ICL Pathway	**DEVELOPMENT OF MANUAL DESCRIBING USE OF OPS, TMS AND EPOSS APIS WITHIN ICL PATHWAY**	Ref:	CR/SPE/007
		Version:	0.3
	COMMERCIAL IN CONFIDENCE	Date:	7/09/99

Document Title:	Development Of Manual Describing Use Of OPS, TMS and EPOSS APIs Within ICL Pathway
Document Type:	Specification
Release:	N/A
Abstract:	This document describes the content and development timescale for the production of the "ICL Pathway Generalised API for OPS/TMS"
Document Status:	Draft
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0.0 Document Control

0.1 Document History

Version No.	Date	Reason for Issue	Associated CP/PinICL No./ Acceptance Incident
0.1	23/8/99	Draft – for peer review	AI 314
0.2	1/9/99	Revisions in response to comments received from POCL 31/8/99	AI 314
0.3	7/9/99	Revisions agreed at Acceptance Workshop held on 2/9/99 also review comments from J Folkes 7/9/99	AI 314

0.2 Approval Authorities

Name	Position	Signature	Date
John Dicks	Director – Customer Requirements		
Terry Austin	Director – Development		

0.3 Associated Documents

Reference	Version	Date	Title	Source
	Release 17		On-Line Standards: Processes – Document Management	ICL Pathway On-Line Standards
TD/ARC/029	0.2	11/5/99	TMS Architecture Specification	ICL Pathway
TD/ARC/030	0.2	21/5/99	OPS Architecture Specification	ICL Pathway
SD/STD/001	2.0	3/8/99	Horizon OPS Style Guide	ICL Pathway
SD/DES/005	6.0	6/7/99	Horizon OPS Reports and Receipts	ICL Pathway

0.4 Abbreviations/Definitions

Abbreviation	Definition
AI	Acceptance Incident
API	Application Program Interface
EPOS	Electronic Point Of Sale
EPOSS	EPOS Service
NDA	Non Disclosure Agreement
OPS	Office Platform Service
PPD	Processes and Procedures Document
TMS	Transaction Management Service

0.5 Changes in this Version

Version	Changes
0.1	None – this is the initial draft
0.2	Revisions incorporating comments received from POCL 31/8/99. This includes new sections on Agent Interfaces and System Management
0.3	Document commits to the Pathway specific APIs being defined as required for the development process; a list to be given of those APIs the use of which are 'prohibited' within the Pathway environment, the addition of an appendix containing technical details of Systems Management and Key Management that would be subject to an NDA, and a new section on Standards. Changes following review comments from J Folkes 7/9/99.

0.6 Changes Expected

Changes
None

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0.7 Table of Contents

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1 Introduction

This defines the content and production plan for the document:

"ICL Pathway Generalised API for OPS/TMS"

This document is for internal Pathway use by application developers.

It is also to be supplied under the Contract (in compliance with Requirements R469, R470 and R869(part)) to POCL for the purpose of enabling POCL to procure applications to run on the Service Infrastructure (i.e. interfacing with OPS and TMS). As such it will be provided to Third Parties.

The OPS Architecture Specification describes the architecture for counter applications operating within the OPS/TMS framework, and describes the interaction of counter applications with OPS and TMS. The document expands on the architecture set out in the OPS Architecture Specification.

2 Scope

The document is intended for application developers within ICL Pathway or Third Parties. The purpose of the document is to enable developers to understand the architecture employed and the facilities available within the ICL Pathway solution, utilising OPS, TMS and EPOSS. The document is intended to provide developers with sufficient details to plan the development of new applications operating in this environment. The developers may be ICL Pathway staff, POCL staff or Third Parties. The document will contain definitions of those Pathway specific APIs essential to utilising OPS, TMS and EPOSS.

In the context of the Contract, it is available to POCL to enable the procurement process. Any supplier of Riposte based applications must obtain a development licence from Escher, who would supply the reference manuals for the Escher specific APIs:

> Escher Group Ltd.
>
> 101 Main Street
>
> Cambridge
>
> Massachusetts
>
> USA

3 Document Standards

ICL Pathway shall produce the document in accordance with the ICL Pathway On-Line Standards for document production. In essence, the document shall conform to a standard template, be written in Microsoft Word and shall be subject to a document review cycle, with comments and responses being formally recorded.

A draft of the document shall be produced and reviewed within ICL Pathway according to the ICL Pathway Document Review Process. A baseline version incorporating changes from the review will be submitted to POCL.

A formal review of the comments received at the end of the review period, assumed to be 2 weeks, will be conducted with representatives of POCL. The review meeting will agree the method of resolution of all comments raised.

A revised version of the document incorporating agreed changes will be baselined and introduced into the Core Documentation Set under CCN.

4 Content of ICL Pathway Generalised API for OPS/TMS

This shall be as follows.

4.1 Introduction

This section describes who the document is intended to be read by, and the conventions used.

4.2 Context

This identifies the relationship of this document to the OPS Architecture Specification, which describes the Retail Broker, Peripheral Broker and Riposte OCXs used in application development and how applications should be developed. It identifies also the relationship to the TMS Architecture Specification that defines the way Riposte facilities are used across the TMS domain. The relationship to the Access Control Policy and OPS Style Guide is also defined.

