

INDEX:

INDEX SET

FRED	I1	YVONNE	I2	empty		RDF	CIDF
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SEQUENCE SET

I1	CANDICE	I11	CRAIG	I12	FRED	I13	RDF	CIDF
I2	HARRY	I21	MARY	I22	YVONNE	I23	RDF	CIDF

DATA:

CONTROL AREA 1

I11	AMY	ANNE	BETTY	CANDICE	empty		RDF	RDF	RDF	RDF	CIDF
I12	CAROL	COLLEEN	CRAIG	empty	empty			RDF	RDF	RDF	CIDF
I13	DAVID	ELLEN	FRED	empty	empty			RDF	RDF	RDF	CIDF

CONTROL AREA 2

I21	GEORGE	GERT	GRACE	HARRY	empty		RDF	RDF	RDF	RDF	CIDF
I22	JUNE	LISA	MARY	empty	empty			RDF	RDF	RDF	CIDF
I23	NANCY	RANDY	YVONNE	empty	empty			RDF	RDF	RDF	CIDF

(a) Initial configuration

INDEX:

INDEX SET

FRED	I1	MARY	I2	empty		RDF	CIDF
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SEQUENCE SET

I1	CANDICE	I11	CRAIG	I12	FRED	I13	RDF	CIDF
I2	HARRY	I21	MARY	I22	empty		RDF	CIDF

DATA:

CONTROL AREA 1

I11	AMY	ANNE	BETTY	CANDICE	empty		RDF	RDF	RDF	RDF	CIDF
I12	CAROL	CRAIG	empty	empty	empty				RDF	RDF	CIDF
I13	DAVID	EILEEN	ELLEN	FRED	empty		RDF	RDF	RDF	RDF	CIDF

CONTROL AREA 2

I11	GEORGE	GERT	GRACE	HARRY	empty		RDF	RDF	RDF	RDF	CIDF
I22	JUNE	LISA	MARY	empty	empty			RDF	RDF	RDF	CIDF
I23	empty	empty	empty	empty	empty						CIDF

(b) Delete COLLEEN, YVONNE, NANCY, RANDY, and insert EILEEN

Figure 12 VSAM Data Maintenance

INDEX:

INDEX SET

CANDICE	I1	FRED	I3	MARY	I2	RDF	CIDF
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SEQUENCE SET

I1	ANNE	I11	CANDICE	I12	empty		RDF	CIDF
I3	DAVID	I31	FRED	I32	empty		RDF	CIDF
I2	GERT	I21	HARRY	I23	MARY	I22	RDF	CIDF

DATA:

CONTROL AREA 1

I11	ALICE	AMY	ANNE	empty	empty			RDF	RDF	RDF	CIDF
I12	BLAKE	BETTY	CANDICE	empty	empty			RDF	RDF	RDF	CIDF
I13	empty	empty	empty	empty	empty						CIDF

CONTROL AREA 2

I21	GARY	GEORGE	GERT	empty	empty			RDF	RDF	RDF	CIDF
I22	JUNE	LISA	MARY	empty	empty			RDF	RDF	RDF	CIDF
I23	GLENN	GRACE	HARRY	empty	empty			RDF	RDF	RDF	CIDF

CONTROL AREA 3

I31	CAROL	CRAIG	DAVID	empty	empty			RDF	RDF	RDF	CIDF
I32	EILEEN	ELLEN	FRED	empty	empty			RDF	RDF	RDF	CIDF
I33	empty	empty	empty	empty	empty						CIDF

(c) Insert ALICE, BLAKE, GARY, GLENN

Figure 12 (Continued)

first names. Here, for simplification, we are using first names to represent data records.) Also, we assume that initially we have two control areas in the data area, each consisting of three control intervals, and that the maximum capacity of control intervals is five logical records. It should be noted that the instance shown in Figure 12a does not necessarily correspond to the instance of the file immediately after loading.

For each CA in the data area, VSAM creates a set of index entries and stores them in a control interval in the index area. There will be one sequence set CI for each data area CA in the index area. The sequence set index entries combine the largest key value in each data area CI with the address of that CI.

Finally, VSAM creates an index set based on the sequence set. The index set entries are combinations of the largest key values in a data area CA and the address of the corresponding sequence set CI.