



Preface:

This document has been compiled in order to share a solution for a TimeBank scenario we've been requested to address. We believe this solution may be useful since it demonstrates various TimeBank capabilities in combination with TableK and TableQ. Those of you who are already familiar with TimeBank may find this information as a useful example of an additional implementation.

Environment:

TK6, TK2000, TK-SQL

The scenario:

Employees (assigned to a weekly pay-period) are entitled to bank up to 6 hours of overtime per pay-period. Overtime in excess of 6 hours is automatically paid at the end of each pay-period. Banked overtime is usually, (but not always, see comment below) paid out every four pay-periods (i.e. every 4 weeks).

On occasion, as per individual employee request, banked overtime may be carried forward to the next 4-week cycle (instead of being paid out). Overtime hours that have been carried forward from a previous 4-week cycle, in addition to the banked overtime accumulated during the current 4-week cycle, are paid out at the end of the current 4-week cycle (unless the employee has requested again that the banked overtime be carried forward). The decision whether to override the automatic payout (and carry forward banked overtime) is a manual, discretionary activity.

Addressing this scenario cannot be handled within TimeBank alone. Thus we have combined TimeBank with TableK, TableQ and the Period Browser:

The solution involves the following major steps:

1. Defining pay-categories in TableA.
2. Setting up TimeBank.
3. Specifying end-of- period calculations in TableK.
4. Configuring the Pay-Period Browser screen.
5. Specifying payroll transfer conditions and values in TableQ.
6. Manual intervention and adjustments.

Step 1 - Defining pay-categories in TableA.

Define the following pay-categories in TableA:

- Total OT** - Contains total of all types of OT pay categories.
Banked OT - OT that will be banked (up to 6 OT hours per pay period)
Paid OT - OT that will be paid (OT in excess of 6 hours per pay-period)
TB Period - Specifies week number within TimeBank's cycle (i.e. 0,1,2,3).
Previous Bank - Previous banked hours (banked OT from previous pay-period)



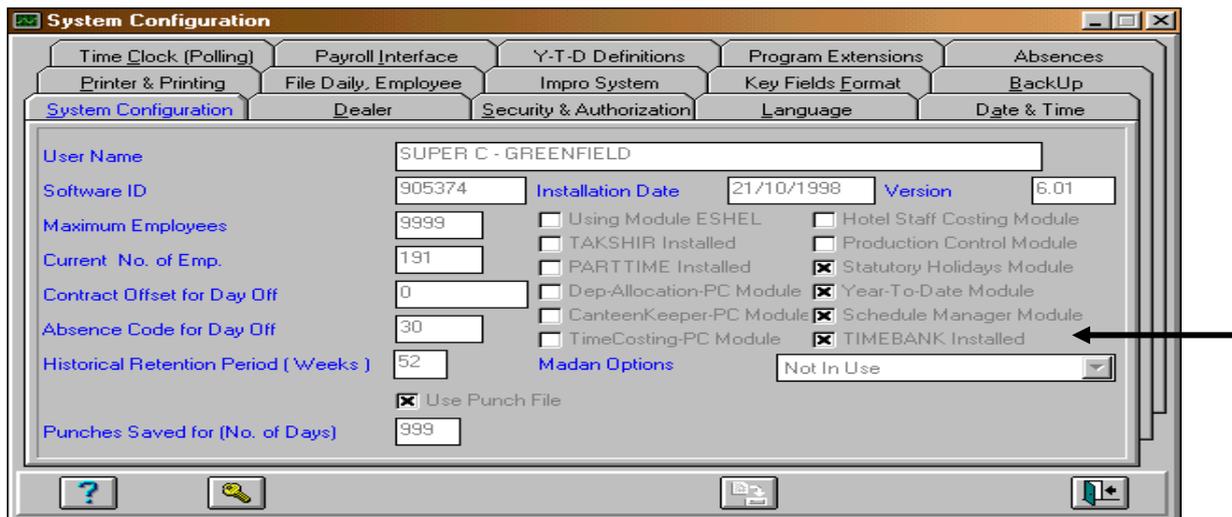
Current Bank - Current banked hours (number of banked OT following pay-period summary).
TB NOT TO PAY- A manual indicator for cases when an employee wants to save banked hours for future purposes. Note that this pay-category must be set-up as “manual”.

