**Terms of Reference (Technical Proposal)**

Summary information

|  |  |
| --- | --- |
| Approval status | XXX |
| Funding | **Maximum budget:** 249 517.45**€** |
| Time scale | Mar 2017 to Mar 2019 |
| Work Items  | XXX |
| Board priority  | [ETSI STF funding criteria](http://portal.etsi.org/stfs/process/item2_PropApprFund/item2_A1_FundCriteria.asp) |

**Title: European Norms for Advanced-Surface Movement Guidance and Control Systems**

**(A-SMGCS)**

**Specific agreement number: SA/ETSI/MOVE/000/2016-04**

**Organisation: ETSI**

**Date**: 22/09/2016

**Part I – Policy relevance and expected market impact**

# Policy relevance

In the context of the Single European Sky (SES) Regulatory Framework and in particular the Interoperability Regulation 552/2004 (as amended by Commission Regulation 1070/2009), the ESOs are requested to produce, under standardisation requests (Mandates), European standards (to be listed in the OJEU as Community Specifications) so as to provide presumption of conformity against the Essential Requirements as defined in Annex II of the Interoperability Regulation. The proposed action is in response to the Multi Annual Work Programme 2014-2020 under the Connecting Europe Facility (CEF), as amended in 2016, allowing the Commission to launch a Programme Support Action in the field of the Single European Sky (SES), implemented by means of grants to the European Standardisation Organisations (ESOs) to support the development of standards and technical specifications for SESAR technologies.

It is believed that the action proposed is in line with the objective pursued by this Multi Annual Work Programme in the context of the SESAR: “objective of optimising the integration and interconnection of transport modes and enhancing the interoperability of transport services, while ensuring the accessibility of transport infrastructures”.

# Rationale

In the context of the Single European Sky (SES) Regulatory Framework, the Interoperability Regulation 552/2004 (as amended by Commission Regulation 1070/2009) gives standards a central role in achieving its objectives and requires the production and adoption of European Standards (ENs) to be referenced in the OJEU as “Community Specifications”. The Interoperability Regulation states that Community Specifications may be “European standards for systems or constituents, together with the relevant procedures, drawn up by the European mandate from the Commission”.

A Community Specification (CS) is a means of defining the technical and operational conditions necessary to meet the Essential Requirements (ERs) of the regulation and any relevant implementing rules for interoperability. Compliance with a published CS creates a presumption of conformity with the Essential Requirements (ERs) and the relevant Implementing Rules (IRs) for interoperability. To achieve this, reference is generally to be made to existing Eurocae or EUROCONTROL specifications, ensuring that these or other necessary content is in alignment with ICAO requirements. A CS contains tests and other technical aspects and may also include operational aspects, procedures, certification and/or institutional considerations, system and/or constituent maintenance aspects as well as implementation guidance material. It is therefore a very important specification as it combines in one single standard all that is needed for presumption of conformity against the ERs of the Interoperability Regulation (552/2004).

ETSI has received and accepted 3 mandates for ATM Interoperability under the SES Regulatory Framework: M/390 in 2006, M/438 in 2009 and more recently M/524 in 2013 which is a framework mandate since it points to the Standardisation Road Map for the implementation of the ATM Master Plan as far as the standardisation activities are concerned. Under M/390 and M/438 ETSI has produced a number of Community Specifications listed in OJEU. This proposed action is also in response to M/524 and it is related to important ATM activities (A-SMGCS) which are part of the SESAR deployment program. Due to the amount of work to be performed, this requires financial support in order to make sure the related standards (necessary for guaranteeing interoperability) are available in due time.

# Objective

The objective of this action is to produce a set of A-SMGCS Community Specifications (in accordance with Article 3 and Article 4 of the Regulation (EC) No 552/2004) in accordance with the SESAR deployment program and the EASCG rolling development plan and in line with regulation 716/2014 (the PCP regulation). The work is in response to mandate M/524 on ATM Interoperability for the ATM Masterplan and will be aligned with Eurocae ED-87D and ED-87E as well as the EUROCONTROL A-SMGCS guidance material addressing the new A-SMGCS services currently under development. Since ED-87E is expected to be published by the end of 2018 (period covered by this action), the publication of one of the expected European Norms (EN 303 213-8) for A-SMGCS can only take place in 2019. Should there be comments during the consultation process (ENAP), these will be processed within the resources of the ETSI Technical Body in charge of the activities (TC ERM/TG AERO) since they are not considered to be part of this action.

