



# **COMREG PAYPHONE DATABASE USER GUIDE**

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#### 1. Introduction

# 1.1 Background

The COMREG Payphone Database has been designed to act as a central store of Irish Payphone numbers. The system is browser based and provides screen functionality to allow operators:

- Add new numbers to the database
- Modify details of an existing number
- Take an existing number out of service
- Add a file of new numbers to the database
- Download a file of all numbers currently within the database

This user guide has been designed to assist users who will access the system. It is structured as follows:

- An Introduction (this section)
- A section on System Connectivity
- A section on System Functionality
- Two appendices, one of which details the layout of upload and download files.

# 1.2 Objectives

The objectives of this document are as follows:

- Describe what the user needs to do to connect to both the Payphone database Production system, and the Payphone database Training system.
- Describe the various screens within the system
- Provide a layout definition for upload and download files, enabling operators to construct upload files, and parse download files.

## 1.3 Scope

Included in the scope of this guide are:

• Functionality of the COMREG Payphone Number database

Excluded from the scope of this guide are:

- Listing of user ids and passwords which will be provided on an individual basis to system users.
- Functionality of other central datastore systems such as the Geographic/Non Geographic Number Porting system

## 1.4 Assumptions

The following assumptions are being made:

• Persons reading this guide will be familiar with using web applications.





# 2. System Connectivity

# 2.1 Connectivity Requirements

The method for accessing the Payphone Database application has changed. Since the launch of the application, access has been by means of analogue dial up, but now the users will gain access via the internet.

The user will access the application by launching their Internet Explorer desktop browser and entering the appropriate URL, depending on whether they want to use the production or test system.

#### The URLs are as follows:

- Production System: <u>www.fixedtelecom.ie/PAC</u>
- Training System: www.fixedtelecom.ie/PACTRAINING

Once the user has entered the URL and hit enter, the system will present a dialog box which challenges the user for a username and password, as shown in the screen-shot below. When the user enters in a valid username and password they will be directed to the Payphone database home page.





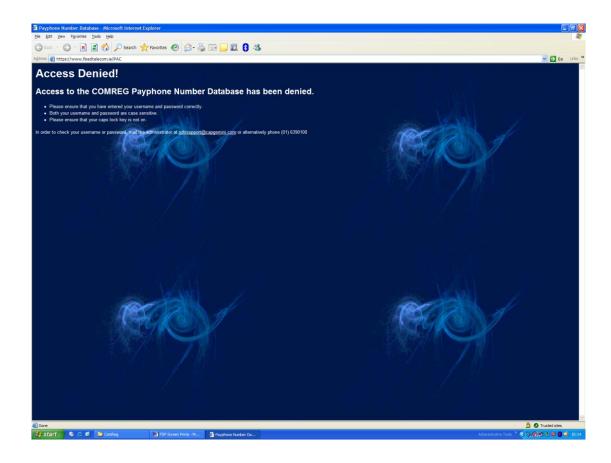






# 2.2 Access Denied Page

When a user enters an incorrect username or password, the system will present the dialog box again. If a user enters an incorrect username or password more than 3 times, they will be presented with an Access Denied screen informing them that they have been denied access to the Payphone database. This screen provides a list of checks to make before trying to gain access, followed by contact details in case a user has any queries.





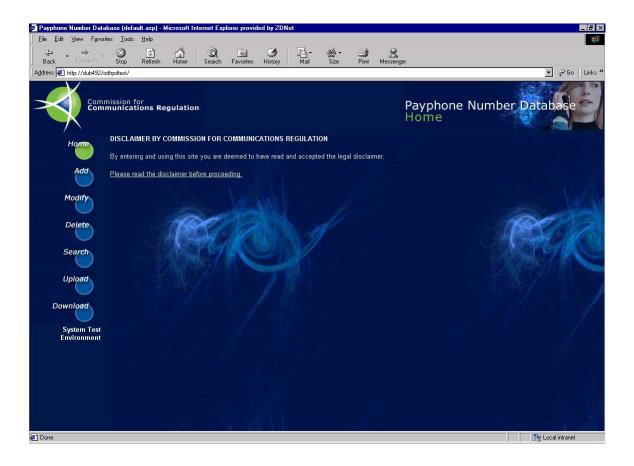


# 2.3 System HomePage

The system presents the Home Page when you first access the system. This page provides a link to the Disclaimer, explaining that users are assumed to have read and accepted the contents of the Disclaimer.

The system also displays a navigation bar which provides a set of links to the other pages on the site. The links will be all of the following or a subset, depending on your profile.:

- Home
- Add
- Modify
- Delete
- Search
- Upload
- Download



**Note**: The options displayed are dependent upon the access permissions of the signed on user. Some users may not see all of the options listed above.

