

**Disclaimer:** This document is intended as a summary of the changes made in AIXM Release Candidate 2. However, because some changes have been decided following face-to-face discussions in the Design Team, not all changes have been recorded in this list and some change descriptions might be inaccurate. Please use them as simple hints, indicating that something has changed in that area of the model.

	Title	Package	Change Type	Change Description
1	Missing Land and Hold Short (LAHSO)	Aerodrome/Heliport	Property change	Added the value LAHSO (point indicating Land And Hold Short Operation location) to <<enumeration>>codeRwyPointRole.
2	verticalDatum - duplicate attribute in AirportHeliport	Aerodrome/Heliport	Property change	Removed verticalDatum type from Class AerodromeHeliport
3	Replace Aerodrome with Airport	Aerodrome/Heliport	Diagram change	<p>According to ICAO, Airport = Aerodrome, the later being an archaic term. Renamed Aerodrome to Airport throughout model.            Changed package from Aerodrome/Heliport to AirportHeliport.            Changed package filename to AirportHeliportPackages.            Other changes were:            Aerodrome/Heliport Facilities to AirportHeliport Facilities</p> <p>Diagram Changes were:            In AirportHeliport package            1-1-Aerodrome to 1-AirportHeliport            2-AerodromeAssociations to 2-AirportHeliport Associations            3-AerodromeUsage to 3-AirportHeliport Usage            5-Aerodrome Codelist to 5-AirportHeliport Codelist            In Service Package            3-Service to Aerodrome/Heliport to 3-Service to AirportHeliport</p> <p>Feature Changes were:            AerodromeHeliport to AirportHeliport            AerodromeHeliportCollocation to AirportHeliportCollocation            AerodromeHeliportNavaid to AirportHeliportNavaid            AerodromeHeliportUsage to AirportHeliportUsage            ServiceAtAerodromeHeliport to ServiceAtAirportHeliport</p> <p>Object Changes were:            AerodromeHeliportUsageCondition to AirportHeliportUsageCondition            AerodromeHeliportUsageLimitation to AirportHeliportUsageLimitation            AerodromeOperation to AirportHeliportOperation</p>

4	Title	Package	Change Type	Change Description
	Expand Marking to Include Lines and Points	Aerodrome/Heliport	Property change	Added <<choice>>MarkingExtent class<<object>>MarkingElement related to <<choice>>MarkingExtent<<choice>>MarkingExtent hasPointExtent with <<object>>ElevatedPoint<<choice>>MarkingExtent hasCurveExtent with <<object>>ElevatedCurve<<choice>>MarkingExtent hasPolygonExtent with <<object>>ElevatedSurface
5	Apron Element	Aerodrome/Heliport	Diagram change; UML change	<<feature>>ApronElement 1. Relationship to <<feature>>Fuel (isProvidedWith) 2. Moved service availability properties from <<feature>>Gatestand. (jetwayAvailability, towingAvailability, dockingAvailability,groundPowerAvailability) 3. Changed type to codeTypeApronElement with values from AMDB and AirMAT: NORMAL, PARKING, DEICE, RAMP, CARGO, FUEL, HARDSTANDA, MAINT, MILITARY, OTHER LOADING, TAXILANE, TURNAROUND  Removed Deicing Area since it is a type of Apron Element.  Updated documentation.
6	For Airport Elements Consider Changing Surface to ElevatedSurface	Aerodrome/Heliport	Relationship change	Geometry relationships were changed for the following Airport features that are physically located on the ground:  1. ApronElement hasExtent with ElevatedSurface 2. ServiceRoad hasExtent with ElevatedSurface 3. ArrestingGear hasExtent with ElevatedCurve 4. RunwayElement hasExtent with ElevatedSurface 5. ConstructionArea hasExtent with ElevatedSurface
7	Change TaxiHoldingPositon to TaxiwayHoldingPosition	Aerodrome/Heliport	Property change	Changed <feature>TaxiHoldingPositon to <feature>TaxiwayHoldingPosition

8	Title	Package	Change Type	Change Description
	Approach Lighting System and Light Element	Aerodrome/Heliport	Relationship change	<p>Changed to &lt;&lt;feature&gt;&gt;AeroGroundLights</p> <ol style="list-style-type: none"> <li>1. Specialization of &lt;&lt;abstract&gt;&gt;SurfaceLightSystem (now called GroundLightSystem)</li> <li>2. Removed operationalStatus since it is included in general class</li> <li>3. Removed descriptionCharacteristics since it is included in parent class</li> </ol> <p>Change to &lt;&lt;VisualGlideSlopeIndicator&gt;&gt;: Made specialization of &lt;&lt;feature&gt;&gt;SurfaceLightSystem (now called GroundLightSystem)</p>
9	Construction Area - planned operational Attribute	Aerodrome/Heliport	Property change	<p>In &lt;&lt;feature&gt;&gt;ConstructionArea</p> <p>Added plannedOperational attribute of type date</p> <p>Removed plannedOperationalYear</p> <p>Removed plannedOperationalMonthDay</p>
10	TLOF Aiming Point	Aerodrome/Heliport	Diagram change; Relationship change	<p>Changed &lt;feature&gt;TouchDownLiftOff relationship to &lt;object&gt;ElevatedPoint. Changed role to "hasAimingPoint"</p>
11	Taxiway Marking List of Values	Aerodrome/Heliport	Property change	<p>In &lt;enumeration&gt;CodeTaxiwaySectionType (formerly codePsnTwy)</p> <p>Added TWY = Taxiway intersection</p>
12	RunwayCenterLine Point and Taxiway Intersection Status	Aerodrome/Heliport	UML change	<p>Added &lt;object&gt;TaxiwayIntersection class indicating the operational status of the runway intersection with a taxiway.entryAllowed - aircraft can transit from the Runway to the TaxiwayexitAllowed - aircraft can transit from the Taxiway to the RunwayFor consistency:Added &lt;object&gt;RunwayIntersection class indicating the operational status of the taxiwayintersection with a runway.entryAllowed - aircraft can transit from the Taxiway to the RunwayexitAllowed - aircraft can transit from the Runway to the Taxiway</p>

