

Part	Title	Description
1	Time and Time Again: Managing Time in Relational Databases, Part 1	A taxonomy of types of history. Why versioning is important. Encapsulation of versioning complexity.
2	Time and Time Again: Managing Time in Relational Databases, Part 2 - Preliminaries	Templates used to present version patterns. A real-world example. Current/historical compared to operational/analytic. Time and ticks of the clock.
3	Time and Time Again: Managing Time in Relational Databases, Part 3 - Version Patterns 1 and 2	Versions which, because their objects cannot recur, may not have time gaps between them.
4	Time and Time Again: Managing Time in Relational Databases, Part 4 - Preliminaries to Version Pattern 3	What version tables version. Episodes and gaps.
5	Time and Time Again: Managing Time in Relational Databases, Part 5: Version Pattern 3	Also: version table keys. Business dates and system dates.
6	Time and Time Again: Managing Time in Relational Databases, Part 6: Version Pattern 4	Also: bi-temporality. Proactive and retroactive inserts, updates and deletes.
7	Time and Time Again: Managing Time in Relational Databases, Part 7: Completing Version Pattern 4	Also: proactive inserts: more than meets the eye. And, proactive deletions.
8	Time and Time Again: Managing Time in Relational Databases, Part 8: Version Pattern 5	From single-episode to multi-episode objects.
9	Time and Time Again: Managing Time in Relational Databases, Part 9: Completing Version Pattern 5	Also: five reasons not to take a one database at a time approach (= five reasons to implement versioned history as an enterprise function).
10	Time and Time Again: Managing Time in Relational Databases, Part 10 - Foreign Keys in Version Tables	The cascade update problem, and three responses to it: ignore it, avoid it or fix it.
11	Time and Time again: Managing Time in Relational Databases, Part 11 - Foreign Keys in Versioned tables Continued	What do foreign keys in versioned tables relate? Versions, or versioned objects?
12	Time and Time Again: Managing Time in Relational Databases, Part 12: Foreign Keys in Version Tables	A note on “current when” joins. Rules for managing foreign keys in versioned tables.
13	Time and Time Again: Managing Time in Relational Databases, Part 13 - A Roadmap of the Rest of This Series	A roadmap, with a discussion of each milestone along the way.
14	Time and Time Again: Managing Time in Relational Databases, Part 14 - Versioning with Surrogate Keys	The semantics of surrogate keys, and an example of their use in version tables.
15	Time and Time Again: Managing Time in Relational Databases, Part 15 - For and Against Surrogate Keys	Arguments for and against surrogate keys.
16	Time and Time Again: Managing Time in Relational Databases Part 16 - Physical Implementation of Version Pattern 1	DDL, SQL updates, SQL retrievals.
17	Time and Time Again: Managing Time in Relational Databases, Part 17 - Physical Implementation of Version Pattern 2	DDL, SQL updates, SQL retrievals.
18	Time and Time Again: Managing Time in Relational Databases, Part 18 - Physical Implementation of Version Pattern 3	DDL, SQL updates, SQL retrievals.

19	<u>Time and Time Again: Managing Time in Relational Databases, Part 19 - RI and Temporal RI</u>	Temporal RI defined.
20	<u>Time and Time Again: Managing Time in Relational Databases, Part 20 - RI and Temporal RI (Continued)</u>	A minor correction to the definition. Start of the Glossary.
21	<u>Time and Time Again: Managing Time in Relational Databases, Part 21 - Enforcement Time Options for Temporal RI</u>	The distinction between original and temporal transactions. Discussion of temporal deletes.
22	<u>Time and Time Again: Managing Time in Relational Databases - Part 22: Original and Temporal Deletes</u>	Temporal deletes, continued.
23	<u>Time and Time Again: Managing Time in Relational Databases, Part 23 - Original and Temporal Updates</u>	Original and temporal updates. The Glossary moved to the authors' websites, with URLs added to the articles.
24	<u>Time and Time Again: Managing Time in Relational Databases, Part 24 - Original and Temporal Updates (Concluded)</u>	When updates do, and do not, trigger temporal RI checks.