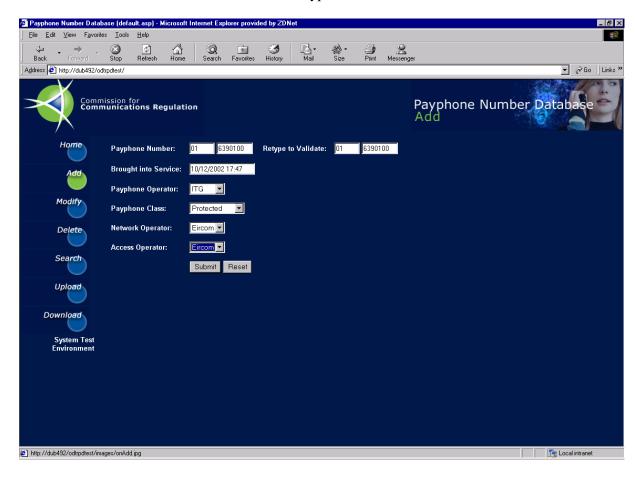




# 3. System Functionality

# 3.1 Adding a Number

The Add screen allows the user add individual Payphone numbers to the database.



Add a Payphone Number – Field and Description Table

Field	Description	
Payphone Number	The Payphone Number has two elements – STD code and Number –	
	both of which must be entered	
Retype to Validate	Re-enter the STD code and Number in these fields as a validation	
	check	
Brought into Service	This will initially be populated with the current system date and time, which may be modified:	
	The date must be in dd/mm/yyyy format e.g. 23/12/2001 and is mandatory	
	• The time element is optional and must be in h24:mm format e.g. 14:00	
	• If the time element is omitted it will default to 00:00	
	The date entered cannot be in the future	
Payphone Operator	Select the Payphone Operator from the drop down list (N.B. If your	





	login credentials are associated with a specific Payphone Operator this	
	will be pre-selected and cannot be changed)	
Payphone Class	Select the Payphone Class from the drop down list	
Network Operator	Select the Network Operator from the drop down list (N.B. If your	
	login credentials are associated with a specific Network Operator this	
	will be pre-selected and cannot be changed)	
Access Operator	Select the Access Operator from the drop down list (N.B. If your login	
	credentials are associated with a specific Access Operator this will be	
	pre-selected and cannot be changed)	
Submit	'Submit' will validate the details entered, and assuming all data	
	entered are valid, store the new Payphone Number on the system	
	database	
Reset	'Reset' will clear any data entered and reset all fields to their initial	
	values	

When you click submit, the details entered in the free format fields (non drop down lists) will be validated as follows:

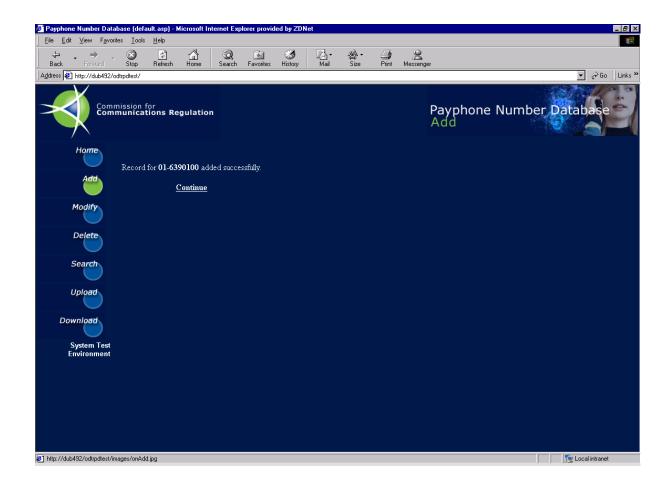
- the STD is a valid numeric and exists within the list of valid STD codes maintained within the system.
- the Number portion is numeric and between 5 and 7 digits
- the Number does not already exist within the database.
- the Brought into Service Date is a valid date and is not in the future.

If a check fails, an appropriate error message will be returned to the user and they will be allowed modify the erroneous data and submit once more.

On successful validation, the number will be added to the database and a 'success' message returned to the user, as shown on the screen shot on the next page.







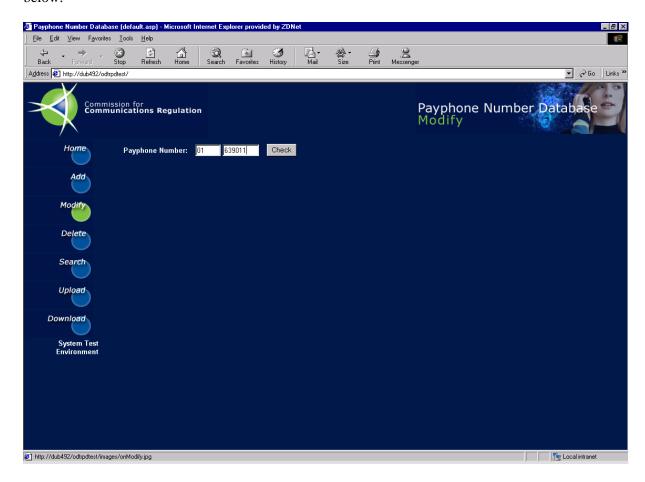
Reference: ODT03/003 Version 2.0 - May 2006





