

OPN_SLM SERVICE LEVEL MONITORING SYSTEM INSTALLATION & USER GUIDE (SINGLE USER EDITION. COMPACT SQL DATABASE)

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1.0 INTRODUCTION

OPN_SLM is a simple to use barcode-based system for attendance monitoring/ event logging and for monitoring time spent performing activities. OPN-SLM monitors:

- Attendance at individual Sites/ Locations
- Time spent at individual Sites/ Locations
- Overall time taken visiting multiple Sites/ Locations (with confirmation of attendance and/or time spent at the associated individual Sites/ Locations)

The system is based on the OPN2001 barcode data collector. These compact units will be used to scan barcoded lcodes as the activity being monitored is performed. The scanned codes will be date/ time tagged by the data collector and stored in internal memory for downloading into the system database and subsequent reporting and analysis.

A utility is also available for remote field staff to allow the OPN2001 data collectors to be downloaded to a simple data file which can be forwarded to head office for importing into the OPN_SLM database.

2.0 INSTALLATION

OPN_SLM will normally be supplied on CD, or sent electronically.

Alternatively an evaluation copy of OPN_SLM may be downloaded from the ERS website at <u>http://www.ers-online.co.uk/o5143/opn-slm-ers-service-level-monitoring-software-solution</u>. In this case download both the Demo OPN_SLM and the DEMO OPN_SLM Reports from the webpage.

To install from CD or electronic delivery:

- Run the OPN_SLM installer setup.exe from the system CD or electronic download and follow the prompts.
- 2) Run **CRRedist2005_x86.exe** to install the components used by the reporting module.

Now proceed to Section 2.1 below to install the drivers for the OPN2001 data collectors

To install an evaluation copy downloaded from ERS website:

- Run the OPN_SLM installer OPN.SLM.msi and follow the prompts.
- 2) Run **CRRedist2005_x86.exe** to install the components used by the reporting module.

Now proceed to Section 2.2 below to start using the software

2.1 INSTALLING THE OPN2001 DRIVERS

These drivers are used by OPN_SLM when downloading the OPN2001 data collectors. To install the drivers run the Opticon Driver Installer (**USB Drivers Installer.exe**) from the system CD of electronic delivery and proceed as shown below.

Note: Do not connect the OPN2001 data collector onto the PC until the drivers have been installed.



2.1.1 CHECKING THE DRIVER INSTALLATION

The driver installations can be checked via the Windows Hardware Device Manager as follows:

🚇 Device Manager 💿 🖬	
Ele Action Yew Help ← → III III III IIII IIIIIIIIIIIIIIIIII	The Windows Device Manager may be accessed by right-clicking My Computer then selecting Properties from the drop down menu. Go to the Hardware Tab and click Device Manager
Communications Port (COM1) Communications Port Port (COM1) Communications Port Port Port Port Port Port Port Port	Connect the scanner to the PC and from the Windows Device Manager expand the Ports section. The scanner will be listed with a description similar to: Opticon USB Code Reader (COMxx)

2.2 CREATING THE SYSTEM DATABASE

Once installed run OPN_SLM and create the system database as shown below:

	😫 OPN-SLM	
🛱 Configuration Options	File Edit Tools Help	1. Click Tools > Options from the program menu bar
Database Additional Fields Server Type: SQL Server Compact Edition	Tran	afer Data
2. Click Create Database ng Systems Lid \OPN-SLM.vOPN-SLM.adf Connection time-out: 15 Seconds seconds Maximum database size: 256 MB Specify location and filename for the new data	Browse	
Create Database Shrink I Organize - New Folder Beskip Beskip Beskip Beskip Beskip Beskip Beskip Beskip	ramData • Electronic Reading Systems Ltd • OPN-SLM • Date modified T T 05/12/2011 10:11 Fi	
3. Specify a location and name for the Save . The default location for the data C:\ProgramData\Electronic Reading System	database file and c abase is: ystems Ltd\OPN_S	lick LM
Create database result	×	
4. The database has been successfully abase creation su created. Click OK to continue.	iccessful.	Save Cancel
Create database result	OK	
5. Click Yes to make this the	e active database	

2.3 LICENCING OPN_SLM

After initial installation the software will run in demonstration/evaluation mode where the max. number of records in the database will be limited.

