

TEMPORAL DATA AND THE RELATIONAL MODEL

by

C. J. Date, Hugh Darwen, and Nikos A. Lorentzos

Known errors in first printing

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Page 15, para. beginning "More generally", line 5: Replace "[87]" by "[81]".

Page 47, Section 2.5, para. beginning "Observe": Replace the last sentence ("See Chapter 14 ... several examples.") by the following:

Note: This definition requires some refinement in the case where two or more of the individual *<relation assign>s* specify the same target relvar. However, the details are beyond the scope of this book.

Page 69, code line in middle of page: Replace SP by SP_SINCE (twice).

Page 136: The last relation on the page should be as follows:

PACK *r* ON (A1,A3,A2)

A1	A2	A3
[S1:S2]	[P2:P2]	[d03:d04]
[S1:S2]	[P3:P3]	[d03:d03]
[S1:S3]	[P3:P3]	[d04:d04]
[S2:S3]	[P3:P3]	[d05:d05]
[S2:S3]	[P4:P4]	[d04:d05]

Page 137: The first relation on the page should be as follows:

PACK *r* ON (A2,A1,A3)

A1	A2	A3
[S1:S2]	[P2:P3]	[d03:d03]
[S1:S1]	[P2:P3]	[d04:d04]
[S2:S2]	[P2:P4]	[d04:d04]
[S2:S3]	[P3:P4]	[d05:d05]
[S3:S3]	[P3:P4]	[d04:d04]

Page 137: Replace the closing paragraph by the following:

These six fully packed relations are all distinct. All six are, of course, redundancy-free.

Page 175, 2nd bullet: Replace the first sentence by the following:

Let S be the set $\{A, B, \dots, Z\}$; if two distinct members of S both include the same superkey of R , replace them in S by their union, and repeat this step until no further such replacements are possible. Then the JD $\otimes\{A, B, \dots, Z\}$ is **implied by the candidate key(s)** of R if and only if S now contains the entire heading of R as a member.

Page 195, para. following code font example, line 5: Add "ON DURING" to "UNPACK S_STATUS_DURING".

Page 246, text for **Query Q12**, line 2: Replace "intervals where the associated" by "intervals and associated percentages where the".

Page 255, code for **Query Q8**: Replace line 2 by:

```
( S_DURING WHERE TODAY ( ) > END ( DURING ) ) { S# } AS T2 :
```

Page 255, text for **Query Q12**, line 2: Replace "intervals where the associated" by "intervals and associated percentages where the".

Page 257, code for **Query Q1**, line 8: Replace T4 by T3.

Page 258, code for **Query Q4**: In the last line, replace S_DURING by T2.

Pages 258-259: The code for **Query Q5** should be as follows:

```
WITH ( EXTEND S_SINCE
      ADD INTERVAL_DATE ( [ S#_SINCE : LAST_DATE ( ) ] )
      AS DURING ) { S#, DURING } AS T1 ,
      ( T1 UNION S_DURING ) AS T2 ,
      ( EXTEND S_SINCE
      ADD INTERVAL_DATE ( [ STATUS_SINCE : LAST_DATE ( ) ] )
      AS DURING ) { S#, STATUS, DURING } AS T3 ,
      ( T3 UNION S_STATUS_DURING ) AS T4 ,
      ( EXTEND SP_SINCE
      ADD INTERVAL_DATE ( [ SINCE : LAST_DATE ( ) ] )
      AS DURING ) { S#, P#, DURING } AS T5 ,
      ( T5 UNION SP_DURING ) AS T6 ,
```

```

( T4 RENAME DURING AS X ) { S#, X } AS T7 ,
( T7 JOIN T2 ) AS T8 ,
( T8 WHERE X  $\subseteq$  DURING ) AS T9 ,
( T6 RENAME DURING AS Y ) { S#, Y } AS T10 ,
( T10 JOIN T9 ) AS T11 ,
( T11 WHERE Y  $\subseteq$  DURING ) AS T12 ,
( SUMMARIZE T12 PER T12 { S#, DURING } ADD
  ( MAX ( BEGIN ( X ) ) AS BXMAX ,
    MAX ( BEGIN ( Y ) ) AS BYMAX ) ) AS T13 ,
( T13 WHERE BXMAX > BYMAX ) AS T14 :
T14 { S# }

```

Page 262, sentence beginning "There is no need" should read as follows:

There is no need to include S_DURING' in the join here, because every {S#,DURING} value that appears in the unpacked form of S_DURING' on DURING also appears in the unpacked form of both S_STATUS_DURING' and S_CITY_DURING' on DURING and *vice versa* (why?), and so no information would be added (or lost) if S_DURING' were included.

Page 264, code for **Query Q5**: In line 3, replace T2 by T1.

Page 284, para. beginning "The semantics are as follows:": Add a footnote reference after the colon. The referenced footnote should read as follows:

The definition requires a slight refinement in the case where two or more of the individual assignments specify the same target variable. The details are beyond the scope of this book; suffice it to say they are carefully specified to give the desired result when distinct individual assignments update distinct parts of the same target variable (an important special case).

Page 330, text following the definition of type EVEN_INTEGER, line 4: Delete "Chapter 2, Section 2.2, or".

Page 418, index entry for "type, ordinal": The page reference should be 321, not 316.

Page 421, para. beginning **C. J. Date**, line 6: Delete the comma following "especially". Line 7: Insert a comma after "worldwide".

***** End *** End *** End *****