



**OSEEM / SISTEL**  
**CALL ACCOUNT SYSTEM**

Oseem ver. 1.1

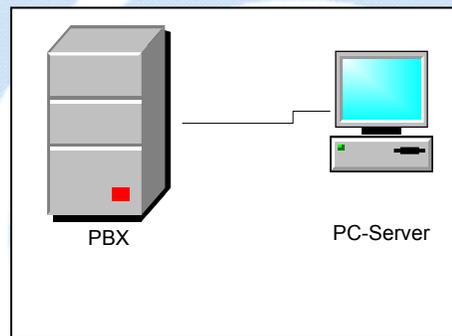
SisTel ver 6.9

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**PROGRAMING**

## Overview

Call account systems are those systems that connected to a pbx (private branch exchange) to collect call information and classifies them in a manner that enables the supervisor to know as much as possible of the phoning process in his company.

All call account systems are common in this final goal, but they are completely differs in their final results and accuracy.

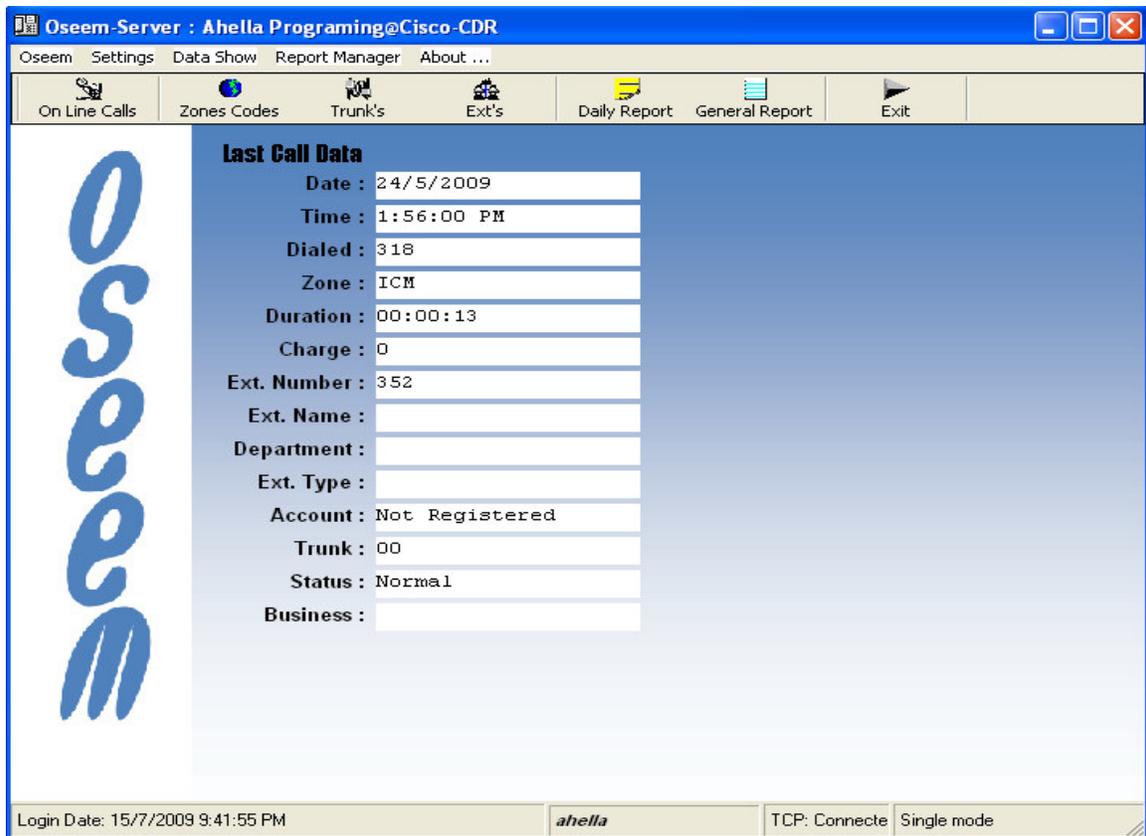


The main task of a call account system is done through three operation steps, as follows:

- Get calls info from the PBX (connect to the PBX).
- Process the calls info (analyze and store).
- Retrieve calls info to the user (Report generation).

The power of any call account system depends on how it behaves in each of these steps.

We in ahella programming put our call account system (Oseem) taking in one hand our long experience in the field of installing and programming the PBX systems, and in the other hand our experience with our customers as a technical support of customising their PBX system to suit their needs –which gave us a great knowledge of what are the most interest points for the customers and also what are the most points they suffer from-.



This strategy enables us to design Oseem to satisfy these points:

- Flexibility

Due to the fact that the customers base that use the call account system are very wide and vary in their fields and interrests, the system has so many options and settings that enable the customers to customize it for their special needs and demands without any need to source code modification.

- User friendly interface

All these options and settings that determin how the system process, store and retrieve calls are exposed to the user in a simple interface which gives the customers the ability to customize/recustomize the system any time without any need from the producer.

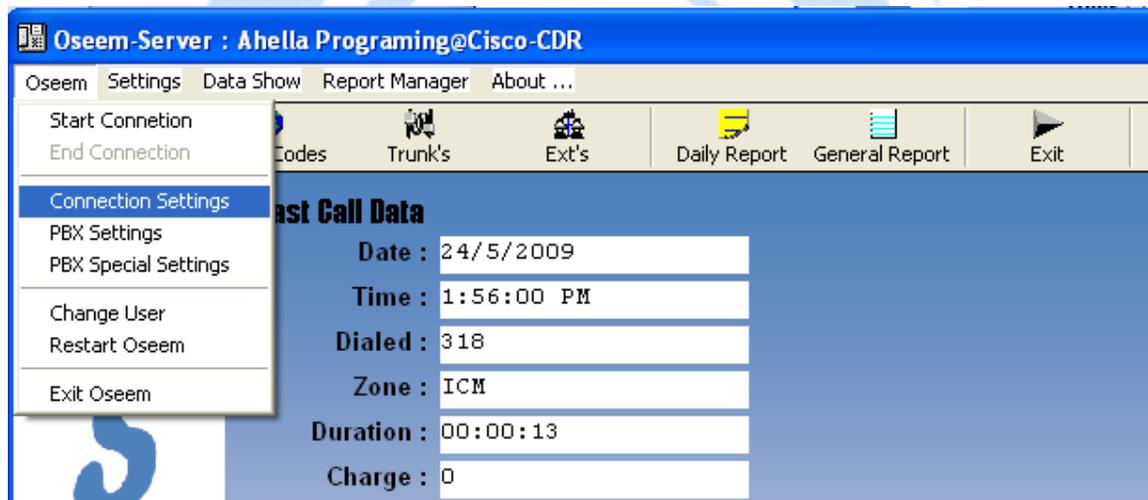
- Easy setup wizard

To complete our goal, the system setup is a short, straight and easy process in which the customers can easily remove/re-setup the system alone.

A short training to the normal customer is so enough for the customer to know how to customize the system as he want.

Throw the following sections –which explore the menues of the system- we will know how Oseem hendles the three operation steps.

## SisTel/Oseem



Oseem menu collection contains the following menus:

### Start connection:

Starts connection between Oseem and the PBX in order to get call info.

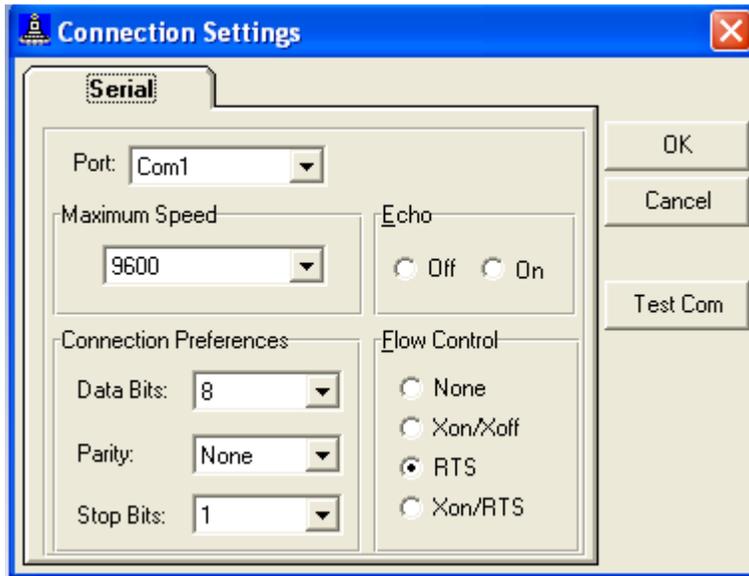
### End connection:

Stops reading call info from the PBX. The connection must be ended before making any change in the conneciton settings or PBX settings, then it must be started again.

### Connection settings:

The connection between Oseem and a PBX can be one of the following types:

### Serial port connection

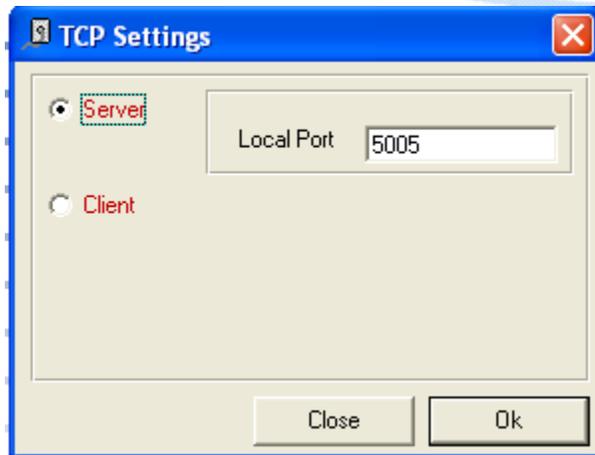


In this case, Oseem is connected directly to the PBX by using a serial cable from the PBX serial port to the PC (where Oseem is running) serial port. And the connection settings from the figure are set equal to their values in the PBX (except that the Port which is the port number of pc-serial port used).

### TCP port connection

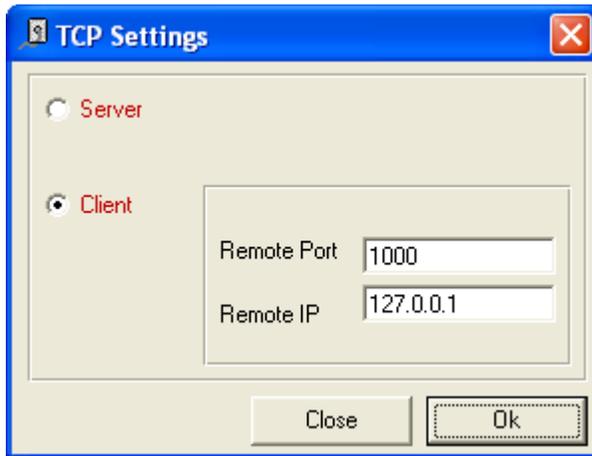
In this case, Oseem is indirectly connected to the PBX through a TCP connection. As known, if 2 sets are connected together through TCP connection, one must be a server and the other must be a client. Oseem can act as a server or a client according to the PBX needs.

#### *Oseem is a TCP server:*



In that case, we assign a logical TCP port number, and in the PBX we assign both this port number and the IP address of our PC.

*Oseem is a TCP client:*



In this case we provide the IP address and the Port number of the PBX (the server in this case).

#### FTP connection

In this case, a third party application (Oseem Ftp Layer) is used. This application is a bridge between Oseem and the PBX. For the PBX, it acts as a FTP server to get the data and store it in his own buffer. For Oseem, it acts as a virtual PBX that Oseem can connect to it through a normal TCP client interface.