4.3 Scope

The document provides a description of the context in which the APIs are used for the application developer. These are expressed in terms of the business functions supported by EPOSS, the application functionality supported by OPS/TMS, and other application interfaces that need to be supported in the OPS/TMS environment.

The document will define APIs that have been created or modified by Pathway. It will list any relevant Escher supplied APIs and will list Riposte APIs that are excluded from the Pathway implementation.

4.4 Business Functions

4.4.1 EPOS

This section describes the concept of the 'Sale' of a product, its relationship to POCL Reference Data and the data structures involved.

4.4.2 Settlement

This section defines the concepts used in the settlement of a customer session, the impact of session transfer and how settlement data is sent to clients.

4.4.3 Stock Unit Management

This section identifies the concepts involved in the use of Stock Units, defines the difference between shared and individual stock units and describes the data structures involved.

4.4.4 Reporting

This section will describe the reporting functions that are available to the application developer.

It will identify how a Cash Account is constructed using Reference Data and will describe the data structures involved. It will cover the way receipts are produced and cross refer to the document Horizon OPS Reports and Receipts.

4.4.5 Balancing

This section covers the way a Stock Unit balance is achieved and its relationship to the office level Cash Account.

4.5 Application Functions

4.5.1 Architecture

This section will cross refer to the appropriate sections in the OPS Architecture Specification.

4.5.2 Peripheral Server Interfaces

This describes the interface provided to support the use of input and output devices.

4.5.3 Retail Broker Interfaces

This describes the interfaces needed to add the sale of a product as a transaction to the stack (list of transactions in the current session) presented to the clerk, to cancel transactions and deal with any additional processing required at the point when a session is settled.

4.5.4 Desktop Interfaces

This chapter describes how the desktop interface is controlled by the use of standard OCXs and identifies those available for use by the application developer and those controlled by the system.

4.5.5 Riposte Functions

This chapter describes the interfaces needed to handle messages and persistent objects.

4.5.5.1 Messaging

The section on messaging describes how messages are created and retrieved. It deals also with the concept of markers, checkpoints and message ports. How to create and wait for the response from queries is also covered as is how to start, end and undo a transaction.

4.5.5.2 Persistent Objects

The section on persistent objects (such as reference data) covers the use of local databases as well as the location of existing objects and the creation of new ones.

4.5.5.3 Parsing Functions

This section describes the concept of attribute grammar and how attribute grammar and messages are parsed.

4.6 Agent Interfaces

4.6.1 Bulk Agent

The interfaces used by both bulk inbound and bulk outbound data transfer agents are described.

4.6.2 Interactive Agents

The interfaces used by both interactive inbound and outbound agents are described.

4.6.3 Enquiry Agents

The interfaces used by enquiry agents are described.

4.7 Other Functions

4.7.1 Administration

This section describes the system supplied administration and configuration functions.

4.7.2 Security

The security functions that are available to the application developer are covered, including an outline of functions and facilities available for cryptographic key management.

The Appendix gives details of key management within the Pathway implementation.

4.7.3 Availability

This section covers the concept of SLAs. It describes the impact of End Of Day processing and of disconnected counters on availability of the service to the clerk.

4.7.4 Usability

This section identifies how the interface to the clerk should be implemented and describes the scope of MMI rules identified in the Horizon OPS Style Guide.

4.7.5 Performance

This section identifies the main issues to be considered to minimise the impact of new applications on the existing OPS application services.

4.7.6 Resilience

This section describes the resilience provided by Riposte and the additional functionality that applications have to provide to deal with the impact of hardware, communications and software faults.

4.8 Standards

4.8.1 Naming Standards

This section defines the naming standards to be used for application components, messages, and persistent objects, events and attributes.

4.9 Systems Management

This section covers the basic elements of systems management that need to be considered in the procurement context of a new application. Further information on those aspects of systems management that developers will require is contained in the Appendix. This will be subject to Non Disclosure Agreement.

4.9.1 POCL Reference Data

This section describes how POCL Reference Data is accessed, the temporal nature of such reference data and the process used to maintain such data.

4.9.2 Event Reporting

This section describes the application interfaces to be used for event reporting, including the reporting of exception conditions.

4.9.3 Software Packaging

This section describes how software comprising new applications is to be handed over to ICL Pathway for system integration testing, and the documentation needed to support such handovers. This section gives an overview of the systems and integration process and subsequent processes leading to implementation of the new application.

5 Development Timetable

The baselined version of this document, without the Appendix, is to be available by the end of November 1999.

The Appendix is to be available by end January 2000.

(A)Appendix   - Systems Management and Key Management

This Appendix is subject to Non Disclosure Agreement

Systems Management

This document expands on the Systems Management information outlined in section 4.9.

In particular, this section defines how software comprising new applications is to be handed over to ICL Pathway for system integration testing, also the documentation needed to support such handovers. For instance, such documentation must include program specifications and must list all the exception conditions catered for, together with resource requirements.

The section defines the way that EXEs, OCXs and DLLs are packaged for distribution and support purposes.

Key Management

Where a new application may employ encryption, Pathway anticipates that discussions with the Supplier of the new application will be initiated at the earliest appropriate stage. This section gives details of the functions for key management in the Pathway environment including the distribution of keys to post offices.