

ANNEX 4

Terms of Reference (ToR) for ETSI ISG Augmented Reality Framework (ISG ARF)

Approved by the Director-General on **30 September 2019** following Board#124 consultation

Scope

The purpose of the ISG ARF is to define a framework for the interoperability of Augmented Reality (AR) components, systems and services. The framework under development will be referenced as “AR framework” in the present document. It defines an overall functional reference architecture, identifying key components and interfaces for an AR solution. The AR framework will allow AR components from different providers to interoperate through the defined interfaces. This will in turn avoid vertical siloes and market fragmentation and enable players in the ecosystem to offer part(s) of an overall AR solution.

The main objectives of ISG ARF are:

- to ensure that Augmented Reality services and platforms will be easier to design, deploy and operate than today taking into account the advent of 5G networks,
- to enable the development of high-performance Augmented Reality components which are portable between different hardware vendors, different providers of software solutions and platforms,
- to achieve co-existence of legacy and proprietary platforms whilst enabling an efficient migration path to fully interoperable platforms.

ISG ARF will acknowledge the work of relevant standardization bodies and open source communities already developing technical solutions for AR and will ensure consistency with other activities in ETSI, for example with regards to IoT, edge computing and 5G.

Areas of activity:

ISG ARF will complete the specification of the AR framework started during the initial 2-year period and produce a set of interoperability requirements for AR components, systems and services.

Based on the standards landscape group report, relevant standards will be mapped onto the reference architecture. The set of interoperability requirements will be used to identify interfaces essential to achieve interoperability. Together, this will be used to focus specification work on these interfaces.

Where existing standards have been identified and fulfil the interface requirements, they will be referenced by the AR framework.

Where existing standards have been identified but extensions are required, the requirements will be contributed to the corresponding standards organisations where appropriate.

Where interfaces in the reference architecture have been identified as key interoperability points but no standards could be identified, new technical specifications relating to APIs, interfaces or data models will be developed within ETSI or in external groups if deemed more appropriate.

In addition, ISG ARF proposes to write a group report of ‘state of the art’ of open source components implementations and interfaces usable within the AR framework.

ISG ARF also plans to initiate open source development (of parts) of the AR framework to further promote and support its adoption by vendors and open source communities.

The workplan can be summarised in figure 1 below.

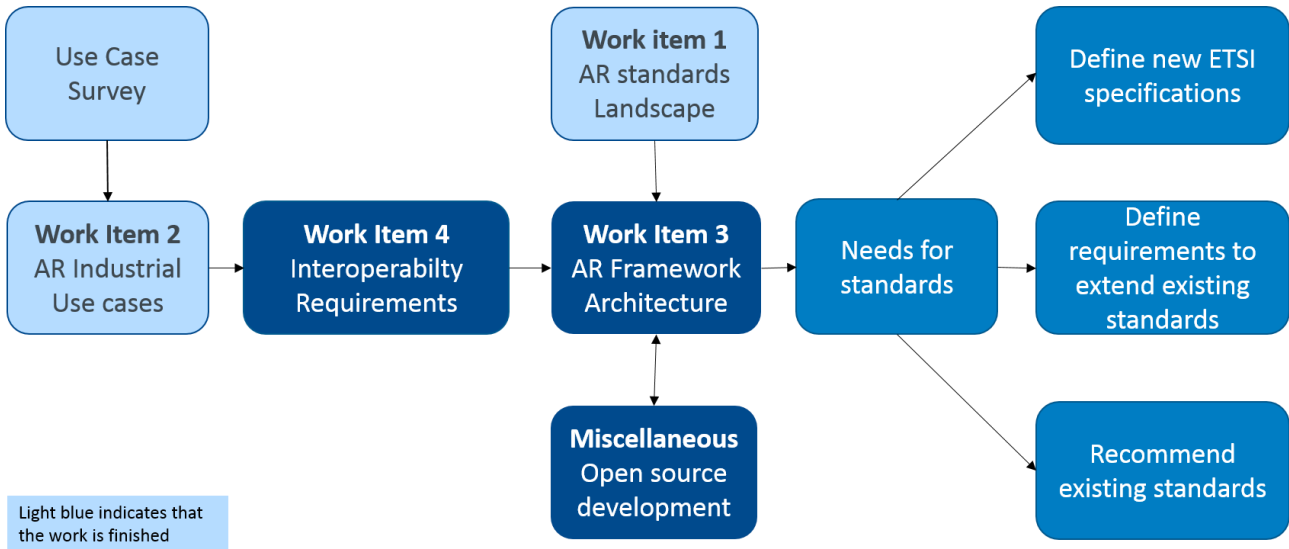


Figure 1: ISG ARF Workplan

ANNEX (Informative): Collaboration with other bodies

ISG ARF will set-up the appropriate communication channels to groups both within and outside of ETSI.

ETSI groups

- ETSI ISG MEC
- 3GPP/SA4-Codec

External Groups

- IEEE
- ISO MPEG
- W3C AR Community Group
- ITU-T
- Khronos
- The AREA
- GSMA Cloud AR/VR