# 3.2 Modifying a Number

The 'Modify' screen is used to change the details of an existing number. It works over two stages. On the first screen the user enters the number on which the change is required, and selects the 'check' button to retrieve the registered details for that number. A screen shot of the initial screen is included below:



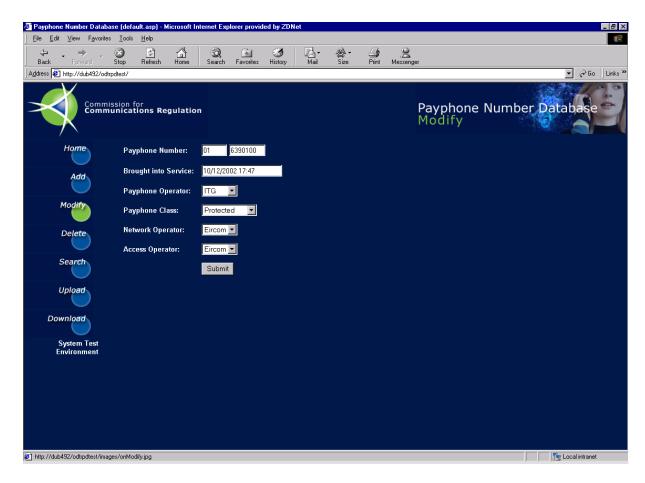
Modify a Payphone Number Screen 1 – Field and Description Table

Field	Description	
Payphone Number	The Payphone Number has two elements – STD code and Number –	
	both of which must be entered	
Check	'Check' will retrieve the requested Payphone Number record ready for	
	making changes	

If the number entered cannot be located or if the number queried was added by a user associated with a different Operator, then an appropriate error message will be returned to the user, and they will be allowed re-enter the number. Assuming the number entered is found within the database and the signed on user is allowed access to it, then the main 'Modify' screen will be displayed. A sample main 'Modify' screen is included on the following page.







Modify a Payphone Number Screen 2 – Field and Description Table

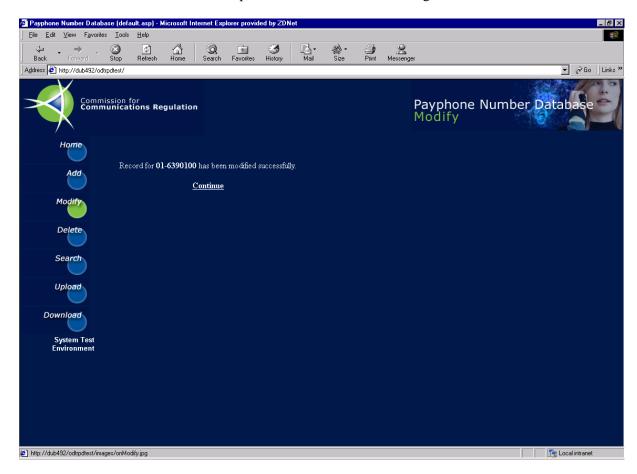
Field	Description		
Payphone Number	The Payphone Number has two elements – STD code and Number –		
	and is 'read-only' in this mode		
Brought into Service	This will be populated with the original stored date and time, and may		
	be modified:		
	<ul> <li>The date must be in dd/mm/yyyy format e.g. 23/12/2001 and is mandatory</li> </ul>		
	• The time element is optional and must be in h24:mm format e.g. 14:00		
	• If the time element is omitted it will default to 00:00		
	The date entered cannot be in the future		
Payphone Operator	Select the Payphone Operator from the drop down list (N.B. If your		
	login credentials are associated with a specific Payphone Operator this		
	will be pre-selected and cannot be changed)		
Payphone Class	Select the Payphone Class from the drop down list		
Network Operator	Select the Network Operator from the drop down list (N.B. If your		
	login credentials are associated with a specific Network Operator this		
	will be pre-selected and cannot be changed)		
Access Operator	Select the Access Operator from the drop down list (N.B. If your login		
	credentials are associated with a specific Access Operator this will be		
	pre-selected and cannot be changed)		
Submit	'Submit' will validate any details entered before storing the modified		
	Payphone Number details on the system database		

Reference: ODT03/003 Version 2.0 - May 2006





The same validation checks as described earlier for the 'Add' screen, are also performed on selecting 'submit' on this screen. However, assuming successful validation, the modified numbers details will be saved to the database and the user presented with a success message such as that below.