# Market impact

Commission Implementing Regulation 716/2014, known as the Pilot Common Project (PCP), mandates, in accordance with the SESAR Deployment Program, the implementation of 6 ATM Functionalities (AFs) within a specified geographical scope by specified dates. A-SMGCS is one of the key elements of AF2 (Airport Integration and Throughput) and therefore it is of paramount importance to speed up the development process of the related European Standards so as not to delay the associated deployment. A delay in the availability of the required standards could result in a non-harmonized deployment, lack of interoperability, integration problems and consequently to the need for reinvestments at a later stage in order to upgrade or re-engineer the deployed solutions to the required standards with obvious consequences in terms of costs. This could also lead to the impossibility to become operational and deliver the expected benefits.

**Part II – Execution of the work**

# Working method / approach

## Specialist Task Force (STF)

ETSI will perform this work by the creation of an ETSI STF, reporting the milestones and the draft deliverables to the ETSI TC ERM/TG AERO (hereafter referred to as TG AERO), according to the planned meeting agenda and additional dates agreed by the Task Group Chairman. TG AERO will lead an active role in steering and contributing to this work.

Coordination with various stakeholders will be necessary, under TG AERO supervision, to achieve the best outcome of this work and the widest possible collection of views amongst all parties concerned. In particular, the STF will liaise with Eurocae, EUROCONTROL and those other players involved in the A-SMGCS domain so as to assure the development of a consistent set of specifications.

## Other type of activity than STFs

The draft deliverables (stable drafts and final drafts for approval) will be distributed for comments not only to relevant ETSI members via mailing lists, but also to relevant aeronautical ETSI partners (such as Eurocae - especially WG-41- and EASA) so as to collect inputs from as wide an aeronautical community as possible.

## Experts qualification required, mix of skills

The STF work will be performed by a group of Companies/Organizations (Service Providers) that will collectively ensure the following mix of skills:

* Deep knowledge of the A-SMGCS system and its constituents
* Good aeronautical background
* Experience in ATM system testing
* Experience in drafting European Standards
* Experience to work in an international environment

The STF Leader will be appointed from one of the Service Providers and will be responsible for co-ordinating the execution of the tasks assigned to the individual Service Providers, according to the requirements in the Terms of Reference (based on the action grant) and following the technical direction given by TG AERO. The STF leader will also possess project management experience, report-writing skills, experience of consensus building, presentation skills, experience of working in an international environment, and in liaising with other international organisations.

The Service Providers will be organised to deliver on the following tasks (or group of tasks):

1. STF Lead including liaison with relevant actors in the A-SMGCS domain as well as the production of the Interim Report (IR) and the Final Report (FR) to the EC/EFTA.
2. Production of the EN 303 213-1 containing technical specifications for the A-SMGCS surveillance service for presumption of conformity against the SES Interoperability Regulation Essential Requirements.
3. Production of the EN 303 213-2 containing technical specifications for the A-SMGCS safety support service for presumption of conformity against the SES Interoperability Regulation Essential Requirements.
4. Production of the EN 303 213-3 containing technical specifications for the A-SMGCS cooperative sensor for presumption of conformity against the SES Interoperability Regulation Essential Requirements.
5. Production of the EN 303 213-7 containing technical specifications for the A-SMGCS routing service for presumption of conformity against the SES Interoperability Regulation Essential Requirements.
6. Production of the EN 303 213-8 containing technical specifications for the A-SMGCS guidance service for presumption of conformity against the SES Interoperability Regulation Essential Requirements.

## Previous work

ETSI has been involved in the development of Community Specifications under the Single European Sky regulatory framework (and in particular under the Interoperability Regulation 552/2004 as amended by Commission Regulation 1070/2009) for quite a long time and has produced a number of deliverables under EC Mandates M/390 for A-SMGCS complemented by Harmonised Standards for A-SMGCS ground equipment under mandate M/536. The latest A-SMGCS Community Specifications are based on Eurocae ED-87C base material and outdated EUROCONTROL A-SMGCS guidance material. The Community Specifications basically cope with the interoperability of the interfaces of the surveillance service and basic safety net functions only (commonly known as EUROCONTROL A-SMGCS Level 1 and 2). The new A-SMGCS Community Specifications will be aligned to the latest and consolidated concepts of A-SMGCS and will include additional system services. A considerable amount of work will be required to produce those Community Specifications in parallel and consistent with the new Eurocae ED-87D and also its evolution ED-87E as well as the latest EUROCONTROL A-SMGCS guidance material.