13	Title	Package	Change Type	Change Description
	Runway Element Can Be Associated with Many Runways	Aerodrome/Heliport	Relationship change	RunwayElements of type intersection may be associated with more than one Runway. Changed multiplicity of RunwayElement isPartOf Runway relationship from [1] to [1..*].
	Runway Direction Touchdown Zone Elevation	Aerodrome/Heliport	Property change	In <<Feature>> RunwayDirection added: 1. elevationTDZ of type valDistVer - Elevation of touch down zone: The value of the highest elevation of the runway Touch Down Zone (TDZ). 2. elevationTDZAccuracy of type valDistVer - The accuracy of the reported Touch Down Zone elevation
	Underpass/Overpass Taxiway Element	Aerodrome/Heliport	Property change	Created codeTypeTaxiwayElement based on codeTypeElement.  Added: 1. OVERPASS 2. UNDERPASS  Changed <<feature>>TaxiwayElement type property to be codeTypeTaxiwayElement
	Add Orange to codeColour	Aerodrome/Heliport	Property change	Added Orange as a code value for codeColour
	SurfaceCharacteristics - maxTirePressure Attribute	Aerodrome/Heliport	Property change	Changed maxTirePressurePcn to maxTyrePressurePcn and changed tirePressureSIWL to tyrePressureSIWL  to be consistent with British English.
	Modify Significant Point to Allow ARP and Runway Threshold	Aerodrome/Heliport	Diagram change	Modified Significant Point to Allow ARP [Airport Reference Point] and Runway Threshold [via RunwayPoint association].
	Delete Relationship RunwayCenterlinePoint intersectionWith Runway	Aerodrome/Heliport	Diagram change; UML change	Deleted relationship RunwayCenterlinePoint intersectionWith Runway
	Reverse navigability between runway direction and runway centerline point	Aerodrome/Heliport	Diagram change	Changed direction of association.

21	Title	Package	Change Type	Change Description
21	Rename Marking position Property	Aerodrome/Heliport	Diagram change	<p>Change Marking position to Marking of markingLocationType.</p> <p>Revised definition to: A code indicating the location of a marking relative to the surface.</p> <p>Changed the following features: RunwayMarking, ApronMarking, TaxiwayMarking, StopwayMarking, TouchDownLiftMarking</p>
22	Change AirportHeliport elevation to fieldElevation	Aerodrome/Heliport	Property change	<p>In AirportHeliport feature:</p> <ol style="list-style-type: none"> <li>1. Changed elevation to fieldElevation</li> <li>2. Changed elevationAccuracy to fieldElevationAccuracy</li> </ol>
23	Add Turning Fix to TerminalSegmentPoint Role	Aerodrome/Heliport	Diagram change	<p>Added Turning Fix to TerminalSegmentPoint role</p>
24	codeClassAcft P Code Value	Aerodrome/Heliport	Documentation change	<p>Changed definition of codeClassAcft = P to Prop not Piston. This makes the definition consistent with other code values.</p>
25	Runway Marking Relationships to Taxiway	Airport/Heliport	Relationship change	<p>Added EXIT value to CodeRunwaySectionType (formerly codePsnRwy)</p> <p>A relationship between Runway Marking (EXIT) and Taxiway was not created because the functional relationship between Runway exit and Taxiway is described by the TaxiwayCenterLinePoint and Runway association.</p>
26	Taxiway on Apron - Guidance Line	Airport/Heliport	UML change	<p>Created features and relationships to model the Guidance Line used to guide an aircraft from the Taxiway to Apron Gatestands. This requirement derives from AMDB. Created Guidance Line diagram in Apron subpackage. Added GuidanceLine feature. Added GuidanceLineCenterPoint feature. Added relationship GuidanceLine to Taxiway. Added relationship GuidanceLine to Gatestand. Added GuidanceLineMarking feature.</p>
27	Taxiway Centreline Not Needed	Airport/Heliport	Diagram change; Relationship change; UML	<p>Added GuidanceLine, which has a shape of type ElevatedCurve. Guidance Lines can be situated on Taxiway (most usual), Apron, Runway. Since we no longer need to have the TWYCentrelinePoint, it was deleted.</p>

