

Scheduling Package Refactoring API

Release 1.05

PricewaterhouseCoopers, LLC (PwC) on behalf of
the Department of Veterans Affairs (VA)

September 19, 2013

Abstract

As part of the Open Source Electronic Health Record (EHR) Services project's refactoring effort funded by the VA, we have successfully refactored the Scheduling Appointment Management module code. The purpose of this document is to describe what work we have done in term of code changes for all interested stakeholders.

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1. Introduction

The overarching goal of any code changes we implement is to make the Veterans Health Information Systems and Technology Architecture (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 package, a Scheduling package including both the Appointment Management and Supervisor Menu module, and a Registration – ADT Bed Control package. All these packages have been submitted as Technical Journals.

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 application programming interface (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. 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 remote procedure call (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 primarily 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 to the Scheduling package routines, two new routines are added to the Registration package (DGSAAPI and DGSADAL). They return specific vocabulary entries from the Registration package.

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 [Kernel Developer's Guide](#) and [Fileman 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 ("ABBREVIATION")	[String] Abbreviation
RETURN ("ADMINISTER INPATIENT MEDS?")	[String] If the clinic location is authorized to dispense inpatient medications to outpatients this field will be set to 1^YES
RETURN ("AGENCY")	[Numeric] Agency associated with specific location (pointer to file 4.11)
RETURN ("ALLOWABLE CONSECUTIVE NO-SHOWS")	[Numeric] Number of times in a row that a patient can be a no-show in a clinic before he/she is flagged for possible discharge from the clinic.
RETURN ("APPT. CANCELLATION LETTER")	[Numeric] Appointment cancellation letter associated with this clinic (pointer to file 407.5)
RETURN ("ASK DIAGNOSIS AT CHECK OUT")	[Numeric] 0=no, 1=yes/required, 2=yes/not required
RETURN ("ASK FOR CHECK IN/OUT TIME")	[Boolean] 0=no, 1=yes
RETURN ("ASK PROVIDER AT CHECK OUT")	[Numeric] 0=no, 1=yes/required,

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	2=yes/not required
RETURN ("ASK STOP CODES AT CHECK OUT")	[Boolean] 0=no, 1=yes
RETURN ("AUTOFINISH CLINIC PRINTER")	[Numeric] Printer where autofinished Rx's for this clinic will be printed (pointer to file 3.5)
RETURN ("AUTOFINISH RX SITE")	[Numeric] Outpatient site this location is associated with (pointer to file 59)
RETURN ("AVAILABILITY FLAG")	[DateTime] Date/time set up for clinic availability
RETURN ("CATEGORY OF VISIT")	[String] Category of visit associated with a specific location
RETURN ("CLINIC CANCELLATION LETTER")	[Numeric] Clinic cancellation letter associated with this clinic (pointer to file 407.5)
RETURN ("CLINIC GROUP (REPORTS)")	[Numeric] Pointer to file 409.67
RETURN ("CLINIC MEETS AT THIS FACILITY?")	[String] N=NO, Y=YES
RETURN ("CLINIC SERVICES RESOURCE")	[Numeric] Pointer to file 403.12
RETURN ("COLLATERAL VISITS? (Y OR N)")	[String] Are collateral visits allowed to this clinic (N=NO, Y=YES)
RETURN ("COPIES")	[Numeric] How many copies of appointment lists should be generated for this clinic
RETURN ("CREDIT STOP CODE")	[Numeric] Appointments to this clinic will receive this stop code credit in addition to the 'normal' stop code credit (pointer to file 40.7)
RETURN ("DEFAULT APPOINTMENT TYPE")	[Numeric] Pointer to APPOINTMENT TYPE file (file 409.1)
RETURN ("DEFAULT PROVIDER")	[Numeric] Default provider or physician that is assigned to specific clinic (pointer to file 200)
RETURN ("DEFAULT TO PC PRACTITIONER?")	[Boolean] If there is no default provider but there is a current primary care practitioner for the patient - it will be provided as the default provider

RETURN ("DISPLAY INCREMENTS PER HOUR")	[Numeric] 1:60-MIN, 2:30-MIN, 4:15-MIN, 3:20-MIN, 6:10-MIN
RETURN ("DISPOSITION ACTION")	[Numeric] Disposition action associated with specific location (0=none, 1=appointment record request, 2=scheduling)
RETURN ("DIVISION")	[Numeric] Pointer to file 40.8
RETURN ("HOLD SC SLOTS UNTIL # OF DAYS")	[Numeric] Should service connected slots be held open for a set number of days?
RETURN ("HOUR CLINIC DISPLAY BEGINS")	[Numeric] Hour part only
RETURN ("INACTIVATE DATE")	[DateTime] Date clinic was inactivated
RETURN ("INCLUDE ON FILE ROOM LISTS?")	[Boolean]
RETURN ("INSTITUTION")	[Numeric] Pointer to file 4
RETURN ("LENGTH OF APP'T")	[Numeric] Length of appointment in minutes
RETURN ("MAX # DAYS FOR AUTO-REBOOK")	[Numeric]
RETURN ("MAX # DAYS FOR FUTURE BOOKING")	[Numeric]
RETURN ("MODULE")	[Numeric] Module or name of hospital location (pointer to file 44)
RETURN ("NAME")	[String] Name
RETURN ("NO SHOW LETTER")	[Numeric] No-show letter associated with this clinic (pointer to file 407.5)
RETURN ("NON-COUNT CLINIC? (Y OR N)")	[String] Y=YES, N=NO
RETURN ("OCCASION OF SERVICE CLINIC?")	[Boolean]
RETURN ("OOS CALLING PACKAGE")	[Numeric] The package which created the occasion of service location (pointer to file 9.4)
RETURN ("OVERBOOKS/DAY MAXIMUM")	[Numeric]
RETURN ("PHYSICAL LOCATION")	[String] Physical location of this specific clinic
RETURN ("PRE-APPOINTMENT LETTER")	[Numeric] Pre-appointment letter

