Step 1 EFPL in NM Systems Technical Specification

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Abstract

Airspace Users will provide information that is additional to the ICAO defined Flight Plan information in the Flight Plan Message to NM, which is called the Extended Flight Plan Message or EFPLM. This additional information consists of 4D trajectory as calculated by the flight operator, as well as flight specific performance data. NM system will provide the profile calculation constraints applying to the flight plan to the Airspace Users in when replying to the flight plan validation and submission; and distribute the EFPLM. For VP-713 exercise, a prototype has been developed following the requirements of version 1.0 to evaluate possible benefits of the Airspace Users receiving the profile calculation constraints and the ATC's receiving the EFPLM. After the exercise execution, these requirements have been updated to deliver Solution #37 for PCP.

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Rational for rejection
None.

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00.01.01	04/10/2016	Final		Updated with SJU review comments and for submission

8 # Intellectual Property Rights (foreground)

9 This deliverable consists of SJU foreground.

Table of Contents

EXECUTIVE SUMMARY **6**

1 INTRODUCTION **7**

1.1 PURPOSE OF THE DOCUMENT 7
1.2 INTENDED READERSHIP 7
1.3 INPUTS FROM OTHER PROJECTS 7
1.4 STRUCTURE OF THE DOCUMENT 7
1.5 REQUIREMENTS DEFINITIONS – GENERAL GUIDANCE 8
1.6 FUNCTIONAL BLOCK PURPOSE 8
1.7 FUNCTIONAL BLOCK OVERVIEW 8
1.8 GLOSSARY OF TERMS 9
1.9 ACRONYMS AND TERMINOLOGY 9

2 GENERAL FUNCTIONAL BLOCK DESCRIPTION **13**

2.1 CONTEXT 13
2.2 FUNCTIONAL BLOCK MODES AND STATES 15
2.3 MAJOR FUNCTIONAL BLOCK CAPABILITIES 15
2.4 USER CHARACTERISTICS 15
2.5 OPERATIONAL SCENARIOS 16
2.6 FUNCTIONAL 16
2.6.1 Functional Decomposition *16*
2.6.2 Functional Analysis *16*
2.7 SERVICE VIEW 16

3 FUNCTIONAL BLOCK FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS **17**

3.1 CAPABILITIES 17
3.1.1 ExtendedFlightPlanSubmission Service Requirements *18*
3.2 ADAPTABILITY 34
3.3 PERFORMANCE 34
3.4 SAFETY & SECURITY 35
3.5 MAINTAINABILITY 36
3.6 RELIABILITY 37
3.7 FUNCTIONAL BLOCK INTERNAL DATA REQUIREMENTS 39
3.8 DESIGN AND CONSTRUCTION CONSTRAINTS 40
3.9 FUNCTIONAL BLOCK INTERFACE REQUIREMENTS 40

4 ASSUMPTIONS **52**

5 REFERENCES **53**

5.1 USE OF COPYRIGHT / PATENT MATERIAL /CLASSIFIED MATERIAL 53
5.1.1 Classified Material *53*

APPENDIX A FLIGHTPLANDATADISTRIBUTION SERVICE REQUIREMENTS **54**

List of tables

Table 1: Operational Uses Cases and Technical Use Cases Mapping 17
Table 2: Interface Data Layout 50

List of figures

Figure 1 – Lateral Deviation of a GeoPoint 9
Figure 2 - NOV-2 Node realisation of ExtendedFlightPlanSubmission service 13
Figure 3 - NOV-2 Node realisation of FlightPlanDataDistribution service 14
Figure 4 – System Architecture Overview 15
Figure 5 – Technical Use Cases 18

Executive Summary

The Extended Flight Plan Message or EFPLM consists of the ICAO 2012 Flight Plan information extended with:

- The 4D trajectory calculated by the Airspace User or the responsible Service Provider taking into account all applicable constraints and information required to plan the flight,
- Optional flight specific performance data.

Under Flight Specific Performance Data (FSPD), we understand the climbing and descending capabilities of the aircraft specific to the flight, taking into account the performance of the airframe that is used to operate the flight as well as any other parameters that may influence it such as engine settings and status, cost factor applied by the operator.

The EFPLM concept was validated as part of the Validation exercises VP-311, VP-616 and VP-713. The validation of an Extended Flight Plan and the Submission of the Extended Flight Plan were in the scope.

After the execution of VP-713, requirements have been updated as well as their validation status for delivery of PCP Solution #37.

1 Introduction

1.1 Purpose of the Document

This document takes as inputs the operational requirements as descr bed in P07.06.02 Step 1 OSED (reference [2]) and the services defined in P08.03.10 (references [3], [4] and [5]).

Based on these documents, Technical Specifications are formulated that will impact:

- the NM B2B web services and NM systems;
- the way that the different systems of the Airspace Users verify and communicate the Extended Flight Plans with NM through B2B services.

The architecture of the existing systems is unchanged. The NM system will change by making use of the Extended Flight Plan information for validating the Flight Plan and for calculating the trajectory.

1.2 Intended Readership

The intended readership of this document is:

- SESAR P 07.06.02 Team
  - To ensure that the systems implementation will fit with the needs of the OSED and the results of the validation.
- SESAR P 11.01 Team
  - To ensure that the systems implementation is aligned with the 11.01 project.
  - To align the planning with P.13.02.01 deliverables where needed.
- SESAR P 08.03.10 Team
  - To ensure that the systems implementation is compliant with the Services Identification and Description.
- Eurocontrol NMD Project Team
  - To have a good understanding of the needs of this particular SESAR project and to ensure that the implementation on NM systems is meeting the requirements identified by the SESAR project.

1.3 Inputs from Other Projects

This document is relying on inputs coming from the OSED of P07.06.02 Step 1 (see reference [2]) and the Service Description Documents (see references [4] and [5]). It is translating these inputs into Technical Specifications.

The technical specifications in this document are updates to the technical specifications developed in P13.02.01 TANDEM project, provided via the 'TM Perfo Final System Requirements' deliverable (see [8]).

1.4 Structure of the Document

This document has the following structure:

Chapter 1: Purpose and scope; Requirements structure; Prototype purpose and high level overview

Chapter 2: General Functional Block Description

Chapter 3: Functional Block Functional and non-Functional Requirements

Chapter 4: Assumptions

Chapter 5: Referenced documents

1.5 Requirements Definitions – General Guidance

The following requirements numbering structure has been followed:

Standard: REQ-07.06.02-TS-***abcd.efgh***

abc is the number of the Deliverable in 3 digits (002, 003, 004…) where the requirement was created for the first time. For example, In case a requirement is for the first time specified in an initial requirements document and later re-used in a final version, it keeps the deliverable number of the first document to avoid duplication of the requirement.

d Requirement Category (1, 2, 3, 4 .. , 9):

- 1 for functional/capability requirement,
- 2 for adaptability requirements,
- 3 for performance requirements,
- 4 for safety and security requirements,
- 5 for maintainability requirements,
- 6 for reliability requirements,
- 7 for component internal data requirements,
- 8 for design and construction requirements and
- 9 for component interface requirements).

e a Requirement Subcategory (0, 1, 2, ..)

fgh a Requirement Number. Often this will be a simple sequence number.

1.6 Functional Block Purpose

Reference is P07.02 Network Sub-systems TAD, reference [6].

The Functional Block is: **Traffic Demand Management.**

This FB groups all functions related traffic demand management at regional and local level.

These functions cover regional or local aspect of the demand management during Long-Term planning phase, Medium and Short Term planning phase and Execution phase.

In Long-Term planning phase, it is based on statistical information based on similar days in the past, as well as economical models (STATFOR). As the time move close to day of operation, modelled data are replaced by real information provided by Airspace Users.

The traffic demand knowledge is a key element of the ATFCM in order to set up scenarios, to calibrate ATC capacity and capacity objectives.

The traffic management includes some flight plan information validation according to the latest constraints known at regional level.

This FB includes dedicated dissemination functions of flight data to ACCs (ATC and FMP). The content of the information is close to SBT / RBT management but needs to be refined with the current means of communication (ADEXP, OLDI, etc.).