Title	Package	Change Type	Change Description
		change	
<b>28</b>	Prior Permission Added to AirportHeliportUsageCondition	Airport/Heliport Property change	Made the following changes to the AirportHeliport usage mode: 1. In AirportHeliportUsageLimitation added relationship to the Unit that is the authorityFor the limitation. 2. In AirportHeliportUsageCondition added priorPermission duration in minutes.
<b>29</b>	codeTypeElement Datatype	Airport/Heliport Property change	Combined codeTypeTaxiwayElement into codeTypeElement.
<b>30</b>	Designated point Name Definition	Airport/Heliport Property change	Changed DesignatedPoint Name definition to support unnamed points. New definition = "Name may also be used to identify an unnamed point. See ARINC 424 definitions"
<b>31</b>	Name of RunwayIntersection Class	Airport/Heliport UML change	Changed RunwayIntersection to RunwayTaxiwayTransit.  The association object is describing transit options at the intersection of the Taxiway and Runway.

	Title	Package	Change Type	Change Description
32	Review ALS list	Airport/Heliport	Property change	<p>In response to forum discussion about Approach Lighting System: We replaced the current "type" attribute (of the ApproachLightingSystem class) with three distinct attributes: 1. classICAO [Classification of the approach lighting system using as criteria the ICAO Annex 14 standards and recommended practices]. List of values: • SIMPLE = Simple approach lighting system (ICAO Annex 14, Vol 1, 5.3.4.2) • CAT1 = Precision approach category I lighting system (ICAO Annex 14, Vol 1, 5.3.4.10) • CAT23 = Precision approach category II and III lighting system (ICAO Annex 14, Vol 1, 5.3.4.22) • CIRCLING = Circling guidance lighting system (ICAO Annex 14, Vol 1, 5.3.6) • LEAD-IN = Runway lead-in lighting system (ICAO Annex 14, Vol 1, 5.3.7) • NONE = Does not classify as an ICAO type Based on an analysis of ICAO ANNEX 14, CAT II and III do not need separate values. 2. type [A regional or organisation specific classification of the approach lighting system equipment. Could also be a brand name]. Open list of values (&lt;codeList&gt;), including: • ALSAF = 3000 FT high intensity Approach Lighting System with Sequenced Flashing Lights • MALS = 1400 FT Medium Intensity Approach Lighting System • MALSR = 1400 FT Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights • SALS = Short Approach Lighting System • SSALS = Simplified Short Approach Lighting System • SSALR = Simplified Short Approach Lighting System with Runway Alignment Indicator Lights • ODALS = Omni Directional Approach Lighting System • AFOVRN = US Air Force Overrun 1000 FT Standard Approach Lighting System • MILOVRN = Military Overrun Approach Lighting System • CALVERT = Calvert Approach Lighting System • etc. 3. classLightingJAR [Classification of the approach lighting system using as criteria JAR-OPS 1 - Subpart E, Appendix 1 to 1.430]. List of values: • FALS = Full approach light facilities; comprise runway markings, 720 m or more of high/medium intensity approach lights, runway edge lights, threshold lights and runway end lights. • IALS = Intermediate approach light facilities; comprise runway markings, 420 to 720 m of high/medium intensity approach lights, runway edge lights, threshold lights and runway end lights. • BALS = Basic approach light facilities; comprise runway markings, less than 420 m of high/medium intensity approach lights (or any length of low intensity approach lights), runway edge lights, threshold lights and runway end lights. • NALS = None or insufficient approach light facilities; comprise runway markings, runway edge lights, threshold lights, runway end lights or no lights at all.</p>

	<b>Title</b>	<b>Package</b>	<b>Change Type</b>	<b>Change Description</b>
<b>33</b>	Marking to marking element Relationship is Wrong.	Airport/Heliport	Relationship change	Corrected relationship/
<b>34</b>	Taxiway Diagrams - No Numbers in Names	Airport/Heliport	Diagram change	Standardized class diagram names in all packages.
<b>35</b>	MovementAreaElements to be Deleted	Airport/Heliport	UML change	The MovementAreaElement <<choice>> has been removed because it had multiple occurrences in its association with AirportHeliportUsage. Thus, it was not a real choice. It has been replaced by direct associations from AirportHeliportUsage to all former choices (TLOF, GateStand, etc.)
<b>36</b>	Nonstandard Runway Markings	Airport/Heliport	Property change	Added markingICAOSTandard of type codeYesNo to indicate that the marking conforms to ICAO standards as described in Annex 14.
<b>37</b>	Partial Runway Closed (last 1000 FT West)	Airport/Heliport	Property change; UML change	Added RunwayElement to the features for which an AirportHeliportUsage can be expressed. The 'last 1000 FT West' will be a note. The ad-hoc RunwayElement will be used to display the affected surface.
<b>38</b>	Usage Conditions Based on Wingspan, Passengers and Weight	Airport/Heliport	Property change	Added the following properties to AircraftCharacteristics to support usage limitations identified in NOTAMs: 1. maxWeight - maximum aircraft weight 2. maxPassengers - maximum number of passengers 3. maxWingSpan - maximum wing span of aircraft.
<b>39</b>	Usage Timetable Moved to AirportHeliportUsageLimitation	Airport/Heliport	Relationship change	Deleted relationship to TimeTable from AirportHeliport and Runway.  Hours of use should be encoded using the AirportHeliportUsageLimitation.
<b>40</b>	Missing Work Area	Airport/Heliport	UML change	Changed ConstructionArea to WorkArea to be more general and applicable to work in progress on a runway.  Added type of codeWorkAreaType with values for CONSTRUCTION area and WORKAREA.
<b>41</b>	Multiple Ways of Declaring Operational Status	Airport/Heliport	Diagram change; UML change	Removed 'status' attributes runway, runway direction, taxiway, apron, etc. Expanded the AirportHeliportUsage feature with associations to GuidanceLine.

