INTERNATIONAL STANDARD

# ISO/IEC 11518-6

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# Information technology — High-Performance Parallel Interface —

## Part 6: Physical Switch Control (HIPPI-SC)

*Technologies de l'information — Interface parallèle à haute performance —*

*Partie 6: Commande de commutation physique (HIPPI-SC)*

Reference number
ISO/IEC 11518-6:1996(E)

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# 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 11518-6 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology,* Subcommittee SC 25, *Interconnection of information technology equipment.*

ISO/IEC 11518 will consist of the following parts, under the general title *Information technology – High-Performance Parallel Interface:*

- *Part 1: Mechanical, electrical, and signalling protocol specification (HIPPI-PH)*
- *Part 2: Framing Protocol (HIPPI-FP)*
- *Part 3: Encapsulation of ISO/IEC 8802-2 (IEEE Std 802.2) Logicial Link Control Protocol Data Units (HIPPI-LE)*
- *Part 4: Mapping of HIPPI to IPI device generic command sets (HIPPI-IPI)*
- *Part 5: Memory Interface (HIPPI-MI)*
- *Part 6: Physical Switch Control (HIPPI-SC)*

Annexes A to C of this part of ISO/IEC 11518 are for information only.

# Introduction

This part of ISO/IEC 11518 defines the control for HIPPI physical layer switches. HIPPI by itself is an efficient simplex high-performance point-to-point interface. The physical switch control allows the interconnection of multiple HIPPI based equipments with HIPPI physical layer switches.

Characteristics of this HIPPI physical switch control protocol include

- Support for both source routeing and destination addresses.
- I-Fields and CCIs can span multiple physical layer switches within a fabric.
- When a Destination end-point receives a packet, it can easily manipulate the I-Field received to return a reply packet to the Source.
- Support for physical layer switches with differing numbers of ports, all within the same fabric.

Figure 1 shows the relationship of this part of ISO/IEC 11518 (in the solid rectangle) to the other entities shown. HIPPI-SC may be considered a HIPPI component which interprets the signalling information provided to HIPPI-PH in certain switched HIPPI configurations.

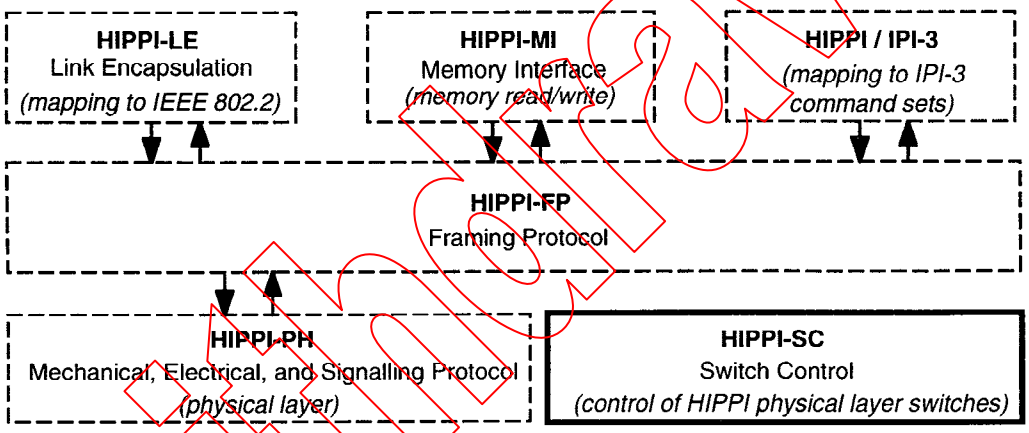


**Figure 1 – HIPPI documents**

# Information technology – High-Performance Parallel Interface –

# Part 6: Physical Switch Control (HIPPI-SC)



## 1 Scope

This part of ISO/IEC 11518 provides switch control for physical layer switches using the High-Performance Parallel Interface (HIPPI), a high-performance point-to-point interface between data-processing equipment. This part of ISO/IEC 11518 does not protect against errors introduced by intermediate devices interconnecting multiple HIPPI-PHs.

The purpose of this part of ISO/IEC 11518 is to facilitate the development and use of the HIPPI in computer systems by providing common physical switch control. It provides switch control structures for physical layer switches interconnecting computers, high-performance display systems, and high-performance, intelligent block-transfer peripherals. This part of ISO/IEC 11518 also applies to point-to-point HIPPI topologies.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 11518. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 11518 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 11518-1:1995, *Information technology, High-Performance Parallel Interface – Part 1: Mechanical, electrical, and signalling protocol specification (HIPPI-PH).*

ISO/IEC 11518-3:1996, *Information technology, High-Performance Parallel Interface – Part 3: Encapsulation of ISO/IEC 8802-2 (IEEE Std 802.2) Logical Link Control Protocol Data Units (HIPPI-LE).*