

# Update Trajectory Point Property Enumerations

<b>CR Number (ID): 134</b>		<b>Submission Date: 9/22/2021</b>	
<b>GENERAL INFORMATION (AUTHOR TO COMPLETE)</b>			
Author	FAA FIXM Development Team		
Brief Description (Subject)	Update the Trajectory Point Property enumerations to match latest values and definitions in the FF-ICE IG 0.96.		
Priority*	<input type="checkbox"/> Immediate	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Scale*	<input type="checkbox"/> Major	<input type="checkbox"/> Medium	<input checked="" type="checkbox"/> Minor
Expected Impact to Implementers*	<input type="checkbox"/> High	<input type="checkbox"/> Medium	<input checked="" type="checkbox"/> Low <input type="checkbox"/> None
Target FIXM Component(s)	<input checked="" type="checkbox"/> FIXM Logical Model <input type="checkbox"/> FIXM Application <input checked="" type="checkbox"/> FIXM XML Schemas <input type="checkbox"/> Other Specify...		
Target FIXM Release	<input checked="" type="checkbox"/> FIXM Core Version 4.3.0 <input type="checkbox"/> Application Version		
Related FIXM CRs			
Motivation / Change Reason	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Functionality/Operability <input type="checkbox"/> Maintenance <input type="checkbox"/> Defect <input type="checkbox"/> Other Specify ...		

\* Optional fields; FIXM Secretariat may update during review

## MOTIVATION / CHANGE REASON DESCRIPTION (AUTHOR TO COMPLETE)

Support updated requirement from the FF-ICE IG section B-3.5.10. Specific values used for update should come from Table 6 Trajectory Point Properties.

## PROPOSED CHANGE (AUTHOR TO COMPLETE)

Add new entries to TrajectoryPointPropertyType enumeration in the RouteTrajectory package:

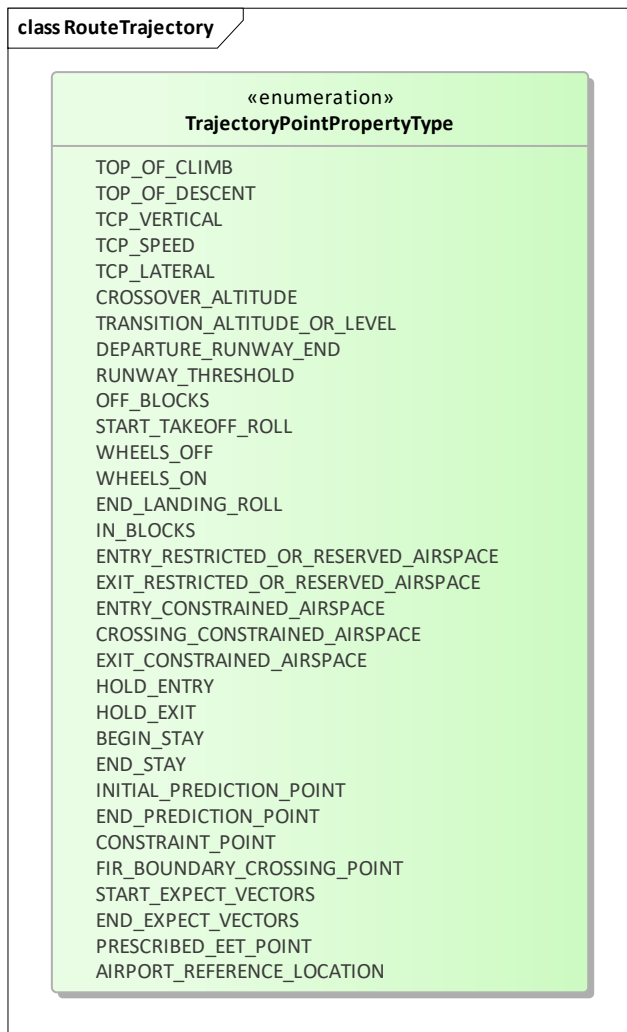
Name: "OFF\_BLOCKS"

Definition: "This is the point at which the aircraft pushes back and begins to taxi for departure."

Name: "IN\_BLOCKS"

Definition: "Indicates the point and time at which an arriving aircraft is/was in blocks."

Update definitions for each existing entry as needed.



During the FIXM 4.3.0 Kick-Off TIM a proposal was made to update the definitions to include recommended business rules that cannot be enforced within XML (see below for details). This was

discussed again at CR TIM#5, during which a concern was raised whether implied business rules should be embedded within the definitions in the Logical Model and XML schemas, or whether they should be limited to the FIXM User Manual. While the technical community agreed with the changes proposed above, they recommended the CCB discuss whether the proposed changes to the definitions below should be implemented.

As noted above, there were two additional potential changes that were raised during the Kick-Off meeting. One from GCAA suggesting that it is currently unclear when some properties should be used as opposed to others. They recommended the following modifications that should clarify when the associated properties should be used.

### PointPropertyType

#### 1. Hold\_Entry

##### **Existing**

Indicates that the associated trajectory point is a point at which the flight is expected to enter into planned holding.

##### **Proposed**

Indicates that the associated trajectory point is a point at which the flight is expected to enter into planned holding. Expression of this property should be used in conjunction with delay type OPERATOR\_REQUEST\_HOLDING.

#### 2. Hold\_Exit

##### **Existing**

Indicates that the associated trajectory point is a point at which the flight is expected to exit from planned holding.

##### **Proposed**

Indicates that the associated trajectory point is a point at which the flight is expected to exit from planned holding. Expression of this property should be used in conjunction with delay type OPERATOR\_REQUEST\_HOLDING.

#### 3. Begin\_Stay

##### **Existing**

Indicates that the associated trajectory point is a point at which the flight is expected to begin an operation at which the flight will remain for some time

### Proposed

Indicates that the associated trajectory point is a point at which the flight is expected to begin a **non-holding** operation at which the flight will remain for some time. **Expression of this property should be used in conjunction with non-holding delay types such as OPERATOR\_REQUEST\_POINT, OPERATOR\_REQUEST\_SEGMENT, OPERATOR\_REQUEST\_AIRSPACE, OPERATOR\_REQUEST\_AERODROME.**

## 4. End\_Stay

### Existing

Indicates that the associated trajectory point is a point at which the flight is expected to terminate an operation at which it remained for some time.

### Proposed

Indicates that the associated trajectory point is a point at which the flight is expected to terminate a **non-holding** operation at which it remained for some time. **Expression of this property should be used in conjunction with non-holding delay types such as OPERATOR\_REQUEST\_POINT, OPERATOR\_REQUEST\_SEGMENT, OPERATOR\_REQUEST\_AIRSPACE, OPERATOR\_REQUEST\_AERODROME**

The other recommendation, raised by the FAA, was to consider incorporating the information contained in the “Uses” and “Number of Instances Allowed” columns from Table 6 in the FF-ICE IG into the FIXM definitions for these enumerated values. For example, the current definition of TRANSITION\_ALTITUDE\_OR LEVEL is:

“Indicates that the associated trajectory point is the point at which the trajectory reaches the transition altitude (in climb) or level (in descent).”

If updated with the additional information available in Table 6, this would become:

“Indicates that the associated trajectory point is the point at which the trajectory reaches the transition altitude (in climb) or level (in descent). Used to provide clarity on assumptions for altitude reference. May occur multiple times in a route/trajectory.”

The current definition of START\_TAKEOFF\_ROLL is:

“Indicates that the associated trajectory point corresponds to the point at the start of takeoff roll (used for departures only)”

If updated, it would become:

“Indicates that the associated trajectory point corresponds to the point at the start of takeoff roll (used for departures only). Used to provide clarity regarding the point at which a computed trajectory is being initiated on the runway. May occur only once in a route/trajectory.”

These two recommendations from the Kick-Off meeting are not mutually exclusive.

CCB SECRETARIAT	
External Standard Consistency Checked	<input type="checkbox"/> AIDX <input type="checkbox"/> AIRM
CR Status	<input checked="" type="checkbox"/> Proposed <input type="checkbox"/> Implemented <input type="checkbox"/> Withdrawn <input type="checkbox"/> Rejected
Decision Date	Click or tap to enter a date
Implemented In	X.X.X
Comments	Click or tap here to add any additional information or comments.

## IMPLEMENTATION NOTES (CCB SECRETARIAT TO COMPLETE)

In addition to adding new fields and updating definitions, the sort order of this enumeration was also fixed (FIXM uses alphabetical order for enumerated values).