#### PBX Settings

After making a connection with the PBX, the next step is reading the data offered by the PBX. This data is in a text style format and its contents are different from one PBX to other as shown:

```

Panasonic KX-TA series
05/12/07 06:32PM 1000 07 0101690393          00:05'53   00000.00

AVAYA system
030808 1557 0032 7 *802          0112340713          1165          1122          002

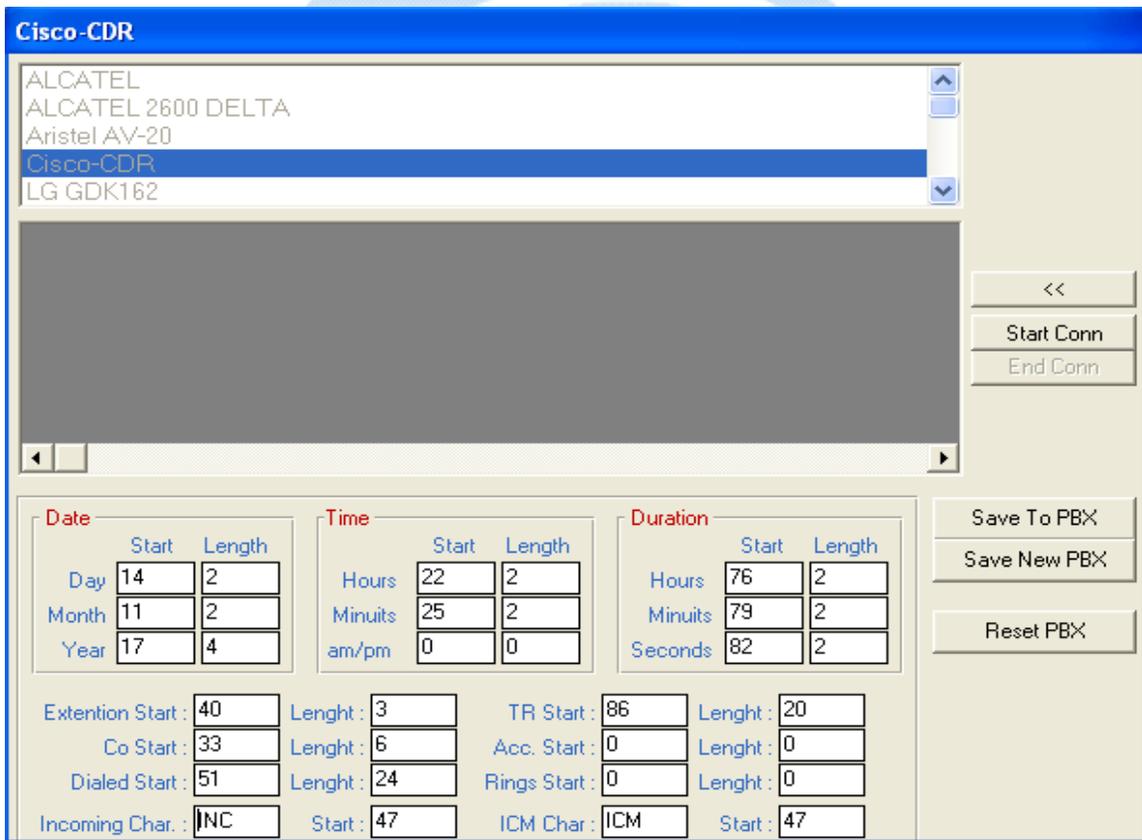
```

To define the data format, we need to tell Oseem the location and length of each data item in the data line.

To ease this operation, there are a large set of PBX's that are previously configured and saved in Oseem, so user just choose the appropriate one.

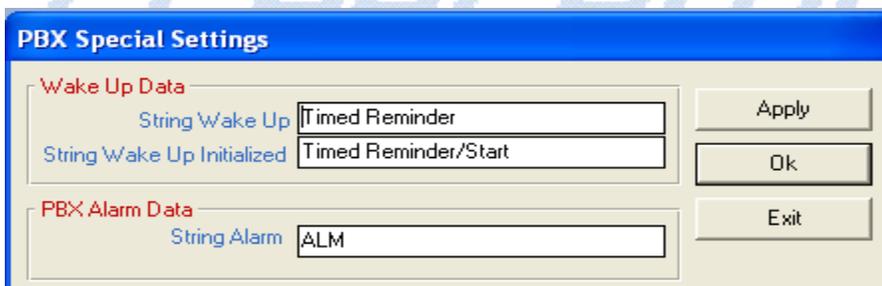


In the case of a new PBX (is not found in the list), user can cofiger it manually and then save this configuration with his PBX name/model to the list.



### PBX special settings

In some PBX's which offers the walk-up calls and PBX-alarm monitor, this info can be monitored/stored by Oseem.



## Change user

As we will see later, supervisor can assign as many users as he need to use the system. Each user has his own authorities and power of tasks that he can do with the system.



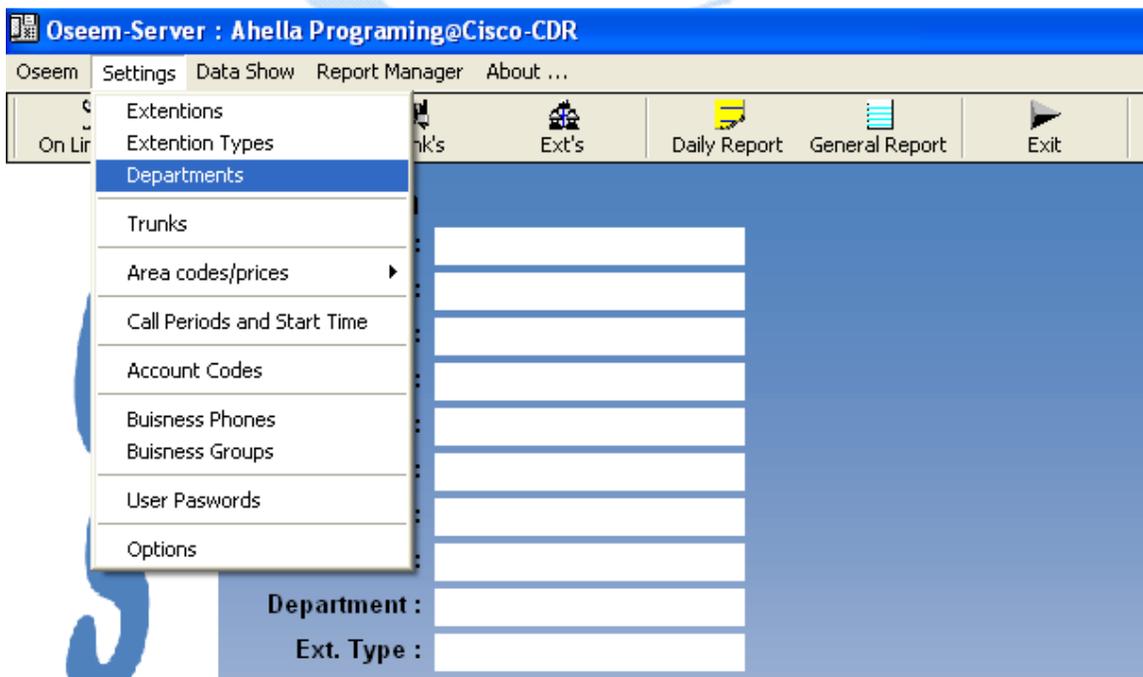
## Restart Oseem

Restarts Oseem (for some modifications to take place).

## Exit Oseem

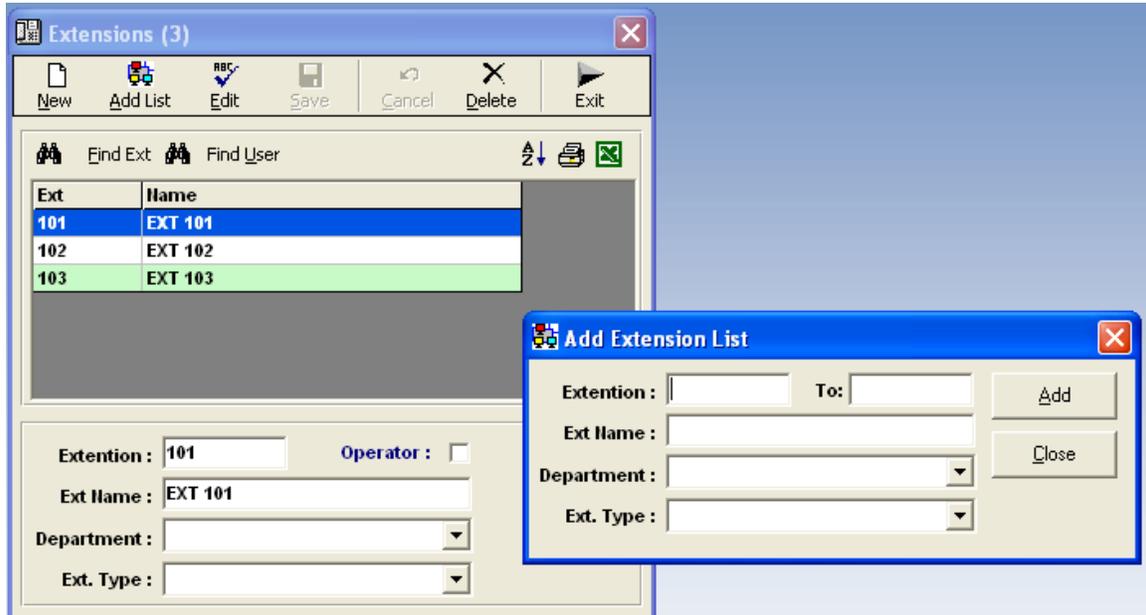
Terminates this application.

## Settings



This menu collection contains all options/tools that determines how Oseem handles, processes and stores the call.

## Extensions



All extensions are assigned with their user names. These extensions can be grouped by department to collect them and add special handling for desired groups. There is another mean of grouping, Extension Type, which allow another level of grouping for further control.

This grouping facilitates the report generation (as we will see later), in which user can as for a report of calls done by departments (e.g. sales) or ext. type (e.g. staff) without the need to assign all extensions in the desired group.

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## Extension Types

**Ext. Types**

New Edit Save Cancel Delete Exit

Find Ext. Type

Serial	Type Name
1	Host
2	Staff
3	Service

Type Name : Service

Disc. Local : 100 % **Automatic Print**

Disc. Mobile : 50 %

Disc. National : 0 %

Disc. International : 0 %

**The Discount Ratio for Mobile Callse**

Any number of extension types can be assigned. For each type, you can assign a call charge discount for each call type (local, mobile, national and international) and can ask for automatic call print report (specially used in hottles).

