OLE Patron Technical Document

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Purpose

The Patron eDoc is used to create and maintain borrower information in OLE. These include but not limited to borrower type, barcodes, expiration date, contact information, special privileges, affiliation, Notes, Proxy details and Local Identifications. Information entered here is used in circulation policy to decide loaning rights, send out notices, calculate fines, handle requests and other Patron related activities in the Library.

Dependencies (db tables)

Tables used in Patron creation

ole_dlvr_borr_typ_t	Borrower (Patron) Type
ole_dlvr_src_t	Source
ole_dlvr_stat_cat_t	Statistical Category

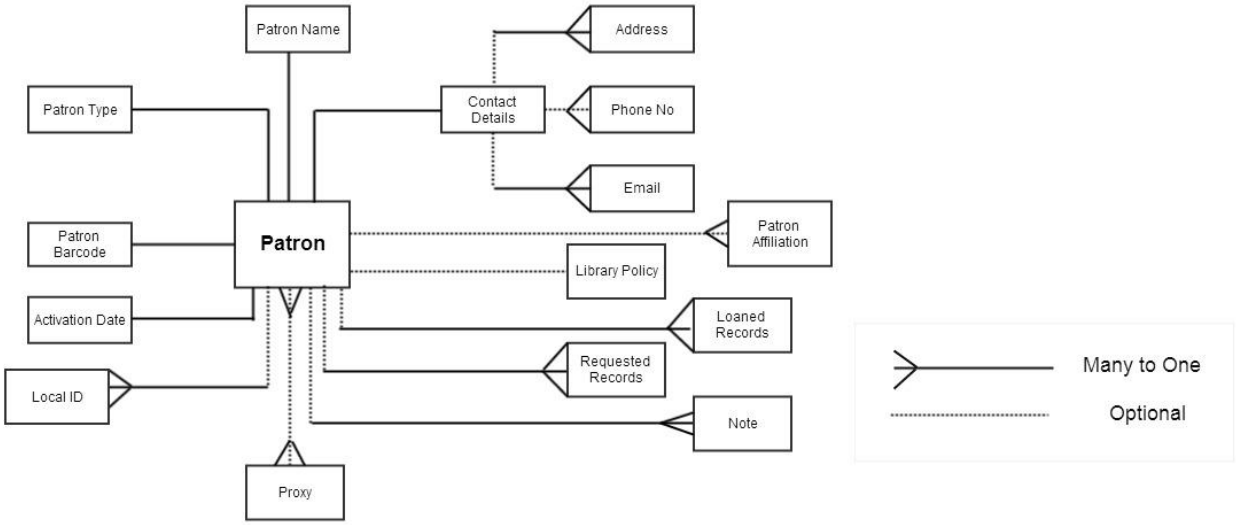
Tables where PatronID is used/referenced

ole_asr_rqst_t	Automatic Storage/Retrieval request
ole_dlvr_add_t	Delivery Address
ole_dlvr_circ_record	Deliver Circulation Record
ole_dlvr_loan_t	Loan Record
ole_dlvr_ptrn_bill_t	Patron Bill
ole_dlvr_rqst_t	Deliver Request
ole_dlvr_temp_circ_record	Deliver Temporary Circulation Record
ole_eres_req_t	eResources Request
ole_proxy_ptrn_t	Proxy Patron
ole_ptrn_addr_t	Patron Address
ole_ptrn_afltn_t	Patron Affiliation
ole_ptrn_email_t	Patron Email Address
ole_ptrn_local_id_t	Patron Local Identification
ole_ptrn_lost_bar_t	Patron Lost Barcode
ole_ptrn_nm_t	Patron Name
ole_ptrn_nte_t	Patron Note

ole_ptrn_phone_t	Patron Phone Number
ole_ptrn_t	Patron

Logical Data Model (Class Structure)

In the below diagram, effort is made to represent patron data with the various entities and their relationships associated with it.



The Patron is of a specific Patron Type and will mandatorily have a name. Contact details can either be in the form of an address, phone number or email address. If the Patron is a staff or faculty then employment related information are part of Patron data. Library policies such as delivery privileges and presence of blocks are optional. Loaned and requested records are also maintained as part of Patron data. Notes specific to patrons can be maintained as part of the Patron data. Patron can have multiple proxies or act as proxy to other patrons and this data is captured as well. Patron data also hold multiple Local Ids associated to them, for example, Student ID, Employee ID, etc.