To licence the software for normal use click **Help > Licence Management** and proceed as follows:

N Licence Mana	gement			×		
	ΟΡΝ	lick Chang	e Licence]		
Licence	DEMO	Cha	ange Licence]		-
Expiry Date	Never					
Licenced Options	Description		Status			
	Single User	I	Enabled			
	Read Only	[Disabled			
	N Enter Release Code		×			
	Keycode	557961	2. OPN_9 Contact E	SLM genera ERS for the	ates a randor relevant rele	n Keycode. ase code
	Release Code					
		Ok	Cancel			

3.0 CONFIGURING OPN_SLM

OPN_SLM includes a number of databases which may be configured as required depending on the specific activity monitoring requirements:

 Operator Database. Configuring the operator database allows the individual operators performing the activities are to be logged. Operators can simply logon to the data collectors using a barcoded Operator ID. As an alternative the data collectors can be allocated to individual operators if required.
 Configuring the operator database is optional, and is not required if logging the individual

Configuring the operator database is optional, and is not required if logging the individual operators is not required

- **Locations Database.** This database contains details of the Locations being monitored. Data fields include: Location Code (barcode), Location description + 4 additional data fields which can be freely allocated by the user.
- **Routes Database.** One or more Routes may be configured, each comprising a list of locations expected to be visited whilst performing specific activities. Each configured Route includes a Route Code and Description together with a list of the Location Codes to be included in that Route.

Configuring the Routes database is optional, however since the use of Routes allows identification of any Locations which have been missed when performing activities it is expected that this will be used in the majority of cases.

• Status Codes Database. A database of status codes may be maintained providing a range of status codes or 'observations' which may be logged whilst performing the activity at different locations by scanning the relevant barcoded Status Code. Each Status comprises a Status Code (barcode) and description.

Configuring the Status codes database is optional, and is not required if status code monitoring or 'observation' logging is not required.

These databases may be configured may be maintained manually via the PC keyboard (see section 3.1 below) or by importing simple csv text files containing relevant data (see section 3.2 below).

Note: OPN_SLM also contains a Transactions database which is used to hold the activity monitored data. This database is described in section 6.1 below and is not described further here.

3.1 MANUALLY MAINTAINING THE SYSTEM DATABASES

To manually maintain the system databases proceed as below:

😫 OPN-SLM						
File Edit Tools	Help					
▲	1. C	lick Edit from	the program m	nenu bar an	d select	
	the	relevant datab	ase from the d	lisplayed m	enu.	
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	Transfer Data	Kenter State	1.11	1.7		
		Uperator ID	Mike Smith	Guard-IT	Serial No	_
	- Ca	1008	Phil Cannon	Contract		
		1009	Sam Crockett	In-House		
	Reports	1022	John James	Guard-IT		
2. To ad	d a new record	d click Add Ne	w and procee	d to enter th	ne relevant details	as below
and click	OK to save.					
To edit a	an existing reco	ord click to hig	hliaht the reco	rd and click	Edit. Amend the	displayed
details a	nd click OK					
		roordo biabli	abt the relevior	t recorde e	nd aliak Delete	
	e one or more	recoras nignii	ght the relevar	it records a	na ciick Delete	
			Add New	Edit	Delete	
ADD Location			×			
Location Code			cations Datak	ase includ	os Location codo	description
Description			d 4 additional	fields which	can be freely used	
Description			a titles for the	additional fi	olde can be config	u. urod (soo
AFT			ction 2 1 1 hel		leius can be conng	
AF2	2			500		
AF3						
AF4	+ <u> </u>					
MDD Route			Cancel			
Boute Code						
Description		Boutes Det			actions to be gray	unad
Locations	Location Code	Routes Dat	abase allows I		ocations to be grou	ipea
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		multiple Rot	ites il required	•		
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	operator / Sent					
	Operator ID	perators Dat	abase Include	es details of	operators: use if t	racking individ-
		al operators u	sing the data c	ollectors		
	Name 0	perators may	logon to the da	ata collector	r by scanning their	barcoded Op-
	Serial No ei	rator ID Alterr	natively data co	ollectors ma	by be allocated to t	he operators by
	in	icluding the se	rial no. of the	allocated ur	hit in the operator's	record.
	Team					
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	ADD Status					
	_		Status Os d	oo Detakaa		ando (horseda)
	Status Code			es Databas	e. includes Status	code (barcode)
	Description		and descrip			
				Cancel		

