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Video surveillance systems for use in security applications - Part 2-31: Live streaming and control based on web services

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/20

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**Video surveillance systems for use in security applications - Part  
2-31: Live streaming and control based on web services  
(IEC 62676-2-31:2019)**

Systèmes de vidéosurveillance destinés à être utilisés dans  
les applications de sécurité - Partie 2-31: Transmission en  
continu en direct et contrôle basé sur les services web  
(IEC 62676-2-31:2019)

Videouberwachungsanlagen für Sicherungsanwendungen -  
Teil 2-31: Videoübertragungsprotokolle - IP-  
Interoperabilität auf Basis von Webservices - Echtzeit-  
Streaming und Konfiguration  
(IEC 62676-2-31:2019)

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**EN IEC 62676-2-31:2019 (E)****European foreword**

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The following dates are fixed:

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## Annex ZA (normative)

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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.

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60839-11-31	-	Alarm and electronic security systems - Part 11-31: Electronic access control systems - Core interoperability protocol based on Web services	EN 60839-11-31	-
ISO 12639	-	Graphic technology -- Prepress digital data exchange -- Tag image file format for image technology (TIFF/IT)	-	-
RFC 1952	-	GZIP file format specification_ - Version 4.3	-	-
RFC 2326	-	Real Time Streaming Protocol (RTSP)	-	-
RFC 2435	-	RTP Payload Format for JPEG-compressed Video	-	-
RFC 2818	-	HTTP Over TLS	-	-
RFC 3016	-	RTP Payload Format for MPEG-4 Audio/Visual Streams	-	-
RFC 3550	-	RTP: A Transport Protocol for Real-Time Applications	-	-
RFC 3551	-	RTP Profile for Audio and Video Conferences with Minimal Control	-	-
RFC 3640	-	RTP Payload Format for Transport of MPEG-4 Elementary Streams	-	-
RFC 3984	-	RTP Payload Format for H.264 Video	-	-
RFC 4566	-	SDP: Session Description Protocol	-	-
RFC 6455	-	The WebSocket Protocol	-	-
RFC 7798	-	RTP Payload Format for High Efficiency Video Coding	-	-
Apple		Tunneling QuickTime RTSP and RTP over HTTP		



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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Video surveillance systems for use in security applications –  
Part 2-31: Live streaming and control based on web services**

**Systèmes de vidéosurveillance destinés à être utilisés dans les applications de  
sécurité –  
Partie 2-31: Transmission en continu en direct et contrôle basé sur les services  
web**



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IEC Central Office  
3, rue de Varembé  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
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**VIDEO SURVEILLANCE SYSTEMS FOR  
USE IN SECURITY APPLICATIONS –****Part 2-31: Live streaming and control  
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This first edition, together with IEC 60839-11-31 and IEC 62676-2-32, cancels and replaces IEC 62676-2-3:2013.

This edition includes the following significant technical changes with respect to IEC 62676-2-3:2013:

- a) addition of the Media2 service;
- b) additional methods for the imaging service;
- c) method duplicates from the device IO service have been removed;
- d) both the display and analytics device service are no more included.

This publication contains attached schema files. These files are intended to be used as a complement and do not form an integral part of the standard

The text of this International Standard is based on the following documents:

FDIS	Report on voting
79/620/FDIS	79/622/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62676 series, published under the general title *Video surveillance systems for use in security applications*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

## INTRODUCTION

The goal of this document is to provide a fully interoperable network video implementation comprised of products from different network video vendors. This document describes the network video model, interfaces, data types and data exchange patterns. The document reuses existing relevant standards where available and introduces new specifications only where necessary to support the specific requirements for network video surveillance.

## VIDEO SURVEILLANCE SYSTEMS FOR USE IN SECURITY APPLICATIONS –

### Part 2-31: Live streaming and control based on web services

#### 1 Scope

This document defines procedures for communication between network video clients and video transmitter devices. This new set of specifications makes it possible to build network video systems with devices and receivers from different manufacturers using common and well-defined interfaces. These interfaces cover functions such as media and imaging configuration, real-time streaming of audio and video, pan, tilt and zoom (PTZ) control as well as analytics.

The management and control interfaces defined in this document are described as web services. Annex F contains XML schema and Web Service Description Language (WSDL) definitions for the introduced network services.

#### 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.

IEC 60839-11-31, *Alarm and electronic security systems – Part 11-31: Electronic access control systems – Core interoperability protocol based on Web services*

ISO 12639, *Graphic technology – Prepress digital data exchange – Tag image file format for image technology (TIFF/IT)*

INTERNET ENGINEERING TASK FORCE (IETF). RFC 1952: *GZIP file format specification version 4.3* [online]. Edited by P. Deutsch. May 1996 [viewed 2019-01-08]. Available at <http://tools.ietf.org/html/rfc1952>

INTERNET ENGINEERING TASK FORCE (IETF). RFC 2326: *Real Time Streaming Protocol (RTSP)* [online]. Edited by H. Schulzrinne et al. April 1998 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc2326.txt>

INTERNET ENGINEERING TASK FORCE (IETF). RFC 2435: *RTP Payload Format for JPEG-compressed Video* [online]. Edited by L. Berc et al. October 1998 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc2435.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 2818: *HTTP over TLS* [online]. Edited by E. Rescorla. May 2000 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc2818.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 3016: *RTP Payload Format for MPEG-4 Audio/Visual Streams* [online]. Edited by Y. Kikuchi et al. November 2000 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc3016.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 3550: *RTP: A Transport Protocol for Real-Time Applications* [online]. Edited by H. Schulzrinne et al. July 2003 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc3550.txt>

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INTERNET ENGINEERING TASK FORCE (IETF), RFC 3984: *RTP Payload Format for H.264 Video* [online]. Edited by T. Stockhammer et al. February 2005 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc3984>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 4566: *SDP: Session Description Protocol* [online]. Edited by M. Handley et al. July 2006 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc4566.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 6455: *The WebSocket Protocol* [online]. Edited by I. Fette et al. December 2011 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc6455.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 7798: *RTP Payload Format for High Efficiency Video Coding (HEVC)* [online]. Edited by Y.-K. Wang et al. March 2016 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc7798.txt>

Apple, *Tunneling QuickTime RTSP and RTP over HTTP*

Available at

[http://www.opensource.apple.com/source/QuickTimeStreamingServer/QuickTimeStreamingServer-412.42/Documentation/RTSP\\_Over\\_HTTP.pdf](http://www.opensource.apple.com/source/QuickTimeStreamingServer/QuickTimeStreamingServer-412.42/Documentation/RTSP_Over_HTTP.pdf)<sup>1</sup>

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<sup>1</sup> QuickTime is the trademark of a product supplied by Apple Inc. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the product named. Equivalent products may be used if they can be shown to lead to the same results.