# Performance indicators

Information that will act as performance indicators against the contracted activity will be provided by the STF in the following cases:

Effectiveness and efficiency:

Details will be provided, throughout the lifetime of the proposed action, on:

* the number of meetings held in relation to this work:
	+ the number of participants;
	+ the stakeholder communities represented;
	+ the number of presentations and technical contributions made on the activity by the STF;
* an evaluation of feedback received identifying key points that needed to be considered by the STF and any recommended actions;
* project progress in relation to the schedule specified

**Proposed effectiveness and efficiency benchmarks**

1. Reports produced by the STF for ETSI TG AERO about the progress of the work and circulated for information to the EASCG. A report will be produced for each TG AERO meeting held during this activity (expected to be at least 3 reports a year).
2. Draft versions of the deliverables to be circulated to TG AERO for comments, namely: stable draft and final draft for approval.
3. Draft versions of the deliverables to be circulated to Eurocae and EUROCONTROL (and EASA as appropriate) for comments, namely: stable draft and final draft for approval
4. Subject to the on time availability of Eurocae and EUROCONTROL basic material, 90% of the tasks and other milestone-related schedule on time (less than 5 days after the planned dates)

Stakeholder engagement and satisfaction:

An analysis will be given of the balance of stakeholder representation in the activity and the number of liaison activities performed.

The STF, through TG AERO, will need to liaise with those stakeholders working in related areas such as Eurocae, EUROCONTROL and EASA. The EASCG will be also consulted.

**Proposed Benchmarks**

1. Contributions received from other stakeholders to the work
2. Comments provided to the draft versions of the deliverables circulated by the STF

Dissemination of results:

Information will be provided on the effectiveness of activities related to the dissemination of project deliverables and efforts made to raise industry awareness of the activity.

**Proposed Benchmarks**

1. At least 2 presentations made to the EASCG
2. At least one news release (for example on the EASCG web page and the ETSI web site) on the work, detailing the achievement of important results and milestones.

# Work plan, milestones and deliverables

## Deliverables

As shown in Table 1, the action will produce two deliverables to be submitted to the EC/EFTA: an Interim Report (IR) and a Final Report (FR). The IR will be submitted 15 months after the signature of the action grant and will detail the work performed to achieve the production of the 5 technical deliverables as well as the latest drafts of these ENs. The FR (provided at the end of the action i.e. not later than 24 months after the signature of the action grant) will provide an overall report of the activity performed along with 4 ENs formally adopted for publication (D1 to D4), 1 formally adopted EN for ENAP (D5), as well as details of the resource usage along with an analysis of the performance indicators.

Table 1: List of Reports

| **Deliv. ID** | Title and Contents |
| --- | --- |
| Interim Report (IR) | **Title**: Interim Report to the EC/EFTA**Content**: This report to the EC/EFTA will include:* 1. The activities performed, the coordination work of the STF activities and the production of the expected deliverables anticipated in the work-plan.
	2. The latest drafts of the deliverables specified in Table 2 below.
	3. Details of specific meetings held with Eurocae and/or EUROCONTROL and/or EASA on A-SMGCS related issues if necessary
	4. The plan for the future activities to complete the deliverables and further expected coordination meetings.
 |
| Final Report (FR) | **Title**: Final Report to the EC/EFTA. **Content**: This report will include:1. The activities performed, the coordination work of the STF activities and the production of the expected deliverables.
2. The published deliverables specified in Table 2 below (D1 to D4)
3. The final version for ENAP of deliverable D5 as specified in Table 2 below.
4. Detailed report of the performance indicators outlined in clause 6 of this proposal.
5. Details of specific meetings held with Eurocae and/or EUROCONTROL and/or EASA on A-SMGCS related issues if necessary.
6. Report on the resources that have been used for performing the work
 |

The goal of this action is to produce 5 candidate Community Specifications (ENs, to be listed in the OJEU) as shown in Table 2. Since Eurocae ED-87E is expected to be published by the end of 2018 (period covered by this action), only the version of D5 (EN 303 213-8) ready for ENAP (EN 303 213-8 V1.1.0) is expected to be available at the end of this action. Should there be comments during the consultation process, these will be processed with the resources of the Technical Body in charge of the activities (TG AERO) since they are not considered to be part of this action.

Section 7.2 gives more details on the work plan, milestones and due dates.

