

ICL Pathway Ltd	Business Incident Management Service High Level Design	Ref:	TD/DES/129
		Version:	2.1
	Company In Confidence	Date:	21/11/01

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**Document Title:** Business Incident Management Service High Level Design

**Document Type:** High Level Design

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**ABSTRACT:** This document contains the High Level Design Specification for the Business Incident Management Service required to support the activities of Customer Services Management Support Unit in the area of resolving Horizon incidents.

**Document Status:** DRAFT

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## 0.0 Document Control

### 0.1 Document History

Version No.	Date	Reason for Issue	Associated CP/PinICL
0.1	14/01/00	Draft for review	CP2352
0.2	28/01/00	2 <sup>nd</sup> draft incorporating review comments and POCL Reporting Changes.	CP2415
1.0	15/02/00	Incorporating final review comments.	
1.1	18/08/00	Draft for review.	CP2628
2.0	22/09/00	Incorporating final review comments.	
2.1	21/11/01	Discrepancy correction prior to handover to SSC	

### 0.2 Approval Authorities

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### 0.3 Associated Documents

Reference	Version	Date	Title	Source
PA/TEM/001			ICL Pathway Document Template	PVCS
1 TD/REQ/003	1.0	15/11/99	Requirements for a Business Incident Management Service	ICL Pathway
2 CS/SPE/008	1.0	05/01/99	Reconciliation Exception Database APS/EPOSS	ICL Pathway, Customer Services BSU

**Unless a specific version is referred to above, reference should be made to the current approved versions of the documents.**

### 0.4 Abbreviations/Definitions

Abbreviation	Definition
APS	Automated Payment Service
BIMS	Business Incident Management Service

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BSM	Business Service Management
EPOSS	Electronic Point of Sale Service
HAPS	Host Automated Payment System
HSB	Horizon Service Helpdesk
MER	Manual Error Report
MSU	Management Support Unit
NR2	New Release 2
RED	Reconciliation Exception Database
SLA	Service Level Agreement
TDA	Technical Design Authority
TIP	Transaction Information Processing

## 0.5 Changes in this Version

Version	Changes
0.2	<p>As a result of meetings with POCL a set of changes has been identified and approved in CP2415. The changes will affect layout and content of forms and reports but have no effect on the design fundamentals. Consequently the only sections affected are 5.1 through 5.4. The changes requested in the CP are listed below.</p> <ul style="list-style-type: none"> <li>• The service code field needs removing, whereas incident type remains the same / replaces the aforementioned field. The data for this field will be one of the following options: 'APS, EPOSS, OBCS'.</li> <li>• 'Exception Total' needs changing to 'Exception Value'.</li> <li>• Several new fields need adding under the 'BIMS heading / area' are 'Transaction Date', 'FAD' and 'CAP' (these are non-compulsory fields).</li> <li>• Under the 'Other References' heading, 'TIP reference' needs changing to 'TIP/TP/OSG Reference'.</li> <li>• Under the 'System Incident References' remove the 'D' from HSHD so that it is shown as 'HSH'.</li> <li>• Liability heading to be re-titled 'Transaction Liability'.</li> <li>• 'Transaction credit' field is to be removed.</li> <li>• Under settlement details: The heading 'Investigation Cost Settlement' is replaced with 'Manual Error Report Charge'.</li> </ul>

	<ul style="list-style-type: none"> <li>The fields below MER Charge require amending to the following: <ul style="list-style-type: none"> <li>Number of chargeable MER</li> <li>MER Settlement Amount (replaces IC Settlement Amount)</li> <li>MER Invoice Number (replaces IC Invoice Number)</li> <li>MER Invoice Date (replaces IC Inv Date)</li> </ul> </li> <li>'Transaction' heading requires changing to 'Transaction Detail'.</li> <li>Then a subheading adjacent to 'Transaction Detail' is required stating 'Manual Error Report', with a Yes / No facility.</li> <li>All hard coded 'Predefined Transaction' fields to be removed and replaced by 20 'Definable Transaction' fields.</li> <li>For each 'Definable Transaction' that is listed, the user needs to be able to select the type which will be: <ul style="list-style-type: none"> <li>Transaction error</li> <li>Cash account error (this could be done as a drop down where one of the 2 is selected).</li> </ul> </li> </ul>
1.0	Minor corrections for review comments.
1.1	A new field, Txn Cost, has been added to the Transactions table and therefore to the transactions subform. The sum of the transaction costs for an incident is now used to populate the MER Set Amt field in the Incidents table. The TXN Error Type field now becomes redundant. A Charging Summary report has been introduced for MSU use.
2.0	None, approved version.
2.1	Correction of discrepancies between the HLD and the live system found during the handover process between IPDU and SSC. The document has also been reformatted with the latest Pathway Document Template to avoid the problem of the old ICL fonts not being present on individual PCs.

## 0.6 Changes Expected

Changes
Requirements are being formulated for support of Network Banking Incidents.



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## 1.0 Introduction

The purpose of this document is to specify the High Level Design for the Business Incident Management Service to be implemented for Customer Services Management Support Unit (MSU). The requirements for the service are stated in the document 'Requirements for a Business Incident Management Service', [1]. The scope of these requirements is limited by CP2352. The design has been prototyped with the help of Angela Shaw of Customer Services MSU.

## 2.0 Scope

CP2352 states that it introduces the first phase of a 2-stage implementation of BIMS. Stage one of the implementation covers the functionality to support logging, tracking and hard-copy reporting of incidents. The solution is to be a direct replacement for the existing RED database. The second phase was to be covered by a further CP, requesting the implementation of a solution for delivery of reports to POCL. This second stage is not now expected to be implemented.

CP2628 introduces changes to the reporting of transaction costs, following a change of procedure agreed with POCL.

## 3.0 Design Principles

A main priority for the TDA solution to the MSU's requirements was to achieve minimum cost, whilst still providing an adequate service. To this end it was decided that the architecture for the service should be the same as for the existing RED database, i.e. a Microsoft Access database residing on a Customer Services server, subject to the existing access restrictions (see later section).

A prototype has been developed as part of the design process. This was further developed to become a first version of the system.

The original requirement to provide a report delivery facility is not now expected to be implemented. Should the requirement for electronic delivery of incident reports to POCL be revisited at a later date the solution should form part of a wider solution to cover all of MSU's reports for POCL. This is outside the scope of the current version of the document.

## 4.0 Requirements

The following requirements have been extracted from the Requirements Catalogue in the requirements scope document [1]. Where a requirement has been limited by CP2532 or held back for later implementation a comment has been attached in *italics*.

### 4.1 Functional Requirements

#### 4.1.1 Incident Logging

- a) A facility is required to enable the receipt, progress and resolution of incidents to be logged. Each incident must be uniquely identifiable for subsequent enquiry.
- b) It must be possible to attach evidence such as a scanned document to an incident.

- c) It must be possible to cross-reference incidents of a similar nature.

