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Telecommunications and information exchange between systems — Unmanned aircraft area network (UAAN) —

Part 4: Physical and data link protocols for video communication

Télécommunications et échange d'information entre systèmes — Réseau de zone de drones (Unmanned aircraft area network - UAAN) —

Partie 4: Protocoles de liaison de données et physiques pour la communication vidéo



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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 6, *Telecommunications and information exchange between systems*.

A list of all parts in the ISO/IEC 4005 series can be found on the ISO and IEC websites.

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Introduction

Unmanned aircrafts (UAs) operating at low altitudes will provide a variety of commercial services in the near future. UAs that provide these services are distributed in the airspace. In level II, many people operate their own UAs without the assignment of communication channels from a central control centre.

This document describes video communication, which is a wireless distributed communication. Video communication allows UAs distributed over the airspace to transmit video without serious interference to the relevant video receiver which is usually a controller. The channels used for video communication have a multi-channel structure, which enables UA and video receiver pairs to independently use the occupied communication link. A wireless distributed communication described by this document is intended to be used in licensed frequency bands.

The ISO/IEC 4005 series consists of the following four parts:

ISO/IEC 4005-1: To support various services for UAs, it describes a wireless distributed communication model and the requirements that this model shall satisfy.

ISO/IEC 4005-2: It describes communication in which all units involved in UA operation can broadcast or exchange information by sharing communication resources with each other.

ISO/IEC 4005-3: It describes the control communication for the controller to control the UA.

ISO/IEC 4005-4 (this document): It describes video communication for UAs to send video to a controller.

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Telecommunications and information exchange between systems — Unmanned aircraft area network (UAAN) —

Part 4: Physical and data link protocols for video communication

1 Scope

This document specifies communication protocols for the physical and data link layer of video communication, which is a wireless distributed communication network for units related with unmanned aircrafts (UAs) in level II.

This document describes video communication, which is one-to-one communication that transmits video from a UA to a video receiver. For the specific use of video communication, video can be transmitted from a UA to multiple receivers.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 4005-1, *Telecommunications and information exchange between systems — Unmanned aircraft area network (UAAN) — Part 1: Communication model and requirements*

ISO/IEC 4005-2, *Telecommunications and information exchange between systems — Unmanned aircraft area network (UAAN) — Part 2: Physical and data link protocols for shared communication*

ISO/IEC 4005-3, *Telecommunications and information exchange between systems — Unmanned aircraft area network (UAAN) — Part 3: Physical and data link protocols for control communication*

ISO 21384-4, *Unmanned aircraft systems — Part 4: Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in ISO/IEC 4005-1, ISO/IEC 4005-2, ISO/IEC 4005-3, ISO 21384-4 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Abbreviated terms

CC	Control Communication
CB	Coding Block
CRC	Cyclic Redundancy Check

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