TECHNICAL REPORT

# ISO/IEC TR 22512

First edition
2017-12

# Information technology — Telecommunications and information exchange between systems — Guidelines for the implementation of ISO/IEC 17982:2012

*Technologies de l'information — Téléinformatique — Lignes directrices pour la mise en application de l'ISO/IEC 17982:2012*

Reference number
ISO/IEC TR 22512:2017(E)

© ISO/IEC 2017



## COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

# Contents

Page

**Foreword** ..... **iv**

**Introduction** ..... **v**

**1 Scope** ..... **1**

**2 Normative reference** ..... **1**

**3 Terms and definitions** ..... **1**

**4 Implementation approach** ..... **1**

4.1 TDS number and sequence number ..... 1
4.2 CRC ..... 2
4.3 Segmentation and reassembly ..... 2
4.4 Random number ..... 3
4.5 RFU handling standard way ..... 3
4.6 RFU handling proprietary way ..... 3
4.7 Collision avoidance ..... 3
4.8 Identifying the P-PDUs ..... 4
4.9 PHY User ..... 5

**Bibliography** ..... **6**

© ISO/IEC 2017 – All rights reserved

# Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*.


© ISO/IEC 2017 – All rights reserved

# Introduction

ISO/IEC 17982 specifies minimum requirements for interoperable CCCC PHY technology. This document provides guidance for the implementation of ISO/IEC 17982 in order to realize highly compatible CCCC PHY.

© ISO/IEC 2017 – All rights reserved

# Information technology — Telecommunications and information exchange between systems — Guidelines for the implementation of ISO/IEC 17982:2012

## 1 Scope

This document provides guidance for the implementation of ISO/IEC 17982.

## 2 Normative reference

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 17982:2012, *Information technology — Telecommunications and information exchange between systems — Close Capacitive Coupling Communication Physical Layer (CCCC PHY)*

## 3 Terms and definitions

No terms and definitions are listed in this document. The abbreviated terms in ISO/IEC 17982 apply.

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

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

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

## 4 Implementation approach

### 4.1 TDS number and sequence number

ISO/IEC 17982:2012, 8.3 states "P-PDUs shall be transmitted byte-wise in the sequence specified in 9.1. Bytes shall be transmitted with least significant bit first.". This means that payload is transmitted as byte and the others are transmitted T by T as specified in ISO/IEC 17982:2012, Figure 6.

Table 1 represents the implementation of the TDS number.

**Table 1 — TDS number**

| Decimal notation | Binary notation | $t_{12}$ | $t_{13}$ | $t_{14}$ |
|---|---|---|---|---|
| 1 | (000)b | 0 | 0 | 0 |
| 2 | (001)b | 1 | 0 | 0 |
| 3 | (010)b | 0 | 1 | 0 |
| 4 | (011)b | 1 | 1 | 0 |
| 5 | (100)b | 0 | 0 | 1 |
| 6 | (101)b | 1 | 0 | 1 |
| 7 | (110)b | 0 | 1 | 1 |
| 8 | (111)b | 1 | 1 | 1 |

© ISO/IEC 2017 – All rights reserved