## Departments

**Departments**

New Edit Save Cancel Delet Exit

Find Department

Serial	Department Name
1	Sales
2	Security
3	Accounting
4	Support

Department Name : Support

Disc. Local : 30 %

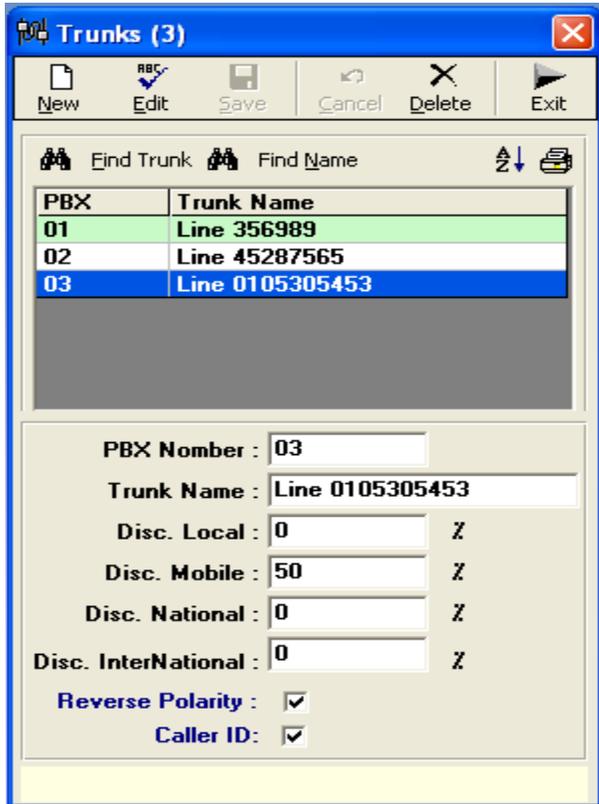
Disc. Mobile : 50 %

Disc. National : 0 %

Disc. InterNational : 0 %

You can set any number of departments as you need, for each a special call charge set can be assigned.

## Trunks



The screenshot shows a software window titled "Trunks (3)" with a menu bar containing "New", "Edit", "Save", "Cancel", "Delete", and "Exit". Below the menu bar is a search area with "Find Trunk" and "Find Name" fields. A table lists three trunks:

PBX	Trunk Name
01	Line 356989
02	Line 45287565
03	Line 0105305453

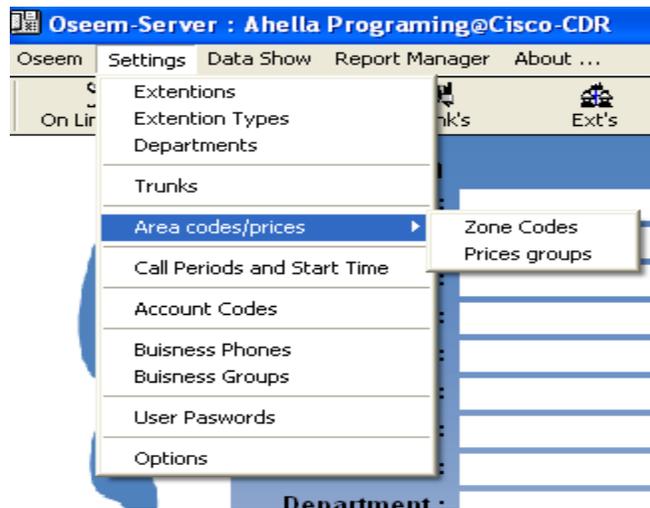
Below the table, the settings for the selected trunk (PBX 03) are displayed:

PBX Number : 03  
Trunk Name : Line 0105305453  
Disc. Local : 0 Z  
Disc. Mobile : 50 Z  
Disc. National : 0 Z  
Disc. InterNational : 0 Z  
Reverse Polarity :   
Caller ID :

These are the external trunk lines connected to your PBX. Each line is assigned with its name (e.g. line 0105305453) and any discount in each call type.

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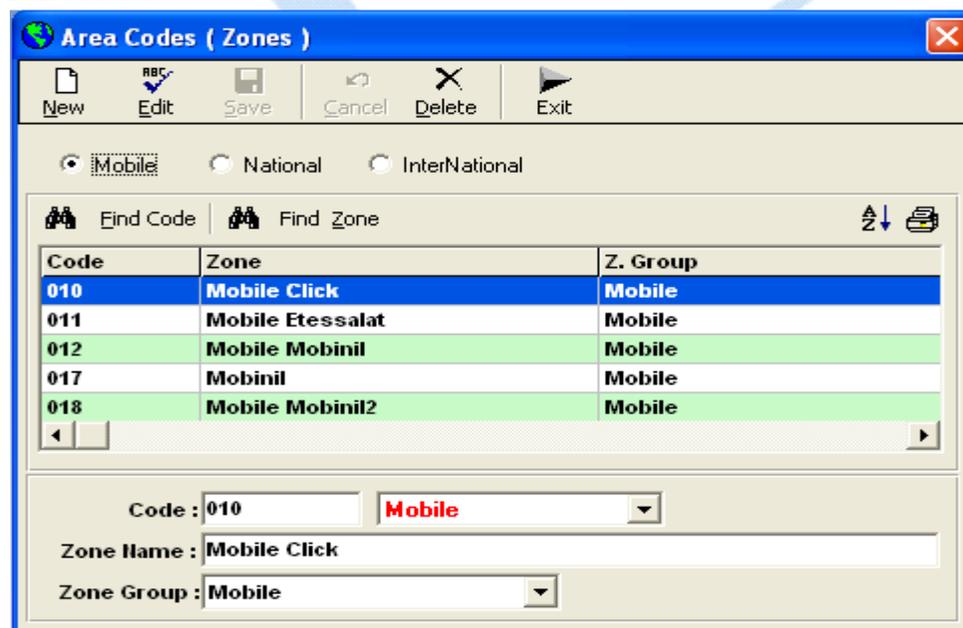
## Area codes/Prices



Oseem determines the cost of calls through a flexible charging table. Instead of assigning the charge for each zone area, Oseem lets you create a price group with the desired charge values, then enter zone area and assign to it the pricing group it will belong to.

This operation facilitates the pricing process since there are many area codes/countries that share the same price.

## Zone codes



A pre-existing area/country codes are assigned for you. You can add, edit or delete as you want without any limitation. For each area/country you assign the price group it will follow.

## Prices Groups

The screenshot shows a window titled "Zone Groups" with a menu bar containing "New", "Edit", "Save", "Cancel", "Delete", and "Exit". Below the menu bar is a "Find" field with a search icon and a list of call price groups. The table below shows the data for these groups:

Group	S. Day	Day	S. Night	Night
Local	0.05	0.02	0.05	0.02
Mobile	0.45	0.45	0.45	0.45
National	0.20	0.20	0.20	0.20
InterNational	36.00	12.00	36.00	12.00
Europ	36.00	12.00	36.00	12.00
Arabic Region	24.00	8.00	24.00	8.00
Asia	51.00	17.00	51.00	17.00
Africa	24.00	8.00	24.00	8.00

Below the table, there are input fields for the selected group "Local":

Group : Local  
 Day Start : 0.05      Night Start : 0.05  
 Day : 0.02              Night : 0.02

You can add, edit or delete from the pre-existing group list. For each group, you assigne the call period price as follow:

### *Day start:*

The cost of the first call period in the day

### *Day:*

The cost in the call period in the day (except that the first period).

### *Night start:*

The cost of the first call period in the night

### *Night:*

The cost of the call period in the night (except that the first period).

## Time settings

This part constitutes all periods, durations and time values used in call process for all the system. It consists of:

### Call periods:

Call Type	Minutes	Seconds	Unit	Day Start in	Night Start in
Local	60	60	Sec	8 :00:00 AM	8 :00:00 PM
Mobile	60	60	Sec		
National	60	60	Sec		
International	60	60	Sec		

As we discussed earlier, we can assign the call period charge for every area/country code. This part completes the pricing by assign the duration of the call period. Also as we separated the charge of the first period, we also separate its duration.

So you can assign the length of the first and normal call period for each call type (local, mobile, national and international).

Also, you can assign the day/night starting time.

### Call start time:

Call Type	Duration	Unit	Operator	Operator Unit
Local after	10	Sec	10	Sec
Mobile after	0	Sec		
National after	0	Sec		
International after	0	Sec		

This is very important factor in call process. Normally you PBX system well start count call duration by one of two methods:

#### *Revers polarity method:*

In this case, you must have the revers polarity option for each trunk line you connect to the PBX and the PBX will start the duration exactly when the other party answer your call. This is the exact method.

**Delay time method:**

This case will be used either if you haven't the reverse polarity option in your trunk lines or your PBX system doesn't support the reverse polarity technique.

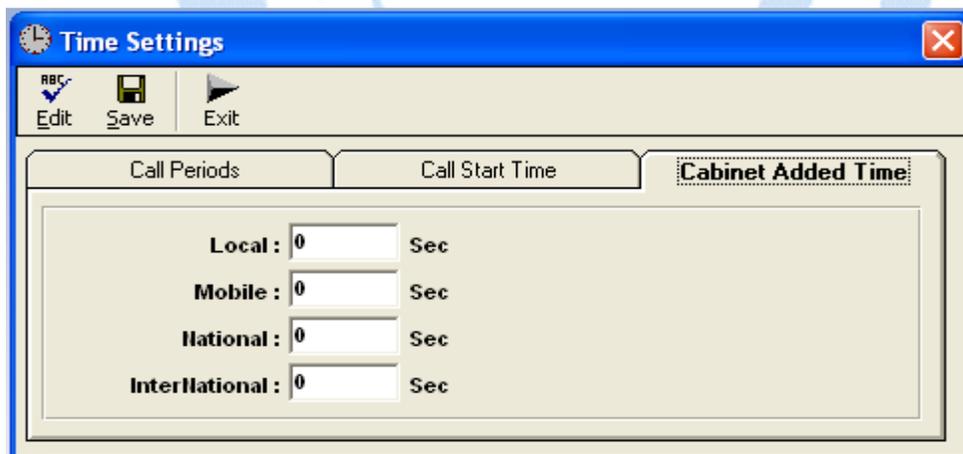
In this case, the PBX will automatically start duration count after a delayed time since your last dialed digit regardless of the other party status (answer, not answer or busy).

In this second case, we usually ask PBX manager to initialize the PBX's delay time to zero and depend on our call account system delay time (for each call type).

So the system behaviour will be as follows:

If a call info arrived from the PBX, the system will check its duration, if this duration less than the call start time (for the call type), then the system will consider it as not a real call and will not process or store it. But will store it in the missed call log (and the supervisor can restore it any time if he wants).

Besides that, the supervisor can assign an extra delay time for the operator extension(s) if this option is required.

**Cabinet added time:**

For one or more extension types, supervisor can assign a duration (for each call type) that is added to the actual call duration of the call. This is usually used in hotels.

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## Account codes

Acc. Code	Acc. Name
5237	test

Acc. Code : 5237  
 Acc. Name : test  
 Department :

The owner of the call is normally the extension number which make/receive the call, but in some PBX system to make a call you must enter a password/account code and this code is the real owner of the call regardless the extension where the call has been done.

Supervisor can enter all these passwords/codes along with their user names and Oseem will insert this info in the call for displaying/reporting operation.

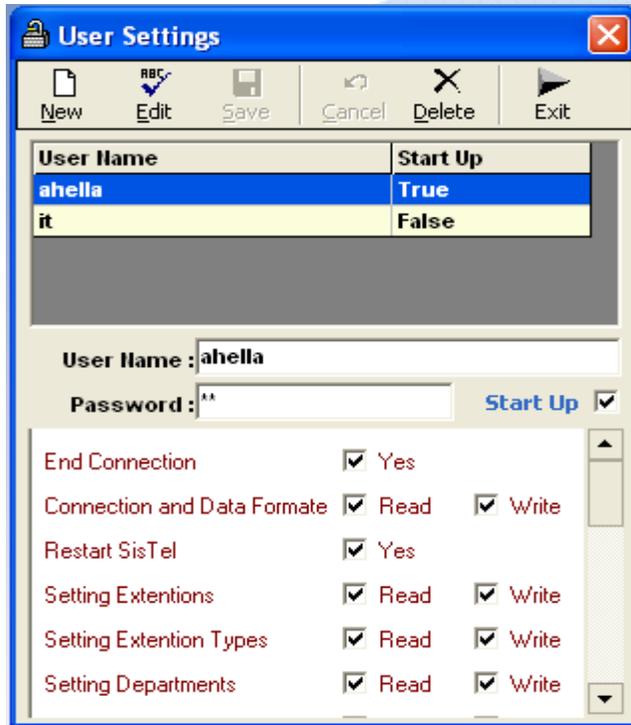
## Buisness phones/Groups

B. Phone	B. Name
0105305453	Ahella Programing

B. Phone : 0105305453  
 B. Name : Ahella Programing  
 B. Group : Support

You can store a phone list that represents your customers, suppliers, dealers or even you employees and can clasifying these number in groups of your owns. When a call is made to or received from any number of these numbers, Oseem displays this number's owner name and groupe for viewing. Also you can used this option in reporting (e.g. give me the calls to customer "Ahella Programing", or to Group "Support").

