Operand 1	PM	Preferred embodiment Send processing
223	O	Sending a Database (DB) object causes the DB object to be sent to the recipient MS in a manner which is appropriate for subsequent import DB or table(s). The DB-obj parameter takes on many syntaxes for sending any subset of a database object, such as an entire database, table(s), certain rows, certain columns, etc. In one embodiment, a qualified database form is used such as: Owner:DatabaseName:TableName for sending the entire table (can use table name wildcard for multiple tables). In another embodiment, Owner:DatabaseName:"...SQL query... shall return the data that is to be sent, preferably in a comma delimited or tab delimited form (as specified in the attributes parameter). Preferably, the send command data is maintained to LBX History, a database log, or other useful storage (subj/msg to document the transaction) for subsequent user browse of the accompanying data and a date/time stamp of when sent, and for DB query manager browse of the data in response to a user action for browse. One preferred embodiment enables the data for easy import to a variety of database destinations, preferably via the same DB query mgr interface(s) used for browsing.
225	O	Sending data causes reading the current value of the data at the MS where the send command action is being executed and then sending the current value to the recipient MS for informative purposes. In the preferred embodiment, the data is a global system variable visible to all processes of a MS operating system. In other embodiments, the data may have limited scope which is made accessible to present disclosure processing (e.g. with extern). Depending on the embodiment, data may be that which is contained in a program data segment, stack segment, and/or extra segment. There can be unique syntaxes for specifying which type of data is being sought (e.g. "S:dataname"). In the preferred embodiment, all occurrences found on the MS and information including its value about the occurrence is presented to the user. In one embodiment, a well known location of link symbol information files are consulted, and in another embodiment a new parameter specifies where to look, or which symbol file of information to use. Preferably, the data value is maintained to LBX History, a historical log, or other useful storage for subsequent user browse, or programmatic access, of the data variable name, its value and date/time stamp of when sent, and for presentation of the data value in response to a user action to show it.
227	O	Sending a semaphore causes reading the current value of the semaphore at the MS where the send command action is being executed and then sending the current value to the recipient MS for informative purposes. In the preferred embodiment, the semaphore is a global system semaphore visible to all processes of a MS operating system. In other embodiments, the semaphore may have limited scope which is made accessible to present disclosure processing (e.g. RAM semaphore). Preferably, the semaphore value (cleared or set) is maintained to LBX History, a historical log, or other useful storage for subsequent user browse, or programmatic access, of the semaphore name, its value and date/time stamp of when sent, and for presentation of the semaphore value in response to a user action to show it.

Fig. 63B-4

Operand ↓	PM	Preferred embodiment Send processing
229	E	Sending a directory causes interface to the email delivery system (e.g. SMTP API) for sending the directory. In one embodiment, the directory is assumed to be the body of the email (e.g. when attributes parameter indicates it is to be a description only of the directory) for sending information about the directory such as # files, nesting of folders, sizes, and any useful file system characteristic(s) or statistics of the directory. In another embodiment, or as specified with an additional parameter (or in attributes), the directory is compressed and encoded as an attachment. In another embodiment, the directory is sent as individually attached files (as indicated to send that way by new or attributes parameter). The email will arrive to a recipient like other emails. The attribute parameter can be used for conventional email attributes as well as new attributes which affect directory data processing.
231	O	Sending an application context causes invocation of the application at the recipient MS and then executing a macro within the application context. The app parameter is preferably a fully qualified path name to the executable to start. In another embodiment, the app parameter is indirect: a path name to a "shortcut" (like a MS Windows shortcut). In another embodiment, the app parameter is an identifier string for the underlying operating system to know which application to start. The macro parameter is preferably a file, path, or accessible variable name containing a set of keystrokes that can be directed to standard/user-interface input. In another embodiment, the macro parameter is a prerecorded user input scenario (for play after application launched -- pulldown selections, mouse droppings, clicks, etc) captured to a file or stored in an accessible variable name. The attributes parameter can be used for how to start the application, for example to flag whether to start an additional instance if the application is already running at the MS (provided multiple instances are supported), and to specify the type of macro parameter being specified, or to specify a speed for processing individuals of the macro. The msg/subject parameter may be useful for maintaining to LBX history useful information with record of the application context invocation reference. An error is logged if the app parameter is not found for launch.
233	E	Sending the focused user interface object causes interface to the email delivery system (e.g. SMTP API) for sending an image (preferably .JPG) of the currently focused user interface object as an attachment. The "<alt><prtscrn>" constant string parameter is a syntactical string representation for the keystroke sequence for performing the MS focused user interface capture action. A similar syntax can be used to specify a different keystroke sequence (1st parameter) for the same functionality. The email will arrive to a recipient like other emails. The attributes parameter can be set for which format to send, in which case a conversion may take place prior to sending (depends on embodiment). Various attributes can be set (e.g. confirmation of delivery status, special handling, NLS considerations, etc).

Fig. 63B-5

Operand ↓	PM	Preferred embodiment Send processing
235	O	Sending user interface control causes redirecting the keystroke macro to input of the recipient MS as if it were entered by the MS user. The macro parameter is preferably a file, path, or accessible variable name containing a set of keystrokes that can be directed to standard user-interface/input. In another embodiment, the macro is a prerecorded user input scenario (for play after application launched -- pulldown selections, mouse droppings, clicks, etc) captured to a file or stored in an accessible variable name. The attributes parameter can be used for whether or not to first display the subj/msg to the recipient MS user for user acknowledgement, or cancellation, prior to executing the macro at the MS. This allows the user time to get the MS user interface in a desirable state if necessary for running the macro, and to see information of the origination (i.e. Parameters). The msg/subject parameter may be useful for maintaining to LBX history information with a record of user interface control sent.
237	O	Sending input causes redirecting the input to the iodev parameter input device stream of the recipient MS as if it were entered by the MS user, or programmatically specified to the iodev I/O device parameter by a data processing system process. The input parameter is preferably a file, path, or accessible variable name containing a datastream (e.g. macro) recognizable by the iodev connected device. The attributes parameter can be used for whether or not to first display the subj/msg to the recipient MS user for user acknowledgement, or cancellation, prior to redirecting the input parameter datastream at the MS, or to specify a speed for processing individuals of the input. This allows the user time to get the MS user interface, and any iodev devices, in a desirable state if necessary for running the input, and to see information of the origination (i.e. Parameters). The msg/subject parameter may be useful for maintaining to LBX history information with a record of the user interface control having been sent.
239	O	Sending output causes redirecting the output to the iodev parameter output device stream of the recipient MS as if it were entered by the MS user, or programmatically specified to the iodev I/O device parameter by a data processing system process. The output parameter is preferably a file, path, or accessible variable name containing a datastream (e.g. macro) recognizable by the iodev connected device. The attributes parameter can be used for whether or not to first display the subj/msg to the recipient MS user for user acknowledgement prior to redirecting the output parameter datastream at the MS, or to specify a speed for processing individuals of the output.. This allows the user time to get the MS user interface, and any iodev devices, in a desirable state if necessary for running the output, and to see information of the origination (i.e. Parameters). The msg/subject parameter may be useful for maintaining to LBX history information with a record of the user interface control having been sent.

Fig. 63B-6

Operand 1	PM	Preferred embodiment Send processing
241	O	Sending an alert updates appropriate recipient MS storage so that a recipient MS alerter process can pick up the alert and then alert the user. There are a variety of alert processes, the most basic of which monitors incoming messages and posts them to the user in an alerting manner. In one embodiment, the alert parameter is identical to the msg/subj parameter. In another embodiment, the two parameters are concatenated, or formed in a complimentary manner, to highlight the subj/msg parameter from the alert message. In another embodiment, only a null subj/msg is supported. The attributes parameter can be for special treatment of the alert by an alerter process.
243	O	See Notify Command for identical processing.
245	O	See Notify Command for identical processing.
247	O	See Notify Command for identical processing.
249	O	See Notify Command for identical processing.
251	O	Sending a calendar object causes interface to the recipient MS calendar/scheduling system for sending/scheduling the calendar object parameter. The calobj parameter contains the date/time stamp of when to schedule the object, or a special syntax constant for "now", "first available per recipient and sender availability", "by end of the week pending availability", or other reasonable constants for when to schedule the calendar object. In one embodiment, the calendar object is assumed to be a newly scheduled calendar item for placement to the calendar of recipients. In another embodiment, the calendar object (e.g. data or file containing parsable syntax) contains directives for what actions exactly to perform to the calendar application interface. In another embodiment, the email system is the transport to deliver the calendar object or calendar actions to recipients. Attributes can be set as is customary for calendar entries (attendance required, emergency meeting, recurring/weekly/monthly meeting, etc). The attributes parameter may be used for performing other actions/functions in the calendaring interface.
253	O	Sending an address book (AB) object causes interface to the AB system for sending/entering the AB object parameter at the recipient MS. In one embodiment, the AB object is assumed to be a newly entered AB entry (e.g. contact reference name) for creation in the AB of recipients. In another embodiment, the AB object parameter contains directives (e.g. data or file containing parsable syntax) for what actions exactly to perform to the AB application interface. Attributes can be set as may be customary for AB entries (customer, peer, manager, friend, family, etc). The attributes parameter may be used for performing other actions/functions in the AB interface.
...		

Fig. 63B-7

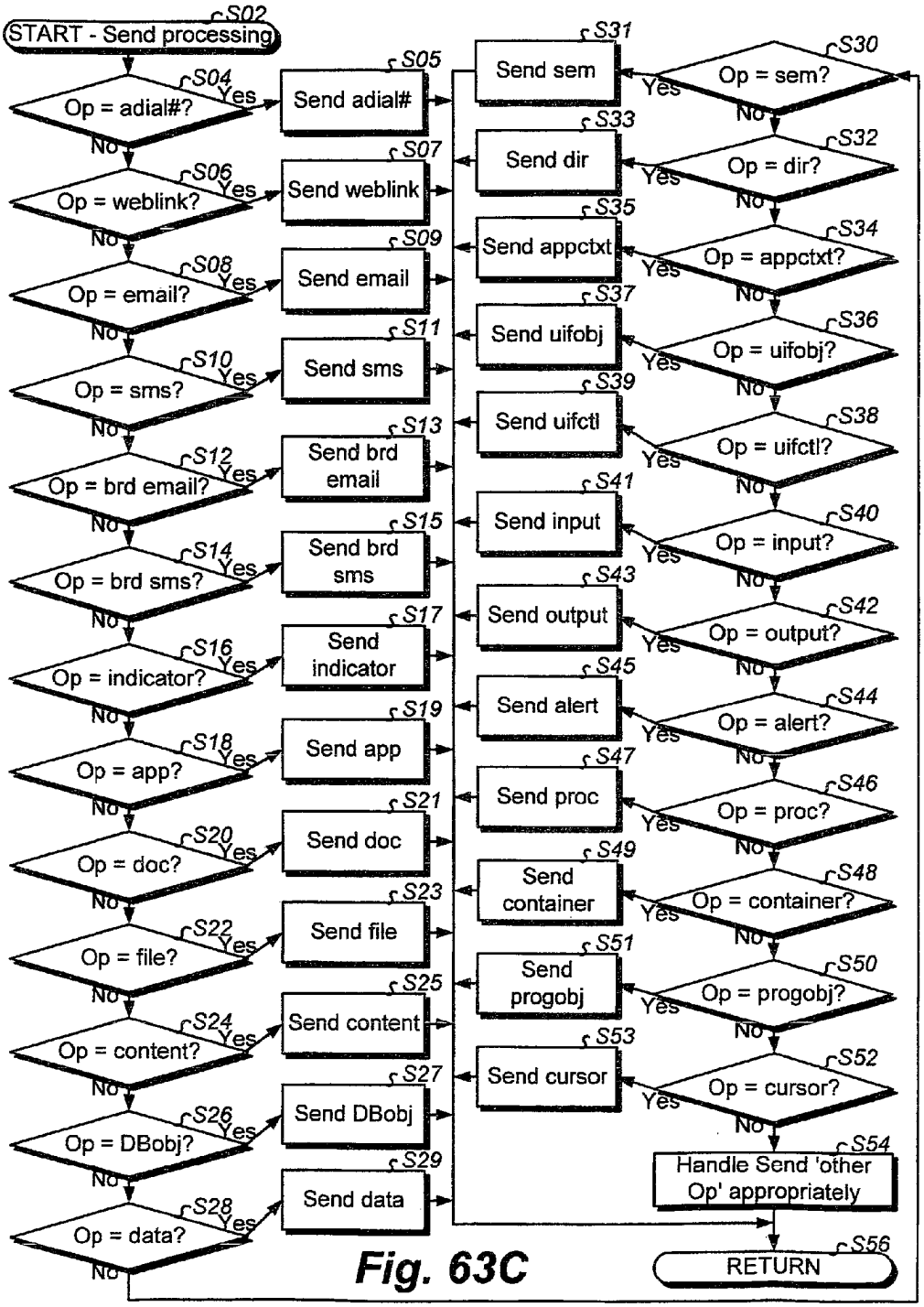
S02
START - Send processing
S04
Op = adial#?
Yes
No
S05
Send adial#
S06
Op = weblink?
Yes
No
S07
Send weblink
S08
Op = email?
Yes
No
S09
Send email
S10
Op = sms?
Yes
No
S11
Send sms
S12
Op = brd email?
Yes
No
S13
Send brd email
S14
Op = brd sms?
Yes
No
S15
Send brd sms
S16
Op = indicator?
Yes
No
S17
Send indicator
S18
Op = app?
Yes
No
S19
Send app
S20
Op = doc?
Yes
No
S21
Send doc
S22
Op = file?
Yes
No
S23
Send file
S24
Op = content?
Yes
No
S25
Send content
S26
Op = DBobj?
Yes
No
S27
Send DBobj
S28
Op = data?
Yes
No
S29
Send data
S31
Send sem
S33
Send dir
S35
Send appctxt
S37
Send uifobj
S39
Send uifctl
S41
Send input
S43
Send output
S45
Send alert
S47
Send proc
S49
Send container
S51
Send progobj
S53
Send cursor
S30
Op = sem?
Yes
No
S32
Op = dir?
Yes
No
S34
Op = appctxt?
Yes
No
S36
Op = uifobj?
Yes
No
S38
Op = uifctl?
Yes
No
S40
Op = input?
Yes
No
S42
Op = output?
Yes
No
S44
Op = alert?
Yes
No
S46
Op = proc?
Yes
No
S48
Op = container?
Yes
No
S50
Op = progobj?
Yes
No
S52
Op = cursor?
Yes
No
S54
Handle Send 'other Op' appropriately
S56
RETURN

Fig. 63C

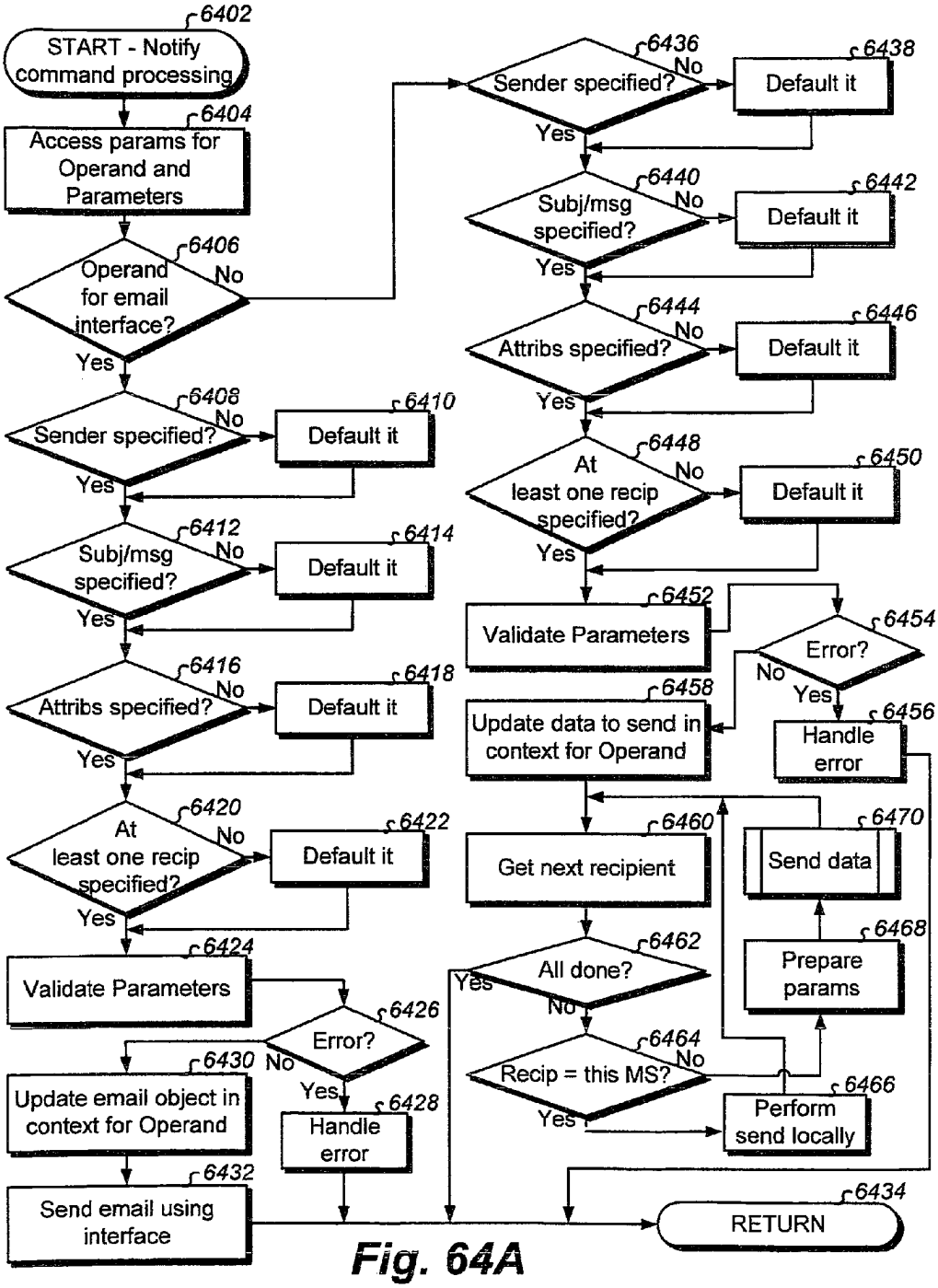
6402
START - Notify command processing
6404
Access params for Operand and Parameters
6406
Operand for email interface?
No
Yes
6408
Sender specified?
No
Yes
6410
Default it
6412
Subj/msg specified?
No
Yes
6414
Default it
6416
Attribs specified?
No
Yes
6418
Default it
6420
At least one recip specified?
No
Yes
6422
Default it
6424
Validate Parameters
6426
Error?
No
Yes
6428
Handle error
6430
Update email object in context for Operand
6432
Send email using interface
6434
RETURN
6436
Sender specified?
No
Yes
6438
Default it
6440
Subj/msg specified?
No
Yes
6442
Default it
6444
Attribs specified?
No
Yes
6446
Default it
6448
At least one recip specified?
No
Yes
6450
Default it
6452
Validate Parameters
6454
Error?
No
Yes
6456
Handle error
6458
Update data to send in context for Operand
6460
Get next recipient
6462
All done?
Yes
No
6464
Recip = this MS?
No
Yes
6466
Perform send locally
6468
Prepare params
6470
Send data

Fig. 64A

Operand 1	PM	Preferred embodiment Notify processing
201	O	Notifying with an auto-dial # automatically performs call processing to auto-dial the auto-dial #. Preferably, the recipient MS user is called by the MS as a normal phone call would be made. In one embodiment, multiple recipients are called "back to back" after the previous recipient call terminates. In another embodiment, a multiple line party call is made with an automated manner with all recipients. The attributes parameter can indicate which embodiment to use, and can be used for specialized call processing (collect, prepaid account check, hide caller id, etc). Preferably, the notify command data and call data is maintained to LBX History, a historical call log (e.g. incoming), with the accompanying subj/msg and a date/time stamp of when sent, and for future repeated automated speed dialing of the # in response to a user action to auto-dial. Various embodiments will save to LBX History how many times, and when, the auto-dial # was used to perform automated speed dialing, along with call details such as direction of call, parties to the call, features of the call, or other call characteristics. In one embodiment, the recipient ID is one to one with the called #. In another embodiment, the recipient ID is used to find the associated called number. Preferably, an existing API is used to accomplish processing. Automatic dialing through a variety of interfaces is well known in the art, and depends on the software development environment. Conventional processing side affects of automated calling should occur like the action was manual (e.g. log update).
203	O	Notifying with a web link automatically invokes (transposes to) at the recipient MS the link, for example in a browser, with a minimal (if any) user interface action. In one embodiment, the link includes URL parameter(s) (e.g. ?p1=xyz). In another embodiment, all recipients are passed to the link with appended URL parameter(s) (e.g. ?ids=Recip1;Recip2;...RecipN). An alternate embodiment fires form variables to the loaded page with the same URL variables. The attributes parameter can indicate which embodiment to use, and how to invoke the link (e.g. use currently focused window, use an active browser window, spawn new browser window, etc). Preferably, the notify command data is maintained to LBX History, a historical call log (e.g. incoming), browser history data, browser favorites, or other useful storage for subsequent user browse of the accompanying subj/msg and a date/time stamp of when sent, and for invocation of the link within a MS browser in response to a user action to use the link again in the future. Various embodiments will save to LBX History how many times, and when, the weblink was invoked.
205	E	See Send Command for identical processing.
207	E	See Send Command for identical processing.
209	E	See Send Command for identical processing.
211	E	See Send Command for identical processing.
213	O	See Send Command for identical processing.
215	O	See Send Command for identical processing.

Fig. 64B-1

Operand	PM	Preferred embodiment Notify processing
217	E	See Send Command for identical processing.
219	E	See Send Command for identical processing.
221	O	Notifying with content causes the content to be presented at the recipient MS upon delivery in a manner which is appropriate for the content type. The content parameter is one that cannot be classified in the other operands, but is content for presentation nevertheless. Examples include special data records (e.g. extern variable name), content data memory locations (e.g. programmatic variable), or files containing a customizably processed format. Methods of displaying the content include audio and/or visual using applicable MS capabilities. Preferably, the notify command data is maintained to LBX History, a historical content log (e.g. incoming), browser history data, or other useful storage for subsequent user browse of the accompanying content and a date/time stamp of when sent, and for presentation of the content. Various embodiments will save to LBX History how many times, and when, the content was presented.
223	O	Notifying with a Database (DB) object causes the DB object (i.e. qualified database with access query string) to be modified with the query parameter. The query parameter is used to perform any query against the specified DB-database (DB-obj), preferably a query that only returns a return code (e.g. causes alteration). Preferably, the notify command data is maintained to LBX History, a database log (e.g. incoming), or other useful storage for subsequent query use and a date/time stamp of when sent, and for DB query manager browse/use of the query in response to an applicable user action. Other params are for documentary purposes when information is saved. In some embodiments, an appropriate SQL client interface (e.g. SQLNET API) is used to carry out processing, or a suitable DB API is used.
225	O	Notifying data causes modifying the value of the data at the recipient MS (set data to value). An error can result if the data is not resolvable for the attempt. In the preferred embodiment, the data is a global system variable visible to all processes of a MS operating system. In other embodiments, the data may have limited scope which is made accessible to present disclosure processing (e.g. with extern). Preferably, the data affected is maintained to LBX History, a historical log (e.g. incoming), or other useful storage for subsequent user browse, or programmatic access, of the data variable name, its before and after values and date/time stamp of when sent, and for presentation of the data value in response to a user action to show it.
227	O	Notifying a semaphore causes modifying the value of the semaphore at the recipient MS. In the preferred embodiment, the semaphore is a global system semaphore visible to all processes of a MS operating system. In other embodiments, the semaphore may have limited scope which is made accessible to present disclosure processing (e.g. RAM semaphore). Preferably, the semaphore value before and after setting is maintained to LBX History, a historical log (e.g. incoming), or other useful storage for subsequent user browse, or programmatic access, and for presentation of the semaphore information in response to a user action to show it.

Fig. 64B-2

Operand ↓	PM	Preferred embodiment Notify processing
229	E	See Send Command for identical processing.
231	O	See Send Command for identical processing.
233	E	See Send Command for identical processing.
235	O	See Send Command for identical processing.
237	O	See Send Command for identical processing.
239	O	See Send Command for identical processing.
241	O	Notifying with an alert presents the alert to each recipient MS. Depending on attributes parameter settings, the alert may be asynchronously presented to an alert area, synchronously alerted and requiring a user action to acknowledge, logged to special file, or other reasonable alert method(s). Fig. 75B processing will cause the alert to be presented to the MS user. In one embodiment, the alert parameter is identical to the msg/subj parameter. In another embodiment, the two parameters are concatenated, or formed in a complimentary manner, to highlight the subj/msg parameter from the alert message. In another embodiment, only a null subj/msg is supported. Various embodiments will support different alert content types and applicable processing as indicated by the attributes parameter. Preferably, an appropriate API is made available for processing.
243	O	Notifying a process causes sending an operating system signal (see UNIX signaling) to the process with Process ID (PID) of the pid parameter. A numeric value parameter (e.g. 0 or 1) may be communicated with the signal. Depending on attributes parameter settings, another embodiment accesses the pid parameter as a process identifier parameter which is used to lookup the operating system PID prior to signaling. The msg/subject parameter may be useful for maintaining to LBX history useful information, along with a date/time stamp when sent, with record of the application invocation reference. An error can be logged if the process is not found for signaling.
245	O	Notifying a container causes launch of a MS file manager to examine the contents of a MS system container having the path in the container parameter (e.g. c:\dir1\subdir3). The attributes parameter can be used for how to start the file manager, for example to flag whether to start an additional instance if the file manager is already running at the MS (provided multiple instances are supported), otherwise an existing instance is updated for the container, or a new instance is started for the container. The msg/subject parameter may be useful for maintaining to LBX history useful information, along with a sent date/time stamp, with record of the application invocation reference. An error can be logged if the file manager is not found for launch, or if the container is invalid.