AO also provides specific aircraft information to improve the trajectory prediction inside regional central AM/NM systems and inside local AM/NM systems.

1.7 Functional Block Overview

The scope of this Technical Specifications is related to the Execution Phase at regional level: the exchange of the Extended Flight Plan Messages between Airspace Users and NM via B2B services and the processing of the Extended Flight Plan Message (EFPLM) by NM systems.

1.8 Glossary of Terms

The following terms are specifically defined as follows by the P07.06.02 project for this TS, either in the OSED or only in this document.

Filed Trajectory: a synonym of UP4DT, AO calculated flight trajectory taking into account constraints and meteorological information for its calculation.

Accepted Trajectory: The trajectory which is adapted by taking as far as possible the Filed Trajectory, and applying the constraints known by NM.

4D Trajectory: either Filed or Accepted Trajectory depending on if it is in the service request or service reply.

Flight Specific Performance Data (FSPD): The climbing and descending capabilities of the aircraft specific to the flight, taking into account the performance of the airframe that is used to operate the flight as well as any other parameters that may influence it, such as engine settings and status, cost factor applied by the operator.

Take-off Weight (TOW): The total weight of the aircraft at the first 4D Point of the Filed Trajectory which is at ADEP.

Lateral Deviation of a GeoPoint: the distance of a GeoPoint or unknown point to the line that is made up by the projection on the ground of known points that bound the GeoPoint.

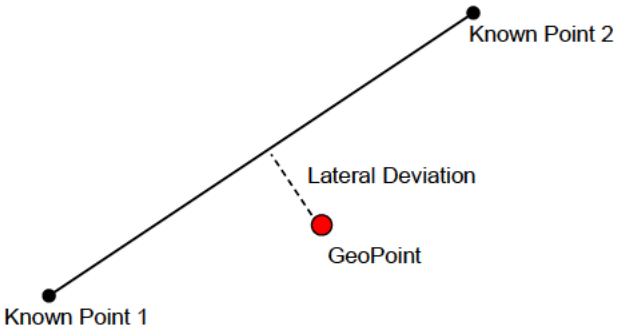

Figure 1 – Lateral Deviation of a GeoPoint

1.9 Acronyms and Terminology

Term	Definition
ACC	Air Control Centre
ADD	Architecture Definition Document
AM	Airspace Management
ANG1	ANG1 is the NM access node to the AFTN network for exchanging the ICAO flight messages.
ATC	Air Traffic Control

Term	Definition
ATFCM	Air Traffic Flow and Capacity Management
ATM	Air Traffic Management
AU	Airspace User
B2B	Business to Business
BADA	Base of Aircraft Data, a model produced by the EEC project BADA, implemented as aircraft performance category tables stored in the NM ADR (CACD).
CACD	Central Airspace and Capacity Database
CFSP	Computerised Flight Plan Service Providers
CNL	A cancelation message of an EFPL or of a FPL
CTFM	Current Tactical Flight Model, defined within NM ETFMS system
DCB	Demand Capacity Balancing
DOD	Detailed Operational Description
E-ATMS	European Air Traffic Management System
ECHG	A change message to an EFPL
EDLA	A Delay message to an EFPL
EFPL(M)	Extended Flight Plan (Message)
ETF(C)MS	Extended Tactical Flow (and Capacity) Management System (NM system)
ExtendedFlightPlan	The ICAO Flight Plan extended with an AO4D and the FSPD and/or TOW as input provided by the CFSP when calling the B2B service.
ExtendedFlightPlanReply	The reply to the ExtendedFlightPlan web service in B2B by NM system.
FMP	Flow Management Position
FOC	Flight Operation Centre
FPL	Flight Plan
FSPD	Flight Specific Performance Data
FTFM	Filed Tactical Flight Model, defined within NM ETFMS system
GeoPoint	An unrecognised point, identified by co-ordinates. The opposite of known significant point.

Term	Definition
HMI	Human Machine Interface
IFPS	Initial Flight plan Processing System (NM system)
IFPUV	"Integrated Initial Flight Plan Processing System Validation system" or "IFPS validation system"
IFPZ	IFPS Zone
FB	Functional Block
IRS	Interface Requirements Specification
INTEROP	Interoperability Requirements
NM	Network Manager
NOP	Network Operations Plan
OSED	Operational Service and Environment Definition
PTR	Profile Tuning Restriction
RBT	Reference Business Trajectory
RFL	Requested Flight Level
RTFM	Regulated Tactical Flight Model (by ATFM Measures), defined within NM ETFMS system.
SBT	Shared Business Trajectory
SESAR	Single European Sky ATM Research Programme
SID	Standard Instrument Departure
STAR	Standard Terminal Arrival Route
SJU	SESAR Joint Undertaking (Agency of the European Commission)
SJU Work Programme	The programme which addresses all activities of the SESAR Joint Undertaking Agency.
SESAR Programme	The programme which defines the Research and Development activities and Projects for the SJU.
STATFOR	Statistics and Forecast: a Eurocontrol service for Statistics and Forecasts of Air Traffic
TOW	Take Off Weight, the initial mass of the aircraft.
TP	Terminal Procedure

Term	Definition
SPR	Safety and Performance Requirements
TS	Technical Specification
TAD	Technical Architecture Description
UP4DT (user preferred 4D trajectory)	Corresponds to today's Airspace User Operational flight plan transmitted to the flight crew a few hours before departure, more detailed than the ATC flight plan, it consists in the list of points and estimates computed by the airline tool to build the lateral transitions and vertical profiles.
4D Point	A four dimensional trajectory point, containing information on time, distance and level identified by a 2 dimensional location. A location is identified by co-ordinates Latitude and Longitude.

2 General Functional Block Description

2.1 Context

The context of this Technical Specification document is the processing of the Extended Flight Plan (EFPL) by NM systems and the availability of Extended Flight Plan B2B Web Services for the Airspace Users that support the validation, submission, distribution, and retrieve of the EFPL.

This is part of Functional Block "Traffic Demand Management".

The service architecture proposed during the Service Allocation phase, originating from P08.03.10 (see [4]) is:

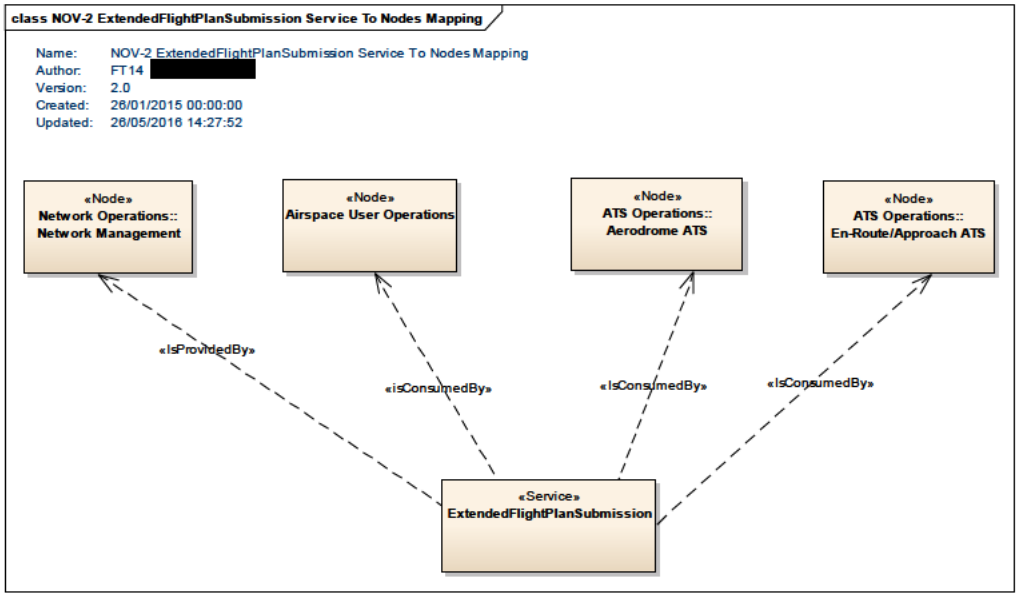

Figure 2 - NOV-2 Node realisation of ExtendedFlightPlanSubmission service

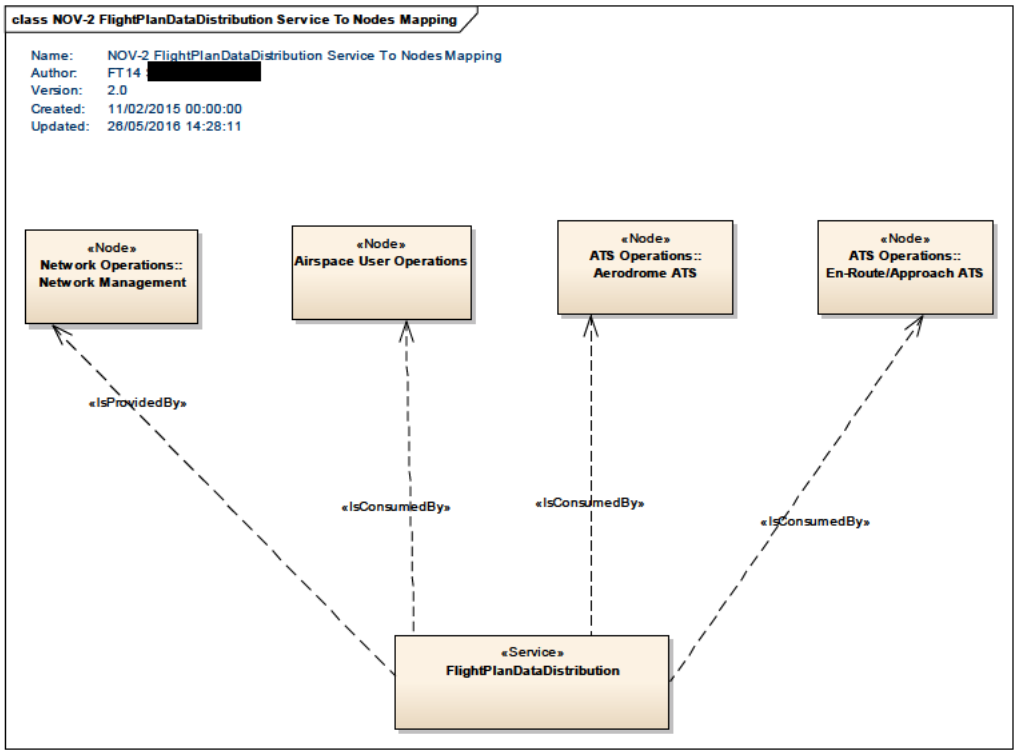

Figure 3 - NOV-2 Node realisation of FlightPlanDataDistribution service

Please note that the functionalities of Extended Flight Plan Status service, delivered as separated service for ISRM 1.3 have been included into the Extended Flight Plan Submission service in ISRM 1.4 and in the following release (ISRM 2.0).

The corresponding system architecture is:

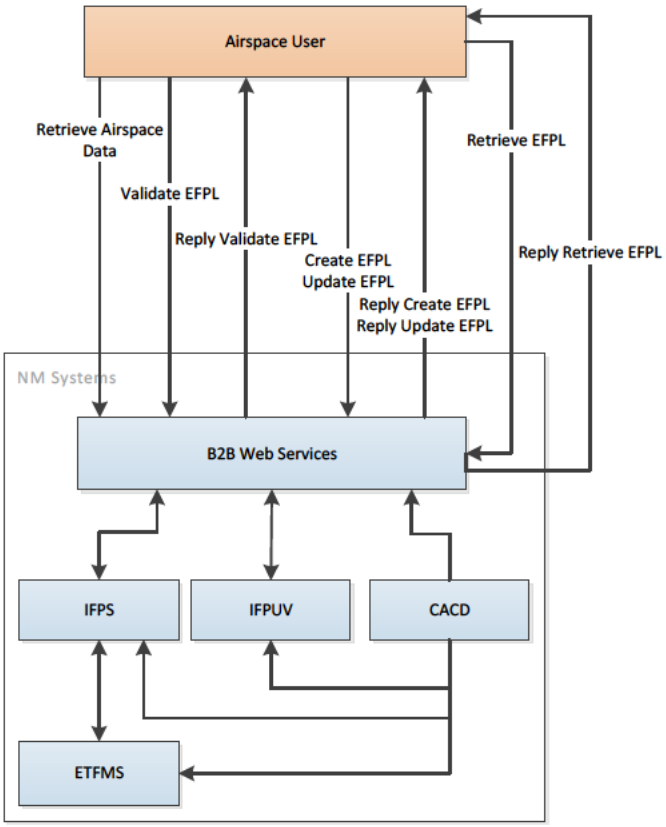

Figure 4 – System Architecture Overview

2.2 Functional Block Modes and States

The Traffic Demand Management functional block covers several states: Long-Term planning phase, Medium and Short Term planning phase and Execution phase. These Technical Specifications are referring to the Execution phase.

2.3 Major Functional Block Capabilities

Requirements can be grouped in 2 categories (based on Service Identification classification and service definitions, see Ref. [4] and [5]).

1. ExtendedFlightPlanSubmission Service
2. FlightPlanDataDistribution Service

For the purpose of validation activities only ExtendedFlightPlanSubmission service is in the scope.

Some requirements for the FlightPlanDataDistribution service are already known and defined but are listed in Annex to avoid losing them.

2.4 User Characteristics

Following actors (participants) have been identified (based on Service Identification, see Ref. [3]) and as illustrated in section 2.1 node realisation models:

1. Airspace User (AU),

2. ATC,
3. Network Manager.

2.5 Operational Scenarios

The operational scenarios are described in Chapter 4 of the OSED of P07.06.02 Step 1 (see reference [2]).

2.6 Functional

2.6.1 Functional Decomposition

All functions of these Technical Specifications belong to the same functional block “Traffic Demand Management”.

2.6.2 Functional Analysis

The Chapter 4 of the OSED of P07.06.02 Step 1 (see reference [2]) has identified the following use cases:

- UC1: EFPL validation
- UC2: EFPL re-validation
- UC3: EFPL distribution
- UC4: EFPL update

This technical specifications document defines the requirements for the use cases UC1 and UC4. The UC2 and UC3 are out of scope.

In P08.03.10 (see ref. [4] and [5]), Service Operations have been described (listed in next chapter).

It has to be noted that not all the service operations described in the reference [3] have been implemented and validated during validation activities. The FlightPlanDataDistribution service described in the reference [5] is not in the scope of the validation.

The OSED Chapter 4 requirements which are not covered in this technical specification are:

- REQ-07.06.02-OSED-0001.0045 Content of an extended delay message
- REQ-07.06.02-OSED-0001.0008 Normal flight plan data distribution
- REQ-07.06.02-OSED-0001.0014 Cost-effectiveness - reduction of flight planning operating costs
- REQ-07.06.02-OSED-0001.0015 Capacity - Better use of airspace and airport capacity
- REQ-07.06.02-OSED-0001.0016 Flight efficiency improvement

2.7 Service View

The service view has been defined by P08.03.10 (see ref. [3]).

Functional Block: Traffic Demand Management.

The Services view and the scope of these Technical Specifications are also described under 2.3.

The requirements in section 3 and in Annex of these Technical Specifications are linked to the services as they are defined in the ExtendedFlightPlanSubmission and FlightPlanDataDistribution Service Description Documents (ref. [4] and [5]).

3 Functional Block Functional and non-Functional Requirements

In the section, when identification of concerned NM systems is possible, their names are listed (e.g. ETFMS or IFPS). When not possible (subject to change or cannot be exhaustive for instance), the term 'NM systems' is used.

The requirements described in this technical specifications document are written as changes to the current NM systems.

3.1 Capabilities

The operational use cases from the OSED are mapped to the technical use cases as follows:

Operational Use Case	Technical Use Case
UC1: EFPL validation	Validate EFPL Submit EFPL Retrieve EFPL
UC2: EFPL re-validation	Submit EFPL
UC3: EFPL distribution	Distribute EFPL Retrieve EFPL
UC4: EFPL update	Update EFPL

Table 1: Operational Uses Cases and Technical Use Cases Mapping

The technical use cases in the scope of these technical specifications are illustrated in the use case diagram below. The 'Distribute EFPL' use case was not part of validation activities.