## System users



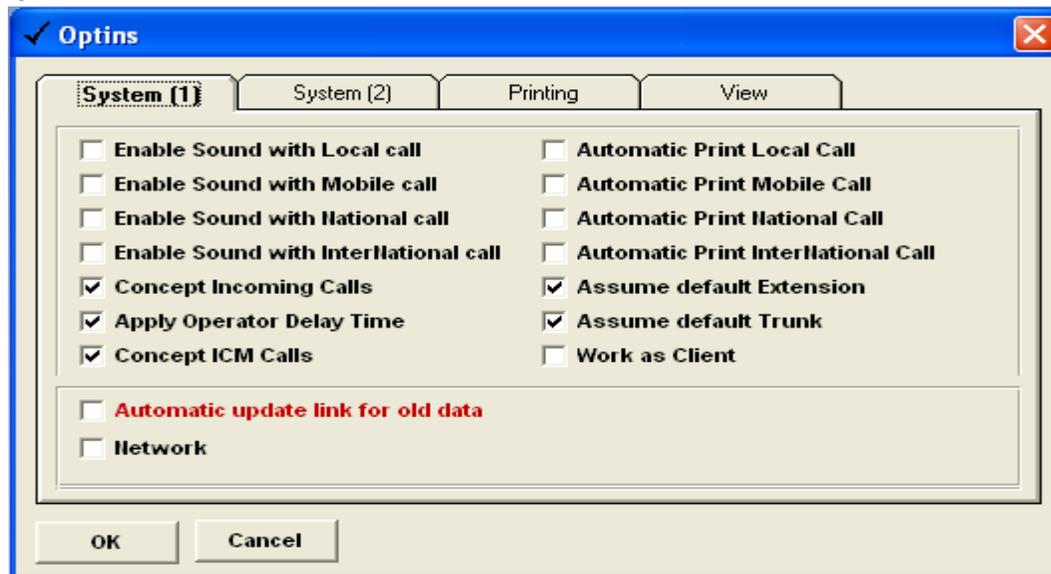
As we mentioned earlier, supervisor can assign any number of users which can use the system. Each one has it's own authority and powers, and can easily login by applying his user name and password.

Also, supervisor can select any user as a startup user, in which when the application run, it'll automaticall login with this user and you can cahnge to your user any time if you want.

## System options

These are some option supervisor can select/assing and are affection the overall operation of the system. They are classified as follow:

## System 1:

**Enable sound:**

For each call type, you can assign Oseem to generate a BEEP when a call of that type is done.

**Automatic print:**

For each call type, you can assign Oseem to automatically print a call billing for each call of that call type.

**Concept incoming call:**

Determines if the system will handle/store incoming calls or not.

**Apply operator delay time:**

Apply or not the operator delay time (assigned in call start time screen).

**Concept ICM calls:**

Determines if the system will handle/store the intercome calls (extension to extension call) if the PBX offer this data info.

**Assume default extension:**

If not set, the system will process/store calls for the only assigned extensions only.

**Assume default trunk:**

If not set, the system will process/store calls for only assigned trunks only.

**Works as client:**

Determines if this application copy will work as server (that's connected directly to the PBX) or client (collect it's data from a server copy not from the PBX).

**Automatic update link for old data:**

Refreshes the database files to the current application folder. It's used when :

- Re-install the system and keeping the old data.
- Enable/disable the network option.

### Network:

Is enabled when the system will be installed on many PC's (one server and one or more clients). The steps of activating the network are as follow:

On Oseem server:

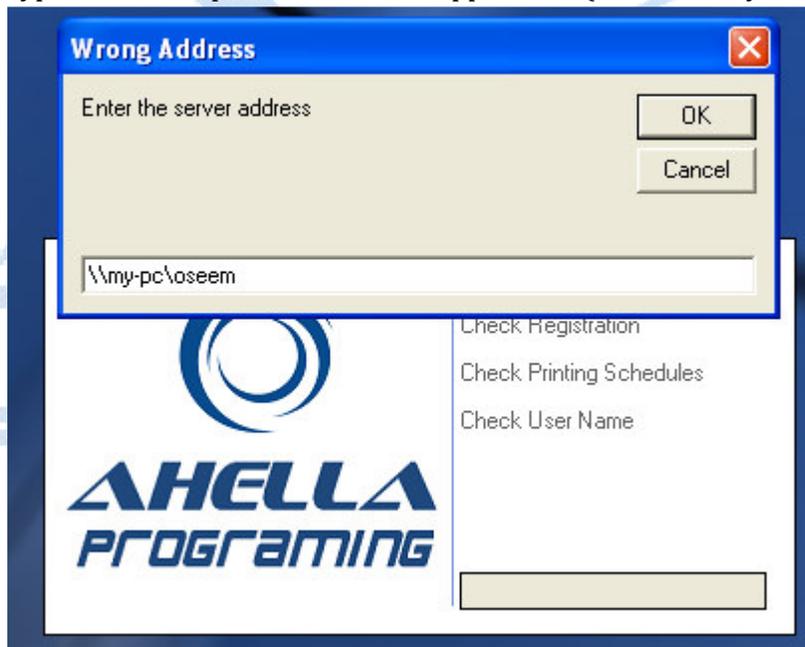
- Install the system on the server (any pc may be work as Oseem server).
- Share the folder witch you install the application to all users that will have a client copy (full access sharing).
- check the network option and put the shared address



- 
- Select "Automatic update link for old data" option.
- Restart the server application.

On Oseem client:

- Install the system
- Run the application
- Type the shared path of the server application (the same as you set in the server).



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## System 2:

***Activate dialed number filtering:***

Remove any invalid character from the dialed number if exists (it's normally happen if the PBX is hanged).

***Cancel if dialed number less than n digits:***

If the dialed number digits is less than this count, cancel the call (consider it as a fault dialing).

***Local area code***

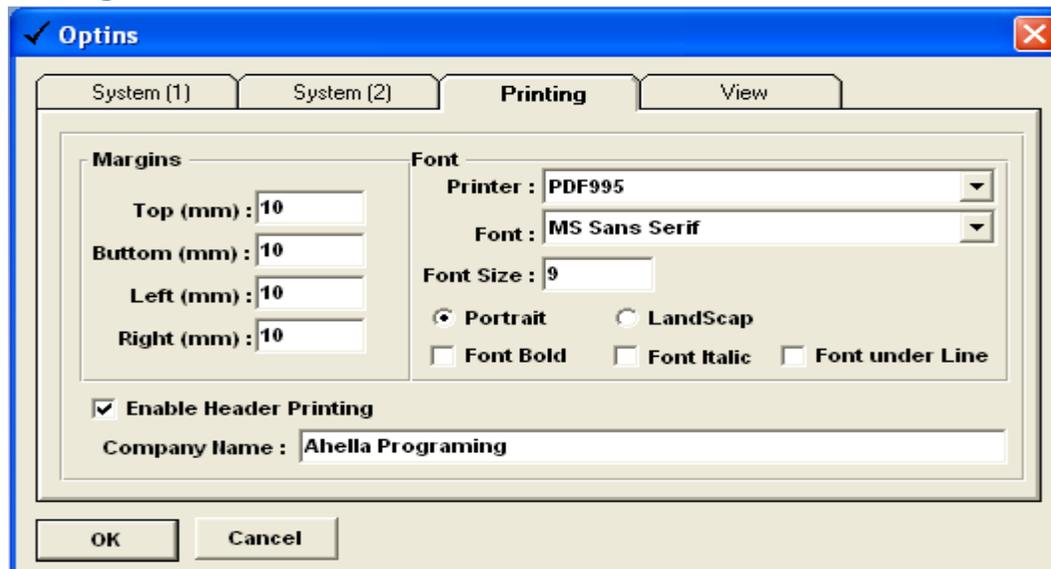
To be removed from the caller ID (if CID is already exists).

***Dialed length restrictions:***

Restrict the dialed number saved to the limit supplied for each call type. E.g. if the dialed arrived from the PBX as "01053054532145" and the limit for the mobile is "10", then the dialed will be saved as "0105305453" only and the rest of digits will be canceled.

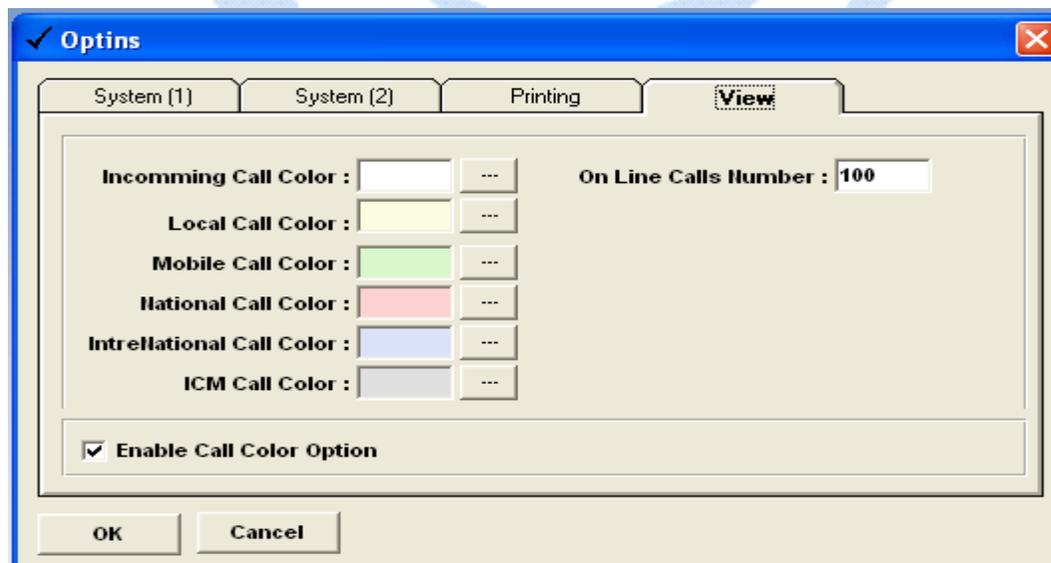
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## Printing



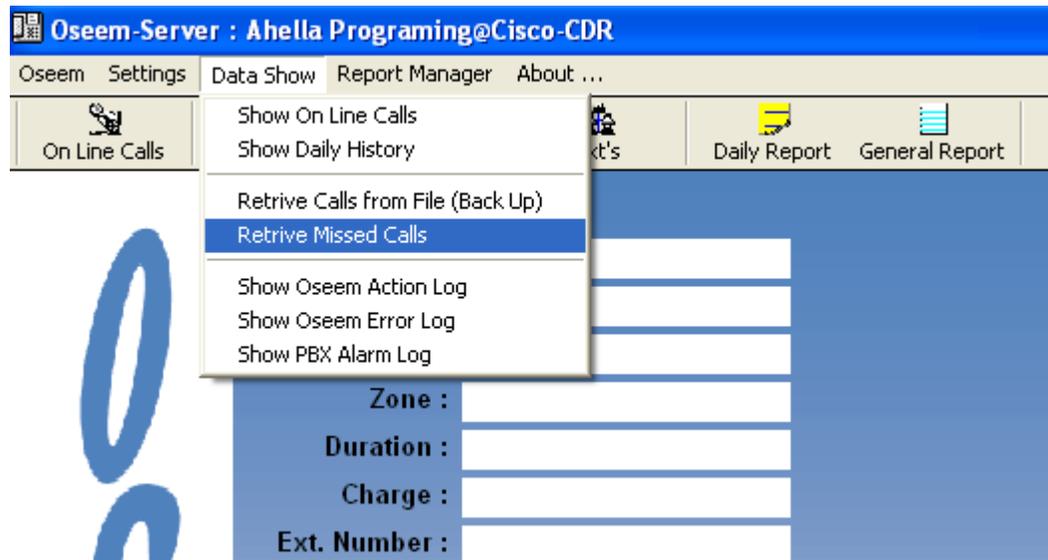
Select you printer and adjust fonts, margins and if desired the printing header of the printed reports.

