Scheduling Package Refactoring API

Release 1.01

PricewaterhouseCoopers, LLC (PwC) on behalf of
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Abstract

As part of the Open Source EHR Refactoring project funded by the VA, we have continued working on refactoring the Scheduling module code. This document is to describe what we have done in term of code changes for all interested stakeholders.

Contents

1. Introduction

The overarching goal of any code changes we implement is to make the VistA code more modular and readable without altering functionality. *Problem List* was chosen as the first module to be refactored because it has a moderate number of dependencies to other packages, allowing our team to finalize a refactoring strategy and allocate ample time for certification. To date, we have completed a *Problem List* application programming interface (API) that is used both by the roll-and-scroll interface and CPRS.

With the lessons learned from *Problem List*, we are now applying these and our refactoring methodology to *Scheduling*. This module has a significant number of dependencies to other VistA packages, and thus requires an increased concentration to the interactions it has within the system and how we will develop an API. Our team has prepared a dependency document [*RGI_Open Source EHR Refactoring Services_Scheduling Dependency Notes.docx*] outlining these interactions and it is available on our project

page on the OSEHRA website [http://www.osehra.org/group/ehr-refactoring-services]. We have specifically chosen this module in order to align with VA's active search into improving scheduling functionality within VistA; any refactoring completed by our project team should be helpful to future *Scheduling* design and implementation efforts.

Scheduling has a well-defined API for the core information that is being used by its dependent packages; details on this API may be found in the PIMS Technical Manual [http://www.va.gov/vdl/documents/Clinical/Scheduling/pimstm.pdf]. However, this API is read-only, meaning it provides the ability to view currently scheduled appointments but is not being used by the roll-and-scroll interface. Currently there appears to be no API for the core *Scheduling* functionality of making appointments, check-ins and check-outs, etc.

There is an additional API that is being used by the Primary Care Management module, *Managed Care*. This module does not deal directly with the core *Scheduling* functionality, and thus its interactions with the module can be considered unique and separate; it has a graphical user interface (GUI) and gets/sets its associated data through RPC tags within the *Scheduling* module.

Additionally, we found that there are a number of packages that currently use globals belonging to *Scheduling* directly. Details on these packages can be found in the dependency notes document. (Within the roll-and-scroll interface, routines using globals directly is considered the norm, not the exception.)

Since there is a well-defined API for reading *Scheduling* data, we have focused on the roll-and-scroll interface that is being used for making, changing, or editing appointments. Most of this core functionality resides under the Appointment Management option. We have applied the methodology used for *Problem List* and developed an API that is capable of exposing most of the functionality of the Appointment Management menu. Similar to the API created for *Problem List*, we have worked to minimize direct global access and the number of assumed variables within the *Scheduling* API.

2. Code Walkthrough

Several APIs were developed during the refactoring effort. They are described below.

In addition Also, apart from changes done to the Scheduling package routines, there were added two new routines are added to the Registration package (DGSAAPI and DGSADAL). They return specific vocabulary entries from the Rregistration package module.

Unless otherwise noted all date formats are internal FileMan format (e.g. 3120121 = Jan 21, 2012). Unless otherwise noted all date formats are internal FileMan format (e.g. 3120121 = Jan 21, 2012). Various utility methods to handle internal date format, including conversions from/to human readable forms, are available in http://www.va.gov/vdl/application.asp?appid=10 Kernel Developer's Guide and http://www.va.gov/vdl/application.asp?appid=5 Programmer Manual.

2.1 Clinic management API

$$GETCLN^SDMAPI1() - Return Clinic details

This extrinsic function returns detailed information on a clinic.

Format

    $$GETCLN^SDMAPI1(.RETURN,SC)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data. All fields are returned as internal_format^external_format. Fields returned:

RETURN("CREDIT STOP CODE")	[Numeric] Pointer to CLINIC STOP file
RETURN("DEFAULT APPOINTMENT TYPE")	[Numeric] Pointer to APPOINTMENT TYPE file (file 409.1)
RETURN("DISPLAY INCREMENTS PER HOUR")	[Numeric] 1:60-MIN, 2:30-MIN, 4:15-MIN, 3:20-MIN, 6:10-MIN
RETURN("HOUR CLINIC DISPLAY BEGINS")	[Numeric]
RETURN("INACTIVATE DATE")	[DateTime]
RETURN("LENGTH OF APP'T")	[Numeric]
RETURN("MAX # DAYS FOR AUTO-REBOOK")	[Numeric]
RETURN("MAX # DAYS FOR FUTURE BOOKING")	[Numeric]
RETURN("NAME")	[String]
RETURN("NON-COUNT CLINIC?")	[String] Y:YES,N:NO
RETURN("OVERBOOKS/DAY MAXIMUM")	[Numeric]

RETURN("PRIVILEGED USER",IEN) –	[Numeric] List of users that have the right to make appointments.
RETURN("PROHIBIT ACCESS TO CLINIC?")	[String] Y:YES
RETURN("REACTIVATE DATE")	[DateTime] Date clinic was reactivated
RETURN("SCHEDULE ON HOLIDAYS?")	[String] Y:YES
RETURN("STOP CODE NUMBER")	[Numeric] Three digit stop code number assigned to specific location
RETURN("TYPE")	[String] Type of clinic (one of the codes returned by LSTHLTP^SDMAPI1)
RETURN("VARIABLE APP'NTMENT LENGTH")	[String] V:YES

SC   [Required,Numeric] Clinic IEN

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned
INVPARAM   Invalid parameter

CLNNFND   Clinic not found.

$$LSTCLNS^SDMAPI1() - Return clinics filtered by name
This extrinsic function returns a list of clinics filtered by name.

Format
$$LSTCLNS^SDMAPI1(.RETURN,SEARCH,.START,NUMBER)

Input Parameters
.RETURN   [Required,Array] Array passed by reference that will receive the data.

RETURN   [Boolean] 1=success, 0=failure

RETURN(#,"ID")   [Numeric] Clinic IEN

RETURN(#,"NAME")   [String] Clinic name

SEARCH   [Optional,String] Partial match restriction. Default: All entries

.START   [Optional,String] The clinic name from which to begin the list.

NUMBER   [Optional,Numeric] Number of entries to return. Default: All entries

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned

None

$$SLOTS^SDMAPI1() – Get available slots

This extrinsic function returns the available slots for a clinic.