Table 2: list of deliverables

|  |  |  |  |
| --- | --- | --- | --- |
| **Deliv. ID** | **Standard number/version** | **Working title** | **Scope/Remarks** |
| D1 | EN 303 213-1 V2.1.1\* | Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 1: Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for A-SMGCS surveillance service including external interfaces | Major update of the European Standard for A-SMGCS surveillance service in order to align it with new reference material from EUROCONTROL (guidance material)/Eurocae (ED-87D). This update is also required to fulfil the PCP. Although this deliverable is a revision of EN 303 213-1 V1.4.1 (covering Level 1), the scope of the new A-SMGCS concept (surveillance service instead of level) is much broader than it used to be and therefore it can be considered as a new standard.  |
| D2 | EN 303 213-2 V2.1.1\* | Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 2: Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for A-SMGCS airport safety support service | Major update of the European Standard for A-SMGCS airport safety support service in order to align it with new reference material from EUROCONTROL (guidance material)/Eurocae (ED-87D). This update is also required to fulfil the PCP. Although this deliverable is a revision of EN 303 213-2 V1.4.1 (covering Level 2), the scope of the new A-SMGCS concept with regard to airport safety support services is different from the old Level 2 and therefore it can be considered as a new standard. |
| D3 | EN 303 213-3 V1.2.1\* | Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 3: Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for a deployed cooperative sensor including its interfaces. | Update of the European Standard for A-SMGCS for a deployed cooperative sensor in order to align it with Eurocae ED-117A and ED-87D and required by the PCP. |
| D4 | EN 303 213-7 V1.1.1\* | Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 7: Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for A-SMGCS routing service. | New European Standard for A-SMGCS routing service in order to take into consideration the extension of A-SMGCS functionalities as defined in the reference material from EUROCONTROL (guidance material)/Eurocae (ED-87D) and required by PCP. |
| D5 | EN 303 213-8 V1.1.0\*\* | Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 8: Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for A-SMGCS guidance service. | New European Standard for A-SMGCS guidance service in order to take into consideration the extension of A-SMGCS functionalities as defined in the reference material from EUROCONTROL (guidance material)/ Eurocae (ED-87E)  |

\* Version at publication time.

\*\* Version at publication time will be V1.1.1

## Work plan

Table 3 shows the detailed work plan for this action in terms of tasks. T0 is the date of signature of the contract.

Table 3: Task Description with milestones

| Task | Description and methodology | Deliverables |
| --- | --- | --- |
| T1 | STF Organization |  |
| T1.1 | STF SetupETSI and the ERM TG AERO chairman will interview the STF candidates and select those to best meet the work plan.ETSI will make arrangements for STF members (contracts, etc.). |  |
| T1.2 | STF LeaderThe STF leader will:* Plan the work of the STF members, ensuring that the timescales of the STF deliverables are met
* Organise STF meetings to discuss the drafts, recording any major issues and resolutions of the STF, identifying and progressing the actions of STF members
* Report to TG AERO on the work of the STF
* Represent, or arrange for other STF members to represent the STF at other external meetings as appropriate
* Provide drafts of the IR and FR to the ETSI secretariat