## View



- Select the color for each call type and how many calls that may appear in the “OnLineCalls screen”.
- Set the maximun number of calls to be appeared in the “OnLineCalls screen”.
- Enable/disable the color schem you selected.

## Data show



## Show On-Line Calls

The 'On Line Calls' window displays a table of the last 100 calls. The table has columns for Date, Time, Ext, Trunk, Dialed, Duration, Cost, Zone, and Ext Name. Below the table, there are 'Print Call' and 'Exit' buttons. A status bar at the bottom shows 'Call Added : 24/5/2009 4:00:00 PM 301 22665786 00:05:35'.

Date	Time	Ext	Trunk	Dialed	Duration	Cost	Zone	Ext Name
24/5/2009	3:28:00 PM	330	00	0126222323	00:01:40	0	ICM	
24/5/2009	3:30:00 PM	344	00	Incoming	00:00:02	0	Incoming	
24/5/2009	3:29:00 PM	335	00	23633125	00:01:08	0	ICM	
24/5/2009	3:30:00 PM	335	00	350	00:00:11	0	ICM	
24/5/2009	3:31:00 PM	350	00	350	00:00:00	0	ICM	
24/5/2009	3:31:00 PM	362	00	26399734	00:00:19	0	ICM	
24/5/2009	3:31:00 PM	344	00	350	00:00:12	0	ICM	
24/5/2009	3:32:00 PM	344	00	362	00:00:22	0	ICM	
24/5/2009	3:33:00 PM	335	00	337	00:00:42	0	ICM	
24/5/2009	3:34:00 PM	344	00	Incoming	00:00:12	0	Incoming	
24/5/2009	3:34:00 PM	344	00	300	00:00:00	0	ICM	
24/5/2009	3:34:00 PM	300	00	Incoming	00:00:51	0	Incoming	
24/5/2009	3:33:00 PM	330	00	0126222323	00:02:28	0	ICM	
24/5/2009	3:38:00 PM	301	00	350	00:00:11	0	ICM	

Displays the online-calls screen. This screen views the last (n) calls that have been done by the PBX and recorded in Oseem database. Each call color is assigned according to color schem you previously assigned, and the maximum number of calls (n) is also as you assigned.

## Show daily history

**Daily Call History**

Print Call
 Exit

05/24/2009

Date	Time	Ext...	Trunk	Dialed	Duration	Cost	Zone
05/24/2009	9:38:00 AM	344	00	Incoming	00:00:42	0.00	Incoming
05/24/2009	9:38:00 AM	344	00	Incoming	00:00:42	0.00	Incoming
05/24/2009	9:38:00 AM	344	00	Incoming	00:00:42	0.00	Incoming
05/24/2009	9:43:00 AM	335	00	25744160	00:00:31	0.00	ICM
05/24/2009	9:43:00 AM	362	00	333	00:00:11	0.00	ICM
05/24/2009	9:43:00 AM	335	00	25744160	00:00:31	0.00	ICM
05/24/2009	9:43:00 AM	362	00	333	00:00:11	0.00	ICM
05/24/2009	9:43:00 AM	335	00	010259490	00:00:11	0.00	ICM

**Total Calls :**

**Total Duration :**

**Total Charge :**

This screen is a fast report screen in which you select one day, and the system displays all calls in that day followed by a summary of these calls.

## Retrieve calls from file

**Data Retrieval**

**File Name :**

**Retrieve Type**

Append to Existing Data
  Replace Existing Data

**Call Type**

All Calls
  Specific Calls

This option is used by the system administrator only and is used to re-create the calls database(s).

To understand its usage, we must describe how the calls data are stored in the system, so let's start:

- The database used by Oseem is an Access database. This database type has a main advantage that it's very easy to be handled and it doesn't require a separate hosting engine to work (like SQL server and Oracle) since its hosting is built into the windows operating system itself.
- But it suffers from the limited size, which makes it unsuitable for the large data storage, and our call account system may be working for years saving all the call info that yields to a large data space required.
- To overcome this problem, Oseem stores the application settings in a separate database, and for the call info (data) it automatically creates a separate database file for each new month, so whatever your call info rate, the data stored in each database file (data for one month only) is in the safe capacity.
- In the other hand, the end user may ask for a report of calls during any interval (may be years) and the system takes the responsibility of collecting data from all database(s) in that range and gives the final result to the user.
- Besides having a separate database file for every month, Oseem creates a backup text file for that month too. This backup contains the call info (in text format) as it gets from the PBX. This gives two advantages:
  - It yields on a backup file that contains all the data of the month and may be used to re-create the database file for that month (if the original database is corrupted) or if the call handling criteria are changed and the administrator needs to apply the new criteria on the old data.
  - We have a clear log of the data as it arrives from the PBX, which is an indication of the performance and accuracy of the PBX (to detect the PBX hanging and to be sure that the PBX provides the data in a correct format).
- So, in our data folder we have two files for each month: one for plain-text data and the other is for the handled data. Each is named as its month in that format (mmyy.txt and mmyy.ap/mmyy.sis) respectively.

So, the process of retrieving a backup is just to select the backup file (mmyy.txt) for the required month and ask Oseem to re-create the database for it with the following options:

- Retrieve type:

*Append: adds the new retrieved data to the old one.*

*Replace: clear any existing data and add the new one.*

- Call type:

*You may want to retrieve all calls from the backup file, or just retrieve specific calls in which you must apply the criteria that determines the specific calls you want to retrieve.*

**Data Retrieval**

File Name :

**Retrieve Type**

Append to Existing Data       Replace Existing Data

**Call Type**

All Calls       Specific Calls

Date      From : 4 / 2 /2004      To : 4 / 2 /2004

Time      From :      To :     

Dialed start with     

Trunk(s)     

Extention(s)     

Account Code(s)     

Start Retrieve      Cancel

## Retrieve missed calls

Retrive Missed Calls

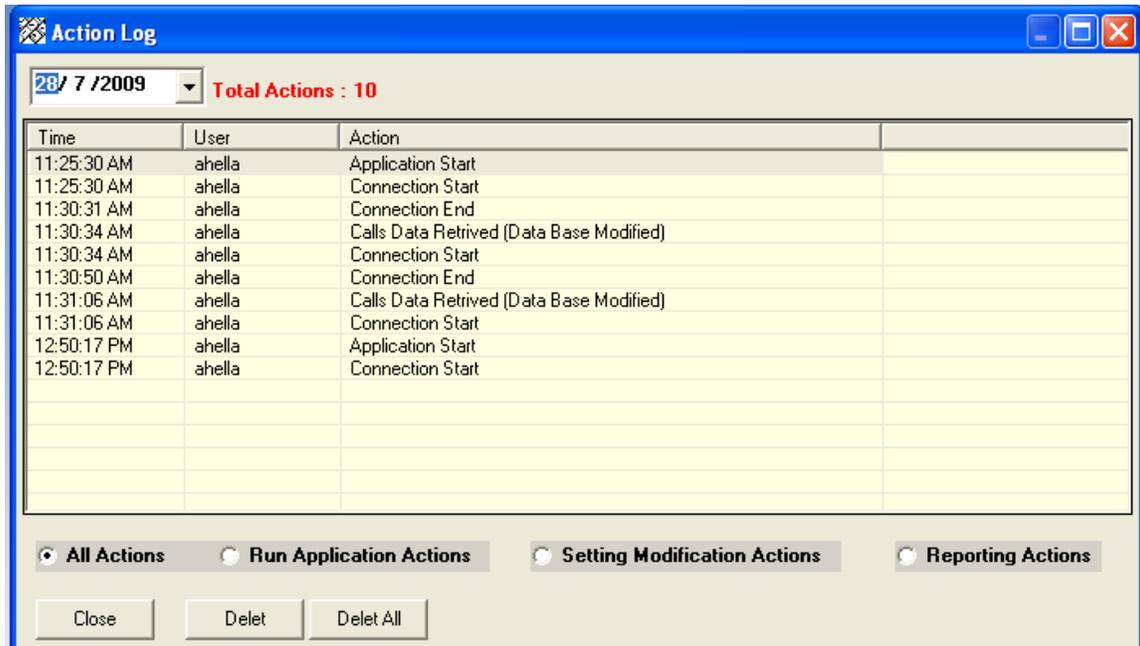
Call Type: All Calls      Total Calls = 172      Retrive Call

ID	Data
71317	UNKNOWN
71318	00:00:00 INCOMING CALL      RINGING 0:32
71319	00:00:39 HOLD
71320	00:01:12 UNHOLD
71321	00:02:47 CALL RELEASED
71322	-----
71323	07/05/09 20:30:00      LINE = 0036      STN = 7401
71324	00:00:00 OUTGOING CALL
71325	DIGITS DIALED      5551212
71326	00:00:39 HOLD
71327	00:01:12 UNHOLD
71328	00:02:00 CALL RELEASED
71329	-----
71330	07/05/09 20:30:00      LINE = 0035      STN = 7465
71331	00:00:00 OUTGOING CALL
71332	DIGITS DIALED      5551212L
71333	DIGITS DIALED      0105305453
71334	00:00:39 HOLD

12133      05/23/2009 20:38:40      7      344      OUT 1      00:00:00      Una

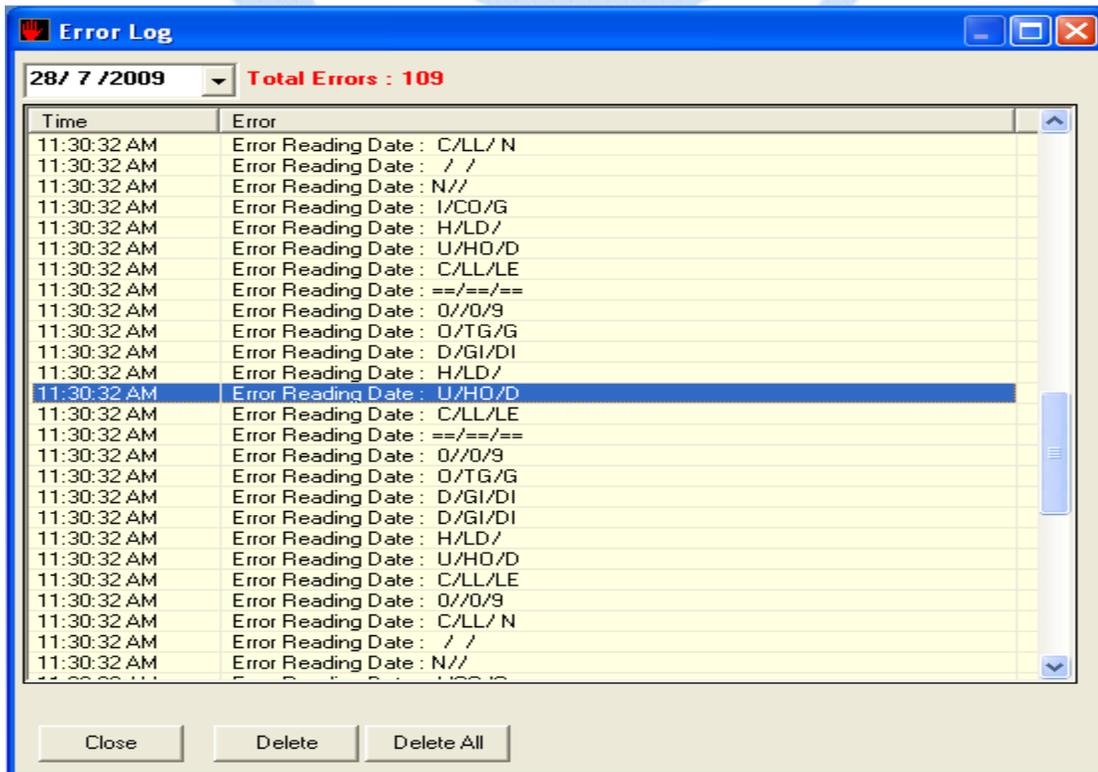
Missed calls are that data arrived from the PBX and didn't pass the call handled criterias. These info are stored as a missed calls, which is checked by the administrator to remove them or try to handl them again (after changin the call handle criterias).

