Summary Record Layout

This chapter describes the format of the summary records copied to a sequential output file. It covers the following topics:

- The Header Portion

- The Schema Portion

- The Data Portion

- Calculating the Number of Summary Records That Can Be Stored

Note:
Software AG does not provide a program that reads this file. However, DSECT samples are supplied in members SUMRECD, SUMRECH and SUMRECS of the source library for users who wish to write their own programs to read this data.

The Header Portion

A fixed-length header is created for each record written to the sequential file. The format of the header is described in the following table:

Offset		Length Bytes	Format	Explanation
Hex	Decimal			
0	0	2	Binary	Record Length
2	2	2	Binary	X'0000'
4	4	3	Alphanumeric	Eye catcher "SUM"
7	7	1	Alphanumeric	Record type "H" for header
8	8	32	Alphanumeric	Report name
28	40	8	Binary	STCK value when record gets written
30	48	1	Binary	Flag of trigger event: X'01' -- report is closed or suspended X'02' -- time interval reached X'04' -- trigger command executed X'08' -- report is closed and restarted
31	49	1	Binary	Unused
32	50	10	Alphanumeric	Date of first record (YYYY-MM-DD)
3C	60	8	Alphanumeric	Time of first record (HH:MM:SS)
44	68	10	Alphanumeric	Date of last record (YYYY-MM-DD)
4E	78	8	Alphanumeric	Time of last record (HH:MM:SS)
56	86	2	Binary	Database ID
58	88	2	Binary	Offset to data record
5A	90	6	Binary	Unused

The Schema Portion

This portion of the summary record varies, depending upon the fields used in the report. The schema describes the layout of the field data which follows afterwards. The format of the schema portion of the summary record is shown in the following table:

Offset		Length	Format	Explanation
Hex	**Decimal**	**Bytes**		
60	96	2	Binary	Record Length
62	98	2	Binary	X'0000'
64	100	3	Alphanumeric	Eye catcher "SUM"
67	103	1	Alphanumeric	Record type "S" for schema
68	106	6	Binary	Unused
6E	104	2	Binary	Total number of fields
Varies +00	Varies +0	8	Alphanumeric	Field name (see the *Field Reference*)[1]
+08	+8	2	Binary	Data length
+0A	+10	1	Alphanumeric	Data format: C'B' -- binary X'C' -- character
+0B	+11	1	Alphanumeric	Field type: C'A' -- Account field C'C' -- COST field[*] C'M' -- MIN (minimum) field C'P' -- PCT (percent) field C'R' -- RATE field C'S' -- SUM (summary) field C'T' --TOT (total cost) field[*] C'V' -- AVG (average) field C'X' -- MAX (maximum) field [*] - The COST and TOT fields can only be defined in autostarted or batch reports.

[1] The following fields use alternate names than the one listed in the field reference list.

Field Name in the *Field Reference*	**Field Name in the Summary Record**
ADDIT*x*	ADD*x*
FILE	FNR
IOS	IO
NATAPPL	LOG
NATPROG	PRO
NUCID	SMP

Determining the Format of the Variable Portion

▶ **To determine the format of the variable portion of the record:**

- Refer to the report definition for each field (including virtual fields such as summary fields). Twelve bytes in total are reserved for the field name, the data length, the format of the field, and the field type.

The Data Portion

This portion of the summary record varies, depending upon the fields used in the report. The data portion contains the contents of the fields that are described in the schema portion. The format of the data portion of the summary record is shown in the following table:

Offset		Length Bytes	Format	Explanation
Hex	**Decimal**			
Varies +0	Varies +0	2	Binary	Record Length
+2	+2	2	Binary	X'0000'
+4	+4	3	Alphanumeric	Eye catcher "SUM"
+7	+7	1	Alphanumeric	Record type "D" for data
+8	+8	Varies	Binary/alphanumeric	Data portion for all fields, as defined in the schema portion.

Determining the Format of the Variable Portion

▶ **To determine the format of the variable portion of the record:**

- Refer to the schema portion of this record. For each report field, the data length and format are stored.

Calculating the Number of Summary Records That Can Be Stored

To determine the number of summary records that can be stored on the summary log file, the size of the summary record and the specified block size must be taken into consideration.

The record size of a summary log record can be calculated using the summary record layout described elsewhere in this section. In the following examples, the size of the summary log record is 182 bytes. So the bytes user for one summary record is 186 bytes: `182 + 4` (record length).

Example 1: 3390 Device with Block Size of 10.000

- Available bytes per block: `9.996 = 10.000 – 4` = (4-byte block length)

- Records per block: `53 = 9.996/186 = Trunc(53,74)`

- Blocks per track: `5 = 57000/10.000 = Trunc(5,7)`

- Tracks per cylinder: `15`

- Records per cylinder: `3975 = 53 * 5 * 15`

Example 2: 3390 Device with Block Size of 27.998

- Available bytes per block: `27.994 = 27.998 - 4` = (4-byte block length)

- Records per block: `150 = 27.994/186 = Trunc(150,5)`

- Blocks per track: `2 = 57000/27.994 = Trunc(2,03)`

- Tracks per cylinder: `15`

- Records per cylinder: `4500 = 150 * 2 * 15`

Comparing these two examples, we see that you can store 525 more records per cylinder when using a larger block size (`4500 - 3975 = 525`).