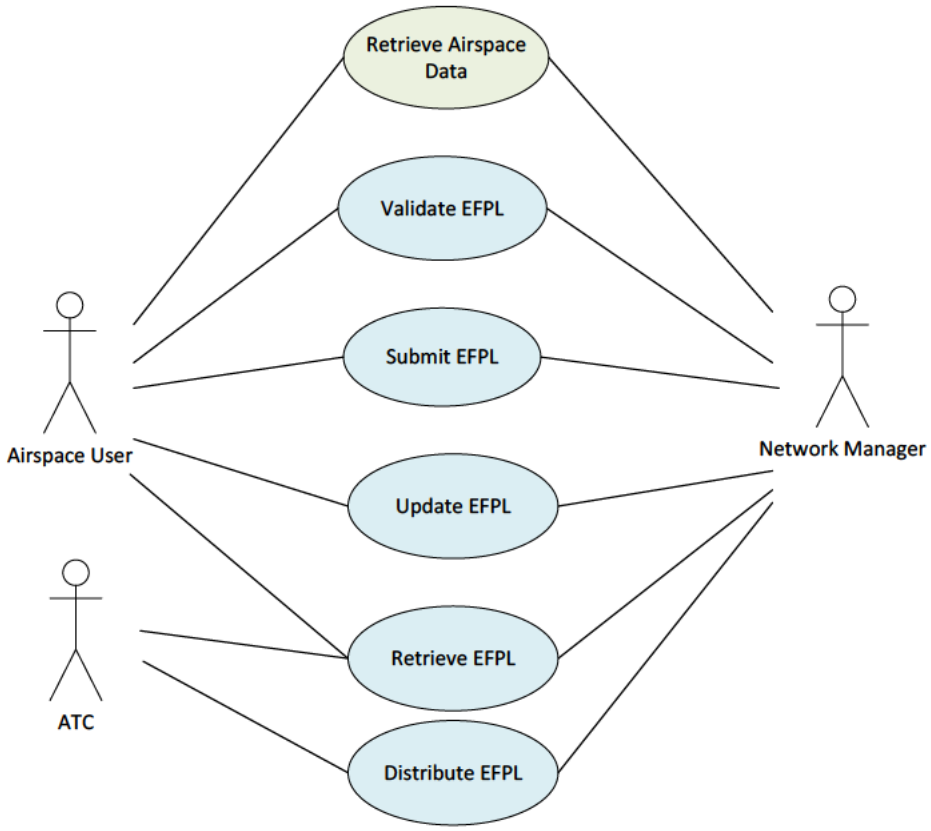

Figure 5 – Technical Use Cases

The 'Retrieve Airspace Data' is part of the Airspace Management use cases; therefore it is not described in this document (see [16] for more information). However, it is included here for the sake of completeness, since the 'Validate EFPL' provides data that needs to be associated with the data retrieved via the 'Retrieve Airspace Data'.

3.1.1 ExtendedFlightPlanSubmission Service Requirements

The 'EFPL update' is a function of 'EFPL submission' in the service view. Therefore, the service requirements of 'EFPL submission' apply to the 'EFPL update' requirements.

[REQ]

Identifier	REQ-13.02.01-TS-0101.1000
Requirement	The IFPS shall be able to receive EFPL and the associated modification message transmitted by the Airspace Users or their designated representatives.
Title	EFPL Submission - Reception by NM
Status	<In Progress>
Rationale	New fields of the extended FPL must be validated and processed by IFPS. The ultimate goal is to improve the quality of the NM trajectory with this information. 'In Progress' state since the related 7.6.1 OSED requirement is 'In Progress' state.
Category	<Functional>
Validation Method	
Verification Method	<Test>

271
272 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0040	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-PRF1.0025	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0000	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0010	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0060	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0070	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0110	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

273
274 [REQ]

Identifier	REQ-13.02.01-TS-0101.1001
Requirement	The IFPS shall be able to validate EFPL and the associated modification messages transmitted by the Airspace Users or their designated representatives.
Title	EFPL Submission - Validation
Status	<In Progress>
Rationale	New fields of the extended FPL must be validated and processed by IFPS. The ultimate goal is to improve the quality of the NM trajectory with this information. 'In Progress' state since the related 7.6.1 OSED requirement is 'In Progress' state.
Category	<Functional>
Validation Method	
Verification Method	<Test>

275
276 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-PRF1.0025	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0001	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

277
278 [REQ]

Identifier	REQ-07.06.02-TS-0421.4002
Requirement	The IFPS shall allow NM IFPS operators to manually process the EFPL.
Title	EFPL Submission - Validation

Status	<Validated>
Rationale	To enable the NM IFPS operators manually overcome the potential deficiencies in the IFPS processing. There is an existing process for ICAO FPL; this requirement is to enable the same process for EFPL.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPP1.0080	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-0101.1002
Requirement	The IFPS shall allow either TOW or FSPD to be present.
Title	EFPL Submission - Validation FSPD
Status	<Validated>
Rationale	Not all FOCs will provide FSPD.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0030	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-0101.1003
Requirement	IFPS shall invalidate an EFPL were the AU filed trajectory is not consistent with the ICAO Field 15 route.
Title	EFPL Submission - Validation 4D
Status	<In Progress>
Rationale	New fields must be validated and processed by IFPS Requirement prerequisite to EFPL distr bution to ATC. Planned to be validated in SESAR 2020.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0002	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPS1.0011	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1042
Requirement	The first 4D point in the Filed Trajectory shall have a cumulative distance = 0 and an estimated time = 0. If not, an error shall be returned in the reply message.
Title	EFPL Submission - Validation 4D First Point
Status	<Validated>
Rationale	New fields EFPLM must be validated and processed by IFPS
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0001	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1044
Requirement	The first 4D point of type aerodrome and value ADEP in the Filed Trajectory shall be provided without an explicit route segment. If not, an error shall be returned in the reply message.
Title	EFPL Submission - Validation ADEP
Status	<Validated>
Rationale	New fields EFPLM must be validated and processed by IFPS
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0001	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

297
298 [REQ]

Identifier	REQ-13.02.01-TS-1451.1045
Requirement	In case of failure of any of syntax and semantic validations performed by the IFPS system of NM, the EFPL shall not be processed by IFPS.
Title	EFPL Submission - Validation Failure
Status	<Validated>
Rationale	New fields EFPLM must be validated and processed by IFPS.
Category	<Functional>
Validation Method	
Verification Method	<Test>

299
300 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0001	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

301
302 [REQ]

Identifier	REQ-13.02.01-TS-1451.1142
Requirement	4D points of type GeoPoint in the en-route section of the Filed Trajectory shall not laterally deviate more than a given tolerance from the line of projection on the ground of known points that bound the GeoPoint. The tolerance level is a parameter that can be set. The initial value for the Validation exercises will be 5 NM. In case the tolerance is exceeded, the 4D Point shall be discarded.
Title	EFPL Submission - Validation 4D GEO PT lateral deviation
Status	<Validated>
Rationale	New fields EFPLM must be validated and processed by IFPS.
Category	<Functional>
Validation Method	
Verification Method	<Test>

303
304 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0001	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

305
306 [REQ]

Identifier	REQ-13.02.01-TS-0101.1006
Requirement	The IFPS shall use the Filed Trajectory of the EFPL to perform the flight plan validation processes that involve the use of the flight profile, instead of its own calculated profile.
Title	EFPL Submission - 4D Profile Calculation

Status	<Validated>
Rationale	New fields must be validated and processed by IFPS.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0003	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-0101.1004
Requirement	The IFPS shall use the SID and/or STAR information from the Filed Trajectory of the EFPL if present and if not defined in the ICAO Field 15
Title	EFPL Submission – Use of SID/STAR information
Status	<Validated>
Rationale	Use of SID/STAR information from AO's 4D trajectory when present to use 4D trajectory to its full potential.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0003	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-0101.1009
Requirement	The NM shall inform the originator of the EFPL message about the result of the validation process (accepted, rejected or referred for manual processing).
Title	EFPL Submission - Reply
Status	<In Progress>
Rationale	Same process as for the ICAO Flight Plan. 'In Progress' state since the related 7.6.1 OSED requirement is 'In Progress' state.
Category	<Functional>
Validation Method	
Verification Method	<Test>