**Expertise required:*** Ability to lead and manage a team
* Project management and communication skills

6 travels to present results to TG AERO meetings are foreseen**Effort Required: 40 units****Milestones:** **Start**: T0+2 **M1.1** Interim report: T0+15 **M1.2** Final report: T0+24 |  |
| T1.3 | Interactions with other relevant organizationsOne of the goals of this task is to ensure that the STF fluently interacts with relevant actors in the A-SMGCS field in order to make sure the work is well coordinated and synchronised. The two organisations of relevance for this action are Eurocae (mainly WG-41 producing MASPS for A-SMGCS and MOPS for A-SMGCS and Multilateration Systems) and Eurocontrol (producing A-SMGCS guidance material). This interaction is therefore indispensable for ensuring that the standards produced are fully aligned with Eurocae/Eurocontrol basic material so as to produce in due time a consistent set of standards. In addition, a further interaction with EASA (assured by the ETSI-EASA MoU) might be needed for safety related aspects. As ICAO documents are another important source of input on A-SMGCS requirements, any updates of the existing ICAO material on A-SMGCS must be also considered in the STF which means that a close interaction with ICAO would be of benefit.The STF, under ERM TG AERO supervision, will collaborate with Eurocae WG 41 using the basic MoU agreement ETSI has with Eurocae and also Eurocontrol (ETSI member) as appropriate. The team will make sure the development of the standards will proceed in parallel with the development of Eurocae/Eurocontrol basic material so as to speed up the development time in support of the deployment of SESAR.**Effort Required: 20 units** |  |
| T2 | **Production of A-SMGCS surveillance service European Norm (EN 303 213-1)** |  |
| T2.1 | **Description:** The goal of this task is to produce the deliverable EN 303 213-1: “Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for A-SMGCS surveillance service including external interfaces”. This deliverable will define the requirement for implementing the A-SMGCS surveillance service based on Eurocae ED-87D as well as Eurocontrol guidance material. All the essential requirements of the interoperability regulation (552/2004) will be mapped with the relevant technical requirements. It will be necessary to coordinate the work with tasks 3.1, 5.1 and 6.1 since these will cover complementary aspects of A-SMGCS. A strong coordination with Eurocae is needed.   | EN 303 213-1 |
| T2.1a | **Methodology:** Since the basic material from Eurocae and Eurocontrol is expected to be finalized by the end of 2017, the STF will need to perform a strong coordination with Eurocae/Eurocontrol till the basic material is published so as to finalize the deliverable as soon as possible after the publication of ED-87D and Eurocontrol guidance material. The methodology for the development of the Community Specification will be the following:* Analysis of the Interoperability Regulation Essential Requirements (ERs)
* For each ER, identification of the applicable technical requirements (when defined elsewhere – for instance in ED-87D) or definition of the missing ones (when not defined).
* For each technical requirement, identification of the applicable tests (when defined elsewhere) or definition of the missing ones (when not defined) for presumption of conformity.
* For each ER of the Interoperability Regulation (amended by Regulation EC 1070/2009), definition of a checklist providing a comprehensive traceability of evidence on constituents and system levels analysing keywords of this same ER. These keywords mainly address the phases of design, build, operation and maintenance of systems and constituents as well as specifically required qualities or attributes as defined in the given ER

The STF is expected to produce a final draft after the publication of the Eurocontrol and Eurocae basic material (end of 2017) so that the EN can be published in due time by the end of 2018/beginning of 2019 according to the comments received during the consultation phase. The work related to tasks 2.1, 3.1, 5.1 and 6.1 is expected to be done in parallel but this will depend on the way the parallel development of ED-87D as well as the related Eurocontrol guidance material will actually proceed. **Working sessions:** It is anticipated that the majority of the work will be performed as drafting work remotely and electronically. However a few additional face-to-face working sessions will be needed - especially for clarification purposes with regard to terms and definitions and the alignment of the various information sources. It is planned to have 4 face-to-face working sessions in total (tasks 2 to 6). **Effort required: 65 units****Intermediate and final Milestones:****Start**: immediately after establishment of the STF.**M2.1**: Stable draft:T0 + 10.**M2.2**: Final draft approved by TC ERM: T0 + 14.**M2.3:** EN published: end of T0 + 24. | EN 303 213-1 |
| T3 | **Production of A-SMGCS airport safety service European Norm (EN 303 213-2)** |  |
| T3.1 | **Description:** The goal of this task is to produce the deliverable EN 303 213-2: “Part 2: Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for A-SMGCS airport safety support service”. This deliverable will define the requirement for implementing the A-SMGCS airport safety service based on Eurocae ED-87D as well as Eurocontrol guidance material. All the essential requirements of the interoperability regulation (552/2004) will be mapped with the relevant technical requirements. It will be necessary to coordinate the work with tasks 2.1, 5.1 and 6.1 since these will cover complementary aspects of A-SMGCS. A strong coordination with Eurocae is needed. A clear definition of the content of that airport safety service will need to be established to outline the commonalities and differences to old definitions such as “Level 2+”, “Surface Safety Nets”, “Airport Safety Nets” etc. Liaison with EASA for safety aspects might also be needed.   | EN 303 213-2 |
| T3.1a | **Methodology:** Since the basic material from Eurocae and Eurocontrol is expected to be finalized by the end of 2017, the STF will need to perform a strong coordination with Eurocae/Eurocontrol till the basic material is published so as to finalize the deliverable as soon as possible after the publication of ED-87D and Eurocontrol guidance material. The methodology for the development of the Community Specification will be the following:* Analysis of the Interoperability Regulation Essential Requirements (ERs)
* For each ER, identification of the applicable technical requirements (when defined elsewhere – for instance in ED-87D) or definition of the missing ones (when not defined). Liaison with EASA is likely to be needed
* For each technical requirement, identification of the applicable tests (when defined elsewhere) or definition of the missing ones (when not defined) for presumption of conformity. Liaison with EASA is likely to be needed
* For each ER of the Interoperability Regulation (amended by Regulation EC 1070/2009), definition of a checklist providing a comprehensive traceability of evidence on constituents and system levels analysing keywords of this same ER. These keywords mainly address the phases of design, build, operation and maintenance of systems and constituents as well as specifically required qualities or attributes as defined in the given ER

