

60 Generating breaks in subfile reports

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This tech note describes 2 methods of generating a subfile report with a level 1 break.

Unlike **PRINT SELECTION** reports, 4th Dimension does not produce breaks when printing subrecords. This technote will discuss 2 methods of printing sub files. The first report will produce a report with level 1 breaks with subtotals and ending with a grand total. The second report will produce a level 1 break, but will only display the section header ahead of the records. The techniques described are applicable with a selection of records as well.

Both reports use the same layouts as called by the **PRINT LAYOUT** command.

alpha	18
alpha	3
alpha	12
Break for alpha	51
beta	41
beta	34
beta	13
beta	23
beta	5
Break for beta	116
cappa	87
Break for cappa	87
delta	74
delta	12
delta	7
Break for delta	93
gamma	25
gamma	6
Break for gamma	31
<u>Grand Total: 360</u>	

Fig 1; level 1 breaks and subtotals

Header for alpha	
alpha	18
alpha	3
alpha	12
Header for beta	
beta	41
beta	34
beta	13
beta	23
beta	5
Header for cappa	
cappa	87
Header for delta	
delta	74
delta	12
delta	7
Header for gamma	
gamma	25
gamma	6
<u>Grand Total: 360</u>	

Fig 2; level 1 header breaks.

In order to produce a report of the subfile containing a level 1 break including a subtotal it is necessary to manually track the breaks in the sorted records. You must handle the accumulation of the numeric field, in the variable *vSum*.



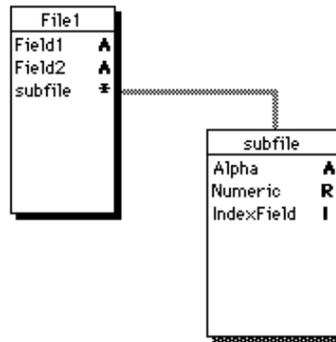


Fig 3; file structure

From the parent's layout procedure, sort the selection of subrecords. Store the value of the first sorted sub record [File1]subfile'Alpha, in a temporary variable, vBreak. Then, while walking down the sorted subrecords via **APPLY TO SUBSELECTION**, compare every subrecords' [File1]subfile'Alpha against vBreak; every time there is a difference, invoke a break using **PRINT LAYOUT**. After the break is printed, assign vBreak with the current value of [File1]subfile'Alpha. Clear the sum variable, vSum. Go on to the next subrecord.

Input Layout Procedure for the subfile report with subtotals. (Figure 1).

Case of

: (bprint=1)

PRINT SETTINGS

SORT SUBSELECTION([File1]subfile;[File1]subfile'Field1;>)

vSum:=subfile'numeric `initialize the subtotal accumulator

vGrand:=0 `initialize the grand total variable

vBreak:=[File1]subfile'alpha `initialize break test variable

APPLY TO SUBSELECTION([File1]subfile;PrintSub) `call global proc for every sub record

vMessage:="Break for "+vBreak `message for the last break of report

PRINT LAYOUT([File1];"PLBreak") `print the last break

vMessage:="Grand Total: "+String(vGrand) `total for Grand total layout

PRINT LAYOUT([File1];"PLTotals") `the report grand total

FORM FEED `eject page

End case

The above layout procedure will call the following global procedure in **APPLY TO SUBSELECTION**.

` Global Proc.:PrintSub, for the subfile report with subtotals.

` This proc will be call for every subrecord

If ([File1]subfile'Alpha#vBreak) `if a break is sensed

vMessage:="Break for "+vBreak `Load the message for the break

PRINT LAYOUT([File1];"PLBreak") `print the break, including the sum

vSum:=0 `reset the sum accumulator

vBreak:=[File1]subfile'Field1 `reset vBreak to the current subrecord

End if



```
vMessage:=[File1]subfile'Field1 `load info from the current subrecord  
vQty:=[File1]subfile'Numeric  
vSum:=vSum+[File1]subfile'Numeric `accumulate sum info  
vGrand:=vGrand+[File1]subfile'Numeric`accumulate grand total info  
PRINT LAYOUT([File1];"PLSub") `print the current subrecord
```



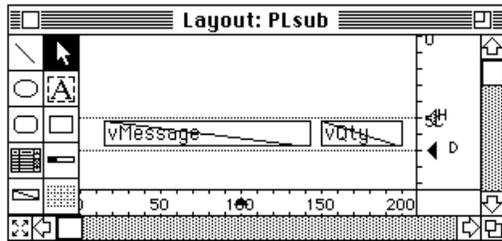


Fig 4; Layout used for printing detail information

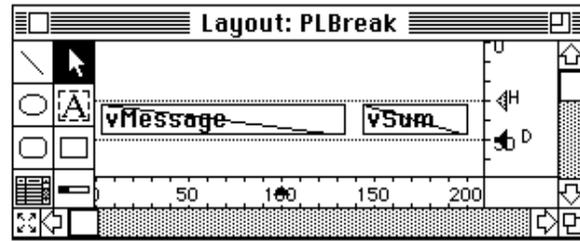


Fig 5; Layout used for printing break, level 1

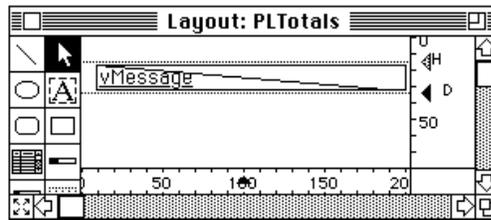


Figure 6; Layout used for printing grand total

The following procedures will create a subfile report with each sections break header immediately preceding its records, as illustrated by the right report in figure 1.

Case of

: (bprint2=1)

PRINT SETTINGS

ALL SUBRECORDS([File1]subfile)

SORT SUBSELECTION([File1]subfile;[File1]subfile'Alpha;>)

vSum:=0

vGrand:=0 `init grand total var

vBreak:="" `clear breaker var

APPLY TO SUBSELECTION([File1]subfile;PntSubsWHead) `call following global

vMessage:="Grand Total: "+String(vGrand)

PRINT LAYOUT([File1];"PLTotals") `for the report totals

FORM FEED

End Case

The above layout procedure will call the following global procedure in **APPLY TO SUBSELECTION**.

`Global Proc.: PrintSubWHead

If ([File1]subfile'Alpha#vBreak) `if a break is sensed

vMessage:="Header for "+[File1]subfile'Alpha

PRINT LAYOUT([File1];"PLBreak")

vBreak:=[File1]subfile'Alpha`reassign to the current subrecord

End if

vMessage:=[File1]subfile'Alpha

vQty:=[File1]subfile'Numeric `



vGrand:=vGrand+[File1]subfile'Numeric

PRINT LAYOUT([File1];"PLSub")

Print layout offers many ways to produce reports impossible with the PRINT SELECTION method of reporting. It is possible to start a break section with a title containing the sum of it's following records, currently all totalling must be done *after* the records in question are processed.

