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Foreword

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

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Introduction

Audiovisual equipment is pervasive; everyone with a smartphone, a tablet or a laptop has both recording and display equipment at their disposal, usually connected to a local or a public network. This equipment is increasingly sophisticated, with higher resolutions and better lenses (for video), often multiple microphones (for audio), coupled with other sensors (e.g. for geolocation) and increasingly sophisticated processing capabilities. These devices can not only decode in real time, but usually also perform decent encoding. Sensors and displays come in the form of personal smart phones, but also include smart watches, omnidirectional cameras and a variety of virtual reality and augmented reality head-mounted devices. All these devices can either be a source of multimedia content (audio, video or audiovisual) or consume such content. Often, devices play both roles.

The proliferation of these multimedia-capable devices combined with ever-increasing bandwidth, including mobile bandwidth, necessitates better and standardized mechanisms for coordinating such devices, the associated media streams and the available resources, like media processing and transmission. This process is called “orchestration”. Orchestration includes coordination in time (synchronization) and in space, as well as the coordination of computational resources to perform the coordination functions.

This document was developed to address the need for specifying this coordination between capture devices (“sources”) and play-back devices (“sinks”) in a heterogeneous environment. In this context, “heterogeneous” refers to the fact that devices can be of different nature (e.g. a mix of consumer and professional devices) and on different networks.

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