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Exceeding the limits of table sizes in ODO (Occurs Depending On)

Exceeding Table Limits

Before COBOL 5, the defined limits in the OCCURS clause handled by COBOL compilers could be exceeded by using a larger value in the data-name defined within the DEPENDING clause. The technician or programmer who managed the program, needed to be sure there was extra table space beyond the OCCURS to not upset the apple cart and cause an ABEND or worse have an undetected problem that was permanently there and never fixed.

With COBOL 5, 6 and beyond, the limits defined within the OCCURS are strictly forced. In converting in the process of moving forward, each program needs to be carefully examined to see if the table OCCURS limit is exceeded.

Using Control/DCD saves an enormous amount of time in finding tables that violate this rule, especially when checking a whole system of COBOL programs.

The 'Digital Documentation Manual' creates Analysis on each COBOL program in a PDF format. A special OCCURs report exists (providing OCCURS option is on) within the DDM to show relevant documentation for finding possible OCCURS errors. See sample report below:

```
 #OCCURS REPORT       &OCCURS REPORT
 Used to verify legal range in OCCURS when DEPENDING on Data-Name is used

(0026) &T2-NBR-ENTRIES
    In 453-454 of T1-TABLE
    in WORKING-STORAGE
    05  T2-NBR-ENTRIES
              Pic S9(4)  Value ZERO
              Usage is COMP
    Used in Depending on T2-NBR-ENTRIES (30)      <--- DEPENDING ON field
    Move 50 to T2-NBR-ENTRIES (721)
    Add 1 to T2-NBR-ENTRIES (911)
    Set T2-INDEX to T2-NBR-ENTRIES (633)

(0029) &T2-ENTRY
    In 1-15 of 01 T2-TABLE
    in WORKING-STORAGE
    05  T2-ENTRY  OCCURS  5 TO 30  TIMES
         DEPENDING  ON  T2-NBR-ENTRIES        <--- OCCURS/DEPENDING
    MOVE ZEROS to T2-ENTRY (905)

 End of  OCCURS/DEPLENDING  Info
```

The above OCCURS report shows complete narrative on two fields within the program as follows:
1. Each data field containing an OCCURS clause with a DEPENDING clause
2. Each data field referenced in a DEPENDING clause

The report allows quick verification of whether the table may be exceeded!

Note the highlighted in yellow 50 and 30 in the above report showing that the table is in violation of new COBOL standards.

See Analyzing a COBOL Data Name during maintenance

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