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**Title:** Summary of changes of History Second WD

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**Status:** Proposal for consideration of the study and comments

**Source:** Editor Contribution

**References:**

[TXL-013] ISO/IEC JTC 1/SC 32/WG 4: TXL-013,  
Information technology — Database languages — SQL Multimedia and Application  
Packages — Part 7: History(Part 7: History candidate base document)

[WLG-005] ISO/IEC JTC 1/SC 32/WG 4: WLG-005,  
Information technology — Database languages — SQL Multimedia and Application  
Packages — Part 7: History(Part 7: History 2nd Edition Text for Working Draft)

## **1. Introduction**

This paper summarizes the changes from [TXL-013] WD(first WD) to [WLG-005] WD(second WD).

## **2. List of Changes from [TXL-013] to [WLG-005]**

[WLG-005] contains some changes from [TXL-013] as follows:

- some additional methods of HS\_History type,
- history table encapsulation using a method,
- transaction time support,
- concept of time granularity.

## **3. Additional Methods of HS\_History Type**

In order to make up for the lack of functions of HS\_History type, the following methods of HS\_History type are added: HS\_Succeeds, HS\_Union, and HS\_Except.

## **4. History Table Encapsulation Using a Method**

In [WLG-005], history table is defined to be generated effectively and is referred using a HS\_HistoryTable method of HS\_TYPE\_<TableName> type. The way to store history table is implementation dependent.

## **5. Transaction Time Support**

In [WLG-005], in addition to the history time, history rows contain the transaction time. The transaction time is a period which the corresponding current state row exists in the current state table. To treat the transaction time, some methods of HS\_History type is added. These methods are named HS\_Txxxx, where xxxx is 'Overlaps', 'Meets', 'Precedes', 'Succeeds', 'Contains', 'Equals', 'MonthInterval', 'DayInterval', 'Intersect', 'Union', and 'Except'.

## **6. Concept of Time Granularity**

In [WLG-005], concept of time granularity is introduced. History supports the following time granularity: 'YEAR', 'FISCAL\_YEAR', 'HALF\_YEAR', 'QUARTER', 'MONTH', 'WEEK', 'DAY', 'HOUR', 'MINUTE', and 'SECOND'.

Time granularity is specified as the parameter of methods of HS\_History type to treat the history time under a certain time granularity.

The following methods of HS\_History type has the parameter to specify time granularity: HS\_Overlaps, HS\_Meets, HS\_Precedes, HS\_Succeeds, HS\_Contains, HS\_Equals, HS\_Previous, HS\_Next, HS\_MonthInterval, HS\_DayInterval, HS\_PreviousTime, HS\_NextTime, HS\_CurrentTimeStamp, HS\_Intersect, HS\_Union, and HS\_Except.