Fig. 64B-3

Operand ↓	PM	Preferred embodiment Notify processing
247	O	Notifying a program object causes acting on a specified program object (per attribute parameter) with the specified data at the recipient MS. The progobj parameter is the linked run time symbolic name accessible to charter processing of the present disclosure for third party plug-in processing. The progobj parameter can be a variable name, function name, object name, queue name, procedure name, or semaphore name accessed at run time by the symbolic name evaluation during charter processing. The binary data parameter is used to modify the program object (variable name set Least Significant Bit (LSB) to Most significant Bit (MSB) right to left intuitive Motorola processing byte/bit order until bits set or unmatched, function name invoked with respective data bytes pushed to the stack prior to invocation, object name data public data area initialized with the data parameter on a byte to byte basis, queue name entry inserted using the data parameter as a typecast data record of bits, procedure name invoked with respective data bytes pushed to the stack prior to invocation, or semaphore name set with clear for a null data parameter, else a set action). Alternately, an Intel reverse byte order can be used to apply the data Parameter. The attributes parameter indicates which variety of progobj is specified, and can be used to indicate a byte order data mapping method to use. The msg/subject parameter may be useful for maintaining to LBX history useful information, along with a date/time stamp when sent, with record of the program object invocation. An error can be logged if the progobj parameter is not resolvable. Appropriate MS O/S interfaces are used.
249	O	Notifying a cursor causes modifying a recipient MS user interface cursor in accordance with direction by the attributes parameter. The cursor parameter can be a suitable cursor bitmap file reference, suitable animated cursor file, predefined appearance type, or predefined behaving cursor. The attributes parameter further distinguishes which cursor modification is being requested. The msg/subject parameter may be useful for maintaining to LBX history useful information, along with a date/time stamp when sent. An error is logged if there is no active cursor in the user interface. An appropriate MS API is used, depending on the development environment.
251	O	See Send Command for identical processing.
253	O	See Send Command for identical processing.
...		

Fig. 64B-4

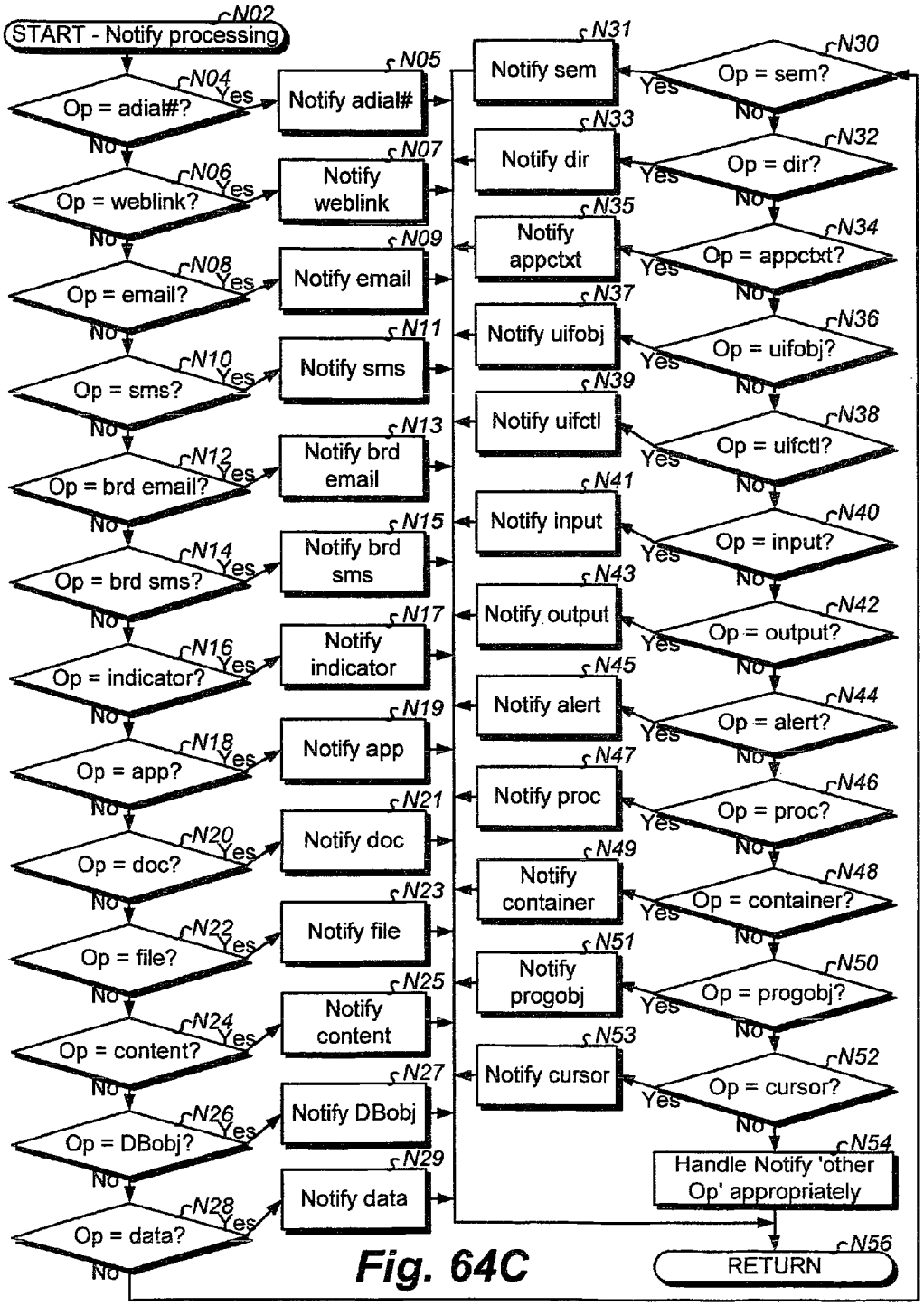
N02
START - Notify processing
N04
Op = adial#?
Yes
No
N05
Notify adial#
N06
Op = weblink?
Yes
No
N07
Notify weblink
N08
Op = email?
Yes
No
N09
Notify email
N10
Op = sms?
Yes
No
N11
Notify sms
N12
Op = brd email?
Yes
No
N13
Notify brd email
N14
Op = brd sms?
Yes
No
N15
Notify brd sms
N16
Op = indicator?
Yes
No
N17
Notify indicator
N18
Op = app?
Yes
No
N19
Notify app
N20
Op = doc?
Yes
No
N21
Notify doc
N22
Op = file?
Yes
No
N23
Notify file
N24
Op = content?
Yes
No
N25
Notify content
N26
Op = DBobj?
Yes
No
N27
Notify DBobj
N28
Op = data?
Yes
No
N29
Notify data
N31
Notify sem
N33
Notify dir
N35
Notify appctxt
N37
Notify uifobj
N39
Notify uifctl
N41
Notify input
N43
Notify output
N45
Notify alert
N47
Notify proc
N49
Notify container
N51
Notify progobj
N53
Notify cursor
N30
Op = sem?
Yes
No
N32
Op = dir?
Yes
No
N34
Op = appctxt?
Yes
No
N36
Op = uifobj?
Yes
No
N38
Op = uifctl?
Yes
No
N40
Op = input?
Yes
No
N42
Op = output?
Yes
No
N44
Op = alert?
Yes
No
N46
Op = proc?
Yes
No
N48
Op = container?
Yes
No
N50
Op = progobj?
Yes
No
N52
Op = cursor?
Yes
No
N54
Handle Notify 'other Op' appropriately
N56
RETURN

Fig. 64C

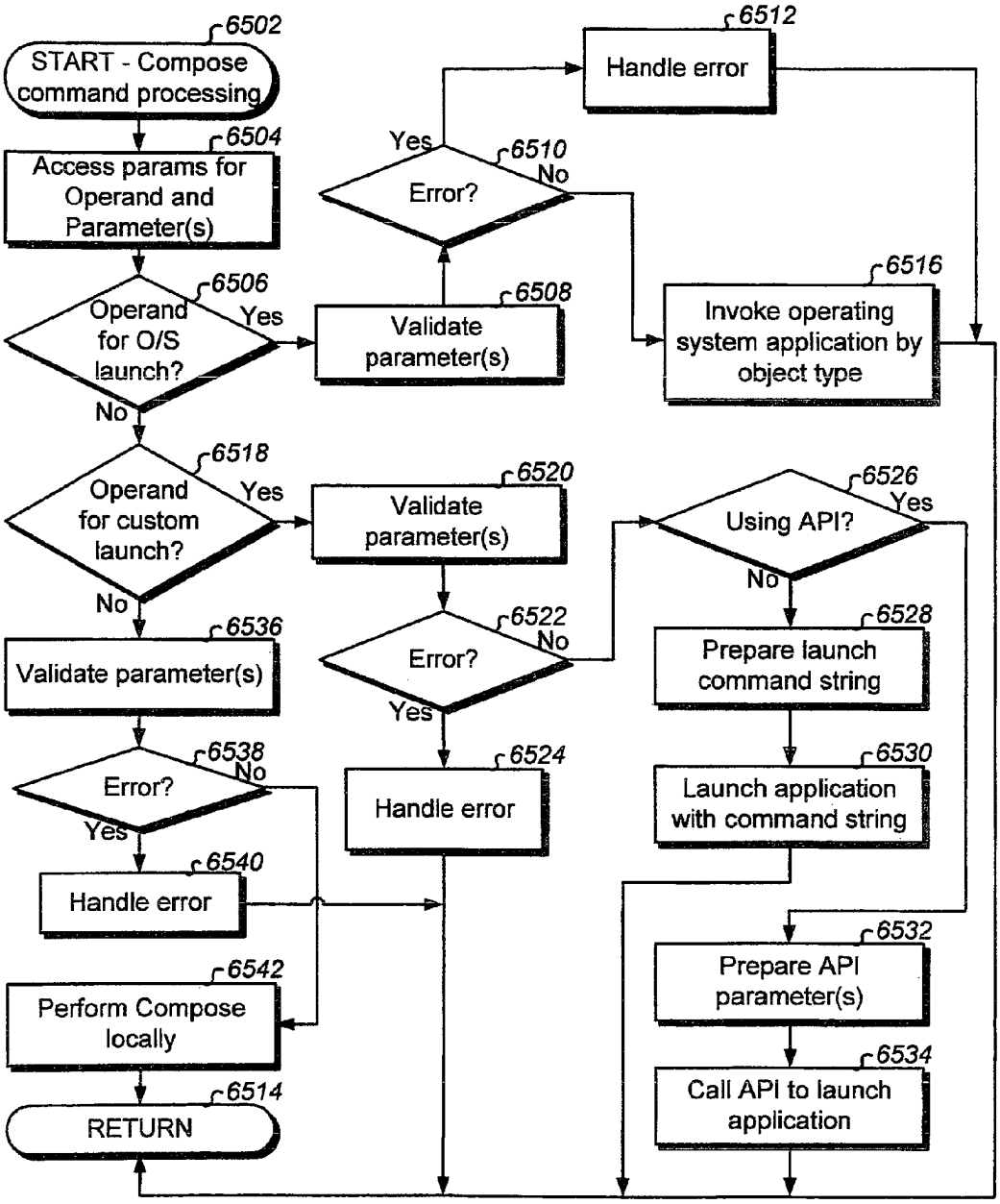
6502
START - Compose command processing
6504
Access params for Operand and Parameter(s)
6506
Operand for O/S launch?
Yes
No
6508
Validate parameter(s)
6510
Error?
Yes
No
6512
Handle error
6516
Invoke operating system application by object type
6518
Operand for custom launch?
Yes
No
6520
Validate parameter(s)
6522
Error?
Yes
No
6524
Handle error
6526
Using API?
Yes
No
6528
Prepare launch command string
6530
Launch application with command string
6532
Prepare API parameter(s)
6534
Call API to launch application
6536
Validate parameter(s)
6538
Error?
Yes
No
6540
Handle error
6542
Perform Compose locally
6514
RETURN

Fig. 65A

Operand ↓	PM	Preferred embodiment Compose processing
201	C	Composing an auto-dial # launches the MS phone number calling interface with the auto-dial # parameter defaulted for making the call. Once launched, the user can make a very simple confirmation action for placing the call to the auto-dial #. Call processing takes place as though the user manually launched the dialing application, entered the auto-dial # and then is ready to decide if the call should be placed. Appropriate MS storage is updated and subsequently processed as though the user had entered the # for calling manually. Preferably, the compose command data is maintained to LBX History, a historical call log (e.g. outgoing when call placed), or other useful storage for subsequent use.
203	S	Composing a web link launches a MS browser and defaults the link as though the user had entered it manually. The user can subsequently invoke (transpose to) the link if desired with a minimal action (e.g. click ok). The link may include appended URL parameters (e.g. "?v=yes&T=go" for customized web page processing). An alternate embodiment can fire form variables for active web page processing using URL parameters specified or using the params parameter. Processing takes place as though the user manually launched the browser application, entered the weblink and then is ready to decide if the link should be invoked. Appropriate MS storage is updated and subsequently processed as though the user had entered the weblink in the browser manually. Preferably, the compose command data is maintained to LBX History, a historical log (web page load history when invoked), or other useful storage for subsequent use.
205	C	Composing an email causes interface to the email delivery system for invoking the create email interface and defaulting the appropriate email fields with the passed parameters. The user can subsequently send the email with little effort, or after optional modification, with a minimal action (e.g. click ok). Processing takes place as though the user manually launched the create email application, entered the fields of the email form with passed parameters, and then is ready to decide if the email should be sent, or further edited, or possibly cancelled. Appropriate MS storage is updated and subsequently processed as though the user manually started the create email interface and entered the email information manually. Preferably, the compose command data is maintained to LBX History, a historical call log (e.g. incoming), or other useful storage for subsequent use. A standard email POP or mailbox interface is preferably used. The email will arrive to a recipient like other emails. Various attributes can be set (e.g. confirmation of delivery status, special handling, NLS considerations, etc).

Fig. 65B-1

Operand 1	PM	Preferred embodiment Compose processing
207	C	Composing an sms message causes interface to an appropriate messaging delivery system for invoking the create message interface and defaulting the appropriate message fields with the passed parameters. The user can subsequently send the message with little effort, or after optional modification, with a minimal action (e.g. click ok). Processing takes place as though the user manually launched the create message application, entered the fields of the messaging form with passed parameters, and then is ready to decide if the message should be sent, or further edited, or possibly cancelled. Appropriate MS storage is updated and subsequently processed as though the user manually started the create message interface and entered message information manually. Preferably, the compose command data is maintained to LBX History, a historical call log (e.g. incoming), or other useful storage for subsequent use. A standard email POP or mailbox interface, or a similar messaging interface, can be used. The message will arrive to a recipient like other sms messages. Various sms message attributes may be set (e.g. confirmation of delivery status, special handling, NLS considerations, etc).
209	C	Composing a broadcast email causes interface to the email delivery system for invoking the create email interface and defaulting the appropriate email fields with the passed parameters. The user can subsequently send the email with little effort, or after optional modification, with a minimal action (e.g. click ok). Processing takes place as though the user manually launched the create email application, entered the fields of the email form with passed parameters, and then is ready to decide if the email should be sent, or further edited, or possibly cancelled. Appropriate MS storage is updated and subsequently processed as though the user manually started the create email interface and entered the email information manually. Preferably, the compose command data is maintained to LBX History, a historical call log (e.g. incoming), or other useful storage for subsequent use. A standard email POP or mailbox interface is preferably used. The email will arrive to a recipient like other emails. Various attributes can be set (e.g. special handling, NLS considerations, etc), but preferably, no confirmation of delivery status is requested in attributes since this is a broadcast.

Fig. 65B-2

Operand ↓	PM	Preferred embodiment Compose processing
211	C	Composing a broadcast sms message causes interface to an appropriate messaging delivery system for invoking the create message interface and defaulting the appropriate message fields with the passed parameters. The user can subsequently send the message with little effort, or after optional modification, with a minimal action (e.g. click ok). Processing takes place as though the user manually launched the create message application, entered the fields of the messaging form with passed parameters, and then is ready to decide if the message should be sent, or further edited, or possibly cancelled. Appropriate MS storage is updated and subsequently processed as though the user manually started the create message interface and entered message information manually. Preferably, the compose command data is maintained to LBX History, a historical call log (e.g. incoming), or other useful storage for subsequent use. A standard email POP or mailbox interface, or a similar messaging interface, can be used. The message will arrive to a recipient like other messages. Various attributes can be set (e.g. special handling, NLS considerations, etc), but preferably, no confirmation of delivery status is requested in attributes since this is a broadcast.
213	O	See Send Command for identical processing.
215	C	Composing an application causes invocation of the application at the MS. The app parameter is preferably a fully qualified path name to the executable to start. In another embodiment, the app parameter is indirect: a path name to a "shortcut" (like a MS Windows shortcut). In another embodiment, the app parameter is an identifier string for the underlying operating system to know which application to start. The params parameter can be used for command line, or string to append, or pass, to the app/path parameter, for how to start the application (e.g. with parameters). Processing takes place as though the user manually launched the application (and with any optional params). Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
217	S	Composing a document causes invocation of the appropriate application at the MS in accordance with the object type as though the user selected the document for automatically being associated to the correct application when opening the document. The doc parameter may be preferably a fully qualified path name to the document. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
219	S	Composing a file causes invocation of the appropriate application at the MS in accordance with the file type of the fully qualified path name of the file as though the user selected the file for automatically being associated to the correct application when opening the document. Processing takes place as though the user manually launched the application for the specified file. The path parameter is preferably a fully qualified path name to the file. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.

Fig. 65B-3

Operand →	PM	Preferred embodiment Compose processing
221	O	Composing content causes invocation of the appropriate application at the MS in accordance with the content as though the user selected the content for automatically being associated to the correct application when opening the content. Processing takes place as though the user manually launched the applicable application for the content. The path parameter is preferably a fully qualified specification to the content. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
223	C	Composing a DB object causes invocation of the appropriate database query manager DB object creation interface to a context complementary to the type of DB object as though the user started the query manager and manually entered the DB object for creation. Processing takes place as though the user manually launched the query manager, entered the fields of the database object form, and then is ready to further work with the starting template of DB object information. In one embodiment, the DB-obj parameter contains directives for automatically populating specified data to a particular Query Manager create object interface. In another embodiment, the DB-obj parameter is specified for an existing DB object for then being opened by the query manager for further review or work. Appropriate MS storage is updated and subsequently processed as though the user had entered information manually. Preferably, the compose command data is maintained to LBX History, a historical call log (e.g. incoming), or other useful storage for subsequent use.
225	O	Composing data causes modifying the value of the data at the MS (analogous to a Notify data action -- set data to value). An error can result if the data is not resolvable for the attempt. In the preferred embodiment, the data is a global system variable visible to all processes of a MS operating system. In other embodiments, the data may have limited scope which is made accessible to present disclosure processing (e.g. with extern). Preferably, the data affected is maintained to LBX History, a historical log (e.g. incoming), or other useful storage for subsequent user browse, or programmatic access, of the data variable name, its before and after values and date/time stamp of when sent, and for presentation of the data value in response to a user action to show it.
227	O	Composing a semaphore causes modifying the value of the semaphore at the MS (analogous to a Notify sem action -- set sem to value). An error can result if the semaphore is not resolvable for the attempt. In the preferred embodiment, the semaphore is a global system semaphore visible to all processes of a MS operating system. In other embodiments, the semaphore may have limited scope which is made accessible to present disclosure processing (i.e. RAM semaphore). Preferably, the semaphore value before and after setting is maintained to LBX History, a historical log (e.g. incoming), or other useful storage for subsequent user browse, or programmatic access, and for presentation of the semaphore information in response to a user action to show it.

Fig. 65B-4

Operand 1	PM	Preferred embodiment Compose processing
229	S	Composing a directory causes invocation of the appropriate application (e.g. file system manager) at the MS as though the user selected the directory for automatically being associated to the correct file management application when opening the directory. Processing takes place as though the user manually launched the application for working with the directory. The path parameter is preferably a fully qualified path name to the directory. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
231	C	Composing an application context causes invocation of the application at the MS and then executing a macro within the application context (analogous to a Send app context action). The app parameter is preferably a fully qualified path name to the executable to start. In another embodiment, the app parameter is indirect: a path name to a "shortcut" (like a MS Windows shortcut). In another embodiment, the app parameter is an identifier string for the underlying operating system to know which application to start. The macro parameter is preferably a file, path, or accessible variable name containing a set of keystrokes that can be directed to standard/user-interface input. In another embodiment, the macro parameter is a prerecorded user input scenario (for play after application launched -- pulldown selections, mouse droppings, clicks, etc) captured to a file or stored in an accessible variable name. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
233	S	Composing a focused user interface object causes invocation of the appropriate application (e.g. graphic application by file type embodiment .jpg, .gif, etc) at the MS as though the user manually captured the focused user interface object (e.g. Alt-Prtscrn) using the first command string syntax parameter, invoked the correct graphical application to open for the captured image, and is ready for save of the file, or for further editing. Processing takes place as though the user manually launched the application for the specified file. The embodiment's file type preference may influence which application is to be launched. The first parameter can be used to change the keystroke sequence for capture. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
235	O	Composing user interface control causes redirecting the keystroke macro to user interface input of the MS as if it were entered by the MS user (analogous to a Send user interface control action). The macro parameter is preferably a file, path, or accessible variable name containing a set of keystrokes that can be directed to standard input. In another embodiment, the macro is a prerecorded user input scenario (for play after application launched -- pulldown selections, mouse droppings, clicks, etc) captured to a file or stored in an accessible variable name. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.

Fig. 65B-5

Operand 1	PM	Preferred embodiment Compose processing
237	O	Composing input causes redirecting the input to the iodev parameter input device stream of the MS as if it were entered by the MS user, or programmatically specified to the iodev I/O device parameter by a data processing system process (analogous to a Send input action). The input parameter is preferably a file or accessible variable name containing a datastream recognizable by the iodev connected device. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
239	O	Composing output causes redirecting the output to the iodev parameter output device stream of the MS as if it were entered by the MS user, or programmatically specified to the iodev I/O device parameter by a data processing system process (analogous to a Send output action). The output parameter is preferably a file or accessible variable name containing a datastream recognizable by the iodev connected device. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
241	S	Composing an alert causes invocation of the appropriate alerter application at the MS as though the user selected the alert application, manually entered the alert parameter, and is ready to decide what to do with the alert, for example send it with a minimal action (e.g. ok), edit it, or cancel it. Processing takes place as though the user manually launched the application for creating the specified alert. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
243	O	Composing a process causes sending an operating system signal (see UNIX signaling) to the process with Process ID (PID) of the pid parameter (analogous to a Notify process action). A numeric value parameter (e.g. 0 or 1) may be communicated with the signal. An error can be logged if the process is not found for signaling. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
245	S	Composing a container causes launch of a MS container manager (e.g. file manager) to examine the contents of the container having the path in the container parameter (e.g. c:\dir1\subdir3) (analogous to a Notify container action). An error is logged if the file manager is not found for launch, or if the container is invalid. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
247	O	Composing a program object causes launch of a MS development environment application (e.g. Microsoft Visual Studio or IBM C-Set development consoles, etc), performing a search for the progobj parameter symbol, and producing search results of all occurrences for the current development working directory, mount point, or last used development repository. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.

Fig. 65B-6

Operand 1	PM	Preferred embodiment Compose processing
249	O	Composing a cursor causes invocation of the appropriate application (e.g. graphic application by file type embodiment .bmp, .ico, etc) at the MS as though the user manually launched the application for the cursor parameter, and is ready for save of the file, or for further editing, or for cancellation. Depending on the cursor parameter referenced, an appropriate application will be launched for graphics, animation, etc. The cursor parameter is preferably a fully qualified path to determine the cursor (e.g. file). Processing takes place as though the user manually launched the application for the specified file. The embodiment's file type preference will influence which application is to be launched. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
251	S	Composing a calendar object causes interface to the calendar system for invoking the create calendar object interface and defaulting the appropriate calendar interface fields with the passed parameters. The calendar object parameter may be as described for Send calendar object, except for defaulting calendar interface create object interface(s). The user can subsequently create the scheduled event with little effort, or after optional modification, with a minimal action (e.g. click ok). Processing takes place as though the user manually launched the calendar application, entered the fields of the calendar form with passed parameters, and then is ready to decide what to do with it. Appropriate MS storage is updated and subsequently processed as though the user had manually started the calendar application and entered the calendar information manually. Preferably, the compose command data is maintained to LBX History, a historical call log (e.g. incoming), or other useful storage for subsequent use. A standard calendaring interface is preferably used. Attributes can be set as is customary for a calendar object.
253	S	Composing an address book (AB) object causes interface to the AB system for invoking the create AB object interface and defaulting the appropriate AB interface fields with the passed parameters. The AB object parameter may be as described for Send AB object, except for defaulting AB interface create object interface(s). The user can subsequently create the AB entry with little effort, or after optional modification, with a minimal action (e.g. click ok). Processing takes place as though the user manually launched the AB application, entered the fields of the AB form with passed parameters, and then is ready to decide what to do with it. Appropriate MS storage is updated and subsequently processed as though the user manually started the AB application and entered the AB information manually. Preferably, the compose command data is maintained to LBX History, a historical call log (e.g. incoming), or other useful storage for subsequent use. A standard AB interface is preferably used. Attributes can be set as may be customary for an AB entry.
...		