Format

$$SLOTS^SDMAPI1(.RETURN,SC)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data

    RETURN   [Boolean] 1=success,0=failure

    RETURN(0)   [Numeric] Hour, clinic display begins (this is the starting point of each line in the availability pattern)

    RETURN(DATE,1)   [String] Availability string

SC   [Required,Numeric] Clinic IEN

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter

CLNNFND   Clinic not found.

$$FRSTAVBL^SDMAPI1() - Find first available appointment date

This extrinsic function finds the first available appointment date for a clinic.

Format

$$FRSTAVBL^SDMAPI1(.RETURN,SC)

Input Parameters

.RETURN   [Required,DateTime] Passed by reference, set to the first available date.

SC   [Required,Numeric] Clinic IEN

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter

CLNNFND   Clinic not found.

$$GETAPTS^SDMAPI1() - Get patient appointments

This extrinsic function returns a list of patient appointments.

Format

$$GETAPTS^SDMAPI1(.RETURN,DFN,SD)

Input Parameters

.RETURN   [Required] Array passed by reference that will receive the data

RETURN("APT",DT," APPOINTMENT DATE/TIME") – [DateTime] Date of appointment

RETURN("APT",DT," APPOINTMENT TYPE") – [Numeric] Type of appointment (pointer to APPOINTMENT TYPE file)

RETURN("APT",DT," APPT. CANCELLED") – [Numeric] Clinic in which the patient had a scheduled appointment which was cancelled to set this appointment

RETURN("APT",DT," CANCELLATION REASON") – [Numeric] Cancellation reason (pointer to CANCELLATION REASONS file)

RETURN("APT",DT," CANCELLATION REMARKS") – [String] Cancellation remarks

RETURN("APT",DT,"CLINIC") – [Numeric] Clinic

RETURN("APT",DT," COLLATERAL VISIT") – [Boolean] Collateral visit

RETURN("APT",DT," CURRENT STATUS") – [String] Current status of appointment

RETURN("APT",DT," DATA ENTRY CLERK") – [Numeric] User who made appointment

RETURN("APT",DT," PURPOSE OF VISIT") – [Numeric] Type of appointment

RETURN("APT",DT," STATUS") – [String] Appointment status

DFN   [Required,Numeric] Patient IEN

SD   [Optional,DateTime] – if not set returns all patient appointments.

- If SD is set to a valid date-time returns the corresponding appointment.
- If SD(0) is set (0/1) returns patient appointments before/after specified date (SD).

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

PATNFND   Patient not found.

$$HASPEND^SDMAPI1() – Check if patient has pending appointments

This extrinsic function verifies if a patient has pending appointments.

Format

$$HASPEND^SDMAPI1(.RETURN,DFN)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the patient has pending appointments, 0 otherwise

DFN   [Required,Numeric] Patient IEN

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

PATNFND   Patient not found.

$$GETPEND^SDMAPI1() - Return patient pending appointments
This extrinsic function returns a list of patient pending appointments.

Format
        $$GETPEND^SDMAPI1(.RETURN,DFN)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data

        RETURN   [Numeric] Number of entries returned

        RETURN(APPTDT," APPOINTMENT TYPE") – [Numeric] Type of appointment

        RETURN(APPTDT," CLINIC") – [Numeric] Clinic

        RETURN(APPTDT," COLLATERAL VISIT") – [Boolean] Collateral visit

        RETURN(APPTDT," CONSULT LINK") – [Numeric]

        RETURN(APPTDT," EKG DATE/TIME") – [DateTime]

        RETURN(APPTDT," LAB DATE/TIME") – [DateTime]

        RETURN(APPTDT," LENGTH OF APP'T") – [Numeric] Length of appointment

        RETURN(APPTDT," X-RAY DATE/TIME") – [DateTime]

DFN   [Required,Numeric] Patient IEN

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

PATNFND   Patient not found.

2.2 Appointment management API

$$MAKE^SDMAPI2() - Make appointment

This extrinsic function creates a new appointment.

Format

$$MAKE^SDMAPI2(.RETURN,DFN,SC,SD,TYPE,STYP,LEN,SRT,OTHR,CIO,LAB,XRAY,EKG,RQXRAY,CONS,LVL)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the update succeeded, 0 otherwise

RETURN(0) – [String] Error code^Text^Level (1 for error, 2 for warning, 3 for warning)

DFN   [Required,Numeric] Patient IEN

SC   [Required,Numeric] Clinic IEN

SD   [Required,DateTime] Appointment date/time

TYPE   [Required,Numeric] Purpose of visit (drawn from the Appointment Types list – see $$LSTAPPT^SDMAPI1)

STYP   [Optional,Numeric] Sub-category associated with this appointment (one of the codes returned by LSTSBCTG^DGSAAPI)

LEN   [Required,Numeric] Appointment length in minutes.

SRT   [Required,String] Scheduling request type (one of the codes returned by LSTSRT^SDMAPI1)

OTHR   [Optional,String] Any other tests ordered in association with the appointment

CIO   [Optional,String] If set to "CI" the appointment will be checked-in.

LAB   [Optional,DateTime] If this patient is scheduled for laboratory tests in conjunction with this appointment, set LAB to the date/time the patient should report to the lab for these tests.

XRAY   [Optional,DateTime] If this patient is scheduled for laboratory tests in conjunction with this appointment, set LAB to the date/time the patient should report to the lab for these tests.

EKG   [Optional,DateTime] If this patient is scheduled for laboratory tests in conjunction with this appointment, set LAB to the date/time the patient should report to the lab for these tests.

RQXRAY   [Optional,Boolean] Set to 1 if x-ray films are required for this appointment.

CONS   [Optional,Numeric] Consult associated with this appointment (pointer to Request/Consultation file).

LVL   [Optional,Numeric]

-     Forces appointment creation if it is set to 1 (ignores all warnings described below)

- If set to 2 will return an error if there are no open slots
- If set to anything higher that 2 or left undefined, will return an error if the patient has an active appointment on same time, or on same day, or a canceled appointment on same time, or if there are no open slots.

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

APTCINV   Clinic is scheduled to be inactivated on …

APTCBCP   CAN'T BOOK WITHIN A CANCELLED TIME PERIOD

APTCLUV   There is no available slot for this date/time.