	associated with this clinic (pointer to file 407.5)
RETURN ("PRINCIPAL CLINIC")	[Numeric] Principal clinic or main clinic assigned to this specific location (pointer to file 44)
RETURN("PRIVILEGED USER",IEN)	[Array,Numeric] List of users that have the right to make appointments.
RETURN ("PROHIBIT ACCESS TO CLINIC?")	[String] If only privileged users have access to book to this clinic this field will be set to Y^YES
RETURN ("PRV. YEAR CREDIT STOP CODE")	[Numeric] Previous year's credit stop code assigned to clinic (pointer to file 40.7)
RETURN ("PRV. YEAR STOP CODE")	[Numeric] Previous year's three digit stop code number that was assigned to specific location (pointer to file 40.7)
RETURN ("REACTIVATE DATE")	[DateTime] Date clinic was reactivated
RETURN ("REQUIRE ACTION PROFILES?")	[Boolean] 0=YES, 1=NO
RETURN ("REQUIRE X-RAY FILMS?")	[String] If x-ray films are required for patients scheduled in this clinic this field will be set to Y^YES
RETURN ("SCHEDULE ON HOLIDAYS?")	[String] If the user is able to schedule appointments on holiday's for specific location this field will be set to Y^YES
RETURN ("SERVICE")	[String] Service assigned to this specific location (M:MEDICINE, S:SURGERY, P:PSYCHIATRY, R:REHAB MEDICINE, N:NEUROLOGY, 0:NONE)
RETURN ("SPECIAL AMIS STOP")	[Numeric] Special AMIS stop associated with a specific location based on the Service assigned (10:MENTAL HYGEINE, 11:DAY TREATMENT, 12:DAY HOSPITAL, 13:DRUG DEPENDANCE, 14:ALCOHOL TREATMENT, 15:EMERGENCY UNIT, 16:EMPLOYEE HEALTH)
RETURN ("START TIME FOR AUTO REBOOK")	[Numeric] Start time (hour of day) that should be searched for when user auto rebooking an appointment

RETURN ("STOP CODE NUMBER")	[Numeric] Three digit stop code number assigned to specific location (pointer to file 40.7)
RETURN ("TELEPHONE")	[String] Telephone number for this specific location
RETURN ("TREATING SPECIALTY")	[Numeric] Treating specialty assigned to this specific location (pointer to file 45.7)
RETURN ("TYPE")	[String] Type of clinic (one of the codes returned by LSTHLTP^SDMAPI1)
RETURN ("TYPE EXTENSION")	[Numeric] Pointer to file 40.9
RETURN ("VARIABLE APP'NTMENT LENGTH")	[String] V=Yes, variable length
RETURN ("VISIT LOCATION")	[String] Location of visit
RETURN ("WARD LOCATION FILE POINTER")	[Numeric] If location is a ward, this is the file pointer to the Ward Location File (file 42)
RETURN ("WORKLOAD VALIDATION AT CHK OUT")	[Boolean] 1 will result in a validation being performed on each checked out encounter for this clinic
SC	[Required,Numeric] Clinic IEN (pointer to File 44)

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(0,1) [String] Availability string

SC [Required,Numeric] Clinic IEN (pointer to File 44)

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 (pointer to File 44)

Output

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

Error Codes Returned

INVPARAM	Invalid parameter
CLNNFND	Clinic not found.

\$\$GETPAT^SDMAPI4() – Get patient data

This extrinsic function returns detailed information about a patient.

Format

\$\$GETPAT^SDMAPI4(.RETURN,DFN)

Input Parameters

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

RETURN(0) [String] Set to Error description if the call fails

RETURN [Boolean] 1=success, 0=failure

RETURN("NAME") [String] Patient name

RETURN("SEX") [String] Patient sex code. One of: M^MALE, F^FEMALE

RETURN("BIRTH") [DateTime] Birth date

RETURN("MSTATUS") [String] Marital status (pointer to file 11) (I^E)

RETURN("RELIG") [String] Religious preference (pointer to file 13) (I^E)

RETURN("SSN") [String] Social security number

RETURN("DTODTH") [DateTime] Date of death

RETURN("REMARKS") [String] Short remarks

RETURN("PELIG") [String] Primary eligibility code (pointer to file 8) (I^E)

RETURN("PSERV") [String] Period of service (pointer to file 21) (I^E)

RETURN("PHONE") [String] Phone number (residence)

RETURN("ADD1") [String] Street address line 1

RETURN("CELL") [String] Phone number (cellular)

RETURN("ADD2") [String] Street address line 2

RETURN("PAGER") [String] Pager number

RETURN("COUNTRY") [Numeric] Contry

RETURN("ZIP") [Numeric] ZIP code

RETURN("CITY") [String] City

RETURN("STATE") [String] State (pointer to file 5) (I^E)

RETURN("EMAIL") [String] Email address

RETURN("EXPOI") [String] Radiation exposure. One of: Y^YES, N^NO., U^UNKNOWN

RETURN("POWSTAT") [String] POW status. One of: Y^YES, N^NO., U^UNKNOWN

RETURN("AGENTO") [String] Agent orange exposure. One of: Y^YES, N^NO., U^UNKNOWN

RETURN("AGENTOL") [String] Agent orange expos. location. One of: K^KOREAN DMZ, V^VIETNAM

RETURN("SASIA") [String] Environmental contaminants. One of: Y^YES, N^NO., U^UNKNOWN

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

Output

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

Error Codes Returned

INVPARAM Invalid parameter value

\$\$GETCSC^SDMAPI1() – Get clinic stop code data

This extrinsic function returns detailed information about a clinic stop code.

Format

\$\$GETCSC^SDMAPI1(.RETURN,CSC)

Input Parameters

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

RETURN(0) [String] Set to Error description if the call fails

RETURN [Boolean] 1=success, 0=failure

RETURN("ID") [Numeric] Clinic stop code IEN (pointer to file 40.7)

RETURN("NAME") [String] Clinic stop code name

RETURN("AMIS") [Numeric] AMIS reporting stop code

RETURN("IDT") [DateTime] Inactive date

CSC [Required,Numeric] Clinic stop code IEN (pointer to File 40.7)

Output

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

Error Codes Returned

INVPARAM Invalid parameter value

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CLNSCIN Invalid clinic stop code

\$\$GETAPTS^SDMAPI1Q - 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 file 409.1)

RETURN("APT",DT," APPOINTMENT TYPE SUB-CATEGORY") [Numeric] Sub-category associated
with this appointment (pointer to file 35.2)

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," AUTO-REBOOKED APPT. DATE/TIME") [DateTime] The date/time for which
this appointment was rescheduled

RETURN("APT",DT," CANCELLATION REASON") [Numeric] Cancellation reason (pointer to file
409.2)

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

RETURN("APT",DT,"CLINIC") [Numeric] Clinic (pointer to file 44)

RETURN("APT",DT," COLLATERAL VISIT") [String] Collateral visit (1=YES, empty=NO)

RETURN("APT",DT," CURRENT STATUS") [String] Current status of appointment (one of:
FUTURE, NO ACTION TAKEN, CHECKED IN,
CHECKED OUT, NON-COUNT)

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

RETURN("APT",DT," DATE APPT. MADE") [DateTime] The date the appointment was
entered into the scheduling system