Fig. 65B-7

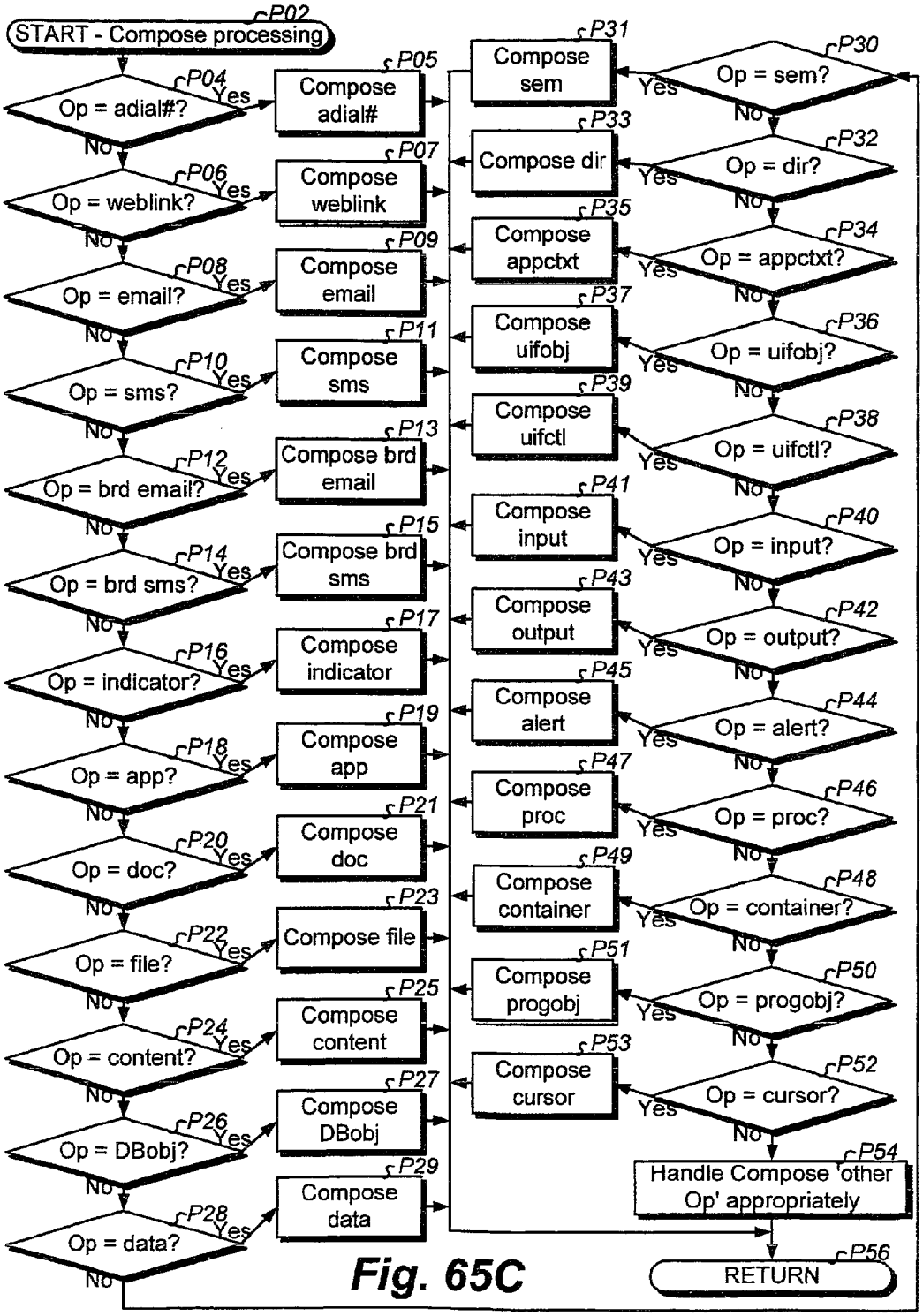
P02
START - Compose processing
P04
Op = adial#?
Yes
No
P05
Compose adial#
P06
Op = weblink?
Yes
No
P07
Compose weblink
P08
Op = email?
Yes
No
P09
Compose email
P10
Op = sms?
Yes
No
P11
Compose sms
P12
Op = brd email?
Yes
No
P13
Compose brd email
P14
Op = brd sms?
Yes
No
P15
Compose brd sms
P16
Op = indicator?
Yes
No
P17
Compose indicator
P18
Op = app?
Yes
No
P19
Compose app
P20
Op = doc?
Yes
No
P21
Compose doc
P22
Op = file?
Yes
No
P23
Compose file
P24
Op = content?
Yes
No
P25
Compose content
P26
Op = DBobj?
Yes
No
P27
Compose DBobj
P28
Op = data?
Yes
No
P29
Compose data
P31
Compose sem
P33
Compose dir
P35
Compose appctxt
P37
Compose uifobj
P39
Compose uifctl
P41
Compose input
P43
Compose output
P45
Compose alert
P47
Compose proc
P49
Compose container
P51
Compose progobj
P53
Compose cursor
P30
Op = sem?
Yes
No
P32
Op = dir?
Yes
No
P34
Op = appctxt?
Yes
No
P36
Op = uifobj?
Yes
No
P38
Op = uifctl?
Yes
No
P40
Op = input?
Yes
No
P42
Op = output?
Yes
No
P44
Op = alert?
Yes
No
P46
Op = proc?
Yes
No
P48
Op = container?
Yes
No
P50
Op = progobj?
Yes
No
P52
Op = cursor?
Yes
No
P54
Handle Compose 'other Op' appropriately
P56
RETURN

Fig. 65C

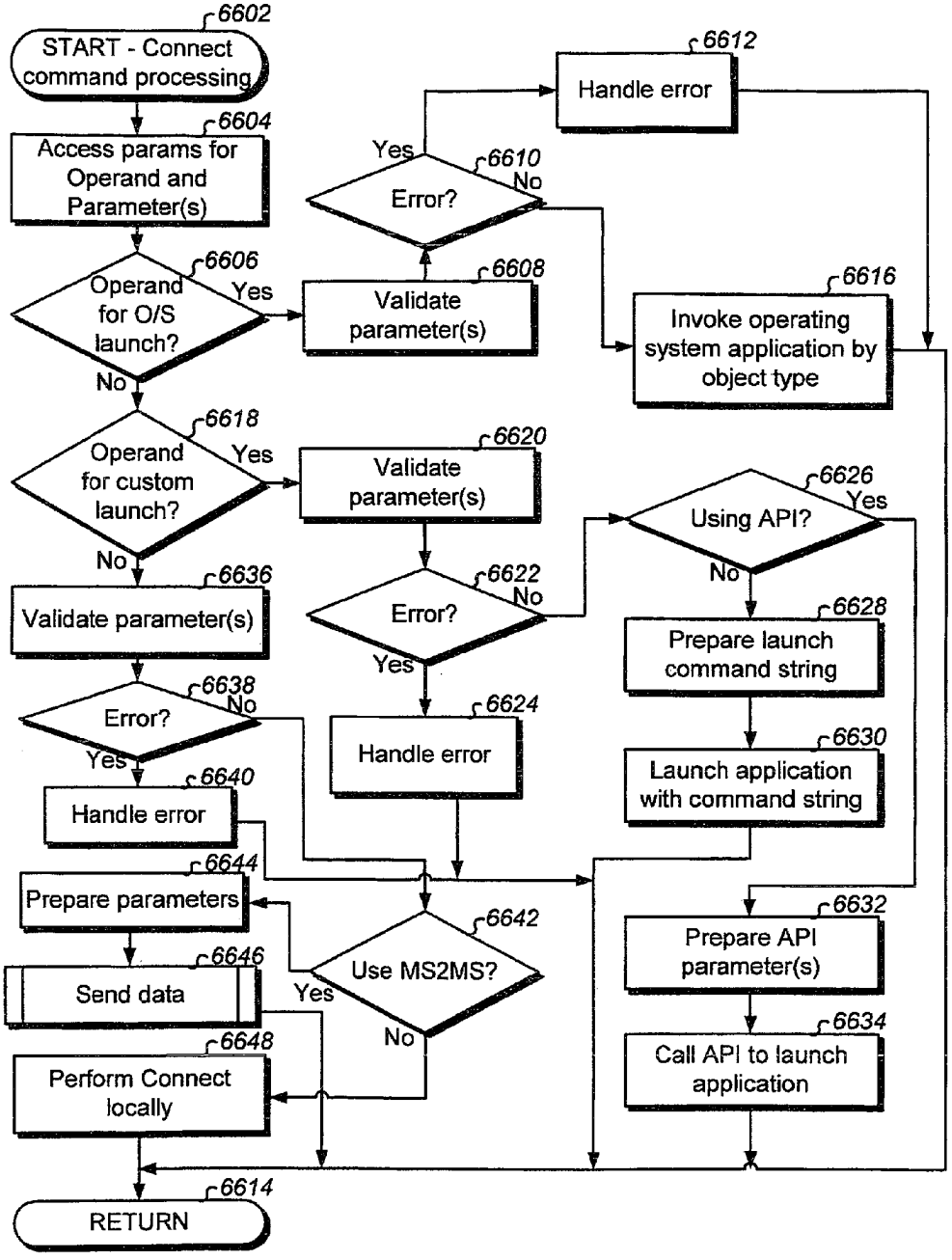
6602
START - Connect command processing
6604
Access params for Operand and Parameter(s)
6606
Operand for O/S launch?
Yes
No
6608
Validate parameter(s)
6610
Error?
Yes
No
6612
Handle error
6616
Invoke operating system application by object type
6618
Operand for custom launch?
Yes
No
6620
Validate parameter(s)
6622
Error?
Yes
No
6624
Handle error
6626
Using API?
Yes
No
6628
Prepare launch command string
6630
Launch application with command string
6632
Prepare API parameter(s)
6634
Call API to launch application
6636
Validate parameter(s)
6638
Error?
Yes
No
6640
Handle error
6642
Use MS2MS?
Yes
No
6644
Prepare parameters
6646
Send data
6648
Perform Connect locally
6614
RETURN

Fig. 66A

Operand ↓	PM	Preferred embodiment Connect processing
201	C	Connecting with an auto-dial # launches the MS phone number calling interface with the auto-dial # parameter defaulted for placing a call (like Notify autodial #). The call is actually made as though the user manually launched the dialing application, entered the auto-dial # and then chose to make the call with it. Appropriate MS storage is updated and subsequently processed as though the user had entered the # for calling manually and then made the call. Conventional call processing takes place thereafter. Preferably, the compose command data is maintained to LBX History, a historical call log (e.g. outgoing), or other useful storage for subsequent use.
203	S	Connecting with a web link launches a MS browser and invokes (transposes to) the link as though the user had entered it manually and went to the weblink page (like Notify weblink). In one embodiment, the weblink parameter includes URL parameter(s). In another embodiment, the params parameter supports a URL command string for appending to the weblink (e.g. "?v=yes&T=go") for customized web page processing. An alternate embodiment can fire form variables for active web page processing using the params parameter. Processing takes place as though the user manually launched the browser application, entered the weblink and then loaded the weblink webpage. Appropriate MS storage is updated and subsequently processed as though the user had entered the weblink in the browser manually. Preferably, the compose command data is maintained to LBX History, a historical log (web page load history), or other useful storage for subsequent use.
205	C	See Send Command for identical processing.
207	C	See Send Command for identical processing.
209	C	See Send Command for identical processing.
211	C	See Send Command for identical processing.
213	O	See Send Command for identical processing.
215	C	See Compose command for identical processing.
217	S	See Compose command for identical processing.
219	S	See Compose command for identical processing.
221	O	See Compose command for identical processing.
223	C	See Notify command for identical processing, except some applicable parameters not used.
225	O	See Compose command for identical processing.
227	O	See Compose command for identical processing.
229	O	See Compose command for identical processing.
231	C	See Compose command for identical processing.
233	S	See Compose command for identical processing.
235	O	See Compose command for identical processing.

Fig. 66B-1

Operand →	PM	Preferred embodiment Connect processing
237	O	See Compose command for identical processing.
239	O	See Compose command for identical processing.
241	C	Connecting with an alert causes interfacing to the alert subsystem for instantly producing the alert at the MS. Preferably, the connect command data is maintained to LBX History, a log, or other useful storage for subsequent use. The alert parameter of Notify processing is identical.
243	O	See Compose command for identical processing.
245	S	See Compose command for identical processing.
247	O	See Notify command for identical processing.
249	O	See Notify command for identical processing.
251	C	See Send Command for identical processing.
253	C	See Send Command for identical processing.
. . .		

Fig. 66B-2

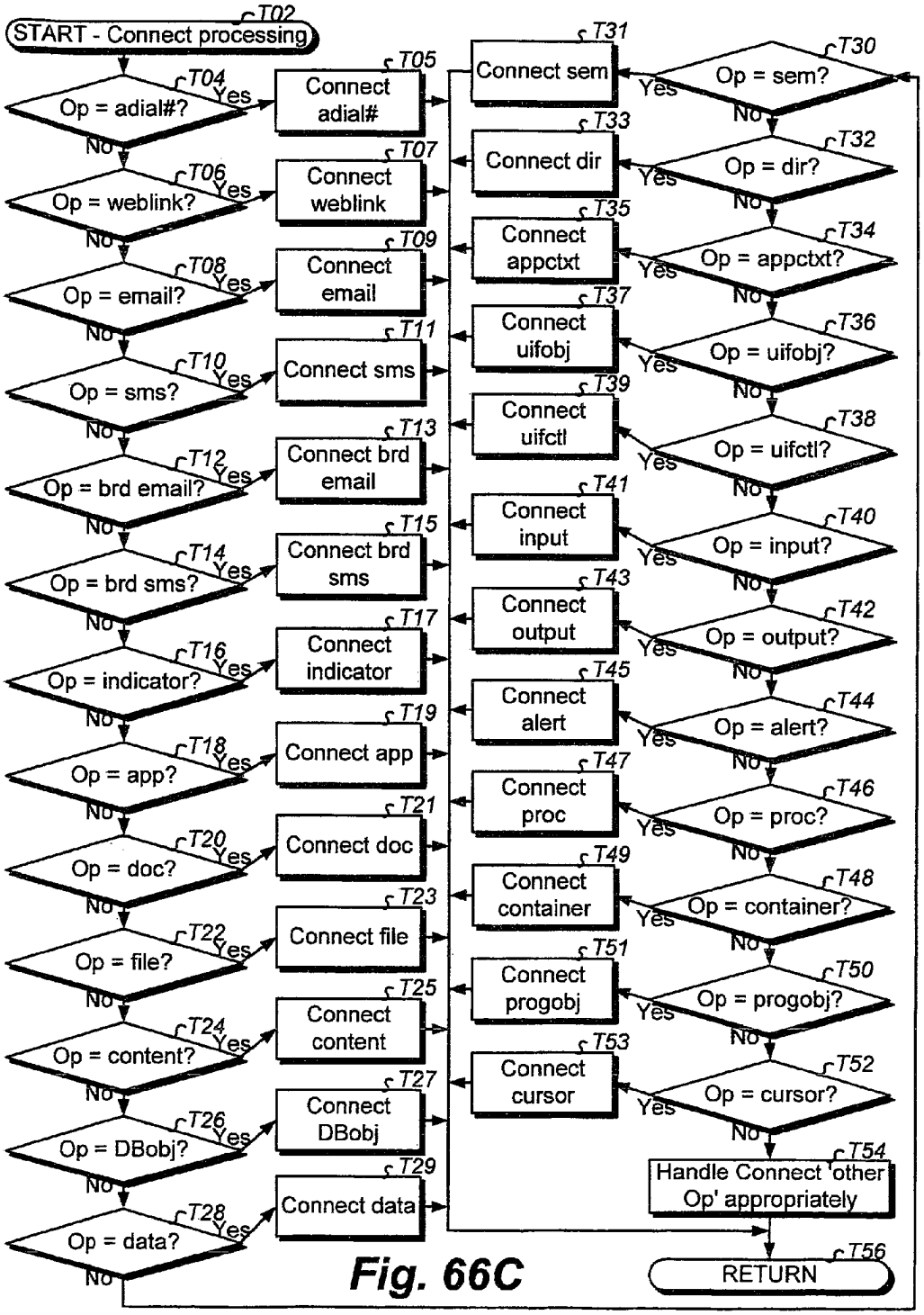
T02
START - Connect processing
T04
Op = adial#?
Yes
No
T05
Connect adial#
T06
Op = weblink?
Yes
No
T07
Connect weblink
T08
Op = email?
Yes
No
T09
Connect email
T10
Op = sms?
Yes
No
T11
Connect sms
T12
Op = brd email?
Yes
No
T13
Connect brd email
T14
Op = brd sms?
Yes
No
T15
Connect brd sms
T16
Op = indicator?
Yes
No
T17
Connect indicator
T18
Op = app?
Yes
No
T19
Connect app
T20
Op = doc?
Yes
No
T21
Connect doc
T22
Op = file?
Yes
No
T23
Connect file
T24
Op = content?
Yes
No
T25
Connect content
T26
Op = DBobj?
Yes
No
T27
Connect DBobj
T28
Op = data?
Yes
No
T29
Connect data
T31
Connect sem
T33
Connect dir
T35
Connect appctxt
T37
Connect uifobj
T39
Connect uifctl
T41
Connect input
T43
Connect output
T45
Connect alert
T47
Connect proc
T49
Connect container
T51
Connect progobj
T53
Connect cursor
T30
Op = sem?
Yes
No
T32
Op = dir?
Yes
No
T34
Op = appctxt?
Yes
No
T36
Op = uifobj?
Yes
No
T38
Op = uifctl?
Yes
No
T40
Op = input?
Yes
No
T42
Op = output?
Yes
No
T44
Op = alert?
Yes
No
T46
Op = proc?
Yes
No
T48
Op = container?
Yes
No
T50
Op = progobj?
Yes
No
T52
Op = cursor?
Yes
No
T54
Handle Connect 'other Op' appropriately
T56
RETURN

Fig. 66C

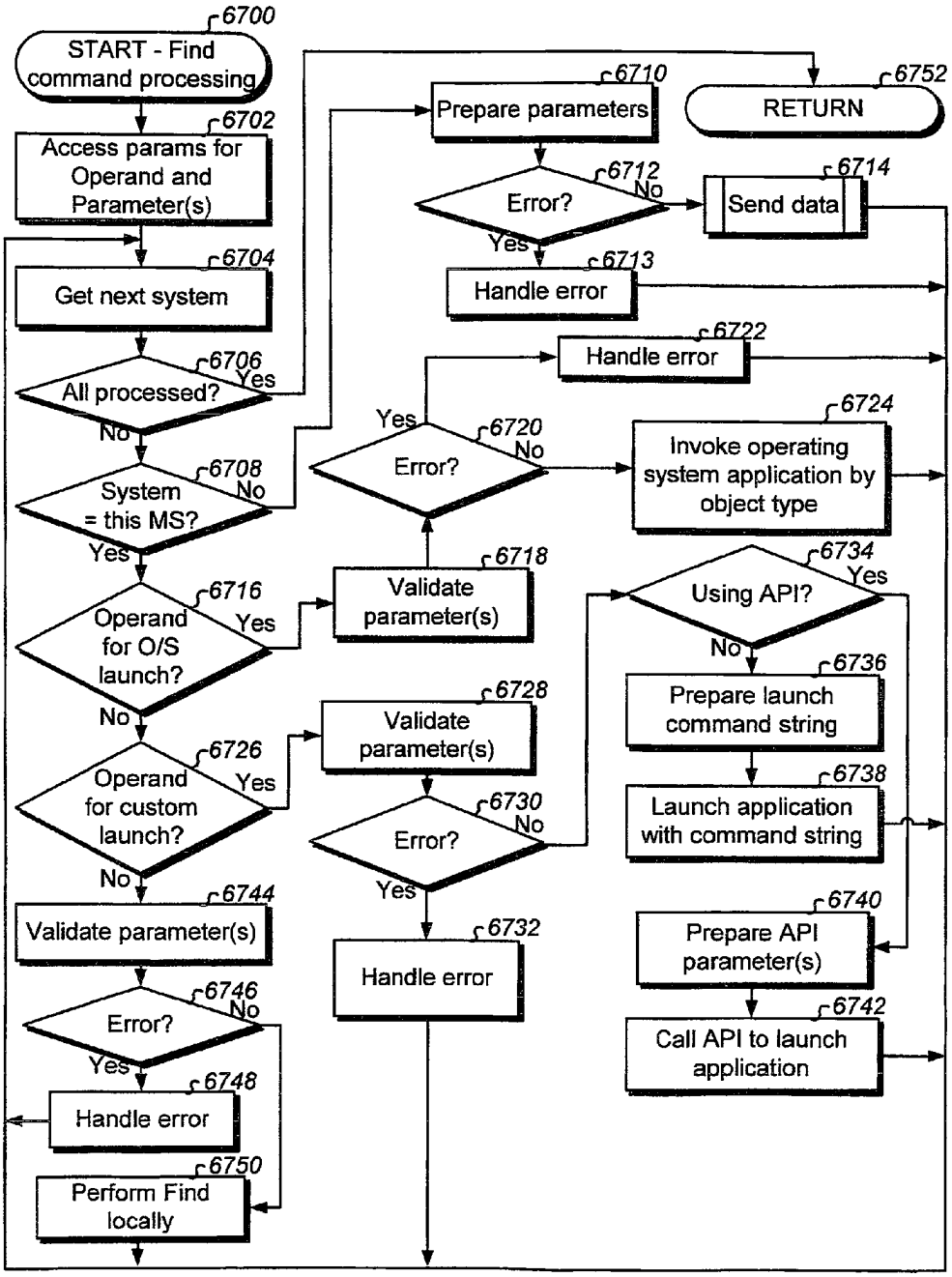
6700
START - Find command processing
6702
Access params for Operand and Parameter(s)
6704
Get next system
6706
All processed?
Yes
No
6708
System = this MS?
No
Yes
6716
Operand for O/S launch?
Yes
No
6726
Operand for custom launch?
Yes
No
6744
Validate parameter(s)
6746
Error?
No
Yes
6748
Handle error
6750
Perform Find locally
6710
Prepare parameters
6712
Error?
No
Yes
6713
Handle error
6722
Handle error
6720
Error?
Yes
No
6718
Validate parameter(s)
6728
Validate parameter(s)
6730
Error?
No
Yes
6732
Handle error
6752
RETURN
6714
Send data
6724
Invoke operating system application by object type
6734
Using API?
Yes
No
6736
Prepare launch command string
6738
Launch application with command string
6740
Prepare API parameter(s)
6742
Call API to launch application

Fig. 67A

Operand ↓	PM	Preferred embodiment Find processing
201	C	Finding an auto-dial # launches a system (e.g. MS) phone number log interface with the auto-dial # parameter for searching. Preferably, both the outgoing and incoming logs are searched. The auto-dial # parameter can be a wildcard (pattern) for matching. In one embodiment, all matching occurrences found in history are presented with their date/time stamps, and perhaps other information, of the call and when it took place. In another embodiment, the most recent occurrence from a particular log is presented, and perhaps in an interface which enables calling the # with a minimal user action. The search takes place as though the user manually launched the search, entered the auto-dial # for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user manually performed the search. Preferably, the find cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. A new parameter can be specified for which log to search.
203	S	Finding a weblink launches a search to system (e.g. MS) browser history with the weblink parameter (and with the params parameter if specified) for searching. The weblink parameter can be a wildcard (pattern), and may include URL parameters, for matching. In one embodiment, all matching occurrences found in history are presented with their date/time stamps, and perhaps other information, of the link and when it was invoked. In another embodiment, the most recent occurrence from a particular invocation is presented, and perhaps in an interface which enables invoking (transposing to) the weblink with a minimal user action. In a preferred embodiment, the params parameter tells find processing how and where to search. The search takes place as though the user manually launched the search, entered the weblink for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. A new parameter can be specified for which folder to search.

Fig. 67B-1

Operand ↓	PM	Preferred embodiment Find processing
205	C	Finding an email causes searching a system (e.g. MS) email system with search criteria of the email parameter string. The email parameter string can specify searching any email fields for any values including wildcarding (patterns for matching). Each field is referenced with a predefined name and then associated with a search criteria. For example, the email string of "subj:'personnel';recip:'george@alltell.com';body:'reduction in force'" causes searching all emails with a subject containing "personnel" and was sent to "george@alltell.com" and has a message body containing the string "reduction in force". To search for certain email containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:sent,inbox,company;" indicates to only search the email folders of sent, inbox, and company (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of email. Wildcarding (pattern matching) is preferably inherent by seaching for substrings. All occurrences found in history are presented with at least their date/time stamps, subject line, sender and recipient, and perhaps other information, of the email and when it took place. In another embodiment, the most recent occurrence from searched folders is presented, and perhaps in an interface which enables appropriate MS email system processing from that point forward (e.g. when processed at local MS). Alternatively, an additional parameter indicates how to search. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.

Fig. 67B-2

Operand ↓	PM	Preferred embodiment Find processing
207	C	Finding an sms message causes searching a system (e.g. MS) sms messaging system with search criteria of the sms message parameter string. The message parameter string can specify searching any message fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria. For example, the sms message string of "recip:'2144034071@nextel.com,9725397137@lbxsrv.com';" causes searching all messages to the sought recipients. To search for certain messaging containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:outgoing" indicates to only search the outgoing folder (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of messages. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In the preferred embodiment, all occurrences found in history are presented with at least their date/time stamps, message, sender and recipient, and perhaps other information, of the message and when it took place. In another embodiment, the most recent occurrence from searched folders is presented, and perhaps in an interface which enables appropriate MS messaging system processing from that point forward (e.g. when processed at local MS). Alternatively, an additional parameter indicates how to search. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.

Fig. 67B-3

Operand ↓	PM	Preferred embodiment Find processing
209	C	Finding a broadcast email causes searching a system (e.g. MS) email system with search criteria of the email param string. The email param string can specify searching any email fields for any values including wildcarding. Each field is referenced with a predefined name and associated with a search criteria. For example, the param of "subj:'personnel';recip:'george@alltell.com';body:'reduction in force'" searches emails with a subject containing "personnel" and sent to "george@alltell.com" and has an email body containing "reduction in force". To search for certain email containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:sent,inbox,company;" indicates to only search the email folders of sent, inbox, and company (no specification preferably indicates to search all folders). Those skilled in the art recognize useful syntaxes for searching any characteristics of email. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In the preferred embodiment, all occurrences found in history are presented with at least their date/time stamps, subject line, sender and recipient, and perhaps other info, of the email and when it took place. In another embodiment, the most recent occurrence from searched folders is presented, and perhaps in an interface which enables appropriate MS email system processing from that point forward (e.g. when processed at local MS). Alternatively, an additional parameter indicates how to search. The search takes place as though the user manually launched the search, entered criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.

Fig. 67B-4

Operand	PM	Preferred embodiment Find processing
211	C	Finding a broadcast sms message causes searching a system (e.g. MS) sms messaging system with search criteria of the sms message param string. The message param string can specify searching any message fields for any values including wildcarding. Each field is referenced with a predefined name and associated with a search criteria. For example, the sms message string of "recip:'2144034071@nextel.com,9725397137@lbxsrv.com';" causes searching messages to the sought recipients. To search for certain messaging containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:outgoing" indicates to only search the outgoing folder (no specification preferably indicates to search all folders). Those skilled in the art recognize useful syntaxes for searching any characteristics of messages. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In the preferred embodiment, all occurrences found in history are presented with at least their date/time stamps, message, sender and recipient, and perhaps other information, of the message and when it took place. In another embodiment, the most recent occurrence from searched folders is presented, and perhaps in an interface which enables appropriate MS messaging system processing from that point forward (e.g. when processed at local MS). Alternatively, an additional parameter indicates how to search. The search takes place as though the user manually launched the search, entered search criteria, and then was presented with result(s). Appropriate MS storage is updated and processed as though the user manually performed the search. Preferably, find cmd data is maintained to LBX History, a historical log, or other useful storage for later use.
213	O	Finding an indicator searches appropriate system (e.g. MS) storage for the indicator (e.g. storage/memory used for indicators by other commands). The indicator parameter string specifies the indicator (e.g. string) being sought and wildcarding is supported. Any active user interface object containing the indicator is surfaced. If more than one user interface object contains the indicator, then all objects are appropriately tiled with the most recent in the priority position(s). In another embodiment, appropriate MS storage/memory which contains the history of indicators sent is searched and all occurrences found in history are presented with at least their date/time stamps, the indicator, and perhaps other information. In yet another embodiment, a new parameter tells processing whether to surface/prioritize active objects, or to search history for when indicators were sent. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.

