**3GPP TSG-SA WG4 Meeting #129-eS4-241595**

**Online, 19 – 23 August 2024**

**Source: Tencent**

**Title: Pseudo-CR on Haptics device types**

**Spec: 3GPP TR 26.854**

**Agenda item: 15.11**

**Document for: Agreement**

**1. Introduction**

The FS\_HapticsMed study was approved at the last SA plenary. A tentative workplan has been shared during the Release19 work plan offline session with the following objectives for this meeting.

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| --- | --- |
| SA4#129-e (19 - 23 August, Online) | * Agree TR skeleton and time plan
* **Start (1)** Identify and extract the Haptic-related use cases and requirements defined in TR22.847 and/or in SA4 studies and refined them as necessary.
* **Start (2)** Identify and describe the candidate input formats for haptic experience, relevant to the above use-cases.
* **Start (3)** Identify relevant device types with support for haptic playback and/or capture
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The proposed contribution introduces device types categorization depending on their primary capability.

**2. Reason for Change**

Introduction of device types.

**3. Proposal**

It is proposed to agree the following changes to 3GPP TR 26.854 in the clause dedicated to the documentation of device types (assumption of clause 6.2).

\* \* \* First Change \* \* \* \*

## 6.3 Haptics device types

### 6.3.1 Introduction

Haptics devices may be categorized into types defining their primary capability. Each category reflects the device's intended application and the type of haptic experience it provides.

### 6.3.2 Haptics device type 1: Basic sensory feedback

Devices in this category are designed to provide passive, non-localised sensory feedback, in applications such as simple mobile game and entertainment, alerting, or communication. They include smartphone, smartwatch, wearables, finger UI, headphone, HMD. They usually have a low number of actuators.

### 6.3.3 Haptics device type 2: Sensorial texture feedback or Spatial sensory feedback

Devices in this category are designed to deliver highly detailed and precise tactile sensations. These devices simulate the feel of textures, pressure, and other subtle interactions, enabling users to experience intricate touch-based feedback. They are commonly used in applications where detailed touch interaction is crucial, such as virtual reality gloves or touch-sensitive surfaces. Fine-tuned sensory feedback devices include Haptic gloves and Haptic touchpads and screens.

### 6.3.4 Haptics device type 3: Full-body and complex motion feedback

Devices in this category provide immersive, whole-body sensations. These devices use a network of actuators to simulate a wide range of physical experiences, such as vibrations, impacts, and movements across the body. They are ideal for enhancing immersion in virtual environments or simulation scenarios by delivering comprehensive, multi-sensory feedback. Haptics suits and furniture such as racing game seats, motion platforms and simulators are example of Full-Body and complex feedback devices.

### 6.3.5 Haptics device type 4: Interactive and localized feedback

Devices in this category are focused on providing targeted, localized tactile feedback. This type of feedback is typically used to enhance user interaction with controllers, handheld devices, robotics or personal electronics. These devices simulate specific actions or interactions, such as button presses or in-game effects, through vibrations or adaptive triggers. This category includes haptic controllers such as game console controllers offering localized feedback through vibration motors and adaptive triggers to simulate various in-game sensations and interactions.

\* \* \* End of Changes \* \* \* \*