3.1.1 CONFIGURING THE ADDITONAL FIELD NAMES FOR LOCATIONS

To configure the additional field names click **Tools** > **Options** from the program menu bar and select the Additional Fields Tab:

😫 OP	N-SLM		
File	Edit Too	s Help	1. Click Tools > Options from the program menu bar and select the Additional Fields Tab
		Transfer Data	Configuration Options
		Reports	Additional Field 1 Additional Field 2 Additional Field 3 Additional Field 4
2. E The	Enter the	e relevant field I names will the	names into the boxes provided and click OK when finished. In be used for display and reporting purposes.

3.2 IMPORTING DATA INTO THE SYSTEM DATABASE

The system databases may also be initialised by importing details from a simple text file.

To import operator details click File > Import > Operator/ Serial No. Link File from the program menu bar and proceed as follows:



The format of the iinput data files is detailed in Appendix A below

4.0 USING OPN_SLM

OPN_SLM may be used to monitor a number of activities including:

- **Simple Attendance Logging**. In this scenario operators scan simple barcoded location codes when attending different locations. The Locations may be grouped into 'Routes' in order to report both on the Locations visited, and those which were missed.
- **Time Spent at Individual Locations**. Barcoded location codes can be created to allow operators to 'Clock on' when arriving at a Location and to 'Clock off' when leaving. In this way OPN_SLM can monitor not only the Locations that have been visited, but also the time spent at each location.
- **Time Spent across Multiple Locations**. Even if not tracking the time sent at individual locations, as above, barcodes can be created to allow the operator to track the overall time spent performing an activity across multiple locations. In this case the operator will scan a 'Group Start' barcode when starting the activity and scan the associated 'Group Stop' barcode when finishing the activity.
- Attendance Logging with Status Monitoring. One or more Status Codes may be scanned at any location if required to log an 'observation' or status relevant to that Location. Status Code monitoring can be used with any of the scenarios above.

4.1 LOGGING ON TO THE DATA COLLECTORS

If required operators can logon to the data collectors by scanning an Operator ID barcode. This will automatically tag the operator ID to the transactions enabling the operator performing the activity to be tracked.

4.1.1 DATA FORMAT FOR THE LOGON BARCODES

In order for the data collector to recognise the barcode as an operator 'logon' the barcode must be created using the relevant Operator ID as configured in the Operators database with a leading dot character.

Thus a logon barcode for operator ID 1001 would contain the data '.1001'. For example:



Note: The leading dot character will identify this as a logon barcode and will automatically be stripped before storing the data into the transactions database

4.2 SIMPLE ATTENDANCE SCANNING

In this case the OPN2001 will be used to scan barcoded Location Codes to confirm attendance at the locations by the operator.

4.2.1 DATA FORMAT FOR THE LOCATION BARCODES

The scanned location barcodes will simply be the relevant Location Codes from the Locations database printed in barcode format.

Thus the barcode representing Location Code LOC001 would simple contain the data 'LOC001', for example:



4.3 MONITORING TIME SPENT AT INDIVIDUAL LOCATIONS

In this case the operator scans a 'Start Location' barcode on arrival at the location and a separate 'Finish Location' barcode on departure allowing both the operator's attendance at the Location to be confirmed and detailing the duration of the visit.

4.3.1 DATA FORMATS FOR START LOCATION AND FINISH LOCATION BARCODES

The barcodes used for Start Location and Finish Location will contain the relevant Location Code from the Locations database. OPN_SLM provides 2 formats for the Start Location and 2 formats for the Finish Location barcodes as follows:



4.4 LOGGGING STATUS CODES AT LOCATIONS

One or more Status codes or 'observations' may be logged at any location by scanning a suitable Status Code barcode. Where Status codes are to be attached to a Location these will be scanned after the operator has scanned the Location code to confirm attendance. (ie: Scanned Status Codes apply to the current 'active' location in the data collector).