Physical Data Model (Database Schema)

Kuali Rice already provides a middleware, KIM, to capture data regarding person *(krim_entity_t)* such as their name *(krim_entity_nm_t)*, address *(krim_entity_addr_t)*, phone numbers *(krim_entity_phone_t)*, email addresses *(krim_entity_email_t)*. This is leveraged in OLE and is used to store Patron related information in these tables.

NOTE: Both Patrons and OLE System Users data are stored in *krim_entity* tables but the System Users data additionally reside in the *krim_prncpl_t* table also. This is because a role can be

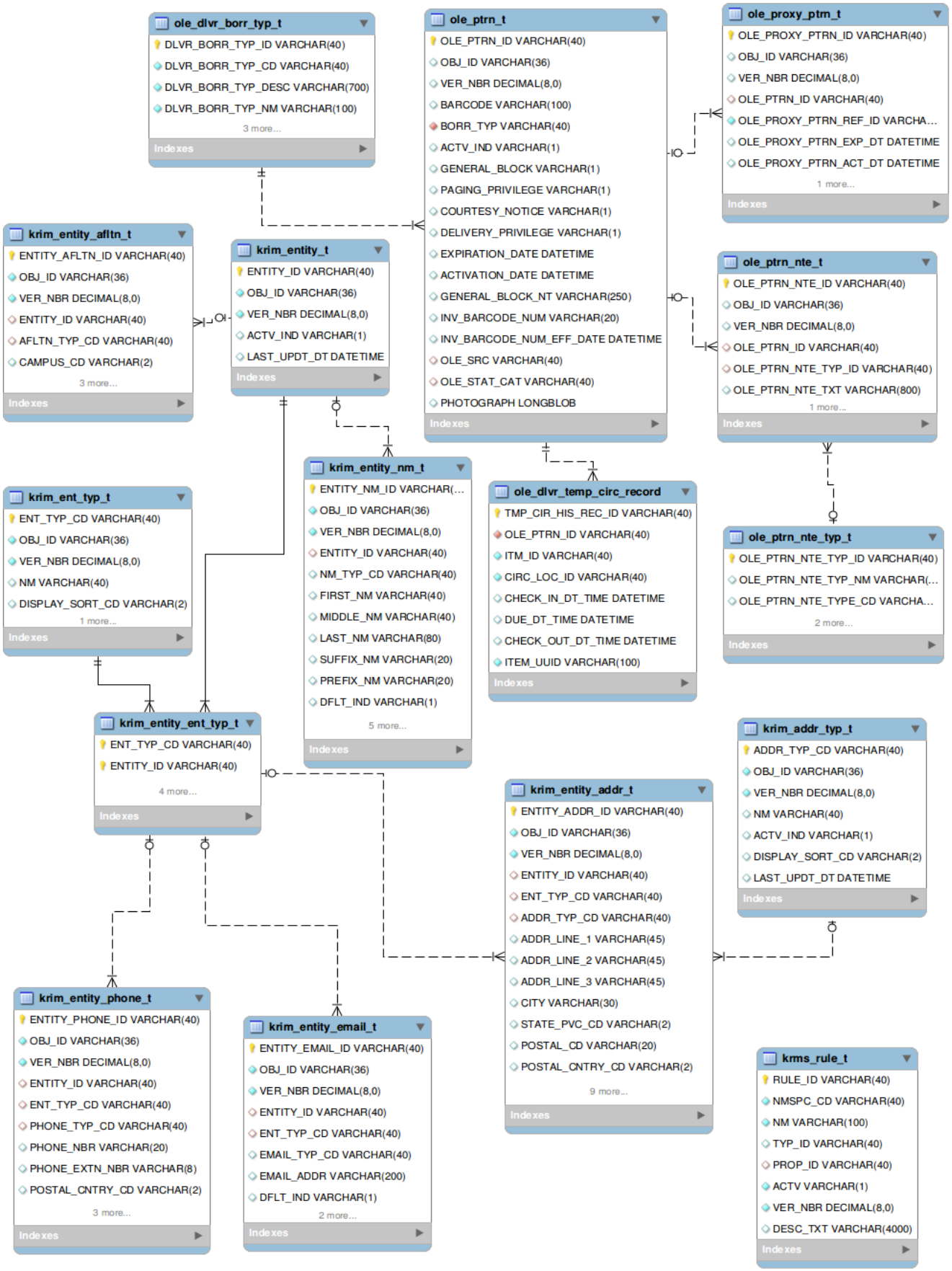
assigned only to a principal and Patrons having never been intended to have roles assigned to them has no presence in the *krim_prncpl_t*.

