Update Status of SMGCS Standards (Manual, Specification and MASPS)

Electronic Navigation Research Institute

Hiromi Miyazaki

A-SMGCS Standards

ICAO
(Doc 9830)

- A-SMGCS Manual
- Specification for A-SMGCS Services
- EUROCAE MASPS for A-SMGCS

EUROCAE
(ED-87)

Eurocontrol
(SPEC-171)

EUROCAE: European Organization for Civil Aviation Equipment

MASPS: Minimum Aviation System Performance Specification

ICAO Work Program for SP
(SP: Surveillance Panel)

SP ASWG job cards	Tasks
SP.008.01 Ensure performance of Surveillance and ACAS systems	• The development of updates to existing materials in light of operational experience • Develop provisions aimed at lowering interference levels on 1030/1090 MHz.

- The current A-SMGCS manual includes a lot of outdated information related to airport surface surveillance systems
- Providing incorrect information as ICAO guidance would generate potential confusions for States
- SP decided to update information related to surveillance systems included in the A-SMGCS Manual

How to Update for Doc 9830

- Doc 9830 was created in the early phase of the development and implementation of A-SMGCS
- As of today, A-SMGCS has been installed in airports around world
- EURO SPEC-171 provides a new Specification for A-SMGCS Services
- The SPEC-171 takes into account the experience gained from the SESAR project and the implementation of A-SMGCS basic functions (Surveillance, Runway Monitoring and Conflict Alerting) and includes the new Services (Airport Safety Support, Routing and Guidance)

: The Single European Sky ATM Research

How to Update for Doc 9830

- The end-state of this work is an update of Doc 9830 that will reflected the new SPEC-171
- Technical Sub-group (TSG) of SP was tasked to update Doc 9830

➢ Step 1: Identification of Standards and representative installations
➢ Step 2: Identify information for update or removal
➢ Step 3: Restructure the Doc 9830
➢ Step 4: Development of a final report for SP panel

- TSG provided an initial results of the Step 2 on June 2019

A-SMGCS Standards

- A-SMGCS Manual
- Specification for A-SMGCS Services
- EUROCAE MSAPS for A-SMGCS

ICAO
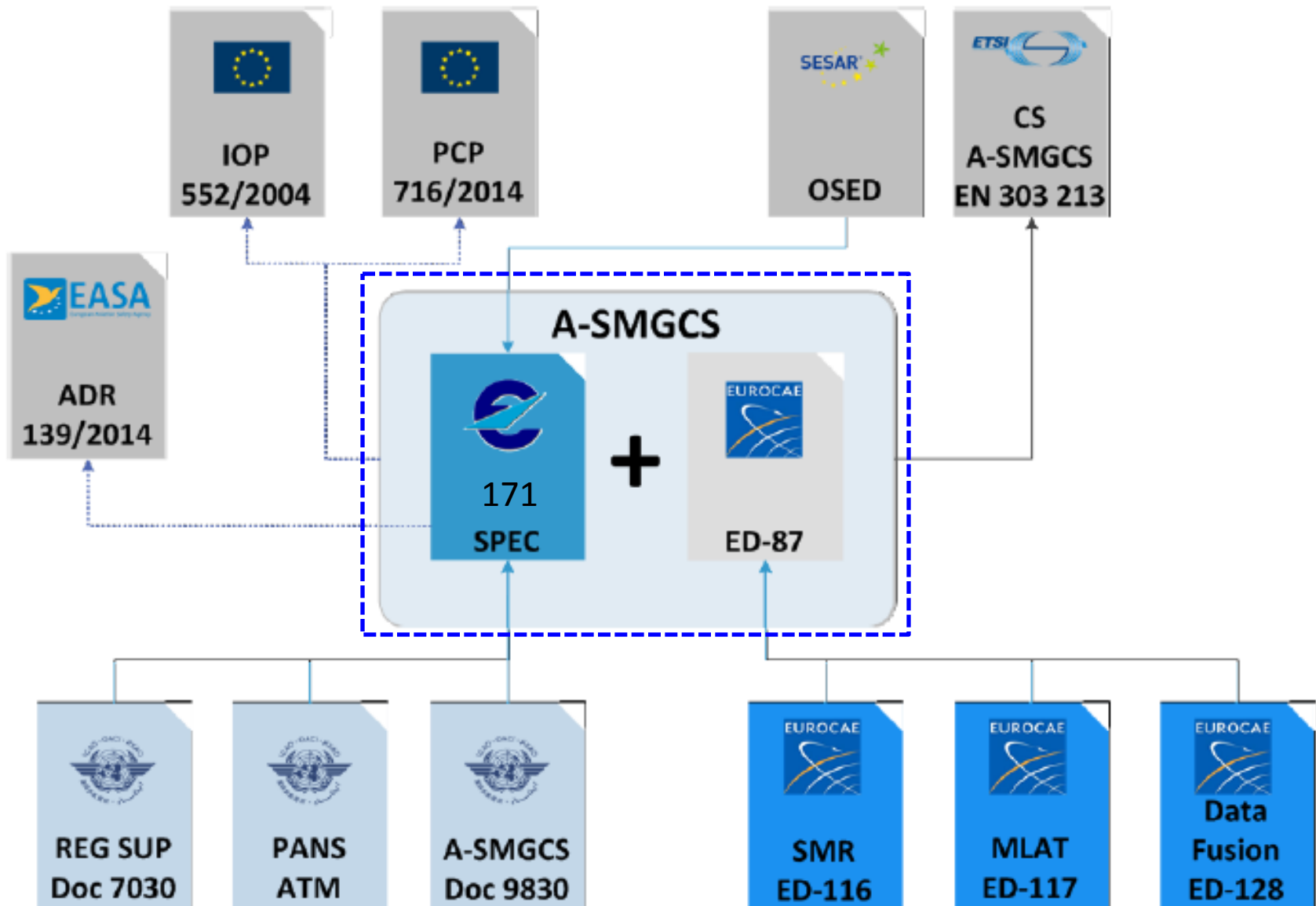(Doc 9830)