4.4.1 DATA FORMAT FOR STATUS CODE BARCODES

In order for the system to recognise the barcode as a Status Code the barcode must be created using the relevant Status code as configured in the Status codes database with a leading % character.

Thus a barcode for Status Code ERS021 would contain the data '%ERS021'. For example:



4.5 MONITORING TIME SPENT OVER MULTIPLE LOCATIONS

This facility provides a measure of the time spent on an overall job or task which involves visiting multiple locations.

In this case the operator will scan a 'Group Start' barcode at the commencement of the task and a 'Group Finish' barcode when the task is completed. Between the Group Start and Group Finish barcodes the operator will proceed as normal to scan Location Codes, Status codes etc. as required in order to monitor the activity itself.

To use the Group Start and Group Finish facility create a Location in the Locations database to act as the Start and Finish Location for the Activity being monitored. This location could be a physical location (eg: the Security Guard office from which security patrols will start and finish), or a 'logical Location representing Activity Start/ Finish, Shift Start/ Finish etc.

Multiple Group Start/ Finish Locations may be created as required.

In order for the system to recognise the Group Start and finish 'instructions' the Group Start and Finish barcodes will include the relevant Location code from the Locations database with a leading / or \$ character as follows:





5.0 GENERATING THE BARCODES

OPN_SLM includes a barcode label printing module as standard which operates with the desktop Toshiba B-EV4T label printer.

This standard module generates 70mm x 32mm self-adhesive paper or polyester labels and where necessary will automatically include the relevant formatting characters as summarised in section 3.0 above, depending on the type of barcode label being printed.

If preferred however barcodes may be generated externally from OPN_SLM, however in this case it will be necessary to ensure the barcodes are printed according to the correct data format (ie: including the leading identifier character where appropriate)

5.1 PRINTING BARCODE LABELS FROM OPN_SLM

To print barcoded location labels click **Tools** > **Barcode** printing and proceed as shown below:

Barcode Label Printing		×□
in Al	• 🕅	
	Label fields	 Configure the format of the Location Labels. Use the relevant drop down list to select up to 4 lines of data from the Locations database for the labels. Once configured this format will remain as default until subsequently changed. In this example the labels will include the Location code (as barcode), the location code (as text) plus the Location Description and customer name (as text).
Select Al Preter Model: Tarlos EV4TGS13.gM.R Lighteets Field 1 None	Field 1 Location Code (C Field 2 Location Code Field 3 Description Field 4 Customer	Code 39 Barcode)
Field 2 None Field 3 None	·)	
Reld 4 None		Note: The label printing option works with the B-EV4T thermal label printer using 70mm x 32mm paper or polyester labels
Barcode Label Printing		
in All Description LOC001 RECEPTION LOC002 MAIN OFFICE	Customer Acme ENGINEERING Acme ENGINEERING	Jse the search facility to display a specific Location code as uired, or use the * wild card to display all Locations.
LOC005 REAR LOADING BAY OX01 BLING JEWELLERS RS-24 BLING JEWELLERS	ACME ENGINEERING Hig box	hlight the Location(s) to be printed, or click the Select All to print all Locations.
	3. Use the drop dov Location barcodes Finish label pairs. N included when the	wn list to select the type of location barcodes required. ie: simple only, or Location Start and Finish label pairs, or Group Start and Note that the relevant formatting characters will automatically be barcodes are printed.
Printer Model: Toghiha FV4T-GS13-OM-R	Label Media: Z-Select 70mm x 32mm	V Cabel Type Locaton Stat Only
Label Fields Field 1 [Location Code (Code 39 Barcode) Field 2 [Location Code Field 3 Description Field 4 [Customer		4. Specify the no. of copies required and click Print to generate the labels
		No. of copies T Print

6.0 DOWNLOADING THE OPN2001 DATA COLLECTOR

In use the OPN2001 data collector will be used to monitor service levels by scanning location barcodes.

To download the stored barcode data from the data collector proceed as shown below.

Note: The Transfer Data facility will automatically synchronise the OPN2001 real-time clock. Before using the data collectors we therefore recommend using the Transfer Data function to ensure the all the devices are synchronised and set to the correct time



6.1 EDITING THE DOWNLOADED TRANSACTIONS

The data downloaded from the OPN2001 data collectors will be written to the Transactions database for reporting and/ or exporting.