#### **4.1.2 Incident Enquiry**

- a) It must be possible to view the entire history of an incident, including individual actions and final conclusion.
- b) It must be possible to group incidents into categories for subsequent analysis.
- c) It must be possible to monitor progress against a Service Level Agreement. A reminder must be issued on loading the system for any incidents that must be cleared by close of business that day.
- d) The new service must cut-over at the start of a calendar month. Information regarding APS and EPOSS incidents captured in the existing RED database from the start of NR2 does not have to be accessible via the new service but must be available for update of outstanding incidents and for viewing of old incidents.

#### **4.1.3 Progress Reporting**

- a) The receipt, progress and resolution of an incident must be reported to POCL. Incident updates must be delivered on a daily basis, normally at the end of the working day, to HAPS(Farnborough), TIP(Chesterfield) and BSM(Sheffield).
- b) Provision must be made to replace the current practice of faxing/posting updates. With the volumes expected it will no longer be practical to deliver reports in this way. The MSU's preferred method is for POCL to have read-only access to the database (or a copy) as no information is held that should not be seen by POCL. Alternatively, a solution where updates are posted to an intranet website to which POCL have access would be acceptable provided the extra work involved in transferring the information is minimal.

*This requirement is to be satisfied in the second stage of the implementation. In the interim, a hard-copy facility must be available to allow the current practice of posting updates to continue.*

- c) It must be possible to carry out ad hoc enquiries by incident in order to answer immediate queries, e.g. telephone queries, data-protection queries.

#### **4.1.4 Reference & Static Data**

- a) Where an incident is related to an outlet it must be possible to record the FAD Code and use it for subsequent analysis.
- b) It must be possible for MSU staff to maintain the static data tables, to introduce new analysis codes, etc., as necessary.
- c) A charge may be applied to incidents to cover investigation costs. An investigation cost base value needs to be held so that a new rate can be applied to an individual incident, where applicable, without the need for reprogramming.

#### **4.1.5 Internal Reporting**

- a) A report of Liability settlements is required, showing invoice details where final liability has been assigned.
- b) An SLA Status report is required to enable performance against SLAs to be tracked.

- c) An ad hoc reporting facility is required to enable MSU staff to generate their own additional reports and enquiries. Access to the database from both Microsoft Access and Business Objects is required.

## 4.2 Non-functional Requirements

Note: the Audit and Security requirements included here were originally drawn up for RED. It has been confirmed that these requirements still stand and should also apply to BIMS.

### 4.2.1 Audit

It has been decided that the BIMS database should be included in the standard audit procedures. This needs to be taken into account in both the choice of platform and the system design.

- BIMS-IAR2 All records of exceptions handled, investigated and resolved by MSU and recorded on BIMS must be retained for a period not less than 18 months.
- BIMS-IAR6 Each change or input to BIMS must be associated with the person carrying out the change or input.

### 4.2.2 Security

- BIMS-IAR4 The BIMS facility must be physically secure and access to it limited to those personnel specifically authorised.
- BIMS-IAR5 Logical access to the BIMS facility must be password controlled. Effective password management must be practised.

### 4.2.3 Access

- a) The service must allow for multi-user access. This is necessary to cater for possible peaks in incident occurrence and for increased staffing levels in the event of significant increase in incident volumes during Roll Out.
- b) The client application should reside on the PCs of the individual users. *The intention of this requirement was for provision of access to the service from the user's PCs rather than from a standalone box. The requirement has been satisfied by placing the client application on the MSU server in a folder restricted to the authorised users. The application is then accessed by the users from their own PCs. This solution avoids having to load enhancements on several boxes and allow better sharing of queries, etc.*
- c) Access to the database must be provided for use with Business Objects for MIS reporting purposes.

### 4.2.4 Performance

- a) The service must be capable of supporting 10 users processing an estimated 70 incidents per day at full Roll Out. Each incident may be updated an average of three times after creation, including final closure.
- b) A clear-down process must be provided to remove incidents which have been closed for 18 months.



#### **4.2.5 Resilience**

- a) The MSU needs a properly supported service. The existing system is currently supported by staff with limited knowledge of Access.
- b) The service should provide for daily backups to ensure manageable levels of re-input effort in the event of system failure. For loss of the database alone, a restore to the last dump will be sufficient based on current volumes. They may need to put some kind of manual procedure in place to aid re-input should it be necessary.

#### **4.2.6 Service Levels**

- a) The MSU feel they could cope for 2 days in the event of loss of the system. A longer period of downtime could cause a backlog that couldn't be caught up. The impact of a loss of service would vary according to the type of incidents being reported. A series of incidents requiring lots of updates to HAPS would be a problem. A manual procedure has been defined for use in overload situations but this does have the disadvantage that detailed information for subsequent analysis will be lost.

### **4.3 Requirements for CP2628**

The functional requirements are changed as a result of CP2628.

- Transactions (MERs) for an incident may now be mixed, in that cash account errors and transaction errors may be logged for the same incident. The transaction error type is therefore redundant and can be removed from the screen.
- There is now no requirement to add an indicator to the transaction record to show the transaction type.
- An additional field is required against each individual transaction record, in order to hold the cost which will be entered manually. The value will not be defaulted to the next transaction.
- The transaction (MER) amount for an incident is to be calculated as the sum of the transaction costs for the incident.
- An additional monthly summary report for export to POCL is required, which lists all MERs for agreement.

## **5.0 System Components**

### **5.1 Application Components**

#### **5.1.1 Static Data Maintenance**

##### **5.1.1.1 BIMS Calendar Maintenance**

A function will be provided to allow the BIMS Calendar table to be updated. Dates may be added and their associated details changed as required. If the details are changed after any reports have been run for the month in question it is the responsibility of the user to ensure that a replacement report is produced if required.



Dates may be added automatically by clicking on the Add Dates button. A pop-up screen is displayed to enable an end date to be selected. Rows are then added to the table for each calendar date between the current highest date and the date selected. The columns are set to the default values defined below but may be amended as necessary. In particular the Day Status must be updated for holidays ('H').

Day Status	'S' (for Mon-Fri) or 'W' (for Sat & Sun)
Day of Week	Mon, Tue, Wed, Thur, Fri, Sat, Sun
Cash Account Week	5199, etc.
Month Text	'99/01 Jan', etc.
Quarter	'99/1', etc.

The value set in the Cash Account Week field is the same for Thursday to the following Wednesday. The value is determined for the current highest date and incremented each following Thursday. When the week number reaches 53 a message box is displayed asking whether the current year is a 53-week year. If the answer is 'no' the week number is set to 1 and the year number incremented. If the answer is 'yes' the year is incremented automatically following week 53.

#### **5.1.1.2 FAD Code Maintenance**

This function allows new FAD codes to be added against their associated region code. FAD codes may also be deleted but only if there are no incidents recorded against it.

#### **5.1.1.3 Resolution Category Maintenance**

This function will enable new resolution categories to be added or changed. Categories may also be deleted provided there are no incidents that reference the category in question.

#### **5.1.1.4 Incident Type Maintenance**

This function will allow new Incident Types to be added or changed. It should be noted however that if a description is amended the change will apply to all previous incidents as well as new ones. A type may only be deleted if there are no Incidents or Incident Classes that refer to it.

#### **5.1.1.5 Incident Class and Investigation Cost Maintenance**

This function will allow Incident Classes and related Investigation Costs to be maintained. If there are Incident Classes related to an Incident Type but no incidents that reference the Incident Class, deleting the Incident Class will allow the incident type to be deleted.