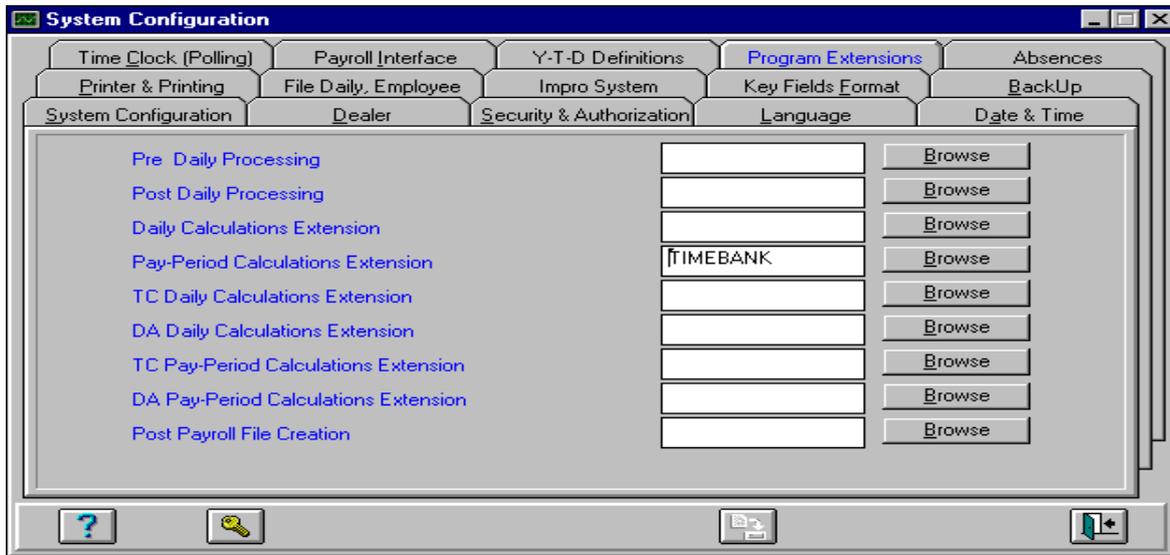
Notes:

- **Both Banked OT and Paid OT are part of Total OT, since Banked OT are the hours to be banked and Paid OT are the hours to be paid. This relationship is specified in Step 3.**
- **Accumulating overtime pay-categories into Total OT can be done either by nominal value (i.e. an hour of 125% is transferred as 60 minutes to the Total OT pay-category) or by real value (i.e. an hour of 125% is transferred as 75 minutes to the Total OT pay-category). The type of transfer depends on the customer’s requirements. In this scenario, hours have been accumulated by nominal value.**

Step 2 – Setting up TimeBank.

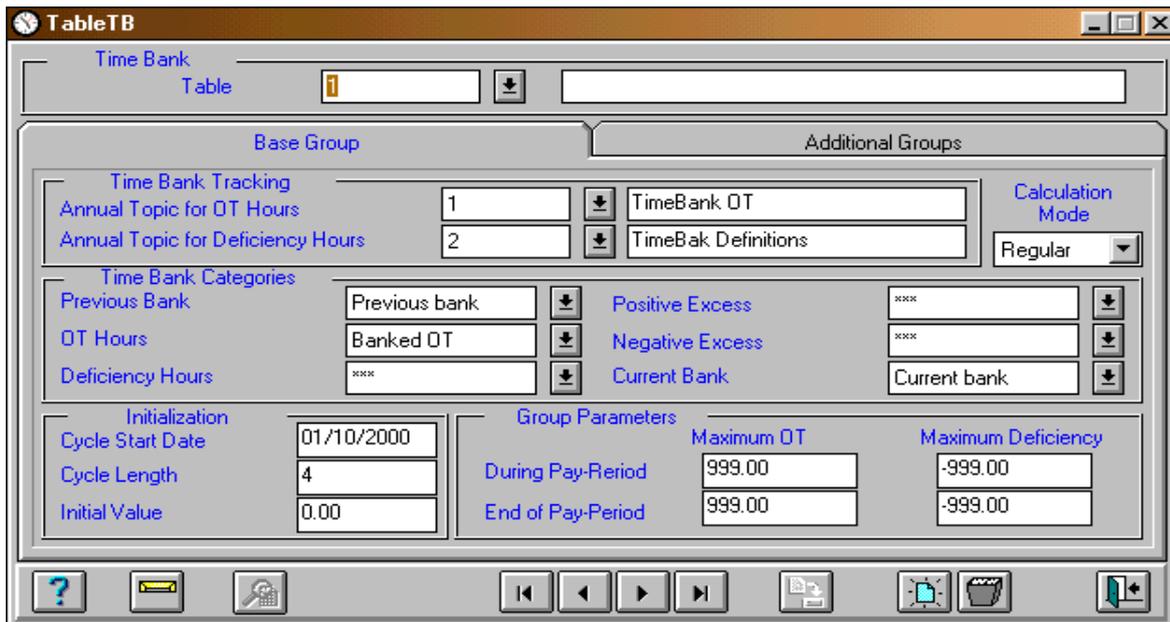
Step 2.1 – System Configuration Activation





Step 2.2 - Specifying TimeBank (Table TB)

In this scenario, we are not required to use all of TimeBank’s features (i.e. Positive Excess, Negative Excess, Minimum OT, Maximum OT, Additional Group etc.). Consequently, TimeBank’s setup is quite simple.