Fig. 67B-5

Operand 1	PM	Preferred embodiment Find processing
215	C	Finding an application causes searching the system (e.g. MS) for the application (and with the params parameter if specified). The app parameter is preferably an executable name, optionally with parameters that were passed. Providing a partial or full path to the application parameter will validate that it is found there. The app parameter string preferably supports wildcarding. Embodiment (or as specified with params and/or new parameters) include file system searching, invocation history (e.g. Microsoft Windows up/down arrow command line recall) searching for what had been invoked (perhaps within a trailing time period), what is currently running, what has been terminated (perhaps within a trailing time period), or any of these for a particular invoked identity, credentials, or owner. In the preferred embodiment, all occurrences found on the MS and their paths are presented to the user with at least their date/time stamps, size, and perhaps attributes information. In another embodiment, all parts which are linked to the executable are identified with their paths, date/time stamps, size, and perhaps attributes when a symbol file is specified with a new parameter. The symbol file is output from a link process and can be used to identify all executable parts such as dynamic link libraries, linked binaries, and any other executable binary file involved with the application. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and processed as though the user had manually performed the search. Preferably, find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
217	S	Finding a document causes searching the system (e.g. MS) for the document. The doc parameter is a document name. The document parameter can be a wildcard (pattern) for matching. Providing a partial or full path to the document name will validate that it is found there. In the preferred embodiment, all occurrences found on the MS and their paths are presented to the user with at least their date/time stamps, size, and perhaps attributes information. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
219	S	Finding a file causes searching the system (e.g. MS) for the file. The path parameter is a file name. Providing a partial or full path to the file will validate that it is found there. The path parameter can be a wildcard (pattern) for matching. In the preferred embodiment, all occurrences found on the MS and their paths are presented to the user with at least their date/time stamps, size, and perhaps attributes information. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.

Fig. 67B-6

Operand ↓	PM	Preferred embodiment Find processing
221	O	Finding content causes searching the system (e.g. MS) for the content. The content parameter can be a wildcard (pattern) for matching. The content parameter can be a handle to the content, or a search criteria for the content. In the preferred embodiment, all occurrences found on the MS and where the content is located is presented to the user, perhaps with other content description information. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). There are various embodiments for how and where content is maintained. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
223	C	Finding a DB object causes searching the system (e.g. MS) database(s) for the database object. The database object parameter is provided with a variety of syntaxes depending on the type of database object sought. For example, the DB-obj parameters is "T:tablename" to seek a table, "S:schemaname" to seek a particular schema, "C:columnname" to seek a particular column name, "D:DBname" to seek a particular DB name, "R:rolename" to seek a particular role set, "P:procname" to search for particular stored procedure, etc. There are unique syntaxes for every type of DB object being sought. Those skilled in the art know how to query system tables for particular DB object(s) sought. An appropriate SQL client API should be used. If necessary, an additional parameter is specified for authentication credentials (may be specified with DB-obj string syntax). The search criteria can be a wildcard (pattern) for matching. In the preferred embodiment, all occurrences found on the MS and information about the occurrence is presented to the user. The search takes place as though the user manually launched the search, entered the criteria or query for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.

Fig. 67B-7

Operand ↓	PM	Preferred embodiment Find processing
225	O	Finding data causes searching the system (e.g. MS) for the data. In the preferred embodiment, the data is a global system variable visible to processes of a MS O/S. In other embodiments, the data may have limited scope which is made accessible to present disclosure processing (e.g. with extern). Depending on the embodiment, data may be that which is contained in a program data segment, stack segment, and/or extra segment. There can be unique syntaxes for specifying which type of data is being sought (e.g. "S:dataname"). The search criteria can be a wildcard (pattern) for matching. In the preferred embodiment, all occurrences found on the MS and information about the occurrence including its current value is presented to the user. In one embodiment, a well known location of link symbol information files are consulted, and in another embodiment a new parameter specifies where to look, or which symbol file of information to use. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, find command data is maintained to LBX History, a historical log, or other useful storage for later use.
227	O	Finding a semaphore causes reading the current value of the semaphore at the system (e.g. MS) where the find command action is being executed and then presenting the current value along with any other useful information for the semaphore. The semaphore param can be a wildcard (pattern) for matching. In the preferred embodiment, the semaphore is a global system semaphore visible to all processes of a MS operating system. In other embodiments, the semaphore may have limited scope which is made accessible to present disclosure processing. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
229	S	Finding a directory causes searching the system (e.g. MS) for the directory (path). The path parameter is a directory name. Providing a more defined partial or full path to the path parameter will narrow down the results if the directory exists in more than one place. The path parameter can be a wildcard (pattern) for matching. In the preferred embodiment, all occurrences found on the MS and their paths are presented to the user with at least their date/time stamps, size, and perhaps attributes information. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.

Fig. 67B-8

Operand ↓	PM	Preferred embodiment Find processing
231	C	Finding an application context causes invocation of the application at the system (e.g. MS) and then executing a macro within the application context (similar to Compose app object processing).. The app parameter is preferably a fully qualified path name to the executable to start. In another embodiment, the app parameter is indirect: a path name to a "shortcut" (like a MS Windows shortcut). In another embodiment, the app parameter is an identifier string for the underlying operating system to know which application to start. The search criteria can be a wildcard (pattern) for matching. The macro parameter is preferably a file, or path, or accessible variable name containing a set of keystrokes that can be directed to standard/user-interface input. In another embodiment, the macro parameter is a prerecorded user input scenario (for play after application launched -- pulldown selections, mouse droppings, clicks, etc) captured to a file or stored in an accessible variable name. Preferably, the compose command data is maintained to LBX History, a log, or other useful storage for subsequent use.
233	S	Finding a user interface object causes finding and focusing the user interface object at the system (e.g. MS) which contains the object text (objtxt) parameter. In a preferred embodiment, there is a unique syntax for which places of user interface objects that are currently active are to be search (e.g. title bar, entry fields, radio button options, window text, combinations thereof, etc). The search criteria can be a wildcard (pattern) for matching. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
235	O	Finding user interface control causes searching the system (e.g. MS) storage and/or memory which was used for processing another command (e.g. Compose) to redirect the keystroke macro to standard input of the MS as if it were entered by the MS user. The search criteria can be a wildcard (pattern) for matching. The macro parameter is the same as was used by the command and is to be matched. In the preferred embodiment, presented in the search results are all occurrences of previous command actions, which used the macro at the MS, including the command, date/time stamp, and other information recorded (e.g. to LBX History, a historical log, or other useful storage for subsequent use). The search takes place as though the user manually launched a search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, historical log, or other useful storage for subsequent use.

Fig. 67B-9

Operand 1	PM	Preferred embodiment Find processing
237	O	Finding input causes searching the system (e.g. MS) storage and/or memory which was used for processing another command (e.g. Compose) to redirect the input to the iodev device of the MS. The iodev and input parameters are the same as was used by a previous command and is to be matched. The search criteria can be a wildcard (pattern) for matching. In the preferred embodiment, presented in the search results are all occurrences of previous command actions, which used the iodev and input at the MS, including the command, date/time stamp, and other information recorded (e.g. to LBX History, a historical log, or other useful storage for subsequent use). The search takes place as though the user manually launched a search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
239	O	Finding output causes searching the system (e.g. MS) storage and/or memory which was used for processing another command (e.g. Compose) to redirect the output to the iodev device of the MS. The search criteria can be a wildcard (pattern) for matching. The iodev and output parameters are the same as was used by a previous command and is to be matched. In the preferred embodiment, presented in the search results are all occurrences of previous command actions, which used the iodev and output at the MS, including the command, date/time stamp, and other information recorded (e.g. to LBX History, a historical log, or other useful storage for subsequent use). The search takes place as though the user manually launched a search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
241	S	Finding an alert causes searching the system (e.g. MS) for the alert. The alert parameter is the same parameter used to generate an alert (e.g. using another command). In the preferred embodiment, all occurrences found on the MS which is associated to the alerter application in use at the MS, and which is used for other commands disclosed, are presented to the user with at least their date/time stamps, and perhaps other information. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). The search criteria can be a wildcard (pattern) for matching. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.

Fig. 67B-10

Operand 1	PM	Preferred embodiment Find processing
243	O	Finding a process causes finding all process names running at the system (e.g. MS) which contain the prname string parameter (e.g. in UNIX: "ps -ef | grep prname"). In the preferred embodiment, all occurrences found running at the MS are presented with interesting programmatic information such as when started, its size, etc (see UNIX ps command for other information that can be presented here in various embodiments; an additional parameter (like ps parameters) can specify what info to provide to the user). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, historical log, or other useful storage for subsequent use.
245	S	Finding a container causes searching the system (e.g. MS) for the container. The container parameter is a container name (e.g. file system directory) depending on the MS or environment. Unique syntaxes can be used for which type of container is being searched. In the preferred embodiment, all occurrences found on the MS and their paths are presented to the user with information of interest. The search criteria can be a wildcard (pattern) for matching. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, historical log, or other useful storage for subsequent use.
247	O	Finding a program object causes searching the system (e.g. MS) for the program object. In the preferred embodiment, a unique syntax is used for which type of program object is being sought (e.g. Q:queuename has a queue qualifier prefix). There can be unique syntaxes for specifying which type of program object is being sought (e.g. "S:dataname"). In the preferred embodiment, all occurrences found on the MS and information about the occurrence including its current value is presented to the user. A null data parameter returns all occurrences found. A non-null data parameter returns these objects having the data value. Objects must be programmatically accessible. In one embodiment, a well known location of link symbol information files are consulted, and in another embodiment a new parameter specifies where to look, or which symbol file of information to use. In another embodiment, MS storage and/or memory is searched which recorded a previous atomic command action, and the search takes place for a previous command(s) (e.g. Notify) for when performed and what was performed. The search criteria can be a wildcard (pattern) for matching. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.

Fig. 67B-11

Operand ↓	PM	Preferred embodiment Find processing
249	O	Finding a cursor causes searching the system (e.g. MS) storage and/or memory which was used for processing another command (e.g. Compose) to view or alter a cursor. In the preferred embodiment, presented in the search results are all occurrences of previous command actions, which viewed or altered the cursor at the MS, including the command, date/time stamp, and other information recorded (e.g. to LBX History, a historical log, or other useful storage for subsequent use). The search criteria can be a wildcard (pattern) for matching. The search takes place as though the user manually launched a search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
251	C	Finding a calendar object causes searching a system (e.g. MS) calendar system with search criteria of the calendar object parameter string. The calendar object parameter string can specify searching any calendar entry fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria (similar to email above). Those skilled in the art recognize useful syntaxes for searching any characteristics of calendar objects with an appropriate syntax. The calendar object parameter is at least a string with a syntax for querying any combination of calendar object fields. In the preferred embodiment, all occurrences found in history are presented with at least their date/time stamps, attendees, and perhaps other information, of the calendar object and when it was scheduled. In another embodiment, the most recent occurrence from the calendaring system is presented, and perhaps in an interface which enables appropriate MS calendar system processing from that point forward (e.g. when processed at local MS), or alternatively an additional parameter can specify how to search. Wildcarding (pattern matching) is preferably inherent by searching for substrings. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.

Fig. 67B-12

Operand →	PM	Preferred embodiment Find processing
253	C	Finding an address book (AB) object causes searching a system (e.g. MS) AB system with search criteria of the AB object parameter string. The AB object parameter string can specify searching any AB entry fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria (similar to email above). Those skilled in the art recognize many useful syntaxes for searching any characteristics of AB objects/entries with an appropriate syntax. The AB object parameter is at least a string with a syntax for querying any combination of AB object fields. In the preferred embodiment, all occurrences found are presented with appropriate AB information. In another embodiment, the most recent occurrence from the AB system is presented, and perhaps in an interface which enables appropriate MS AB system processing from that point forward (e.g. when processed at local MS), or alternatively an additional parameter can specify how to search. Wildcarding (pattern matching) is preferably inherent by searching for substrings. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was presented with the result(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the find command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
...		

Fig. 67B-13

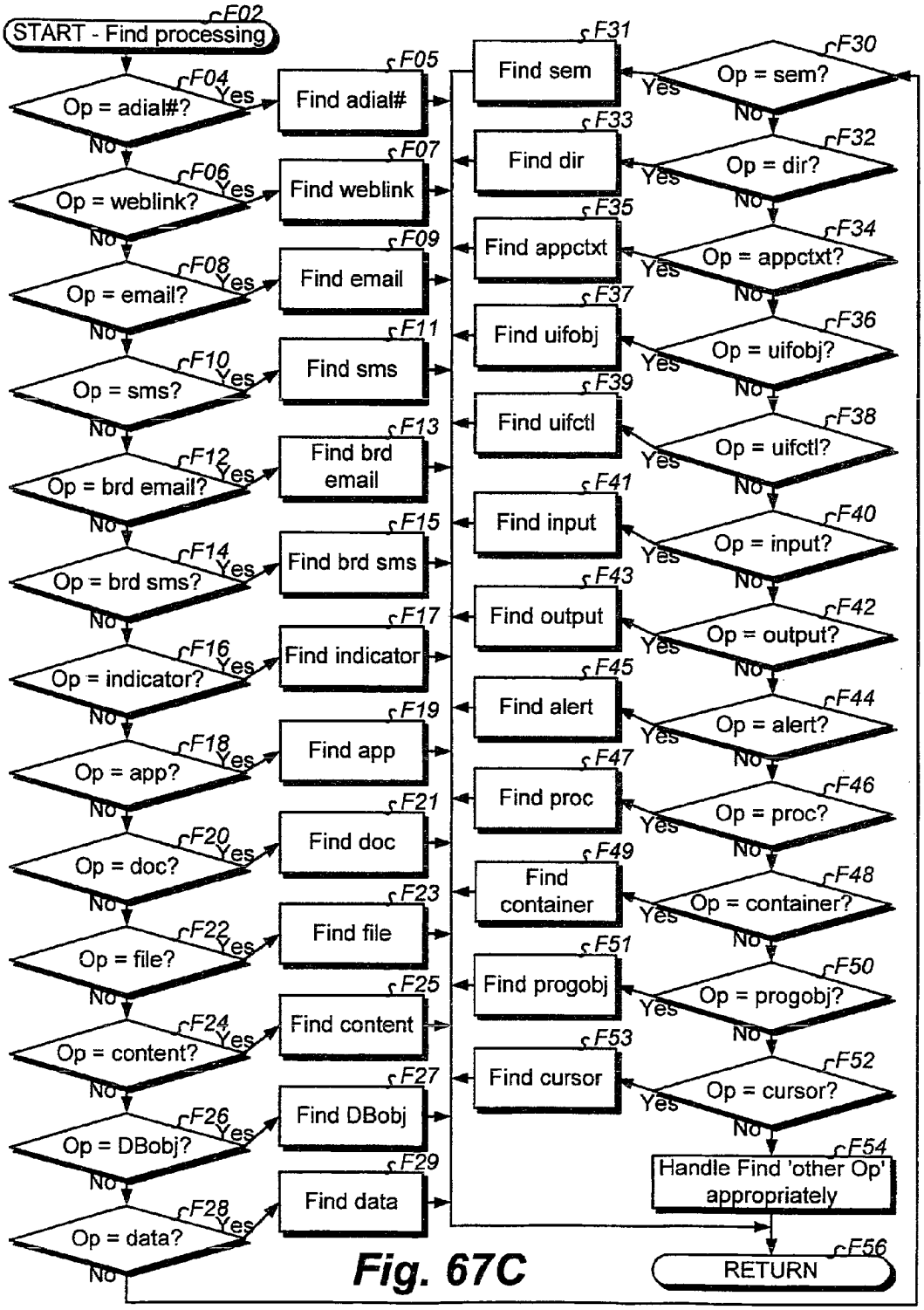
F02
START - Find processing
F04
Op = adial#?
Yes
No
F05
Find adial#
F06
Op = weblink?
Yes
No
F07
Find weblink
F08
Op = email?
Yes
No
F09
Find email
F10
Op = sms?
Yes
No
F11
Find sms
F12
Op = brd email?
Yes
No
F13
Find brd email
F14
Op = brd sms?
Yes
No
F15
Find brd sms
F16
Op = indicator?
Yes
No
F17
Find indicator
F18
Op = app?
Yes
No
F19
Find app
F20
Op = doc?
Yes
No
F21
Find doc
F22
Op = file?
Yes
No
F23
Find file
F24
Op = content?
Yes
No
F25
Find content
F26
Op = DBobj?
Yes
No
F27
Find DBobj
F28
Op = data?
Yes
No
F29
Find data
F31
Find sem
F33
Find dir
F35
Find appctxt
F37
Find uifobj
F39
Find uifctl
F41
Find input
F43
Find output
F45
Find alert
F47
Find proc
F49
Find container
F51
Find progobj
F53
Find cursor
F30
Op = sem?
Yes
No
F32
Op = dir?
Yes
No
F34
Op = appctxt?
Yes
No
F36
Op = uifobj?
Yes
No
F38
Op = uifctl?
Yes
No
F40
Op = input?
Yes
No
F42
Op = output?
Yes
No
F44
Op = alert?
Yes
No
F46
Op = proc?
Yes
No
F48
Op = container?
Yes
No
F50
Op = progobj?
Yes
No
F52
Op = cursor?
Yes
No
F54
Handle Find 'other Op' appropriately
F56
RETURN

Fig. 67C

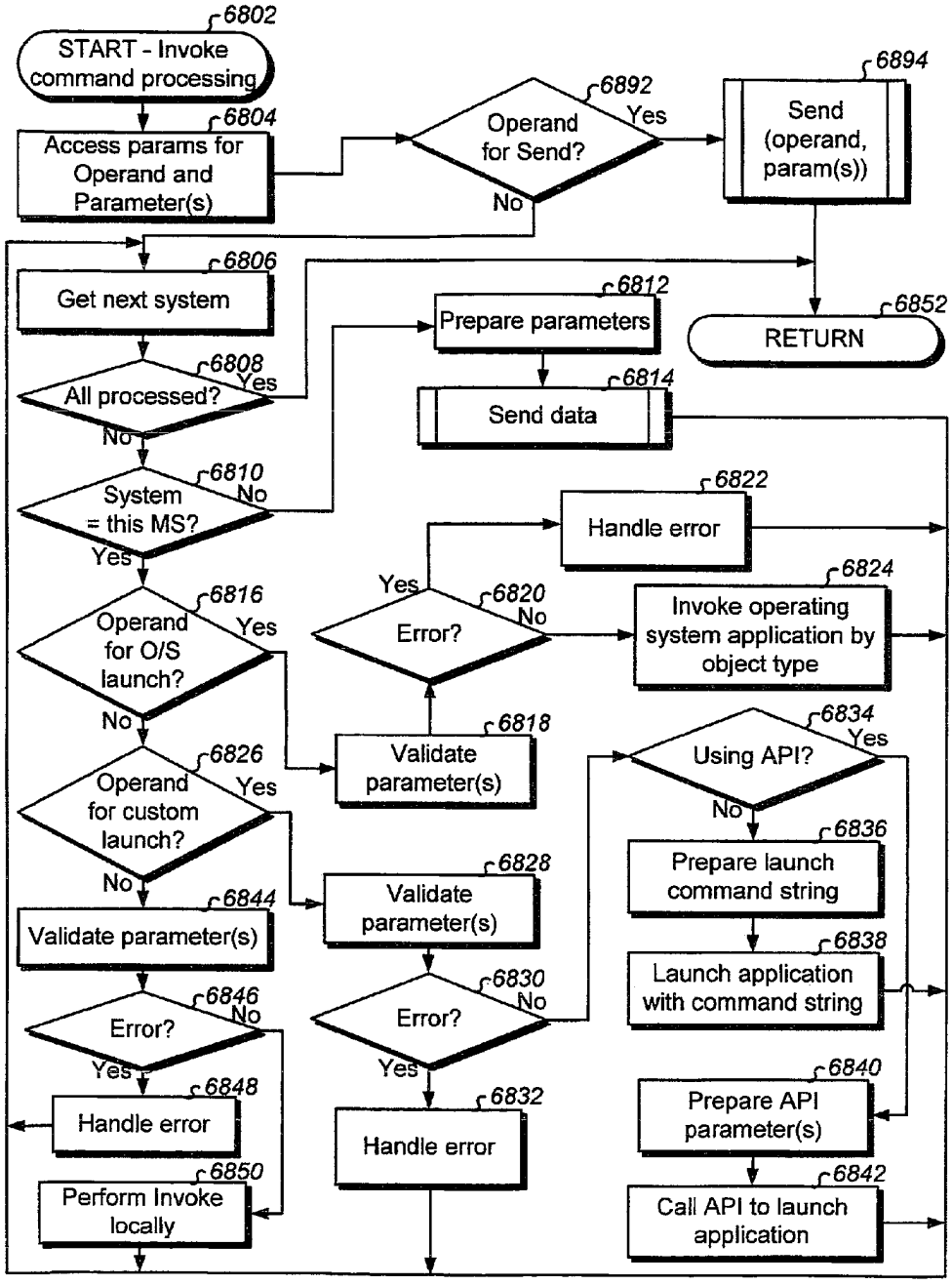
6802
START - Invoke command processing
6804
Access params for Operand and Parameter(s)
6892
Operand for Send?
Yes
No
6894
Send (operand, param(s))
6806
Get next system
6808
All processed?
Yes
No
6812
Prepare parameters
6814
Send data
6852
RETURN
6810
System = this MS?
No
Yes
6822
Handle error
6816
Operand for O/S launch?
Yes
No
6820
Error?
Yes
No
6824
Invoke operating system application by object type
6818
Validate parameter(s)
6826
Operand for custom launch?
Yes
No
6828
Validate parameter(s)
6844
Validate parameter(s)
6846
Error?
Yes
No
6830
Error?
Yes
No
6832
Handle error
6848
Handle error
6850
Perform Invoke locally
6834
Using API?
Yes
No
6836
Prepare launch command string
6838
Launch application with command string
6840
Prepare API parameter(s)
6842
Call API to launch application

Fig. 68A

Operand →	PM	Preferred embodiment Invoke processing
201	C	Invoking with an auto-dial # launches the MS phone number calling interface at the MS (local or remote) with the auto-dial # parameter for placing a call (like/see Notify / Connect autodial # processing). The call is actually made as though a user manually launched the dialing application at the particular MS, entered the auto-dial # and then chose to make the call with it. Appropriate MS storage is updated and subsequently processed as though the user had entered the # for calling manually, and then make the call. Conventional call processing takes place thereafter. Preferably, the invoke command data is maintained to LBX History, a historical call log (e.g. outgoing), or other useful storage for subsequent use. A system parameter provides means for placing the call from another system (e.g. another MS) – like a Host specification.
203	S	Invoking with a web link launches the MS browser at the particular MS and invokes (transposes to) the link as though the user had entered it manually and went to the weblink page (like/see Notify / Connect weblink processing). In one embodiment, the weblink parameter includes URL parameter(s). In another embodiment, the params parameter supports a URL command string for appending to the weblink (e.g. "?v=yes&T=go") for customized web page processing. An alternate embodiment can fire form variables for active web page processing using the params parameter, or URL parameter(s). Processing takes place as though the user manually launched the browser application at the particular MS, entered the weblink and then loaded the weblink webpage. Appropriate MS storage is updated and subsequently processed as though the user had entered and invoked the weblink in the browser manually. Preferably, the compose command data is maintained to LBX History, a historical log (web page load history), or other useful storage for subsequent use.
205	E	See Send Command for identical processing.
207	E	See Send Command for identical processing.
209	E	See Send Command for identical processing.
211	E	See Send Command for identical processing.

Fig. 68B-1

Operand 1	PM	Preferred embodiment invoke processing
213	O	Invoking an indicator updates the appropriate MS storage so that the currently focused user interface object (e.g. window titlebar) of the particular MS user interface is modified with the indicator (like/see Send indicator processing).. If there are no active user interface objects in the MS user interface, then an appropriate alert area of the currently focused interface is to display the indicator. The user can clear (remove) the indicator when desired. Preferably, the indicator is used for modifying other focused objects (e.g. titlebars) or other focused areas in the user interface so as to not get overlooked. For example, as the user navigates and surfaces/focuses new user interface objects, the indicator remains visible on the newly focused object. Preferably, the indicator is selectable by the user of the MS for showing all other send command parameters associated, as well as a date/time stamp of when sent. In other embodiments, the most recently displayed indicator is displayed in the appropriate focused area, but the user can conveniently select any indicators which were sent in history at some point in time for sought indicator information by selecting the currently displayed indicator and then requesting to browse/scroll history of previously delivered indicators (with options to see details). Preferably, the invoke command data is maintained to LBX History, a historical log (web page load history), or other useful storage for subsequent use.
215	C	Invoking an application causes invocation of the application at the particular MS (like/see Send app processing).. The app parameter is preferably a fully qualified path name to the executable to start, and may already include parameters. In another embodiment, the app parameter is indirect: a path name to a "shortcut" (like a MS Windows shortcut). In another embodiment, the app parameter is an identifier string for the underlying operating system to know which application to start. The params parameter may specify the executable parameters, or may be used for how to start the application (like attributes of Send app processing). An error is logged if the app parameter is not found for launch. Preferably, the invoke command data is maintained to LBX History, a historical log (web page load history), or other useful storage for subsequent use.
217	S	Invoking a document causes invocation of an appropriate application at the particular MS in accordance with the object type as though the user selected the document for automatically being associated to the correct application when opening the document. The user can then decide what to do with the document once it is opened in the appropriate application. In an alternate embodiment, an additional parameter is provided for exactly what to do with the document, in which case an appropriate API is invoked with the document (i.e. PM = C). The doc parameter is preferably a fully qualified path name to the document. Preferably, the invoke command data is maintained to LBX History, a log, or other useful storage for subsequent use.

Fig. 68B-2

Operand ↓	PM	Preferred embodiment Invoke processing
219	S	Invoking a file causes invocation of an appropriate application at the particular MS in accordance with the file type as though the user selected the file for automatically being associated to the correct application when opening the document. Processing takes place as though the user manually launched the application for the specified file. The user can then decide what to do with the file once it is opened in the appropriate application. In an alternate embodiment, an additional parameter is provided for exactly what to do with the file, in which case an appropriate API is invoked with the file (i.e. PM = C). The path parameter is preferably a fully qualified path name to the file. Preferably, the invoke command data is maintained to LBX History, a log, or other useful storage for subsequent use.
221	O	Invoking content causes the content to be presented at the particular MS in a manner which is appropriate for the content type (like/see Notify content processing).. The content parameter is one that cannot be classified in the other operands, but is content for presentation nevertheless. Examples include special data records (e.g. extern variable name), content data memory locations (e.g. programmatic variable), or files containing a customizably processed format. Methods of displaying the content include audio and/or visual using applicable MS capabilities. Preferably, the invoke command data is maintained to LBX History, a historical content log (e.g. incoming), browser history data, or other useful storage for subsequent user browse of the accompanying content and a date/time stamp of when sent, and for presentation of the content. Various embodiments will save to LBX History how many times, and when, the content was presented.
223	O	Invoking a Database (DB) object causes the DB object (i.e. qualified database with access query string) to be modified with the query parameter at the particular MS (like/see Notify DB-obj processing without certain parameters). The query parameter is used to perform any query against the specified DB-database (DB-obj), preferably a query that only returns a return code. Preferably, the invoke command data is maintained to LBX History, a database log (e.g. incoming), or other useful storage for subsequent query use and a date/time stamp of when sent, and for DB query manager browse/use of the query in response to an applicable user action.
225	O	Invoking data causes modifying the value of the data at the particular MS (i.e. set data to value – like/see Notify data processing without certain parameters). An error can result if the data is not resolvable for the attempt. In the preferred embodiment, the data is a global system variable visible to all processes of a MS operating system. In other embodiments, the data may have limited scope which is made accessible to present disclosure processing (e.g. with extern). Preferably, the data affected is maintained to LBX History, a historical log (e.g. incoming), or other useful storage for subsequent user browse, or programmatic access, of the data variable name, its before and after values and date/time stamp of when sent, and for presentation of the data value in response to a user action to show it.