RETURN("APT",DT," DESIRED DATE OF APPOINTMENT") [DateTime]

RETURN("APT",DT," EKG DATE/TIME") [DateTime] The date/time the patient should
report for EKG tests

RETURN("APT",DT," ENCOUNTER CONVERSION STATUS") [Numeric] 0=NOT CONVERTED,

1=CONVERTED

RETURN("APT",DT," ENCOUNTER FORMS AS ADD-ONS")	[Boolean] Used by the Print Manager to indicate that it has printed the encounter forms as an add-on.
RETURN("APT",DT," ENCOUNTER FORMS PRINTED")	[Boolean] Used by the Print Manager to indicate that it has printed the encounter forms.
RETURN("APT",DT," FOLLOW-UP VISIT")	[Boolean]
RETURN("APT",DT," LAB DATE/TIME")	[DateTime] The date/time the patient should report for LAB tests
RETURN("APT",DT," NEXT AVA. APPT. INDICATOR")	[Numeric] One of: 0:NOT INDICATED TO BE A 'NEXT AVA.' APPT., 1:'NEXT AVA.' APPT. INDICATED BY USER, 2:'NEXT AVA.' APPT. INDICATED BY CALCULATION, 3:'NEXT AVA.' APPT. INDICATED BY USER & CALCULATION
RETURN("APT",DT," NO-SHOW/CANCEL DATE/TIME")	[DateTime] The date/time the no-show was cancelled.
RETURN("APT",DT," NO-SHOW/CANCELLED BY")	[Numeric] The user who cancelled the no-show (pointer to file 200)
RETURN("APT",DT," NUMBER OF COLLATERAL SEEN")	[Numeric] The number assigned to the collateral.
RETURN("APT",DT," OUTPATIENT ENCOUNTER")	[Numeric] Outpatient encounter created rom this appointment (pointer to file 409.68)
RETURN("APT",DT," PURPOSE OF VISIT")	[Numeric] One of: 1=C&P, 2=10-10, 3=SCHEDULED VISIT, 4=UNSCHED. VISIT
RETURN("APT",DT," REAL APPOINTMENT")	[Boolean] This is a computed field which determines whether the appointment is considered real (kept)
RETURN("APT",DT," ROUTING SLIP PRINT DATE")	[DateTime] Date when routing slip was printed.
RETURN("APT",DT," ROUTING SLIP PRINTED")	[String] If a routing sheet was printed for this appointment, this field will be set to Y^YES.
RETURN("APT",DT," SCHEDULING REQUEST TYPE")	[String] One of: N='NEXT AVAILABLE' APPT., C=OTHER THAN 'NEXT AVA.' (CLINICIAN REQ.), P=OTHER THAN 'NEXT AVA.' (PATIENT REQ.), W=WALKIN APPT., M=MULTIPLE APPT. BOOKING, A=AUTO REBOOK, O=OTHER THAN 'NEXT AVA.'

APPT.

RETURN("APT",DT," SPECIAL SURVEY DISPOSITION")	[Numeric] If this patient is claiming exposure to agent orange or ionizing radiation, this field contains the special survey disposition.
RETURN("APT",DT," STATUS")	[String] Appointment status. One of: N=NO-SHOW, C=CANCELLED BY CLINIC, NA=NO-SHOW & AUTO RE-BOOK, CA=CANCELLED BY CLINIC & AUTO RE-BOOK, I=INPATIENT APPOINTMENT, PC=CANCELLED BY PATIENT, PCA=CANCELLED BY PATIENT & AUTO-REBOOK, NT=NO ACTION TAKEN
RETURN("APT",DT," TELEPHONE OF CLINIC")	[String] The telephone number for the clinic at which this patient has an appointment.
RETURN("APT",DT," X-RAY DATE/TIME")	[DateTime] The date/time the patient should report for X-RAY tests
DFN	[Required,Numeric] Patient IEN (pointer to File 2)
SD	[Optional,DateTime] – if not set returns all patient appointments. <ul style="list-style-type: none"> - 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.

\$\$GETHOL^SDMAPI4() – Get holiday data

This extrinsic function returns detailed information about a holiday.

Format

\$\$GETHOL^SDMAPI4(.RETURN,SD)

Input Parameters

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

RETURN [Boolean] Set to 1 if the specified date is a holiday, 0 otherwise.

RETURN(SD) [String] Set to date^holiday name if date is a holiday.

SD [Required,Date] The date checked if is a holiday.

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Output

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

Error Codes Returned

INVPARAM Invalid parameter value

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] Appointment Type Sub-Category (one of the active Sharing Agreement Sub-Category returned by LSTASTYP^SDMAPI5, to add a new Sub-Category use ADDASC^SDMAPI5)
LEN	[Required,Numeric] Appointment length in minutes.
SRT	[Optional,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.
XRAY	[Optional,DateTime] If this patient is scheduled for x-ray in conjunction with this appointment, set XRAY to the date/time the patient should report.
EKG	[Optional,DateTime] If this patient is scheduled for EKG in conjunction with this appointment, set EKG to the date/time the patient should.
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] <ul style="list-style-type: none"> - Forces appointment creation if it is set to 1 and user has SDOB security key (ignores all warnings described below) - If set to 1 will return an error if there are no open slots and user do not have SDOB security key - If set to 2 will return an error if there are no open slots - If set to anything higher than 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 (pointer to File 2)
SC	[Required,Numeric] Clinic IEN (pointer to File 44)
SD	[Optional,DateTime] Appointment date/time. Defaults to now.
TYP	[Required,Numeric] Purpose of visit visit (drawn from the Appointment Types list – see \$LSTAPPT^SDMAPI1)
STYP	[Optional,Numeric] Appointment Type Sub-Category (one of the active Sharing Agreement Sub-Category returned by LSTASTYP^SDMAPI5, to add a new Sub-Category use ADDASC^SDMAPI5)

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
---------	--

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DFN	[Required,Numeric] Patient IEN (pointer to File 2)
SC	[Required,Numeric] Clinic IEN (pointer to File 44)
SD	[Required,DateTime] Appointment date/time
LVL	[Optional,Numeric] <ul style="list-style-type: none"> - 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 (pointer to File 2)
SD	[Required,DateTime] Appointment date/time
SC	[Required,Numeric] Clinic IEN (pointer to File 44)
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^SDMAPI4Q - Check out appointment

This extrinsic function checks out an existing appointment and creates related outpatient encounter and visit.

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.
APTDCCO	>>> Editing and deleting old encounters not allowed.
CLNNFND	Clinic not found.
INVPARAM	Invalid parameter value
PATNFND	Patient not found.