The following definitions are required for each Table No. in TableTB:

- Tracked Values (source): Two Annual Topics Nos. The first Topic No., specifies the Annual Topic containing a reference to the Banked OT field in the pay-period summary file (PERIOD). The second Topic No., specifies the Annual Topic containing a reference to a field designated as the DEFICIENCY field in the pay-period summary file (PERIOD). Note, that as in our scenario, the requirement is only to bank overtime hours,



the TIMEBANK DEFICIENCY topic can refer to any “unused” pay-category (whose value is assumed to always equal zero).

Topic No.	Topic Name	Topic Code	Target File	Expression Source File	Expression	Expression Type
1	TIMEBANK OT	Auto	ANNUAL	PERIOD	PERIOD->CA	Hours/Minutes
2	TIMEBANK DEFIC	Auto	ANNUAL	PERIOD	PERIOD->CA	Hours/Minutes

- Calculation Mode: Specify “Standard” calculation mode.
- Result Storage Categories (target): Specify where the TimeBank values will be stored (after the TimeBank calculation is complete) as per the definitions in TableA.
- Cycle Definitions: Specify the “cycle length” as 4 (pay periods).
- Limits Definitions: Specify the minimum & maximum limits as -999.00 and 999.00 respectively (i.e. no limits).

Step 3 – Specifying End-of-Period process in TableK

In our scenario we accrue (nominally) all OT pay-categories into **Total OT**. Then we divide the hours in **Total OT** as follows: up to 6 hours to **Banked OT** and the rest to **Paid OT**. This process is run at the end of the Pay Period. This it is defined in TableK.



Table K - Pay Period Standards

Table Number: 1 | Table Description: | Period Code: 1 | Period Code Name: Hebdo

Line	Field Type	Check Field	Low Bound	Upp Bound	Field Type	Update Field	Const	Field Type	Mult Field	Mult Consta
1	From	Suppl	0.01	9999.1	From	Total OT	0.00	From	Suppl 1.5	1.00
2	From	Total	0.01	5.99	From	Banked	0.00	From	Total OT	1.00
3	From	Total	6.00	9990.1	From	Banked	6.00	From		0.00
4	From	Total	6.00	9990.1	From	Paid OT	-6.00	From	Total OT	1.00

- Line 1: Move all types of OT categories to **Total OT**
- Line 2-4: If Period→**Total OT** < 6
 Then Move **Total OT** to **Banked OT**
 If Period→ **Total OT** ≥ 6
 Then Move 6 to **Banked OT**
 Else Move (**Total OT**-6) to **Paid OT**.

Additionally, we require a field, which will indicate when we have reached the 4th week within a cycle (i.e. an “End of TimeBank Cycle” field). To that end, we define a pay-category in TableK as follows:

Table K - Pay Period Standards

Table Number: 1 | Table Description: | Period Code: 1 | Period Code Name: Hebdo

Condition	Calculation Expression	Field Ty	Transfer To Fi	Calculation Order
2 > 1	MOD (VAL(SUBSTR (STR (PERIOD->PERIOD_KEY,6,0) ,5,2)) ,4)	From	TB Period	Standard



The expression `MOD (VAL (SUBSTR (STR (PERIOD->PERIOD_KEY, 6,0), 5,2)), 4)` enables us to determine whether it is the end TimeBank cycle, as the end of a cycle occurs when the result is 0 (Zero).

Example: `MOD (VAL (SUBSTR (STR (200005,6,0), 5,2)), 4) =1`

Explanation: We refer to 05 (of 200005) and divide it by 4. The remainder is 1 (i.e. $5/4 = 1 (1)$). This remainder is saved in the **TB PERIOD** pay-category. We will use this pay-category in TableQ, as explained in Step 5.

Step 4 – Configuring the Pay-Period Browser screen.