	<b>Title</b>	<b>Package</b>	<b>Change Type</b>	<b>Change Description</b>
<b>42</b>	Stopway Has Same Properties as Protection Area	Airport/Heliport	UML change	Removed Stopway feature. Added a new type 'SWY' in the list of AirportHeliportProtectionArea. Adjusted lists of values for position on Runway. Included AirportHeliportProtectionArea in the list of features that can get marking and lighting.
<b>43</b>	Missing Possibility to Model SNOWTAM Information	Airport/Heliport	UML change	Added a new set of classes under the AirportHeliport package that model Surface Contamination.
<b>44</b>	Typo in AirportHeliport/Helipoints Sub-package	Airport/Heliport	UML change	This is no longer an issue as the sub-package name has been changed to "Helicopter Surfaces"
<b>45</b>	Typo in Relationship between MarkingElement & MarkingExtent	Airport/Heliport	Relationship change	Changed the role of the MarkingExtent <<choice>> into "extent". Typo error corrected.
<b>46</b>	UML Association Name - Make Active Verbs	Airport/Heliport	Diagram change; Relationship change	The association names have been updated across the model. They are now active verbs. For example, 'locatedAt' is now 'isLocatedAt'.
<b>47</b>	Spelling Mistakes in Documentation	Airport/Heliport	Documentation change	All identified spelling errors have been corrected.
<b>48</b>	Missing Aggregation in Airspace Model	Airspace	Relationship change	The association between AirspaceAggregateComponent and AirspaceVolume was intended to be aggregation, because AirspaceVolume is an object. Changed relationship between AirspaceAggregateComponent and AirspaceVolume to aggregation.
<b>49</b>	Typo in Feature Name: AirspaceAggergateComponent	Airspace	UML change	Changed <<feature>>AirspaceAggergateComponent to <<feature>>AirspaceAggregateComponent
<b>50</b>	Add hasActiveHours Relationship between Airspace and TimeTable	Airspace	Diagram change; Relationship change	Added relationship between <<feature>>Airspace and <<object>>TimeTable called hasActiveHours.  This relationship is used to record the schedule when an airspace is active.

51	Title	Package	Change Type	Change Description
51	How to Model GND and UNL for Vertical Limits	Airspace	Property change	<p>Updated valDistVer to include four special values:            UNL - Unlimited.            GND - Ground.            FLOOR - the bottom of the airspace            CEILING - the top of the airspace</p> <p>New pattern is: ((\+ \-){0,1}\d{1,8}(\.\d{1,4}){0,1}) 'UNL' 'GND' 'FLOOR' 'CEILING'</p>
52	List of Values for Airspace Activity Needs to be Cleaned	Airspace	Property change	<p>Removed Special equipment, RVSM equipment, RNAV equipment and 8.33 KHz equipment from the codeTypeActivity domain. The same values are already covered by AircraftCharacteristics, capability attribute, which can be used as part of a FlightRestriction in order to express limitations such as RNAV, RVSM, 8.33.</p>
53	AIXM Abstract Feature Update	AIXM Abstract Features	Property change	<p>Removed &lt;&lt;modelGroup&gt;&gt; and added identifier property directly into AIXMFeature. &lt;&lt;object&gt;&gt; AbstractAIXMMessage - XSD Tool - Changed set to XSDcomplexType.            In &lt;&lt;object&gt;&gt; AbstractAIXMMessage - XSD Tool, changed model property "id" value to "AbstractAIXMMessage" .            In &lt;&lt;feature&gt;&gt; AIXMFeature - XSD Tool, changed set to XSDcomplexType .            In &lt;&lt;feature&gt;&gt; AIXMFeature - XSD Tool, changed model property "id" value to "_Feature" .            In &lt;&lt;feature&gt;&gt; AIXMFeature - XSD Tool, changed model property "substitutionGroup" value to "True" .            In &lt;&lt;object&gt;&gt; AIXMObject - XSD Tool, changed set to "XSDcomplexType".</p>
54	Update Abstract AIXM Package to Improve Understanding	AIXM Abstract Features	Diagram change	<p>Added AIXMFeatureProperties class to the Abstract package. The AIXMFeatureProperties is related to the AIXMFeatureTimeSlice. The purpose is to show how properties are included in the TimeSlice.</p>