APTEXCD   EXCEEDS MAXIMUM DAYS FOR FUTURE APPOINTMENT!!

APTEXOB   WILL EXCEED MAXIMUM ALLOWABLE OVERBOOKS,

APTNOST   NO OPEN SLOTS THEN

APTOAPD   ONLY … OVERBOOKS PER DAY!!

APTOVBK   OVERBOOK!

APTOVOS   THAT TIME IS NOT WITHIN SCHEDULED PERIOD!

APTOAPD   ONLY … OVERBOOK PER DAY!!

APTPAHA   PATIENT ALREADY HAS APPOINTMENT … THEN.

APTPAHCO   PATIENT ALREADY HAS APPOINTMENT … THEN.

APTPAHU   Patient already has an appt on …

APTPCLA   Appointment date is prior to the clinic's availability date.

APTPHSD   PATIENT ALREADY HAS APPOINTMENT ON THE SAME DAY …

APTPPAB   Appointment date is prior to the patient's date of birth.

APTPPCP   THIS TIME WAS PREVIOUSLY CANCELLED BY THE PATIENT …

APTSHOL   HOLIDAY??

APTNOST   NO OPEN SLOTS THEN

APTWHEN   WHEN??

CLNNFND   Clinic not found.

CLNURGT	Access to … is prohibited! Only users with a special code may access this clinic.
INVPARAM	Invalid parameter value
PATDIED	PATIENT HAS DIED.
PATNFND	Patient not found.
STYPNFND	Appointment subtype not found or inactive.
TYPINVD	Patient must have the eligibility code EMPLOYEE, COLLATERAL or SHARING AGREEMENT to choose those types of appointments.
TYPINVSC	The 'SC Percent','Service Connected' and 'Primary Eligibility Codes' are OUT OF SYNC, Please CORRECT the problem.
TYPNFND	Appointment type not found.

$$MAKEUS^SDMAPI2() – Make unscheduled appointment

This extrinsic function creates a new unscheduled appointment.

Format

$$MAKEUS^SDMAPI2(.RETURN,DFN,SC,SD,TYP,STYP,CIO)

Input Parameters

.RETURN	[Required,Boolean] Set to 1 if the update succeeded, 0 otherwise
	RETURN(0) – [String] Error code^Text^Level (1 for error, 2 for warning, 3 for warning)
DFN	[Required,Numeric] Patient IEN
SC	[Required,Numeric] Clinic IEN
SD	[Required,DateTime] Appointment date/time
TYP	[Required,Numeric] Purpose of visit visit (drawn from the Appointment Types list – see $$LSTAPPT^SDMAPI1)
STYP	[Optional,Numeric] Sub-category associated with this appointment (one of the codes returned by LSTSBCTG^DGSAAPI)
CIO	[Optional,String] 'CI'=check-in appointment, 'CO'=check-out appointment

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

APTCINV	Clinic is scheduled to be inactivated on …
APTCIPE	You cannot check in this appointment.
APTCITS	It is too soon to check in this appointment.

APTCOCE   >>> You can not check out this appointment.

APTCOTS   It is too soon to check out this appointment.

APTCOCN   You cannot check out this appointment.

APTCOAC   Appointment already checked out

APTCONW   Appointment new encounter

APTLOCK   Another user is editing this record. Trying again.

APTPAHU   Patient already has an appt on …

CLNINV   Invalid Clinic.

CLNSCIN   Invalid Clinic Stop Code …

CLNSCNR   Clinic's Stop Code … has no restriction type ...

CLNSCPS   Clinic's Stop Code … cannot be …

CLNSCRD   Clinic's Stop Code … cannot be used. Restriction date is …

CLNNFND   Clinic not found.

INVPARAM   Invalid parameter value

PATDIED   PATIENT HAS DIED.

PATNFND   Patient not found.

STYPNFND   Appointment subtype not found or inactive.

TYPINVD   Patient must have the eligibility code EMPLOYEE, COLLATERAL or SHARING AGREEMENT to choose those types of appointments.

TYPINVSC   The 'SC Percent','Service Connected' and 'Primary Eligibility Codes' are OUT OF SYNC, Please CORRECT the problem.

TYPNFND   Appointment type not found.

$$CANCEL^SDMAPI2() - Cancel appointment

This extrinsic function cancels an existing appointment.

Format

     $$CANCEL^SDMAPI2(.RETURN,DFN,SC,SD,TYP,RSN,RMK)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the update succeeded, 0 otherwise

     RETURN(0) – [String] Error code^Text^Level (1 for error, 2 for warning, 3 for warning)

DFN   [Required,Numeric] Patient IEN

SC   [Required,Numeric] Clinic IEN

SD   [Required,DateTime] Appointment date

TYP   [Required,String] Status (one of the codes returned by LSTAPPST^SDMAPI1)

RSN   [Required,Numeric] Cancellation reason (one of the codes returned by
                LSTCRSNS^SDMAPI1)

RMK   [Optional,String] Remarks

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

APTCAND   Appointment already cancelled

APTCCHO   Appointment has a check out date and cannot be cancelled.

APTCRGT   Appt. … NOT CANCELLED. Access to this clinic is restricted to only privileged users!

APTCNPE   You cannot cancel this appointment.

CLNNFND   Clinic not found.

INVPARAM   Invalid parameter value

PATNFND   Patient not found.

RSNNFND   Cancellation reason not found.

$$NOSHOW^SDMAPI2() - Mark appointment as no-show

This extrinsic function marks an existing appointment as no-show.

Format

        $$NOSHOW^SDMAPI2(.RETURN,DFN,SC,SD,LVL)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the update succeeded, 0 otherwise

DFN   [Required,Numeric] Patient IEN

SC   [Required,Numeric] Clinic IEN

SD   [Required,DateTime] Appointment date/time

LVL   [Optional,Numeric]

                - If set to 1, unconditionally marks the appointment as no show
                - If set to anything else than 1 or left undefined will return an error if any of the checks

failed (for instance if the appointment was already marked as no show).

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

APTNSAL   ALREADY RECORDED AS NO-SHOW... WANT TO ERASE

APTNSAR   THIS APPOINTMENT ALREADY A NO-SHOW AND REBOOKED... ARE YOU SURE YOU WANT
            TO ERASE

APTNSCE   You cannot execute no-show processing for this appointment.