\$\$GETAPT^SDMAPI1() – Get appointment

This extrinsic function returns detailed information for an appointment.

Format

\$\$GETAPT^SDMAPI1(.RETURN,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("CLINIC")	[String] Clinic (pointer to file 44) (I^E)
RETURN("STATUS")	[String] Appointment status (I^E)
RETURN("LABDT")	[String] The date/time the patient should report for LAB tests (I^E)
RETURN("XRAYDT")	[String] The date/time the patient should report for XRAY tests (I^E)
RETURN("EKGDT")	[String] The date/time the patient should report for EKG tests (I^E)
RETURN("PURPOSE")	[String] One of: 1^C&P, 2^10-10, 3^SCHEDULED VISIT, 4^UNSCHED. VISIT
RETURN("ARBK")	[String] Auto-rebooked appt. date/time (I^E)
RETURN("CVISIT")	[String] Collateral visit flag. Empty or 1^YES
RETURN("NOSHOWBY")	[String] The date/time the no-show was cancelled (I^E)
RETURN("NOSHOWDT")	[String] The user who cancelled the no-show (pointer to file 200) (I^E)
RETURN("CREASON")	[String] Cancellation reason (pointer to file 409.2) (I^E)
RETURN("TYPE")	[String] Type of appointment (pointer file 409.1) (I^E)
RETURN("CREMARKS")	[String] Cancellation remarks
RETURN("ENTRY")	[String] User who made appointment (pointer to file 200) (I^E)
RETURN("MADEDT")	[String] The date the appointment was entered into the scheduling system (I^E)
RETURN("OE")	[String] Outpatient encounter created from this appointment (pointer to file 409.68) (I^E)
RETURN("RTYPE")	[String] One of: N^'NEXT AVAILABLE' APPT., C^OTHER THAN 'NEXT AVA.' (CLINICIAN REQ.), P^OTHER THAN 'NEXT AVA.' (PATIENT REQ.), W^WALKIN APPT., M^MULTIPLE APPT. BOOKING, A^AUTO REBOOK, O^OTHER THAN 'NEXT AVA.' APPT.
RETURN("NEXTA")	[String] One of: 0^NOT INDICATED TO BE A 'NEXT AVA.' APPT., 1^'NEXT AVA.' APPT. INDICATED BY USER, 2^'NEXT AVA.' APPT. INDICATED BY CALCULATION, 3^'NEXT AVA.' APPT. INDICATED BY USER & CALCULATION
RETURN("DDATE")	[String] Desired date of appointment (I^E)

RETURN("FVISIT")	[String] One of: 0^NO, 1^YES
RETURN("PATIENT")	[String] Patient (pointer to file 2) (I^E)
RETURN("LENGTH")	[Numeric] Appointment length (minutes)
RETURN("OTHER")	[String] Other observations
RETURN("OVERBOOK")	[String] 0^OVERBOOK if this appointment was an overbook, empty otherwise
RETURN("RQXRAY")	[String] Y^YES if prior x-ray results are required to be sent to clinic, empty otherwise
RETURN("EVISIT")	[String] Eligibility of visit (pointer to file 8) (I^E)
RETURN("CIDT")	[String] Check in date (I^E)
RETURN("CIUSER")	[String] Check in user (pointer to file 200) (I^E)
RETURN("CODT")	[String] Check out date (I^E)
RETURN("COUSER")	[String] Check out user (pointer to file 200) (I^E)
RETURN("COENTER")	[String] Date and time that the check out was entered (I^E)
RETURN("CONSULT")	[Numeric] Consult associated with this appointment (pointer to REQUEST/CONSULTATION FILE <#123>)
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.

\$\$\$ADDTSTS^SDMAPI4() – Append ancillary test to appointment

This extrinsic append ancillary test to appointment.

Format

\$\$\$ADDTSTS^SDMAPI4(.RETURN,DFN,SD,LAB,XRAY,EKG)

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
SD	[Required,DateTime] Appointment date/time
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.
XRAY	[Optional,DateTime] If this patient is scheduled for x-ray in conjunction with this appointment, set XRAY to the date/time the patient should report.
EKG	[Optional,DateTime] If this patient is scheduled for EKG in conjunction with this appointment, set EKG to the date/time the patient should.

Output

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

Error Codes Returned

INVPARAM	Invalid parameter value
PATNFND	Patient not found
TSTAHAPT	Patient already has appointment at that time

\$\$DELTSTS^SDMAPI4() – Delete ancillary test from appointment

This extrinsic delete ancillary test from appointment.

Format

\$\$DELTSTS^SDMAPI4(.RETURN,DFN,SD,LAB,XRAY,EKG)

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
SD	[Required,DateTime] Appointment date/time
LAB	[Optional,Boolean] If is set to 1 LAB date/time will be removed.
XRAY	[Optional,Boolean] If is set to 1 XRAY date/time will be removed.
EKG	[Optional,Boolean] If is set to 1 EKG date/time will be removed.

Output

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

Error Codes Returned

INVPARAM	Invalid parameter value
----------	-------------------------

PATNFND Patient not found

\$LSTCAPTS^SDMAPI1() – Get clinic appointments

This extrinsic return a list of clinic appointments filtered by date or by status.

Format

`$LSTCAPTS^SDMAPI1(.RETURN,SC,SDBEG,SDEND,STAT)`

Input Parameters

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

RETURN(0) [String] Set to Error description if the call fails

RETURN [Boolean] 1=success, 0=failure

RETURN(,"BID") [Numeric] Last 4 digits of the patient SSN

RETURN(,"CIDT") [DateTime] Check-in date (internal format)

RETURN(,"CLINIC") [String] Clinic (pointer to file 44) (I^E)

RETURN(,"CODT") [DateTime] Check-out date (internal format)

RETURN(,"DATE") [DateTime] Appointment date (internal format)

RETURN(,"EKG") [DateTime] EKG tests date/time (internal format)

RETURN(,"LAB") [DateTime] LAB tests date/time (internal format)

RETURN(,"LEN") [Numeric] Appointment length (minutes)

RETURN(,"OE") [Numeric] Outpatient encounter IEN (pointer to file 409.68)

RETURN(,"PATIENT") [String] Patient (pointer to file 2) (I^E)

RETURN(,"STAT") [String] appt status ifn ^ status name ^ print status ^
check in d/t ^ check out d/t ^ adm mvt ifn

RETURN(,"XRAY") [DateTime] XRAY tests date/time (internal format)

SC [Required,Numeric] Clinic IEN (pointer to file 44)

SDBEG [Optional,DateTime] Start date

SDEND [Optional,DateTime] End date

STAT [Required,Numeric] Appointment group IEN (pointer to file 409.62)

Output

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

Error Codes Returned

INVPARAM	Invalid parameter value
CLNNFND	Clinic not found

\$\$LSTPAPTS^SDMAPI1() – Get patient appointments

This extrinsic return a list of patient appointments filtered by date or by status.