317
318 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-PRF1.0025	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0006	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0020	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0021	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0030	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

319
320 [REQ]

Identifier	REQ-13.02.01-TS-1451.1010
Requirement	The IFPS system shall return an error message whenneither the FSPD or TOW is present in the EFLPM.
Title	EFPL Submission - FSPD processing
Status	<Validated>
Rationale	New fields must be validated and used by IFPS.
Category	<Functional>
Validation Method	
Verification Method	<Test>

321
322 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0030	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

323
324 [REQ]

Identifier	REQ-13.02.01-TS-1451.1021
Requirement	IFPS shall construct the NM profile initially using the FSPD with a preference given to FSPD, in case both FSPD and TOW are available.
Title	EFPL Submission - FSPD processing priority
Status	<Validated>
Rationale	Implementation option of IPFS processing taking into account FSPD.
Category	<Functional>
Validation Method	
Verification Method	<Test>

325
326 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A

<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0003	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1022
Requirement	All distances in the NM Profile shall be adapted in cumulative distance to those specified within the Filed Trajectory, including those locations identified outside the IFPZ.
Title	EFPL Submission - 4D Profile Calculation Distances
Status	<Validated>
Rationale	Implementation option of IPFS processing taking into account FSPD Data.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0003	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1023
Requirement	The NM profile shall be adapted in level and estimate time to the level locations given at equivalent locations in the Filed Trajectory. The resulting NM profile is called Accepted Trajectory.
Title	EFPL Submission - 4D Profile Calculation Level/time
Status	<Validated>
Rationale	Implementation option of IFPS processing taking into account Filed Trajectory.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0003	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1025

Requirement	NM systems (IFPS/ETFMS) shall be able to control the global extent of which the AO intent is respected over constraints imposed by Profile Tuning Restrictions.
Title	EFPL Submission process - Curtain Profile
Status	<Validated>
Rationale	Impact of Filed Trajectory on ETFMS
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0003	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1109
Requirement	NM systems shall support a mixed mode of operations: flight plans with EFPL information and the current ICAO compliant flight plans.
Title	EFPL Submission Process - Mixed Mode
Status	<Validated>
Rationale	To ensure continuity
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0013	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1201
Requirement	A Web Service shall be available that allows an Airspace User to request EFPL Validation without submission and distribution.
Title	EFPL Submission process - Web Service
Status	<Validated>
Rationale	Communication with AUs will be via B2B (Web) Services. There is already a validation service for FPL and the same kind of service shall be provided for EFPL.
Category	<Functional>

Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0002	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0000	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0001	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0030	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0050	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1202
Requirement	A Web Service shall be available that allows an Airspace User to submit an EFPL and to apply a Modification to an EFPL.
Title	EFPL Submission process - Web Service
Status	<Validated>
Rationale	Communication with AUs will be via B2B (Web) Services. There is already a submission and modification service for FPL and the same kind of service shall be provided for EFPL.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0002	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0000	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0001	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0010	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0060	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0070	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0110	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0030	<Partial>

<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0040	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1206
Requirement	The NM Web Service allowing an Airspace User to request EFPL Validation without submission and distribution shall return a Reply message.
Title	EFPL Submission process - Web Service
Status	<In Progress>
Rationale	Communication with AUs will be via B2B (Web) Services 'In Progress' state since the related 7.6.1 OSED requirement is 'In Progress' state.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0002	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0000	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0001	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0030	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0020	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0030	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0050	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1207
Requirement	The NM Web Service allowing an Airspace User to submit an EFPL and to apply a Modification to an EFPL shall return a Reply Message (ACK, REJ, MAN).
Title	EFPL Submission process - Web Service
Status	<Validated>
Rationale	Communication with AUs will be via B2B (Web) Services
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance

<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0002	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0000	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0001	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0020	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0021	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0030	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0030	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0040	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0421.9001
Requirement	The information provided by the ExtendedFlightPlanSubmission request message shall be expressed using format WS-N WSDL and XSD.
Title	EFPL Submission - SWIM
Status	<Validated>
Rationale	Format to submit the EFPL information using the Yellow Profile: SWIM-TI binding: REQ-14.01.04-TS-0901.0304
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-NFR1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-13.02.01-TS-1451.1202	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0421.9002
Requirement	The information provided by the ExtendedFlightPlanSubmission reply message shall be expressed using format WS-N WSDL and XSD
Title	EFPL Submission - SWIM
Status	<Validated>
Rationale	Format to submit the EFPL information using the Yellow Profile: SWIM-TI binding: REQ-14.01.04-TS-0901.0304

Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-NFR1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-13.02.01-TS-1451.1202	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1203
Requirement	The reply message to an ExtendedFlightPlanSubmission request shall indicate the adapted distance, level and time only for the flight portion within IFPZ.
Title	EFPL Submission process - Reply Message
Status	<Validated>
Rationale	Communication with AUs will be via B2B (Web) Services
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0006	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.1204
Requirement	The reply message to an ExtendedFlightPlanSubmission request, shall not contain the Filed Trajectory points that were not in the limit of the allowed tolerance for the lateral deviation.
Title	EFPL Submission process - Reply Message
Status	<Validated>
Rationale	Communication with AUs will be via B2B (Web) Services
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance

<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0006	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0421.4003
Requirement	The IFPS shall use the AU supplied direct routing distance between the first/last point within the route field of a Filed Trajectory and the aerodrome of departure/destination to perform the aerodrome DCT checking. It shall not use a calculated direct shortest distance.
Title	EFPL Submission process - Aerodrome DCT rules
Status	<Validated>
Rationale	Sometimes the distance provided within the Filed Trajectory for the first/last route segment is longer that the DCT line between the first/last en-route point and the ADES, as it takes into account the distance flown when departing/arriving from/to the different aerodrome runways. The actual requirement for the IFPS aerodrome DCT checking is to check the direct line distance between the first/last en-route point and the ADEP/ADES.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0003	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0421.4001
Requirement	NM system shall enable the IFPS staff to distinguish whether the flight trajectory in the NM systems (IFPS or ETFMS) is based on the Filed Trajectory; or NM calculated trajectory from an ICAO FPL or modification message.
Title	Mixed mode - Distinguish AU provided trajectory
Status	<In Progress>
Rationale	To support the mixed mode of operations during transition, in order to identify by which mechanism the 4D trajectory information of a flight is updated. 'In Progress' state since the related 7.6.1 OSED requirement is 'In Progress' state.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A

<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-PRF1.0025	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0013	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

385
386 [REQ]

Identifier	REQ-13.02.01-TS-1451.1205
Requirement	NM systems shall reduce the impact on the AO intent in the CTFM when there is a profile calculation which results in a change to the route from what was initially planned in the Filed Trajectory.
Title	EFPL Submission process - CFTM Processing
Status	<Validated>
Rationale	Communication with AUs will be via B2B (Web) Services
Category	<Functional>
Validation Method	
Verification Method	<Test>

387
388 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0011	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

389
390 [REQ]

Identifier	REQ-13.02.01-TS-1451.1301
Requirement	The HMI of IFPS and ETFMS shall show the extent to which the NM profile calculation has been adapted to the Filed Trajectory.
Title	EFPL Submission process - HMI Visualisation 4D
Status	<Validated>
Rationale	Interface to visualise and analyse impact on the NM profile
Category	<Functional>
Validation Method	
Verification Method	<Test>

391
392 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0011	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>

393 [REQ]

Identifier	REQ-07.06.02-TS-0421.3001
Requirement	The IFPS shall be able to validate an EFPL and return the associated errors to the requester if any, without distributing an EFPL.

