!(pcs_reset+hi_lfer+!block_lock)*
((((lpi_fr_sigtype==IDLE * lpi_fr_active) * !pcs_data_mode))

FR_RX_INIT

rx_raw <= IBLOCK_R
rx_lpi_wake <= false
rx_lpi_active <= false

R_TYPE(rx_coded)=S

D

R_TYPE(rx_coded)=C+LII

C

R_TYPE(rx_coded)=(E+D+LI+T)

E

pcs_reset + hi_lfer + !block_lock +
(!(lpi_fr_sigtype==IDLE * lpi_fr_active) * !pcs_data_mode)

pcs_reset + hi_lfer +
!block_lock + ! pcs_data_mode

RX_INIT

rx_raw ⇐ LBLOCK_R
rx_lpi_wake ⇐ false
rx_lpi_active ⇐ false

R_TYPE(rx_coded) = S

D

R_TYPE(rx_coded) = (E + D + LI + T)

R_TYPE(rx_coded) = C+LII

C

RX_C

rx_raw ⇐ DECODE(rx_coded)
rx_lpi_wake ⇐ false

R_TYPE(rx_coded) = C + LII

R_TYPE(rx_coded) = LI

L

R_TYPE(rx_coded) = (E + D + T)

R_TYPE(rx_coded) = S

NOTE- Signals and
functions shown
with dashed lines are
only required for the
EEE capability

Change Figure 55-16 as shown:
Add a new state FR_RX_INIT.
Change the entry conditions to RX_INIT.

Add the following text to 55.3.5.2.2

'This variable is only required for PHYs that have the fast retrain capability.
lpi_fr_sigtype
This variable is set to IDLE if 1.147.1 is set to 1 and fast retrain is supported.
The variable is set to LFAULT otherwise.'

Add a mechanism to pass fr_active from the PMA to PCS as follows:

'55.2.2.12 PMA_FR_ACTIVE.indication
For PHYs that support the fast retrain capability, this primitive indicates whether
or not the PMA is currently performing a fast retrain. The fr_active variable is
generated by the PMA PHY Control function. It is passed to the PCS Receive
Control function via the PMA_FR_ACTIVE.indication primitive.
55.2.2.12.1 Semantics of the primitive
PMA_FR_ACTIVE.indication(fr_active)
The fr_active parameter can take on one of two values.
TRUE The PMA is performing a fast retrain
FALSE The PMA is not performing a fast retrain
55.2.2.12.2 When generated
The PMA PHY Control function generates PMA_FR_ACTIVE.indication
messages continuously.
55.2.2.12.3 Effect of receipt
The effect of receipt of this primitive is specified in Figure 55-16.'