**3GPP TSG-SA WG4 Meeting 131 S4-250187r01**

**Geneva, Switzerland, 17 – 21 February, 2025**

**Source:** InterDigital Canada

**Title:** [FS\_ARSpatial] Updated Time and Work Plan v0.2.1

**Agenda item:** 9.9

**Document for:** Discussion andAgreement

# Introduction

The New Study Item on “Spatial Computing for Augmented Reality” was proposed in S4-241380 and agreed in the SA4#128 meeting. The study item description (SP-240927) was approved during the SA#104 meeting.

The study item has the following objectives:

* Study how functions such as UE tracking in a real environment, relocalization (to estimate the pose of the AR device), mapping (to reconstruct the surrounding space), and semantic perception are realized and identify the necessary set of spatial mapping information.
* Collect and document the different formats for spatial descriptions as well as interoperability requirements for such descriptions.
* Identify where spatial computing functions run and which media, metadata, and description formats are used for exchange between these elements based on the architecture defined in the TS 26.506, notably in split processing scenarios. And document relevant procedures, flows, configurations, and transport protocols.
* Identify gaps in TS 26.119, TS 26.506, and TS 26.565 to support XR spatial description handling, with a focus on real-time scenarios, based on relevant use cases from 3GPP SA1 TR 22.856 and SA4 TR 26.998.
* Study the interactions and cross-operation between a spatial computing service and other media service enablers and architectures, such as split rendering, as well as potential interactions with AI/ML architectures in TR 26.927.
* Identify and recommend potential areas for normative work as the next phase and communicate/align with other potential 3GPP WGs and external organizations on relevant aspects related to the study.

# Time Plan

The following time plan for the execution of the FS\_ARSpatial study item objectives is proposed in the following table.

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| Meeting |  **Work Item Objectives** |
| SA4#129-e (19 – 23 August 2024, Online) | Progress work on:* Study spatial computing functions and identify the necessary set of spatial mapping information.
* Collect and document spatial description formats.
* Document interoperability requirements for such descriptions.
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| Post SA4#129-e Video AHG telco (Oct 8, 2024, 15:00 – 17:00 CEST, Host: Qualcomm) | Progress work on:* Study spatial computing functions and identify the necessary set of spatial mapping information.
* Collect and document spatial description formats.
* Document interoperability requirements for such descriptions.

Submission deadline: * 15:00 CEST - October 7, 2024.
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| Post SA4#129-e Video AHG telco (Oct 29, 2024, 15:00 – 17:00 CEST, Host: Qualcomm) | Progress work on:* Study spatial computing functions and identify the necessary set of spatial mapping information.
* Collect and document spatial description formats.
* Document interoperability requirements for such descriptions.

Submission deadline: * 15:00 CEST - October 28, 2024.
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| SA4#130 (18 – 22 November 2024, Orlando, US) | Progress work on:* Study spatial computing functions identify the necessary set of spatial mapping information.
* Collect and document spatial description formats.
* Document interoperability requirements for such descriptions.
* Mapping of spatial computing functions to the architecture defined in TS 26.506.
	+ Document procedures, flows, configurations, and transport protocols.
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| Post SA4#130 Video AHG telcos:* Dec 18, 2024, 15:00 – 17:00 CET, Host: Qualcomm (submission deadline Dec 17, 2024, 23:59 CET)
* Jan 14, 2024, 15:00 – 17:00 CET, Host: Qualcomm (submission deadline Jan 13, 2024, 23:59 CET)
 | Progress work on:* Collect and document spatial description formats.
* Document interoperability requirements for such descriptions.
* Mapping of spatial computing functions to the architecture defined in TS 26.506.
	+ Document procedures, flows, configurations, and transport protocols.
* Identify gaps to support XR spatial description handling, with a focus on real-time scenarios.
	+ based on relevant use cases from 3GPP SA1 TR 22.856 and SA4 TR 26.998.
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| SA4#131 (17 – 21 February 2025, Geneva, Switzerland) | Progress work on:* Collect and document spatial description formats.
* Document interoperability requirements for such descriptions.
* Mapping of spatial computing functions to the architecture defined in TS 26.506.
	+ Document procedures, flows, configurations, and transport protocols.
* Identify gaps to support XR spatial description handling, with a focus on real-time scenarios.
	+ based on relevant use cases from 3GPP SA1 TR 22.856 and SA4 TR 26.998.

Communicate with other potential 3GPP WGs and external organizations if necessary. |
| Post SA4#131 Video AHG telcos:* Mar 18, 2025, 15:00 – 17:00 CET, Host: Qualcomm (submission deadline Mar 17, 2025, 23:59 CET)
* Mar 25, 2025, 15:00 – 17:00 CET, Host: Qualcomm (submission deadline Mar 24, 2025, 23:59 CET)
 | Progress work on:* Document interoperability requirements for such descriptions.
* Mapping of spatial computing functions to the architecture defined in TS 26.506.
	+ Document procedures, flows, configurations, and transport protocols.
* Identify gaps to support XR spatial description handling, with a focus on real-time scenarios.
	+ based on relevant use cases from 3GPP SA1 TR 22.856 and SA4 TR 26.998.
* Study interactions and cross-operation between with other media service enablers and architectures.
	+ with focus such as TS 26.565 and potential interactions with AI/ML architectures in TR 26.927.
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| SA4#131-bis-e (7 – 11 April 2025, Online)  | Progress work on:* Mapping of spatial computing functions to the architecture defined in TS 26.506.
	+ Document procedures, flows, configurations, and transport protocols.
* Identify gaps to support XR spatial description handling, with a focus on real-time scenarios.
	+ based on relevant use cases from 3GPP SA1 TR 22.856 and SA4 TR 26.998.
* Study interactions and cross-operation between with other media service enablers and architectures.
	+ with focus such as TS 26.565 and potential interactions with AI/ML architectures in TR 26.927.

Communicate with other potential 3GPP WGs and external organizations if necessary. |
| SA4#132 (19 – 23 May 2025, Japan) | Progress work on:* Mapping of spatial computing functions to the architecture defined in TS 26.506.
	+ Document procedures, flows, configurations, and transport protocols.
* Identify gaps to support XR spatial description handling, with a focus on real-time scenarios.
	+ based on relevant use cases from 3GPP SA1 TR 22.856 and SA4 TR 26.998.
* Study interactions and cross-operation between with other media service enablers and architectures.
	+ with focus such as TS 26.565 and potential interactions with AI/ML architectures in TR 26.927.
* Finalize conclusions of the TR.
* Agree new TR 26.819 v2.0.0 and send to SA for approval.
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| SA#108 (10 – 13 June 2025, China) | Present TR 26.819 v2.0.0 for approval. |

# Proposal

It is proposed to agree on the updated time and work plan as described in Section 2.