Format

\$\$LSTPAPTS^SDMAPI1(.RETURN,DFN,SDBEG,SDEND,STAT)

Input Parameters

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

RETURN(0) [String] Set to Error description if the call fails

RETURN [Boolean] 1=success, 0=failure

See LSTCAPTS^SDMAPI1 for detailed RETURN format

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

SDBEG [Optional,DateTime] Start date

SDEND [Optional,DateTime] End date

STAT [Required,Numeric] Appointment group IEN (pointer to file 409.62)

Output

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

Error Codes Returned

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 synonym

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

Output

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

Error Codes Returned

INVPARAM 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

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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

\$\$LSTAGRP^SDMAPI1() - List appointment groups

This extrinsic function returns a list of appointment groups.

Format

\$\$LSTAGRP^SDMAPI1(.RETURN)

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
	RETURN(#,"ID") – [Numeric] Appointment group IEN
	RETURN(#,"NAME") – [String] Appointment group name
	RETURN(#,"TITLE") – [String] Appointment group title
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

\$\$LSTASTYP^SDMAPI5() - List appointment type sub-categories

This extrinsic function returns a list of appointment type sub-categories.

Format

\$\$LSTASTYP^SDMAPI5 (.RETURN,TYPE,ACTIVE)

Input Parameters

.RETURN	[Required,Array] Array passed by reference that will receive the data
	RETURN(0) – [Numeric] # of entries found
	RETURN(#,ID) – [Numeric] Sharing agreement category IEN (pointer to the Sharing Agreement Category file #35.1)
	RETURN(#,SUBCAT) [String] Sub-category IEN^Sub-category name (pointer to the Sharing Agreement Sub-Category file #35.2)
	RETURN(#,STATUS) – [Boolean] Sharing agreement category status

ACTIVE	[Optional,Boolean] If is set to 1 returns only active sub-categories, otherwise all.
TYPE	[Required,Numeric] Appointment type IEN (pointer to the Appointment Type file #409.1)

Output

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

Error Codes Returned

TYPNFND	Appointment type not found.
TYPINAC	Appointment type is inactive.
INVPARAM	Invalid parameter value

2.4 Supervisor API

\$\$ADDASC^SDMAPI5() – Add new Appointment Type Sub-Category

This extrinsic function creates a new Appointment Type Sub-Category entry

Format

\$\$ADDASC^SDMAPI5(.RETURN,TYPE,SUBCAT,STATUS)

Input Parameters

.RETURN	[Required,Numeric] Set to the new sharing agreement category IEN, 0 otherwise. Set to Error description if the call fails
TYPE	[Required,Numeric] Appointment type IEN (pointer to the Appointment Type file #409.1)
SUBCAT	[Required,Numeric] Sub-Category IFN (pointer to the Sharing Agreement Sub-Category file #35.2)
STATUS	[Optional,Boolean] Sharing Agreement Category active code. One of: 1^YES, 0^NO. Defaults to 0^NO.

Output

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

Error Codes Returned

TYPNFND	Appointment type not found.
SACEXST	Sharing Agreement Category already exists.
TYPINAC	Appointment type is inactive.
SASCNFND	Sharing Agreement Sub-Category not found.
INVPARAM	Invalid parameter value

\$\$GETMPAR^SDPARAPI() – Get Main Parameters

This extrinsic function returns the scheduling main parameters.

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Format

\$\$GETMPAR^SDPARAPI(.RETURN)

Input Parameters

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

RETURN("STRTDAYS") [Numeric] Appointment search threshold

RETURN("UPDMAIL") [Numeric] Appointment update mail group (from the Mail Group file #3.8 in internal^external)

RETURN("NPCMAIL") [Numeric] NPCDB mail group (from the Mail Group file #3.8 in internal^external)

RETURN("DEFCOSCR") [Boolean] View check out info default

RETURN("LATMAIL") [Numeric] Late activity mail group (from the Mail Group file #3.8 in internal^external)

RETURN("APIMAIL") [Numeric] API errors mail group (from the Mail Group file #3.8 in internal^external)

RETURN("APILEVEL") [String] API notifications to process. One of: E^ERRORS ONLY, WE^WARNINGS & ERRORS, N^NONE

RETURN("UPARROW") [Boolean] Allow up-arrow out of class

Output

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

Error Codes Returned

None

\$\$UPDMPAR^SDPARAPIQ – Update Main Parameters

This extrinsic function updates the scheduling main parameters.

Format

\$\$UPDMPAR^SDPARAPI(.RETURN,.PARAM)

Input Parameters

.RETURN [Required,Numeric] Set to 1 if the operation succeeds

Set to Error description if the call fails

.PARAM [Optional,Array] Array passed by reference that holds the new data.

PARAM("STRTDAYS") [Optional,Numeric] Appointment search threshold (1-30 days).

PARAM("UPDMAIL") [Optional,Numeric] Appointment update mail group (one of the codes returned by LSTMGRP^SDMEXT)

PARAM("NPCMAIL")	[Optional,Numeric] NPCDB mail group (one of the codes returned by LSTMGRP^SDMEXT)
PARAM("DEFCOSCR")	[Optional,Boolean] View check out info default
PARAM("LATMAIL")	[Optional,Numeric] Late activity mail group (one of the codes returned by LSTMGRP^SDMEXT)
PARAM("APIMAIL")	[Optional,Numeric] API errors mail group (one of the codes returned by LSTMGRP^SDMEXT)
PARAM("APILEVEL")	[Optional,String] API notifications to process. One of: E^ERRORS ONLY, WE^WARNINGS & ERRORS, N^NONE
PARAM("UPARROW")	[Optional,Boolean] Allow up-arrow out of class

Output

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

Error Codes Returned

INVPARAM Invalid parameter value

MGRPNFND Mail Group not found.

\$\$GETDPAR^SDPARAPI() – Get Division Parameters

This extrinsic function returns the scheduling division parameters.

Format

\$\$GETDPAR^SDPARAPI(.RETURN,DIV)

Input Parameters

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

Set to Error description if the call fails

RETURN("ADDLOC") [Numeric] Address location on letters. One of: 1^BOTTOM, 0^TOP.