These data may also be manually edited if required. Existing transactions may be edited or deleted and new transactions manually entered as required.

The following data is stored for each transaction:

- **Reference**. Optional. This allows a Reference code to be attached to the transaction which may be used when reporting. (this is the Download reference that can be entered when downloading the data collectors (see Section 6.0 above).
- **Operator ID**. Optional. This is the ID of the operator using the OPN2001.
- Serial No. Optional. This is the serial no. of the OPN2001 used to perform the transaction
- Location Code. Mandatory. This is the Location visited
- **Status Code**. Optional. This allows a status code or 'observation' to be attached to the transaction. Note: If multiple Status Codes are to be logged against the Location then multiple transactions will be stored in the transactions database
- **Start Date/Time**. Mandatory. This is the date/ time at which the Location code was scanned on arrival at the Location
- **Stop Date/ Time**. Optional. Used only where the time spent at the location is being monitored and represents the time when the activity was finished at that location.
- Elapsed time (automatically calculated)

To manually add a transaction or to edit and existing transaction click **Edit** > **Transactions** from the program menu and proceed as shown below:

Highlight a single transaction and click **Edit** to amend, or highlight one or more records and click **Delete** to remove those records from the database.

Alternatively click **Add New** to manually enter a new transaction.

Note: To order the Edit Transactions grid by any specific data field click on the relevant field header.

5, 5, 1			06/12/2011 12:13:34		un um us
			06/12/2011 12:13:34		Oh Om Os
			06/12/2011 12:13:36		Oh Om Os
DIH001	026288	LOC001	06/12/2011 12:13:37	06/12/2011 12:13:37	Oh Om Os
DIH001	026288	LOC004	06/12/2011 12:13:39		Oh Om Os
DIH001	026288	LOC005	06/12/2011 12:13:42	06/12/2011 12:13:44	Oh Om 2s
1					
	Add New	Edit	Delete	>	

Start DTS

06/12/2011 12:13:30

06/12/2011 12:13:31

06/12/2011 12:13:33

△ Finish DTS

Elapsed

0h 0m 0s

0h 0m 0s

0h 0m 0s

06/12/2011 12:13:39 Oh Om Os

😫 Edit Transac	tions										<u>- 🗆 🗙</u>
Reference	Ор	perati	Data co	allector not	allocated	to specific		Start DTS	Finish DTS	Elapsed	^
Site X	100	D1	Dala Cl	parator and no Operator and				08/06/2012 17:42:2	1 08/06/2012 17:42:48	0h 0m 27s	
Site X	100	D1					08/06/2012 17:43:0	8 08/06/2012 17:43:47	0h 0m 39s		
Site X	100	04	scanne	scanned. Operator therefore blank				08/06/2012 17:43:5	4 08/06/2012 17:44:12	0h 0m 18s	
TimeTest				026288	A0211	003		08/06/2012 17:56:4	4 08/06/2012 17:56:52	Oh Om 8s	
TimeTest				026288	A0212			08/06/2012 17:56:5	4 08/06/2012 17:57:04	0h 0m 10s	
TimeTest				026288	A0325			08/06/2012 17:57:0	8 08/06/2012 17:57:31	0h 0m 23s	
TimeTest	100	02	/	026288	A0212			11/06/2012 15:59:5	4 11/06/2012 16:00:12	0h 0m 18s	
SiteZ	100	04		026288	A0211			11/06/2012 16:02:0		Oh Om Os	
SiteZ	100	04		026288	A0212			11/06/2012 16:02:1	5 /	Oh Om Os	
SiteZ	100	04		026288	A0325		< l>	11/06/2012 16:02:2	1	On Om Os	
SiteZ	100	04		026288	B0537	001	$\overline{\ }$	11/06/2012 16:02:3	9	Oh Om Os	
SiteZ	100	04		026288	B0537	002		11/06/2012 16:02:4)	Øh Om Os	
SiteZ	100	04 -		000000	D0527	002	\neg	11/06/2012 10-02-4		Ob Om On	
			Multiple Locatioi tions da	e Status Co n 1004. Sh itabase as	des scann own in 'rav separate re	ed against v' transac- ecords	1		cations where anning is requ	e simple uired (no	attenda finish t