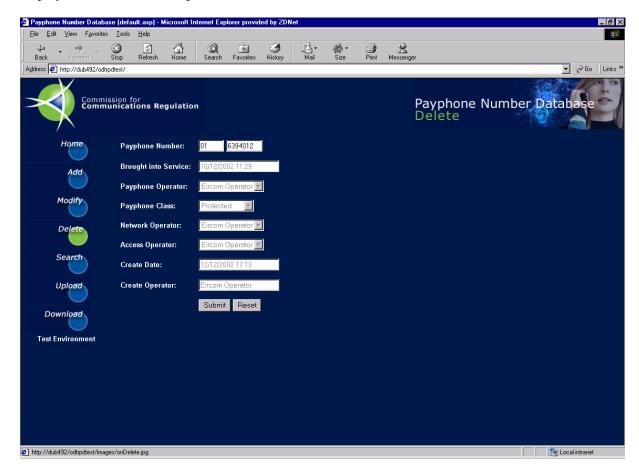




## 3.3 Deleting a Number

The 'Delete' screen is used to take an existing number within the database 'Out of Service'. It works over two stages, as in the case of the 'Modify' screen. On the first screen the enters the number on which the delete is required, and selects the 'check' button to retrieve the numbers details. A screen shot of this screen is not included here as it is almost exactly the same (in look and function) as that described just previously for the 'Modify' scenario. The only difference being an additional check which informs the user that an 'already out of service number' cannot be taken 'Out of Service'.

Assuming the number entered passes all validation checks, and then the main delete screen is displayed to the user. A sample screen is included below.

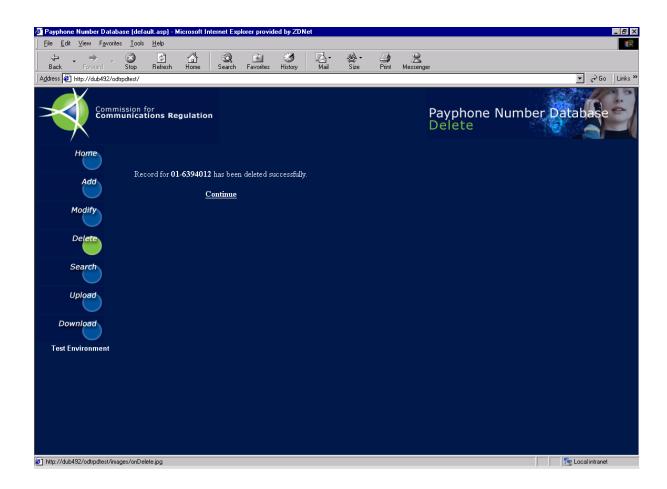


The user is not permitted to change any data on the 'Delete' screen. All fields are in ready only mode and are displayed for information purposes only i.e. to allow the user be sure that they are deleting the correct number.

Two buttons are displayed on screen, 'Reset' and 'Submit'. 'Reset' will return the user to the 'check' screen, while 'Submit' will take the number displayed 'Out of Service' (Delete). On a successful 'delete' the user will be provided with a 'success' message such as that displayed on the following page:









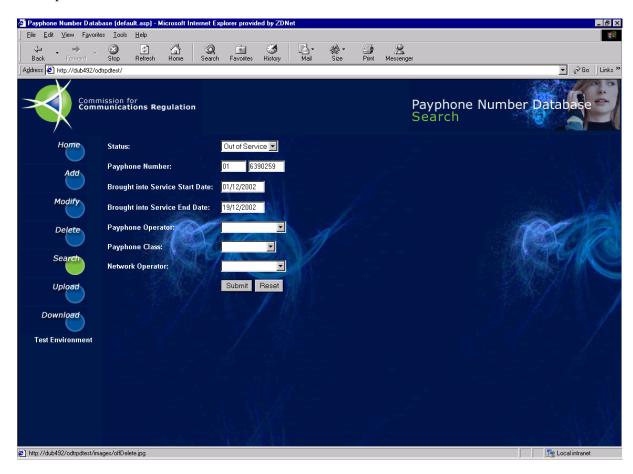


# 3.4 Searching a Number

The 'Search' screen allows the user to query details on existing numbers within the database. The 'Search' function contains three screens:

- The first screen is used to capture the users 'Search' criteria
- Assuming one or more records are found that match the user's criteria, then the second search screen (and first results screen) is displayed. If a number on this screen has an audit trail (its details have changed since it was first added to the database e.g. a number now 'Out of Service' but was previously 'In Service') then a 'selectable' 'Audit Trail' link will display alongside
- On selecting the 'Audit Trail' link, previous versions of the record will display on the 'Audit Results' screen.

A sample screenshot of the first search screen is included below:



Note: status normally defaults to 'In Service'.