The STF is expected to produce a final draft after the publication of the Eurocontrol and Eurocae basic material (end of 2017) so that the EN can be published in due time by the end of 2018/beginning of 2019 according to the comments received during the consultation phase. The work related to tasks 2.1, 3.1, 5.1 and 6.1 is expected to be done in parallel but this will depend on the way the parallel development of ED-87D as well as the related Eurocontrol guidance material will actually proceed. **Working sessions:** It is anticipated that the majority of the work will be performed as drafting work remotely and electronically. However a few additional face-to-face working sessions will be needed - especially for clarification purposes with regard to terms and definitions and the alignment of the various information sources. It is planned to have 4 face-to-face working sessions in total (tasks 2 to 6). **Effort required: 65 units****Intermediate and final Milestones:****Start**: immediately after establishment of the STF.**M3.1**: Stable draft: T0 + 10.**M3.2**: Final draft approved by TC ERM: T0 + 14.**M3.3:** EN published: end of T0 + 24. | EN 303 213-2 |
| **T4** | **Production of A-SMGCS cooperative sensor European Norm (EN 303 213-3)** |  |
| T4.1 | Description: The goal of this task is to produce the update of the deliverable EN 303 213-3: “Part 3: Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for a deployed cooperative sensor including its interfaces”. This deliverable will define the requirements for implementing the A-SMGCS cooperative sensor constituent based mainly on Eurocae ED 117A. All the essential requirements of the interoperability regulation (552/2004) will be mapped with the relevant technical requirements. | EN 303 213-3 |
| T4.1a | **Methodology:** The methodology for the development of the Community Specification will be the following:* Analysis of the Interoperability Regulation Essential Requirements (ERs)
* For each ER, identification of the applicable technical requirements (when defined elsewhere – for instance in ED 117A) or definition of the missing ones (when not defined).
* For each technical requirement, identification of the applicable tests (when defined elsewhere) or definition of the missing ones (when not defined) for presumption of conformity.
* For each ER of the Interoperability Regulation (amended by Regulation EC 1070/2009), definition of a checklist providing a comprehensive traceability of evidence on constituents and system levels analysing keywords of this same ER. These keywords mainly address the phases of design, build, operation and maintenance of systems and constituents as well as specifically required qualities or attributes as defined in the given ER

The STF is expected to produce a final draft by the end of 2017 so that the EN can be published in due time by the end of 2018/beginning of 2019 according to the comments received during the consultation phase. **Working sessions:** It is anticipated that the majority of the work will be performed as drafting work remotely and electronically. However a few additional face-to-face working sessions will be needed - especially for clarification purposes with regard to terms and definitions and the alignment of the various information sources. It is planned to have 4 face-to-face working sessions in total (tasks 2 to 6). **Effort required: 43 units****Intermediate and final Milestones:****Start**: immediately after establishment of the STF.**M4.1**: Stable draft: T0 + 9.**M4.2**: Final draft approved by TC ERM: T0 + 14.**M4.3:** EN published: end of T0 + 24. | EN 303 213-3 |
| T5 | **Production of A-SMGCS routing service European Norm (EN 303 213-7)** |  |
| T5.1 | **Description:** The goal of this task is to produce the deliverable EN 303 213-7: “Part 7: Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for A-SMGCS routing service”. This deliverable will define the requirement for implementing the A-SMGCS airport routing service based on Eurocae ED-87D as well as Eurocontrol guidance material. All the essential requirements of the interoperability regulation (552/2004) will be mapped with the relevant technical requirements. It will be necessary to coordinate the work with tasks 2.1, 3.1 and 6.1 since these will cover complementary aspects of A-SMGCS. A strong coordination with Eurocae is needed.  | EN 303 213-7 |
| T5.1a | **Methodology:** Since the basic material from Eurocae and Eurocontrol is expected to be finalized by the end of 2017, the STF will need to perform a strong coordination with Eurocae/Eurocontrol until the basic material is published so as to finalize the deliverable as soon as possible after the publication of ED-87D and Eurocontrol guidance material. The methodology for the development of the Community Specification will be the following:* Analysis of the Interoperability Regulation Essential Requirements (ERs)
* For each ER, identification of the applicable technical requirements (when defined elsewhere – for instance in ED-87D) or definition of the missing ones (when not defined).
* For each technical requirement, identification of the applicable tests (when defined elsewhere) or definition of the missing ones (when not defined) for presumption of conformity.
* For each ER of the Interoperability Regulation (amended by Regulation EC 1070/2009), definition of a checklist providing a comprehensive traceability of evidence on constituents and system levels analysing keywords of this same ER. These keywords mainly address the phases of design, build, operation and maintenance of systems and constituents as well as specifically required qualities or attributes as defined in the given ER

