22. TPF SECTION

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22.1 An outline of TPF

TPF is one of operating system (OS) which mainly used for airline customer reservation systems (CRS).
To correspond to TPF, DKC must support logical exclusive lock facility and extended cache facility.
The former is a function which called MPLF (Multi-Path Lock Facility) and the later is a function which called RC (Record Cache).

22.1.1 An outline of MPLF

This facility provides a means, using a DKC, to control concurrent usage of resources in host systems via use of logical locks.

A logical lock may be defined for the control of a shared resource, where the sharing of that resource must be controlled. Each shared resource has it own name called Lock Name. Every Lock Name controls multiple lock states (2 to 16).

Figure. shows the outline of I/O sequence which uses MPLF.

DKC recognizes up to 16 MPLF users. In this figure, user A and user B are used. These users may belong to same HOST or different HOSTs.

Each user must indicate MPLP (Multi-Path Lock Partition) when uses MPLF. MPLP is a means of logically subdividing the MPLs (Multi-Path Locks) for a user set. The maximum number of MPLP is four. Each MPLP has numbered from 1 to 4. The process to get permission for use MPLF is called CONNECT.

The connected user execute SET LOCK STATE process using Lock Name.

The MPL corresponding to specified Lock Name is assigned to the user. This assignment is canceled by UNLOCK process. HOSTs can share the DASD without contradiction by using this MPLF.

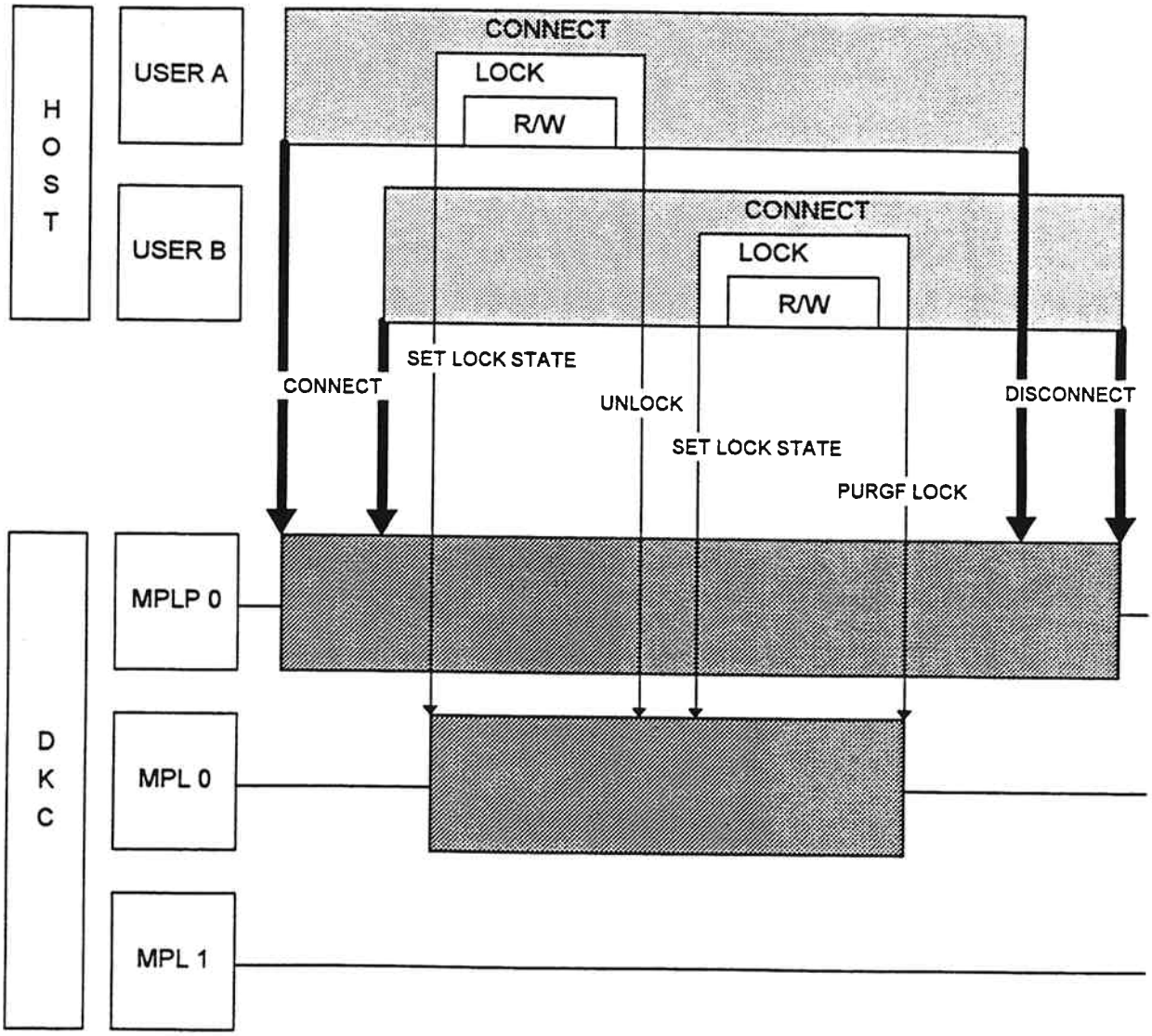

Fig.1.1-1 An outline of MPLF

22.1.2 An outline of RC

RC has following three feature.

(1) Record Mode Chain

(2) Record Caching

The followings explain these features.

(1) Record Mode Chain

Record Mode Chain consist of following 4 command chains.

a) Mainline Processing (Read)

b) Mainline Processing (Write)

c) Capture

d) Restore

To execute Record Mode Chain, subsystem must be initialized for Record Caching, and Record Mode must be allowed for the addressed device. Under these conditions, Record Mode Chain works when Record Mode Chain is indicated in the Extended Global Attributes of Define Extent command. Otherwise, the chain is processed in standard mode.

A Mainline Processing chain consists of a Define Extent command, a Locate Record command, and a single Read Data or Write Update Data command.

A Capture chain consists of a Define Extent command followed by a Seek command and multiple Read Count, Key, and Data commands.

A Restore chain consists of a Define Extent command, a Locate Record command, and multiple Write Update Data commands.

(2) Record Caching

Record Caching is the naming contract with Track Caching used in standard model. At the point first initialize complete, all of cache is allocated to Track Slot as standard model. Record Cache will be allocated if Set Cache Allocation Parameters Order is issued.

22.2 TPF Support Requirement

22.2.1 OS

TPF Ver.3.1 or Ver.4.1.

22.2.2 Hardware

TPF Support Hardware Specification.

Table 2.2-1 TPF Support Hardware Specification

CU type	3990-3/6
DEV type	3390-3
Base RAID200 model	HA RAID1/5
CHA DKA max. LDEV	2-4 4-8 32
Drive	DK308-90
Channel	ESCON/Metal