Search for a Payphone Number Screen 1 – Field and Description Table

Field	Description
Status	Select a Status from the drop down list. By default it is set to "In Service", which can be changed to "Out of Service" but cannot be left blank
Payphone Number	The Payphone Number has two elements – STD code and Number –





	1: .: 1 D 4 0700 1 137 1 1 1 0 11 1 1 .:0		
	and is optional. Both STD code and Number may be left blank, but if		
	either field contains a value then both must contain values. When a		
	Payphone Number is specified at most 1 record will be returned by the		
	system		
<b>Brought into Service Start</b>	This will initially be populated with the current system date, which		
Date	may be modified or cleared:		
Dute	The date must be in dd/mm/yyyy format e.g. 23/12/2001		
	The date entered cannot be in the future		
	• The date entered cannot be later than the "Brought into Service End Date" field		
	May only be blank if the "Brought into Service End Date" field		
	is also blank		
<b>Brought into Service End</b>	This will initially be populated with the current system date, which		
Date	may be modified or cleared:		
	• The date must be in dd/mm/yyyy format e.g. 23/12/2001		
	The date entered cannot be in the future		
	• The date entered cannot be earlier than the "Brought into		
	Service Start Date" field		
	May only be blank if the "Brought into Service Start Date"		
	field is also blank		
Payphone Operator	Select the Payphone Operator from the drop down list		
Payphone Class	Select the Payphone Class from the drop down list		
Network Operator	Select the Network Operator from the drop down list		
Reset	Reset's the screen to its initial state		
Submit	Validates the data entered and executes a search for matching numbers		
	based on the users input criteria.		
	*		

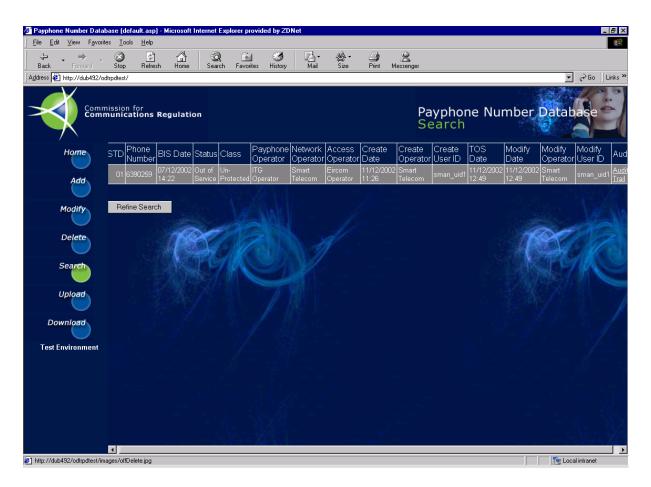
**Note**: access restrictions may limit certain users to 'searching' only on their associated Operator Type. In this case the only Operator name to appear in one of the Operator lists will be that of the users own Operator, and the user will not be allowed clear the value or provide any other.

Once the user selects 'Submit' the validations described above will be applied, and if a particular validation fails, then the user will be provided with an appropriate error message and allowed to modify the erroneous data. Assuming that valid data values and a valid search criteria combination have been entered, then the system attempts a search based on the users criteria. If no data is found an 'information' message to this effect is returned to the user, and they are allowed return to the search screen to modify their search criteria.

However, assuming numbers exist within the database that match the user's 'Search' criteria, then the first 'search results' screen is displayed. A sample results screen is included on the following page.







The above screen displays details for one number only, indicating that only one number satisfied the users search criteria. In our example a search was executed for a specific 'Out of Service' number between a start and an end Brought Into Service date range i.e. the date the number was initially brought into service. The search returned the above record.

The usual details associated with a number are displayed, with the following additional fields:

- Creation Details. A set of fields that will always be populated.
  - ⇒ Create Date: the system date and time the number was originally added (either via 'Add' or 'Upload' functions) to the database.
  - ⇒ Create Operator: the Operator the signed on user is associated with, that initially added the number to the database.
  - ⇒ Create User ID: the User ID of the user that initially added the number to the database.
- TOS Date: Taken 'Out of Service' date. This field will only appear if the original search was based on 'Out of Service' numbers.
- Modification Details. A set of fields that will only have values if the number's details have changed (once or more) since it was first added to the database.
  - ⇒ Modify Date: the system date and time the number was last modified (either via the 'Modify' function, or the 'Add', 'Upload', or 'Delete' functions if the number has switched between 'In Service' and 'Out of Service' states).
  - ⇒ Modify Operator: the Operator the signed on user is associated with, that performed the modification.
  - ⇒ Modify User ID: the User ID of the user that performed the modification.





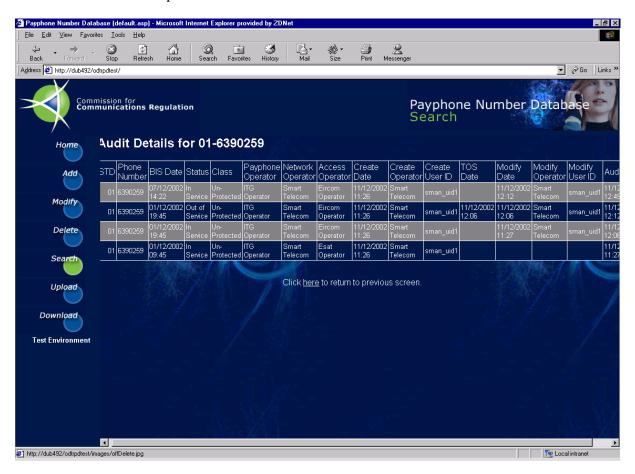
Audit Trail: The 'selectable' Audit Trail link will only appear if previous versions of the record
exist and can be viewed by clicking on this link. This will load the 'Audit Trail' screen for this
record.