APTNSIA   Inpatient Appointments cannot reflect No-Show status!

CLNNFND   Clinic not found.

INVPARAM   Invalid parameter value

PATNFND   Patient not found.

$$CHECKIN^SDMAPI2() - Check in appointment

This extrinsic function checks in an existing appointment.

Format

        $$CHECKIN^SDMAPI2(.RETURN,DFN,SD,SC,CIDT)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the check in succeeded, 0 otherwise

            RETURN(0) – [String] Error code^Text^Level (1 for error, 2 for warning, 3 for warning)

DFN   [Required,Numeric] Patient IEN

SD   [Required,DateTime] Appointment date/time

SC   [Required,Numeric] Clinic IEN

CIDT   [Optional,DateTime] Date and time the patient was checked in for the appointment

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

APTCIPE   You cannot check in this appointment.

APTCITS   It is too soon to check in this appointment.

CLNNFND   Clinic not found.

INVPARAM   Invalid parameter value

PATNFND   Patient not found.

$$CHECKO^SDMAPI4() - Check out appointment

This extrinsic function checks out an existing appointment.

Format

$$CHECKO^SDMAPI2(.RETURN,DFN,SD,SC)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the check-in succeeded, 0 otherwise

RETURN(0) – [String] Error code^Text^Level (1 for error, 2 for warning, 3 for warning)

RETURN("COD") – [DateTime] Checked out date/time

RETURN("COVISIT") – [Boolean] Collateral visit (1=this patient has been seen as a collateral for another patient)

RETURN("LOCATION") – [Numeric] Encounter location (pointer to file 44)

RETURN("SDOE") – [Numeric] Pointer to the corresponding outpatient encounter (file 409.68)

RETURN("VISIT") – [Numeric] Visit file entry (pointer to file 9000010)

DFN   [Required,Numeric] Patient IEN

SD   [Required,DateTime] Appointment date/time

SC   [Required,Numeric] Clinic IEN

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

APTCOCE   >>> You can not check out this appointment.

APTCOTS   It is too soon to check out this appointment.

APTCOCN   You cannot check out this appointment.

APTCOAC   Appointment already checked out

APTCONW   Appointment new encounter

CLNNFND   Clinic not found.

INVPARAM   Invalid parameter value

PATNFND   Patient not found.

$$DELCOSD^SDMAPI4() - Delete check out (scheduling)

This extrinsic function deletes an existing appointment check out.

Format

$$DELCOSD^SDMAPI4(.RETURN,DFN,SD)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the check in succeeded, 0 otherwise

               RETURN(0) – [String] Error code^Text^Level (1 for error, 2 for warning, 3 for warning)

               RETURN("OE") [Numeric]Pointer to the corresponding outpatient encounter (file 409.68)

DFN   [Required,Numeric] Patient IEN

SD   [Required,DateTime] Appointment date

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

APTCOSU   You must have the 'SD SUPERVISOR' key to delete an appointment check out.

APTDCOD   The appointment must have a check out date/time to delete.

APTDCOO   >>> Editing and deleting old encounters not allowed.

CLNNFND   Clinic not found.

INVPARAM   Invalid parameter value

PATNFND   Patient not found.

2.3 Vocabularies API

$$GETAPPT^SDMAPI1() - Get Appointment Type details

This extrinsic function returns detailed information about an appointment type.

Format

$$GETAPPT^SDMAPI1(.RETURN,TYPE)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data.

               RETURN("NAME") – [String] Appointment type name

               RETURN("NUMBER") – [Numeric] Appointment type IEN

               RETURN("SYNONIM") – [String] Appointment type synonim

TYPE   [Required,Numeric] Appointment type IEN (File 409.1)

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVAPARAM   Invalid parameter value

TYPNFND   Appointment type not found.

$$GETELIG^SDMAPI1() - Return Eligibility Code details

This extrinsic function returns detailed information about an eligibility code.

Format

$$GETELIG^SDMAPI1(.RETURN,ELIG)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data

RETURN("ABBREVIATION")   [String] Eligibility Code abbreviation

RETURN("MAS ELIGIBILITY CODE") [Numeric]

RETURN("NAME")   [String] Eligibility Code name

RETURN("PRINT NAME")   [String] Eligibility Code print name

RETURN("TYPE")   [String] Eligibility Code type (N:NON VETERAN,Y:VETERAN)

RETURN("VA CODE NUMBER")   [Numeric] VA Code Number

RETURN("INACTIVE")   [Boolean] Eligibility Code status

ELIG   [Required,Numeric] Eligibility code IEN

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

$$LSTAPPT^SDMAPI1() - List appointment types filtered by name

This extrinsic function returns a list of appointment types. The list can be filtered by name.

Format

$$LSTAPPT^SDMAPI1(.RETURN,SEARCH,START,NUMBER)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data

RETURN(0) – [String] # of entries found^maximum requested^any more?^flags

(consistent with LIST^DIC header node)

RETURN(#,"ID") – [Numeric] Appointment type IEN

RETURN(#,"NAME") – [String] Appointment type name

SEARCH   [Optional,String] Partial match restriction. Default: All entries

START   [Optional,String] The appointment type name from which to begin the list. Default: ""

NUMBER   [Optional,Numeric] Number of entries to return. Default: All entries

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned
None

$$LSTAPPST^SDMAPI1() - List appointment statuses
This extrinsic function returns a list of appointment status codes.

Format
        $$LSTAPPST^SDMAPI1(.RETURN)

Input Parameters
.RETURN   [Required,Array] Array passed by reference that will receive the data

        RETURN(0) – [Numeric] # of entries found

        RETURN(#) – [String] code^display_name

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned
None

$$LSTHLTP^SDMAPI1() - List hospital location types
This extrinsic function returns a list of hospital location types.

Format
        $$LSTHLTP^SDMAPI1(.RETURN)

Input Parameters
.RETURN   [Required,Array] Array passed by reference that will receive the data

        RETURN(0) – [Numeric] # of entries found

        RETURN(#) – [String] code^display_name

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned

None

$$LSTCRSNS^SDMAPI1() - List cancellation reasons filtered by name

This extrinsic function returns a list of cancellation reasons. The list can be filtered by name.