The STF is expected to produce a final draft after the publication of the Eurocontrol and Eurocae basic material (end of 2017) so that the EN can be published in due time by the end of 2018/beginning of 2019 according to the comments received during the consultation phase. The work related to tasks 2.1, 3.1, 5.1 and 6.1 is expected to be done in parallel but this will depend on the way the parallel development of ED-87D as well as the related Eurocontrol guidance material will actually proceed. **Working sessions:** It is anticipated that the majority of the work will be performed as drafting work remotely and electronically. However a few additional face-to-face working sessions will be needed - especially for clarification purposes with regard to terms and definitions and the alignment of the various information sources. It is planned to have 4 face-to-face working sessions in total (tasks 2 to 6).**Effort required: 95 units****Intermediate and final Milestones:****Start**: immediately after establishment of the STF.**M5.1**: Stable draft: T0 + 12.**M5.2**: Final draft approved by TC ERM: T0 + 14.**M5.3:** EN published: end of T0 + 24. | EN 303 213-7 |
| T6 | Production of A-SMGCS guidance service European Norm (EN 303 213-8) |  |
| T6.1 | **Description:** The goal of this task is to produce the deliverable EN 303 213-8: “Part 8: Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for A-SMGCS guidance service”. This deliverable will define the requirement for implementing the A-SMGCS airport guidance service based on Eurocae ED-87E as well as Eurocontrol guidance material. All the essential requirements of the interoperability regulation (552/2004) will be mapped with the relevant technical requirements. It will be necessary to coordinate the work with tasks 2.1, 3.1 and 5.1 since these will cover complementary aspects of A-SMGCS. A strong coordination with Eurocae is needed. | EN 303 213-8 |
| T6.1a | **Methodology:** Since the basic material from Eurocae and Eurocontrol is expected to be finalized by the end of 2018, the STF will need to perform a strong coordination with Eurocae/Eurocontrol till the basic material is published so as to finalize the deliverable as soon as possible after the publication of the Eurocontrol guidance material and in parallel to the publication of ED-87E from EUROCAE. The methodology for the development of the Community Specification will be the following:* Analysis of the Interoperability Regulation Essential Requirements (ERs)
* For each ER, identification of the applicable technical requirements (when defined elsewhere – for instance in ED-87E) or definition of the missing ones (when not defined).
* For each technical requirement, identification of the applicable tests (when defined elsewhere) or definition of the missing ones (when not defined) for presumption of conformity.
* For each ER of the Interoperability Regulation (amended by Regulation EC 1070/2009), definition of a checklist providing a comprehensive traceability of evidence on constituents and system levels analysing keywords of this same ER. These keywords mainly address the phases of design, build, operation and maintenance of systems and constituents as well as specifically required qualities or attributes as defined in the given ER

The STF is expected to produce a final draft after the publication of the Eurocontrol (end of 2017) and in parallel with EUROCAE (End of 2018) so that the EN can be published by mid-2019 according to the comments received during the consultation phase. The work related to tasks 2.1, 3.1, 5.1 and 6.1 is expected to be done in parallel but this will depend on the way the parallel development of ED-87E as well as the related Eurocontrol guidance material will actually proceed. **Working sessions:** It is anticipated that the majority of the work will be performed as drafting work remotely and electronically. However a few additional face-to-face working sessions will be needed - especially for clarification purposes with regard to terms and definitions and the alignment of the various information sources. It is planned to have 4 face-to-face working sessions in total (tasks 2 to 6). Since ED-87E is expected to be published by the end of 2018 (period covered by this action), the publication of this European Norm can only take place in 2019. Should there be comments during the ENAP process, these will be processed with the resources of the Technical Body in charge of the activities (TG AERO) since they are not considered to be part of this action.**Effort required: 75 units****Intermediate and final Milestones:****Start**: immediately after establishment of the STF.**M6.1**: Stable draft: T0 + 18.**M6.2**: Final draft approved by TC ERM: T0 + 23.**M6.3:** EN sent to ENAP: end of T0 + 24. | EN 303 213-8 |

