

# **New Billing Project**

## **FES – GNV Ledger UI Specifications**

## Revision History

Revision	Date	Description	Author
1.0	Jan 23, 2025	Initial Version	Claudia Fung

## Customer Enquiry - Geneva Ledger

### Objective

To provide interface for FES GNV Ledger

### Screen Layout – Geneva Ledger (Main Screen)



Bill	Date	Account Bal: (incl unbilled debit)	Amount	Kiosk O/S (a/c)	Amount	OS	Amount
07		Account Bal: (incl unbilled debit)	91.00	Kiosk O/S (a/c)	91.0	OS	91.00

Bill Dtl.	Bill Image	Date	Reference	Type	Amount	Balance	Invoice Number
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This function is initiated to call the existingn LedMainGNV.jsp

<LedMainGNV.jsp – Revise the existing program>

#### On Screen Load

- Carry session variables of cust\_num and subr\_num
- Follow the existing LedMainGNV.jsp program codes to get the following values:-
  - o isPrepaid
  - o account\_num
  - o billingSource
  - o nspCustNum
  - o nspAccountNum
  - o boolean isNspHpp = !"".equals(nspCustNum)
  - o custNumTemp = isNspHpp ? nspCustNum : cust\_num
  - o accountNoTemp = isNspHpp ? nspAcountNum : account\_num
  - o if isPrepaid or billingSource = F (i.e. prepaid or HPP subscriber)
    - billdate = lib\_customer\_prepaid.get\_bill\_day (existing logic, no program changed)
    - Call new program of Sales Ledger (isPrepaid, billingSource, billdate)
  - o else (i.e. postpaid subscriber)
    - billdate = lib\_customer\_prepaid.get\_bill\_day (existing logic, no program changed)

## Prepaid Subscriber – Ledger Details

If isPrepaid

### Geneva Ledger

Ledger Details			Deposit Details		CDR Access	Close
Bill Day	23	Expiry Date:	24-12-2025 00:00	Successful Recharge for this Month		\$0
	Reference	Type	Amount	Invoice Number	Account Num	
2024	55044801	ADJ	964.00 FTBAL - Forfeit Balance for Card		50015999.00001	
1			Expiry			

- Bill Day = billdate
- Expiry Date = fesrb\_sa\_subr\_info\_view.card\_status\_timeout\_date
- Successful Recharges for this month:

```
select nvl(sum(ap.account_payment_mny)/1000, 0)
from fesrb_accountpayment ap, fesrb_accountattributes aa
where aa.account_num = ap.account_num
and ap.account_payment_status = 1
and ap.payment_balance_type = 101
and ap.account_payment_dat between to_date(aa.last_charge_date, 'dd/mm/yyyy') and to_date(aa.next_charge_date, 'dd/mm/yyyy')
and ap.account_payment_txt not in ('FES', 'Balance Migration')
and ap.account_num = input accountNoTemp
and to_date(aa.next_charge_date, 'dd/mm/yyyy') >= trunc(sysdate)
```

The above SQL is equal to call payment/transactionHistory() returning sTotalAmount (refer to below ICP API)  
 New Billing API : <https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/payment/transactionHistory>

	Reference	Type	Amount	Invoice Number	Account Num
2024	55044801	ADJ	964.00 FTBAL - Forfeit Balance for Card		50015999.00001
1			Expiry		

- Get the day range of prepaid real-time record (currently, day range is 30 days)

```
Select typdesctypname into dayRange from ext_typedesc
where typdesctblname = 'GNV_LEDGER' AND typdescscs = 'PRERT'
```

```
sStartDate = trunc(sysdate) - dayRange
sEndDate = trunc(sysdate)
```

```
Call ICP API API : https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/payment/transactionHistory {
  "accountNum": input accountNoTemp,
  "startDate": sStartDate,
  "endDate": sEndDate
  "parallelRun": sParallelRun
} Returning {
  "resultCode": "0",
  "errorDesc": "",
  "errorCode": "",
  "custNum": sCustNumber,
  "acctNum": sAccountNumber,
  "subrNum": sSubrNumber,
  "paymentCnt": sPaymentCnt,
  "totalAmount": sTotalAmount,
  "paymentInfo": {
    "paymentId": sPaymentId,
    "postedDate": sPostedDate,
```

```

        "amount": sAmount,
        "paymentMethodCode": sPaymentMethodCode,
        "openingBalance": sOpeningBalance,
        "closingBalance": sClosingBalance,
        "paymentRef": sPaymentRef
    }
}

