

## Change Proposal

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| ID:             | AIXM-143    |
| target version: | AIXM 5.1.1  |
| version:        | 1.0         |
| last updated:   | 24 MAR 2015 |
| status:         | Implemented |



## Add CodeProcedureFixRoleType missing value

### Description

A new allowable value is proposed in the enumeration of the CodeProcedureFixRoleBaseType: LTP (landing threshold point).

### Rationale for change

See <https://aixmccb.atlassian.net/browse/AIXM-120>

The *SegmentLeg* feature may be associated with TerminalSegmentPoint fulfilling one of the roles: arcCentre, startPoint or endPoint.

The TerminalSegmentPoint role attribute is of type CodeProcedureFixRoleBaseType, which is an enumeration covering different roles the respective fix may have in a terminal procedure, e.g. initial approach fix (IAF), intermediate fix (IF), final approach fix (FAF), etc.

Associated with FAS (final approach segment) data block for RNAV GBAS/SBAS procedures (for precision or APV approaches), there is a fix role not covered in the CodeProcedureFixRoleBaseType enumeration: landing threshold point (LTP). The LTP is not part of the FAS data block, but is required for the procedure construction and charting, together with the FPAP (flight path alignment point).

Therefore, it is proposed to add the value LTP in the CodeProcedureFixRoleBaseType.

As the definitions of LTP and FTP values are related, in the same time, the definition documentation related to the value "FTP" should be updated to be aligned to the provisions of ICAO Doc 8168 (PANS-OPS), Vol II.

### Impact assessment

AIXM 5.1 data providers might be affected by this change, in case APV procedures have already been encoded together with the landing threshold point. In the absence of the appropriate value for the LTP, a workaround using "OTHER:LTP" might have been used. In such cases, the value LTP could replace the existing values via scripts or directly in the databases.

Backwards compatibility should be taken into account by reverting the LTP value back to "OTHER:LTP" in order to allow data processing by legacy AIXM 5.1 systems. This will be ensured with an XSLT script.

### Change Proposal details

In the UML model, the following changes are proposed:

- CodeProcedureFixRoleBaseType:
  - add value “LTP” to the data type enumeration with the following definition (extract from ICAO Doc 8168, Vol II, Chapter 1 Definitions): *“The Landing Threshold Point (LTP) is a point over which the glide path passes at a relative height specified by the reference datum height (RDH). The LTP is normally located at the intersection of the runway centre line and the threshold.”*
  - for the existing value “FTP”, replace the definition with the following one (extracted from ICAO Doc 8168 PANS-OPS, Vol II): *“The Fictitious Threshold Point (FTP) is a point over which the final approach segment path passes at a relative height specified by the reference datum height (RDH). The FTP replaces the LTP when the final approach course is not aligned with the runway extended centre line or when the threshold is displaced from the actual runway threshold. For non-aligned approaches the FTP lies on the intersection of the perpendicular from the FAS to the runway threshold. The FTP elevation is the same as the actual runway threshold elevation.”*

### **Mapping AIXM 5.1 to AIXM 5.1.1 (forward)**

The following algorithm shall be applied:

- For each TerminalSegmentPoint.role that has the value “OTHER:LTP”:
  - replace the value “OTHER:LTP” with “LTP”
- For any other XML elements/attributes - copy identical in the output

This algorithm will be implemented in an XSLT script that will be provided together with the AIXM 5.1.1 Schema.

### **Mapping AIXM 5.1.1 to AIXM 5.1 (backward)**

The following algorithm shall be applied:

- For each TerminalSegmentPoint.role that has the value “LTP”:
  - replace the value “LTP” with “OTHER:LTP”
- For any other XML elements/attributes - copy identical in the output

This algorithm will be implemented in an XSLT script that will be provided together with the AIXM 5.1.1 Schema.

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