If more than one number meets the user's search criteria, then numbers are displayed in 'Date Brought Into Service' order, and if more than twenty records meet the user's search criteria, then the following two 'selectable' links are displayed at the base of the screen:

- Next: selecting this link will update the screen with details of the 'next' twenty records in 'Date Brought Into Service' order.
- Previous: the 'previous' link will only display on second, third and so on 'twenty record result' screens. As its name suggests, it will return to the previously displayed twenty records.

The 'Refine Search' button which appears in the bottom left corner of the screen can be used to return to the original search screen, with the original criteria intact. This allows the user to modify the criteria and execute a new search, if they do not like the results of the previous search.

If the user selects the 'Audit Trail' link, then the audit trail of the chosen number will be displayed, in date audited order. A sample 'Audit Details' screen is included below.



The layout of the audit screen is very similar to that of the previous 'Search Results' screen, except for the following minor differences:

- Audit Date: this additional field contains the system date and time that the audit actually took place
- A link is included at the base of the screen to allow the user return to the previous 'Search Results' screen.



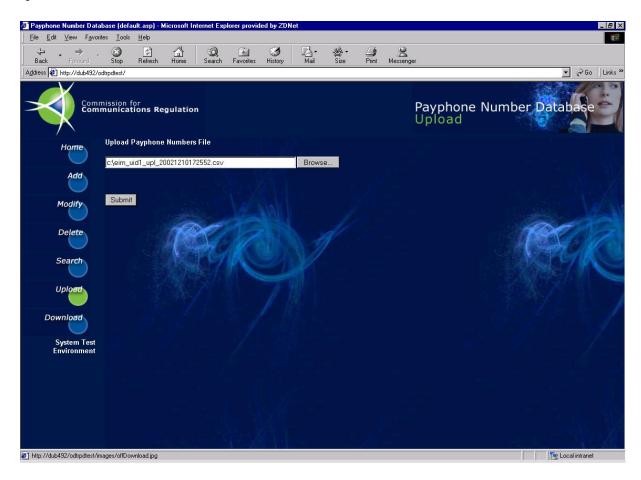


• A 'Refine Search' button or Next 'and' Previous' links are not necessary on this screen

# 3.5 Uploading a File of Numbers

The 'Upload' screen allows the user add a file of numbers to the database. Details on file format and associated validation checks are included in Appendix B.

Two screens are involved. The initial screen allows the user select the file they require to upload, and 'submit' the upload. The second screen displays the results of the upload. An example of the initial upload screen is included below:



The 'browse' button displays an additional dialogue that allows the user select the required local file via point and click action. Alternatively the full file name and path can be typed directly to the file name field.

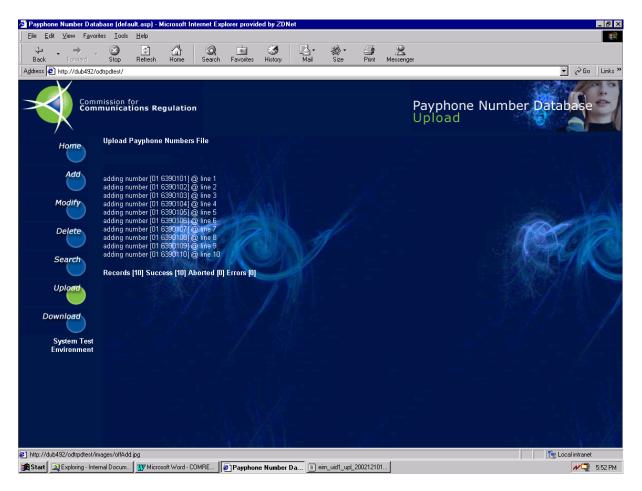
Once a file name has been provided, selecting 'Submit' will upload the file, validate the file, and assuming all validations succeed process the records contained within the file. File layout validation is described in Appendix B.

Assuming file layout validation succeeds, then each record contained in the file are both validated and processed. If a record fails validation it will not be added to the database, a suitable error description will be added to the upload log, and processing will continue for the next record in the file. Once processing of the file has completed, the results will be displayed on screen in the form of the 'upload





log'. A sample 'upload log' screen is included below for an upload based on a file containing ten numbers.



The log screen contains the following items:

- A result line for each number in the file. The message displayed could be one of the following:
  - ⇒ A message indicating that the record was added to the database successfully (as in the above ten cases)
  - ⇒ An error message indicating that the record was not added due to the identified error. **Note**: the same validations as described earlier on the 'Add' screen, are applied to the data fields of each record in the file.
  - ⇒ An information message indicating that while the record's content was valid, it was not added as it existed already etc.
- A report total line with the following fields:
  - ⇒ Records : the total number of records in the file
  - ⇒ Success: the total number of records added to the database
  - ⇒ Aborted: the total number of adds not executed due to system constraints i.e. the record existed already.
  - ⇒ Errors: the total number of records not added due to data errors or failures on validation e.g. future Brought Into Service Date etc.





