

Fast/Unload 4.3 Lobs - Get it Now!

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Fast/Unload 4.3: May, 2006

- Has the necessary set of operations on Lob fields
 - By the way, I say Lob to mean "BLOB or CLOB"
- Tweezers and microscope on float handling
- The best base for maintenance
 - Especially if you aren't already using 4.2 (which, other than unlikely problems, we'll keep up to date)
 - Float handling and other unlikely problems fixed only here
 - We'll all sleep better if maintenance is current!



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Lob support

- First, simply the ability to open file which was CREATED in V6R1
 - Also supported in Fast/Unload 4.2
- Then, ability to UAI/PAI a Lob field
 - Neither this nor other Lob support available in any version prior to 4.3
 - Includes UNLOAD[C] statement reference to Lob
- Get value of Lob
 - Sufficient, but some cases not allowed
 - Compile-time check



Lob support (*continued*)

- %variables can contain strings longer than 255
 - Same cases allowed as Lob field
 - Run-time check
- Modify value of Lob
 - All forms
- Declare type (BLOB or CLOB) on NEW statement
 - Helps in conversion of group of field occurrences to a Lob
- FSTATS for Lob includes number of Table E pages used



Creating Lob field from input occurrences

```

OPEN PRODFILE
UAI OINDEX
NEW ALLCOMMENTS WITH BLOB /* Need Lob; ADD long value
FOR EACH RECORD
IF COMMENT EXISTS THEN
  %X = '' /* Initialize BLOB value
  FOR I FROM 1 TO COMMENT(#)
    %X = #CONCAT(%X, COMMENT) /* #CONCAT: long value
  DELETE COMMENT
END FOR
ADD ALLCOMMENTS = %X /* ADD (Lob only): long value
END IF
UNLOAD
END FOR

```

- Note that the **first** occurrence of COMMENT is used in each iteration



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Structured unload of Lob field

```
OPEN PRODFILE
FOR EACH RECORD
PUT '*'
PUT CUSTOMER_ID
OUTPUT
IF ALLCOMMENTS EXISTS THEN
  %COM = ALLCOMMENTS
  %LENGTH = #LEN(ALLCOMMENTS)
```

- Continued on next page...



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Structured unload of Lob field (*continued*)

```

%I = 1
%LIM = %LENGTH - 254 /* %COM last position with len > 254
REPEAT
  IF +%I >= %LIM THEN /* This plus sign very important!
    LEAVE REPEAT      /* Don't have > 254 bytes at pos'n
  END IF
  %X = #SUBSTR(%COM, %I, 255) /* #SUBSTR allows > 255
  PUT %X                  /* PUT allows at most 255 bytes
  OUTPUT
  %I = %I + 255          /* Advance position
END REPEAT
%X = #SUBSTR(%COM, %I) /* Get last (< 255 byte) piece
PUT %X
OUTPUT
END IF /* ALLCOMMENTS EXISTS
END FOR /* EACH RECORD

```



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Notes on traversing a long value

- If have a true long value (20K or more, say, but even 2K or more, to lesser extent)
- Much better to access small pieces by increasing position (as in previous page) than to "get first part and copy rest"
 - I.e., **this bad**: Repeat
 - `%s = #SUBSTR(%com, 1, 255)`
 - `%com = #SUBSTR(%com, 256)`End Repeat



When OK to use *value* of Lob or long %var

- argument of #CONCAT or #LEN
- first argument of #SUBSTR
- right-hand side of assignment to %var
- right-hand side of CHANGE or ADD[C] statement, when field on left-hand side is a Lob
- Otherwise: if using value of Lob, compilation error; if using value of %var (& %var exceeds 255 bytes), FUEL program terminates with error
 - E.g.: IF, PUT, other #funs, arithmetic don't allow long value



Some contexts don't use the value, and so it's OK to use with any field or %var's value

- MISSING or EXISTS clause on IF and ELSEIF
- UNLOAD[C] statement
- DELETE[C] statement
- #IF and #ELSEIF directives
- LobField(#) -- number of occurrences of field