Format

$$LSTCRSNS^SDMAPI1(.RETURN,SEARCH,START,NUMBER)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data

    RETURN(0) – [String] # of entries found^maximum requested^any more?^flags

    (consistent with LIST^DIC header node)

    RETURN(#,"ID") – [Numeric] Cancellation reason IEN

    RETURN(#,"NAME") – [String] Cancellation reason name

SEARCH   [Optional,String] Partial match restriction. Default: All entries

START   [Optional,String] The entry from which to begin the list. Default: ""

NUMBER   [Optional,Numeric] Number of entries to return. Default: All entries

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

None

$$LSTSRT^SDMAPI1() - List scheduling request types

This extrinsic function returns a list of scheduling request types.

Format

$$LSTSRT^SDMAPI1(.RETURN)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data

    RETURN(0) – [Numeric] # of entries found

    RETURN(#) – [String] code^display_name

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

None

$$LSTSBCTG^DGSAAPI() - List sharing agreement sub-categories filtered by name

This extrinsic function returns a list of sharing agreement sub-categories. The list can be filtered by name.

Format

$$LSTSBCTG^DGSAAPI (.RETURN,SEARCH,START,NUMBER)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data

                 RETURN(0) – [Numeric] # of entries found

                 RETURN(#) – [String] IEN^name

SEARCH   [Optional,String] Partial match restriction. Default: All entries

START   [Optional,String] The entry from which to begin the list. Default: ""

NUMBER   [Optional,Numeric] Number of entries to return. Default: All entries

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

None

2.4 Electronic Wait List API

$$LIST^SDWLAPI1() - List EWL entries for patient

This extrinsic function returns the list of a patient EWL entries.

Format

$$LIST^SDWLAPI1(.RETURN,DFN,STATUS,BEGIN,END)

Input Parameters

.RETURN   [Required,Numeric] Array passed by reference that will receive the data. All fields except 'IEN' are returned in internal^external format.

RETURN	[Numeric] # of entries found
RETURN(#,"DISPTYPE")	[String]Disposition type
RETURN(#,"IEN")	[Numeric]EWL entry IEN
RETURN(#,"INSTITUTION")	[Numeric]Institution
RETURN(#,"ORIGDT")	[DateTime] Originating date
RETURN(#,"PRIORITY")	[String] Priority (A:ASAP,F:FUTURE)
RETURN(#,"STATUS")	[String] Status (O:OPEN,C:CLOSED)

RETURN(#,"WAITFOR")	[Numeric] Pointer to Team/Position/Specialty/Clinic depending on Wait List Type
RETURN(#,"WLTYPE")	[Numeric] Wait List Type: 1=PCMM Team assignment, 2=PCMM position assignment, 3=service/specialty, 4=specific clinic

DFN   [Required,Numeric] Patient IEN

STATUS   [Optional,String] EWL entry status (O=Open, C=Closed, ""=Both). Default ""

BEGIN   [Optional,DateTime] Start date (originating date)

END   [Optional,DateTime] End date (originating date)

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned
INVPARAM   Invalid parameter value

PATNFND   Patient not found.

$$DETAIL^SDWLAPI1() – Wait List entry detailed information
This extrinsic function returns detailed information for a EWL entry

Format
        $$DETAIL^SDWLAPI1(.RETURN,IEN)

Input Parameters
.RETURN   [Required] Array passed by reference that will receive the data. All fields are returned in internal^external format.

RETURN("APPTCLERK")	[Numeric] Who made the appointment
RETURN("APPTCLIN")	[Numeric] Appointment clinic
RETURN("APPTCREDSC")	[Numeric] Appointment credit stop code
RETURN("APPTDATE")	[DateTime] Date appointment made
RETURN("APPTINST")	[Numeric] Appointment institution
RETURN("APPTSC")	[Numeric] Appointment stop code
RETURN("APPTSCHED")	[DateTime] Scheduled date of appointment
RETURN("APPTSN")	[String] Appointment station number
RETURN("APPTSTATUS")	[String] Appointment status

RETURN("CHDCLINP")	[Numeric] Changed clinic parent pointer
RETURN("CMNTS")	[String] Comment
RETURN("DISPBY")	[Numeric] Dispositioned by
RETURN("DISPDT")	[DateTime] Date dispositioned
RETURN("DISPTYPE")	[String] Disposition
RETURN("DNRCMT")	[String] Do not remove comment
RETURN("DNRDT")	[DateTime] Do not remove date
RETURN("DNRRSN")	[String] Do not remove reason
RETURN("DNRUSR")	[Numeric] User entering no remove
RETURN("DSRDDT")	[DateTime]Desired date of appointment
RETURN("ENTEREDBY")	[Numeric] Originating user
RETURN("INSTITUTION")	[Numeric] Institution
RETURN("ORIGDT")	[DateTime] Originating date
RETURN("PATIENT")	[Numeric] Patient
RETURN("PRIORITY")	[String] Priority
RETURN("PROVIDER")	[Numeric] Provider
RETURN("REOPENCMT")	[String] Reopen comment
RETURN("REOPENRSN")	[String] Reopen reason
RETURN("REQBY")	[Numeric] Request by
RETURN("SCPRIORITY")	[Boolean] Service connected priority
RETURN("STATUS")	[String] Status
RETURN("WAITFOR")	[Numeric] Pointer to Team/Position/Specialty/Clinic depending on Wait List Type
RETURN("WAITFORP")	[String] Returned as internal^external value. Can be clinic_stop_IEN^clinic_stop_name if WL Type is '3' or clinic_IEN^clinic_name if type is '4'
RETURN("WLTYPE")	[Numeric] Wait List Type: 1=PCMM Team assignment, 2=PCMM position assignment, 3=service/specialty, 4=specific clinic

IEN   [Required,Numeric] EWL entry IEN

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned
INVPARAM   Invalid parameter value

$$NEW^SDWLAPI1() – Add new EWL entry
This extrinsic function creates a new EWL entry

Format
$$NEW^SDWLAPI1(.RETURN,.SDWLD)

Input Parameters
.RETURN   [Required,Numeric] Will return the new IEN if the call succeeded, 0 otherwise

.SDWLD   [Required,Array] Array containing the data to be saved

SDWLD("WLTYPE")   [Numeric]Wait List Type

SDWLD("PATIENT")   [Numeric] Patient

SDWLD("INSTITUTION")   [Numeric] Institution

SDWLD("WAITFOR")   [Numeric]Pointer to Team/Position/Specialty/Clinic depending on Wait List Type

