filePro® 4.1 and prior Automatic Index Information

Automatic Index Header

The first 128 bytes of the index are as follows:

All values are given in decimal unless preceded with "0x" for hexadecimal

Offset	Length	Contents
0	2	"0xC931" - filePro index magic number
2	16	The filePro file name
18	64	Sort information -- see below
82	2	Index record length -- see below
84	1	"1" - An automatic index
85	1	"1" - internal flags
86	4	Pointer to head of binary tree
90	4	Pointer to head of freechain
94	4	Number of records in the index
98	30	"0" - reserved

Index Record Length

The index record length is the length of the sort key plus 13.

Sort Information

The sort information is the following 8 bytes repeated 8 times - once for each possible sort key.

4.1 Automatic indexes use only the first entry

Offset	Length	Contents
0	2	The field number
2	1	Associated field instance
3	1	"0" - Used for output formats only
4	2	Field length
6	1	"0" for ascending, "1" for descending (Automatic indexes are always "0")
7	1	Field type

Index Entries

Starting at the 129th byte is an entry for each record in the index:

Offset	Length	Contents
0	n	The key
.	1	Associated field instance (@AF-1) or "0" if not an associated field
.	4	Left node pointer (see below)
.	4	Right node pointer (see below)
.	4	Record number

Node Pointers

The format of the left and right node pointers is:

Bit	Contents
31	N
30	B
29	Record number

N (bit 31) is the level indicator.
It is set if this node points up the tree to the previous (if left) or next (if right) record in sort order.

B (bit 30) is the "out-of-balance" flag.
It is set if this node is deeper than the other node.

Record number is the record number in the filePro file.

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