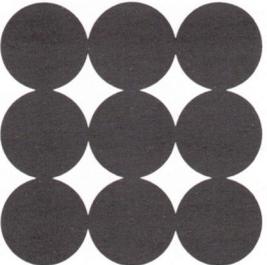


X.25

**DTE
PROTOCOL
MODULE**

**DTE
SW 3811/1**

 **RCNET**

General

The protocol implemented in the DTE driver is the CCITT X.25 level 3 packet protocol (ref. 2).

The driver supports a number of HDLC lines and a number of users. Several logical channels can be multiplexed on each HDLC line. Number of HDLC lines, packet size and window size must be agreed upon at system generation time.

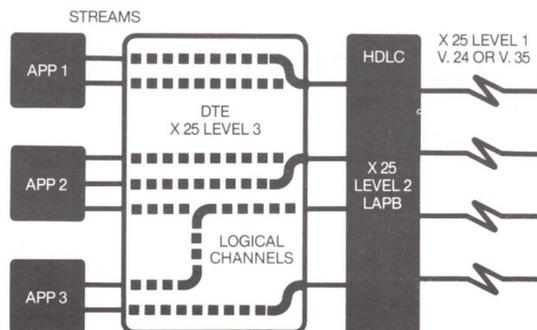
Functional description

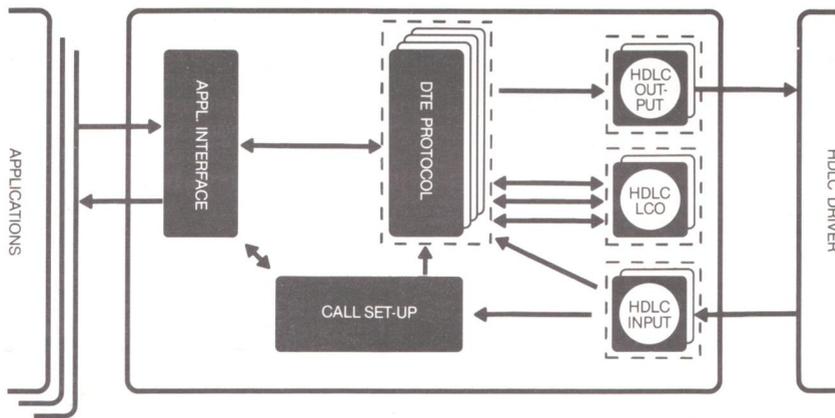
Initially all the logical channels are in "ready" state and not connected to any particular HDLC line or application process. When an application process wants to establish a virtual call it sends a "call request" message to the DTE driver specifying the called and calling DTE address. If the DTE driver finds a free logical channel it will try to set up a virtual call, else the "call request" message will be queued until a logical channel is free or until a timer specified in the message runs out. When the virtual call is established a stream number will be returned to the application process. At any time there is a one to one connection between a virtual call and a stream number.

If a "Call Indication" is received from the DCE the DTE driver will establish a virtual call if a free logical channel is found and a "receive incoming call" message from the application process is pending. A stream number will be returned to the application process in the answer to the "receive incoming call" message. In case it is not possible to establish a virtual call the DTE driver will transmit a "Clear Request" to the DCE.

When a virtual call is established data and interrupts can be sent and received by the application process. Furthermore resets can be initiated by the application process.

To clear a virtual call the application process must send a "clear request" to the DTE driver. This will cause the driver to free the logical channel used.





Internal structure

The configuration shown is supporting four logical channels and two HDLC lines, i.e. there are one DTE-protocol coroutine incarnation for each logical channel and one HDLC interface coroutine incarnation for each HDLC line.

At any time HDLC statistic can be requested by the application process, and at any time during a virtual call session statistic for that virtual call can be requested. The HDLC statistic will give information about e.g. the number of error free information packets, number of erroneous packets, number of retransmissions, number of RNR and REJ's and the frequency of some modem signals. The session statistic will give information about e.g. the DTE addresses used, number of received and transmitted RNR's, Interrupts, Reset's and REJ's, number of data bytes transmitted and received and the last transmitted and received Interrupt, user data, Reset-, Clear- and Restart cause and diagnostic.

Environments/program size

Hardware requirements:
RC3603/3703/3803 CPU, 64Kb or 128Kb memory.
RC3684 HDLC controller.

Software requirements:
MUS or DOMUS operating system, Vers. 3.01 or later versions.
Coroutine monitor CM011 or later versions.
HDLC Driver HLC09 or later versions.
Program size (packet size = 128 bytes):
DTE supporting 1 VC and 1 HDLC line: 12 Kb
Extra for each additional VC: 1 Kb
Extra for each additional HDLC link: 1 Kb

Documentation

1. RCNET-DTE Programmers Reference Manual
RCSL: 43-GL10944
2. Reference Manual for the DCTE Module
RCSL: 43-GL10948



RC COMPUTER

AS REGNECENTRALEN af 1979

HEAD OFFICE:

LAUTRUPBJERG 1 - DK 2750 BALLERUP - DENMARK
Phone: + 45 2 65 80 00 - Cables: rcbalrc - Telex: 35 214 rcbalrk

FINLAND

RC SCANIPS OY
Espoo, 0 51 35 22

FRANCE

RC COMPUTER S.A.R.L.
Paris, 12 33 53 63

HOLLAND

REGNECENTRALEN (NEDERLAND) B.V.
Gouda 1820-29455

KUWAIT

KUWAITI DANISH COMPUTER CO. S.A.K.
Safat, 83 01 60

NORWAY

A/S RC DATA
Jessheim 29 70 220

PHILIPPINES

CARDINAL ELECTRONICS CORPORATION
Metro Manila, 88 24 78

SWEDEN

SCANIPS DATA AB
Stockholm, 8 34 91 55

SWITZERLAND

RC COMPUTER AG
Basel, 61 22 90 71

UNITED KINGDOM

REGNECENTRALEN (UK) LTD.
London, 1 606 3252

UNITED STATES

LOCKHEED ELECTRONICS COMPANY, Inc.
New Jersey, 201 757 1600

WEST GERMANY

RC COMPUTER G.m.b.H.
Frankfurt, 611 66 40 06