Title	EFPL Validation - Service Interface
Status	<Validated>
Rationale	To provide the EFPL validation means to the AUs.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0050	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0010	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0421.3002
Requirement	The IFPS shall return the PTR information that is applicable to the validated EFPL in the validation reply.
Title	EFPL Validation - Reply with PTR info
Status	<In Progress>
Rationale	To provide the profile calculation constraints to the AU. Validated planned in SESAR 2020, PJ18
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-TRJ1.0050	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0035	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0020	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0030	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0421.3003

Requirement	The IFPS shall return the Accepted Trajectory for the validated EFPL in the validation reply.
Title	EFPL Validation - Reply with Accepted Trajectory info
Status	<Validated>
Rationale	To make the AU aware of the calculated after applying the constraints.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0030	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0035	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

3.2 Adaptability

N/A

3.3 Performance

[REQ]

Identifier	REQ-13.02.01-TS-0103.0001
Requirement	NM systems shall be able to process the same minimum number of EFPLs per second as ICAO Flight Plans, this is 6 per second.
Title	EFPL Performance
Status	<In Progress>
Rationale	This requirement is based on the current IFPS system Validation planned in V4.
Category	<Performance>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPP1.0140	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-0103.0002

Requirement	NM systems shall in average not take more than 10% of processing time for an EFPL as compared to the processing time of an ICAO flight plan
Title	EFPL Performance
Status	<In Progress>
Rationale	This requirement is based on the current IFPS system Validation planned in V4.
Category	<Performance>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPP1.0060	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

3.4 Safety & Security

[REQ]

Identifier	REQ-13.02.01-TS-1454.0001
Requirement	FSPD and TOW that are considered to be sensitive shall not be displayed on the NM client HMIs.
Title	EFPL Safety and Security
Status	<In Progress>
Rationale	To ensure confidentiality of commercially sensitive data Validation planned in V4.
Category	<Security>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0002	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0075	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0012	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0424.0003
Requirement	FSPD that is considered to be sensitive shall be present in the reply of the EFPL Retrieve and EFPL Distribute services only if the request is coming from an authorised user.
Title	EFPL Safety and Security
Status	<In Progress>

Rationale	To ensure confidentiality of commercially sensitive data Validation planned in V4.
Category	<Security>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0002	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0075	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0012	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1454.0002
Requirement	The B2B EFPL submission and distribution services shall inherit from the security, authorisation and authentication requirements from the current B2B flight plan filing services.
Title	EFPL Safety and Security
Status	<In Progress>
Rationale	To ensure only authorised users are using authorised functions Validation planned in V4.
Category	<Security>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0002	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0075	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPP1.0050	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

3.5 Maintainability

[REQ]

Identifier	REQ-13.02.01-TS-0105.0001
Requirement	NM shall have a weekly maintenance window at a fixed time of maximum 1 hour in order to apply necessary software maintenance and execute interventions during which submission and processing of EFPLS will not be poss ble.

Title	EFPL Maintainability
Status	<In Progress>
Rationale	This requirement is based on the current IFPS system Validation planned in V4.
Category	<Maintainability>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPP1.0030	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-0105.0002
Requirement	NM shall have the possibility of organising a 3 months in advance announced downtime of NM systems in a deployment plan.
Title	EFPL Maintainability
Status	<In Progress>
Rationale	This requirement is based on the current IFPS system, in order to allow for a major upgrade of NM systems. Validation planned in V4.
Category	<Maintainability>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPP1.0040	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

3.6 Reliability

[REQ]

Identifier	REQ-13.02.01-TS-0106.0001
Requirement	AUs shall be able to submit and validate EFPLs during 24h/7days. In case of a system failure EFPL services shall be available again within 1 hour.
Title	EFPL Reliability
Status	<In Progress>
Rationale	This requirement is based on the current IFPS system Validation planned in V4.

Category	<Reliability>
Validation Method	
Verification Method	<Test>

436
437 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPP1.0010	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

438
439 [REQ]

Identifier	REQ-13.02.01-TS-0106.0002
Requirement	NM systems shall be designed in such a way that under all circumstances no EFPLM shall get lost, also not during a system crash or catastrophe.
Title	EFPL Reliability
Status	<In Progress>
Rationale	This requirement is based on the current IFPS system Validation planned in V4.
Category	<Reliability>
Validation Method	
Verification Method	<Test>

440
441 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPP1.0020	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

442
443 [REQ]

Identifier	REQ-13.02.01-TS-0106.0003
Requirement	In case of a system failure EFPL services shall be available again within 1 hour.
Title	EFPL service - Recovery following a service failure
Status	<In Progress>
Rationale	This requirement is based on the current IFPS system Validation planned in V4.
Category	<Reliability>
Validation Method	
Verification Method	<Test>

444
445 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A

<ALLOCATED TO>	<Project>	07.06.02	N/A
<APPLIES TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPP1.0015	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

3.7 Functional Block Internal Data Requirements

[REQ]

Identifier	REQ-13.02.01-TS-0107.0001
Requirement	The ADEXP interface used between IFPS and ETFMS shall be adapted to support the EFPL.
Title	EFPL Internal Processing by NM systems
Status	< In Progress>
Rationale	IFPS/ETFMS must be adapted internally to support the EFPL. No link to satisfy an OSED requirement, because it is a standardisation of FSPD format. In Progress state since related SPR requirement DCP1.0100 is In Progress state.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0100	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0105	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0110	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0120	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-0107.0002
Requirement	The Filed and Accepted Trajectories shall be used by ETFMS to construct its internal FTFM
Title	EFPL Internal Processing by NM systems
Status	<In Progress>
Rationale	IFPS/ETFMS must be adapted internally to support the EFPL. No link to satisfy a requirement, because it is a standardisation of FSPD format. In Progress state since related SPR requirement DCP1.0100 is In Progress state.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0100	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0105	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0110	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0120	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-0107.0003
Requirement	The EFPL in ADEXP format exchanged between IFPS and ETFMS shall not be distributed to the AFTN network.
Title	EFPL Internal Processing by NM systems
Status	<In Progress>
Rationale	IFPS/ETFMS must be adapted internally to support the EFPL. No link to satisfy an OSED requirement, because it is a standardisation of FSPD format. Validation planned in SESAR 2020, PJ18.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0100	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0105	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0110	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-DCP1.0120	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

3.8 Design and Construction Constraints

In order to optimise memory and performance of the system there needs to be limits put to the number of 4D points that the system can support. Therefore IFPS will discard 4D points that are a distance of less than one km of the previous point.

In the first phase of the development, NM will revert to its own profile calculation in some limited cases namely when changes to the FPL invoke in IFPS a route change (e.g. in case of an AO-WIR).

3.9 Functional Block Interface Requirements

[REQ]

Identifier	REQ-13.02.01-TS-1459.0001

Requirement	An EFPL message shall consist of the following sections of data: 1. ICAO 2012 FPL data, the filed flight plan as specified in ICAO Doc 4444. 2. 4D Trajectory (Filed or Accepted Trajectory) 3. FSPD
Title	EFPL Submission process - Interface
Status	<Validated>
Rationale	The EFPLM must follow certain conventions for validation and processing by IFPS and for B2B exchange with the clients
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0030	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-04a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1459.0002
Requirement	The Climb and Descent profiles shall be represented by increasing closed intervals of level, distance and time.
Title	EFPL Submission process - Interface
Status	<Validated>
Rationale	Conventions are needed to pass the FSPD Data between CFSP and NM. No link to satisfy a requirement, because it is a standardisation of FSPD format.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPS1.0021	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1459.0003
Requirement	A minimum of three triplets of time, distance and levels shall be provided as a performance table that constitutes Flight Specific Performance Data.
Title	EFPL Submission process - Interface
Status	<Validated>