Fig. 68B-3

Operand ↓	PM	Preferred embodiment Invoke processing
227	O	Invoking a semaphore causes modifying the value of the semaphore at the particular MS where the action is being executed (like/see Notify semaphore processing).. In the preferred embodiment, the semaphore is a global system semaphore visible to all processes of a MS operating system. In other embodiments, the semaphore may have limited scope which is made accessible to present disclosure processing (e.g. RAM semaphore). Preferably, the semaphore value before and after setting is maintained to LBX History, a historical log (e.g. incoming), or other useful storage for subsequent user browse, or programmatic access, and for presentation of the semaphore information in response to a user action to show it.
229	S	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
231	C	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
233	S	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter). Also, the cmds parameter replaces the "capture focused object" command string with one or more semicolon delimited "capture focused object" command strings for each target system in the system(s) parameters. This enables a plurality of different types of MSs to participate even though they have different commands (e.g. keystroke capture actions) to accomplish capturing the focused user interface object. Based on the file type at the particular MS, the appropriate application opens the file.
235	O	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
237	O	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
239	O	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
241	C	See Connect Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
243	O	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
245	S	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
247	O	See Notify Command for identical processing, except sender is forced to requesting MS, no documentary subj/msg parameter, and system(s) used instead of recipient(s). Processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).

Fig. 68B-4

Operand ↓	PM	Preferred embodiment Invoke processing
249	O	See Notify Command for identical processing, except sender is forced to requesting MS, no documentary subj/msg parameter, and system(s) used instead of recipient(s). Processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
251	O	See Send Command for identical processing, except sender is forced to requesting MS, and system(s) used instead of recipient(s) for calendar alteration without regard for the owner (this embodiment). Processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
253	O	See Send Command for identical processing, except sender is forced to requesting MS, and system(s) used instead of recipient(s) for AB alteration without regard for the owner (this embodiment). Processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter).
. . .		

Fig. 68B-5

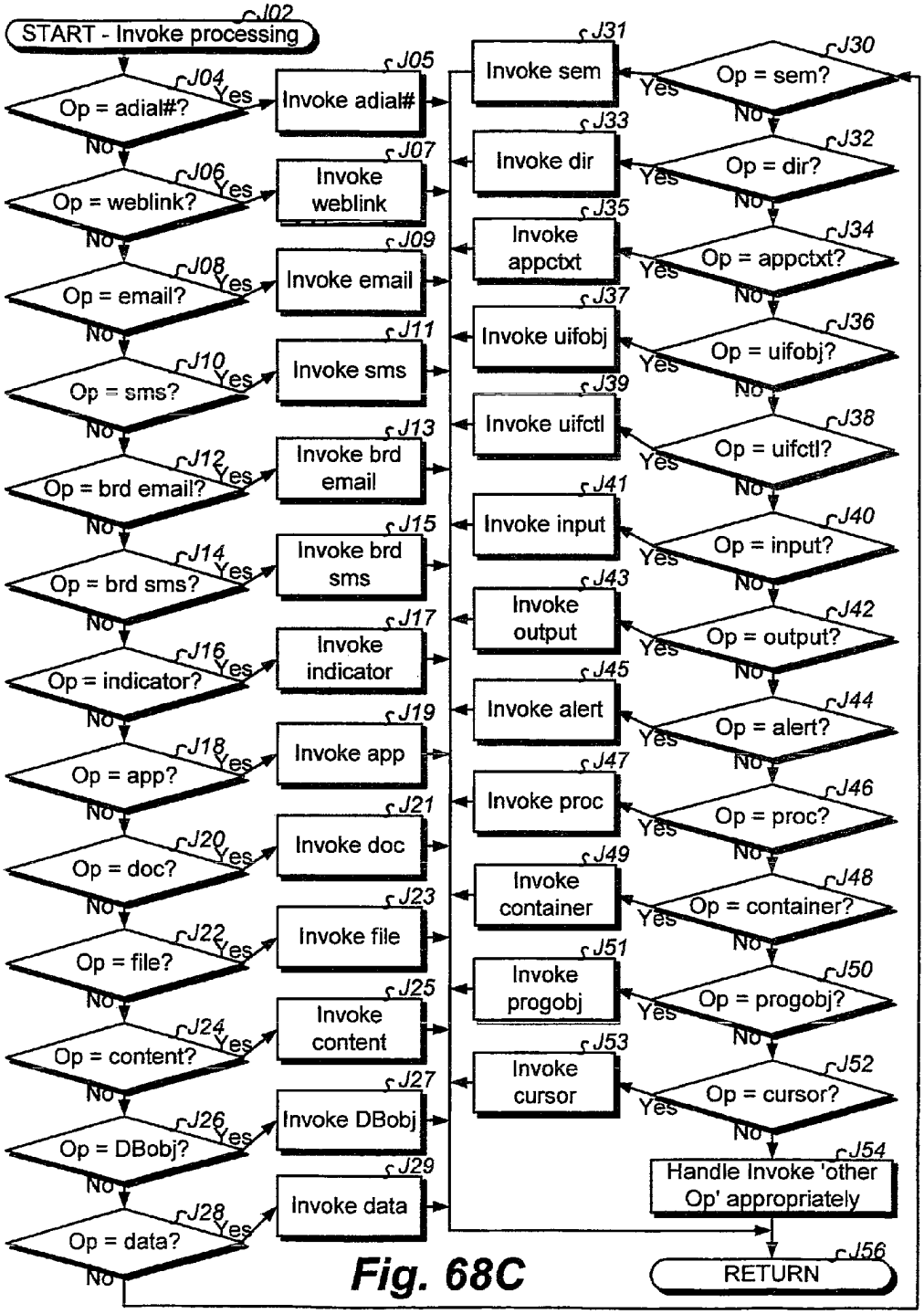
J02
START - Invoke processing
J04
Op = adial#?
Yes
No
J05
Invoke adial#
J06
Op = weblink?
Yes
No
J07
Invoke weblink
J08
Op = email?
Yes
No
J09
Invoke email
J10
Op = sms?
Yes
No
J11
Invoke sms
J12
Op = brd email?
Yes
No
J13
Invoke brd email
J14
Op = brd sms?
Yes
No
J15
Invoke brd sms
J16
Op = indicator?
Yes
No
J17
Invoke indicator
J18
Op = app?
Yes
No
J19
Invoke app
J20
Op = doc?
Yes
No
J21
Invoke doc
J22
Op = file?
Yes
No
J23
Invoke file
J24
Op = content?
Yes
No
J25
Invoke content
J26
Op = DBobj?
Yes
No
J27
Invoke DBobj
J28
Op = data?
Yes
No
J29
Invoke data
J31
Invoke sem
J33
Invoke dir
J35
Invoke appctxt
J37
Invoke uifobj
J39
Invoke uifctl
J41
Invoke input
J43
Invoke output
J45
Invoke alert
J47
Invoke proc
J49
Invoke container
J51
Invoke progobj
J53
Invoke cursor
J30
Op = sem?
Yes
No
J32
Op = dir?
Yes
No
J34
Op = appctxt?
Yes
No
J36
Op = uifobj?
Yes
No
J38
Op = uifctl?
Yes
No
J40
Op = input?
Yes
No
J42
Op = output?
Yes
No
J44
Op = alert?
Yes
No
J46
Op = proc?
Yes
No
J48
Op = container?
Yes
No
J50
Op = progobj?
Yes
No
J52
Op = cursor?
Yes
No
J54
Handle Invoke 'other Op' appropriately
J56
RETURN

Fig. 68C

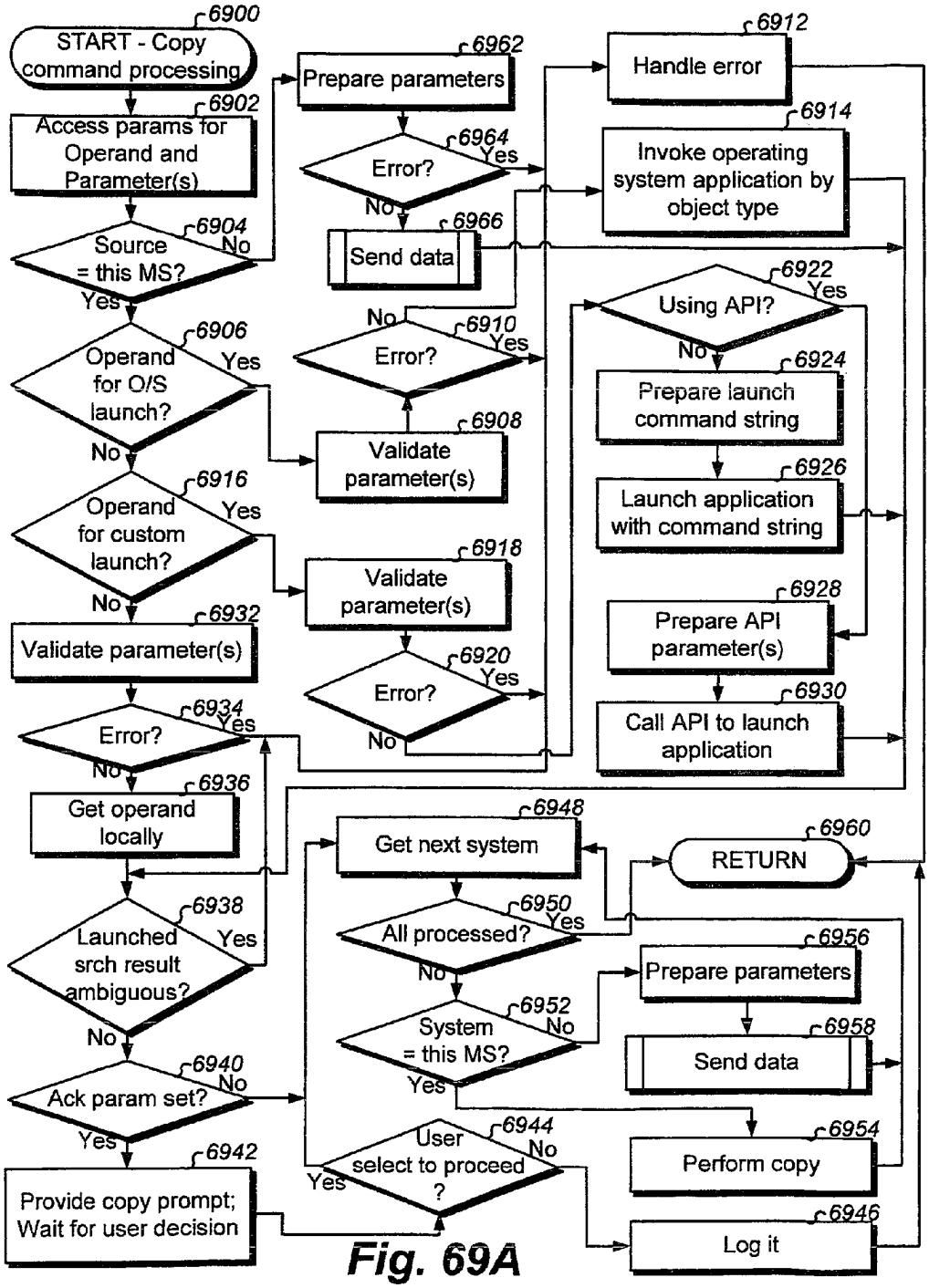
6900
START - Copy command processing
6902
Access params for Operand and Parameter(s)
6904
Source = this MS?
No
Yes
6906
Operand for O/S launch?
Yes
No
6908
Validate parameter(s)
6910
Error?
Yes
No
6912
Handle error
6914
Invoke operating system application by object type
6916
Operand for custom launch?
Yes
No
6918
Validate parameter(s)
6920
Error?
Yes
No
6922
Using API?
Yes
No
6924
Prepare launch command string
6926
Launch application with command string
6928
Prepare API parameter(s)
6930
Call API to launch application
6932
Validate parameter(s)
6934
Error?
Yes
No
6936
Get operand locally
6938
Launched srch result ambiguous?
Yes
No
6940
Ack param set?
No
Yes
6942
Provide copy prompt; Wait for user decision
6944
User select to proceed ?
No
Yes
6946
Log it
6948
Get next system
6950
All processed?
Yes
No
6952
System = this MS?
No
Yes
6954
Perform copy
6956
Prepare parameters
6958
Send data
6960
RETURN
6962
Prepare parameters
6964
Error?
Yes
No
6966
Send data

Fig. 69A

Operand →	PM	Preferred embodiment Copy processing
201	C	Copying an auto-dial # launches a phone number log interface with the auto-dial # parameter (can be wildcarded) for searching the source system. Preferably, both the outgoing and incoming logs are searched. In an alternate embodiment, the log is specified with a parameter. In the preferred embodiment, the most recent occurrence from a particular log is provided. In another embodiment, all occurrences found in history are presented with their date/time stamps, and perhaps other information, of the call and when it took place (e.g. when the ack parameter is set) and the user browses the results prior to accepting the copy of multiple items. The search takes place as though the user manually launched the search, entered the auto-dial # for the search, and then was provided with result(s) for the copy. Preferably, the copy shall take place if there are no ambiguities (e.g. more than one phone number returned per search criteria). An additional parameter may be specified for the target (different log) of the copy, otherwise the object is copied to an assumed location (e.g. same folder to more recent position). Appropriate MS storage is updated and subsequently processed as though the user manually performed the search and copy of the result. Preferably, the copy cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The copy is made to system(s) logs, preferably with identifying information of the source and who did the copy.
203	C	Copying a weblink launches a search to MS browser history with the weblink parameter (can be wildcarded) for searching the source system. In one embodiment, all occurrences found in history are presented with their date/time stamps, and perhaps other information, of the link and when it was invoked (e.g. when the ack parameter is specified to true) for presentation to the user prior to doing the copy. In the preferred embodiment, the most recent occurrence from a particular invocation is provided for the copy. An additional parameter may be specified for the target (specified favorites folder), otherwise the object is copied to an assumed location (e.g. highest level favorites folder or special named folder). The search takes place as though the user manually launched the search, entered the weblink for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy of the result. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The copy is made to a special browser favorites folder, or another designated folder configured ahead of time, preferably with identifying information of the source and who did the copy.

Fig. 69B-1

Operand ↓	PM	Preferred embodiment Copy processing
205	C	Copying an email causes searching the source email system with search criteria of the email parameter string. The email parameter string can specify searching any email fields for any values including wildcarding (patterns for matching). Each field is referenced with a predefined name and then associated with a search criteria. For example, the email string of "subj:'personnel';recip:'george@alltell.com';body:'reduction in force'' causes searching all emails with a subject containing "personnel" and was sent to "george@alltell.com" and has a message body containing the string "reduction in force". To search for certain email containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:sent,inbox,company;" indicates to only search the email folders of sent, inbox, and company (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of email. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In one embodiment, all occurrences found in history are presented with at least their date/time stamps, subject line, sender and recipient, and perhaps other information, of the email and when it took place, when the ack parameter is set to true for user reconciliation. In a preferred embodiment, the most recent occurrence from searched folders is provided for the copy. An additional parameter may be specified for the target (specified folder), otherwise the object is copied to an assumed location (e.g. drafts, inbox, or special named folder). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for doing the copy. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The copy is made to a special email folder of the target system, or another designated folder configured ahead of time, or as specified with a new parameter for copy processing, preferably with identifying information of the source and who did the copy (if supported in email application).

Fig. 69B-2

Operand →	PM	Preferred embodiment Copy processing
207	C	Copying an sms message causes searching the source messaging system with search criteria of the sms message parameter string. The message parameter string can specify searching any message fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria. For example, the sms message string of "recip:'2144034071@nextel.com,9725397137@lbxsrv.com';" causes searching all messages to the sought recipients. To search for certain messaging containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:outgoing" indicates to only search the outgoing folder (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of messages. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In the one embodiment, all occurrences found in history are presented with at least their date/time stamps, message, sender and recipient, and perhaps other information, of the message and when it took place, when the ack parameter is set to true for user reconciliation. In a preferred embodiment, the most recent occurrence from searched folders is provided for copying. An additional parameter may be specified for the target (specified folder), otherwise the object is copied to an assumed location (e.g. inbox, drafts, special named folder). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The copy is made to a special messaging folder of the target system, or another designated folder configured ahead of time, or as specified with a new parameter to copy processing, preferably with identifying information of the source and who did the copy.

Fig. 69B-3

Operand ↓	PM	Preferred embodiment Copy processing
209	C	Copying a broadcast email causes searching the source email system with search criteria of the email parameter string. The email parameter string can specify searching any email fields for any values including wildcarding (patterns for matching). Each field is referenced with a predefined name and then associated with a search criteria. For example, the email string of "subj:'personnel';recip:'george@alltell.com';body:'reduction in force'" causes searching all emails with a subject containing "personnel" and was sent to "george@alltell.com" and has a message body containing the string "reduction in force". To search for certain email containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:sent,inbox,company;" indicates to only search the email folders of sent, inbox, and company (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of email. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In one embodiment, all occurrences found in history are presented with at least their date/time stamps, subject line, sender and recipient, and perhaps other information, of the email and when it took place, when the ack parameter is set to true for user reconciliation. In a preferred embodiment, the most recent occurrence from searched folders is provided for the copy. An additional parameter may be specified for the target (specified folder), otherwise the object is copied to an assumed location (e.g. inbox, drafts, special named folder). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for doing the copy. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The copy is made to a special email folder of the target system, or another designated folder configured ahead of time, or as specified with a new parameter to copy processing, preferably with identifying information of the source and who did the copy.

Fig. 69B-4

Operand	PM	Preferred embodiment Copy processing
211	C	Copying a broadcast sms msg causes searching the source messaging system with search criteria of the sms message parameter string. The message parameter string can specify searching any message fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria. For example, the sms message string of "recip:'2144034071@nextel.com,9725397137@lbxsrv.com';" causes searching all messages to the sought recipients. To search for certain messaging containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:outgoing" indicates to only search the outgoing folder (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of messages. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In the one embodiment, all occurrences found in history are presented with at least their date/time stamps, message, sender and recipient, and perhaps other information, of the message and when it took place, when the ack parameter is set to true for user reconciliation. In a preferred embodiment, the most recent occurrence from searched folders is provided for copying. An additional parameter may be specified for the target (specified folder), otherwise the object is copied to an assumed location (e.g. inbox, drafts, special named folder). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The copy is made to a special messaging folder of the target system, or another designated folder configured ahead of time, or as specified with a new parameter to copy processing, preferably with identifying information of the source and who did the copy.
213	C	Copying an indicator searches appropriate source storage for the indicator (e.g. storage/memory used for indicators by other commands). The indicator parameter string specifies the indicator string being sought and wildcarding is supported. In one embodiment, appropriate MS storage/memory which contains the history of indicators sent to the source system is searched and all occurrences found in history are presented with at least their date/time stamps, the indicator, and perhaps other information, for user reconciliation at block 6942. In a preferred embodiment, the most recently delivered indicator is identified and used for the copy. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for the copy. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The copy is made so that the target system(s) are delivered the indicator(s) like delivering a new indicator for presentation.

Fig. 69B-5

Operand ↓	PM	Preferred embodiment Copy processing
215	C	Copying an application causes searching the source system for the application (and with the params parameter(s) if specified to get the params specified invocation of the application). The app parameter is preferably an executable name and may contain parameters that were passed. Providing a more defined partial or full path to the application parameter will limit the search result. The app parameter string preferably supports wildcarding. In one embodiment, all occurrences found at the source and their paths are presented to the user with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation at block 6942. In a preferred embodiment, the most recently executed instance of the matching application is determined for the copy. In one embodiment, the application itself is copied to the target systems, perhaps as directed by an additional parameter (e.g. directory location). In another embodiment, the executable path to run the application is placed into execution history at the system(s) so that a user can run it, albeit from a remote system (assumption that application available for running there already). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provide with the result for copy. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
217	C	Copying a document causes searching the source for the document. The doc parameter is a document name. The document parameter can be a wildcard (pattern) for matching. Providing a more defined partial or full path to the document name will narrow the search. In one embodiment, all occurrences found on the MS and their paths are presented to the user with at least their date/time stamps, size, and perhaps attributes information, for reconciliation at block 6942. In a preferred embodiment, the most recently accessed search result is provided for the copy. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. Copying the document places a copy to each target system at a special shared folder, or configured folder for sharing, or as specified with a new destination parameter to copy processing.

Fig. 69B-6

Operand ↓	PM	Preferred embodiment Copy processing
219	C	Copying a file causes searching the source path for the file. The path parameter is a file name. Providing a more defined partial or full path to the file will narrow the search result. The path parameter can be a wildcard (pattern) for matching. In one embodiment, all occurrences found on the MS and their paths are provided with at least their date/time stamps, size, and perhaps attributes information, for reconciliation at block 6942. In a preferred embodiment, the most recently accessed file meeting the search criteria is copied to the target systems. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provide with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In one embodiment, the copy results in overwriting an existing file with the same handle (e.g. name). In another embodiment, the copy results in writing a newly altered name of the file when there is an existing file with the same handle (e.g. name). An additional parameter may be specified for the target (specified folder), otherwise the object is copied to an assumed location).
221	O	Copying content causes searching the source for the content. The content parameter is a reference to the content. The content parameter can be a wildcard (pattern) for matching. In a preferred embodiment, the most recently accessed search result is provided for the copy. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. Copying the content places a copy to each target system at a special shared destination, or configured destination for sharing, or as specified with a new parameter to copy processing.

Fig. 69B-7

Operand ↓	PM	Preferred embodiment Copy processing
223	O	Copying a DB object causes searching the source for the database object value. The database object parameter is provided with a variety of syntaxes depending on the type of database object sought. For example, the DB-obj parameters is "T:tablename" to seek a table, "S:schemaname" to seek a particular schema, "C:columnname" to seek a particular column name, "D:DBname" to seek a particular DB name, "R:rolename" to seek a particular role set, "P:procname" to search for particular stored procedure, etc. There are unique syntaxes for every type of DB object being sought which maps to an appropriate SQL system tables query. The search criteria can be a wildcard (pattern) for matching. In one embodiment, all occurrences found on the source system and information about the occurrence is presented to the user for reconciliation at block 6942. In other embodiments, the best (e.g. most recently accessed) fit database object is identified for use in the copy, or a new parameter indicating how to search. The search takes place as though the user manually launched the search, entered the criteria or query for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The value of the DB object is copied to the value of the DB object with the same name and type at the destination system(s). If not found at a target system, then no action is performed at that system. Copying a database object copies the value to the same database object(s) at other system(s), or creates new copies of the DB objects there when names do not match. Copying a DB object is intended to keep DBs in synch in some uses. Value(s) are overwritten.

Fig. 69B-8

Operand 1	PM	Preferred embodiment Copy processing
225	O	Copying data causes searching the source system for the data. In the preferred embodiment, the data is a global system variable visible to all processes of a MS operating system. In other embodiments, the data may have limited scope which is made accessible to present disclosure processing (e.g. with extern). Depending on the embodiment, data may be that which is contained in a program data segment, stack segment, and/or extra segment. There can be unique syntaxes for specifying which type of data is being sought (e.g. "S:dataname" for data parameter). The search criteria can be a wildcard (pattern) for matching. In the preferred embodiment, a well known location of link symbol information files are consulted, and in another embodiment a new parameter specifies where to look, or which symbol file of information to use. In one embodiment, all occurrences found at the source system and information about the occurrence including its current value is presented to the user for reconciliation at block 6942. In a preferred embodiment, the best data value (e.g. most recently accessed if more than one matches) is provided for the copy. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The value of the copied data is copied to the data with the same name and type at the destination system(s). If not found at a target system, then no action is performed at that system, or an error is provided. Copying a data object copies the value to the same data object(s) at other system(s). Copying is intended to keep data in synch between systems in some uses. Value(s) are overwritten.
227	O	Copying a semaphore causes reading the current value of the semaphore at the source where the copy command action is being executed and then copying the current value to the same semaphore names at the target system(s). The semaphore param can be a wildcard (pattern) for matching. In the preferred embodiment, the semaphore is a global system semaphore visible to all processes of a MS operating system. In other embodiments, the semaphore may have limited scope which is made accessible to present disclosure processing. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The value (set or cleared) of the copied semaphore is copied to the semaphore with the same name and type at the destination system(s). If not found at a target system, then no action is performed at that system, or an error is provided. Copying a semaphore copies the value to the same semaphore at other system(s). Copying a semaphore is intended to keep systems in synch in some uses. Value(s) are overwritten.

Fig. 69B-9

Operand 1	PM	Preferred embodiment Copy processing
229	C	Copying a directory causes searching the source system for the directory. The path parameter is a directory name. Providing a more defined partial or full path to the directory parameter will narrow the search result. The path parameter can be a wildcard (pattern) for matching. In one embodiment, all occurrences found on the MS and their paths are provided with at least their date/time stamps, size, and perhaps attributes information, for reconciliation at block 6942. In a preferred embodiment, the most recently accessed directory meeting the search criteria is copied to the target systems. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In one embodiment, the copy results in overwriting an existing directory and files therein. In another embodiment, the copy results in writing a newly altered name of directory contents when there is a conflict (e.g. existing entity with same name). In another embodiment, an additional target path parameter is provided for where to place the directory.
231	C	Operand 215 (application object) is treated identically to this Operand 231 (application context) this LBX release (same params currently).
233	C	Copying a focused user interface object causes capturing the currently focused user interface object using the first parameter (e.g. Alt-Prtscrn; can be changed with the param) string syntax for keystroke(s) to capture the image, and then copying the graphics file (file type in various embodiments) to a shared destination, or a configured destination at the target system(s) or as specified with a new parameter. The capture takes place as though the user manually performed the capture action, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the capture and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In one embodiment, the copy results in overwriting an existing file with the same handle (e.g. name), which will be seldom since the graphics file name preferably contains a date/time stamp portion. In another embodiment, the copy results in writing a newly altered name of the file when there is an existing file with the same handle (e.g. name).
235	C	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter). Also, the ack parameter provides a reconciliation option.
237	C	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter). Also, the ack parameter provides a reconciliation option.