EUROCAE
(ED-87)

Eurocontrol
(SPEC-171)

ENRI Standardization Framework

From EUROCONTROL
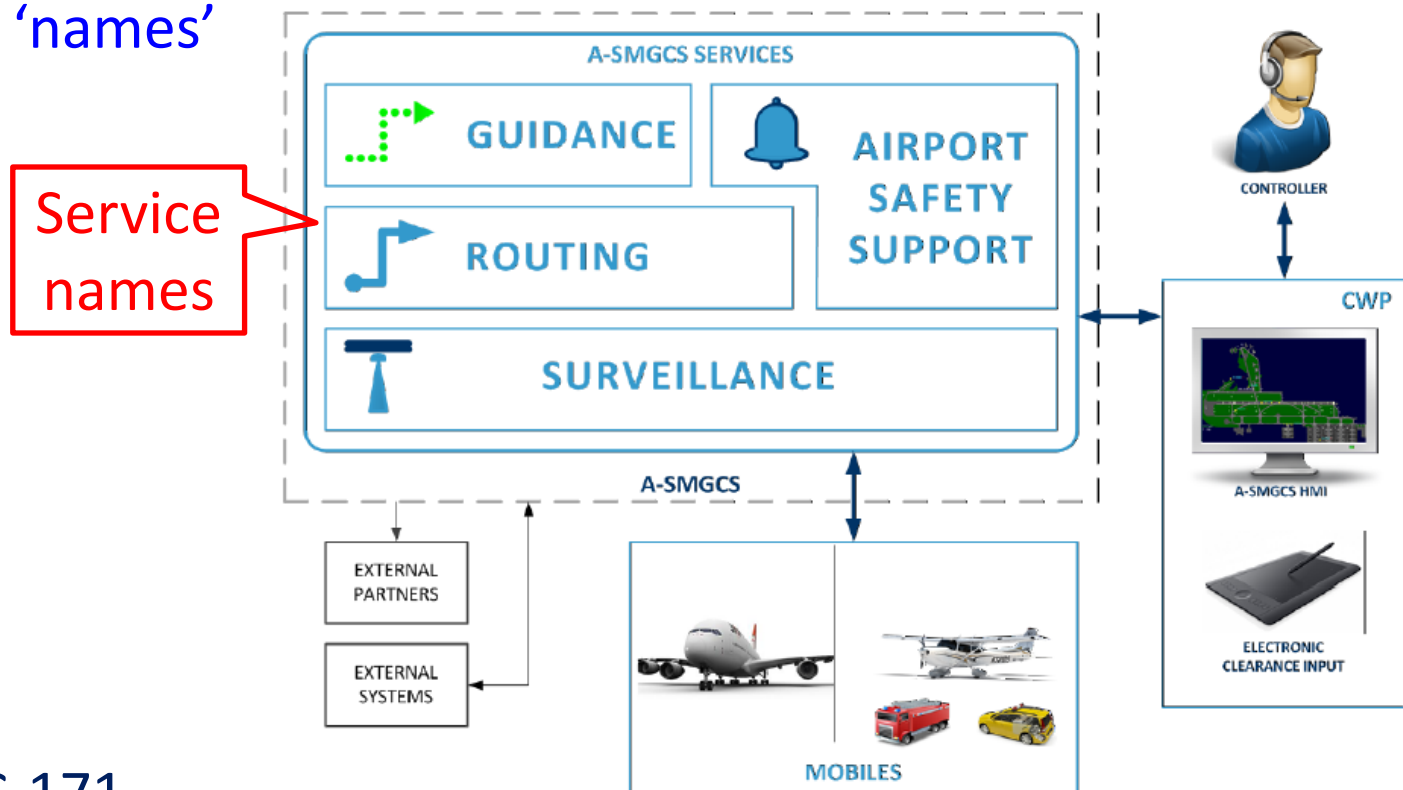
Purpose of the SPEC

- The purpose of this document is to provide an EUROCONTROL Specification for A-SMGCS Services to support the implementation of an A-SMGCS in EURO states
- The reference to 'levels' is no longer used and has been superseded by using 'names'

Service names

A-SMGCS SERVICES

GUIDANCE

AIRPORT SAFETY SUPPORT

ROUTING

SURVEILLANCE

A-SMGCS

EXTERNAL PARTNERS

EXTERNAL SYSTEMS

MOBILES

CONTROLLER

CWP

A-SMGCS HMI

ELECTRONIC CLEARANCE INPUT

From SPEC-171

Differences (Manual and SPEC)

Eurocontrol Definition (SPEC-171):

- Level: no longer used and has been superseded by using 'services'
- services: Surveillance, Airport Safety Support, Routing, Guidance
- services to "users": controllers, pilot/driver, equipped mobiles
- no association to airport size and complexity

EUROCONTROL held a workshop on A-SMGCS ROUTING on April 2019

- Service providers: DFS(Germany), ADP(France)
- Manufactures: Thales, SAAB, LEONARDO
- They provided experiences for A-SMGCS activities, as presentation

A-SMGCS Standards

ICAO
(Doc 9830)

- A-SMGCS Manual
- Specification for A-SMGCS Services
- EUROCAE MSAPS for A-SMGCS

EUROCAE
(ED-87)

Eurocontrol
(SPEC-171)

EUROCAE: European Organization for Civil Aviation Equipment

EUROCAE MASPS (ED-87)

EUROCAE is the European leader in the development of worldwide recognized industry standards for aviation and develops standards by industry/members for the industry needs

The ED-87 specifies system and equipment characteristics that should be useful to designers, installers, manufacturers, service providers and users of systems intended for operational use at aerodromes.

- ED-87C: for A-SMGCS Level 1 and 2 (2015)
- ED-87D: for Airport Safety Support and Routing (July 2019)
- ED-87E: for Guidance Service (Future)

MASPS: Minimum Aviation System Performance Specification

EUROCAE MASPS (ED-87D)

ED-87D has been updated to include the newest services of A-SMGCS and align the requirements to recently published EUROCONTROL

As compared with the previous version, the main changes are:

- Addition of requirements for the Airport Safety Support Service
- Addition of requirements for the Routing Service
- Revision of the text to consolidate the requirements for A-SMGCS with results of the SESAR research projects

MASPS: Minimum Aviation System Performance Specification

Thank you for your attention!

Any Questions??

Let's get experiences for A-SMGCS by introducing new systems!!

ICAO Technical Panels

From ICAO