```

#### UI fields (Sales Ledger) mapping to API returned values

```

"ledgerRef": ICP API returned paymentRef
"transactionDate" : ICP API returned postedDate
"transactionType" : "PAY - " + ICP API returned paymentMethodCode
"transactionRef" : ICP API returned paymentRef
"amount" : ICP API returned amount
"osBalance" : ICP API returned closing_balance

```

Note: the prefix: PAY + one space + "-" + one space + paymentMethodCode

**It needs to call one API for the adjustment ( CDSS account transfer amount API – to be changed for the new function name) – TBC by vendor**

#### **CDSS salesLedger API is not support for prepaid subscriber**

— Call ICP API to get array list of the sales ledger information:-

<https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/account/salesLedger>

{cust\_num, account\_num, 'PREPAID', sStartDate, sEndDate, sParallelRun) returning

```

{
    "resultCode": sResultCode
    "salesLedger": {
        "ledgerRef": sLedRef,
        "transactionDate": sTxDate,
        "transactionType": sTxType,
        "transactionRef": sTxRef,
        "amount": sLedAmt,
        "osBalance": sOsBalance,
        "accountNumber": sAccountNumber
    }
}

```

— Display the array record of salesLedger for the following condition

- tx\_type NOT LIKE 'PAY\_T%' and tx\_type NOT LIKE 'INV%' and
- (tx\_type NOT LIKE 'PAY\_PTRF%' OR (tx\_type LIKE 'PAY\_PTRF%' AND sOsBalance <> 0)) and
- NOT (SUBSTR(tx\_type, 1, 3) = 'ADJ' AND NVL(sLedAmt, 0) = 0)

- Prepaid History:-

To maintain the following codes – cs\_salesledger\_nsp table is uploaded by DDE file

<Follow the existing program logic of LedMainGNVContentPrepaid.jsp>

Open cursor

```
SELECT /*+ index(a I1_CS_SALESLEDGER_NSP1, I1_CS_SALESLEDGER_NSP2) */
      DECODE(TRUNC(tx_date), TRUNC(fes_reference_date), fes_reference_date, tx_date) tx_date,
      DECODE(TRUNC(tx_date), TRUNC(fes_reference_date),
      TO_CHAR(fes_reference_date, 'YYYY-MM-DD hh24:mi:ss'),
      TO_CHAR(tx_date, 'YYYY-MM-DD')) tx_date_disp, tx_ref, SUBSTR(tx_type, 1, 3) tx_type,
      CASE WHEN tx_type LIKE 'PAY%' THEN SUBSTR(tx_type, 6, INSTR(tx_type, ':') - 6) ELSE '' END pay_type,
      TO_CHAR(NVL(sled_amount, 0), '9999999990.00') sled_amount, sled_ref, account_num
FROM cs_salesledger_nsp a
WHERE a.cust_num = sNspCustNum and a.tx_type NOT LIKE 'PAY_T%'
      and a.tx_type NOT LIKE 'INV%' and NOT (substr(a.tx_type, 1, 3) = 'ADJ' and nvl(a.sled_amount, 0) = 0)
      and a.tx_date < add_months(sysdate, -6)
Order by a.tx_date desc
```

Loop

Fetch record for display

Note: change the display date format YYYY-MM-DD HH24:MI:SS

End Loop

## Prepaid HPP Subscriber – Ledger Details

If lisPrepaid and billingSource = F (i.e. billByPrepaid = true in the existing program)



The screenshot shows the 'Geneva Ledger' interface. At the top, there are tabs for 'Ledger Details' (selected), 'Deposit Details', 'CDR Access', and 'Close'. Below the tabs, there is a summary table with the following data:

Bill	-1	Account Bal: (incl unbilled debit)	0.00	Kiosk O/S (a/c)	0	OS	0.00
------	----	------------------------------------	------	-----------------	---	----	------

Below this, there is a detailed table for the Kiosk O/S Balance:

Current:	0.00
20 Days:	0.00
30 Days:	0.00
60 Days:	0.00
90 Days:	0.00

At the bottom, there is a table with the following columns: Bill, Bill, Date, Reference, Type, Amount, Balance, Invoice Number, Alloc. The first row shows a bill with a date of -1, an account balance of 0.00, and a kiosk O/S balance of 0.00.

