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Alarm systems - Social alarm systems

Part 9: IP Communications Protocol

bsi.

National foreword

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European foreword

This document (CLC/TS 50134-9:2018) has been prepared by CLC/TC 79 “Alarm systems”.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

EN 50134 consists of the following parts, under the general title *Alarm systems — Social alarm systems*:

— *Part 1: System requirements*;

— *Part 2: Trigger devices*;

— *Part 3: Local unit and controller*;

— *Part 5: Interconnections and communications*;

— *Part 7: Application guidelines*;

— *Part 9: IP Communications Protocol* [the present Technical Specification].

Annexes which are designated “informative” are given for information only.

Introduction

As telecommunication operators continue to migrate towards Next Generation Networks they are increasingly converging voice traffic onto their IP infrastructures which may have an adverse impact on the reliability of in-call, tone based protocols.

The impact differs per country but is rapidly increasing across Europe. In addition, cellular technology is increasingly used next to broadband, cable and fibre solutions.

This Technical Specification defines the IP communications protocol for social alarms, optimized for stand-alone usage. The majority of current social alarms usage is stand-alone within the home and not related to other alarm systems. The combination of social alarms with other types of alarm systems is pending for a future version of this standard.

1 Scope

This Technical Specification specifies a protocol for point-to-point transmission of alarms, faults, control signals and communications monitoring, between a Local Unit and Controller and an Alarm Receiving Centre using the Internet protocol (IP). The protocol is intended for use over any network that supports the transmission of IP data with sufficient quality of service to support VoIP or a separate voice channel.

The Alarm Protocol is defined as an XML scheme including the alarm types, codes and necessary additional information.

The alarm protocol is an application layer protocol using another Internet Protocol as a transport protocol to handle addressing and transport functions. The transport protocol initially defined in this Technical Specification is SIP (Session Initiation Protocol).

The system performance characteristics for alarm transmission are specified in EN 50134-5. The performance characteristics of the Local Unit and Controller are expected to comply with the requirements of its associated alarm system standard and to apply for the transmission of social alarms.

The protocols described in this standard are based on the SS 91100:2014 SCAIP standard [7] and defined to enable backwards compatibility with existing products based on the SCAIP standard.

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.

EN 50134–1, *Alarm systems — Social alarm systems — Part 1: System requirements*

ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ITU X509, *Information technology — Open Systems Interconnection — The Directory: Public-key and attribute certificate frameworks*

RFC 2119, *Key words for use in RFCs to Indicate Requirement Levels*

[HTTP-AUTH] RFC 2617, *HTTP Authentication: Basic and Digest Access Authentication*

[SIP] RFC 3261, *SIP: Session Initiation Protocol*

[SDP] RFC 3264, *An Offer/Answer Model with the Session Description Protocol (SDP)*

[SIP-IM] RFC 3428, *Session Initiation Protocol (SIP) Extension for Instant Messaging*

[RTP] RFC 3550, *RTP: A Transport Protocol for Real-Time Applications*

[SRTP] RFC 3711, *The Secure Real-time Transport Protocol (SRTP)*

[SDP-SEC] RFC 4568, *Session Description Protocol (SDP) - Security Descriptions for Media Streams*

[RTP-DTMF] RFC 4733, *RTP Payload for DTMF Digits, Telephony Tones, and Telephony Signals*

[ICE] RFC 5245, *Interactive Connectivity Establishment (ICE): A Protocol for Network Address Translator (NAT) Traversal for Offer/Answer Protocols*

[STUN] RFC 5389, *Session Traversal Utilities for NAT (STUN)*