

---

---

**Identification cards — Integrated circuit(s)  
cards with contacts —**

**Part 7:**

**Interindustry commands for Structured Card  
Query Language (SCQL)**

*Cartes d'identification — Cartes à circuit(s) intégré(s) à contacts —*

*Partie 7: Commandes intersectorielles pour langage d'interrogation de carte  
structurée (SCQL)*

**Contents**

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

**2 Normative references ..... 1**

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

**4 Symbols (and abbreviated terms)..... 2**

**5 SCQL database concept ..... 2**

**5.1 SCQL database ..... 2**

**5.2 SCQL tables..... 3**

**5.3 SCQL views ..... 4**

**5.4 SCQL system tables and dictionaries ..... 5**

**5.5 SCQL user profiles ..... 7**

**6 SCQL related commands ..... 7**

**6.1 General aspects ..... 7**

**6.2 Grouping and encoding of commands..... 8**

**6.3 Notation and special codings ..... 9**

**6.4 Status bytes..... 10**

**6.5 Coding of identifiers ..... 11**

**6.6 Security attributes of tables, views and users..... 12**

**6.7 Linking user ids to INSERT and UPDATE operations ..... 12**

**7 Database operations..... 12**

**7.1 CREATE TABLE ..... 12**

**7.2 CREATE VIEW ..... 13**

**7.3 CREATE DICTIONARY ..... 15**

**7.4 DROP TABLE..... 16**

**7.5 DROP VIEW ..... 17**

© ISO/IEC 1999

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

ISO/IEC Copyright Office • Case postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

<b>7.6 GRANT</b> .....	<b>18</b>
<b>7.7 REVOKE</b> .....	<b>19</b>
<b>7.8 DECLARE CURSOR</b> .....	<b>20</b>
<b>7.9 OPEN</b> .....	<b>22</b>
<b>7.10 NEXT</b> .....	<b>23</b>
<b>7.11 FETCH</b> .....	<b>23</b>
<b>7.12 FETCH NEXT</b> .....	<b>24</b>
<b>7.13 INSERT</b> .....	<b>25</b>
<b>7.14 UPDATE</b> .....	<b>26</b>
<b>7.15 DELETE</b> .....	<b>27</b>
<b>8 Transaction management</b> .....	<b>28</b>
<b>8.1 General concept</b> .....	<b>28</b>
<b>8.2 Transaction operations</b> .....	<b>29</b>
<b>9 User management</b> .....	<b>31</b>
<b>9.1 General concept</b> .....	<b>31</b>
<b>9.2 User operations</b> .....	<b>32</b>
<b>Annex A (informative) Usage of SCQL operations</b> .....	<b>36</b>

## 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. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 7816-7 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Identification cards and related devices*.

ISO/IEC 7816 consists of the following parts, under the general title *Identification cards — Integrated circuit(s) cards with contacts*:

- *Part 1: Physical characteristics*
- *Part 2: Dimensions and location of the contacts*
- *Part 3: Electronic signals and transmission protocols*
- *Part 4: Interindustry commands for interchange*
- *Part 5: Numbering system and registration procedure for application identifiers*
- *Part 6: Interindustry data elements*
- *Part 7: Interindustry commands for Structured Card Query Language (SCQL)*
- *Part 8: Security related interindustry commands*

Annex A of this part of ISO/IEC 7816 is for information only.

## Introduction

This part of ISO/IEC 7816 is one of a series of standards describing the parameters for integrated circuit(s) cards with contacts and the use of such cards for international interchange.

These cards are identification cards intended for information exchange negotiated between the outside and the integrated circuit in the card. As a result of an information exchange, the card delivers information (computation results, stored data), and/or modifies its content (data storage, event memorization).

During the preparation of this part of ISO/IEC 7816, information was gathered concerning relevant patents upon which application of this part of ISO/IEC 7816 might depend. Relevant patents were identified in France, the patent holder is Gemplus. However, ISO cannot give authoritative or comprehensive information about evidence, validity or scope of patents or like rights.

The patent holder has stated that licenses will be granted in appropriate terms to enable application of this part of ISO/IEC 7816, provided that those who seek licenses agree to reciprocate.

Further information is available from

GEMPLUS  
B.P. 100  
13881 GEMENOS CEDEX  
FRANCE

# Identification cards — Integrated circuit(s) cards with contacts —

## Part 7:

## Interindustry commands for Structured Card Query Language (SCQL)

### 1 Scope

This part of ISO/IEC 7816 specifies

- the concept of a SCQL database (SCQL = Structured Card Query Language based on SQL, see ISO 9075) and
- the related interindustry enhanced commands.

### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 7816. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO/IEC 7816 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO/IEC 9075:1992, *Information technology — Database languages — SQL2*.

ISO/IEC 7816-4:1995, *Information technology — Identification cards — Integrated circuit(s) cards with contacts — Part 4: Interindustry commands for interchange*.

ISO/IEC 7816-6:1996, *Identification cards — Integrated circuit(s) cards with contacts — Part 6: Interindustry data elements*.