- Bill Day = billdate
- Account Balance (incl. unbilled debit)
  - o Account balance table:  
Make connection to CRM to call cs\_bill\_ledger.nsp\_bill\_ldg\_bal\_cal (**NspCustNum**) returning the values to the following fields  
<this stored procedures is referred to the table cs\_salesledger\_nsp>
    - Current = O/S balance
    - 20 Days
    - 30 Days
    - 60 Days
    - 90 Days
- Kiosk O/S Balance:  
KioskOutstanding kiosk = new KioskOutstanding(conn, cust\_num, subr\_num);  
kioskCustBalance = kiosk.getCustAmountString();  
<replace by ICP API as Kiosk outstanding program is calling GNV stored procedure>
- O/S Balance: the current value shown in the account balance table
- Get the day range of prepaid real-time record (currently, day range is 30 days)  
Select typdescbyname into dayRange from ext\_typdesc  
where typdescbyname = 'GNV\_LEDGER' AND typdescclass = 'PRERT'

sStartDate = trunc(sysdate) – dayRange  
sEndDate = trunc(sysdate)

— Call ICP API to get array list of the sales ledger information:

```
https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/account/salesLedger
(nspCustNum, nspAccountNum, 'PREPAID_HPP', sStartDate, sEndDate, sParallelRun) returning
{
  "resultCode": sResultCode
  "salesLedger": {
    "ledgerRef": sLedRef,
    "transactionDate": sTxDate,
    "transactionType": sTxType,
    "transactionRef": sTxRef,
    "amount": sLedAmt,
    "osBalance": sOsBalance,
    "accountNumber": sAccountNumber
  }
}
```

— Display the array record of salesLedger for the following condition

- tx\_type NOT LIKE 'PAY\_T%' and tx\_type NOT LIKE 'INV%' and
- (tx\_type NOT LIKE 'PAY\_\_PTRF%' OR (tx\_type LIKE 'PAY\_\_PTRF%' AND sOsBalance <> 0)) and
- NOT (SUBSTR(tx\_type, 1, 3) = 'ADJ' AND NVL(sLedAmt, 0) = 0)

Call ICP API : <https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/payment/transactionHistory> {

```
"accountNum": nspAccountNum,
"startDate": sStartDate,
"endDate": sEndDate
"parallelRun": sParallelRun
} Returning {
  "resultCode": "0",
  "errorDesc": "",
  "errorCode": "",
  "custNum": sCustNumber,
  "acctNum": sAccountNumber,
  "subrNum": sSubrNumber,
  "paymentCnt": sPaymentCnt,
  "totalAmount": sTotalAmount,
  "paymentInfo": {
    "paymentId": sPaymentId,
    "postedDate": sPostedDate,
    "amount": sAmount,
    "paymentMethodCode": sPaymentMethodCode,
    "openingBalance": sOpeningBalance,
    "closingBalance": sClosingBalance,
    "paymentRef": sPaymentRef
  }
}
```

#### UI fields (Sales Ledger) mapping to API returned values

```
"ledgerRef": ICP API returned paymentRef
"transactionDate": ICP API returned postedDate
"transactionType": "PAY - " + ICP API returned paymentMethodCode
"transactionRef": ICP API returned paymentRef
"amount": ICP API returned amount
"osBalance": ICP API returned closing_balance
```

Note: the prefix: PAY + one space + "-" + one space + paymentMethodCode

**It needs to call one API for the adjustment ( CDSS account transfer amount API – to be changed for the new function name) – TBC by vendor**



- Prepaid HPP History //get history for sales ledger earlier than the past 6 months  
<Follow the existing program logic of LedMainGNVContentNspHpp.jsp>