## 3.6 Downloading a Dump File

The 'Download' function allows the user take a copy of the system's number database. The database contents are copied to a text file (the format of which is defined in Appendix B) and the user is prompted to save the generated file to a location on their local PC.

There are a number of screens involved in the download function. The screen below is used to initiate the download.



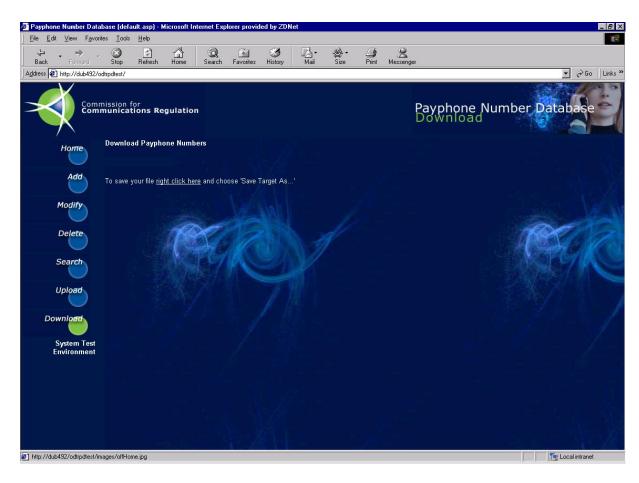
### **Notes:**

- The download file generated will contain the current state only (no audit information) of each number within the payphone database.
- The file includes numbers which are currently 'Out of Service'.
- In some cases certain users will only be provided with details of numbers that directly relate to the Operator that they are associated with. This is controlled via system access privileges.

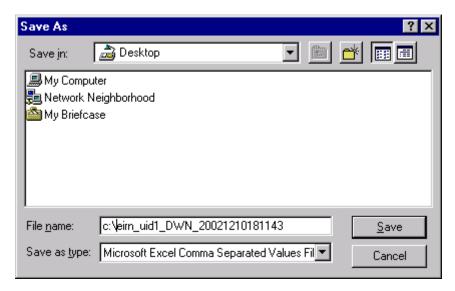
Once 'Submit' is selected on the above screen, the download file is generated in the background and on completion, the 'Save' screen as shown on the following page is displayed.







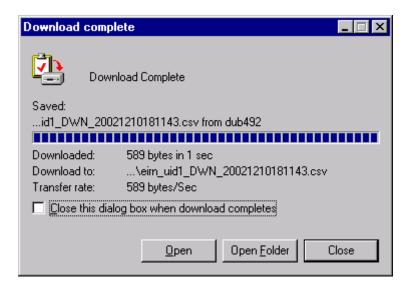
The 'Save' screen provides a 'selectable' link that when 'selected' prompts the user with a dialogue to confirm the location on their local PC, that the generated download file should be saved to. The dialogue is shown below.



When the user chooses a location and selects 'Save', downloading is initiated to that location, and the 'progress' dialogue shown on the following page is displayed.







The above dialogue shows the 'progress' of the download. Once the blue progress bar has completed, the dialogue should be closed by selecting 'Close'. A download file of the system-generated name (shown on above dialogue and on previous dialogue) now exists at the users chosen location on their PC.





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# **Appendix A: Document Control**

# **Version History**

Version	Date	Comments
0.1	13/12/2002	First draft prepared from CGE&Y standard template
0.2	16/12/2002	First draft updated after internal review
1.0	19/12/2002	Second draft updated with refreshed screen shots following UAT
1.1	08/01/2003	Final version following comments from COMREG
1.2	26/11/2003	Addition of new Operator and change in Engagement Manager
2.0	28/04/2006	Updates to reflect changes in migration of system to being web facing.

## **Document Distribution**

Name	Location	Responsibility	Action / Information
Andrew Stone	COMREG	COMREG Payphone Database Project Sponsor	Review
Karen Kavanagh	COMREG	COMREG Telecoms Engineer	Review
Rory O'Donnell	Capgemini	Capgemini Project Manager	Review
Phil Dyrsdale	Capgemini	Capgemini Technical Architect	Review
Capgemini Engagement Support	Capgemini	System Maintenance and Support	Information

# **Document Reviewed By**

Name	Location	Responsibility	
Chris Leonard	Capgemini	Capgemini Manager	Engagement

Reference: ODT03/003 Version 2.0 - May 2006





# **Appendix B: Data File Definitions**

#### File Format

Both upload and download files share a common variable length comma delimited (.csv) format. A file will contain a header record, one or more detail records, and a trailer record. Each record is terminated by a carriage return/new line. File naming must conform to the following convention:

## **File Naming**

USERID\_UPL/DWN\_YYYYMMDDHHMMSS.csv

Where reading from left to right

USERID The current user's User ID

The literal ''

UPL UPL should be used in the upload scenario. DWN will be used by the system

in the download scenario.