55	Title	Package	Change Type	Change Description
	Add Definition to Feature identifier Property	AIXM Abstract Features	Property change	Added definition. [Wikipedia] Identifier definition = A value that enables distributed systems to uniquely identify the feature without significant central coordination. Preferably, the identifier property should be a Universally Unique Identifier (UUID); see ISO/IEC 11578:1996 Information technology -- Open Systems Interconnection - Remote Procedure Call. Alternatively, the identifier can be defined as a unique supplier codeSpace and supplier primary key.
	Abstract Types whose Names Do Not Start with 'Abstract'	AIXM Abstract Features	XSD change	Renamed the two complex types in the AIXM-AbstractGML-ObjectTypes.xsd file: AbstractAIXMTimeSliceTypeAbstractAIXMTimeSliceBaseTypeAlso , all UML classes that are 'Abstract' now generate XSD elements and types that have 'abstract=true'.
	Extension Elements Names Should Start with 'Abstract'	AIXM Abstract Features	XSD change	All "_SomeFeatureExtension" elements have been re-named "AbstractSomeFeatureExtension", to be compliant with the GML requirements for Abstract elements.
	Consistent Approach for All Multiple-Valued Properties in the AIXM XSD	AIXM Abstract Features	Property change	<p>The first change is on the timeSlice property of each and every AIXM feature.</p> <p>In RC1, the &lt;timeSlice&gt; property occurred just once and it allowed multiple occurrences of the &lt;FeatureTimeSlice&gt; object.</p> <p>For RC2:</p> <ol style="list-style-type: none"> <li>1. The &lt;timeSlice&gt; property becomes un-bounded (1 or more) in all features</li> <li>2. All FeatureTimeSlicePropertyType complex types (such as RunwayProtectAreaTimeSlicePropertyType) have a single (no longer unbounded) child element of type reference to FeatureTimeSlice.</li> </ol> <p>The second impact is on associations with a multiplicity of more than 1 (such as SurfaceLightingSystem madeOf 0..* LightElement, Timetable composedOf 0..* Timesheet, etc.). In RC1, they were declared of type FeatureArrayPropertyType.</p> <p>For RC2:</p> <ol style="list-style-type: none"> <li>1. All multiple valued properties (that result from associations with a multiplicity higher than 1, such as isMadeOf in SurfaceLightingSystem), are declared unbounded and of type FeaturePropertyType.</li> </ol>

Title	Package	Change Type	Change Description
			<p>2. Removed from the schema the declaration of the following:</p> <ul style="list-style-type: none"> <li>- FeatureArrayType complex types (such LightElementArrayType)</li> <li>- FeatureArray elements (such as LightElementArray)</li> <li>- FeatureArrayPropertyType (such as LightElementArrayPropertyType)</li> </ul> <p>All these were necessary for the declaration of the multiple valued properties. They are no longer necessary.</p> <p>This second approach also applies for associations with an association class (such as between Navaid and NavaidEquipment, with the association class NavaidComponent). In the RC1 schema, a long chain of arrays was necessary.</p> <p>In RC2 composedOf becomes unbounded, of type NavaidComponentPropertyType and the NavaidCompositionPropertyGroup has an unbounded element "is_NavidEquipment" of type NavaidEquipmentPropertyType.</p>
<b>59</b>	aixm:_Feature Should Be Abstract	AIXM Abstract Features	<p>XSD change</p> <p>Changed the name of the element into AbstractAIXMFeature (in the AIXM-AbstractGML-Object.xsd file).</p> <p>All AIXM features declared by the AIXM-Features.xsd shall be substitutions to aixm:AbstractAIXMFeature. For example:</p> <pre>&lt;element name="RunwayDeclaredDistance" type="aixm:RunwayDeclaredDistanceType" substitutionGroup="aixm:AbstractAIXMFeature"&gt;</pre>
<b>60</b>	Harmonise Abbreviations in List of Values for RWY, TWY Positions	AIXM Data Types	<p>Property change</p> <p>The code lists have been harmonized using the AIXM 4.5 code list guidance document (deliverable of contract with Sofreavia) as a starting point.</p>

61	Title	Package	Change Type	Change Description
	Add nilreason to UML Model	AIXM Data Types	Relationship change; UML change	<p>Added NilReason class to AIXM DataTypes. The NilReason value domain is based on ISO19136 with the following values:</p> <ol style="list-style-type: none"> <li>1. inapplicable -- there is no value</li> <li>2. missing -- the correct value is not readily available to the sender of this data.</li> </ol> <p>Furthermore, a correct value may not exist</p> <ol style="list-style-type: none"> <li>3. template -- the value will be available later</li> <li>4. unknown -- the correct value is not known to, and not computable by, the sender of this data.</li> </ol> <p>However, a correct value probably exists</p> <ol style="list-style-type: none"> <li>5. withheld -- the value is not divulged</li> <li>6. other:text -- other brief explanation, where text is a string of two or more characters with no included spaces and</li> <li>7. anyURI -- should refer to a resource which describes the reason for the exception</li> </ol>
62	Add EngineOut to codeTypeMissedApproach	AIXM Data Types	Diagram change	Added EngineOut code value to the codeTypeMissedApproach because this is required for ARINC 424 coding.
63	Add Statute Miles to valDist Unit of Measurement	AIXM Data Types	Property change	RC!: Added MI = Statute Miles to uomDistHorz
64	codeDatum U Definition	AIXM Data Types	Documentation change	For codeDatum, changed value U to OTHER Changed definition to "Other datum not listed" The concept of Unknown is handled in the Nil and NilReason attributes.