## Show action log



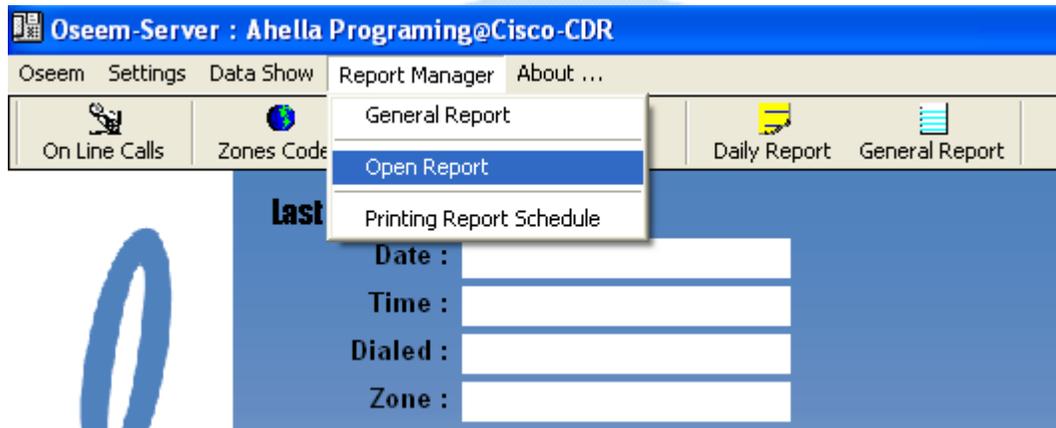
This log show all the actions done by any system user like setting modifications, report printing, ....

## Show error log



This log contains all error that created by Oseem during the call handling process. These errors may indicate a general error in call format or may be a normal error (caused by some data arrived which is not for calls, but is for PBX alarms for example).

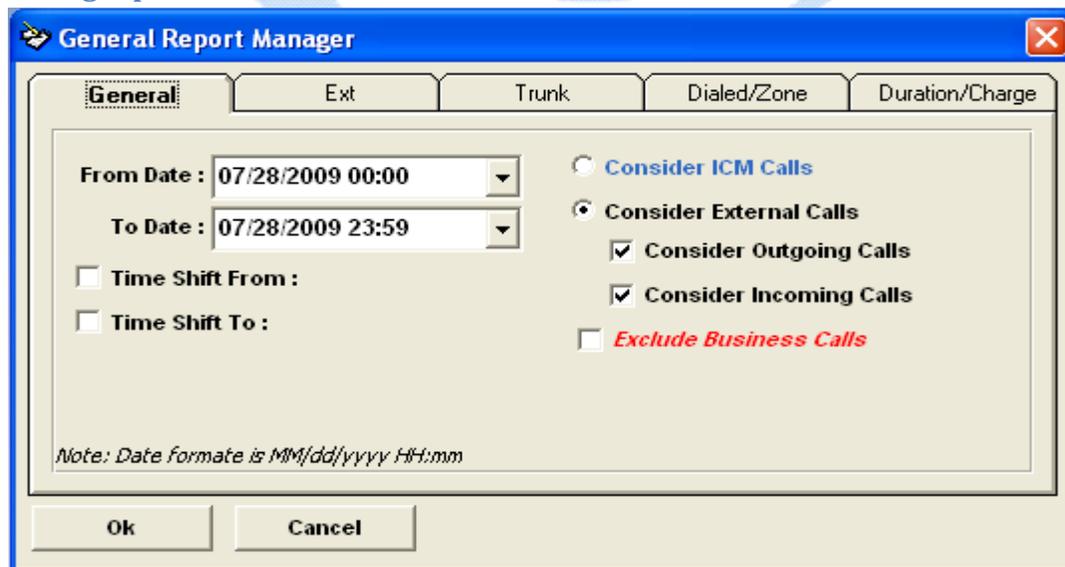
## Report manager



## Generate report

Report generation consists of:

### Setting report criterias



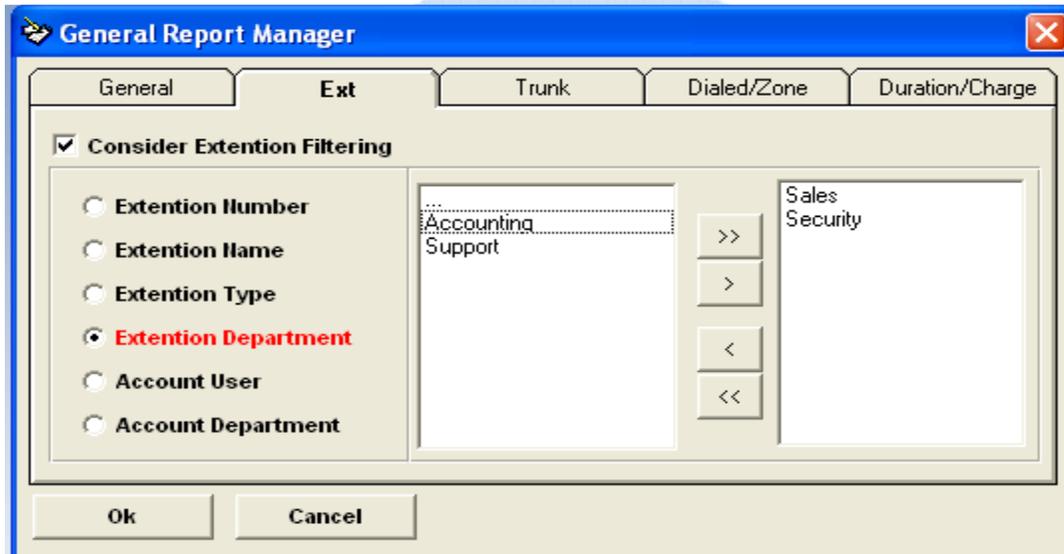
You can query a report by specifying criterias for all the call parts. These criterias are classified of 5 sub-screens as shown, which are as follow:

### General

In this screen, you can determin the following:

- **Date interval:** from date d1 to date d2. And this is the only criteria that must be applied to generate the report, the rest all criterias are optional.
- **Time shift:** from time shift T1 to time shift T2.
- **Select call type:** intercome calls or external calls (outgoing or/and incoming).
- **Exclude the business calls:** you can exclude all calls that are related to any stored number in your business list.

### Extension



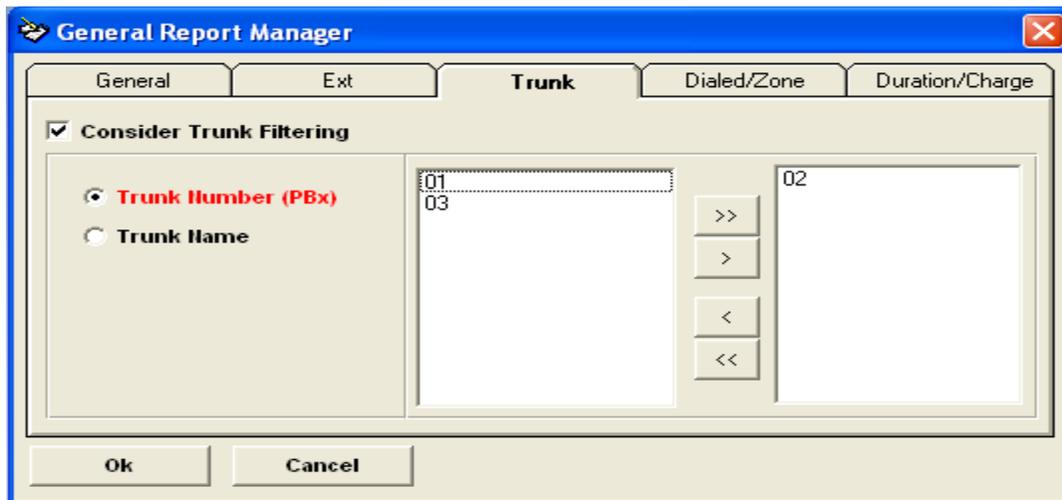
You can ask report for all extensions or you can specify specific extension as follow:

- Extension number: select the desired extension number(s) from the existing list.
- Extension Name: select the desired extension names(s) from the existing list.
- Extension type: select the desired extension type(s) from the existing list.
- Extension department: select the desired extension department(s) from the existing list.
- Account user: select the desired account user(s) from the existing list.
- Account department: select the desired account department(s) from the existing list.

Note: to use these criteria properly, all setting must be set first (e.g. extensions, departments, ...).

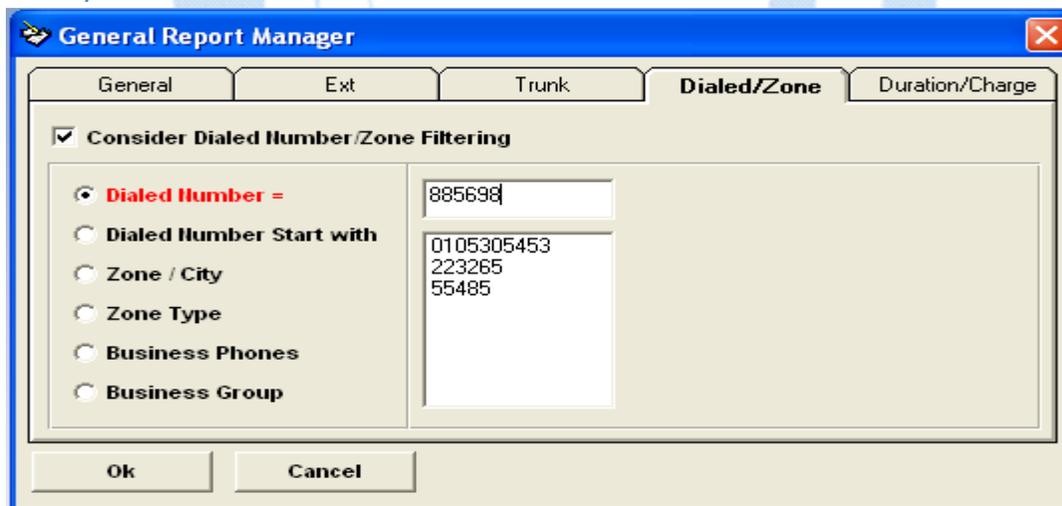
PROGRAMMING

### Trunk



You can ask for calls done on all trunks, or select specific trunk(s) both by their PBX-Nuber or by name.