To save other Patron related data OLE has its own set of tables. *ole_ptrn_t* has data specific to patrons such as the Patron Id, barcode, borrower type and other information. *Ole_proxy_ptrn_t* table has information regarding proxy patrons. The table *ole_ptrn_nte_t* has notes saved by User against the Patrons. The table *ole_dlvr_loan_t* has data about items currently loaned by the Patron.

TIP: Implementors who typically import plenty of Patron data from their old system will be better off doing it using the XML import (see Batch Import for Patrons) functionality rather than inserting data into specific tables given the complexity and multiplicity of tables involved.

Note: When migrating data, if a particular item is out on circulation then the patron who borrowed it must be specified in the *ole_ds_item_t* table under the *current_borrower* field. The due date too can be entered here under the *due_date_time* field.

All tables with persistable data contains two properties by default – Version Number and Object Id. This is in order to take advantage of KRAD features. More information can be found in Rice Documentation here.



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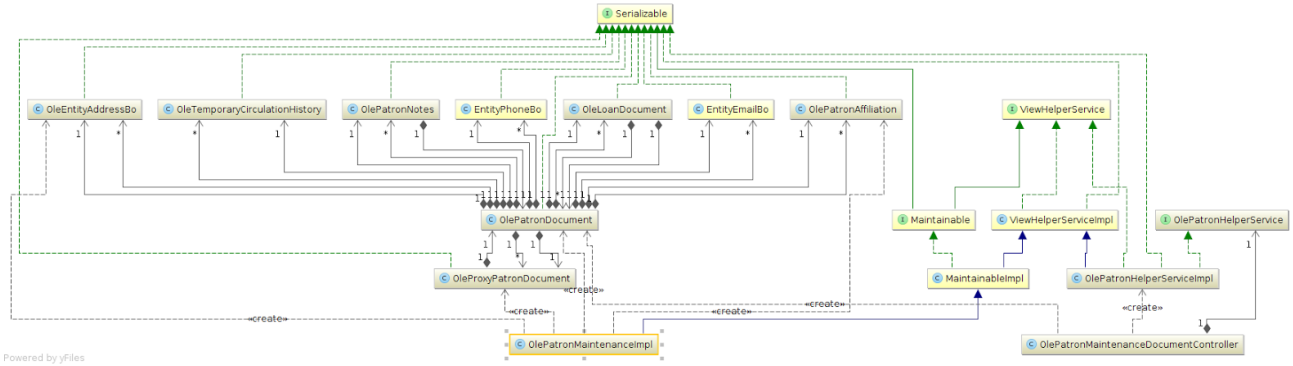
Service Interface Design (Java)

Maintenance Documents are primarily used for creating and maintaining data elements in Rice. The class *OlePatronMaintenanceImpl.java* extends the *MaintainableImpl* of Rice and overrides the necessary methods.



Business Rules Class

The class *OlePatronMaintenanceDocumentController* extends *MaintenanceDocumentController* of Rice and overrides the necessary methods. This class also has few business rules validations built into it.

The other class *OlePatronHelperServiceImpl* is used internally in the controller to validate, build and return POJOs. A lot of business rule validations are done in this class as well.

For more information, Javadocs can be found here.

Service Interface Design (SOAP)

OLE allows Patron data to be created and modified using web services to interact with other systems. This will be useful when there are external applications which would use patron data. For example, there could be gate management system which would need to authenticate Patron data, the gate management system would also probably have an interface to create Patrons which would need to be updated in the LMS in which cases this interface can be put to use.

The WSDL link is <Location URL>/remoting/olePatronService?wsdl (say in case of staging, it is, http://staging.ole.kuali.org/remoting/olePatronService?wsdl)