Open cursor

```
SELECT /*+ index(a I1_CS_SALESLEDGER_NSP1, I1_CS_SALESLEDGER_NSP2) */
      DECODE(TRUNC(tx_date), TRUNC(fes_reference_date), fes_reference_date, tx_date) tx_date,
      DECODE(TRUNC(tx_date), TRUNC(fes_reference_date),
      TO_CHAR(fes_reference_date, 'YYYY-MM-DD hh24:mi:ss'),
      TO_CHAR(tx_date, 'YYYY-MM-DD')) tx_date_disp, tx_ref, SUBSTR(tx_type, 1, 3) tx_type,
      CASE WHEN tx_type LIKE 'PAY%' THEN SUBSTR(tx_type, 6, INSTR(tx_type, ':') - 6) ELSE '' END pay_type,
      TO_CHAR(NVL(sled_amount, 0), '9999999990.00') sled_amount, sled_ref, account_num
FROM cs_salesledger_nsp a
WHERE a.cust_num = sNspCustNum and a.tx_type NOT LIKE 'PAY_T%'
      and a.tx_type NOT LIKE 'INV%' and NOT (substr(a.tx_type, 1, 3) = 'ADJ' and nvl(a.sled_amount, 0) = 0)
      and a.tx_date < add_months(sysdate, -6)
Order by a.tx_date desc
```

Loop

Fetch record for display

Note: change the display date format YYYY-MM-DD HH24:MI:SS

End Loop

## Postpaid Subscriber – Ledger Details

If not isPrepaid and billingSource <> F (i.e. billByPrepaid = false)



The screenshot shows the 'Geneva Ledger' interface. At the top, there are tabs for 'Ledger Details' (selected), 'Deposit Details', 'CDR Access', and 'Close'. Below the tabs, there is a summary table with the following data:

Bill Day	-1	Account Bal: (incl unbilled debit)	0.00	Kiosk O/S (a/c)	0	OS	0.00
----------	----	------------------------------------	------	-----------------	---	----	------

Below this, there is a detailed view of the O/S balance with a table showing the following data:

Current:	0.00
20 Days:	0.00
30 Days:	0.00
60 Days:	0.00
90 Days:	0.00

At the bottom, there is a table with the following columns: Bill Day, Bill, Date, Reference, Type, Amount, Balance, Invoice Number, and Alloc. The first row shows a bill day of -1, a bill of 1, a date of 01/01/2010, a reference of 1, a type of Kiosk, an amount of 0.00, a balance of 0.00, an invoice number of 1, and an allocation of 0.00.

- Bill Day = billdate
- Account Balance (incl. unbilled debit)
  - o Account balance table:
    - Make connection to FES to call cs\_bill\_ledger.bill\_ldg\_bal\_cal (sCustNum) returning the values to the following fields
    - <this stored procedures is referred to the table cs\_salesledger\_nsp>
      - Current = O/S balance
      - 20 Days
      - 30 Days
      - 60 Days
      - 90 Days
- Kiosk O/S Balance:
  - KioskOutstanding kiosk = new KioskOutstanding(conn, cust\_num, subr\_num);
  - kioskCustBalance = kiosk.getCustAmountString();
  - <To be replaced by ICP API as Kiosk outstanding program is calling GNV stored procedure>
- O/S Balance: the current value shown in the account balance table
- Set search range for 6 months
  - sStartDate = add\_months(sysdate, -6)
  - sEndDate = trunc(sysdate)

- Call ICP API to get array list of the sales ledger information:  
<https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/account/salesLedger>  
 (custNum, accountNum, 'POSTPAID', sStartDate, sEndDate, sParellelRun) returning  
 {

```

    "resultCode": sResultCode
    "salesLedger": {
        "ledgerRef": sLedRef,
        "transactionDate" : sTxDate,
        "transactionType" : sTxType,
        "transactionRef" : sTxRef,
        "amount" : sLedAmt,
        "osBalance" : sOsBalance,
        "allocateDate" : sAllocateDate,
        "completeAllocateDate" : sCompleteAllocateDate,
        "accountNumber" : sAccountNumber
    }
}

```

- Filter out for the array record of salesLedger which has tx\_type = 'PAY\_T%'
- Postpaid History //get history for sales ledger earlier than the past 6 months  
 <Follow the existing program logic of LedMainGNVContent.jsp>