The literal ' '

YYYY Current 4 digit year MM Current month – 01 to 12

DD Current day of month – 01 to 31
HH Current hour of day – 00 to 23
MM Current minute of hour – 00 to 59
SS Current second of minute – 00 to 59

e.g. eirn\_uid1\_UPL\_20021215112535.csv in the case of a user of user id 'eirn\_uid1' uploading a file, and 'sman\_uid1\_DWN\_20021215170123.csv in the case of signed on user 'sman\_uid1' taking a download.

**Note**: when attempting to upload a file, the system will validate to ensure the file name conforms to the above convention, and that the signed on user is the user id specified in the file name.

#### File Header

The header record will take the following format:

HH,FType

Where

HH is the literal 'HH' denoting the header record

is the comma delimiter

FType is the file type: 1 for upload, 2 for download.

Thus HH,1 in the case of an upload file, and the system will use HH,2 when creating a download file. Again system validation ensures that only upload files with valid header records are processed.

#### File Footer

The trailer record will take the following format:

TT,NNNNN

Where

TT is the literal 'TT' denoting the trailer record

is the comma delimiter

NNNNN is the number of data records in the file (excludes both

Header and Trailer records)

Reference: ODT03/003 Version 2.0 - May 2006





Thus a trailer of TT,10 denotes a trailer for a file with 10 detail records. There is no limit on the number of detail records allowed within a file, however it is recommended to not include more than 5,000 records as on screen reporting of additions/failures will produce quite a lengthy log.

#### **Notes:**

- As in the case of the header, the system will perform trailer record validation, counting the number of detail records in the file and ensuring it matches with the supplied trailer value.
- The trailer record should be terminated by a carriage return/new line. However additional carriage returns/new lines (blank lines) following the trailer line are not allowed and will result in a validation error.

#### **Detail Record**

The format of a detail record is specified in the table below:

Order	Field Name	Description
1	STD	STD Code of number. Must be a valid STD. Present in both
		upload and download scenarios.
2	PHONE_NUMBER	Phone number element. Must be numeric and contain
		between 5 and 7 digits. Present in both upload and download
		scenarios.
3	STATUS_ID	Single digit. Valid entries are either 1 or 2, where 1 denotes
		"In Service" and 2 denotes "Out of Service". For upload the
		only valid entry is 1, otherwise the record will be rejected.
		Must have a value in both upload and download scenarios.
4	CLASS_ID	Payphone Class ID. Currently can be 1 (Un-Protected), 2
		(Protected) or 3 (Private). Maximum size 2 digits. Must have
		a value in both upload and download scenarios.
5	BIS_DATE	Brought Into Service Date. The format will be
		DD/MM/YYYY HH:MM. Must have a value in both upload
		and download scenarios, and dates in the future are not
		accepted.
6	PAYPHONE_OP_ID	Numeric ID of the Payphone Operator. This must be a valid
		Operator ID, and this Operator must exist in the system as a
		valid Payphone Operator. A list of Operators and their ID's
		are included next. Maximum 2 digits. Must have a value in
7	NETWORK OF IT	both upload and download scenarios.
7	NETWORK_OP_ID	Numeric ID of the Network Operator. This must be a valid
		Operator ID, and this Operator must exist in the system as a
		valid Network Operator. A list of Operators and their ID's are included next. Maximum 2 digits. Must have a value in
		both upload and download scenarios.
8	ACCESS_OP_ID	Numeric ID of the Access Operator. This must be a valid
	ACCESS_OI_ID	Operator ID, and this Operator must exist in the system as a
		valid Access Operator. A list of Operators and their ID's are
		included next. Maximum 2 digits. Must have a value in both
		upload and download scenarios.
9	TOS_DATE	Taken out of service date. Will only be present in the
	_	download file. Format will be DD/MM/YYYY HH:MM.

## **Operator Identifier Values**





At system launch the following Operators exist within the system, and the table below specifies their assigned ID's.

Operator ID	Name
1	Eircom
2	Esat
3	ITG
4	Silvertel
5	WorldCom
6	ComReg
8	Smart Telecom
9	NTL

### **Sample Files**

A sample upload file is included below:

HH,1 01,9012045,1,3,14/12/2002 09:20,3,8,1 01,9012056,1,3,10/12/2002 22:34,3,8,1 TT,2

A sample download file is included below:

HH,2 01,9012045,1,3,14/12/2002 09:20,3,8,1 01,9012056,1,3,10/12/2002 22:34,3,8,1 01,9012044,2,1,05/10/2002 08:15,1,1,1,12/12/2002 13:22 01,9012046,1,2,10/12/2002 22:34,4,5,2 TT,4