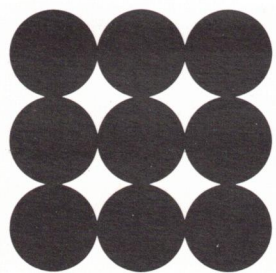


X.25

GATEWAY

DCTE

SW 3812/1



RCNET

General

The DCTE module functions as a X.25 gateway between RCNET and a X.25 network. The protocol implemented is the CCITT X.25 (ref.1). A number of HDLC connections are supported by the DCTE module for load sharing purposes. At system generation time the number of HDLC lines and the maximum number of Virtual Calls on each HDLC line must be specified.

Functional description

The DCTE module interfaces to RCNET and the HDLC driver. The module functions as a DCE at the RCNET interface and as a DTE at the HDLC interface.

When the DCTE module starts up, all the logical channels are in "ready" state. Furthermore each time a Host or HDLC connection is removed or established a "restart request" is generated. Thereby all logical channels on that connection are transferred to "ready" state.

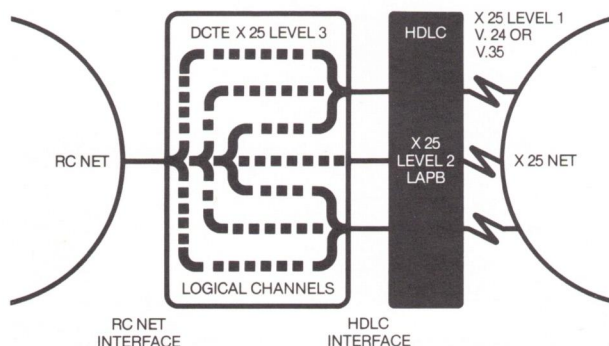
If a "call indication" is received on the HDLC interface a free channel is searched for. If it is found a logical channel number to be used on the RCNET interface is generated and the "call indication" is transmitted further on. If no free channel is found a "clear request" will be transmitted on the HDLC interface.

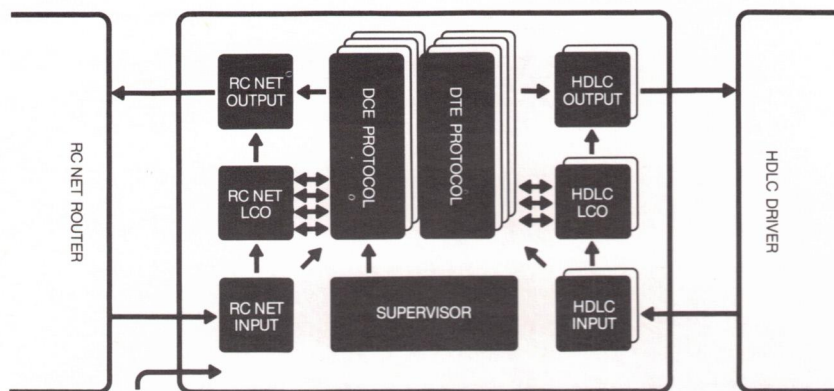
In the same way will a "call request" received on the RCNET interface cause the DCTE module to search for a free channel. If found a logical channel number to be used on the HDLC connection will be generated and the "call request" will be transmitted on that connection. The DCTE module will try to distribute the channels on the HDLC lines according to a strategy chosen at system generation time. If no free channel is found a "clear indication" will be transmitted on the RCNET interface.

When a virtual call is removed a session statistic record will be sent to the network operating center in RCNET.

When a reset, clear or restart request is generated by the DCTE module, a cause telling the reason will be transmitted on the RCNET interface together with the reset, clear and restart request, respectively. Furthermore the DCTE module will be transparent to a cause received on the HDLC interface.

Dependent upon the packet size used internally in RCNET will transactions to the same receiver host be blocked together at the RCNET interface.





Internal structure

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

The DCTE module supports different supervisor functions e.g. functions to request protocol states, HDLC statistics and session statistics.

The formats of these statistics records are shown in reference 1.

Environments/program size:

Hardware requirements:
RC3803 CPU, 127 Kb 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.

RCNET-ROUTER (SW3250).

Program size (window size = 2,
packet size = 128b):

DCTE supporting 1 VC and 1 HDLC
line: 20 Kb

Extra for each VC: 1,2 Kb

Extra for each HDLC link (X.25.2):

1 Kb

Documentation

1. Reference Manual for the DCTE Module
RCSL: 43-GL10948



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AS REGNECENTRALEN af 1979

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