

# (SAAS) ARINC-813-3 (3D) AMDB



<b>Use Case: Name:</b>	<b>Originate ARINC-816-3 Avionics Airport Mapping Database</b>
<b>ASBU:</b>	<b>DAIM-B1/5: Provision of digital aerodrome mapping data sets</b>
<b>PANS-AIM ADC:</b>	Table A1-1 Aerodrome Data
<b>Actors:</b>	AIM Organization (primary), TFG-SAAS on AWS (secondary)
<b>Summary Description</b>	For an AMDB in the archive of the AIM Organization, originate the ARINC-816-3 database standard in consideration of embedded avionics systems.
<b>Pre-Condition</b>	(From Note-3 of PANS-AIM): <i>“The content of the aerodrome mapping data sets is defined in (RTCA) Document DO 272D (EUROCAE) Document ED 99 — User Requirements for Aerodrome Mapping Information.”</i>
<b>Post-Condition</b>	Metadata, Features and attributes derived from DO-272/ED-99, Coding derived from DO-291/ED-119, Optimizations, Database structure, Binary encoding, Cyclic Redundancy Check (CRC) algorithm specification
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>1. The TFG-SAAS verifies that this is a valid customer in the S3 Cloud.</li> <li>2. The AIM Org uploads the .zip up to the TFG-SAAS, in AWS S3.</li> <li>3. The TFG-SAAS verifies that the .zip file contains the Parameter .XLS</li> <li>4. The TFG-SAAS verifies that the .zip file contains DO-272 ED-99 Shapefiles of Point, Line, and Polygon AMDB features</li> <li>5. The TFG-SAAS verifies all needed Attributes for conversion to 816-3</li> <li>6. The TFG-SAAS verifies that all Runway, Taxiway, Apron, Parking Area and Parking Positions features are present, and geospatially linked.</li> <li>7. The TFG-SAAS creates the binary encoded XML format ARINC Specification 814: XML Encoding and Compression Standard.</li> <li>8. The TFG-SAAS provides an audit log of all features converted to 816-3.</li> <li>9. The TFG-SAAS assures the connectivity of all ASRN Edges in the 816-3.</li> </ol>

**THE FANS GROUP LLC (2017)**

Westminster, Colorado, USA 80031

Email: [inquiries@thefansgroup.aero](mailto:inquiries@thefansgroup.aero)

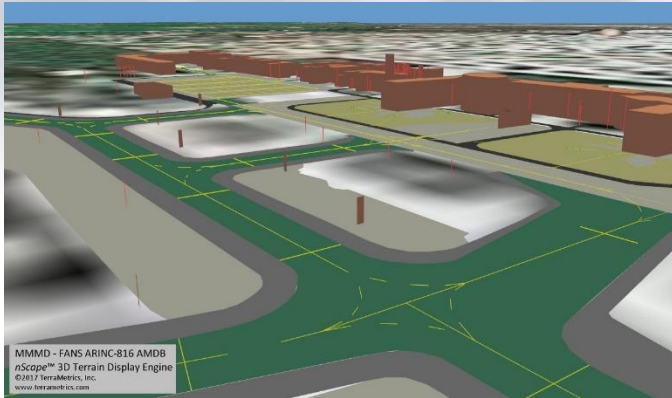
Tel. WESTERN Hemisphere:

**URL:** [www.thefansgroup.aero](http://www.thefansgroup.aero)



**The Fans Group**

# (SAAS) ARINC-813-3 (3D) AMDB



Use Case: Name: Convert Annex-15 Area-2ABC into Annex-14 OLS	
Alternative Path	1a. The entity trying to upload the .zip file is not a valid customer 2a. The .zip file is not readable or does not pass a Virus Scan 3a. The .zip file does not contain the Parameter .XLS 4a. The .zip file does not contain any DO-272 features 5a. The .zip file does not contain the AerodromeReferencePoint or RunwayThreshold shapefiles 5b. The .zip file does not contain proper Stopways or DisplacedArea 6a. The ICAO Runway Code is not valid 7a. The RunwayThreshold, Stopway, DisplacedArea coordinates lack 3D.
Business Rules	B1: Point, Line, Polygon AMDB SHP do not meet DO-276/DO-291 Schema B2: Point, Line, Polygon AMDB SHP do not meet DO-272 Raw Geometry B3: Point, Line, Polygon AMDB SHP do not meet DO-272 individual feature business rules B4: AMDB features to other AMDB features do not meet DO-272 AMDB business rules B5: Point, Line, Polygon AMDB Data lack ICAO Doc 10066 Metadata B6: Point, Line, Polygon AMDB Data lack Temporal Metadata
Non-Functional Requirements	NF1: Time for complete Analysis on AWS ESRI Instance NF2: Security for customer access NF3: Time to create (optional) OLS POV-Ray graphics NF4: Language support for translation of AMDB Code Tables NF5: VPN or IP Address incompatible with Security requirements

**THE FANS GROUP LLC (2017)** URL: [www.thefansgroup.aero](http://www.thefansgroup.aero)  
 Westminster, Colorado, USA 80031  
 Email: [inquiries@thefansgroup.aero](mailto:inquiries@thefansgroup.aero)  
 Tel. WESTERN Hemisphere:

