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DATA COMMUNICATION—HDLC UNBALANCED CLASSES OF PROCEDURES

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Australian Banks Payment Systems Committee

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Australian Computer Equipment Suppliers Association

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Australian Computer Users Association

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Australian Public Service Board

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AUSTRALIAN STANDARD

DATA COMMUNICATION—HDLC UNBALANCED CLASSES OF PROCEDURES

AS 2599—1983

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PREFACE

This standard was prepared by the Association's Committee on Information Processing Systems. It is identical with and has been reproduced from International Standard ISO 6159, drawn up by ISO TC/97, Information Processing Systems.

The purpose of this standard is to describe the HDLC unbalanced class of procedures for synchronous data transmission.

For the purpose of this Australian standard, the text of ISO 6159 given herein should be modified as follows:

(a) *Terminology*: The words 'Australian standard' should replace the words 'International Standard' wherever they appear.

(b) *Cross-references:* The references to International Standards should be replaced by references to Australian standards as follows:

Reference to International Standard	*Appropriate Australian Standard*
ISO 3309, Data communication—High-level data link control procedures—Frame structure	AS 2572, Data communication—High-level data link control procedures—Frame structure
ISO 4335, Data communication—High-level data link control procedures—Elements of procedures	AS 2571, Data communication—High-level data link control procedures—Elements of procedures

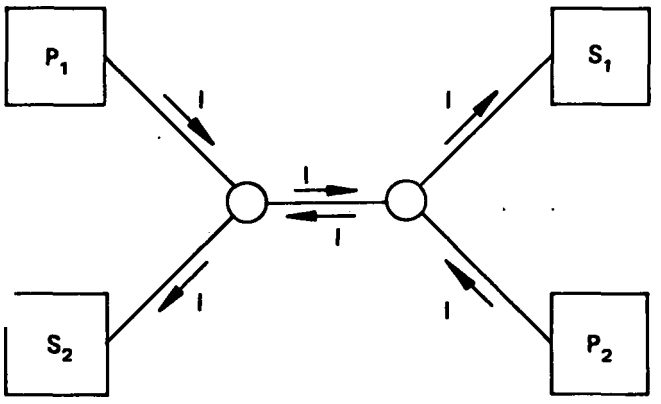
STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

Data communication — HDLC unbalanced classes of procedures

0 Introduction

This International Standard deals with the unbalanced classes of procedures. It is also recognized that it is possible to construct symmetrical configurations for operation on a single data circuit from the unbalanced classes of procedures which are defined below. For example, the combination of two procedures (with I frame flow as commands only) in opposite directions would create a symmetrical point-to-point configuration as illustrated in the diagram below.



1 Scope and field of application

This International Standard describes the HDLC unbalanced classes of procedures for synchronous data transmission. It covers operation requirements in accordance with the overall HDLC architecture. It uses the frame structure as defined in ISO 3309 and elements of procedure described in ISO 4335 and its addenda.

The link consists of a primary station plus secondary stations, and operates in either the asynchronous or normal response mode. A basic repertoire of commands and responses is defined. The capability of the data link may be modified by the use of optional functions.

2 General description

2.1 Principles

2.1.1 Station types

Two types of stations are defined for the unbalanced classes of procedures (see figure 1) :

— Primary stations, which send commands, receive responses and are ultimately responsible for link level error recovery.

— Secondary stations, which receive commands, send responses and may initiate link level error recovery.

2.1.2 Operational modes

Any coupling of a primary station with secondary station(s) can be operated over various types of transmission facilities to build unbalanced point-to-point or multipoint configurations. These stations may be operated in the normal response mode (NRM) or the asynchronous response mode (ARM), two-way alternate or two-way simultaneous.

2.1.3 Addressing scheme

Commands are always sent by the primary station and always contain the destination secondary station(s) address. Responses are always sent by a secondary station and always contain its own station address.

2.1.4 Send and receive state variable

For each primary-to-secondary link, a separate pair of send and receive state variables is required in each station for each direction of transmission of I frames. Upon receipt and acceptance of a set mode command both the send and receive state variables of a secondary station shall be reset to ZERO.