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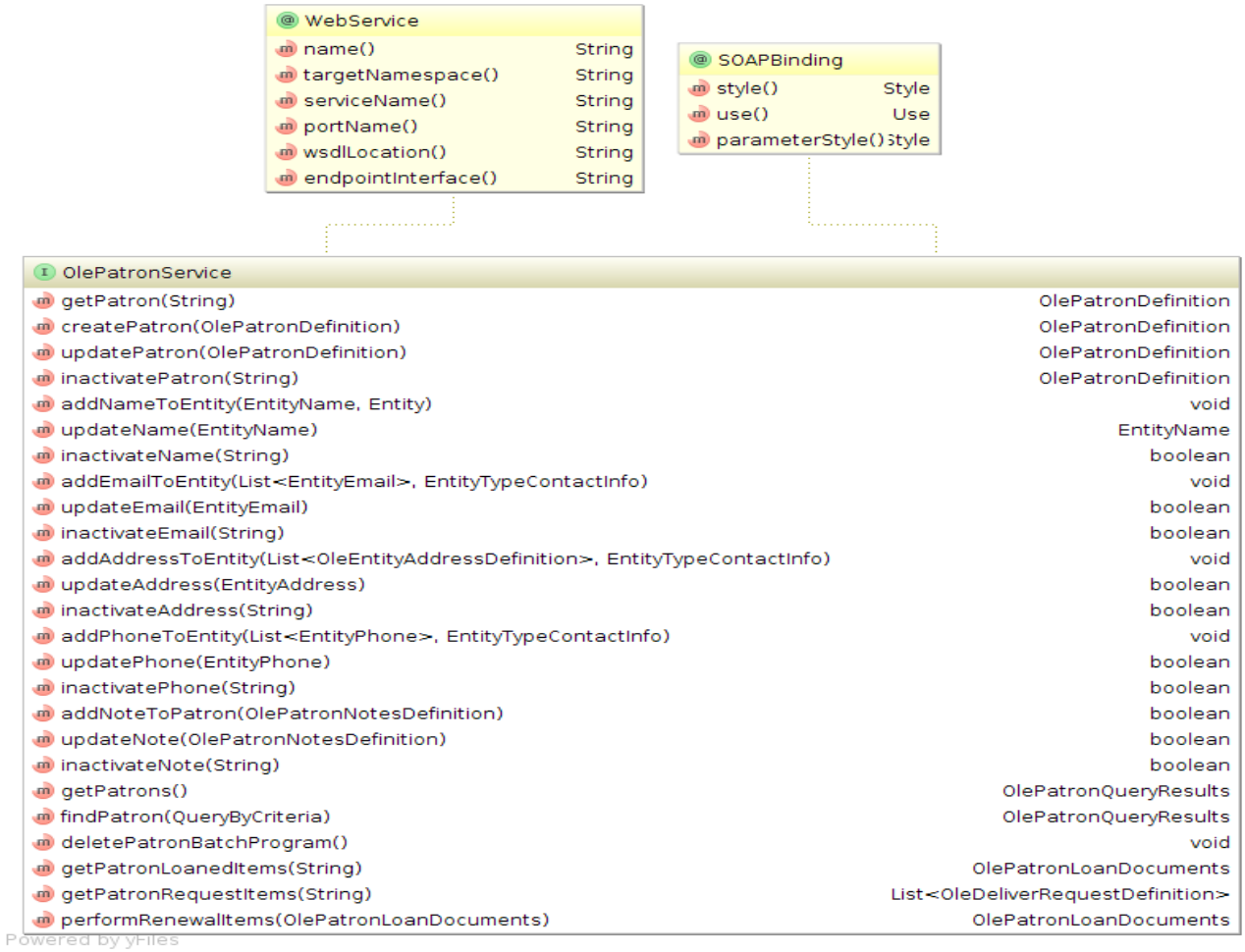
The APIs available through the service are listed below in the class diagra



User Interface Design

The OLE Patron document uses KRAD's UIF (User Interface Framework). A very good guide on this can be found here. The Spring Beans XML used in the case of Patron is the *OlePatronDocument.xml* under the *datadictionary* folder.

Data Importing

Patron data can be imported through Batch Processes. A more detailed document on Batch Process can be found here.

Data Exporting

OLE uses a RDBMS backend and hence any data can be exported using simple SQL queries. Currently there is no direct way in which Patrons can be exported directly from OLE.

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Workflow

Patron document doesn't have any workflow defined by default. However, if needed it can be defined at *OlePatronDocType.xml* file.