SDWLD("PRIORITY")   [String] Priority

SDWLD("REQBY")   [Numeric] Request by

SDWLD("PROVIDER")   [Numeric] Provider

SDWLD("SCPRCNT")   [Numeric] Service connected percentage

SDWLD("SCPRIORITY")   [Boolean] Service connected priority

SDWLD("DSRDDT")   [DateTime] Desired date of appointment

SDWLD("CMNTS")   [String] Comments

SDWLD("ENRSTAT")   [String] EWL enrollee status

SDWLD("ENRDU")   [DateTime] EWL enrollee date used

SDWLD("ENRDF")   [String] EWL enrollee database file

SDWLD("TICKLER")   [Boolean] Scheduling reminder flag

SDWLD("CHDCLINP")   [Numeric] Changed clinic parent pointer

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

$$UPDATE^SDWLAPI1() – Update EWL entry

This extrinsic function returns a list of cancellation reasons. The list can be filtered by name.

Format

$$UPDATE^SDWLAPI1(.RETURN,SDWLIEN,.SDWLD)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the the update succeeded, 0 otherwise

SDWLIEN   [Required,Numeric] IEN of the EWL entry to be updated

.SDWLD   [Required,Array] Array containing the data to be saved

        SDWLD("WLTYPE")   [Numeric] Wait List Type

        SDWLD("INSTITUTION")   [Numeric] Institution

        SDWLD("WAITFOR")   [Numeric] Pointer to Team/Position/Specialty/Clinic depending on Wait List Type

        SDWLD("PRIORITY")   [String] Priority

        SDWLD("REQBY")   [Numeric] Request by

        SDWLD("PROVIDER")   [Numeric] Provider

        SDWLD("SCPRCNT")   [Numeric] Service connected percentage

        SDWLD("SCPRIORITY")   [Boolean] Service connected priority

        SDWLD("DSRDDT")   [DateTime] Desired date of appointment

        SDWLD("CMNTS")   [String] Comments

        SDWLD("ENRSTAT")   [String] EWL enrollee status

        SDWLD("REJECTED")   [Boolean] Rejection flag

        SDWLD("TICKLER")   [Boolean] Scheduling reminder flag

        SDWLD("INTRATF")   [Boolean] Intra-transfer flag

        SDWLD("MULTITEAM")   [Boolean] Multi team flag

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

$$DISP^SDWLAPI1() – Disposition entry

This extrinsic function update the disposition data for an EWL entry.

Format

        $$DISP^SDWLAPI1(.RETURN,SDWLDFN,SDWLIEN,SDWLDISP,.SDWLAPPT)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the update succeeded, 0 otherwise

SDWLDFN   [Required,Numeric] Patient IEN

SDWLIEN   [Required,Numeric] EWL entry IEN

SDWLDISP   [Required,String] Disposition type (D:DEATH, NC:REMOVED/NON-VA CARE,
                SA:REMOVED/SCHEDULED-ASSIGNED, CC:REMOVED/VA CONTRACT CARE,
                NN:REMOVED/NO LONGER NECESSARY, ER:ENTERED IN ERROR, TR:TRANSFERRED)

.SDWLAPPT   [Optional,Array] Array containing appointment data (saved if disposition type is "SA")

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

$$DELETE^SDWLAPI1() – Delete EWL entry

This extrinsic function deletes an existing EWL entry

Format

        $$DELETE^SDWLAPI1(.RETURN,SDWLIEN)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the delete succeeded, 0 otherwise

SDWLIEN   [Required,Numeric] EWL entry IEN

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

$$HASENTRY^SDWLAPI1() – Patient is on EW List?

This extrinsic function checks if patient has entries on the Electronic Wait List

Format

        $$HASENTRY^SDWLAPI1(.RETURN,DFN)

Input Parameters

.RETURN   [Required,Boolean] Set to 1 if the patient has EWL entries on file, 0 otherwise

DFN   [Required,Numeric] Patient IEN.

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

2.5 Team API

$$LSTAPOS^SCTMAPI1() - List active team positions filtered by name

This extrinsic function returns a list of active team positions. The list can be filtered by name.

Format

        $$LSTAPOS^SCTMAPI1(.RETURN,SEARCH,START,NUMBER)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data. All fields except
                  'ID' are returned in internal^external format.

        RETURN(0) – [Numeric] # of entries found

        RETURN(#,"ID") – [Numeric] Team position IEN

        RETURN(#,"CLINIC") – [Numeric] Associated clinic IEN

        RETURN(#,"NAME") – [String] Team position name

        RETURN(#,"TEAM") – [String] Team name

        RETURN(#,"USER") – [String] Practitioner IEN

SEARCH   [Optional,String] Partial match restriction. Default: All entries

        SEARCH(0) – [Optional,Numeric] Team IEN

        SEARCH(1) – [Optional,Boolean] If 1 returns only primary care positions.

START   [Optional,Numeric] The team position name from which to begin the list. Default: ""

NUMBER   [Optional,Numeric] Number of entries to return. Default: All entries

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

None

$$LSTATMS^SCTMAPI1() - List active teams filtered by name

This extrinsic function returns a list of active teams. The list can be filtered by name.

Format

$$LSTATMS^SCTMAPI1(.RETURN,SEARCH,START,NUMBER)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data

   RETURN(0) – [Numeric] # of entries found

   RETURN(#,"ID") – [Numeric] Team IEN

   RETURN(#,"NAME") – [String] Team name

SEARCH   [Optional,String] Partial match restriction. Default: All entries

   SEARCH(0) – [Optional,Boolean] If 1 returns only primary care teams

START   [Optional,Numeric] The team name from which to begin the list. Default: ""

NUMBER   [Optional,Numeric] Number of entries to return. Default: All entries

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

None

$$GETEAM^SCTMAPI1() – Get team details

This extrinsic function returns detailed data for a team.