An investigation cost may be specified for an Incident Class, to be applied from a specific date. A cost may be deleted provided the effective date is in the future.

#### **5.1.1.6 Transaction Label Maintenance**

This function will allow a set of labels to be maintained for use in formatting transaction information. It will be possible to delete a label from this table even if there are transactions on the system that reference it. The table provides a list of currently agreed headings which may change with time. It must be possible to take a label out of use by deleting it from the table whilst retaining its presence in any Incident for which it was valid.

#### 5.1.1.7 User Maintenance

This function will allow the names of MSU analysts to be added to the Analyst table. The analyst name is recorded each time an update is made to an incident. The system knows the analyst's NT Username, the table is used to translate it into his/her real name. It also defines the status of valid users, either Analyst or Supervisor. Some functions are accessible only to users with Supervisor status.

### 5.1.2 Incident Maintenance

#### 5.1.2.1 Access Permissions

Primary access to the service is via NT Username and password. In addition a user will only be allowed access to the function if his/her name has been set up in the Analysts table. This is needed so that the NT Username can be translated into a proper name when the system automatically records the analyst responsible for entering incident details.

#### 5.1.2.2 Operational Details

The incident maintenance function comprises a single screen with a set of tabs giving access to the various sections of incident detail. The basic details of the incident appear on every tab. The first tab contains the summary information, including dates and references. The remaining tabs give access to the repeating information, namely logged actions, transactions, affected outlets, settlement information and evidence.

Navigation through the incident data will be via a set of buttons with the following functions:

New	- create new incident;
Cancel New	- cancel incident being created;
Get First	- go to first incident;
Get Previous	- go to previous incident;
Get Next	- go to next incident (note this will not give a blank record at end of file but will remain at last record);
Get Last	- go to last incident;
Find by Field	- go to first record with the value specified in the field specified;
Find next	- go to next record with field value specified;
Save	- save the updates just made;
Print	- produce a print of the current incident;
Export to Word	- produces a Word document for the current incident.
Exit	- exit to main menu.

These buttons are accessible from each of the tabs.

On Entry to the maintenance function a pop-up screen appears listing any incident whose SLA expires today (see later paragraph, Last Day Reminder).

### 5.1.2.3 Basic Details – All Tabs

The basic incident information listed below is shown on all tabs.

BIMS Reference	This is the Horizon Service Helpdesk Reference prefixed by 'BE/'.
Incident Type	A high-level code for grouping incidents, APS, EPOSS or OBCS.
Incident Class	A more detailed code for grouping incidents both for analysis and for assigning investigation costs.
Originator	Indicates the source of the incident report.
Exception Value	Shows the total value of discrepancies associated with the incident, where appropriate.
Transaction Date	Date of the transaction(s) affected by the incident. May hold the date of a report if there are no transactions.
CAP	Cash Account Period. This will be set automatically to the Cash Account Week held in the BIMS Calendar that corresponds to the Transaction Date.
FAD	FAD Code to which the Incident relates if there is only one. May be used even if further affected Outlets are included.
Status	Shows whether the incident is still open or whether it has been closed. Also shows whether the fault was in the Horizon service.
Resolution Category	Can be used to describe the action taken as a result of resolving the incident, etc.
Version	Updated for each action logged against an incident.
Last Updated	Shows the date the incident was last updated and the analyst responsible.
Created	Shows the date the incident was first logged on the system and the analyst responsible. (The date could be different from the received date if for example the system were unavailable at the time.)
Final Update Flag	Set when the final update to be sent to POCL has been entered. (Note: the use of this field will have to be reviewed if POCL are provided with subsequent updates as a result of the stage two CP.)

Where fields are updated automatically they are displayed in red and cannot be overwritten.



#### 5.1.2.4 Incident Summary Tab

**BIMS - Incident Maintenance**

**Incident Summary**    Action Log    Transactions    Affected Outlets    Settlement    Evidence

**BIMS Reference** DE/3    Version: 8    Last Update: 11/02/00 13:56:03    By: Julio

Incident Type: 2    EPOSS    Created: 19/01/00 13:04:43    By: Sean

Incident Date: 2002    Token type 2 mismatch    Final Update Set: No

Originator: PW-SSC    Exception Value:    Transaction Date: 01-Jan-00    CAP: 4196    FAD: 306513

Status: 1    Fault in Horizon System    Resolution Category: User Error

**Other References**    **Service Level Agreement**    **Incident History**

PHEL Reference:    SLA Period: 20    Date Received: 15-Jan-00

Incident XRef:    SLA Date: 16-Mar-00    Suspend Date: 15-Jan-00

TR/POGO Ref:       Unsuspend Date: 17-Feb-00

Incident Incident References:

HSH:    Date Cleared:   

PHEL:    Date Closed:   

Form View    Start    Index    Microsoft Outlook    Business Incident Manage    Microsoft Word - haw ug    11:03

Each of the reference fields can be set from this tab. A Service Level Agreement period can be entered, the SLA date being calculated automatically from the date received. The calculation takes into account non-working days, which are defined in the BIMS Calendar. If the SLA is suspended for any reason the SLA date is recalculated when the 'unsuspend' action is logged.

The dates in the Incident History column are all set via pop-up screens that are triggered when the related action is selected on the Action Log tab.

### 5.1.2.5    Action Log Tab

The screenshot shows the 'BIMS - Incident Maintenance' form. The 'Action Log' tab is selected. The form contains various fields for incident details, including BIMS Reference, Version, Last Updated, Incident Type, Incident Class, Token type 2 mismatch, Created, By, Originator, Exception Value, Transaction Date, CAP, FAD, Status, Fault in Horizon System, Resolution Category, and Final Update Set. Below these fields, there is a section for Action Type (Describe Incident), Analyst (John), and Entry Made (03/02/00 11:45:11). A large text area for Memo is present, with the text 'initial description' at the top. At the bottom, there is a record list showing 'Record: 1 of 3' and a set of navigation buttons.

This tab is the means of recording actions taken during the active life of the incident. The relevant action type is selected and any associated notes entered. For certain action types a pop-up screen appears to collect additional information. The analyst's name and date/time of entry are inserted automatically. Access to the complete set of actions for an incident is via the navigation buttons.

The actions provided are listed below. Where an action is described as requiring supervisor status the status of the user is checked against the Analyst table to ensure the correct authority is held.

1. Describe Incident – allows additional information to be entered if Incident Class doesn't fully describe it. Must be the first action used and can only be used once.
2. Update Incident – used to record information gathered as the investigation proceeds. May be used at any stage after the incident has been described until it has been cleared.
3. Suspend SLA – requires supervisor status. Used to suspend the Service Level Agreement where circumstances arise that have been agreed with POCL. A pop-up screen appears to capture the suspend date which defaults to today. This action cannot be used if an SLA period has not been set and cannot be used more than once. May be used at any stage after the incident has been described until it has been cleared.