RETURN("OPLABST") [String] OP LAB test start time

RETURN("OPEKGST") [String] OP EKG test start time

RETURN("OPXRAYST") [String] OP X-RAY test start time

DIV [Required,Numeric] Division IEN (pointer to the Medical Center Division file #40.8)

Output

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

Error Codes Returned

INVPARM Invalid parameter value

DIVNFND Medical Center Division not found.

\$\$UPDDPAR^SDPARAPI() – Update Division Parameters

This extrinsic function updates the scheduling division parameters.

Format

\$\$UPDDPAR^SDPARAPI(.RETURN,.PARAM,DIV)

Input Parameters

.RETURN [Required,Numeric] Set to 1 if the operation succeeds

Set to Error description if the call fails

.PARAM [Optional,Array] Array passed by reference that holds the new data.

PARAM("ADDLOC") [Optional,Numeric] Address location on letters. One of: 1^BOTTOM, 0^TOP.

PARAM("OPLABST") [Optional,String] OP LAB test start time - in Military time format (0900).

PARAM("OPEKGST") [Optional,String] OP EKG test start time - in Military time format (0900).

PARAM("OPXRAYST") [Optional,String] OP X-RAY test start time - in Military time format (0900).

DIV [Required,Numeric] Division IEN (pointer to the Medical Center Division file #40.8)

Output

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

Error Codes Returned

INVPARAM Invalid parameter value

INVPARAM Invalid parameter value

DIVNFND Medical Center Division not found.

\$\$GETPMCS^SDPARAPI() – Get Print Manager Clinic Setup

This extrinsic function returns detailed data of the print manager clinic setup.

Format

\$\$GETPMCS^SDPARAPI(.RETURN,SC)

Input Parameters

.RETURN	[Required,Array] Array passed by reference that will receive the data
	Set to Error description if the call fails
RETURN("CLINIC")	[String] Clinic (from the Hospital Location file #44 in internal^external)
RETURN("DEFEFRM")	[String] Basic default encounter form (from the Encounter Form file #357 in internal^external)
RETURN("SUPFRM1")	[String] Supplmntl form #1 all patients (from the Encounter Form file #357 in internal^external)
RETURN("SUPFRM2")	[String] Supplmntl form #2 all patients (from the Encounter Form file #357 in internal^external)
RETURN("SUPFRM3")	[String] Supplmntl form #3 all patients (from the Encounter Form file #357 in internal^external)
RETURN("SUPFRMEP")	[String] Supplmntl form - estblshed pt. (from the Encounter Form file #357 in internal^external)
RETURN("SUPFRMFV")	[String] Supplmntl form - first visit (from the Encounter Form file #357 in internal^external)
RETURN("FRMWO")	[String] Form w/o patient data (from the Encounter Form file #357 in internal^external)
RETURN("REZFU")	[String] Reserved for future use (from the Encounter Form file #357 in internal^external)
RETURN("UPCMM")	[Boolean] Don't use pcmm providers
RETURN(1)	[Array] List of reports that should be printed under certain circumstances.
RETURN(1,#,"REPORT")	[String] Report (from the Package Interface file #357.6 in internal^external)
RETURN(1,#,"COND")	[String] Print condition (from the Print Conditions file #357.92 in internal^external)
RETURN(1,#,"SIDES")	[String] Simplex/Duplex. One of: 0^SIMPLEX, 1^DUPLEX, LONG-EDGE BINDING, 2^DUPLEX, SHORT-EDGE BINDING
RETURN(2)	[Array] Reports defined to print for the division will not print if they are excluded for the clinic.
RETURN(2,#,"REPORT")	[String] Report (from the Package Interface file #357.6 in internal^external)

SC [Required,Numeric] Clinic IEN (pointer to the Hospital Location file #44)

Output

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

Error Codes Returned

INVPARM Invalid parameter value

CLNNFND Clinic not found.

\$\$UPDPMCS^SDPARAPI() – Update Print Manager Clinic Setup

This extrinsic function updates an existing print manager clinic setup.

Format

\$\$UPDPMCS^SDPARAPI(.RETURN,SC,.PARAM)

Input Parameters

.RETURN [Required,Array] Set to 1 if the operation succeeds, 0 otherwise.

RETURN(0) Set to Error description if the call fails

SC [Required,Numeric] Clinic IEN (pointer to the Hospital Location file #44)

.PARAM [Required,Array] Array passed by reference that holds the new data.

PARAM("DEFEFRM") [Optional,Numeric] Basic default encounter form (one of the codes returned by LSTEFRM^SDMEXT)

PARAM("SUPFRM1") [Optional,Numeric] Supplmntl form #1 all patients (one of the codes returned by LSTEFRM^SDMEXT)

PARAM("SUPFRM2") [Optional,Numeric] Supplmntl form #2 all patients (one of the codes returned by LSTEFRM^SDMEXT)

PARAM("SUPFRM3") [Optional,Numeric] Supplmntl form #3 all patients (one of the codes returned by LSTEFRM^SDMEXT)

PARAM("SUPFRMEP") [Optional,Numeric] Supplmntl form - estblished pt. (one of the codes returned by LSTEFRM^SDMEXT)

PARAM("SUPFRMFV") [Optional,Numeric] Supplmntl form - first visit (one of the codes returned by LSTEFRM^SDMEXT)

PARAM("FRMWO") [Optional,Numeric] Form w/o patient data (one of the codes returned by LSTEFRM^SDMEXT)

PARAM("REZFU") [Optional,Numeric] Reserved for future use (one of the codes returned by LSTEFRM^SDMEXT)

PARAM("UPCMM") [Optional,Boolean] Don't use pcmm providers

PARAM(1)	[Optional,Array] List of reports that should be printed under certain circumstances.
PARAM(1,#,"REPORT")	[Required,Numeric] Report (one of the codes returned by LSTPKG1^SDMEXT)
PARAM(1,#,"COND")	[Required,Numeric] Print condition (one of the codes returned by LSTPCON^SDMEXT)
PARAM(1,#,"SIDES")	[Required,Numeric] Simplex/Duplex. One of: 0^SIMPLEX, 1^DUPLEX, LONG-EDGE BINDING, 2^DUPLEX, SHORT-EDGE BINDING
PARAM(2)	[Array] Reports defined to print for the division will not print if they are excluded for the clinic.
PARAM(2,#,"REPORT")	[Required,Numeric] Report (one of the codes returned by LSTPKG1^SDMEXT)

Output

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

Error Codes Returned

INVPARAM	Invalid parameter value
FRMNFND	Encounter form not found.
REPNFND	Report not found.
CONNFND	Print Condition not found.
CLNNFND	Clinic not found.

\$\$DELP MCS^SDPARAPI() – Delete Print Manager Clinic Setup

This extrinsic function deletes an existing print manager clinic setup.