To display the results of TimeBank categories we configure the Pay-Period Browser so that it displays all TimeBank related pay-categories as following:

Period Code	Period Key	TB Period	Total OT	Paid OT	Banked OT	Previous bank	Current bank	!!TB NOT TO PAY!!
1	200041	1.00	64.12	58.12	6.00		6.00	
1	200042	2.00	43.30	37.30	6.00	6.00	12.00	
1	200043	3.00	60.42	54.42	6.00	12.00	18.00	
1	200044		42.00	36.00	6.00	18.00	24.00	
1	200045	1.00	44.30	38.30	6.00		6.00	
1	200046	2.00	44.30	38.30	6.00	6.00	12.00	

Please note: usually, the pay period browser enables the user to (manually) change each category’s value. However, as in this scenario the “banking” process is assumed to be fully automatic, it is highly recommended to configure all categories (except the **TB NOT TO PAY** category) as “Read Only”.

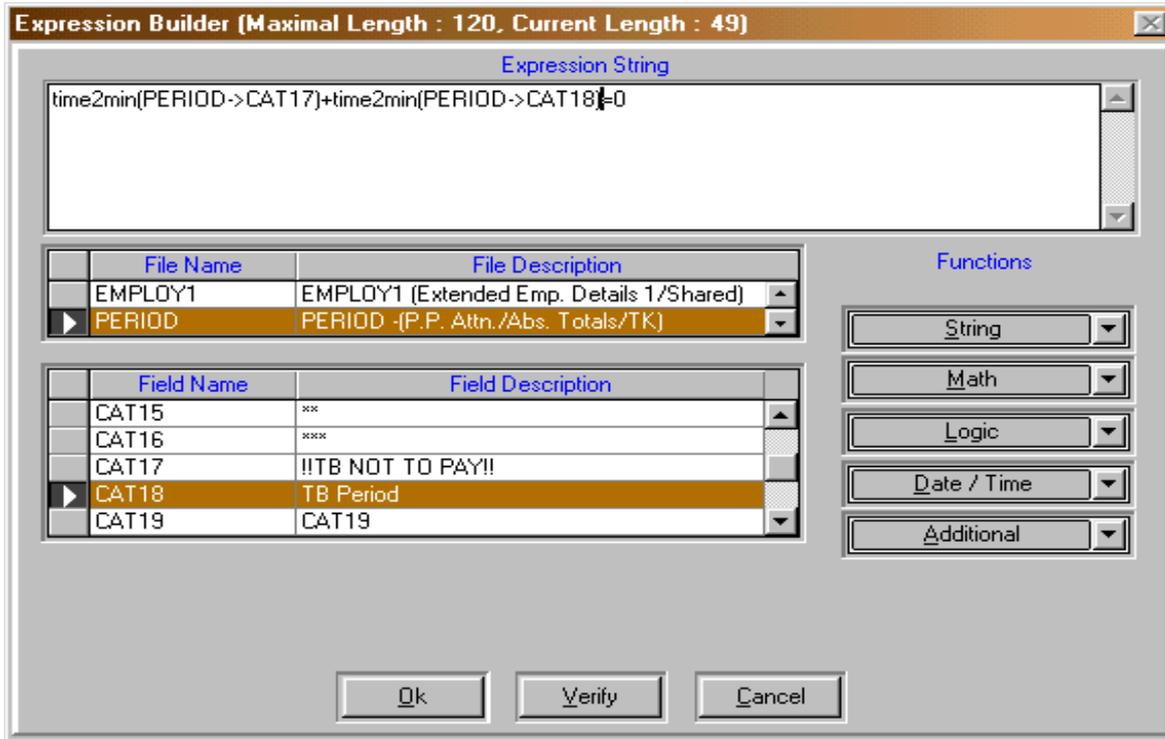
As always, we do not recommend changing any pay-categories in the Pay-Period summary file, since recalculation overrides all manual entry changes.

We use the **TB NOT TO PAY** category to disable the automatic payment of **Current Bank** at the end of TimeBank cycle (as explained in Step 5).

Step 5 – Specifying payroll transfer conditions and values in TableQ.



The condition used in TableQ is as follows:



Note: Obviously, the Paid OT pay-category should be unconditionally transferred to payroll at the end of every pay-period.

Step 6 – Manual intervention and adjustments.

Example 1: A fully automated process (i.e. no manual adjustments).

The previous steps described a “fully automated” process, which banks up to 6 OT hours and pays the rest of the OT hours (in case there are any) per Pay Period e.g.:

- Pay periods 41 – 44 represent a single cycle.
- **TB period** represents the week no. within the cycle.
- The employee has more than 6 OT hours in each Pay Period (week)
- **Banked OT** is always “6” (since the employee has more than 6 OT in each week)
- **Paid OT = Total OT - Banked OT**
- **Current Bank** initializes at the beginning of every cycle. Note when **TB period = 1**.