Rationale	Conventions are needed to pass the Flight Specific Performance Data between CFSP and NM. No link to satisfy a requirement, because it is a standardisation of FSPD format.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPS1.0021	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1459.0004
Requirement	NM system shall accept negative altitudes for aerodromes (or "for PTs declared as ADEP/ ADES") in the AO4D and climb/ descend profiles.
Title	EFPL Submission process - Interface
Status	<Validated>
Rationale	Altitudes when defined as "Altitude above mean sea level" can be negative. An example is departures from aerodromes below sea level.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPS1.0021	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1459.0006
Requirement	The meteo data shall only be present in the Filed Trajectory section of the EFPL.
Title	EFPL Submission process - meteo info
Status	<In Progress>
Rationale	Conventions are needed to pass Filed Trajectory. See Full data layout defined in Table 2. In Progress state since the related REQ-07.06.02-SPR-FPS1.0006 is In Progress.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPS1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPS1.0021	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1459.0007
Requirement	When FSPD information is included in the EFPL, both the climb and the descend profiles shall be present in the FSPD.
Title	EFPL Submission process - Interface
Status	<In Progress>
Rationale	Conventions are needed to pass the FSPD between CFSP and NM. In Progress state since the related REQ-07.06.02-SPR-FPS1.0006 is In Progress.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPS1.0006	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0429.0008
Requirement	The IFPS EFPL validation service shall provide the PTR information as follows: - PTR Identifier - PTR Start Time - PTR End Time
Title	EFPL Validation - PTR Info - Data Elements
Status	<In Progress>
Rationale	To provide the profile calculation constraints to the AU. 'In Progress' state since the related 7.6.1 OSED requirement is 'In Progress' state.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-TRJ1.0050	<Partial>

<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0035	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPS1.0002	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0429.0009
Requirement	The IFPS shall return the PTR identifier that matches the <aixm:designator> of the Profile Restriction that is exported via the NM AirspaceServices B2B web services.
Title	EFPL Validation - PTR Information Airspace Data Reference
Status	<In Progress>
Rationale	To enable the AU retrieve the detailed information about the applicable profile restrictions. 'In Progress' state since the related 7.6.1 OSED requirement is 'In Progress' state.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-TRJ1.0050	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0030	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0429.0010
Requirement	NM shall provide 'FIXM 3.0 EFPL extension' compliant EFPL validate service interface.
Title	FIXM - EFPL Validate Interface
Status	<Validated>
Rationale	To enable the use of standards.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-NFR1.0006	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0429.0011
Requirement	NM shall provide 'FIXM 3.0 EFPL extension' compliant EFPL create service interface.
Title	FIXM - EFPL Create Interface
Status	<Validated>
Rationale	To enable the use of standards.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-NFR1.0006	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-04a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0429.0012
Requirement	NM shall provide 'FIXM 3.0 EFPL extension' compliant EFPL update service interface.
Title	FIXM - EFPL Update Interface
Status	<In Progress>
Rationale	To enable the use of standards. 'In Progress' state since the related 7.6.1 OSED requirement is 'In Progress' state.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-NFR1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-PRF1.0025	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-04a	<Partial>
<SATISFIES>	<Service>	ExtendedFlightPlanSubmission	<Partial>

[REQ]

Identifier	REQ-07.06.02-TS-0429.0013
Requirement	NM shall provide 'FIXM 3.0 EFPL extension' compliant EFPL retrieve service interface.
Title	FIXM - EFPL Retrieve Interface

Status	<Validated>
Rationale	To enable the use of standards.
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-NFR1.0006	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-04a	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

The units and formats used for the validation are:

All latitude and longitude data are given in degree and decimal float

All distances and elevation (altitude) are given in meters.

All times are given in seconds.

All weights are given in Kg.

All speeds are given in m/s (meters per second).

All temperatures are given in C (Celsius degrees).

Elapsed time is in hours, minutes and seconds.

Data Layout: based on the OSED, chapter 4.1.2.1 see ref [2].

An EFPLM contains the following sections of data:

- **ICAO FPL data**: all data to be provided in a filed flight plan as specified in the ICAO Doc 4444, including the Field 15 route information.
- **4D Trajectory**: is one of the following depending on the service interaction
  - **Filed Trajectory**: Present in the EFPL Submission (validate, create or update) request sent by the AO to NM.
  - **Accepted Trajectory:** Present in the EFPL Submission (validate, create or retrieve) reply from NM
- **Flight Specific Performance Data**: The FSPD may be provided either as climb and descent performance profile or as the total weight of aircraft as part of the Filed Trajectory, in the EFPL Submission (validate, create or update) request to NM.

The climb and descent performance profiles are optimum and unconstrained climb and descent profiles instantiated per flight that satisfy the following conditions:

a) Are calculated without taking into account constraints regarding the vertical evolution of the flight such as route availability, RAD level restrictions, SID/STAR restrictions;

b) Are calculated without applying meteorological conditions (wind and temperature);

c) Are provided up to the maximum cruising level acceptable for the flight (even if not included in the flight plan). This would allow the recipient systems to generate accurate trajectories for vertical re-routings above the highest requested cruising level included in the filed flight plan. Performance profiles should be provided at least up to the highest requested cruising level given in the FPL;

d) Do not contain step-climbs and step-descents i.e. if the aircraft is planned to do an initial climb to F350, then burn fuel during an hour of cruise, and then climb to F370, these two consecutive climbs shall be glued together.

See table below for the data layout.

Data section	Data item	Required	Definition	Possible usage
ICAO Flight Plan Data	See ICAO Doc 4444 and IFPS Users Manual	See ICAO Doc 4444 and IFPS Users Manual	All data to be provided in a filed flight plan as specified in the ICAO Doc 4444 and the IFPS Users Manual, including the Field 15 route information	• Transmission to ATC • Retrieval of all other flight plan information than 4D Trajectory and FSPD.
4D Trajectory	Location	C	One of the following location items: (i) Aerodrome of departure/destination. Eg: EGKK (ii) Points traversed by the 4D Trajectory including but not limited to the following: 1. Points where a change of ATS route, requested cruising level or speed, flight rules (IFR/VFR) or flight type (GAT/OAT) occur; 2. Points that mark the beginning and end of a portion of flight outside a designated route (direct segments); 3. Points that mark the beginning and end of a portion of flight where the direction and the vertical and horizontal speed of the flight are constant (vector points). Such points may be used to describe the climb and descent phases of the flight using intermediate points in order to provide a more accurate description of the 4D trajectory along these sections of the trajectory that are not linear. 4. Points that describe the ATS route segments planned to be flown; 5. Top of Climb (TOC) points for every transition from a climb phase to a cruise phase; 6. Top of Descent (TOD) points for every transition from a cruise phase to a descent phase; 7. Bottom of Climb (BOC) points for every transition from a cruise phase to a climb phase; 8. Bottom of Descent (BOD) points for every a transition from a descent phase to a cruise phase; 9. Points where the 4D Trajectory intersects the boundary of FIR/UIRs in	• To describe the planned horizontal (2D) evolution of the flight

Data section	Data item	Required	Definition	Possible usage
			whose airspace the flight is planned to fly. Points shall be described either by using their published coded designator (Eg: SOSUR) or, for points without a coded designator, by using one of the following ways: 1. Latitude and longitude 2. Bearing and distance from a navaid	
	Latitude and longitude	C	Latitude and Longitude of the location (degree and decimal float)	• To solve homonym problems (two locations with the same name) and therefore uniquely identify locations
	Next route segment	C	ATS route followed after the location (Eg: UN621) or DCT. Where published for the aerodromes of departure and destination, the planned SID and STAR routes shall be included in the 4D Trajectory description.	• To indicate the ATS route planned to be followed after the location
	Level	C	Estimated Level at the location expressed as either: i) Flight level (FL) or ii) Altitude above mean sea level (MSL)[1]	• To describe the planned vertical (3D) evolution of the flight
	Taxi Time	O	Estimated taxi time from the parking position to take-off.	• To calculate the planned take-off time
	Elapsed Time	C	Time elapsed since take-off up to the location	• To describe the planned evolution in time (4D) of the flight
	Distance	O	Total ground distance from take-off up to the location	
	Total Weight	C/O*	Total weight of the aircraft at a location included in the 4D Trajectory, starting with the aerodrome of departure (ADEP). The total weight at the ADEP is the Take-Off Weight (TOW).	• To improve local calculations of flight trajectories for example

[1] Aerodrome and climb/descent profiles should accept negative altitudes.