65	Title	Package	Change Type	Change Description
65	All Data Types Should Start with Upper Case and End with 'Type'	AIXM Data Types	Property change	In UML, it would be inconsistent to rename just the data type classes that correspond to these XSD types. Therefore, we renamed all the AIXM UML classes that are in the AIXM Data Types package, as follows:"CodeAircraftCategoryType" instead of codeAircraftCategory"CodeAircraftEngineNumberType" instead of codeAircraftEngineNumber... etc."ValWeightType" instead of valWeightThis is a GML requirement that impacted complex types such as valDistance, because of the 'uom' attribute. Note that the names have not always changed in this change documentation, much of which was written prior to this particular change.
66	Update ABN Value Definition in codeGroundLighting Enumeration	AIXM Data Types	Property change	Updated "ABN" definition in CodeGroundLightingType enumeration from "Aerodrome" to "Airport".
67	Update Consistency in Enumeration Value Naming for codeStatusXxxxx Enumerations	AIXM Data Types	Property change	a) Updated CodeStatusNavaidType value to be consistent. "INCONSTRUCTION" is now "IN_CONSTRUCTION" b) Updated CodeStatusProcedureType value to be consistent. "INCONSTRUCTION" is now "IN_CONSTRUCTION" c) Updated CodeStatusSurfaceType value to be consistent. "WIP" is now "WORK_IN_PROGRESS"
68	Move dataIntegrity from Feature to FeatureTimeSlice	AIXM Metadata	Property change	Moved dataIntegrity from Feature to FeatureTimeSlice
69	ElevatedPoint Specializes Non-existing Class ObstaclePart	Geometry	Relationship change	Deleted the incorrect specialization.

70	Title	Package	Change Type	Change Description
	Holding Pattern Depiction	Holding	UML change	Moved HoldingPattern depictedBy relationship from <<object>>Surface to <<object>>CurveRemoved rolenames since rolenames are not used in AIXM 5 UML.
71	Unplanned Holding for RNAV and non-RNAV at Same Location	Holding	Diagram change; Relationship change	No change was needed for the model
72	Add Holding Pattern Assessment Feature	Holding		Using the assessments, holding patterns are defined using a common attributes of many evaluations so there is a one to many relationship between holding pattern and holding assessment. In our model we can capture the holding patterns and the assessment areas but do not have an object for detailed assessment information. Added Holding Assessment area.
73	Import of GML Schema Components	ISO 19107 Geometry	Documentation change	<p>Added an appinfo annotation element gml:gmlProfileSchema as an immediate child of the root &lt;schema&gt; element to the schema AIXM-AbstractGML-ObjectTypes.xsd as follows:</p> <pre data-bbox="1087 813 1913 1114"> &lt;schema ...&gt;   &lt;annotation&gt;     &lt;appinfo&gt;      &lt;gml:gmlProfileSchema&gt;http://www.aixm.aero/schema/5.0/profile/gml4aixm.xsd&lt;/gml:gmlProfileSchema&gt;       &lt;/appinfo&gt;     &lt;/annotation&gt;     ...   &lt;/schema&gt; </pre>

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74	GML 3.2 Requires New Profile aixm4gml.xsd	ISO 19107 Geometry	XSD change	Because of using a profile of GML 3.2, all enumerations that had been inserted in the AIXM-AbstractGML-ObjectTypes.xsd in Release Candidate 1, were now removed. Also, some modifications were necessary because of changes in GML 3.2 names.1. Changes the referenced GML abstract feature and timeslice type name.In AIXM-AbstractGML-ObjectType.xsd, replaced gml:_Feature with gml:AbstractFeatureIn AIXM_Feature.xsd, replaced gml:_TimeSlice with gml:AbstractTimeSlice2) Removed the following definitions or declarations from the AIXM-AbstractGML-ObjectTypes.xsdAttribute group definitions:aixm:OwnershipAttributeGroup aixm:AggregationAttributeGroupaixm:AssociationAttributeGroupSimple type definitions: aixm:AggregationTypeaixm:nilReasonTypeaixm:nilReasonEnumeration Complex type definitions:aixm:AbstractMetadataPropertyTypeElement declarations :aixm:identifierReplaced all references to the removed aixm: components with the corresponding GML 3.2 components.
75	Attributes with Wrong Names in NavaidPoints	Navaid Points	Property change	Some attributes in the Navaid and Points package do not comply with the naming convention. In NavaidEquipment change:1. codeID to identifier2. codeEmission to emissionClassIn DME change:1. codeType to type2. codeChannel to channelIn TACAN change:1. codeChannel to channelIn MarkerBeacon change:1. codeClass to classIn Localizer change:1. codeTypeUseBack to backCourseUsableIn VOR change:1. codeType to type2. codeTypeNorth to zeroBearingDirectionIn NDB change:1. codeClass to classIn Azimuth change:1. codeType to type2. codeChannel to channel
76	Typo in Association Name Between NavAid and ElevatedPoint	Navaid Points	Relationship change	In relationship from <<feature>>Navaid to <<object>>ElevatedPoint, changed association name from hasNavigableLocation to hasNavigableLocation.
77	Typo in Documentation of Feature Elevation	Navaid Points	Documentation change	Fixed typo in <<feature>>Elevation description.

78	Title	Package	Change Type	Change Description
	Wrong Associations for NavigationSystemCheckpoint	Navaid Points	Diagram change; Relationship change	Changed relationship between <<feature>>NavigationSystemCheckpoint and <<object>>AngleIndication1. Changed navigability from NavigationSystemCheckpoint to AngleIndication since AngleIndication is an <<object>>2. Changed relationship name from referringTo to locatedBy3. Changed to an aggregation relationship.Changed relationship between <<feature>>NavigationSystemCheckpoint and <<object>>DistanceIndication1. Changed navigability from NavigationSystemCheckpoint to DistanceIndication since DistanceIndication is an <<object>>2. Changed relationship name from referringTo to locatedBy3. Changed to an aggregation relationship.
79	Corrected verticalDatum type for Class SpecialNavigationStation	Navaid Points	Diagram change	
80	Change NavaidComposition to NavaidComponent	Navaid Points	Diagram change	<p>Changed &lt;&lt;object&gt;&gt;NavaidComposition to &lt;&lt;object&gt;&gt;NavaidComponent. This improves readability and meaning in the association between Navaid and Navaid Equipment.</p> <p>The relationships in this association now reads: Navaid composedOf NavaidComponent. NavaidComponent is NavaidEquipment</p>
81	Documentation of NavaidComposition Not Appropriate	Navaid Points	Documentation change	Changed definition from:The use of the navaid equipment within the navaid service. For example, the VOR equipment in a VORTAC provides angular guidance service.To:Indicates navigation use of a NavaidEquipment as a component of the navigation service provided by a Navaid. For example the DME NavaidEquipment is a NavaidComponent of an ILS system. The DME may be collocated with the Localizer and the DME may provide the navigable location for the Navaid service.
82	New Diagram for DesignatedPoint	Navaid Points	Diagram change	<p>Created 9 - Designated Point Association diagram in the Navaid package.</p> <p>All Designated Point relationships are shown.</p>

	<b>Title</b>	<b>Package</b>	<b>Change Type</b>	<b>Change Description</b>
<b>83</b>	Revise Definitions for RadioFrequencyLimitation Types	Navaid Points	Property change	The meaning of value 'UUS' was clarified [Un-usability (use is not permitted in the defined sectors)]
<b>84</b>	Add Localizer Directional Aid (LDA) to codeTypeNavaid	Navaid Points	Property change	In codeTypeNavaid, added LDA = Localizer Directional Aid.
<b>85</b>	Update NavaidEquipment Organization Association	Navaid Points	Diagram change; Relationship change	Updated relationship between NavaidEquipment and OrganizationAuthority: 1. changed association name to "isUnderResponsibilityOf" 2. change association multiplicity to NavaidEquipment isUnderResponsibilityOf 0..* OrganizationAuthority 3. added AuthorityForNavaidEquipment association class 4. AuthorityForNavaidEquipment association class has type property with values OWN and OPERATE.
<b>86</b>	Compass Locator	Navaid Points	Diagram change; UML change	In codeClassNDB Updated definition of enumerant L to be "Locator - low powered NDB used as an aid for final approach (also known as a compass locator)."
<b>87</b>	Obstacle Protection for Nav aids	Navaid Points	UML change	Added an aggregation of the ObstacleAssesmentArea in the NavaidEquipment.
<b>88</b>	Attributes Named "identifier"	Navaid Points	Property change	Changed name of attribute 'identifier' into 'designator' in Navaid and NavaidEquipment classes. The use of "identifier" was potentially confusing since the inherited "identifier" from AbstractAIXMFeature is named the same.
<b>89</b>	Create Vertical Structure	Obstacle	Property change; Relationship change; UML change	Obstacle class generalised into VerticalStructure. An obstacle is a type of VerticalStructure, that is explicitly associated with an ObstacleArea.  Rules for identifying when a VerticalStructure is an obstacle can be found in ICAO Annex 15 Appendix 8.
<b>90</b>	Update Obstacle Type Code List	Obstacle	Property change	Reviewed obstacle codelist against AMDB and AirMAT obstacle code lists. AIXM includes all necessary obstacle types. No change.
<b>91</b>	Obstacle ICAO Annex 14 Conformance	Obstacle	Property change	In <<feature>>Obstacle, added markingICAOSTandard of type codeYesNo  In <<feature>>ObstacleLighting, added lightingICAOSTandard of type codeYesNo

