

## FASTCPK... DASD Volume Reorganization

Modern virtual disk arrays, such as the IBM ESS Shark, EMC Symmetrix, Hitachi 9900 and the StorageTek SVA, are still regarded by the OS/390 operating system as a set of conventional DASD volumes. Each logical volume in the array has a fixed number of cylinders, and space is managed in the usual way—with a standard VTOC and VTOCIX.

If datasets are over-allocated, then the unused space on the volume is not available for allocation to other data sets. The total number of extents for many dataset types is still limited to 16 per volume and if freespace on a volume becomes fragmented, it can be difficult to allocate new data sets.

### The FASTCPK Solution

With the above considerations in mind, it is clear to see why there is still a very *real* need for a product like FASTCPK, with key features including:

- **Freespace Fragmentation**—FASTCPK can consolidate the freespace on a volume into as few as one or two contiguous areas.
- **Multiple Extent Consolidation**—FASTCPK can merge the extents of Sequential, PDS, PDSE, VSAM, DB2 and Extended Format datasets—*eliminating the need to run DFSMSHsm extent consolidation*.
- **Space Release**—FASTCPK can release all or part of the unused space within Sequential, PDS, PDSE, VSAM, DB2 and Extended Format datasets.
- **VTOC Manipulation**—FASTCPK can perform a complete analysis of a VTOC, detecting (and in most cases fixing) logical errors, such as invalid Format 5 DSCB's and incorrect freespace definitions. Volumes can be selected by specific or masked volsers, or by SMS Storage Group names.

### Performance



FASTCPK is ultra-fast! Instead of chipping away at a volume over several hours, you can get the job done in just a few minutes. For example, when run against a 3390-3 the average run time to consolidate free space, merge extents, and release unused space is about **2 minutes**.

If you just want to release unused space, the TYPE=RLSE mode usually runs in **less than 10 seconds!**

### FASTCPK with FDRINSTANT

When used in conjunction with the FDRINSTANT component of the FDR DASD Management Family, FASTCPK's performance can be further enhanced by interacting with advanced DASD subsystem features, such as IBM/StorageTek SnapShot Copy and EMC's TimeFinder.

### Examples

This example illustrates a standard FASTCPK against a group of TSO and TEST DASD volumes, identified by the 'VOL=' parameter. The Compaktion will only take place on each volume if the number of freespace extents exceeds 20, as dictated by the CPKFREEEX parameter. The IBM Fragmentation Index can also be used. PSRLSE, PORLSE and VSRLSE parameters specify that all unused space will be released from Sequential, PDS, PDSE and VSAM datasets—but only if they have a secondary allocation coded. (NOSECOND=NORLSE).

#### "Standard" Compaktion

```
//FASTCPK EXEC PGM=FDRCPK,REGION=0M
//SYSPRINT DD SYSOUT=*
//SYSMAP DD SYSOUT=*
//SYSSUMM DD SYSOUT=*
//SYSIN DD *
COMPACT TYPE=FASTCPK,VOL=(TSO*,TEST*),CPKFREEEX=20,
NOSECOND=NORLSE,PSRLSE=ALL,PORLSE=ALL,VSRLSE=ALL
```



# innovation

FASTCPK — DASD Volume Reorganization

The example below illustrates how FDRINSTANT allows FASTCPK to interface with SnapShot Copy, via the SNAPSHOT=YES keyword. Using SnapShot Copy services, FASTCPK can move data tracks *within* the DASD Subsystem, significantly reducing the elapsed time of the job.

Typically, an “Instant” Compaktion against a 3390-3 in an RVA/SVA with SnapShot Copy will run in *less than 10 seconds!*

## “Instant” Compaktion

```
//FASTCPK EXEC PGM=FDRCPK,REGION=OM
//SYSPRINT DD SYSOUT=*
//SYSMAP DD SYSOUT=*
//SYSSUMM DD SYSOUT=*
//SYSIN DD *
COMPACT TYPE=FASTCPK,STORGRP=PROD,SNAPSHOT=YES
```



## Detail and Summary Information

FASTCPK can produce a wide range of information, in both detailed and summary format. The MAP function allows you to map out the contents of selected volumes, while the SIMULATE feature lets you see the effects of a Compaktion without actually having to run it for real. Before and After maps can be produced for each volume processed, either on a SIMULATE or a real Compaktion, together with a concise summary of the effects of the Compaktion. Here is an example of the summary report:

CPK301I INNOVATION DATA PROCESSING-COMPAKTOR VER. 5.3/56P COMBINED SUMMARY DATE 2001.104 TIME 12.42.53																		
-NUMBER OF - >1 -- ALLOCATED ---																		
VOLSER	DEVTYPE	TRACKS	DSNS	EXTS	TRACKS	EXTS	%AL	TRACKS	FREE AREAS	FRAG - LARGEST	EMPTY INDEX	VSAM PS	PO	TRACES IN	-VTOC- SIZE	%US	TIME (MIN)	COMP CODE
IDPLB0	3390-3	50085	153	15	27377	220	55	22708	75	3870	0.314	0	768	634	75	4		
--	AFTER-CPK-->		153	5	26094	167	52	23991	7	5490	0.207	0	37	82	75	4	1.3	0
TSOWK1	3390-3	50085	134	18	38004	193	76	12081	68	2370	0.371	0	637	4849	75	4		
--	AFTER-CPK-->		134	11	32574	162	65	17511	6	6960	0.170	0	26	30	75	4	.6	0

90% Reduction in Free Areas

Reclaimed Most of the Over-Allocated Space

Elapsed Time

3000 Data Centers Worldwide Rely on FASTCPK for their DASD Volume Reorganizations. Call Now for Your FREE, No-Obligation, Trial!



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