System Parameters

Namespace Code	Parameter Name	Description
OLE-PTRN	Barcode	This is for changing the label 'Barcode' to something else. This might be useful for institutions using a different name for Barcode. It seems like it is not in use now.
OLE-PTRN	Borrower Type	This is for changing the label 'Borrower Type' to something else. This might be useful for institutions using a different name for Borrower Type, say, 'Patron Type'. It seems like it is not in use now.
OLE-PTRN	First Name	This is for changing the label 'First Name' to something else. This might be useful for institutions using a different name for First Name. It seems like it is not in use now.
OLE-PTRN	Last Name	This is for changing the label 'Last Name' to something else. This might be useful for institutions using a different name for Last Name. It seems like it is not in use now.
OLE-PTRN	Patron	This is for changing the label 'Patron' to something else. This might be useful for institutions using a different name for Patron, say, 'Borrower'. It seems like it is not in use now.
OLE-DLVR	AUTH_BARCODE	This is for setting which parameter to look for when the NCIP input XML has no User Id field.
OLE-DLVR	PATRON_DIGIT_ROUTINE	This is for setting the Patron digit routine. A 'true' value in here makes the application authenticate that the barcode confirms to the regular expression pattern defined in the PATRON_DIGIT_ROUTINE_PATTERN.
OLE-DLVR	PATRON_DIGIT_ROUTINE_PATTERN	This is for defining the regular expression pattern for the Patron Barcode.
OLE-DLVR	LOAD_DEFAULT_PATRONS_IND	Setting the value to 'Y' will make the application ingest the default patrons upon startup.

Roles and Permissions

Permissions are linked to roles which are in turn linked to Users to give them access to screens and functions.

Permission ID	Permission Name
OLE10130	Initiate Borrower Document
OLE10138	Initiate AddressType Document
OLE10139	Edit AddressType Document
OLE10140	Initiate EmailType Document
OLE10141	Edit EmailType Document
OLE10142	Initiate PhoneType Document
OLE10143	Edit PhoneType Document
OLE10187	Can Override Loan
OLE10188	Mapping Circulation Desk
OLE10195	Create fastadd
OLE10196	Create/Update Circulation desk
OLE10197	Display Existing loan
OLE10198	Update due date
OLE10199	Display request
OLE10201	Can Override
OLE10202	Post payment
OLE10203	Post forgive
OLE10205	Create/Update proxy patron
OLE10206	Can backdate check-in time/date
OLE10207	EDITOR_ITEM_INFORMATION
OLE10208	Update patron address only
OLE10209	Display Current loan
OLE10210	Display Bill

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OLE10211	Create/update Bill
OLE10212	Can update item status
OLE10214	Edit Request Document
OLE10276	Initiate Patron Document
OLE10277	Edit Patron Document
OLE10282	Update patron overview
OLE10283	Update patron name only
OLE10284	Update patron phone only
OLE10285	Update patron email only
OLE10286	Update patron affiliation
OLE10287	Update patron library policies
OLE10288	Display Loaned records
OLE10289	Display Temporary Circulation History records
OLE10290	Update Patron Notes
OLE10291	Display Proxy Patron
OLE10292	Update Patron Local Id
OLE10293	Display InvalidOrLost Barcode

Role ID	Role Name	Permissions
OLE10046	Patron Manager	OLE10130, OLE10131, OLE10132, OLE10138, OLE10139, OLE10140, OLE10141, OLE10142, OLE10143
OLE10073	Super Circulation Supervisor	OLE10195, OLE10203, OLE10205, OLE10206, OLE10207, OLE10208, OLE10209, OLE10210, OLE10211, OLE10212, OLE10214, OLE10276, OLE10282, OLE10283, OLE10284, OLE10285, OLE10286, OLE10287, OLE10288, OLE10289, OLE10290, OLE10291, OLE10292, OLE10293
OLE10074	Circulation Supervisor	OLE10201, OLE10206, OLE10212, OLE10195, OLE10205, OLE10211, OLE10210, OLE10209, OLE10197, OLE10293, OLE10288, OLE10291,

		OLE10289, OLE10199, OLE10207, OLE10214, OLE10276, OLE10203, OLE10202, OLE10292, OLE10290, OLE10198, OLE10208, OLE10286, OLE10285, OLE10287, OLE10283, OLE10282, OLE10284
OLE10075	Circ Desk Attendant I	OLE10195, OLE10201, OLE10206, OLE10208, OLE10277
OLE10076	Circ Desk Attendant II	OLE10201, OLE10206, OLE10212, OLE10195, OLE10205, OLE10211, OLE10210, OLE10209, OLE10197, OLE10293, OLE10288, OLE10291, OLE10289, OLE10199, OLE10207, OLE10214, OLE10276, OLE10203, OLE10202, OLE10292, OLE10290, OLE10198, OLE10208, OLE10286, OLE10285, OLE10287, OLE10283, OLE10282, OLE10284