4. Unsuspend SLA – requires supervisor status. Restarts the SLA and recalculates the SLA date. Displays a pop-up screen as for Suspend SLA. This action cannot be used unless the SLA has been suspended and may only be used until it has been cleared. The unsuspend date may not be earlier than the suspend date.
5. Set Final Update - sets the flag used to control printing of the 'Final Update' text on the reports sent to POCL. May be used at any stage after the incident has been described up until it has been cleared.
6. Clear Incident – the pop-up screen captures the date (default today) the incident was cleared. This action cannot be used if the incident SLA has been suspended but not unsuspended. May be used at any time after the incident has been described up until the incident has been closed.
7. Close Incident – pop-up screen captures the date the incident was closed, default today. This action cannot be used if the incident has not been cleared; may only be used once unless the incident has been re-opened.
8. Re-open Incident – requires supervisor status. Clears the Cleared and Closed dates. This action cannot be used if the incident has not been closed or cleared; will reset the Final Update Flag and the Cleared and Closed dates.



### 5.1.2.6      Transactions Tab

This tab allows details of transactions related to the incident in question to be recorded. Up to 20 variable text fields may be entered each related to a variable label field. The labels can be selected from the user-maintained TXN Labels table or can be entered directly. Whilst the table provides a set of currently agreed headings which should normally be used, there may be occasions when an alternative is needed. For each new transaction after the first for an incident the label fields are defaulted from the previous transaction. A cost can be entered for each transaction. The sum of the costs for all transactions for the incident is used to populate the MER Settlement Amount on the Settlement tab.

The screenshot displays the 'BIMS - Incident Maintenance' application window, specifically the 'Transactions' tab. The window title bar reads 'Business Incident Management Service - [Incident Maintenance - Form]'. The main title 'BIMS - Incident Maintenance' is prominently displayed. Below the title, there are several tabs: 'Incident Summary', 'Action Log', 'Transactions' (which is the active tab), 'Affected Outlets', 'Settlement', and 'Evidence'. The 'Incident Summary' section contains fields for 'BIMS Reference' (BE/999), 'Version' (5), 'Last Updated' (11/08/00 16:08:13), 'By' (Denise), 'Incident Type' (1), 'Incident Class' (130), 'Incident Description' (PO pays customer a higher amount), 'Created' (05/04/00 13:22:26), 'By' (Jesley), 'Originator' (FOCL IP/ITP), 'Exception Value', 'Transaction Date', 'CA%' (0000), 'FAO', 'Status' (1), 'Fault in Horizon System', and 'Resolution Category'. The 'Transaction Details' section includes a 'Manual Error Report' field set to 'Yes'. The 'Transaction Cost' section shows a table with 5 rows and 2 columns, with the first row containing '50.00'. The bottom of the window features a 'Form View' button and a 'Next Record' button.

### 5.1.2.7    Affected Outlets Tab

This tab allows details of outlets related to the incident to be recorded. A set of label/text fields have been provided to allow variable information to be stored.

The screenshot displays the 'BIMS - Incident Maintenance' application window. The 'Affected Outlets' tab is selected, showing a form for recording incident details. The form includes fields for 'BIMS Reference' (BE/3), 'Version' (0), 'Last Updated' (11/02/00 11:14:40), 'By' (jule), 'Incident Type' (2), 'EPOSS', 'Created' (19/01/00 13:04:40), 'By' (jean), 'Incident Class' (202), 'Token type 2 mismatch', 'Final Update Set' (No), 'Originator' (PW SSC), 'Exception Value', 'Transaction Date' (01-Jan-00), 'CAP' (4159), 'FAD' (305513), 'Status' (1), 'Fault in Horizon System', and 'Resolution Category' (User Error). A section for 'FAD Code' (101114) contains multiple 'extra info label' and 'extra info text' fields. The form also includes a 'Record' field and a 'Page' field (1 of 1). The application is running on a Windows operating system, as indicated by the taskbar and window title bar.



### 5.1.2.8    Settlement Tab

The Settlement Tab allows entry of liability and settlement information for the incident.

**BIMS - Incident Maintenance**

**Incident Summary** | **Action Log** | **Transactions** | **Affected Outlets** | **Settlement** | **Evidence**

**BIMS Reference** DE/1    Version: 0    Last Updated: 11/02/00 13:59:58    By: Jule

**Incident Type** 1    **APS**    Created: 16/01/00 14:52:40    By: Sean

**Incident Class** 320    **EPOS option**    Final Update Set: Yes

**Originator** PVV-MSU    **Exception Value** £50.00    **Transaction Date** 12-Jan-00    **CAP** 4290    **FAD**

**Status** 0    **Open**    **Resolution Category** User Error

**Transaction Liability**    **Settlement Details**

**Provisional Liability** POCL=PW    **Transaction Settled**    **Manual Error Report Charge**

**Final Liability** POCL=PW    **Settled Amount** £25.00    **MER Set Amt** £30.00

**Invoice Number** 34324    **MER Inv No** 55

**Invoice Date** 26-Jan-00    **MER Inv Date** 26-Jan-00

**Chargeable Errors** 5

The MER Settlement Amount is calculated by summing the individual transaction costs for the transactions associated with the incident. Similarly the Number of Chargeable Errors is a count of the transactions for the incident. The other fields are entered by the user as they become available.

### 5.1.2.9    Evidence Tab

The Evidence Tab allows one or more pieces of evidence to be stored for an incident. Evidence can take the form of any file type for which viewing software is available on the user's PCs, e.g. WORD, EXCEL, etc. A double click on the icon will load the appropriate application for viewing the file.

Business Incident Management Service - [Incident Maintenance - Form]

File Edit Insert Help

## B I M S - Incident Maintenance

**Incident Summary**    Action Log    Transactions    Affected Outlets    Settlement    Evidence

**BIMS Reference** BE/1    Version 0    Last Updated 11/02/00 11:00:00    By Joe

Incident Type APS    Created 18/01/00 14:55:40    By Sean

Incident Class 020    POSS orphan    Final Update Set Yes

Originator PVMMSU    Exception Value 650.00    Transaction Date 12-Jan-00    CAP 4299    FAD

Status 0    Open    Resolution Category Door Error

Record: 1 of 1

Document

Form View    N/A

Start    Inbox - Microsoft Outlook    Business Incident Ma...    Microsoft Word - Incident129...    11:36



### 5.1.2.10    Last Day Reminder

This is a pop-up screen displayed on entry to the incident maintenance function which lists incidents whose SLA expires today.

**Last Day Reminder**

The following incidents must be resolved today:

Incident	Evidence	Incident History
11/02/00 10:59:50	By: Julie	Date Received: 18-Jan-00
18/01/00 14:55:40	By: Sean	Suspend Date: 19-Jan-00
	Final Update Set: Yes	Unsuspend Date:
an-00 CAP: 4295	FAD:	Date Cleared: 02-Feb-00
		Date Closed:

System Incident References:

HSH: 3454

POCL: e5453456

SLA Date: 11-Feb-00

Form View

Start    End    Microsoft Outlook    Business Incident Manage    Microsoft Word    bms\_ug    11:00

If the list is too long to deal with visually it can be printed using the print button.

### 5.1.3        Predefined Reports

A fuller definition of these reports is contained in the Information Management Section.

#### 5.1.3.1        SLA Status

This report shows the status of all uncleared incidents. They are grouped into two categories, namely those which have failed the SLA and those which are still within their SLA period. The following information will be shown.

