – a crystal growth technique allowing the growing of a crystal layer on top of another crystal substrate.  Définition propose French:  Definición propuesta Spanish:  Agreed, but add “Also known as Metalorganic vapour phase epitaxy (MOVPE)” | Guideline 1048 | WG1 |
| Colour Temperature | 2-1-500 | IALA Sec | The temperature of the full radiator which emits radiation of the same chromaticity as the radiation considered.  Unit: kelvin (K)  Note: The corresponding relative spectral distribution curves need not be similar provided that the radiations give rise to identical colour sensations.  Reference: C.I.E. (modified) | Proposed definition English: Colour temperature of a light source is the absolute temperature of a blackbody radiator having a chromaticity equal to that of the light source.  Définition propose French:  Definición propuesta Spanish:  ENG5 Proposal:  Temperature of a Planckian radiator whose radiation has the same chromaticity as that of a given stimulus.  Reference: C.I.E. | Guideline 1048 | WG1 |
| Colour Purity |  |  | None  See chromaticity | Proposed definition English: Colour purity of a light is the ratio L1 / L2 where L1 is the luminance of the single frequency component that must be mixed with a reference standard to match the colour of the light and L2 is the luminance of the light.  Définition propose French:  Definición propuesta Spanish:  ENG5 Proposal:  Measure of the proportions of the amounts of the monochromatic stimulus and of the specified achromatic stimulus that, when additively mixed, match the colour stimulus considered  Reference: C.I.E. | Guideline 1048 | WG1 |
| Colour rendition |  |  | None | Proposed definition English: General expression for the effect of a light source on the colour appearance of objects in comparison with their colour appearance under a reference light source. (IES Handbook)  Définition propose French:  Definición propuesta Spanish:  Agreed | Guideline 1048 | WG1 |
| Die ~~Chip~~ |  |  | None | Proposed definition English: Die Chip, heart of the LED  Définition propose French:  Definición propuesta Spanish:  The correct term should be “die” or “chip” not “die chip”.  ENG5 Proposal:  Die is a small block of semiconducting material on which a function circuit is fabricated. | Guideline 1048 | WG1 |
| Effective Intensity | 2-1-400 | ENG5 | Effective Intensity (of a rhythmic light)  Alternative term: Equivalent Fixed Intensity (of a rhythmic light)  The luminous intensity of a fictitious juxtaposed steady-burning point light source that would appear to exhibit a luminosity equal to that of the rhythmic point light source it describes. The apparent reduction in intensity of the rhythmic light is subjective and is due to the nature of the response of the eye of the observer.  Symbol: Ie  Unit: candela (cd)  Note 1: The quantity Ie so defined is a function not only of the intensity versus time variation of the rhythmic light, but also of the conditions of observation illuminance level at the eye, background luminance, angular size of light source, etc.  Note 2: The term "effective intensity" is generally restricted to conditions of observation near the limit of luminous range of the light (i.e., at or near the threshold for foveal vision).  Note 3: The use of the term Apparent Intensity with this meaning is deprecated. | Luminous intensity of a fixed light, of the same relative spectral distribution as the flashing light, which would have the same luminous range as the flashing light under identical conditions of observation.  Reference: CIE  Symbol: Ie  Note 1: This definition of “effective intensity” differs slightly from the CIE definition due to IALA defining luminous range based on threshold of illumination as used in marine applications, and not the threshold of foveal vision. | Clarification of terms and bringing the description in line with CIE |  |
| Luminous Range | 2-1-250 | ENG5 | Luminous Range (of a light)  The maximum distance at which a light can be seen, as determined by the luminous intensity of the light, the atmospheric transmission factor and the threshold of illuminance on the eye of the observer (2-1-390). | Greatest distance at which a given signal light can be recognised in any particular circumstances, as limited only by the atmospheric transmissivity and by the threshold of illuminance at the eye of the observer (2-1-390)  Reference: CIE  Note 1: The threshold of illuminance for marine applications differs from that defined by CIE. | Clarification of terms and bringing the description in line with CIE |  |
| Threshold of illuminance | 2-1-390 | ENG5 | Alternative term: Visual Threshold  The weakest illuminance produced at the eye which makes it possible to see a given source against a given background luminance.  Note: The internationally accepted value of the threshold of illuminance for observation of a light at night under typical maritime conditions is 2.10-7 lux (0.686 sea-mile candela, 2-1-060). This figure was agreed at the International Technical Conference of Lighthouse Authorities, Paris 1933. In Britain and U.S.A. this value is sometimes approximated by 0.67 sea-mile candela. | Smallest illuminance (point brilliance), produced at the eye of an observer by a light source seen in point vision, which renders the source perceptible against a background of given luminance, where the illuminance is considered on a surface element that is normal to the incident rays at the eye.  Reference: CIE  Note 1: The internationally accepted value of the threshold of illuminance for observation of a light at night under typical maritime conditions is 0.2 ulux. This figure was agreed at the International Technical Conference of Lighthouse Authorities, Paris 1933. | Clarification of terms and bringing the description in line with CIE and to remove reference to “sea-mile candela” |  |
| Nominal Range | 2-1-255 | ENG5 | Nominal Range (of a light)  The nominal range of a light used as an aid to marine navigation is its luminous range in a homogeneous atmosphere in which the meteorological visibility (2-1-280) is 10 sea-miles. | Nominal Range (of a light)  The nominal range of a light used as an aid to marine navigation is its luminous range in a homogeneous atmosphere in which the meteorological visibility (2-1-280) is 10 nautical miles (18520 m). | Correct the units for the meteorological visibility |  |
| Long flash |  | ENG5 | None | A flash of a character that is exhibited for 2 seconds or more. |  |  |
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1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)