### Dialed/zone



You can restrict report for that calls related to specific phone number(s) or are zone(s) as follow:

- Dialed number =: put list of phone number(s) to be searched.
- Dialed number start with: list of starting digits for the dialed number(s).
- Zone/city: select list of zone are.
- Zone type: select one or more of the zone types (local, mobile, national or international).
- Business phones: select from your business phone list.
- Business group: select from you business group list.

### Duration/charge

The screenshot shows the 'General Report Manager' dialog box with the 'Duration/Charge' tab selected. The 'Consider Duration/Charge Filtering' checkbox is checked. Below it, four filtering options are listed, each with a checked checkbox and a text input field:

- Duration More than (>) :** 00:00:45 (e.g. hh:mm:ss)
- Duration Less than (<) :** 00:10:00 (e.g. hh:mm:ss)
- Charge More than (>) :** 1.5 (Enter any valid number)
- Charge Less than (<) :** 20 (Enter any valid number)

At the bottom of the dialog are 'Ok' and 'Cancel' buttons.

You can set the duration range (from dur1 to dur2) or/and call charge range (> valu1 and < value2).

### Displaying results

The screenshot shows the 'Report Result' window with a toolbar at the top containing icons for Fields, Graph, Save Report, Save as Text, Save as Excel, Print, and Exit. Below the toolbar is a title bar and a header for the report: 'Report of Calls in Date between [28/7/2008 and 28/7/2009 11:59:00 PM]'. The main area contains a table with the following columns: Date, Time, Ext, Trunk, Dialed, Duration, Cost, Zone, and Status. The table lists various call records with their respective details. At the bottom of the window, there is a section for report options, including a dropdown menu for 'Normal Order (No Grouping)', a checkbox for 'Separate Page for Group', and several radio button options for summarizing the data.

Date	Time	Ext	Trunk	Dialed	Duration	Cost	Zone	Status
05/25/2009	11:57:00 AM	306	*	00442070847911	00:11:02	168.00	England	Normal
05/25/2009	11:57:00 AM	331	9	27364121	00:03:46	0.11	Local	Normal
05/25/2009	11:57:00 AM	301	9	27364121	00:00:35	0.05	Local	Transferred
05/25/2009	12:01:00 PM	345	7	0100065809	00:00:14	0.45	Mobile Click	Normal
05/25/2009	12:05:00 PM	333	7	0123401522	00:03:37	1.80	Mobile Mobinil	Normal
05/25/2009	12:06:00 PM	344	00	Incoming	00:00:24	0.00	Incoming	Normal
05/25/2009	12:13:00 PM	330	9	23922124	00:01:00	0.05	Local	Normal
05/25/2009	12:21:00 PM	335	7	0106684855	00:00:12	0.45	Mobile Click	Normal
05/25/2009	12:21:00 PM	318	7	0106684855	00:00:25	0.45	Mobile Click	Normal
05/25/2009	12:22:00 PM	344	00	Incoming	00:00:25	0.00	Incoming	Transferred
05/25/2009	12:23:00 PM	301	00	Incoming	00:01:13	0.00	Incoming	Normal
05/25/2009	12:26:00 PM	335	7	0106684855	00:00:18	0.45	Mobile Click	Normal
05/25/2009	12:26:00 PM	306	*	0097126666888	00:01:16	32.00	U.A.E	Normal
05/25/2009	12:30:00 PM	306	9	24611201	00:01:44	0.07	Local	Normal
05/25/2009	12:33:00 PM	335	8	090070000	00:07:18	1.60	National	Normal
05/25/2009	12:33:00 PM	301	9	22665786	00:01:58	0.07	Local	Normal
05/25/2009	12:36:00 PM	301	9	22665786	00:01:35	0.07	Local	Normal
05/25/2009	12:43:00 PM	335	9	33472027	00:12:58	0.29	Local	Normal
05/25/2009	12:43:00 PM	306	9	24611201	00:00:36	0.05	Local	Normal

Report options at the bottom:

- Normal Order (No Grouping) [v]
- Separate Page for Group [ ]
- Summarization options:
  - Detailed
  - Sum Total
  - Sum per Ext Number
  - Sum per Ext Name
  - Sum per Department
  - Sum per Ext Type
  - Sum per Account
  - Sum per Acc. Department
  - Sum per Trunk
  - Sum per Zone Area
  - Sum per Zone Type
  - Sum per Hour
  - Sum per Day
  - Sum per Month
  - Sum per Dialed

After put all the required criterias for the report, pressing ok will calculate the criterias, collecting data from database file(s) and display the result screen as shown.

The result screen is a dynamic screen in which you can change the displayed data format/type. The bottom part of the screen contains all report type that can be selected and viewed as follow:

**Detailed report:**

This is the default view, which show all the call info in details. You can:

- select the desired call items to be displayed from the field list

Ext	Trunk	Dialed	Duration	Cost	Zone	Status		
301	*	0097317358100	00:01:17	32.00	Bahrain	Normal		
344	00	Incoming	00:00:15	0.00	Incoming	Tranafered		
335	00	Incoming	00:00:38	0.00	Incoming	Normal		
301	*	0097339434501	00:00:41	24.00	Bahrain	Tranafered		
344	00	Incoming	00:23:17	0.00	Incoming	Normal		
331	*	0097339434501	00:04:08	56.00	Bahrain	Normal		
300	7	0107303070	00:02:03	1.35	Mobile Click	Normal		
306	9	33020768	00:02:12	0.09	Local	Normal		
357	9	26070478	00:03:40	0.11	Local	Normal		
344	00	Incoming	00:00:21	0.00	Incoming	Tranafered		
306	00	Incoming	00:01:22	0.00	Incoming	Normal		
325	00	Incoming	00:08:03	0.00	Incoming	Normal		
344	00	Incoming	00:00:24	0.00	Incoming	Tranafered		
05/26/2009	9:48:00 AM	344	00	Incoming	00:00:24	0.00	Incoming	Tranafered
05/26/2009	9:52:00 AM	320	7	0182499990	00:01:28	0.90	Mobile Mobinil2	Normal
05/26/2009	9:54:00 AM	357	7	0106086238	00:00:24	0.45	Mobile Click	Normal
05/26/2009	9:55:00 AM	357	7	0100015912	00:00:56	0.45	Mobile Click	Normal
05/26/2009	9:55:00 AM	344	00	Incoming	00:00:17	0.00	Incoming	Tranafered
05/26/2009	9:55:00 AM	310	00	Incoming	00:48:00	0.00	Incoming	Normal
05/26/2009	9:55:00 AM	344	00	Incoming	00:00:00	0.00	Incoming	Busy
05/26/2009	9:58:00 AM	344	00	Incoming	00:00:21	0.00	Incoming	Tranafered
05/26/2009	9:59:00 AM	357	00	Incoming	00:00:16	0.00	Incoming	Normal
05/26/2009	10:01:00 AM	314	7	0105531751	00:00:16	0.45	Mobile Click	Normal

- Arrang/grouping the data displayed by:

05/26/2009	10:17:00 AM	308	00	Incoming	00:02:13	0.00	Incoming
05/26/2009	10:19:00 AM	335	9	23633125	00:02:04	0.09	Local
05/26/2009	10:20:00 AM	320	7	0181313110	00:00:03	0.45	Mobile Mobinil2
05/26/2009	10:20:00 AM	320	7	0181313110	00:00:05	0.45	Mobile Mobinil2
05/26/2009	10:20:00 AM	324	7	0188385563	00:01:58	0.90	Mobile Mobinil2
05/26/2009	10:22:00 AM	335	7	0118692537	00:01:08	0.90	Mobile Etesa

- Normal order: the calls will be ordered by its date/time.
- Grouped by extension: the calls will be ordered by extension then for each extensions calls it will be ordered by date/time.
- Or can be grouped by:
  - Extension name.
  - Extension type.
  - Extension department.
  - Trunk
  - Zone.
  - Call type: local, mobile, national and international.
  - Dialed numbers.
  - Business phones.
  - Business groups.
  - Account user.
  - Account departments.

If we choos any type of grouping, we can ask to print each group calls in a separate page (with summery) when print the result.

Sum total

**Report Result**

Fields Graph Save Report Save as Text Save as Excel Print Exit

Report of Calls in Date between [28/7/2008 and 28/7/2009 11:59:00 PM]

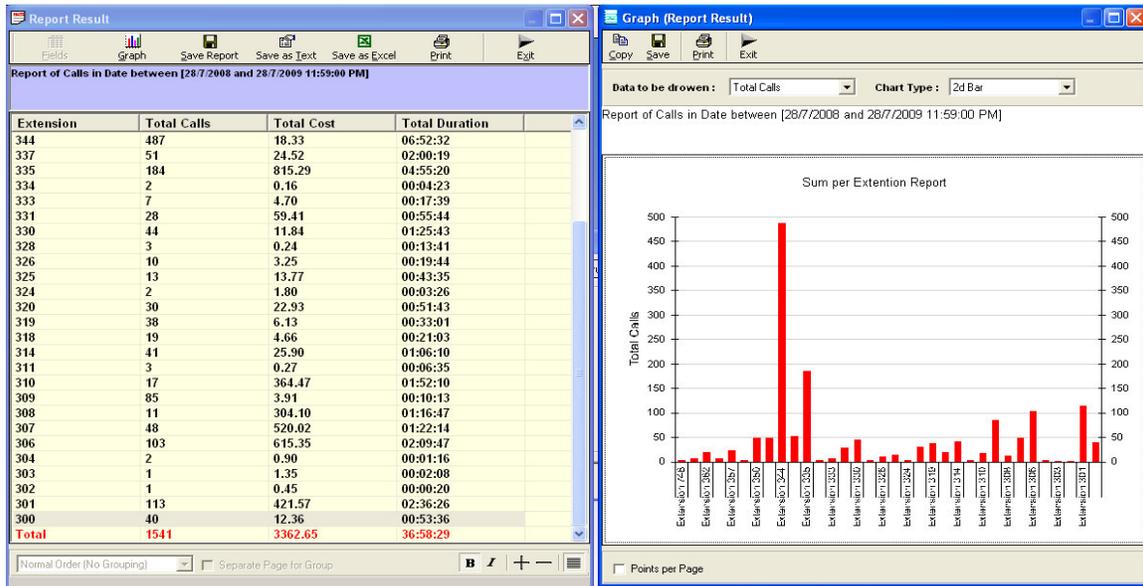
Item	Total Calls	Total Cost	Total Duration
Total Sumery	1541	3362.65	36:58:29

Normal Order (No Grouping)  Separate Page for Group **B** *I* + -

Detailed  
 **Sum Total**  
 Sum per Ext Number  
 Sum per Ext Name  
 Sum per Department  
 Sum per Ext Type  
 Sum per Account  
 Sum per Acc. Department  
 Sum per Trunk  
 Sum per Zone Area  
 Sum per Zone Type  
 Sum per Hour  
 Sum per Day  
 Sum per Month  
 Sum per Dialed

This will simply display total calls/cost/duration for all the result.