Open cursor

```

Select to_char(a.tx_date,'YYYY-MM-DD') AS trans_date, a.sled_ref, SUBSTR(a.tx_type,1,3), a.tx_ref,
      to_char(NVL(a.sled_amount,0),'9999999990.00'),
      to_char(NVL(a.sled_balance,0),'9999999990.00'), TO_CHAR(a.first_alloc_date,' YYYY-MM-DD '),
      TO_CHAR(a.comp_alloc_date, 'YYYY-MM-DD '),
      TRUNC(SYSDATE) - TO_DATE(to_char(a.tx_date,'yyyy-mm-dd'),'yyyy-mm-dd'), a.account_num, a.tx_date,
      CASE WHEN a.tx_type LIKE 'PAY%' THEN SUBSTR(a.tx_type,6) ELSE '' END,
      TO_CHAR(a.first_alloc_date,' YYYY-MM-DD ')

```

From **cs\_salesledger** a

Where a.cust\_num = sCustNum and a.tx\_type not like 'PAY\_T%' and a.tx\_date < add\_months(sysdate, -6)  
 Union all

```

Select to_char(a.tx_date,'dd-mm-yyyy') as trans_date, a.sled_ref, substr(a.tx_type,1,3), a.tx_ref,
      to_char(NVL(a.sled_amount,0),'9999999990.00'),
      to_char(NVL(a.sled_balance,0),'9999999990.00'), TO_CHAR(a.first_alloc_date,' YYYY-MM-DD '),
      TO_CHAR(a.comp_alloc_date, 'YYYY-MM-DD '),
      TRUNC(SYSDATE) - TO_DATE(to_char(a.tx_date,'yyyy-mm-dd'),'yyyy-mm-dd'), a.account_num, a.tx_date,
      CASE WHEN a.tx_type LIKE 'PAY%' THEN SUBSTR(a.tx_type,6) ELSE '' END,
      TO_CHAR(a.first_alloc_date,' YYYY-MM-DD ')

```

From **cs\_saleshistory\_archive\_12\_VW** a

Where cust\_num = sCustNum AND tx\_type not like 'PAY\_T%' and a.tx\_date < add\_months(sysdate, -6)  
 Order by 11 desc, 13 desc

Loop

Fetch record for display

Note: change the display date format YYYY-MM-DD HH24:MI:SS

End Loop

## Deposit Details

< Refer to the existing program codes in DepDetailGNV.jsp >

### Geneva Ledger

Ledger Details						
Deposit Details						
Close						
Total Deposit Amount		0.00				
Date	Inv. No.	Reference	Value	Balance	Type	Account Num

Replace the stored procedure

- lib\_customer\_prepaid.get\_cust\_deposit
- lib\_customer\_postpaid.get\_cust\_deposit

By ICP API : <https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/account/osBalance>  
(custNum, subNum, accountNum)  
returning {depositAmount : sDeposit}

Total Deposit Amount : sDeposit

Deposit details tables <the existing code can be kept>

Prepaid subscriber or Prepaid HPP subscriber (i.e. isPrepaid or billingSource = F)

```
SELECT TO_CHAR(a.tx_date,'YYYY-MM-DD'), to_char(NVL(a.sled_balance,0),'9999999990.00'), a.sled_ref ,
      a.tx_ref,SUBSTR(a.tx_type,1,3),to_char(NVL(a.sled_amount,0),'9999999990.00'), a.account_num
From cs_salesledger_nsp a
where a.cust_num='"+custNumTemp+"' and a.tx_type LIKE 'PAY_T%'
ORDER BY 1,2
```

Postpaid subscriber or Postpaid HPP subscriber (i.e. !isPrepaid and billingSource <> F)

```
SELECT TO_CHAR(a.tx_date,'YYYY-MM-DD'), to_char(NVL(a.sled_balance,0),'9999999990.00'), a.sled_ref ,
      a.tx_ref,SUBSTR(a.tx_type,1,3),to_char(NVL(a.sled_amount,0),'9999999990.00'), a.account_num
From cs_salesledger a
where a.cust_num='"+cust_num+"' and a.tx_type LIKE 'PAY_T%'
ORDER BY 1,2
```