7.0 EXPORTING THE TRANSACTIONS

The stored transactions may be exported from the OPN_SLM in text or Excel format. To edit the transactions click **File** > **Export** > **Transactions** from the program menu and proceed as follows:



8.0 REPORTING

A selection of standard reports are incorporated into the system. To run reports proceed as follows:



8.1 AVAILABLE REPORTS

Standard Reports include:

GENERAL REPORTS

- List Operators. Lists all operators in the Operators database for the selection criteria entered
- List Locations. Lists all locations in the Locations database for the selection criteria entered

SCANNED DATA REPORTS

- **Scanned Locations (by Operator).** Shows the scanned locations for all data in the selection criteria entered (ie: shows operators in the selected Group for whom no activity was found).
- Scanned Locations (by Location). Shows the scanned locations for all data in the selection criteria entered (ie: shows locations in the selected Group for which no transactions were found).
- Scanned Locations (by Route). Shows the scanned locations for all data/Routes in the selection criteria entered (ie: shows locations in the selected Group for which no transactions were found).
- Elapsed Time (by Operator). Shows the locations scanned for all dates and for all operators in the selection criteria. This report includes operators in the selected group for whom no activity was logged.
- **Elapsed Time (By Location).** Shows all activities for all data in the selection criteria. Includes Locations in the selected group for which no transactions were found
- **Raw Transactions**. Shows a chronological list of all transactions in the selected

ATTENDANCE REPORT

• Attendance (By Route). Shows all activities for all data in the selection criteria. Includes locations in the selected Routes for which no transactions were found and inserts an entry for every day in the selected date range, including days for which no transactions are found. (Note: if a large date range is selected this report may take an extended period to process and will generate a report many pages long)

APPENDIX A IMPORT FILE DATA FORMATS

The OPN_SLM system databases may be initialised by importing data from simple csv files in the formats outlined below.

Note that importing a datafile will overwrite any existing data in the database. ie: the database will be completely refreshed.

A.1 OPERATORS DATA FILE

The Operators data file must contain data records in csv format as follows

<Operator ID>,<Operator Name>,<Team Name>,<OPN2001 Serial No><CR><[LF>

Where <CR><LF> are the carriage return and line feed characters.

Example import file format:

A1001,Lilley Yates B1002,Peter Offley,TEAM-5 B1004,Rupert Randolph,GUARD-IT,026288 AB00078,Norman Bates,,343242

Note: only the Operator ID is mandatory.

A.2 LOCATIONS DATA FILE

The Locations data file must contain data records in csv format as follows

<Loc'n ID>,<Description>,<Add. Field 1>,<Add. Field 2>,<Add. Field 3>,<Add. Field 4><CR><[LF>

Where <CR><LF> are the carriage return and line feed characters.

Example import file format:

LOC002,Main Gate LOC002,Reception,Block 7,Building A, Gnd Floor LOC99, Director's Suite, Block 1, Buliding 1, 7th Floor SITEB1004,Perimeter fence,,,, Section A,

Note: only the Location ID is mandatory.

A.3 ROUTES DATA FILE

The Routes data file must contain data records in csv format as follows

<Route ID>,<Description>,<Location 1>,<Location 2>,< Location 3>,....<CR><[LF>

Where

<Location 1>,<Location 2> etc. are the location codes of the Locations to be included in this route and

<CR><LF> are the carriage return and line feed characters.

Example import file format:

R2,Exterior Main building, LOC001, LOC002, LOC49,LOC55,LOC72 R3,Block A, LOC006,LOC007,LOC008,LOC009,LOC201,LOC202,LOC203 R77,Research and Development, LOC006,LOC007,LOC015,LOC106,LOC23

Note: only the Route ID is mandatory

A.4 STATUS CODES DATA FILE

The Status codes data file must contain data records in csv format as follows

<Status Code>,<Description<CR><[LF>

Where <CR><LF> are the carriage return and line feed characters.

Example import file format:

S001,Spillage S002,Faulty Lighting S004,Broken Window

Note: only the Status Code is mandatory