Table 4: *DELETED by ETSI Secretariat*

Table 5 and Table 5a show the calendar of tasks with the milestones. The assumption is that:

* Eurocae ED-87D as well as Eurocontrol basic material are published by the end of 2017
* Eurocae ED-87E (basic material for EN 303 213-8) is published by the end of 2018.

It is planned to work with all of the 5 deliverables (D1 to D5) in parallel since the covered topic (A-SMGCS) is the same and so is most of the basic material. However it must be considered that D5 will be shifted in time with respect to D1-D4 since the basic material (Eurocae ED-87E) is expected to be available by the end of 2018. Work on Task 4 may be the most trivial task since the main information source is expected to be available by the end of 2016 (ED-117A). ENAP (European Norm Approval Procedure) is the consultation phase and its duration takes into account “the worst case” (i.e. when comments are received and a resolution meeting and a subsequent National Vote is needed). This means that the deliverables D1 to D4 could be published earlier than planned if no comments are received during the consultation phase.

Table 5: Calendar of tasks with milestones (T1 to T5)

|  |  |
| --- | --- |
|  | **Month** |
| **Task N.** | ***1*** | ***2*** | ***3*** | ***4*** | ***5*** | ***6*** | ***7*** | ***8*** | ***9*** | ***10*** | ***11*** | ***12*** | ***13*** | ***14*** | ***15*** | ***16*** | ***17*** | ***18*** | ***19*** | ***20*** | ***21*** | ***22*** | ***23*** | ***24*** |
| **STF setup** |  |  | Start of STF |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **T1.** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **M1.1** |  |  |  |  |  |  |  |  | **M1.2** |
| **T2.** |  |  |  |  |  |  |  |  |  | **M2.1** |  |  |  | **M2.2** | *ENAP (including comments resolution & any necessary National Voting)* | **M2.3** |
| **T3.** |  |  |  |  |  |  |  |  |  | **M3.1** |  |  |  | **M3.2** | *ENAP (including comments resolution & any necessary National Voting)* | **M3.3** |
| **T4.** |  |  |  |  |  |  |  |  | **M4.1** |  |  |  |  | **M4.2** | *ENAP (including comments resolution & any necessary National Voting)* | **M4.3** |
| **T5.** |  |  |  |  |  |  |  |  |  |  |  | **M5.1** |  | **M5.2** | *ENAP (including comments resolution & any necessary National Voting)* | **M5.3** |

For Task 6, since the Eurocae basic material (ED-87E) is expected to be available by the end of 2018, it is expected to have the related deliverable (D5, EN 303 213-8) ready for ENAP by the end of 2018 as well, since the development of the two specifications will proceed in parallel and with a strong coordination. Resolution of comments during the ENAP (if any) is not part of the action but will be done with the resources of the Technical Committee in charge of the activities (TG AERO). Also in this case the publication of the related deliverable (D5) could take place earlier than expected if no comments are received during the ENAP.

Table 5a: Calendar of tasks with milestones (T6)

|  |
| --- |
| **Month** |
| **Task N.** | ***1*** | ***2*** | ***3*** | ***4*** | ***5*** | ***6*** | ***7*** | ***8*** | ***9*** | ***10*** | ***11*** | ***12*** | ***13*** | ***14*** | ***15*** | ***16*** | ***17*** | ***18*** | ***19*** | ***20*** | ***21*** | ***22*** | ***23*** | ***24*** |
| **T6** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **M6.1** |  |  |  |  | **M6.2** | **M6.3** |

**Part III: Financial part**

# Financial provisions in the EC/EFTA contract

## Total action costs

The total action costs will amount to: 249 517.45**€**

## Indirect costs

There are no indirect costs involved.

# Document history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Date** | **Author** | **Status** | **Comments** |
| 1.0 | 22-Sep-2016 | ETSI Secretariat | Board Approved | Creation of document, first draft for MTS review |
| 1.1 | 12-Jan-2017 | ETSI Secretariat | Board Approved | Editorials |