HSH Reference  
Date Received  
Suspend Date (if present)  
Unsuspend Date (if present)  
SLA Date.

#### 5.1.3.2        Liability Settlement

The report has two parameters, start and end date. Incidents which have been cleared between the parameter dates are grouped by Final Liability (POCL=>PW, PW or PW=>POCL) and the total number and value are shown for each group. Also the total

number and value of incidents cleared within the period is shown. Details shown for individual incidents are as follows.

- HSH Reference
- Date Received
- Date Cleared
- Provisional Liability
- Invoice Date
- Invoice Number
- Settled Amount

### **5.1.3.3 Incident Report**

The Incident Report contains all the information to be communicated to POCL about an incident. It can be run either from the report menu or by clicking the print button on the Incident Maintenance screen. The report is divided into four sections. The first contains all the non-repeating information about the incident, classification details, date history, references, SLA and liability and settlement details. The second section lists the actions carried out, the third the transactions in error and the fourth the associated outlets.

### **5.1.3.4 Charging Details Report**

The Charging Details Report lists all incidents cleared in a given month where a manual error report contains chargeable errors. It shows details of the number and value of transactions that generated the charge. The report is requested by entering month and year and so can be run for historic as well as current data. It is output to a Word document to enable free-format text to be entered in the POCL Agreed column.

## **5.1.4 System Functions**

### **5.1.4.1 Incident Housekeeping**

This function deletes any incidents that have been closed for more than 18 months, i.e. whose Date Closed is over 18 months ago. A message is displayed showing the number of incidents about to be deleted.

The function will be initiated from the user menu. It will be the MSU's responsibility to ensure that the service is not in use when the facility is actioned.

## **5.2 Interface**

### **5.2.1 User Interface - Menu Selection**

#### **5.2.1.1 Top-level Menu**

The application functions will be accessible via a series of menus. At the top level the main functional areas are as follows:

1. Incident Maintenance
2. Static Data Maintenance
3. Predefined Reports



#### 4. System Functions

The final option on the menu will be to exit from the service completely. Access to Static Data Maintenance and System Functions will be restricted to users with Supervisor status. The menus will be accessible on exit from Incident Maintenance.

##### 5.2.1.2 Second-level Menus

Selection of option 2 will display a second-level menu giving access to the individual static data maintenance functions:

1. BIMS Calendar Maintenance
2. FAD Code Maintenance
3. Resolution Category Maintenance
4. Incident Type Maintenance
5. Incident Class Maintenance
6. Transaction Label Maintenance
7. User Maintenance

The final entry on the menu returns the user to the Main Menu Screen.

Selection of option 4 will display a second-level menu giving access to the housekeeping function:

Incident Housekeeping

The final entry on the menu returns the user to the Main Menu Screen.

##### 5.2.2 Custom Menu Bar

The Access service will have a customised menu bar with the following sub-menus.

File	Save Record
	Print
	Print Preview
	Page Setup
	Compact Database
	Linked Table Manager
	Exit
Edit	Undo
	Cut
	Copy
	Paste
Insert	Insert Object
Help	Standard Access Help Facilities

## 5.3 Distributed Application Services

N/A

## 5.4 Information Management

### 5.4.1 BIMS Database

The Logical Data Model defined in the Requirements Specification, [1], will be implemented in the BIMS database by the following set of tables.

<u>LDM Entity:</u>	<u>Database Implementation:</u>
Client	Will appear only as a text field for an incident
Evidence Box	Evidence Boxes table
BIMS Calendar Date	BIMS Calendar table
Incident	Incidents table
Incident Class	Incident Classes table
Incident Type	Incident Types table, values now changed in line with service codes, i.e. APS, EPOSS and OBCS.
Investigation Cost	Investigation Costs table
Logged Action	Logged Actions table
OLA	Has reverted to SLA (service level agreement) and has been incorporated in the Incidents table.
Outlet	Outlets table with a link to the new PO Regions table.
Resolution Category	Resolution Categories table
Service	Removed, replaced by Incident Types
Settlement	Incorporated in the Incidents table.
Transaction	Transactions table

The relationship in the original model between the Incident and Outlet entities has now been identified as many to many. This has resulted in the need for an additional table, Affected Outlets. Also three tables have been introduced for system control purposes, namely Analysts, TXN Labels and Switchboard Items.

The content of each table is described below. The primary key of each table is highlighted.

#### 5.4.1.1 Affected Outlets Table

Used By: Static Data Maintenance, Incident Maintenance, Ad hoc Reports.

Volumes: Unknown, potentially several thousand.

Column	Mand	Format	MaxLen	Description	Values/Meaning
--------	------	--------	--------	-------------	----------------

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HSH Reference	Y	Text	11	Reference assigned to the incident by the Horizon Service Helpdesk.	
FAD Code	Y	Text	6	Code assigned to an outlet by the PO Accounting System.	
FlexID	N	Long Int	-	This field is not used.	
User Label 1	N	Text	25	A set of free-format fields to allow for additional information to be provided	
User Text 1	N	Text	25		
User Label 2	N	Text	25		
User Text 2	N	Text	25		
User Label 3	N	Text	25		
User Text 3	N	Text	25		
User Label 4	N	Text	25		
User Text 4	N	Text	25		
User Label 5	N	Text	25		
User Text 5	N	Text	25		
User Label 6	N	Text	25		
User Text 6	N	Text	25		

#### 5.4.1.2 Analysts Table

Used By:    Static Data Maintenance, Incident Maintenance, Ad hoc Reports.

Volumes:    10.

Column	Mand	Format	MaxLen	Description	Values/Meaning
Username	Y	Text	12	NT login id of the user.	
Analyst	Y	Text	20	Name of the analyst.	
Type	Y	Text	10	Indicates status of the analyst.	Analyst/ Supervisor

#### 5.4.1.3 BIMS Calendar Table

Used By:    Business Objects Report

Volumes:    365 per year.

Column	Mand	Format	MaxLen	Description	Values/Meaning
BIMS Calendar Date	Y	Date/ Time		Calendar date	dd/mm/yy
Day Status	Y	Text	1	Status of the day for SLA calculation purposes.	S – standard W – weekend H - holiday
Day of week	Y	Text	4	Day of week text.	MON, TUE, etc.

Cash Account Week	Y	Int	4	POCL Cash Account Week	1YY-53YY
Month Text	Y	Text	9	Text used for the associated month.	e.g. 98/08 Aug
Quarter	Y	Text	4	Quarter of the year.	e.g. 99/1

#### 5.4.1.4 Evidence Boxes Table

Used By:    Static Data Maintenance, Incident Maintenance, Ad hoc Reports.

Volumes:    Required for up to 10% of incidents, i.e. 2600.

Column	Mand	Format	MaxLen	Description	Values/Meaning
Evidence Box Id	Y	Long Int	4	Unique identifier for the table entry.	Auto-number
HSH Reference	Y	Text	11	Reference assigned to the incident by the Horizon Service Helpdesk.	
Evidence Box	Y	Ole Object	-	Used to store additional evidence in support of an incident.	

#### 5.4.1.5 Incident Classes Table

Used By:    Static Data Maintenance, Incident Maintenance, Incident Report, Ad hoc Reports.