Note: In a “fully automated” process this screen may used to display the results calculated by TimeBank and TableK. However, there are cases where this screen enables us to intervene manually with calculations as in the following example.



Edit Pay-Period Summary File

File Record Records Type Secondary File Help

Employee : 1262 ROSSIGNOL SYLVIE Pay-Period Type: Hebdo Period : 1 Year : 2000

	Period Code	Period Key	TB Period	Total OT	Paid OT	Banked OT	Previous bank	Current bank	!!TB NOT TO PAY!!
▶	1	200041	1.00	64.12	58.12	6.00		6.00	
	1	200042	2.00	43.30	37.30	6.00	6.00	12.00	
	1	200043	3.00	60.42	54.42	6.00	12.00	18.00	
	1	200044		42.00	36.00	6.00	18.00	24.00	
	1	200045	1.00	44.30	38.30	6.00		6.00	
	1	200046	2.00	44.30	38.30	6.00	6.00	12.00	

Example 2: Manual intervention required.

Manual intervention is required only when the organization enables the employee to carry forward banked hours for future use (i.e. not to pay OT hours and carry forward the Banked OT to the following cycle).

To enable carry forward of the banked hours and avoid payment, two steps are required:

- a. Disable **Current Bank** payment
- b. Enable carry forward of the banked hours.

a. Disabling Current Bank payment

After TK’s pay-period summary has been performed and before exporting to Payroll, the user must enter a positive value (any value which is bigger than 0) to the **TB NOT TO PAY** category in the period browser. **It is essential that this value be entered in the pay-period record of the last week in the cycle (i.e. TB period = 0, period 44 in the following example).**

Edit Pay-Period Summary File

File Record Records Type Secondary File Help

Employee : 1262 ROSSIGNOL SYLVIE Pay-Period Type: Hebdo Period : 1 Year : 2000

	Period Code	Period Key	TB Period	Total OT	Paid OT	Banked OT	Previous bank	Current bank	!!TB NOT TO PAY!!
	1	200041	1.00	64.12	58.12	6.00		6.00	
	1	200042	2.00	43.30	37.30	6.00	6.00	12.00	
	1	200043	3.00	60.42	54.42	6.00	12.00	18.00	
✎	1	200044	0	42.00	36.00	6.00	18.00	24.00	1
	1	200045	1.00	44.30	38.30	6.00		6.00	
	1	200046	2.00	44.30	38.30	6.00	6.00	12.00	



This definition indicates that TimeKeeper should not export to payroll this employee’s banked hours, as defined in step 5 / **TableQ**.

b. Enable carry forward of the banked hours.

Carrying forward the banked hours is a complementary procedure to the previous step. While Step (a) disables the automatic payout, Step (b) enables the employee to carry forward the banked hours to the following cycle, so that they may be used for future purposes.

In order to specify the carry forward value, enter the Edit/View Employee screen, display the relevant employee’s data and then select the EMPLOG icon. When the EMPLOG screen appears, define a new record within the **EMPLOG file** as following:

Group Code	From Date	TIMEBANK Number	TIMEBA Group	Manual Upd Decimal	Start Value
Initialize/Change	03/01/200	1	0	0.000	0.000
Manual Hours Adjustment	29/10/200	1	0	24.000	0.000



Meaning, the employee has accrued 24 hours in the previous cycle and is entitled to carry forward those hours to the next cycle. Viewing the **Period browser** after running pay period calculation, displays continuance of banked hours:

Edit Pay-Period Summary File									
File Record Records Type Secondary File Help									
Employee : 1262 ROSSIGNOL SYLVIE Pay-Period Type: Hebdo Period : 1 Year : 2000									
	Period Code	Period Key	TB Period	Total OT	Paid OT	Banked OT	Previous bank	Current bank	!!TB NOT TO PAY!!
▶	1	200041	1.00	64.12	58.12	6.00		6.00	
	1	200042	2.00	43.30	37.30	6.00	6.00	12.00	
	1	200043	3.00	60.42	54.42	6.00	12.00	18.00	
	1	200044		42.00	36.00	6.00	18.00	24.00	←
	1	200045	1.00	44.30	38.30	6.00		30.00	
	1	200046	2.00	44.30	38.30	6.00	30.00	36.00	

An example to carrying forward banked hours is given in period 200045: The employee starts a new cycle (TimeBank cycle) with previous bank of 24 and accrues 6 more hours, thus the current bank is 30.

Important!

Additional (more detailed and comprehensive) information about setting up and using the TimeBank module can be found in the “TK5 Flextime TimeBank Management” document included with the latest V6.01 CD.