Fig. 69B-10

Operand ↓	PM	Preferred embodiment Copy processing
239	C	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter). Also, the ack parameter provides a reconciliation option.
241	C	Copying an alert causes searching the source for the alert. The alert parameter is the same parameter used to generate an alert (e.g. using another command), and can be wildcarded. In one embodiment, all occurrences found on the MS which is associated to the alerter application in use at the MS, and which is used for other commands disclosed, are provided to the user for reconciliation at block 6942 with at least their date/time stamps, and perhaps other information. In other embodiments, the most recently generated alert matching the alert search criteria is used for copying, or the search occurs as specified with an additional parameter. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The copy is made so that the target system(s) are delivered the alert(s) like delivering a new alert to the systems.
243	C	Copying a process causes first finding all process names running at the source (e.g. MS) which contain the pname string parameter (e.g. in UNIX: "ps -ef | grep pname"). In one embodiment, all occurrences found running at the MS are presented with interesting programmatic information such as when started, its size, etc for reconciliation at block 6942. In the preferred embodiment, one process running in the source system is to be found (i.e. >1 = ambiguous). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying. Results are useful statistics about the process which is running at the source. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, historical log, or other useful storage for subsequent use. Useful statistic(s) about the process (perhaps which statistics specified with an additional parameter) are copied to an appropriate destination of the target system(s) for informative purposes (e.g. a special log file). In another embodiment, the alerter process and/or indicator methodology can be used as the destination for the copy for alerting a user at the target system. In another embodiment, there is new parameter for which end result the copy will have (informative destination, handled like alert, handled like indicator).

Fig. 69B-11

Operand 1	PM	Preferred embodiment Copy processing
245	C	Copying a container causes searching the source system for the container. The container parameter can be well defined to narrow the search result, and may be wildcarded (pattern) for matching. In one embodiment, all occurrences found on the MS and their references/handles are provided with at least their date/time stamps, size, and perhaps attributes information, for reconciliation at block 6942. In a preferred embodiment, the most recently accessed container meeting the search criteria is copied to the target systems. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In one embodiment, the copy results in overwriting an existing container. In another embodiment, the copy results in writing a newly altered reference/handle of the container when there is a conflict (e.g. existing entity with same name). An additional parameter may be specified for the target, otherwise the object is copied to an assumed location.
247	C	Copying a program object first causes searching the source for the program object. In the preferred embodiment, a unique syntax is used for which type of program object is being sought (similar to above). There can be unique syntaxes for specifying which type of program object is being sought (e.g. "S:dataname"). In one embodiment, all occurrences found on the MS and information about the occurrence including its current value is presented to the user for reconciliation at block 6942. In a preferred embodiment, one program object is to be found (e.g. >1 = ambiguous). In one embodiment, a well known location of link symbol information files are consulted, and in another embodiment a new parameter specifies where to look, or which symbol file of information to use. The search criteria can be a wildcard (pattern) for matching. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. Useful statistic(s) about the program object (perhaps which statistics specified with an additional parameter) are copied to an appropriate destination of the target system(s) for informative purposes (e.g. a special log file). In another embodiment, the alerter process and/or indicator methodology can be used as the destination for the copy for alerting a user at the target system. In another embodiment, there is new parameter for which end result the copy will have (informative destination, handled like alert, handled like indicator). An alternate embodiment works like Operand 223 wherein copying is intended to keep program object(s) between systems in synch. Such embodiments require source and target system processing to have access to the object(s) (this may limit participating object(s)).

Fig. 69B-12

Operand 1	PM	Preferred embodiment Copy processing
249	C	Copying a cursor causes searching the source system for the current cursor setting(s). In the preferred embodiment, provided in the search results is the current cursor information (e.g. image, animation , etc). The current cursor information of the source is then used to alter the cursor at the target system(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the copy operation. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
251	C	Copying a calendar (CAL) object causes searching the source CAL system with search criteria of the calendar object parameter string. The calendar object parameter string can specify searching any calendar entry fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria (similar to email above). Those skilled in the art recognize many useful syntaxes for searching any characteristics of CAL objects. In one embodiment, all occurrences found in history are presented to the user for reconciliation at block 6942 with at least their date/time stamps, attendees, and perhaps other information, of the CAL object and when it was scheduled. In a preferred embodiment, the most recent occurrence from the calendaring system is provided for the copy. Wildcarding (pattern matching) is preferably inherent by searching for substrings. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The calendar entry is copied in its entirety to the target system calendaring system. In another embodiment, a new parameter is specified to copy the calendar item to a new schedule or time. A duplicate calendar entry may be created if one already exists.

Fig. 69B-13

Operand ↓	PM	Preferred embodiment Copy processing
253	C	Copying an address book (AB) object causes searching the source AB system with search criteria of the AB object parameter string. The AB object parameter string can specify searching any AB entry fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria (similar to email above). Those skilled in the art recognize many useful syntaxes for searching any characteristics of AB objects/entries. In one embodiment, all occurrences found are presented to the user for reconciliation at block 6942 with appropriate AB information. In a preferred embodiment, the most recent occurrence from the AB system is provided for the copy. Wildcarding (pattern matching) is preferably inherent by searching for substrings. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for copying it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and copy. Preferably, the copy command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The AB entry is copied in its entirety to the target system AB system. In another embodiment, a new parameter is specified to copy the AB item to special destination. A duplicate AB entry may be created if one already exists.
...		

Fig. 69B-14

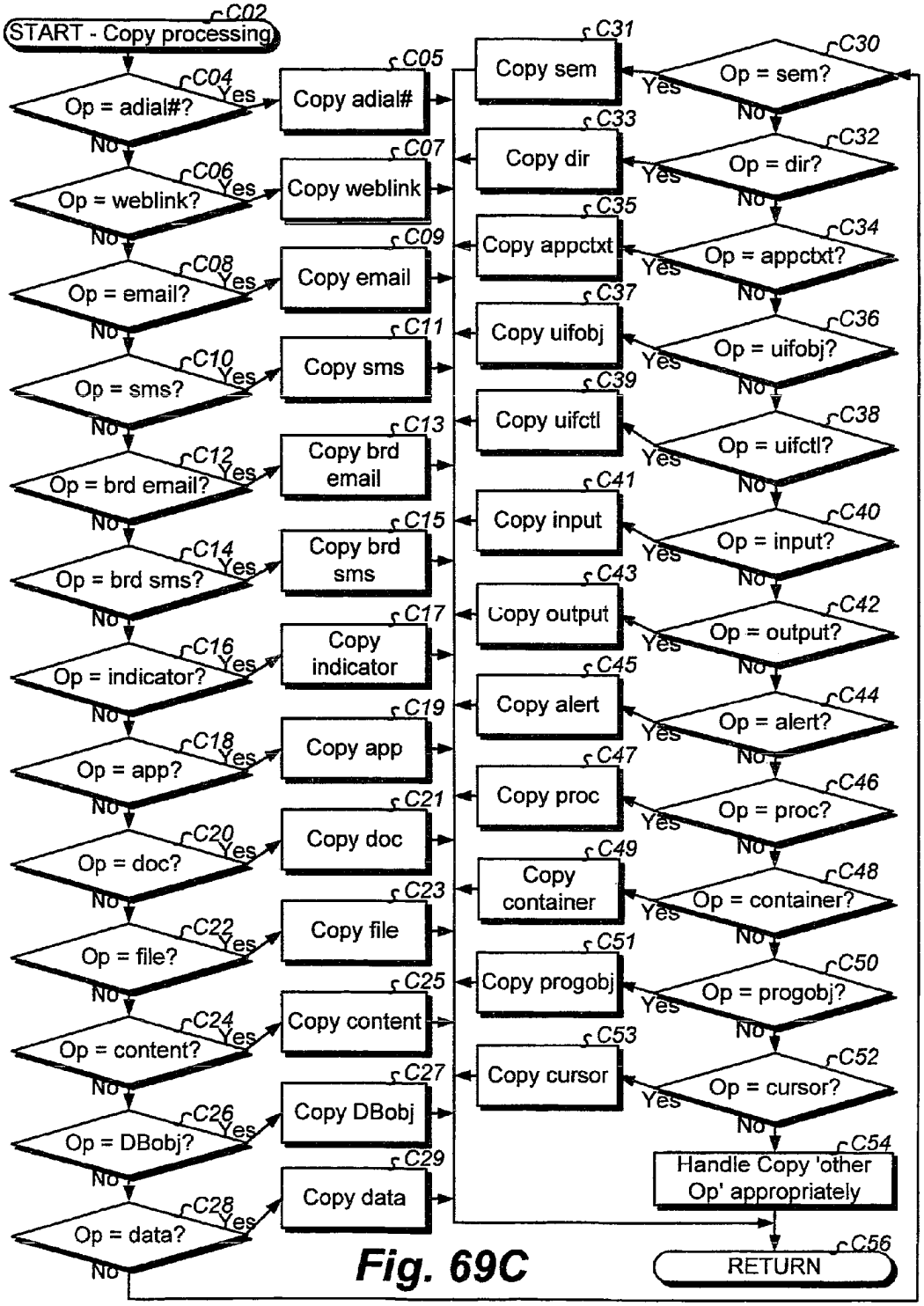
C02
START - Copy processing
C04
Op = adial#?
Yes
No
C05
Copy adial#
C06
Op = weblink?
Yes
No
C07
Copy weblink
C08
Op = email?
Yes
No
C09
Copy email
C10
Op = sms?
Yes
No
C11
Copy sms
C12
Op = brd email?
Yes
No
C13
Copy brd email
C14
Op = brd sms?
Yes
No
C15
Copy brd sms
C16
Op = indicator?
Yes
No
C17
Copy indicator
C18
Op = app?
Yes
No
C19
Copy app
C20
Op = doc?
Yes
No
C21
Copy doc
C22
Op = file?
Yes
No
C23
Copy file
C24
Op = content?
Yes
No
C25
Copy content
C26
Op = DBobj?
Yes
No
C27
Copy DBobj
C28
Op = data?
Yes
No
C29
Copy data
C30
Op = sem?
Yes
No
C31
Copy sem
C32
Op = dir?
Yes
No
C33
Copy dir
C34
Op = appctxt?
Yes
No
C35
Copy appctxt
C36
Op = uifobj?
Yes
No
C37
Copy uifobj
C38
Op = uifctl?
Yes
No
C39
Copy uifctl
C40
Op = input?
Yes
No
C41
Copy input
C42
Op = output?
Yes
No
C43
Copy output
C44
Op = alert?
Yes
No
C45
Copy alert
C46
Op = proc?
Yes
No
C47
Copy proc
C48
Op = container?
Yes
No
C49
Copy container
C50
Op = progobj?
Yes
No
C51
Copy progobj
C52
Op = cursor?
Yes
No
C53
Copy cursor
C54
Handle Copy 'other Op' appropriately
C56
RETURN

Fig. 69C

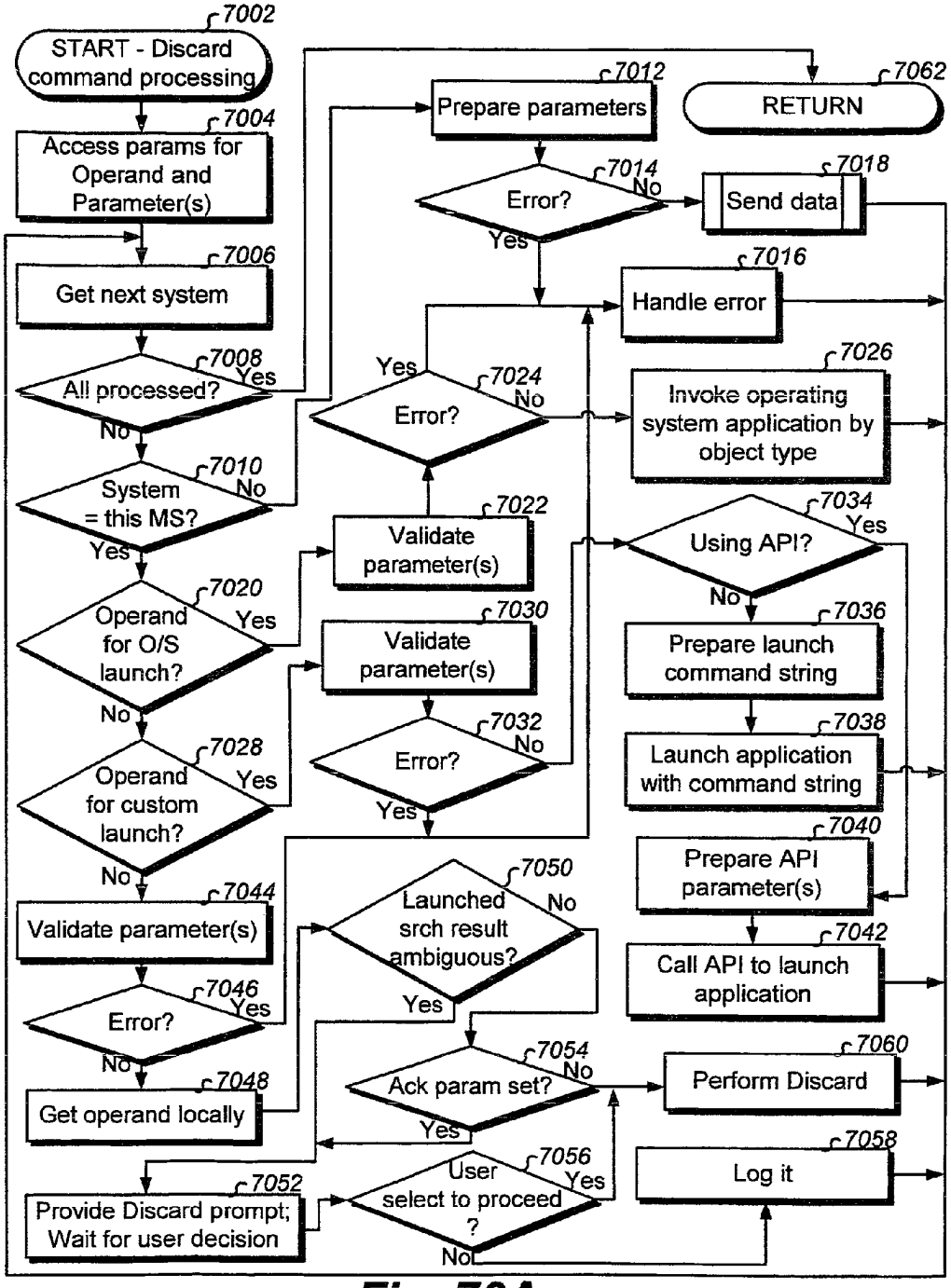
7002
START - Discard command processing
7004
Access params for Operand and Parameter(s)
7006
Get next system
7008
All processed?
Yes
No
7010
System = this MS?
No
Yes
7020
Operand for O/S launch?
Yes
No
7028
Operand for custom launch?
Yes
No
7044
Validate parameter(s)
7046
Error?
Yes
No
7048
Get operand locally
7052
Provide Discard prompt; Wait for user decision
7012
Prepare parameters
7014
Error?
No
Yes
7016
Handle error
7018
Send data
7062
RETURN
7022
Validate parameter(s)
7024
Error?
Yes
No
7030
Validate parameter(s)
7032
Error?
No
Yes
7050
Launched srch result ambiguous?
No
Yes
7054
Ack param set?
No
Yes
7056
User select to proceed ?
Yes
No
7026
Invoke operating system application by object type
7034
Using API?
Yes
No
7036
Prepare launch command string
7038
Launch application with command string
7040
Prepare API parameter(s)
7042
Call API to launch application
7060
Perform Discard
7058
Log it

Fig. 70A

Operand ↓	PM	Preferred embodiment Discard processing
201	C	Discarding an auto-dial # launches a phone number log interface with the auto-dial # parameter (can be wildcarded) for searching the specified system (e.g. MS). Preferably, both the outgoing and incoming logs are searched. In an alternate embodiment, the log is specified with a parameter. In the preferred embodiment, the most recent occurrence from a particular log is to be discarded. In another embodiment, all occurrences found in history are presented with their date/time stamps, and perhaps other information, of the call and when it took place when the ack parameter is set and the user browses the results prior to accepting the discard of multiple items. The search takes place as though the user manually launched the search, entered the auto-dial # for the search, and then was provided with result(s) for the discard. Preferably, the discard shall take place if there are no ambiguities (e.g. more than one phone number returned per search criteria). Appropriate MS storage is updated and subsequently processed as though the user manually performed the search and discard of the result. Preferably, the discard cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The discard is made to system(s) logs.
203	S	Discarding a weblink launches a search to browser history with the weblink parameter (can be wildcarded) for searching the specified system. In one embodiment, all occurrences found in history are presented with their date/time stamps, and perhaps other information, of the link and when it was invoked, when the ack parameter is specified to true for presentation to the user prior to doing the discard. In the preferred embodiment, the most recent occurrence from a particular invocation is provided for the discard. The search takes place as though the user manually launched the search, entered the weblink for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard of the result. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The discard is made to a special browser favorites folder, another designated folder configured ahead of time, or as specified with an additional parameter.

Fig. 70B-1

Operand →	PM	Preferred embodiment Discard processing
205	C	Discarding an email causes searching the specified email system with search criteria of the email parameter string. The email parameter string can specify searching any email fields for any values including wildcarding (patterns for matching). Each field is referenced with a predefined name and then associated with a search criteria. For example, the email string of "subj:'personnel';recip:'george@alltell.com';body:'reduction in force'" causes searching all emails with a subject containing "personnel" and was sent to "george@alltell.com" and has a message body containing the string "reduction in force". To search for certain email containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:sent,inbox,company;" indicates to only search the email folders of sent, inbox, and company (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of email. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In one embodiment, all occurrences found in history are presented with at least their date/time stamps, subject line, sender and recipient, and perhaps other information, of the email and when it took place, when the ack parameter is set to true for user reconciliation. In another embodiment, the most recent occurrence from searched folders is provided for the discard. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for doing the discard. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The email is discarded from an email folder as specified with a syntax in the email parameter string.

Fig. 70B-2

Operand ↓	PM	Preferred embodiment Discard processing
207	C	Discarding an sms message causes searching the specified messaging system with search criteria of the sms message parameter string. The message parameter string can specify searching any message fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria. For example, the sms message string of "recip:'2144034071@nextel.com,9725397137@lbxsrv.com';" causes searching all messages to the sought recipients. To search for certain messaging containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:outgoing" indicates to only search the outgoing folder (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of messages. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In the one embodiment, all occurrences found in history are presented with at least their date/time stamps, message, sender and recipient, and perhaps other information, of the message and when it took place, when the ack parameter is set to true for user reconciliation. In another embodiment, the most recent occurrence from searched folders is provided for discarding. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The message is discarded from a folder as specified with a syntax in the sms message parameter string.

Fig. 70B-3

Operand →	PM	Preferred embodiment Discard processing
209	C	Discarding a broadcast email causes searching the specified email system with search criteria of the email parameter string. The email parameter string can specify searching any email fields for any values including wildcarding (patterns for matching). Each field is referenced with a predefined name and then associated with a search criteria. For example, the email string of "subj:'personnel';recip:'george@alltell.com';body:'reduction in force'" causes searching all emails with a subject containing "personnel" and was sent to "george@alltell.com" and has a message body containing the string "reduction in force". To search for certain email containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:sent,inbox,company:," indicates to only search the email folders of sent, inbox, and company (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of email. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In one embodiment, all occurrences found in history are presented with at least their date/time stamps, subject line, sender and recipient, and perhaps other information, of the email and when it took place, when the ack parameter is set to true for user reconciliation. In a preferred embodiment, the most recent occurrence from searched folders is provided for the discard. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for doing the discard. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The email s discarded from a folder as specified with a syntax in the email parameter string.

Fig. 70B-4

Operand ↓	PM	Preferred embodiment Discard processing
211	C	Discarding a broadcast sms msg causes searching the specified messaging system with search criteria of the sms message parameter string. The message parameter string can specify searching any message fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria. For example, the sms message string of "recip:'2144034071@nextel.com,9725397137@lbxsrv.com';" causes searching all messages to the sought recipients. To search for certain messaging containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:outgoing" indicates to only search the outgoing folder (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of messages. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In the one embodiment, all occurrences found in history are presented with at least their date/time stamps, message, sender and recipient, and perhaps other information, of the message and when it took place, when the ack parameter is set to true for user reconciliation. In a preferred embodiment, the most recent occurrence from searched folders is provided for discarding. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The message is discarded from a folder as specified with a syntax in the sms message parameter string.
213	O	Discarding an indicator searches appropriate specified system storage for the indicator (e.g. storage/memory used for indicators by other commands). The indicator parameter string specifies the indicator string being sought and wildcarding is supported. In one embodiment, appropriate MS storage/memory which contains the history of indicators sent to the source system is searched and all occurrences found in history are presented with at least their date/time stamps, the indicator, and perhaps other information, for user reconciliation. In one embodiment, the most recently delivered indicator is identified and used for the discard. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for the discard. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The discard is performed so that the target system(s) have the indicator(s) removed from the interface if currently presented and removed from history maintained for the user interface object presentation (preferably not from LBX history). An additional parameter may specify how to delete the indicator.

Fig. 70B-5

Operand →	PM	Preferred embodiment Discard processing
215	C	Discarding an application causes searching the specified system for the application (and with the params parameter(s) if specified to get the right invocation of the application). The app parameter is preferably an executable name. Providing a partial or full path to the application parameter will limit the search result. The app parameter string preferably supports wildcarding. In one embodiment, all occurrences found at the source and their paths are presented to the user with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation. In a preferred embodiment, the most recently executed instance of the matching application is determined for the discard. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provide with the result for discard. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The discard does not remove the application from the target system. It terminates the application by killing it at the operating system level. A Discard File operand command can be used to remove it from the system.
217	S	Discarding a document causes searching the specified system for the document. The doc parameter is a document name. The document parameter can be a wildcard (pattern) for matching. Providing a more defined partial or full path to the document name will narrow the search. In one embodiment, all occurrences found and their paths are presented to the user with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation. In a preferred embodiment, the most recently accessed search result is provided for the discard. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. Discard of the document removes it from each target system at a special shared folder, or configured folder for sharing, or as specified with a new parameter to discard processing.
219	S	Discarding a file causes searching the source path for the file. The path parameter is a file name. Providing a more defined partial or full path to the file will narrow the search result. The path parameter can be a wildcard (pattern) for matching. In one embodiment, all occurrences found on the MS and their paths are provided with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation. In another embodiment, the most recently accessed file meeting the search criteria is discarded. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provide with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. File(s) are discarded at each target system.

Fig. 70B-6

Operand ↓	PM	Preferred embodiment Discard processing
221	O	Discarding content causes searching the specified system for the content. The content parameter is a reference to the content. The content parameter can be a wildcard (pattern) for matching. In a preferred embodiment, the most recently accessed search result is provided for the discard. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. Discarding the content removes it from each target system at a special shared destination, or configured destination for sharing, or as specified with a new parameter to discard processing.
223	C	Discarding a DB object causes searching the specified system for the database object value. The database object parameter is provided with a variety of syntaxes depending on the type of database object sought. For example, the DB-obj parameters is "T:tablename" to seek a table, "S:schemaname" to seek a particular schema, "C:columnname" to seek a particular column name, "D:DBname" to seek a particular DB name, "R:rolename" to seek a particular role set, "P:procname" to search for particular stored procedure, etc. There are unique syntaxes for every type of DB object being sought. The search criteria can be a wildcard (pattern) for matching. In one embodiment, all occurrences found on the source system and information about the occurrence is presented to the user for reconciliation. In a preferred embodiment, the best (e.g. most recently accessed) fit database object is identified for discard. The search takes place as though the user manually launched the search, entered the criteria or query for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The DB object is discarded (removed, deleted, dropped).
225	O	Same as Compose processing except modifies the value to 0 at each system.
227	O	Same as Compose processing except modifies the value to clear at each system.

Fig. 70B-7

Operand ↓	PM	Preferred embodiment Discard processing
229	S	Discarding a directory causes searching the specified system for the directory. The path parameter is a directory name. Providing a more defined partial or full path to the directory parameter will narrow the search result. The path parameter can be a wildcard (pattern) for matching. In one embodiment, all occurrences found on the MS and their paths are provided with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation. In one embodiment, the most recently accessed directory meeting the search criteria is discarded. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The directory is discarded at each target system.
231	C	Operand 215 and 235 (application object) is treated identically to Operand 231 (application context) this LBX release (same params currently). The specified application is terminated, not removed.
233	S	Discarding a user interface object causes closing/terminating the focused object(s) at each specified system that contains the objtxt parameter criteria in the titlebar. In a preferred embodiment, there is a unique syntax for which places of user interface objects that are currently active are to be search (e.g. title bar, entry fields, radio button options, window text, combinations thereof, etc). The search criteria can be a wildcard (pattern) for matching. The search takes place as though the user manually launched the search, entered the criteria for the search, and the object(s) are closed/terminated. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
235	C	Operand 215 and 231 (application object) is treated identically to Operand 235 (application context) this LBX release (same params currently). The specified application is terminated, not removed.
237	O	Discarding input causes reinitializing the iodev parameter input device stream of the specified system, so that any pending state is discarded. In one embodiment, a special input datastream is issued to reinitialize the I/O path. In another embodiment, the I/O path is terminated and restarted to reinitialize for the attached device(s). In another embodiment, the I/O path is flushed and then reinitialized. In another embodiment, an additional parameter indicates how to discard the iodev device stream. The iodev parameter specifies which Input/Output device to reinitialize. Preferably, the discard command data is maintained to LBX History, a log, or other useful storage for subsequent use.

Fig. 70B-8

Operand ↓	PM	Preferred embodiment Discard processing
239	O	Discarding output causes reinitializing the iodev parameter output device stream of the specified system, so that any pending state is discarded. In one embodiment, a special output datastream is issued to reinitialize the IO path. In another embodiment, the IO path is terminated and restarted to reinitialize for the attached device(s). In another embodiment, the I/O path is flushed and then reinitialized. In another embodiment, an additional parameter indicates how to discard the iodev device stream. The iodev parameter specifies which Input/Output device to reinitialize. Preferably, the discard command data is maintained to LBX History, a log, or other useful storage for subsequent use.
241	C	Discarding an alert causes searching the specified system for the alert and discarding it. The alert parameter is the same parameter used to generate an alert (e.g. using another command), and can be wildcarded. In one embodiment, all occurrences found which is associated to the alerter application in use at the MS, and which is used for other commands disclosed, are provided to the user for reconciliation with at least their date/time stamps, and perhaps other information. In one embodiment, the most recently generated alert matching the alert search criteria is used for discarding. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
243	O	Discarding a process causes searching for and terminating (killing) all process names running at the specified system (e.g. MS) which contain the prname string parameter (e.g. in UNIX: "ps -ef | grep prname"). In one embodiment, all occurrences found running at the MS are presented with interesting programmatic information such as when started, its size, etc for user reconciliation. In the preferred embodiment, one process running in the specified system is to be found (i.e. >1 = ambiguous). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, historical log, or other useful storage for subsequent use. The process is killed (terminated). It is not removed from the system.

Fig. 70B-9

Operand ↓	PM	Preferred embodiment Discard processing
245	S	Discarding a container causes searching the specified system for the container. The container parameter can be well defined to narrow the search result, and may be wildcarded (pattern) for matching. In one embodiment, all occurrences found on the MS and their references/handles are provided with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation. In one embodiment, the most recently accessed container meeting the search criteria is discarded at the target systems. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The container is discarded from each specified system.
247	O	Discarding a program object causes searching the specified system for the program object and initializing to a initial value i.e. discarding any current value). In the preferred embodiment, a unique syntax is used for which type of program object is being sought (similar to above). There can be unique syntaxes for specifying which type of program object is being sought (e.g. "S:dataname"). In one embodiment, all occurrences found on the MS and information about the occurrence including its current value is presented to the user for reconciliation. In a preferred embodiment, one program object is to be found (e.g. >1 = ambiguous). In one embodiment, a well known location of link symbol information files are consulted, and in another embodiment a new parameter specifies where to look, or which symbol file of information to use. The search criteria can be a wildcard (pattern) for matching. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. A reasonable reset value (e.g. 0 for data, clear for semaphore) is set to the program object. Program objects which cannot hold a value (procedure) are preferably not affected by the discard command. Local and remote processing must have programmatic visibility to affected program object(s).
249	O	Discarding a cursor causes resetting the cursor at the specified system. In the preferred embodiment, provided in the search results is the current cursor information (e.g. image, animation , etc) when user reconciliation is involved. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the discard operation. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In one embodiment, a system defaulted cursor is set. In another embodiment, the previous cursor setting is returned to, and multiple discard cursor actions can change the cursor continuously to historical settings. An additional parameter may provide how to discard the cursor.

Fig. 70B-10

Operand →	PM	Preferred embodiment Discard processing
251	C	Discarding a calendar object causes searching the specified calendar system with search criteria of the calendar object parameter string. The calendar object parameter string can specify searching any calendar entry fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria (similar to email above). Those skilled in the art recognize many useful syntaxes for searching any characteristics of calendar objects. In one embodiment, all occurrences found in history are presented to the user for reconciliation with at least their date/time stamps, sender and recipient, and perhaps other information, of the calendar object and when it was scheduled. In a preferred embodiment, the most recent occurrence from the calendaring system is discarded. Wildcarding (pattern matching) is preferably inherent by searching for substrings. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The calendar entry(s) are discarded from the target system calendaring system.
253	C	Discarding an address book (AB) object causes searching the specified AB system with search criteria of the AB object parameter string. The AB object parameter string can specify searching any AB entry fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria (similar to email above). Those skilled in the art recognize many useful syntaxes for searching any characteristics of AB objects/entries. In one embodiment, all occurrences found are presented to the user for reconciliation with appropriate AB information. In a preferred embodiment, the most recent occurrence from the AB system is discarded. Wildcarding (pattern matching) is preferably inherent by searching for substrings. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for discarding it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and discard. Preferably, the discard command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The AB entry(s) are discarded from the target system AB system.
. . .		

Fig. 70B-11

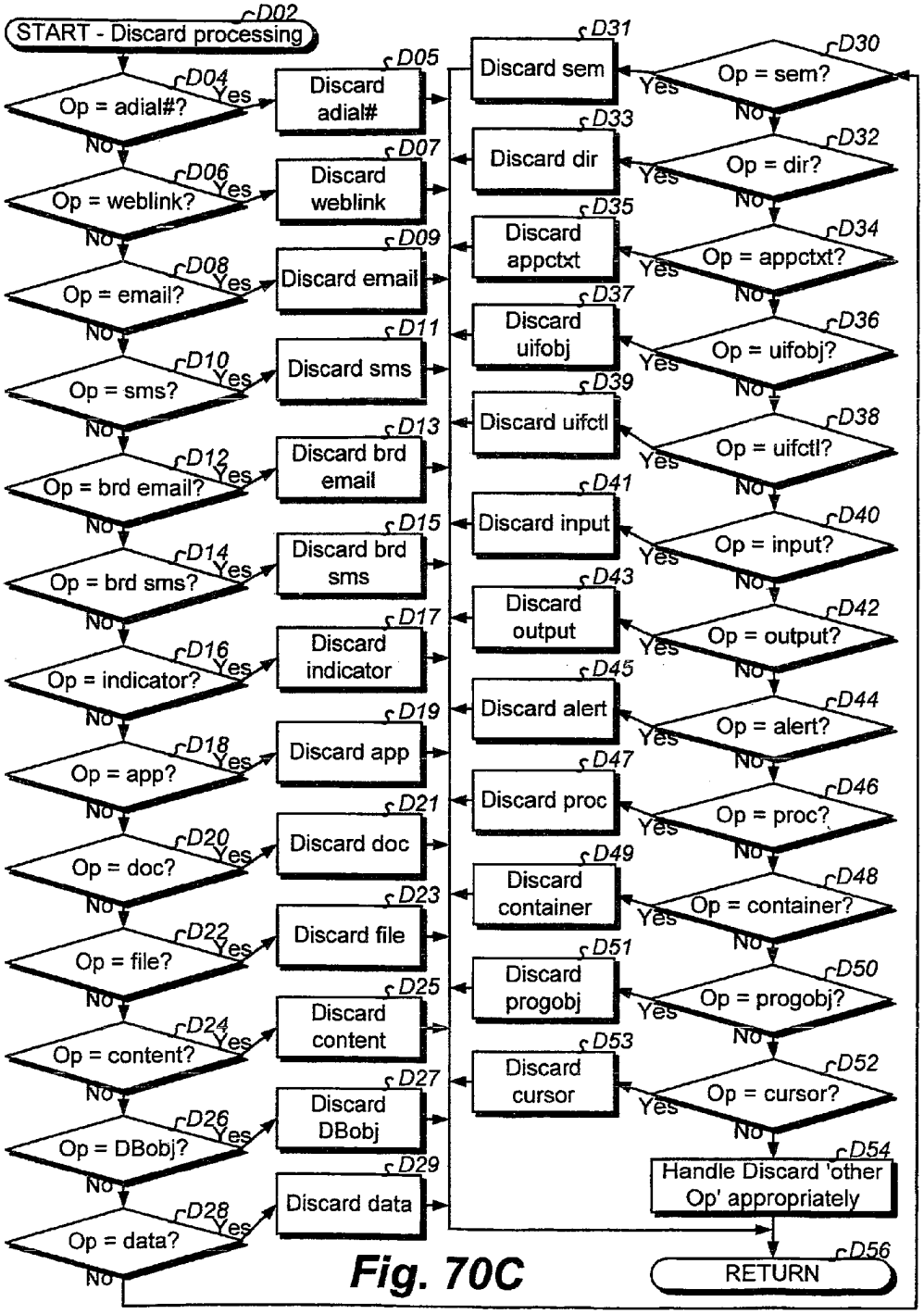
D02
START - Discard processing
D04
Op = adial#?
Yes
No
D05
Discard adial#
D06
Op = weblink?
Yes
No
D07
Discard weblink
D08
Op = email?
Yes
No
D09
Discard email
D10
Op = sms?
Yes
No
D11
Discard sms
D12
Op = brd email?
Yes
No
D13
Discard brd email
D14
Op = brd sms?
Yes
No
D15
Discard brd sms
D16
Op = indicator?
Yes
No
D17
Discard indicator
D18
Op = app?
Yes
No
D19
Discard app
D20
Op = doc?
Yes
No
D21
Discard doc
D22
Op = file?
Yes
No
D23
Discard file
D24
Op = content?
Yes
No
D25
Discard content
D26
Op = DBobj?
Yes
No
D27
Discard DBobj
D28
Op = data?
Yes
No
D29
Discard data
D31
Discard sem
D33
Discard dir
D35
Discard appctxt
D37
Discard uifobj
D39
Discard uifctl
D41
Discard input
D43
Discard output
D45
Discard alert
D47
Discard proc
D49
Discard container
D51
Discard progobj
D53
Discard cursor
D30
Op = sem?
Yes
No
D32
Op = dir?
Yes
No
D34
Op = appctxt?
Yes
No
D36
Op = uifobj?
Yes
No
D38
Op = uifctl?
Yes
No
D40
Op = input?
Yes
No
D42
Op = output?
Yes
No
D44
Op = alert?
Yes
No
D46
Op = proc?
Yes
No
D48
Op = container?
Yes
No
D50
Op = progobj?
Yes
No
D52
Op = cursor?
Yes
No
D54
Handle Discard 'other Op' appropriately
D56
RETURN

Fig. 70C

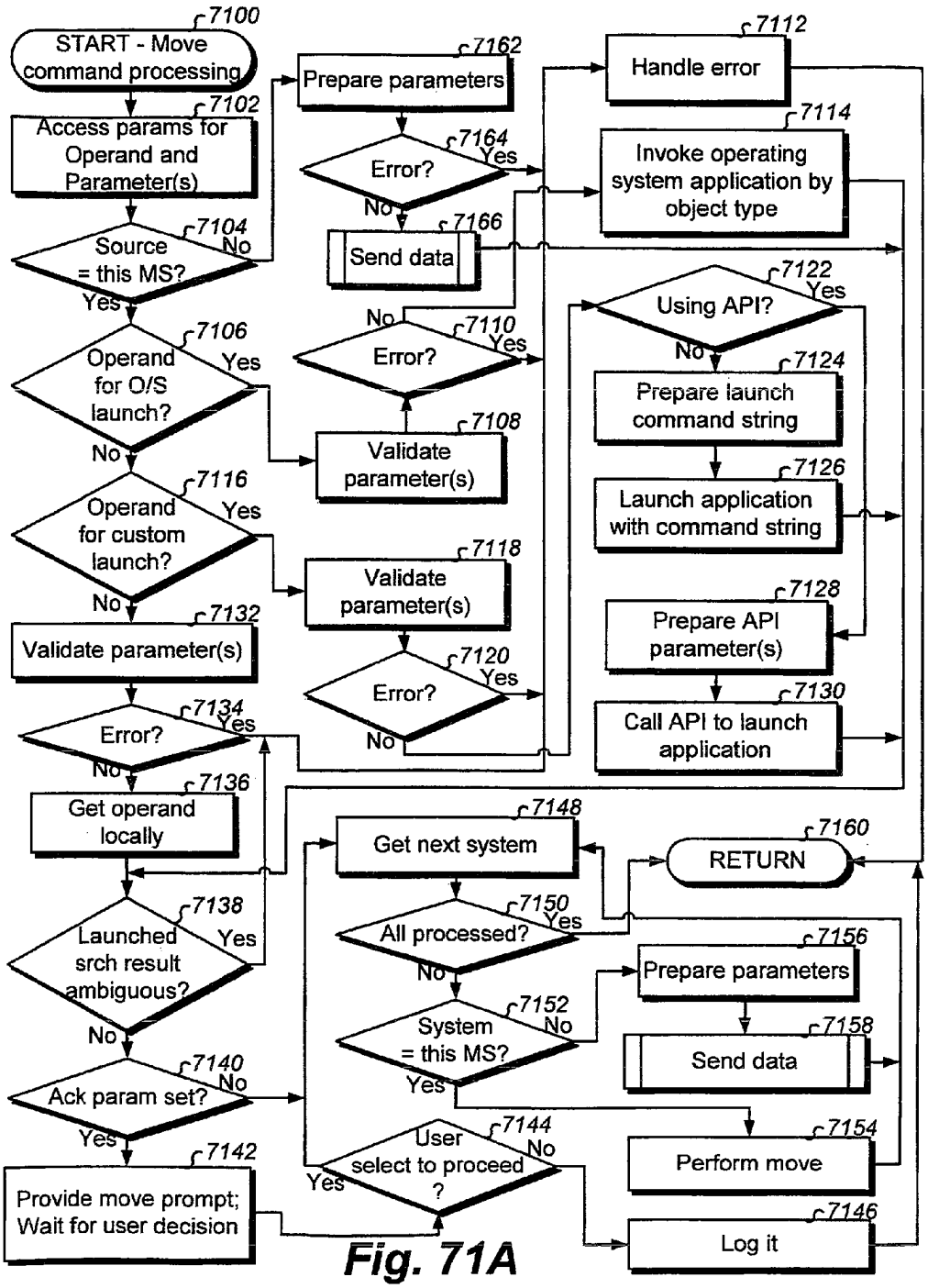
7100
START - Move command processing
7102
Access params for Operand and Parameter(s)
7104
Source = this MS?
No
Yes
7106
Operand for O/S launch?
Yes
No
7108
Validate parameter(s)
7110
Error?
Yes
No
7112
Handle error
7114
Invoke operating system application by object type
7116
Operand for custom launch?
Yes
No
7118
Validate parameter(s)
7120
Error?
Yes
No
7122
Using API?
Yes
No
7124
Prepare launch command string
7126
Launch application with command string
7128
Prepare API parameter(s)
7130
Call API to launch application
7132
Validate parameter(s)
7134
Error?
Yes
No
7136
Get operand locally
7138
Launched srch result ambiguous?
Yes
No
7140
Ack param set?
No
Yes
7142
Provide move prompt; Wait for user decision
7144
User select to proceed ?
No
Yes
7146
Log it
7148
Get next system
7150
All processed?
Yes
No
7152
System = this MS?
No
Yes
7154
Perform move
7156
Prepare parameters
7158
Send data
7160
RETURN
7162
Prepare parameters
7164
Error?
Yes
No
7166
Send data

Fig. 71A

Operand →	PM	Preferred embodiment Move processing
201	C	Moving an auto-dial # launches a phone number log interface with the auto-dial # parameter (can be wildcarded) for searching the source system. Preferably, both the outgoing and incoming logs are searched. In an alternate embodiment, the log is specified with a parameter. In the preferred embodiment, the most recent occurrence from a particular log is provided. In another embodiment, all occurrences found in history are presented with their date/time stamps, and perhaps other information, of the call and when it took place (e.g. when the ack parameter is set) and the user browses the results prior to accepting the move. The search takes place as though the user manually launched the search, entered the auto-dial # for the search, and then was provided with result(s) for the move. Preferably, the move shall take place if there are no ambiguities (e.g. more than one phone number returned per search criteria). An additional parameter may be specified for the target (different log) of the move, otherwise the object is moved to an assumed location (e.g. same folder to more recent position). Appropriate MS storage is updated and subsequently processed as though the user manually performed the search and move of the result. Preferably, the move cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The move is made to system(s) logs, preferably with identifying information of the source and who did the move.
203	C	Moving a weblink launches a search to MS browser history with the weblink parameter (can be wildcarded) for searching the source system. In one embodiment, all occurrences found in history are presented with their date/time stamps, and perhaps other information, of the link and when it was invoked (e.g. when the ack parameter is specified to true) for presentation to the user prior to doing the move. In the preferred embodiment, the most recent occurrence from a particular invocation is provided for the move. An additional parameter may be specified for the target (specified favorites folder), otherwise the object is moved to an assumed location (e.g. highest level favorites folder). The search takes place as though the user manually launched the search, entered the weblink for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move of the result. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The move is made to a special browser favorites folder, or another designated folder configured ahead of time, or as specified with an additional parameter, preferably with identifying information of the source and who did the move.

Fig. 71B-1

Operand →	PM	Preferred embodiment Move processing
205	C	Moving an email causes searching the source email system with search criteria of the email parameter string. The email parameter string can specify searching any email fields for any values including wildcarding (patterns for matching). Each field is referenced with a predefined name and then associated with a search criteria. For example, the email string of "subj:'personnel';recip:'george@alltell.com';body:'reduction in force'" causes searching all emails with a subject containing "personnel" and was sent to "george@alltell.com" and has a message body containing the string "reduction in force". To search for certain email containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:sent,inbox,company;" indicates to only search the email folders of sent, inbox, and company (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of email. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In one embodiment, all occurrences found in history are presented with at least their date/time stamps, subject line, sender and recipient, and perhaps other information, of the email and when it took place, when the ack parameter is set to true for user reconciliation. In a preferred embodiment, the most recent occurrence from searched folders is provided for the move. An additional parameter may be specified for the target (specified folder), otherwise the object is moved to an assumed location (e.g. inbox, drafts, special named folder). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for doing the move. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The move is made to a special email folder of the target system, or another designated folder configured ahead of time, or as specified with a new parameter for move processing, preferably with identifying information of the source and who did the move (if supported in email application).

Fig. 71B-2

Operand →	PM	Preferred embodiment Move processing
207	C	Moving an sms message causes searching the source messaging system with search criteria of the sms message parameter string. The message parameter string can specify searching any message fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria. For example, the sms message string of "recip:'2144034071@nextel.com,9725397137@lbxsrv.com';" causes searching all messages to the sought recipients. To search for certain messaging containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:outgoing" indicates to only search the outgoing folder (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of messages. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In the one embodiment, all occurrences found in history are presented with at least their date/time stamps, message, sender and recipient, and perhaps other information, of the message and when it took place, when the ack parameter is set to true for user reconciliation. In a preferred embodiment, the most recent occurrence from searched folders is provided for moving. An additional parameter may be specified for the target (specified folder), otherwise the object is moved to an assumed location (e.g. inbox, drafts, special named folder). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The move is made to a special messaging folder of the target system, or another designated folder configured ahead of time, or as specified with a new parameter to move processing, preferably with identifying information of the source and who did the move.

Fig. 71B-3

Operand →	PM	Preferred embodiment Move processing
209	C	Moving a broadcast email causes searching the source email system with search criteria of the email parameter string. The email parameter string can specify searching any email fields for any values including wildcarding (patterns for matching). Each field is referenced with a predefined name and then associated with a search criteria. For example, the email string of "subj:'personnel';recip:'george@alltell.com';body:'reduction in force'" causes searching all emails with a subject containing "personnel" and was sent to "george@alltell.com" and has a message body containing the string "reduction in force". To search for certain email containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:sent,inbox,company;" indicates to only search the email folders of sent, inbox, and company (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of email. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In one embodiment, all occurrences found in history are presented with at least their date/time stamps, subject line, sender and recipient, and perhaps other information, of the email and when it took place, when the ack parameter is set to true for user reconciliation. In a preferred embodiment, the most recent occurrence from searched folders is provided for the move. An additional parameter may be specified for the target (specified folder), otherwise the object is moved to an assumed location (e.g. inbox, drafts, special named folder). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for doing the move. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The move is made to a special email folder of the target system, or another designated folder configured ahead of time, or as specified with a new parameter to move processing, preferably with identifying information of the source and who did the move.

Fig. 71B-4

Operand ↓	PM	Preferred embodiment Move processing
211	C	Moving a broadcast sms msg causes searching the source messaging system with search criteria of the sms message parameter string. The message parameter string can specify searching any message fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria. For example, the sms message string of "recip:'2144034071@nextel.com,9725397137@lbxsrv.com';" causes searching all messages to the sought recipients. To search for certain messaging containers/folders, a sub-search criteria of "folders" is used (e.g. "folders:outgoing" indicates to only search the outgoing folder (no specification preferably indicates to search all folders). Those skilled in the art recognize many useful syntaxes for searching any characteristics of messages. Wildcarding (pattern matching) is preferably inherent by searching for substrings. In the one embodiment, all occurrences found in history are presented with at least their date/time stamps, message, sender and recipient, and perhaps other information, of the message and when it took place, when the ack parameter is set to true for user reconciliation. In a preferred embodiment, the most recent occurrence from searched folders is provided for moving. An additional parameter may be specified for the target (specified folder), otherwise the object is moved to an assumed location (e.g. inbox, drafts, special named folder). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The move is made to a special messaging folder of the target system, or another designated folder configured ahead of time, or as specified with a new parameter to move processing, preferably with identifying information of the source and who did the move.
213	C	Moving an indicator searches appropriate source storage for the indicator (e.g. storage/memory used for indicators by other commands). The indicator parameter string specifies the indicator string being sought and wildcarding is supported. In one embodiment, appropriate MS storage/memory which contains the history of indicators sent to the source system is searched and all occurrences found in history are presented with at least their date/time stamps, the indicator, and perhaps other information, for user reconciliation. In a preferred embodiment, the most recently delivered indicator is identified and used for the move. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for the move. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The move is made so that the target system(s) are delivered the indicators like delivering new indicator(s) for presentation.

Fig. 71B-5

Operand ↓	PM	Preferred embodiment Move processing
215	C	Moving an application causes searching the source system for the application (and with the params parameter(s) if specified to get the param specified invocation of the application). The app parameter is preferably an executable name, and may contain parameters that were passed. Providing a more defined partial or full path to the application parameter will limit the search result. The app parameter string preferably supports wildcarding. In one embodiment, all occurrences found at the source and their paths are presented to the user with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation. In a preferred embodiment, the most recently executed instance of the matching application is determined for the move. In one embodiment, the application itself is moved to the target systems, perhaps as directed by an additional parameter (e.g. directory location). In another embodiment, the executable path to run the application is moved to execution history at the system(s) so that a user can run it, albeit from a remote system (assumption that application available for running there already). In another embodiment, the executable(s) are roved to the target system using methodologies of U.S. Patent 5,938,722 ("Method of executing programs in a network", Johnson). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for move. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use.
217	C	Moving a document causes searching the source system for the document. The doc parameter is a document name. The document parameter can be a wildcard (pattern) for matching. Providing a more defined partial or full path to the document name will narrow the search. In one embodiment, all occurrences found on the MS and their paths are presented to the user with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation. In a preferred embodiment, the most recently accessed search result is provided for the move. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. Moving the document places the document to each target system at a special shared folder, or configured folder for sharing, or as specified with a new destination parameter to move processing.

Fig. 71B-6

Operand 1	PM	Preferred embodiment Move processing
219	C	Moving a file causes searching the source path for the file. The path parameter is a file name. Providing a more defined partial or full path to the file will narrow the search result. The path parameter can be a wildcard (pattern) for matching. In one embodiment, all occurrences found on the MS and their paths are provided with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation. In a preferred embodiment, the most recently accessed file meeting the search criteria is moved to the target systems. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provide with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In one embodiment, the move results in overwriting an existing file with the same handle (e.g. name). In another embodiment, the move may result in writing a newly altered name of the file when there is an existing file with the same handle (e.g. name). An additional parameter may be specified for the target (specified folder), otherwise the object is moved to an assumed location.
221	O	Moving content causes searching the source for the content. The content parameter is a reference to the content. The content parameter can be a wildcard (pattern) for matching. In a preferred embodiment, the most recently accessed search result is provided for the move. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. Moving the content places the content to each target system at a special shared destination, or configured destination for sharing, or as specified with a new parameter to move processing.

Fig. 71B-7

Operand ↓	PM	Preferred embodiment Move processing
223	O	Moving a DB object causes searching the source for the database object value. The database object parameter is provided with a variety of syntaxes depending on the type of database object sought. For example, the DB-obj parameters is "T:tablename" to seek a table, "S:schemaname" to seek a particular schema, "C:columnname" to seek a particular column name, "D:DBname" to seek a particular DB name, "R:rolename" to seek a particular role set, "P:procname" to search for particular stored procedure, etc. There are unique syntaxes for every type of DB object being sought which maps to an appropriate SQL system tables query. The search criteria can be a wildcard (pattern) for matching. In one embodiment, all occurrences found on the source system and information about the occurrence is presented to the user for reconciliation. In other embodiments, the best (e.g. most recently accessed) fit database object is identified for use in the move, or a new parameter indicates how to search. The search takes place as though the user manually launched the search, entered the criteria or query for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The value of the DB object is moved to the value of the DB object with the same name and type at the destination system(s). If not found at a target system, then no action is performed at that system. Moving a database object moves the value to the same database object(s) at other system(s), or creates new ones when there is not match. Value(s) are overwritten.

Fig. 71B-8

Operand	PM	Preferred embodiment Move processing
225	O	Moving data causes searching the source system for the data. In the preferred embodiment, the data is a global system variable visible to all processes of a MS operating system. In other embodiments, the data may have limited scope which is made accessible to present disclosure processing (e.g. with extern). Depending on the embodiment, data may be that which is contained in a program data segment, stack segment, and/or extra segment. There can be unique syntaxes for specifying which type of data is being sought (e.g. "S:dataname" for data parameter). The search criteria can be a wildcard (pattern) for matching. In the preferred embodiment, a well known location of link symbol information files are consulted, and in another embodiment a new parameter specifies where to look, or which symbol file of information to use. In one embodiment, all occurrences found at the source system and information about the occurrence including its current value is presented to the user for reconciliation. In a preferred embodiment, the best data value (e.g. most recently accessed if more than one matches) is provided for the move. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The value of the data to be moved is copied to the data with the same name and type at the destination system(s). In another embodiment, the source data is reinitialized (e.g. 0), or reinitialized according to a new parameter, as part of the move operation. If not found at a target system, then no action is performed at that system, or an error is provided. Moving a data object at least copies the value to the same data object(s) at other system(s). Value(s) are overwritten.
227	O	Moving a semaphore causes reading the current value of the semaphore at the source where the move command action is being executed and then moving the current value to the same semaphore names at the target system(s). The semaphore param can be a wildcard (pattern) for matching. In the preferred embodiment, the semaphore is a global system semaphore visible to all processes of a MS operating system. In other embodiments, the semaphore may have limited scope which is made accessible to present disclosure processing. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The value (set or cleared) of the copied semaphore is copied to the semaphore with the same name and type at the destination system(s). In another embodiment, the source data is reinitialized (e.g. 0), or reinitialized according to a new parameter, as part of the move operation. If not found at a target system, then no action is performed at that system, or an error is provided. Moving a semaphore a t least copies the value to the same semaphore at other system(s). Value(s) are changed (clear or set).

Fig. 71B-9

Operand →	PM	Preferred embodiment Move processing
229	C	Moving a directory causes searching the source system for the directory. The path parameter is a directory name. Providing a more defined partial or full path to the directory parameter will narrow the search result. The path parameter can be a wildcard (pattern) for matching. In one embodiment, all occurrences found on the MS and their paths are provided with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation. In a preferred embodiment, the most recently accessed directory meeting the search criteria is copied to the target systems. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In one embodiment, the move results in overwriting an existing directory and files therein. In another embodiment, the move results in writing a newly altered name of directory contents when there is a conflict (e.g. existing entity with same name). In another embodiment, an additional target path parameter is provided for where to place the directory.
231	C	Operand 215 (application object) is treated identically to this Operand 231 (application context) this LBX release (same params currently).
233	C	Moving a focused user interface object causes capturing the currently focused user interface object using the first parameter (e.g. Alt-Prtscrn; can be changed with the param) string syntax for keystroke(s) to capture the image, and then moving the graphics file (file type in various embodiments) to a shared destination, or a configured destination at the target system(s), or as specified with a new parameter. The capture takes place as though the user manually performed the capture action, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the capture and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In one embodiment, the move results in overwriting an existing file with the same handle (e.g. name), which will be seldom since the graphics file name preferably contains a date/time stamp portion. In another embodiment, the move results in writing a newly altered name of the file when there is an existing file with the same handle (e.g. name).
235	C	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter). Also, the ack parameter provides a reconciliation option.
237	C	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter). Also, the ack parameter provides a reconciliation option.