Volumes:    approx. 200.

Column	Mand	Format	MaxLen	Description	Values/Meaning
Class Code	Y	Text	6	Code representing an Incident Class	
Class Description	Y	Text	255	Description for an Incident Class	

#### 5.4.1.6 Incident Types Table

Used By:    Static Data Maintenance, Incident Maintenance, Incident Report, Ad hoc Reports.

Volumes:    4.

Column	Mand	Format	MaxLen	Description	Values/Meaning
Type Code	Y	Int	2	Code representing an Incident Type	1 - 3
Type Description	Y	Text	30	Textual Description of an Incident Type	1 –APS 2 – EPOSS 3 - OBCS

#### 5.4.1.7 Incidents Table

Used By:    Static Data Maintenance, Incident Maintenance, Incident Report, Ad hoc Reports.

Volumes:    26,000 based on 70/day for 18 months.

Column	Mand	Format	MaxLen	Description	Values/Meaning
HSH Reference	Y	Text	11	Reference assigned to the incident by the Horizon Service Helpdesk	
Type Code	Y	Int	2	Code representing an Incident Type	
Date_Time Created	Y	Date/ Time	8	Date incident record created	Auto-generated
User Created	Y	Text	20	Name of the analyst who created the incident	Auto-generated
Date_Time Updated	Y	Date/ Time	8	Date incident last updated	Auto-generated
User Updated	Y	Text	20	Name of the analyst who last updated the incident	Auto-generated
Version Number	Y	Int	2	Version number of the incident, incremented each time an action is logged.	Auto-generated
Date Received	Y	Date/ Time	8	The date the incident was reported to or discovered by the MSU.	
Originator	Y	Text	15	Person or organisation that raised the incident.	Outlet POCLTP/TIP PW-MSU, PW-SSC, POCL, OSG
PinICL Reference	N	Text	9	Reference assigned to the incident by the PinICL system.	
TIP Reference	N	Text	20	Reference from POCL's Transaction Interface Processing system.	
Incident Xref	N	Text	15	Used to hold either the Incident Id, HSH Reference or PinICL reference of a related incident.	
SysInc HSH Reference	N	Text	11	HSH Reference assigned when an associated system incident raised.	
SysInc PinICL Reference	N	Text	9	PinICL Reference assigned when an associated system incident raised.	
Date Cleared	N	Date/ Time	8	Clearance is authorised by the MSU once incident resolution has been agreed with POCL.	



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Date Closed	N	Date/ Time	8	Closure normally takes place after any invoice adjustments have occurred and is agreed at the Monthly Accounting & Reconciliation forum.	
Final Update Flag	Y	Yes/No	1	Flag set to indicate to POCL that this is the last update for this incident	
Closure Code	N	Int	4	Indicates whether the incident was caused by a fault in Horizon.	0 – Open, 1 – Fault in Horizon System, 2 – No fault in Horizon System
Provisional Liability	N	Text	15	Organisation that has provisionally been assigned liability for the incident.	POCL=>PW PW=>POCL
Final Liability	N	Text	15	Organisation that has been assigned liability for the incident.	POCL=>PW PW=>POCL
Exception Value	N	Currency	15	Total exception value of all transactions in error related to this incident.	
Class Code	Y	Text	6	Code representing an Incident Class	
Resolution Category	N	Text	50	Category which describes the resolution of the incident for analysis purposes,	
SLA Period	N	Byte	2	Number of days assigned under the SLA.	
SLA Date	N	Date/ Time	8	Date by which the incident must be cleared to satisfy the SLA.	Calculated from the Received Date and the SLA period
Suspend Date	N	Date/ Time	8	Date when incident suspended in agreement with POCL.	
Unsuspend Date	N	Date/ Time	8	Date SLA period restarted following suspension.	
Settled Amount	Y	Currency	8	Value of the settlement.	
Invoice Number	Y	Text	15	Invoice Number supplied by ICL Pathway Finance Dept.	
Invoice Date	Y	Date	8	Date of the Invoice.	
MER Set Amount	N	Currency	8	The sum of Txn Cost for each related transaction.	Calculated
MER Inv No	N	Text	15	Invoice Number for the Investigation Cost settlement, supplied by ICL Pathway Finance Dept	
MER Inv Date	N	Date	8	Date of the Investigation Cost invoice.	ddmmmyy
Chargeable Errors	N	Int	4	Number of transaction errors being charged for relating to this incident	Auto-generated



Transaction Date	N	Date	8	Date of related transactions or associated report.	
CAP	Y	Long Int	4	Cash Account Period to which Transaction Date belongs.	Auto-generated from Calendar
FAD	N	Text	6	FAD Code related to incident.	
Manual Error Report	N	Yes/No	1	Set to Yes if transactions recorded constitute a repair report.	
TXN Error Type	N	Text	20	[Indicates type of transactions affected.] No Longer in use.	Transaction Error, Cash Account Error

#### 5.4.1.8 Investigation Costs Table

Used By:    Static Data Maintenance. No longer used in Incident Maintenance but still available for Ad hoc Reports.

Volumes:    Max 2 or 3 per Incident Class, < 500, probably much less.

Column	Mand	Format	MaxLen	Description	Values/Meaning
Class Code	Y	Text	6	Code representing an Incident Class	
Cost Date	Y	Date /Time		Date from which this cost value applies.	
Cost Value	Y	Currency		Cost value to be applied.	

#### 5.4.1.9 Logged Actions Table

Used By:    Static Data Maintenance, Incident Maintenance, Incident Report, Ad hoc Reports.

Volumes:    5 per incident, i.e. 130,000.

Column	Mand	Format	MaxLen	Description	Values/Meaning
HSH Reference	Y	Text	11	Reference assigned to the incident by the Horizon Service Helpdesk	Auto-generated
Action Date_Time	Y	Date/ Time		Date/Time log entry created	Auto-generated
Analyst	Y	Text	20	Name of the user who created the entry from the Analyst table	Auto-generated
Action Notes	N	Memo		Free-format notes fields for additional information.	
Action Type	Y	Text	20	Description of the type of action carried out.	Describe Incident Update Incident Suspend SLA Unsuspend SLA Set Final Update Clear Incident Close Incident Re-open Incident

#### 5.4.1.10 Outlets Table

Used By:    Static Data Maintenance, Incident Maintenance, Ad hoc Reports.

Volumes:    Potentially 19,000. May be restricted to those for which an incident has been reported if MSU only load them as required.

Column	Mand	Format	MaxLen	Description	Values/Meaning
FAD Code	Y	Text	6	Code assigned to an outlet by the PO Accounting System.	
PO Region	Y	Text	30	PO Region to which the Outlet belongs	

#### 5.4.1.11 PO Regions Table

Used By:    Static Data Maintenance, Incident Maintenance, Ad hoc Reports.

Volumes:    3.

Column	Mand	Format	MaxLen	Description	Values/Meaning
PO Region	Y	Text	30	A Post Office region	

#### 5.4.1.12 Resolution Categories Table

Used By:    Static Data Maintenance, Incident Maintenance, Ad hoc Reports.

Volumes:    Probably less than 100.