Data section	Data item	Required	Definition	Possible usage
				in case of what-if scenarios
	Estimated Speed	O	Estimated speed of the aircraft at the location expressed as Mach number or True Air Speed (TAS)	• To improve local calculations of flight trajectories for example in case of what-if scenarios
	Air Temperature	O	The forecast static air temperature used to calculate the 4D Trajectory at the location and the corresponding estimated level included in the 4D Trajectory. It is only required when Speed is given as TAS.	• To improve local calculations of flight trajectories for example in case of what-if scenarios
	Wind information	O	The forecast direction and speed of the wind used to calculate the 4D trajectory at the location and the corresponding estimated level included in the 4D trajectory.	
Flight Specific Performance Data	Climb Performance Profile	C/O*	The climb performance profile described as a sequence of points in which every point is defined by: a) Cumulative Distance from the aerodrome of departure b) Level: Altitude above mean sea level (MSL) in feet (ft)[2] or meters (m) or Flight level (FL). c) Cumulative Time elapsed from the aerodrome of departure	• To improve local calculations of flight trajectories for example in case of what-if scenarios
	Descent Performance Profile	C/O*	The descent performance profile described as a sequence of points, in reverse order starting from the aerodrome of destination, in which every point is defined by: a) Cumulative Distance from the aerodrome of destination b) Level: Altitude above mean sea level (MSL) in feet (ft)[2] or meters (m) or Flight level (FL). c) Cumulative Time elapsed from the aerodrome of destination	• To improve local calculations of flight trajectories for example in case of what-if scenarios

Table 2: Interface Data Layout

[2] Aerodrome and climb/descent profiles should accept negative altitudes.

Legend:

C = compulsory

O = optional

* - either the Total Weight or the Climb/Descent Performance Profiles shall be included in an extended flight plan message. When one of the two data items is included the other one is optional.

The detailed description of the fields, their names, their formats, syntax, etc. are described in the XML schema that can be found in FIXM 3.0 Extended Flight Plan Extension v1.0 beta definition and the NM B2B web services documentation. In case any discrepancy is found between this document and the XML schema, the XML schema takes precedence.

4 Assumptions

N/A

5 References

[1] IEEE / MIL Standards

[2] SESAR P07.06.02 D56 Step 1 Business trajectory OSED 2016 update, Edition 00.05.01, 23/09/2016

[3] P08.03.05 European ATM Service Identification for Extended Flight Plan Service, D22-002 00.01.00

[4] P08.03.10 D65 European ATM Service Description for ExtendedFlightPlanSubmission Service, Edition 00.03.00, 03/06/2016

[5] P08.03.10 D65 European ATM Service Description for FlightPlanDataDistribution Service, Edition 00.03.00, 03/06/2016

[6] P07.02 D42 Step 1 Network Sub-systems Technical Architecture, Edition 00.01.14, 22/02/2016

[7] P07.06.02 D55 Step 1 Business Trajectory Validation Report for VP713, Edition 00.01.01, 14/09/2016

[8] P13.02.01 D145 TM Perfo Final System Requirements V1.0, Edition, 00.01.01, 27/09/2013

[9] 14.01.04-D42-004 SWIM-TI Yellow Profile Technical Specification 3.0, Edition 00.02.00

[10] P08.03.10-D65 ISRM Service Portfolio, Edition 00.08.00, 02/06/2016

[11] B4.03-D100 SESAR Working method on Services Edition 2014, Edition 00.05.00, 21/01/2015

[12] SESAR System Thread Guidance, Edition 04.00.00, 20/08/2014

[13] P07.06.01 D46 Collaborative NOP OSED Step 1, Edition 00.04.01, 20/09/2016

[14] SESAR P07.06.02 D57 Step 1 SPR for Business Trajectory Management, Edition 00.03.01, 23/09/2016

[15] WPB.01, D83, Integrated Roadmap version DS15 release note, Edition 00.01.00, 21/12/2015

[16] NM Airspace B2B services (http://www.eurocontrol.int/services/nm-b2b-web-services)

Comment [AE1]: Update dates & version

Comment [AE2]: Update dates & version

Comment [AE3]: Update dates & version

5.1 Use of copyright / patent material /classified material

N.A.

5.1.1 Classified Material

N.A.

Appendix A FlightPlanDataDistribution Service Requirements

For the purpose of validation activities only ExtendedFlightPlanSubmission service has been covered.

Some of the requirements for the FlightPlanDataDistribution service are already known and listed below.

[REQ]

Identifier	REQ-13.02.01-TS-0101.2001
Requirement	The IFPS shall use the Filed Trajectory of the flight to apply the airspace constraints, and then perform the FP addressing instead of its own calculated profile.
Title	EFPL Distr bution - FP Addressing
Status	<Validated>
Rationale	NM shall have the same view of the planned route of the flight as the operator of the flight while determining the addresses for the flight plan distribution.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0009	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

[REQ]

Identifier	REQ-13.02.01-TS-1451.2002
Requirement	NM shall distribute valid EFPL messages as ICAO messages and as ADEXP messages for the extended part and shall distribute change messages to the EFPL.
Title	EFPL Distr bution - Registered Units
Status	<In Progress>
Rationale	To ensure that all stakeholders within the ATM network share the same view on the planned evolution of the flight and local flight trajectory prediction by NM clients will be improved. To enable the NM to distribute an EFPL message, an ECHG message, an EDLA message and a CNL to ATC units supporting EFPL.
Category	<Functional>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A

<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0120	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0123	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0126	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0130	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0133	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0136	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0007	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

603
604 [REQ]

Identifier	REQ-13.02.01-TS-1451.2004
Requirement	NM shall provide a function that allows an ATC or an AU to retrieve, on request, EFPL information for a given flight from NM.
Title	EFPL Distr bution - EFPL Retrieve
Status	<In Progress>
Rationale	Not all ATCs have received the information of a flight plan automatically. The AO needs to have the Accepted Trajectory information.
Category	<Functional>
Validation Method	
Verification Method	<Test>

605
606 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0055	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0155	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0145	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

607
608 [REQ]

Identifier	REQ-07.06.02-TS-0421.2005
Requirement	The EFPL Retrieve service shall allow the AU or ATC request one or more of the following information in the reply: - The ICAO2012 flight plan - The Accepted Trajectory - The FSPD
Title	EFPL Retrieve - Requested information

Status	<In Progress>
Rationale	In order to provide the relevant reply according to the needs of the requester, and optimize the payload
Category	<Functional>
Validation Method	
Verification Method	<Test>

609
610 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-GEN1.0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0055	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-OSED-0001 0010	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-07.06.02-SPR-FPP1.0055	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0155	<Partial>
<SATISFIES>	<Information Exchange Requirement>	IER-07.06.02-OSED-EFPL.0145	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

611
612 [REQ]

Identifier	REQ-07.06.02-TS-0421.9003
Requirement	The information provided by the FlightPlanDataDistribution request message shall be expressed using format WS-N WSDL and XSD
Title	EFPL Distr bution - SWIM
Status	<Validated>
Rationale	Format to distribute the EFPL information using the Yellow Profile: SWIM-TI binding: REQ-14.01.04-TS-0901.0304
Category	<Interface>
Validation Method	
Verification Method	<Test>

613
614 [REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED_TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES_TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-NFR1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-13.02.01-TS-1451.2002	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-13.02.01-TS-1451.2004	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

615
616 [REQ]

Identifier	REQ-07.06.02-TS-0421.9004

Requirement	The information provided by the FlightPlanDataDistribution reply message shall be expressed using format WS-N WSDL and XSD
Title	EFPL Distr bution - SWIM
Status	<Validated>
Rationale	Format to distribute the EFPL information using the Yellow Profile: SWIM-TI binding: REQ-14.01.04-TS-0901.0304
Category	<Interface>
Validation Method	
Verification Method	<Test>

[REQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<ALLOCATED TO>	<Functional block>	Traffic Demand Management	N/A
<ALLOCATED_TO>	<Project>	07.06.02	N/A
<APPLIES TO>	<Operational Focus Area>	OFA03.01 04	N/A
<SATISFIES>	<ATMS Requirement>	REQ-07.06.01-OSED-NFR1.0006	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-13.02.01-TS-1451.2002	<Partial>
<SATISFIES>	<ATMS Requirement>	REQ-13.02.01-TS-1451.2004	<Partial>
<SATISFIES>	<Enabler>	NIMS-21a	<Partial>
<SATISFIES>	<Enabler>	SWIM-APS-03a	<Partial>
<SATISFIES>	<Service>	FlightPlanDataDistribution	<Partial>

620 **-END OF DOCUMENT-**

621

622