	<b>Title</b>	<b>Package</b>	<b>Change Type</b>	<b>Change Description</b>
<b>92</b>	Minor Changes to VerticalStructures	Obstacle	Property change; UML change	a) Updated VerticalStructurePartGeometry documentation to fix typo. "differnt" is now "different" b) Diagrams were already updated and the geometries are now depicted. c) Updated CodeVerticalStructureType value to fix typo. "TETHERED_BALL0ON" is now "TETHERED_BALLOON"
<b>93</b>	Spelling of Organisation	Organisation	UML change	Change OrganizationAuthority to OrganisationAuthority and OrganizationAuthorityAssociation to OrganisationAuthorityAssociation to be consistent with British English
<b>94</b>	Typo in Association Name between SegmentLeg and HoldingUse	Procedure	Relationship change	Changed relationship name from extablishes to establishes for the relationship between <<feature>>SegmentLeg and <<object>>HoldingUse
<b>95</b>	Role Name on Association ProcedureTransition Represents Curve	Procedure	Relationship change	Role names are not used in the AIXM 5 UML model. Removed the rolename +path for the relationship between <<feature>>ProcedureTransition and <<object>>Curve.
<b>96</b>	Wrong Multiplicity Between Procedure and Aerodrome	Procedure	Relationship change	A Procedure services one or more AirportHeliports. Therefore, for the relationship <<feature>>Procedure to <<feature>>AirportHeliport, changed multiplicity from 0..* AirportHeliport to 1..* AirportHeliport.
<b>97</b>	Missing Class Definitions in "Segment Leg Codelists" Diagram	Procedure	Diagram change; Property change	The following codelist enumerations were carried over from original design and modeling discussions. It was determined that these code lists were already included in AIXM. Deleted: - codeSegmentType - codeAltitudeType - codeSatelliteServiceLevel.
<b>98</b>	Show Leg to Procedure Relationship	Procedure		Added Star, Sid and InstrumentApproachProcedure <<features>> to the SegmentLegSpecialization diagram.
<b>99</b>	Change Element Name legType	Procedure	Diagram change; UML	Changed SegmentLeg legType property to endConditionDesignator.

Title	Package	Change Type	Change Description
		change	
<b>100</b>	Change Relationship of ProcedureTransition	Procedure	Diagram change; UML change Added seqNumberARINC to ProcedureTransition. Changed ProcedureTransition from a feature to an object. Modified relationships to be M-M from Procedure to SegmentLeg having the association class ProcedureTransition.
<b>101</b>	Change flyBy to flyOver	Procedure	Diagram change; UML change Changed SegmentLeg flyBy property to flyOver. Comments on forum suggest the default activity if flyOver so it is more natural to use flyOver as the property name.
<b>102</b>	Add Relationship for FPAP	Procedure	Diagram change; UML change Added relationship from FinalSegment to TerminalSegmentPoint; hasFinalPathAlignmentPoint, keeping point definition consistent. Deleted elements altitudeFPAP, geoidHeight and heightAboveEllipsoid from FasDataBlock object.
<b>103</b>	Modify Multiplicity of MSA to ApproachProcedure	Procedure	Diagram change; UML change MSA can be associated to 1..M InstrumentApproachProcedures. Modified multiplicity of MSA to ApproachProcedure
<b>104</b>	Prior and Post Fix Errors	Procedure	Property change Added priorFixTolerance and postFixTolerance to PointUse.  Because the fix may be received early, protection against obstacles must be provided from a line perpendicular to the flight course. PriorFixTolerance indicates the error distance from the fix to the earliest point where the fix may be received along the flight course.  postFixTolerance - Indicates the error distance from the fix to the latest point where the fix may be received along the flight course.
<b>105</b>	Review codeIAPFix	Procedure	Property change Name of data type changed into CodeProcedureFixRoleType in RC2 and it has been reviewed.
<b>106</b>	Remove default for TerminalSegmentPoint flyOverFlag	Procedure	Property change RC1 Removed nil default value for flyOverFlag
<b>107</b>	Association isArcCenter between SegmentLeg and TSP is Named Inconsistently	Procedure	Relationship change Association renamed to SegmentLeg "hasArcCenter" with TerminalSegmentPoint.

108	Title Change EnRouteRoute to Route	Package Routes	Change Type Diagram change	Change Description
108	Change EnRouteRoute to Route	Routes	Diagram change	Package Changes: En-route routes deleted to avoid duplicate packages.  Diagram Changes En Route Routes to Routes  Feature Changes: EnRouteRoute to Route
109	Move RouteSegment type and flightRule to Route	Routes	Relationship change	Updated route model.1. From RouteSegment moved international, military, flightRule to the Route.2. From RouteSegment moved navigationType, requiredNavigationPerformance to RoutePortionUsage
110	Model for North Atlantic and Other Oceanic Tracks	Routes	UML change	Added a type attribute in the Route feature, initially with two values: ATS - normal route according to Annex 11 NAT - North Atlantic Track.  Added simple Point as option in the SignificantPoint choice.
111	Add Surface to Service Frequency Diagram	Service	Diagram change	Added <<object>>Surface to the ServiceFrequency diagram
112	Add HoldingAssessment definition	Shared	Diagram change; Documentation change	Definition added.
113	Typo in AircraftCapabilities	Shared	UML change	Changed AircraftCapabilites to AircraftCapability