Column	Mand	Format	MaxLen	Description	Values/Meaning
Resolution category	Y	Text	50	Category which describes the resolution of the incident for analysis purposes,	

#### 5.4.1.13 Switchboard Items Table

Used By:    BIMS Menu (automatically generated by Access Switchboard Manager function).

Volumes:    23

Column	Mand	Format	MaxLen	Description	Values/Meaning
Switchboard Id	Y	Long Int	4	All these fields are maintained automatically by the Access Switchboard Manager facility.	
Item Number	Y	Int	2		
Item Text	Y	Text	255		
Command	Y	Int	2		
Argument	Y	Text	50		

#### 5.4.1.14 Transactions Table

Used By:    Static Data Maintenance, Incident Maintenance, Incident Report, Ad hoc Reports.

Volumes:    Unknown. Some incidents will require transaction details to be logged but it is not known how many. Likewise it is not known how many individual transactions may be affected by a single incident. It is reasonable to assume that there may be several thousand over an 18-month period.

Column	Mand	Format	MaxLen	Description	Values/Meaning
Txn Id	Y	Long Int	4	Unique identifier for the table entry.	Auto-number
HSH Reference	Y	Text	11	Reference assigned to the incident by the Horizon Service Helpdesk.	
Txn Cost	N	Currency	8	Cost of transaction error.	
TXN Label 1	N	Text	25	20 sets of free-format fields to allow for additional information to be entered.	
TXN Text 1	N	Text	25		
.	.	.	.		
.	.	.	.		
TXN Label 20	N	Text	25		
TXN Text 20	N	Text	25		

#### 5.4.1.15 TXN Labels Table

Used By:    Static Data Maintenance, Incident Maintenance, Ad hoc Reports.

Volumes:    probably < 100.

Column	Mand	Format	MaxLen	Description	Values/Meaning
TXN Label	Y	Text	20	Label for use when formatting transaction information.	

#### 5.4.1.16 Table Summary

Table Name	Forecast Volume
Affected Outlets	Several thousand
Analysts	10
BIMS Calendar	1825, based on 365 per year if not deleted
Evidence Boxes	2600, based on 10% of incidents
Incident Classes	200
Incident Types	4
Incidents	26,000, based on 70/day for 18 months
Investigation Costs	Predicted < 500, currently not used
Logged Actions	130,000 (based on 5 per incident)

Outlets	19,000
PO Regions	3
Resolution Categories	< 100
Switchboard Items	23
Transactions	Several thousand
TXN Labels	< 100
Predicted Peak Sizing	180Mb

## 5.4.2      BIMS Reporting

### 5.4.2.1    External Reporting

During the first phase of the implementation a hard copy report of individual incidents will be provided for onward transmission to POCL. This will also be available for local use longer term. [Phase 2 of the implementation will provide a delivery strategy for all of MSU's output which is destined for POCL, including incident reports, probably based around an intranet solution. *Note: There are no plans to introduce a second phase at present.*]

Incident Report Details		Data Source:
	BIMS Reference	Incidents.HSH Reference, prefixed by 'BE/'.
	Final Update Text	Present if Incidents.Final Update Flag = Yes
	Incident Type	Incidents.Type Code
	Incident Type Description	Incident Types.Type Description
	Incident Class	Incident Classes.Class Code
	Incident Class Text	Incident Classes.Class Description
	Originator	Incidents.Originator
	Transaction Date	Incidents.Transaction Date
	CAP	Incidents.CAP
	FAD	Incidents.FAD
	Status	Incidents.Closure Code
	Status Text	Translated from Closure Code: 0 - Open, 1 - Fault in Horizon Service, 2 - No Fault in Horizon Service
	Version	Incidents.Version Number
	Last Updated	Incidents.Date_Time Updated
	Exception Value	Incidents.Exception Value
<b>Other References:</b>		
	PinICL Reference	Incidents.PinICL Reference
	Incident XRef	Incidents.Incident XRef
	TIP/TP/OSG Ref	Incidents.TIP Reference
	System Incident References: HSH	Incidents.SysInc HSH Reference



System Incident References:	Incidents.SysInc PinICL Reference
<b>Incident History:</b>	
Date Received	Incidents.Date Received
Date Cleared	Incidents.Date Cleared
Date Closed	Incidents.Date Closed
<b>Liability</b>	
Provisional	Incidents.Provisional Liability
Final	Incidents.Final Liability
<b>Settlement Details</b>	
Transaction Settlement:	
Settled Amount	Incidents.Settled Amount
Invoice Number	Incidents.Invoice Number
Invoice Date	Incidents.Invoice Date
<b>Manual Error Report Charge:</b>	
Chargeable Errors	Incidents.Chargeable Errors
MER Set Amt	Incidents.MER Set Amt
MER Inv No	Incidents.MER Inv No
MER Inv Date	Incidents.MER Inv Date
For Each Action	<b>Data Source:</b>
Action Date/Time	Logged Actions.Date_Time
Action Type	Logged Actions.Action Type
Analyst	Logged Actions.Analyst
Action Notes	Logged Actions.Action Notes
For Each Transaction	<b>Data Source:</b>
User Defined Fields (1-20):	
Label 1-20	Transactions.TXN Label 1-20
Text 1-20	Transactions.TXN Text 1-20

### 5.4.2.2 Internal Reporting

Only two internal predefined reports have been specified for BIMS, the Liability Settlement Report and the SLA Status Report. Other, ad hoc, reporting requirements are to be met by User-defined Access and Business Objects reports.

#### 5.4.2.2.1 Liability Settlement Report

Report Selection:	<b>Values:</b>
From Date	dd/mm/yy
To Date	dd/mm/yy

Main Heading:		Data Source:
	Final Liability	Incidents.Final Liability
	HSH Reference	Incidents.HSH Reference
	Date Received	Incidents.Date Received
	Date Cleared	Incidents.Date Cleared
	Provisional Liability	Incidents.Provisional Liability
	Invoice Date	Incidents.Invoice Date
	Invoice Number	Incidents.Invoice Number
	Settled Amount	Incidents.Settled amount
Sub-Totals for Final Liability:		Data Source:
	Final Liability Text	Incidents.Final Liability (first occurrence in group
	Settled Amount	Sum of Incidents.Settled Amount for all incidents cleared in the period with the associated Settlement Action recorded.
Totals:		Data Source:
	Total Settlements	Count of incidents cleared in the selected period.
	Total Value	Sum of the Incidents.Settled Amount for all incidents cleared in the selected period.

**5.4.2.2.2 SLA Status Report**

Report Selection:		
	All incidents which have not yet been cleared, grouped into sections by comparison of SLA Date with 'today'.	
Section 1 Heading:		
	Within SLA Period	
Section 2 Heading:		
	You have failed the SLA on these incidents	
Detail Heading:		Data Source:
	HSH Reference	Incidents.HSH Reference
	Date Received	Incidents.Date Received
	Suspend Date	Incidents.Suspend Date
	Unsuspend Date	Incidents.Unsuspend Date
	SLA Date	Incidents.SLA Date
Totals by Section:		Data Source:
	Number of Incidents Outstanding	Count of incidents in the section.