Format

$$GETEAM^SCTMAPI1(.RETURN,SCTM)

Input Parameters

.RETURN   [Required,Array] Array passed by reference that will receive the data in internal^external format

RETURN("AUTO-ASSIGN FROM ASSC CLINICS?") - [Boolean] Autoassign patients from associated clinics

RETURN("CAN ACT AS A PC TEAM?") – [Boolean] Can act as primary care team for a patient

RETURN("CLOSE TO FURTHER ASSIGNMENT?") – [Boolean] Indicates if team can be assigned additional patients

RETURN("CURRENT # OF PATIENTS") – [Numeric] # of patients currently assigned to this team

RETURN("CURRENT ACTIVATION DATE") - [DateTime] Activation date

RETURN("CURRENT EFFECTIVE DATE") – [DateTime] The most recent date that the status has

changed

RETURN("CURRENT INACTIVATION DATE") – [DateTime] Inactivation date as of today

RETURN("CURRENT STATUS") – [String] Status (Active, Inactive)

RETURN("DEFAULT TEAM PRINTER") – [Numeric] Printer IEN (pointer to DEVICE file)

RETURN("DESCRIPTION") – [String] Team description

RETURN("DISCHARGE FROM ASSOC. CLINICS?") – [Boolean] Auto discharge from team when
   discharge from associated clinic?

RETURN("INSTITUTION") – [Numeric] Site IEN (pointer to INSTITUTION file)

RETURN("MAX % OF PRIMARY CARE PATIENTS")- [Numeric] Maximum percentage of patients that
   this team should be assigned

RETURN("MAX NUMBER OF PATIENTS") – [Numeric] Maximum allowable number of patients for
   this team

RETURN("NAME") – [String] Team name

RETURN("RESTRICT CONSULTS?") – [Boolean] Prevents making consult appointments to clinics in
   which the patient is not enrolled

RETURN("SERVICE/DEPARTMENT") – [Numeric] Service/Section IEN (pointer to SERVICE/SECTION
   file)

RETURN("TEAM PHONE NUMBER") – [String] Phone

RETURN("TEAM PURPOSE") – [Numeric] Primary role of team (pointer to TEAM PURPOSE file)

SCTM   [Required,Numeric] Team IEN

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned
INVPARAM   Invalid parameter value

$$GETEAMPO^SCTMAPI1() – Get team position details
This extrinsic function returns a detailed information for a team position.

Format
   $$GETEAMPO^SCTMAPI1(.RETURN,SCTMPO)

Input Parameters
.RETURN   [Required,Array] Array passed by reference that will receive the data in
               internal^external format

RETURN("*PRECEPTOR POSITION") – [Numeric] Position IEN of the team position responsible for

supervising this position

RETURN("ASSOCIATED CLINIC") – [Numeric] Associated clinic IEN (pointer to HOSPITAL LOCATION file)

RETURN("BEEPER NUMBER") – [String] Pager/beeper number

RETURN("CAN ACT AS PRECEPTOR?")- [Boolean] Set to 1 if this position may be used as a preceptor position

RETURN("CONSULT MESSAGE") – [String] For which patients team receives messages related to patient activity in clinics in which he is not enrolled (T:TEAM'S PATIENTS, P:POSITION'S PATIENTS, N:DO NOT SEND)

RETURN("CURRENT # OF PATIENTS") – [Numeric] # of all patients associated with the team

RETURN("CURRENT # OF PC PATIENTS") – [Numeic] # of primary care patients

RETURN("CURRENT ACTIVATION DATE") – [DateTime] Activation date as of today

RETURN("CURRENT EFFECTIVE DATE") – [DateTime] Effective date as of today

RETURN("CURRENT INACTIVATION DATE") – [DateTime] Inactivation date as of today

RETURN("CURRENT STATUS") – [String] Status (Active, Inactive)

RETURN("DEATH MESSAGE") – [String] For which patients team receives messages related to patient's death (T:TEAM'S PATIENTS, P:POSITION'S PATIENTS, N:DO NOT SEND)

RETURN("FUTURE # OF PATIENTS")- [Numeric] # of current and future assignments

RETURN("FUTURE # OF PC PATIENTS") – [Numeric] # of current and future patient care assignments

RETURN("INPATIENT MESSAGE") – [String] For which patients team receives messages related to inpatient activity (T:TEAM'S PATIENTS, P:POSITION'S PATIENTS, N:DO NOT SEND)

RETURN("MAX NUMBER OF PATIENTS") – [Numeric] Maximum nuber of patients that can be assigned to this position

RETURN("POSITION")="OIF OEF CLINICAL CASE MANAGER^OIF OEF CLINICAL CASE MANAGER"

RETURN("POSITION DESCRIPTION") – [String] Description

RETURN("POSSIBLE PRIMARY PRACTITIONER?") – [Boolean] If 1 this position may be used as preceptor for the team

RETURN("PRECEPTOR CONSULT MESSAGE") – [Boolean] 1 sends a message to preceptor on consult activity

RETURN("PRECEPTOR DEATH MESSAGE") – [Boolean] 1 sends a message to preceptor on a death entry

RETURN("PRECEPTOR INPATIENT MESSAGE") – [Boolean] 1 sends a message to preceptor on inpatient activity

RETURN("PRECEPTOR TEAM MESSAGE") – [Boolean] 1 sends a message to preceptor on team activity

RETURN("STANDARD ROLE NAME") – [Numeric] Standard role IEN (pointer to ROLE POSITION file)

RETURN("TEAM") – [Numeric] Team IEN (pointer to TEAM file)

RETURN("TEAM MESSAGE") – [String] For which patients team receives messages related to team activity (T:TEAM'S PATIENTS, P:POSITION'S PATIENTS, N:DO NOT SEND)

RETURN("USER CLASS") – [Numeric] Pointer to USR CLASS file

SCTMPO   [Required,Numeric] Team position IEN

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned
INVPARAM   Invalid parameter value

TMPONFND   Team position not found.

2.6 Encounter utilities API

$$GETSCAP^SDMAPI1() – Get clinic appointment
This extrinsic function returns detailed information for an appointment.

Format
$$GETSCAP^SDMAPI1(.RETURN,SC,DFN,SD)

Input Parameters
.RETURN   [Required] Array passed by reference that will receive the data

RETURN	[Boolean] Set to 1 if the the call succeeded, 0 otherwise
RETURN("CHECKIN")	[DateTime] Check in date
RETURN("CHECKOUT")	[DateTime] Check out date
RETURN("CONSULT")	[Numeric] Consult associated with this appointment (pointer to REQUEST/CONSULTATION FILE <#123>)
RETURN("DATE")	[DateTime] Date appointment made
RETURN("IFN")	[Numeric]Clinic appointment IEN

RETURN("LENGTH")	[Numeric] Appontment length (minutes)
RETURN("USER")	[Numeric]Data entry clerk IEN

SC   [Required,Numeric] Clinic IEN

DFN   [Required,Numeric] Patient IEN

SD   [Required,DateTime] Appointment date/time

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned
INVPARAM   Invalid parameter value

PATNFND   Patient not found.