Format

`$$DELP MCS^SDPARAPI(.RETURN,SC)`

Input Parameters

.RETURN	[Required,Array] Set to 1 if the operation succeeds, 0 otherwise.
RETURN(0)	Set to Error description if the call fails
SC	[Required,Numeric] Clinic IEN (pointer to the Hospital Location file #44)

Output

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

Error Codes Returned

CLNNFND	Clinic not found.
INVPARAM	Invalid parameter value.

\$\$GETPMDS^SDPARAPI() – Get Print Manager Division Setup

This extrinsic function returns detailed data of the print manager division setup.

Format

\$\$GETPMDS^SDPARAPI(.RETURN,DIV)

Input Parameters

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

RETURN(0) Set to Error description if the call fails

RETURN("MCDIV") [String] Division (from the Medical Center Division file #40.8 in internal^external)

RETURN(1) [Array] The reports that should print.

RETURN(1,#,"REPORT") [String] Report (from the Package Interface file #357.6 in internal^external)

RETURN(1,#,"COND") [String] Print condition (from the Print Conditions file #357.92 in internal^external)

RETURN(1,#,"SIDES") [String] Simplex/Duplex. One of: 0^SIMPLEX, 1^DUPLEX, LONG-EDGE BINDING, 2^DUPLEX, SHORT-EDGE BINDING

DIV [Required,Numeric] Division IEN (pointer to the Medical Center Division file #40.8)

Output

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

Error Codes Returned

INVPARM Invalid parameter value

DIVNFND Medical Center Division not found.

\$\$UPDPMDS^SDPARAPI() – Update Print Manager Division Setup

This extrinsic function updates an existing print manager division setup.

Format

\$\$UPDPMDS^SDPARAPI(.RETURN,DIV,.PARAM)

Input Parameters

.RETURN [Required,Array] Set to 1 if the operation succeeds, 0 otherwise.

RETURN(0) Set to Error description if the call fails

DIV [Required,Numeric] Division IEN (pointer to the Medical Center Division file #40.8)

.PARAM [Required,Array] Array passed by reference that holds the new data.

PARAM(1)	[Optional,Array] The reports that should print.
PARAM(1,,"REPORT")	[Required,Numeric] Report (one of the codes returned by LSTPKG1^SDMEXT)
PARAM(1,,"COND")	[Required,Numeric] Print condition (one of the codes returned by LSTPCON^SDMEXT)
PARAM(1,,"SIDES")	[Required,Numeric] Simplex/Duplex. One of: 0^SIMPLEX, 1^DUPLEX, LONG-EDGE BINDING, 2^DUPLEX, SHORT-EDGE BINDING

Output

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

Error Codes Returned

INVPARAM	Invalid parameter value
INVPARM	Invalid parameter value
REPNFND	Report not found.
CONNFND	Print Condition not found.
DIVNFND	Medical Center Division not found.

\$\$DELPMD5^SDPARAPI() – Delete Print Manager Division Setup

This extrinsic function deletes an existing print manager division setup.

Format

\$\$DELPMD5^SDPARAPI(.RETURN,DIV)

Input Parameters

.RETURN	[Required,Array] Set to 1 if the operation succeeds, 0 otherwise.
RETURN(0)	Set to Error description if the call fails
DIV	[Required,Numeric] Division IEN (pointer to the Medical Center Division file #40.8)

Output

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

Error Codes Returned

DIVNFND	Medical Center Division not found.
INVPARM	Invalid parameter value.

\$\$RESTAV^SDAVAPI() - Restore Clinic availability

This extrinsic function restore the clinic availability.

Format

\$\$RESTAV^SDAVAPI(.RETURN,SC,SD)

Input Parameters

.RETURN	[Required,Array] Set to 1 if the operation succeeds
	Set to Error description if the call fails
SC	[Required,Numeric] Clinic IEN (pointer to the Hospital Location file #44)
SD	[Required,DateTime] Date/time to restore clinic availability

Output

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

Error Codes Returned

INVPARAM	Invalid parameter.
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.
RESTCNC	Clinic has not been cancelled for that date, so it cannot be restored
RESTIAP	No upcoming or indefinite appointment pattern exists for day of week
RESTCBR	This clinic date cannot be restored
RESTCIN	Clinic is inactive ...

\$\$GETCANP^SDAVAPI() - Return cancelled periods

This extrinsic function returns a list of cancelled periods.

Format

\$\$GETCANP^SDAVAPI(.RETURN,SC,SD)

Input Parameters

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

Set to Error description if the call fails

RETURN(T) [Array] Array of cancelled periods. T is the date/time when cancel period begin.

RETURN(T,"BEGIN") [DateTime] Cancel date/time begin

RETURN(T,"END") [String] Cancel ending time

RETURN(T,"MESS") [String] Cancel message

SC [Required,Numeric] Clinic IEN (pointer to the Hospital Location file #44)

SD [Required,Date] Date for desired cancelled periods

Output

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

Error Codes Returned

INVPARAM Invalid parameter.

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.

\$\$REMAP^SDAVAPI() – Remap Clinic

This extrinsic function remap a clinic.

Format

\$\$REMAP^SDAVAPI(.RETURN,SC,SDBD,SDDED)

Input Parameters

.RETURN [Required,Array] Set to 1 if the operation succeeds

Set to Error description if the call fails

RETURN(0) [Numeric] Number of the warning messages

RETURN(,"CLNIC") [String] Clinic (from the Hospital Location file #44 in internal^external)

RETURN(,"DATE") [Date] Availability date for which the warning occurred

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RETURN(#,"MSG") [String] Warning message. One of:

"Bogus clinic day- Appts!" - when the date and day of the week do not correspond

"[HOLIDAY NAME]- Appts!" - when appointments exist on a holiday and the clinic does not schedule on holidays

"no master pattern for this day" - when no day of the week template exists for this day of the week

"Cancelled" - when availability was cancelled

SC [Required,Numeric] Clinic IEN (pointer to the Hospital Location file #44)

SDBD [Required,Date] Beginning date for the remap

SDDED [Required,Date] Ending date for the remap

Output

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

Error Codes Returned

INVPARAM Invalid parameter

CLNNFND Clinic not found.

CLNINV Invalid Clinic ...

REMEDABD Ending date must not be before beginning date

\$\$ADDHOL^SDAVAPIQ – Add new holiday

This extrinsic function creates a new Holiday entry.

Format

\$\$ADDHOL^SDAVAPI(.RETURN,HDT,NAME)

Input Parameters

.RETURN [Required,Numeric] Set to 1 if the operation succeeds

Set to Error description if the call fails

HDT [Required,DateTime] The date for the observance of the holiday.