#### 5.4.2.2.3 Charging Details Summary

Report Selection:		
	All incidents which have been cleared within the month and year selected, where the manual error report indicator is set to Yes and the MER Set Amt is greater than zero.	
Main Heading:	Data Source:	
TIP REF	Incidents.TIP Reference	
BIMS/HSR REF	Incidents.HSR Reference	
CLASS	Incidents.Class Code	
DATE RECEIVED	Incidents.Date Received	
DATE CLEARED	Incidents.Date Cleared	
No OF CHARGEABLE ERRORS	<b>Incidents.Chargeable Errors</b>	
TOTAL VALUE	Incidents.MER Set Amt	
COMMENTS	Incident Classes.Class Description related to Incidents.Class Code.	
POCL AGREED	Blank to be completed by user in Word document.	
Total:	Data Source:	
Total chargeable value for all incidents	Sum of Incidents.MER Set Amt for all incidents listed.	

## 5.5 Networking Services

No additional networking services will be required for stage one of the implementation. The application to be implemented will be a direct replacement for the existing RED database and will be sited and accessed in the same way, using the standard network facilities available to customer services staff.

## 5.6 Platforms

The application to be implemented at stage one consists of a Microsoft Access database, sited on the customer services drive on the 'Svbra01pwc2n2' server, accessed via a separate Microsoft Access client, also resident on the server.

## 6.0 Systems Management

System management will be carried out at two levels. Backups of the database will be provided by the standard backup procedures for the server. Responsibility for managing recovery and other housekeeping will rest with Customer Services MSU staff. Deletion of obsolete data will be carried out by a bespoke function invoked from the application user menu; compacting/reorganisation of the front-end database will also be available as a user function.

The database will be split, separating the data from the application. This will protect the tables from accidental structure changes and simplify potential software updates. If for any reason back-end database is moved the links held in the front-end database will have to be refreshed using the Linked Table Manager Add-in.

## 7.0 Application Development

The application will be developed in Microsoft Access, based on the existing prototype. Consequently no Low Level Design Document will be produced.

## 8.0 System Qualities

### 8.1 Availability

#### 8.1.1 Resilience

The service will be available during the normal working day. Backup of the service will be provided by the normal server backup procedures. The backup procedures are described below.

Monday - Thursday a differential backup is run which backs up the following devices E\$, M\$ and the Registry. The same job is run on all 4 servers within the Cluster.

Friday a Full backup is run on Friday which backs up the following devices C\$, E\$ M\$ and the Registry. The same job is run on all 4 servers within the Cluster.

Backups are started at 2000hours. If any of the files are currently in use by any applications the ARCServe will *NOT* back the file up. When the job has finished the Last Result in the job queue will display Incomplete, this signifies that some files were not backed up due to the fact they were in use.

In order that the service is backed up daily it is imperative that the service is closed down completely by all users at close of business.

#### 8.1.2 Recovery

Should it be necessary to recover the system from back-up tapes the following points should be noted:

1. The service comprises two parts, the back-end database and the front-end application.
2. If no software updates have been carried out since the last recoverable dump it is only necessary to restore the part of the system which is in error.
3. If software updates have taken place it is essential that both parts of the service are recovered from the same date, or at least from dumps where it is known that the application and tables are in step.

#### 8.1.3 Support

Support is provided in the first instance by the Workplace 2000 Helpdesk. Where a software error is identified in the application, i.e. excluding user-created queries, etc., support will be provided by the Internal Infrastructure team of Pathway Development.

## 8.2 Usability

The system has been designed with input from the user in order that the MSU's working practises are adequately supported. The system will be menu-driven for ease of use. The



functionality provided is largely self-explanatory although a user guide will also be provided giving guidance on how to use the various screens, navigation controls, etc.

Pessimistic locking will be implemented to prevent users carrying out updates which cannot subsequently be committed. Note: this can also prevent users from editing adjacent or nearby incidents. It was felt that this would be preferable to allowing two users to work on the same incident concurrently.

### 8.3 Performance

No specific performance criteria have been defined for the application. The forecast volumes were taken into account when the decision to use Microsoft Access was made and were considered to be within the limits which give acceptable performance. The functions will be built to give good response times wherever possible. Certain functions, such as housekeeping facilities, as a result of the need to scan large parts of the database, may take a significant time to run. Increase in run times should be kept to a minimum by regularly compacting the database, particularly the front-end. Both of these tasks should be carried out at start of day to allow for minimum data loss in the case of failure.

### 8.4 Security

The first level of security for BIMS is provided by the location in which it will implemented. It will reside on a local server within the Customer Services environment which consists of a secure office within a secure building.

At the next level the MSU has its own folder structure within the Customer Services drive to which only authorised MSU staff have access. BIMS will reside within this structure. Access to the service will be controlled by NT username and password. Compliance with IAR5 requires regular password changes to be enforced as per standard build and ideally the build should also utilise the facility of obfuscating passwords in the registry.

All MSU staff need the ability to create queries and also have authority to update most of the tables. Consequently there are very few limitations on data access that could be put in place. Since it is virtually impossible to prevent someone with the correct NT permissions from gaining access to full Microsoft Access functionality (or updating via other Microsoft utilities) should they really wish to, it was felt that the aim should be to discourage experiment and prevent accidents where possible.

Bespoke functionality has been provided for all tasks to be undertaken, removing the need for tables to be updated directly. Two levels of authority have been created within the service to enable functionality to be classified for use by all staff or solely for supervisor use. The system checks the status of the user when any of the restricted facilities is selected. A custom menu bar will be provided with a reduced set of standard facilities to avoid update queries being generated, tasks being fired off by accident, etc.

With regard to the hard-copy output of incidents it must ensured that manual procedures including handling, storage, disposal and contingency arrangements are catered for.

## 8.5 Potential For Change

It is not envisaged that changes will be required to the design. Allowance has been made for user defined data to be recorded in those areas where information requirements are less certain.

An upgrade to the service will be required when the users migrate to Office 2000. Care will be required when this occurs as the Office 97 version cannot be accessed by Office 2000 users and the Office 2000 version will not be accessible to Office 97 users.

The Outlet table will be pre-loaded with a complete set of FAD codes. Further Maintenance will be the responsibility of the user – no attempt will be made to maintain the Outlet table automatically.

## 9.0 Solution Implementation Strategy

The total solution to the MSU's requirements will be implemented in two stages. The first stage, as documented in this version of the design specification, consists of the main application, which replaces the functionality currently provided by the RED database. This will give the users the ability to log, track and print incident details and to monitor SLA status. Analysis facilities will be available via Business Objects, as at present.

The second stage of the implementation (yet to be specified) will provide a facility to deliver electronic incident reports to POCL. This will be part of an overall solution to cover delivery of all of MSU's requirements for reporting to POCL.

## 10.0 Risks and Timescales

### 10.1 Risks

The design has been produced on the basis of the forecast volumes. If these are exceeded by any significant amount there is a risk that the service will degrade. Also, once the system is in steady state (after 18 months), housekeeping and database compacting will need to be carried out on a regular basis to prevent degradation.

### 10.2 Timescales

The service needs to go live at the beginning of a calendar month to enable the MSU to rationalise its monthly reporting. With the resumption of roll-out implementation of the service needs to be carried out as soon as possible.