Sum per extension number/name:

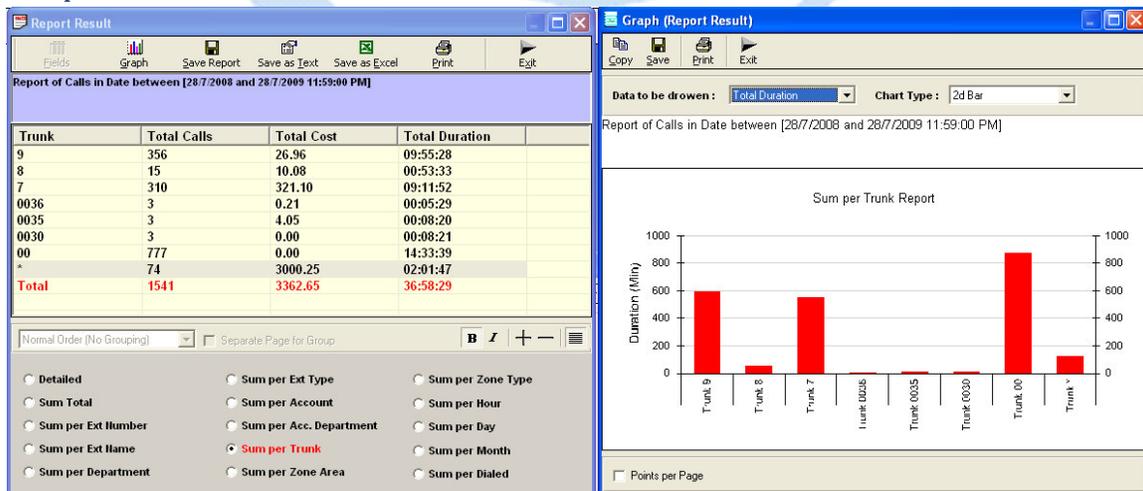


This will display the calls summary for each extension number/name in both grid and graph view.

Sum per department/ext. type/account/account department

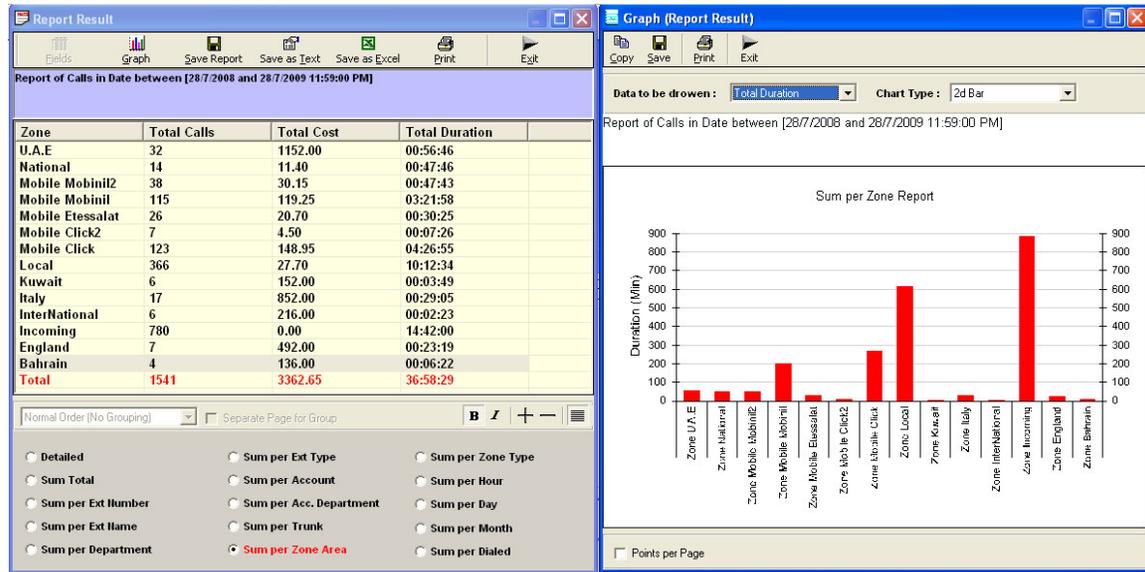
The same as sum/ext for each sum type.

Sum per trunk



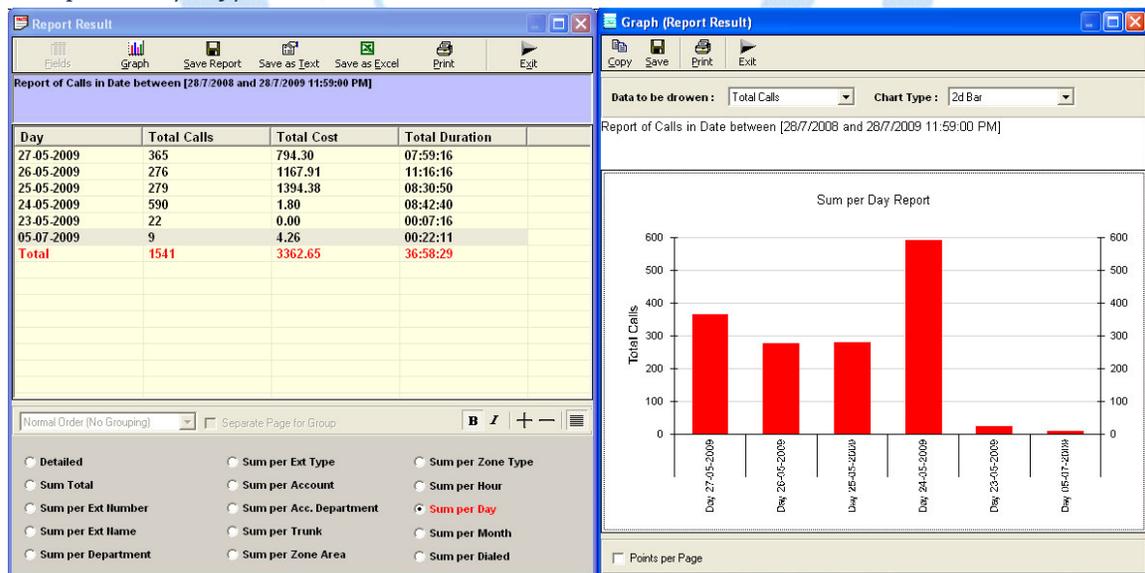
Displays call summary for each trunk in both grid/graph view.

Sum per zone area/type:



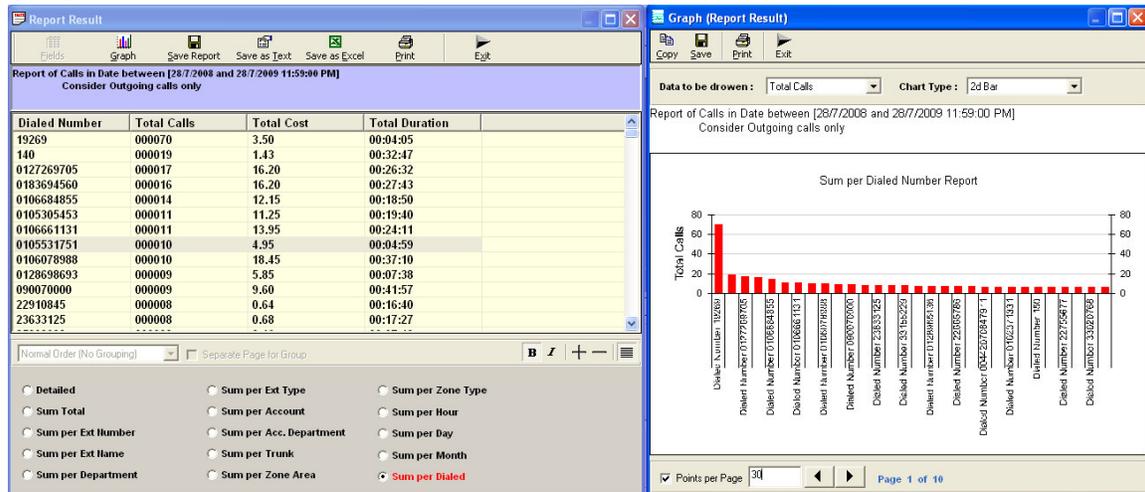
Displays summery of calls for each zone area/type in both grid/graph view.

Sum per hour/day/month



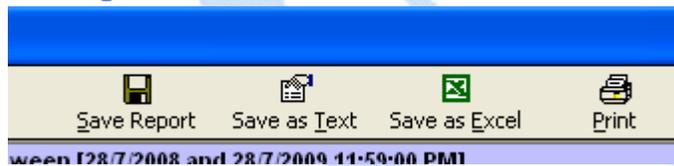
Displays call summery for each hour/day/month in both grid/graph view.

## Sum per dialed



Displays call summary for each dialed number in both grid/graph view. This is very useful to determine the most number dialed by your users and how much it cost you to dial it during the interval of request.

## Printing result



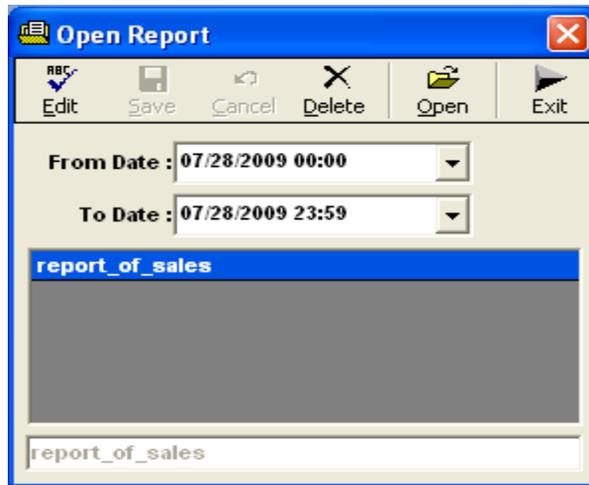
After you display the report you have the options to :

- Print report to your favorite printer.
- Export report to excel sheet.
- Export report to text file.
- Save the report criteria:
- You can save the report criteria you selected for rapid report re-creation in the future without worried about setting the criteria again (specially for the complicated criteria).



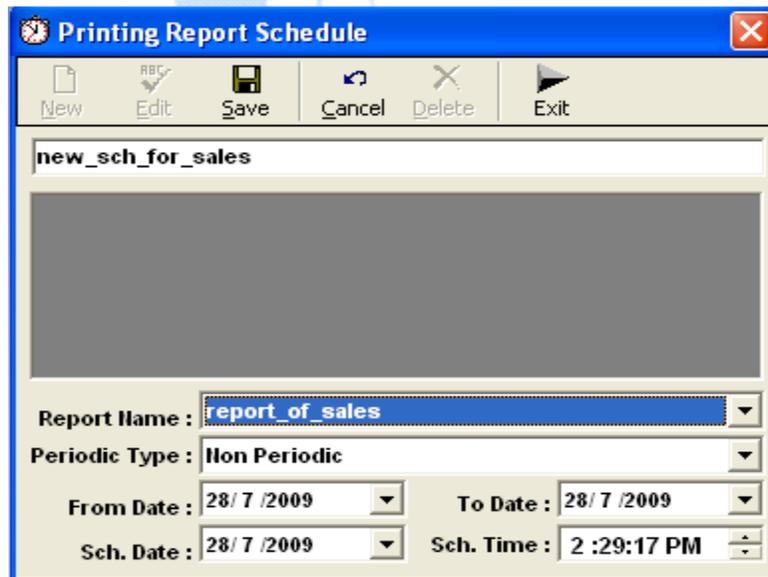
Just enter the name for this report and press save.

## Open report



You can re-create any of the pre-saved report. Just select it and assigne the new date period and press open, the result will be displayed as if you create the report from scrach.

## Printing report schedule



You can create report schedule for any of the pre-saved report as follow:

- Put a name for the schedule.
- Select the pre-saved report.
- Select the periodic type: (none, daily, weekly, ...).
- Select the period of interest.
- Select the date/time in which the schedule will be excuted and save.

In the selected date/time of the schedule, the selected report will be calculated (for the selected period) and automaticall exported to Excell sheet with the schedule name at the application folder.