NAME [Optional,String] Name of the holiday.

Output

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

Error Codes Returned

INVPARAM Invalid parameter

HOLAEXST Holiday already exists.

\$\$UPDHOL^SDAVAPIQ – Update holiday

This extrinsic function updates an existing Holiday.

Format

\$\$UPDHOL^SDAVAPI(.RETURN,HDT,NAME)

Input Parameters

.RETURN [Required,Numeric] Set to 1 if the operation succeeds

Set to Error description if the call fails

HDT [Required,DateTime] The date for the observance of the holiday.

NAME [Optional,String] Name of the holiday.

Output

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

Error Codes Returned

INVPARAM Invalid parameter

HOLNFND Holiday not found

\$\$DELHOL^SDAVAPIQ – Delete holiday

This extrinsic function deletes an existing Holiday.

Format

\$\$DELHOL^SDAVAPI(.RETURN,HDT)

Input Parameters

.RETURN [Required,Numeric] Set to 1 if the operation succeeds

Set to Error description if the call fails

HDT [Required,DateTime] The date of the holiday to delete.

Output

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

Error Codes Returned

INVPARAM Invalid parameter

HOLNFND Holiday not found

2.5 Electronic Wait List API

\$\$LIST^SDWLAPI1Q - 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^SDWLAPI1Q – 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

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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

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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)

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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^SDWLAPI1Q – 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

\$\$TRNDET^SDWLAPI1Q – Transfer request detailed data

This extrinsic function returns transfer request details for a specified Wait List

Format

\$\$TRNDET^SDWLAPI1(.RETURN,SDWLIEN)

Input Parameters

RETURN("ACTIVE") [Boolean] One of: 0: no active transfer, 1: active transfer

RETURN("INSTITUTION") [String] Institution name

RETURN("STATION") [Numeric] Station Number

SDWLIEN [Required,Numeric] Wait List IEN.

Output

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

Error Codes Returned

INVPARAM Invalid parameter value

\$\$LOCK^SDWLAPI1Q – Lock specified wait list

This extrinsic function lock specified Wait List

Format

`$$LOCK^SDWLAPI1(.RETURN,IEN)`

Input Parameters

`.RETURN` [Required,Boolean] Set to 1 if the operation succeeds, 0 otherwise

`IEN` [Required,Numeric] Wait list IEN (pointer to file 409.3).

Output

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

Error Codes Returned

`INVPARAM` Invalid parameter value

\$\$UNLOCK^SDWLAPI1() - Unlock specified wait list

This extrinsic function unlock specified Wait List

Format

`$$UNLOCK^SDWLAPI1(IEN)`

Input Parameters

`IEN` [Required,Numeric] Wait list IEN (pointer to file 409.3).

Output

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

Error Codes Returned

None

2.6 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^SCTMAPI1Q – 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") – [Numeric] # 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 number 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 USER 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.

2.7 Encounter utilities API

\$\$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.

PATNAEAC Patient is not actively enrolled in any clinics.

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/time

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.

\$\$GETCHLD^SDMAPI4() – Get children outpatient encounter list

This extrinsic function returns a list of children outpatient encounter.

Format

\$\$GETCHLD^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("ID") [Numeric] Child outpatient encounter IEN

RETURN("CLINIC") [Numeric] Clinic IEN

RETURN("DATE") [DateTime] Encounter date/time

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.

\$\$DATA2PCE^PXAPI() – Add/Update visit and related data

This extrinsic function is used to add/update/delete data related to a visit such as: providers, procedures and diagnosis.

Format

\$\$DATA2PCE^PXAPI(INPUTROOT,PKG,SOURCE,.VISIT,USER,ERR,
DISP,.ERRARRAY,PPEDIT,.ERRPROB, .ACCOUNT)

For more detailed information about this API see Patient Care Encounter Technical Manual from VA site.

2.8 Scheduling events handling API

Successful execution of one of the following routines: MAKE^SDMAPI2, CANCEL^SDMAPI2, NOSHOW^SDMAPI2, MAKEUS^SDMAPI2 or CHECKIN^SDMAPI2 will also generate the execution of the SDAM APPOINTMENT EVENTS protocol, which consists in execution of its children protocols. An interactive protocol could cause unexpected behaviour such as: ignored in the best case, hangup in the worst. The following protocols: DG MEANS TEST REQUIRED, IBACM OP LINK, ORU PATIENT MOVMT, PKX SDAM TO V-FILES, VAFH HL7 OUTPATIENT CAPTURE, VAFH HL7 OUTPATIENT CAPTURE, DGEN SD ENROLL PATIENT, IVM SEND FINANCIAL QUERY, RG ADT OUTPATIENT ENCOUNTER DRIVER, EAS UE SCHED EVENT, SDAM APPT TYPE VALIDATION, SDAM PFSS EVENT and EDP CHECK-IN are not interactive and can operate correctly in the RPC Broker context. The DVBA C&P SCHD EVENT protocol is interactive and should be removed from the Scheduling events list.

The following API routines offers the possibility to add or remove protocols:

\$\$ADD^XPDPROT() – Add child to protocol

This extrinsic function add a child to the specified parent.

Format

\$\$ADD^XPDPROT(PARENT,CHILD,MNE,SEQ)

Input Parameters

PARENT	[Required,String] Parent protocol name
CHILD	[Required,String] Child protocol name
MNE	[Optional,String] Short abbreviation for the item (1-4 characters)
SEQ	[Optional,Numeric] Sequence. The order in which items should be processed.

Output

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

Error Codes Returned

0^parent protocol not found

0^wrong type

0^child protocol not found

\$\$DELETE^XPDPROT() – Remove child protocol

This extrinsic function remove a child from the specified parent.

Format

\$\$DELETE^XPDPROT(PARENT,CHILD)

Input Parameters

PARENT	[Required,String] Parent protocol name
CHILD	[Required,String] Child protocol name

Output

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

Error Codes Returned

0^parent protocol not found

0^wrong type

0^child protocol not found

3. GLOSSARY

Term	Definition
Internal Entry Number (IEN)	The number used to identify an entry within a file. Every record has a unique 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 and 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: DT, U, and DUZ.

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 document a Kernel Installation and Distribution System (KIDS) 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 (i.e. C:\ SD_5.3_260003_RC5_MB.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 document has presented a set of APIs developed as part of the Open Source EHR Services refactoring effort. They are meant to be used by both Roll-and-Scroll Interface and RPC tags and intended to be accessible by other packages and applications. In addition, they should remove direct global access, uncouple the business logic from the user interface elements and minimize code duplication.