CLNNFND   Clinic not found.

$$DISCH^SDMAPI3() – Discharge from clinic
This extrinsic function discharges a patient from the clinic he is enrolled in.

Format
        $$DISCH^SDMAPI3(.RETURN,DFN,SD,SC,RSN)

Input Parameters
.RETURN   [Required,Boolean] Set to 1 if the discharge succeeded, 0 otherwise

.ENS   [Optional,Array]

        ENS(clinic_ien,"IEN")   [Numeric] Enrollment IEN

        ENS(clinic_ien,"EN",#,"DISCHARGE")   [DateTime] Date of discharge

        ENS(clinic_ien,"EN",#,"REASON")   [String] Reason for discharge

DFN   [Required,Numeric]   Patient IEN (pointer to file 2)

SD   [Required,DateTime]   Discharge date

SC   [Optional,Numeric]   Enrollment clinic IEN (pointer to file 44)

RSN   [Optional,String]   Reason for discharge

Output
A Boolean value signaling if the call was successful or not.

Error Codes Returned
INVPARAM   Invalid parameter value

PATNFND   Patient not found.

PATDARD   PATIENT ALREADY DISCHARGED FROM CLINIC

PATDNEN   Patient not enrolled in clinic.

PATDHFA   PATIENT HAS FUTURE APPOINTMENTS, MUST BE CANCELLED PRIOR TO DISCHARGE !!

$$GETPENRL^SDMAPI3() – Get patient enrollments filtered by status

This extrinsic function returns the list of a patient enrollment events filtered by clinic and enrollment status.

Format

$$GETPENRL^SDMAPI3(.RETURN,DFN,SC,STAT)

Input Parameters

.RETURN   [Required] Array passed by reference that will receive the data

RETURN   [Boolean] Set to 1 if the the call succeeded, 0 otherwise

RETURN(clinic_ien,"EN",#,"DISCHARGE") [DateTime] Date of discharge

RETURN(clinic_ien,"EN",#,"ENROLLMENT") [DateTime] Date of enrollment

RETURN(clinic_ien,"EN",#,"OA") [String]Outpatient/Ambulatory (O: outpatient, A: ambulatory care)

RETURN(clinic_ien,"EN",#,"REASON") [String] Reason for discharge

RETURN(clinic_ien,"EN",#,"REVIEW") [DateTime] Review date

RETURN(clinic_ien,"IFN")   [Numeric] Enrollment IEN

RETURN(clinic_ien,"NAME")   [String] Enrollment clinic name

RETURN(clinic_ien,"STATUS")   [String] Enrollment status (I: inactive)

DFN   [Required,Numeric] Patient IEN

SC   [Optional,Numeric] Clinic IEN

STAT   [Optional,String] Status (0: both active and inactive, 1: active only)

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

PATNFND   Patient not found.

$$GETOE^SDMAPI4() – Get outpatient encounter data

This extrinsic function returns detailed information about an outpatient encounter.

Format

$$GETOE^SDMAPI4(.RETURN,SDOE)

Input Parameters

.RETURN   [Required] Array passed by reference that will receive the data

RETURN	[Boolean] Set to 1 if the the call succeeded, 0 otherwise
RETURN("CLINIC")	[Numeric]Clinic IEN
RETURN("DATE")	[DateTime]Encounter date
RETURN("PATIENT")	[Numeric]Patient IEN
RETURN("SCODE")	[Numeric] Clinic stop code
RETURN("VISIT")	[Numeric] Visit IEN

SDOE   [Required,Numeric] Outpatient encounter IEN

Output

A Boolean value signaling if the call was successful or not.

Error Codes Returned

INVPARAM   Invalid parameter value

OENFND   Outpatient encounter not found.

3. GLOSSARY

IEN   Internal Entry Number. The number used to identify an entry within a file. Every record has a unique internal entry number. Often abbreviated as IEN.

STOP CODE   A three-digit number corresponding to an additional stop/service a patient received in conjunction with a clinic visit.
Stop code entries are used so that medical facilities may receive credit for the services rendered during a patient visit.

4. How to use the code

API

The APIs presented in this paper cover most of the functionality found in the Appointment Management menu option. They follow a consistent calling convention that allows for returning rich error messages from the called routines, making them suitable as an interface to be used by external applications.

Assumed Variables

The only assumed variables used in this API are Kernel variables documented in section 2.3.1.3.2 of the SAC. In this version the following assumed variables were used: DUZ,DT,U

Format and conventions of the calls

The conventions used in this API are very similar to those enforced by the RPC Broker. Every tag has at least one parameter, passed by reference that will hold the result of the call. Every function returns a Boolean to signal if the processing was successful or not.

If the return value is 0, the first parameter (RETURN) will be structured as an array containing the errors encountered, numbered from 0 to the error count - 1. The errors have the following form:

RETURN(#)=ErrorId^Message^Level

Example

INVPARAM^Invalid parameter value – SDWLDFN^1

5. Installation

Along with this paper a KID Host File is provided. The steps required to install the distribution are outlined below:

1. From the *Systems Manager Menu* select *Programmer Options…*
2. Select *Kernel Installation & Distribution System*
3. Select *Installation*
4. Select *Load a Distribution*
5. Enter the host file path, for example C:\ SD_5.3_260003.KID and load the distribution.
6. Use the *Install Package(s)* option and select SD*5.3*260003
7. When prompted *Want KIDS to Rebuild Menu Trees Upon Completion of Install?* Respond NO
8. When prompted *Want KIDS to INHIBIT LOGONs during the install?* Respond NO
9. When prompted *Want to DISABLE Scheduled Options, Menu Options, and Protocols?* Respond NO

6. Conclusions

This paper presented a set of APIs developed as part of the Open Source EHR refactoring effort. They are meant to be used by both scroll & roll interface and RPC tags and to be accessible by other packages and applications. Also they should remove direct global access, uncouple the business logic from the user interface elements and minimize code duplication.