THE NEED FOR SPEED

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BACKGROUND

- - Started with Progress version 6..
- - Running Chemistry As for 25 years
- - Progress partner since 2012
- - Norwegian PUG Chairman for too long..
- - Diverse customers: Industry, Insurance, Statistics, DOJ, ++

TODAYS TOPIC

- Why OpenEdge SQL (and why not)?

- How to use (OpenEdge) SQL-92 from ABL - on PASOE!

WHY

- Data gathered from many sources (data entry screens loosing importance)

- Data analytics and verification on the rise.. Should we as ABL programmers just pass that on to the some random data warehouse solution (using AI)? IMHO NOT!

- Power users should be able to define and excecute queries on the production database

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WHY – TECHNICALLY

- The SQL query optimizer: Also considers record count when deciding query plan

- Fast record counts: SELECT COUNT(*) at least 3-4 times faster than AGGREGATE

- ABL index pitfalls:
«orderline where orderline.ordernum = order.ordernum and orderline.itemnum = 10»

Will use item index only. SQL handles this properly

- FIRST/LAST considerations: LAST order according to what (logically)? Ordernumber or date?

- DEMO

WHY NOT – TECHNICALLY

- Processing rows gives much more flexibility than processing sets

- F.ex:

I've got this table, pricelist, with itemnum,storenum and price. Storenum 0 holds the standard price but an individual store might have their own price. How to write the sql that returns unique item numbers with the right price info for a given store?

Itemnum	Storenum	Price
A	0	100
A	5	90

WHY NOT – TECHNICALLY (CONT)

```
WITH RankedPrices AS (SELECT  itemnum,price,storenum,
       ROW_NUMBER() OVER (
          PARTITION BY itemnum
          ORDER BY CASE WHEN storenum = 5 THEN 1 ELSE 2 END
       ) AS rn   FROM pricelist
    WHERE storenum IN (5, 0)
)
SELECT itemnum,price
FROM RankedPrices
WHERE rn = 1;
```

WHY NOT – TECHNICALLY (CONT)

```
VAR INT myStore = 5.

DEF BUFFER bPricelist FOR pricelist.

REPEAT WHILE hQuery:GET-NEXT():

    IF CAN-FIND(FIRST bPricelist

      WHERE bPricelist,itemum = pricelist.itemnum
      AND bPriceList.storenum = myStore
      AND bPricelist.storenum NE pricelist.storenum) THEN NEXT.

 END.
```

WHY NOT – TECHNICALLY (CONT)

```
VAR HANDLE hq.


CREATE QUERY hq.
hq:SET-BUFFERS(BUFFER order:HANDLE).
hq:QUERY-PREPARE('FOR EACH order NO-LOCK BREAK BY
STRING(YEAR(orderdate),"9999") + STRING(MONTH(orderdate),"99") DESC').
hq:QUERY-OPEN().
REPEAT WHILE hq:GET-NEXT():
  IF hq:FIRST-OF(1) THEN
    DISP STRING(YEAR(orderdate),"9999") + STRING(MONTH(orderdate),"99").
END.
```

IN OUR DREAMS..

```
VAR HANDLE hQuery.
CREATE QUERY hQuery.
hQuery:SET-BUFFERS(..).
hQuery:FORWARD-ONLY = YES.
hQuery:USE-SQL-OPTIMIZER =
YES.
```