

Change ID: 5.1-04

Approach lighting as sub-type of ground lighting system

Summary

It is proposed to make the ApproachLightingSystem class a specialisation of the GroundLightSystem, similar to all other surface lighting systems installed at the airport.

Background

The approach lighting system installed for a runway direction is modelled by the [ApproachLightingSystem](#) feature. The rest of the airport surface lighting, such as runway lights, taxiway lights, etc. are modelled through the [GroundLightSystem](#) feature and its specialisations.

Rationale

The class ApproachLightingSystem already has some properties (intensity, operationalStatus) and associations (with PilotControlledLighting) that are common with those of the GroundLightSystem class. Deriving the ApproachLightingSystem from GroundLightSystem will increase the consistency of the model, as all other types of ground lights (runway, slope indicator, etc.) are derived from GroundLightSystem. It will also bring the possibility to describe in detail each light element and the vertical structure that supports the approach lighting (lightpoles, stanchions), as these possibilities already exist for GroundLightSystem.

Change proposal

- insert an inheritance association from GroundLightSystem to ApproachLightingSystem;
- remove the association between ApproachLightingSystem and PilotControlledLighting, as it will be inherited from GroundLightSystem;
- remove the attributes intensity and operationalStatus from ApproachLightingSystem, as they will be inherited from GroundLightSystem.