Fig. 71B-10

Operand ↓	PM	Preferred embodiment Move processing
239	C	See Compose Command for identical processing, except processing may take place locally and/or at privilege-providing remote MS(s) (system(s) parameter). Also, the ack parameter provides a reconciliation option.
241	C	Moving an alert causes searching the source system for the alert. The alert parameter is the same parameter used to generate an alert (e.g. using another command), and can be wildcarded. In one embodiment, all occurrences found on the MS which is associated to the alerter application in use at the MS, and which is used for other commands disclosed, are provided to the user for reconciliation with at least their date/time stamps, and perhaps other information. In other embodiments, the most recently generated alert matching the alert search criteria is used for moving, or the search occurs as specified with an additional parameter. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The move is made so that the target system(s) are delivered the alert(s) like delivering a new alert to the systems.
243	C	Moving a process causes first finding all process names running at the source (e.g. MS) which contain the pname string parameter (e.g. in UNIX: "ps -ef | grep pname"). In one embodiment, all occurrences found running at the MS are presented with interesting programmatic information such as when started, its size, etc for user reconciliation. In the preferred embodiment, one process running in the source system is to be found (i.e. >1 = ambiguous). The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving. Results are useful statistics about the process which is running at the source. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, historical log, or other useful storage for subsequent use. Useful statistic(s) about the process (perhaps which statistics specified with an additional parameter) are copied to an appropriate destination of the target system(s) for informative purposes (e.g. a special log file). In another embodiment, the alerter process and/or indicator methodology can be used as the destination for the move for alerting a user at the target system. In another embodiment, there is new parameter for which end result the move will have (informative destination, handled like alert, handled like indicator). In some embodiments, the process is roved to the target system using methodologies of U.S. Patent 5,938,722 ("Method of executing programs in a network", Johnson), as requested in a new parameter.

Fig. 71B-11

Operand ↓	PM	Preferred embodiment Move processing
245	C	Moving a container causes searching the source system for the container. The container parameter can be well defined to narrow the search result, and may be wildcarded (pattern) for matching. In one embodiment, all occurrences found on the MS and their references/handles are provided with at least their date/time stamps, size, and perhaps attributes information, for user reconciliation. In a preferred embodiment, the most recently accessed container meeting the search criteria is copied to the target systems. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In one embodiment, the move results in overwriting an existing container. In another embodiment, the move results in writing a newly altered reference/handle of the container when there is a conflict (e.g. existing entity with same name). An additional parameter may be specified for the target, otherwise the object is moved to an assumed location.
247	C	Moving a program object causes first searching the source for the program object. In the preferred embodiment, a unique syntax is used for which type of program object is being sought (similar to above). There can be unique syntaxes for specifying which type of program object is being sought (e.g. "S:dataname"). In one embodiment, all occurrences found on the MS and information about the occurrence including its current value is presented to the user for reconciliation. In a preferred embodiment, one program object is to be found (e.g. >1 = ambiguous). In one embodiment, a well known location of link symbol information files are consulted, and in another embodiment a new parameter specifies where to look, or which symbol file of information to use. The search criteria can be a wildcard (pattern) for matching. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. Useful statistic(s) about the program object (perhaps which statistics specified with an additional parameter) are moved/copied to an appropriate destination of the target system(s) for informative purposes (e.g. a special log file). In another embodiment, the alerter process and/or indicator methodology can be used as the destination for the move for alerting a user at the target system. In another embodiment, there is new parameter for which end result the move will have (informative destination, handled like alert, handled like indicator). An alternate embodiment works like Operand 223 wherein moving is intended to keep program object(s) between systems in synch, albeit with a discard from the source system. Such embodiments require source and target system processing to have access to the object(s) (this may limit participating object(s)).

Fig. 71B-12

Operand →	PM	Preferred embodiment Move processing
249	C	Moving a cursor causes searching the source system for the current cursor setting(s). In the preferred embodiment, provided in the search results is the current cursor information (e.g. image, animation , etc). The current cursor information of the source is then used to alter the cursor at the target system(s). Appropriate MS storage is updated and subsequently processed as though the user had manually performed the move operation. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In some embodiments, the source cursor is reset to a different (e.g. initialized) setting as resulting from the move.
251	C	Moving a calendar object causes searching the source calendar system with search criteria of the calendar object parameter string. The calendar object parameter string can specify searching any calendar entry fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria (similar to email above). Those skilled in the art recognize many useful syntaxes for searching any characteristics of calendar objects. In one embodiment, all occurrences found in history are presented to the user for reconciliation with at least their date/time stamps, attendees, and perhaps other information, of the calendar object and when it was scheduled. In a preferred embodiment, the most recent occurrence from the calendaring system is provided for the move. Wildcarding (pattern matching) is preferably inherent by searching for substrings. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The calendar entry is moved in its entirety to the target system calendaring system. In another embodiment, a new parameter is specified to move the calendar item(s) to a new schedule or time. A duplicate calendar entry may be created if one already exists.

Fig. 71B-13

Operand ↓	PM	Preferred embodiment Move processing
253	C	Moving an address book (AB) object causes searching the source AB system with search criteria of the AB object parameter string. The AB object parameter string can specify searching any AB entry fields for any values including wildcarding. Each field is referenced with a predefined name and then associated with a search criteria (similar to email above). Those skilled in the art recognize many useful syntaxes for searching any characteristics of AB objects/entries. In one embodiment, all occurrences found are presented to the user for reconciliation with appropriate AB information. In a preferred embodiment, the most recent occurrence from the AB system is provided for the move. Wildcarding (pattern matching) is preferably inherent by searching for substrings. The search takes place as though the user manually launched the search, entered the criteria for the search, and then was provided with the result for moving it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and move. Preferably, the move command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. The AB entry is moved in its entirety to the target system AB system. In another embodiment, a new parameter is specified to move the AB item(s) to a special destination. A duplicate AB entry may be created if one already exists.
...		

Fig. 71B-14

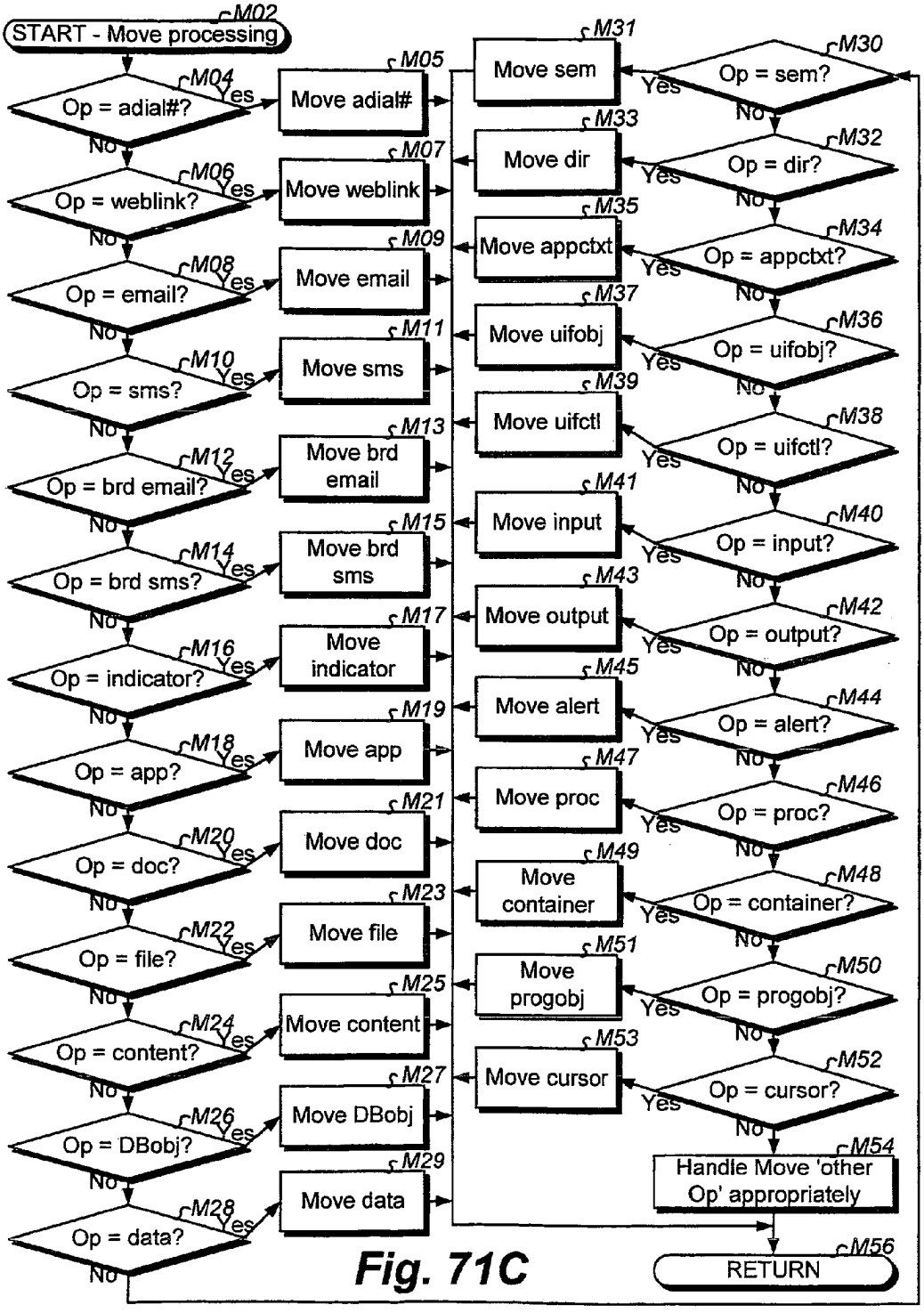
M02
START - Move processing
M04
Op = adial#?
Yes
No
M05
Move adial#
M06
Op = weblink?
M07
Move weblink
M08
Op = email?
M09
Move email
M10
Op = sms?
M11
Move sms
M12
Op = brd email?
M13
Move brd email
M14
Op = brd sms?
M15
Move brd sms
M16
Op = indicator?
M17
Move indicator
M18
Op = app?
M19
Move app
M20
Op = doc?
M21
Move doc
M22
Op = file?
M23
Move file
M24
Op = content?
M25
Move content
M26
Op = DBobj?
M27
Move DBobj
M28
Op = data?
M29
Move data
M31
Move sem
M33
Move dir
M35
Move appctxt
M37
Move uifobj
M39
Move uifctl
M41
Move input
M43
Move output
M45
Move alert
M47
Move proc
M49
Move container
M51
Move progobj
M53
Move cursor
M30
Op = sem?
M32
Op = dir?
M34
Op = appctxt?
M36
Op = uifobj?
M38
Op = uifctl?
M40
Op = input?
M42
Op = output?
M44
Op = alert?
M46
Op = proc?
M48
Op = container?
M50
Op = progobj?
M52
Op = cursor?
M54
Handle Move 'other Op' appropriately
M56
RETURN

Fig. 71C

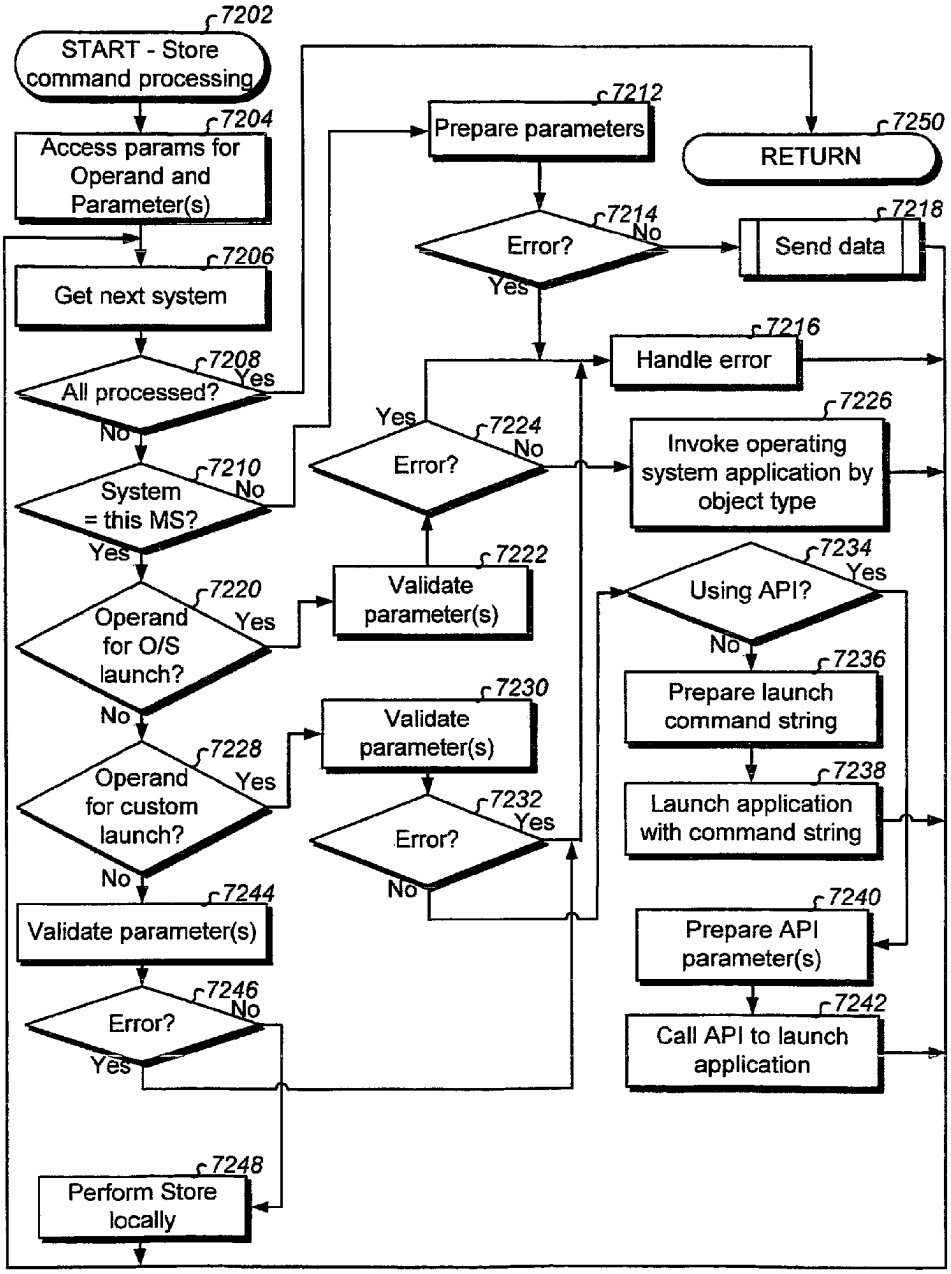
7202
START - Store command processing
7204
Access params for Operand and Parameter(s)
7206
Get next system
7208
All processed?
Yes
No
7210
System = this MS?
No
Yes
7220
Operand for O/S launch?
Yes
No
7228
Operand for custom launch?
Yes
No
7244
Validate parameter(s)
7246
Error?
No
Yes
7248
Perform Store locally
7212
Prepare parameters
7214
Error?
No
Yes
7224
Error?
No
Yes
7222
Validate parameter(s)
7230
Validate parameter(s)
7232
Error?
Yes
No
7250
RETURN
7218
Send data
7216
Handle error
7226
Invoke operating system application by object type
7234
Using API?
Yes
No
7236
Prepare launch command string
7238
Launch application with command string
7240
Prepare API parameter(s)
7242
Call API to launch application

Fig. 72A

Operand →	PM	Preferred embodiment Store processing
201	C	Storing an auto-dial # stores the auto-dial # parameter to the system(s). Preferably, a certain log is used to store the auto-dial #, or an additional parameter can be provided for where to store the auto-dial # to. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored auto-dial #. An additional parameter may be specified for how/where exactly to store it (e.g. which log).
203	S	Storing a weblink stores the weblink parameter to the system(s). Preferably, a certain link folder is used to store it, or an additional parameter can be provided for where to store it. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored weblink. An additional parameter may be specified for how/where exactly to store it (e.g. which folder).
205	C	Storing an email causes storing the email object to the system(s)' email system. In one embodiment, the email parameter string is a string containing a syntax for defining an email item and used to create the email to a certain folder, configured folder, or as specified with an additional parameter. Each email field can be defined with values, and the store command may result in defaulting fields which are not specified in the email parameter. In another embodiment, the email parameter points to a file containing a syntax for creating the email object. Those skilled in the art recognize many useful syntaxes for setting data in a new email object. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored email.

Fig. 72B-1

Operand →	PM	Preferred embodiment Store processing
207	C	Storing an sms message causes storing the sms message object to the system(s)' messaging system. In one embodiment, the sms message parameter string is a string containing a syntax for defining an sms message item and used to create the sms message to a certain folder, configured folder, or as specified with an additional parameter. Each sms message field can be defined with values, and the store command may result in defaulting fields which are not specified in the sms message parameter. In another embodiment, the sms message parameter points (e.g. path) to a file containing a syntax for creating the sms message object. Those skilled in the art recognize many useful syntaxes for setting data in a new sms message object. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored sms message.
209	C	Storing a broadcast email causes storing the email object to the system(s)' email system. In one embodiment, the email parameter string is a string containing a syntax for defining an email item and used to create the email to a certain folder, configured folder, or as specified with an additional parameter. Each email field can be defined with values, and the store command may result in defaulting fields which are not specified in the email parameter. In another embodiment, the email parameter points (e.g. path) to a file containing a syntax for creating the email object. Those skilled in the art recognize many useful syntaxes for setting data in a new email object. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored email.

Fig. 72B-2

Operand ↓	PM	Preferred embodiment Store processing
211	C	Storing a broadcast sms message causes storing the sms message object to the system(s)' messaging system. In one embodiment, the sms message parameter string is a string containing a syntax for defining an sms message item and used to create the sms message to a certain folder, configured folder, or as specified with an additional parameter. Each sms message field can be defined with values, and the store command may result in defaulting fields which are not specified in the sms message parameter. In another embodiment, the sms message parameter points to a file (e.g. path) containing a syntax for creating the sms message object. Those skilled in the art recognize many useful syntaxes for setting data in a new sms message object. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored sms message..
213	O	See Invoke Command for identical processing.
215	C	See Invoke Command for identical processing.
217	S	Storing a document stores the document parameter to the system(s). The document may be a self contained object parameter, or pointer (e.g. path) to a file defining the document. Preferably, a certain folder is used to store it, or an additional parameter can be provided for where to store it. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored document.
219	S	Storing a file stores the file from the path parameter to the system(s). Preferably, a certain folder is used to store it, or an additional parameter can be provided for where to store it. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored file.

Fig. 72B-3

Operand ↓	PM	Preferred embodiment Store processing
221	O	Storing content stores the content parameter to the system(s). The content may be a self contained object parameter, or pointer (e.g. path) to a file defining the content. Preferably, a certain destination is used to store it, or an additional parameter can be provided for where to store it. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored content.
223	C	See Invoke Command for identical processing.
225	O	See Invoke Command for identical processing.
227	O	See Invoke Command for identical processing.
229	S	Storing a directory stores the directory from the path parameter to the system(s). Preferably, a certain folder is used to store it, or an additional parameter can be provided for where to store it. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored directory.
231	C	See Invoke Command for identical processing.
233	S	Storing a focused user interface object causes a snapshot to be taken of the currently focused user interface object (to .jpg, .gif, alternate embodiments, etc) at the MS and then the snapshot file is stored as though the user manually captured the focused user interface object (e.g. Alt-Prtscrn) and saved it. Preferably, a certain folder is used to store it, or an additional parameter can be provided for where to store it. The first parameter command syntax can be defaulted or changed. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored snapshot.
235	O	See Invoke Command for identical processing.
237	O	See Invoke Command for identical processing.
239	O	See Invoke Command for identical processing.

Fig. 72B-4

Operand ↓	PM	Preferred embodiment Store processing
241	S	Storing an alert causes storing the alert to the specified system(s). The alert parameter is the same parameter used to generate an alert (e.g. using another command). Storing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search and store. Preferably, the store command data is maintained to LBX History; a historical log, or other useful storage for subsequent use. The store is performed so that the target system(s) are delivered the alert(s) like delivering a new alert to the systems.
243	O	Storing a process causes sending an operating system signal (see UNIX signaling) to the process name (after determining the Process ID (PID) of the prname parameter). A numeric value parameter (e.g. 0 or 1) may be communicated with the signal. An error is logged if the process is not found for signaling. Preferably, the store command data is maintained to LBX History, a log, or other useful storage for subsequent use.
245	S	Storing a container stores the container parameter to the system(s). The container may be a self contained object parameter, or pointer (e.g. path) to a file defining the container. Preferably, a certain destination is used to store it, or an additional parameter can be provided for where to store it. Store processing takes place as though the user manually launched it. Appropriate MS storage is updated and subsequently processed as though the user manually performed the store command. Preferably, the store cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. In a preferred embodiment, information about who, when, why is additionally maintained with the stored container.
247	O	See Invoke Command for identical processing.
249	O	See Invoke Command for identical processing.
251	C	See Invoke Command for identical processing.
253	C	See Invoke Command for identical processing.
...		

Fig. 72B-5

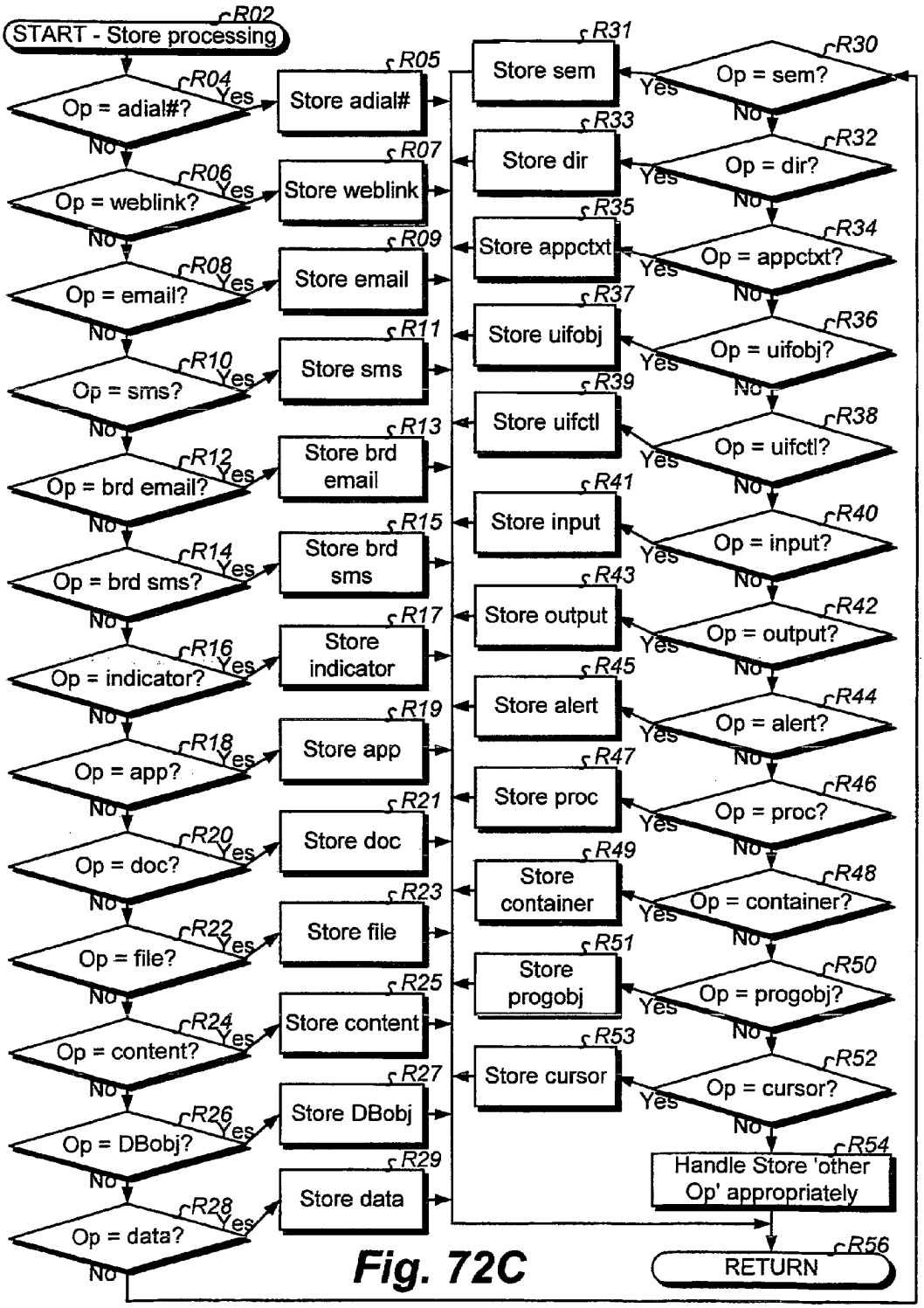
R02
START - Store processing
R04
Op = adial#?
Yes
No
R05
Store adial#
R06
Op = weblink?
Yes
No
R07
Store weblink
R08
Op = email?
Yes
No
R09
Store email
R10
Op = sms?
Yes
No
R11
Store sms
R12
Op = brd email?
Yes
No
R13
Store brd email
R14
Op = brd sms?
Yes
No
R15
Store brd sms
R16
Op = indicator?
Yes
No
R17
Store indicator
R18
Op = app?
Yes
No
R19
Store app
R20
Op = doc?
Yes
No
R21
Store doc
R22
Op = file?
Yes
No
R23
Store file
R24
Op = content?
Yes
No
R25
Store content
R26
Op = DBobj?
Yes
No
R27
Store DBobj
R28
Op = data?
Yes
No
R29
Store data
R31
Store sem
R33
Store dir
R35
Store appctxt
R37
Store uifobj
R39
Store uifctl
R41
Store input
R43
Store output
R45
Store alert
R47
Store proc
R49
Store container
R51
Store progobj
R53
Store cursor
R30
Op = sem?
Yes
No
R32
Op = dir?
Yes
No
R34
Op = appctxt?
Yes
No
R36
Op = uifobj?
Yes
No
R38
Op = uifctl?
Yes
No
R40
Op = input?
Yes
No
R42
Op = output?
Yes
No
R44
Op = alert?
Yes
No
R46
Op = proc?
Yes
No
R48
Op = container?
Yes
No
R50
Op = progobj?
Yes
No
R52
Op = cursor?
Yes
No
R54
Handle Store 'other Op' appropriately
R56
RETURN

Fig. 72C

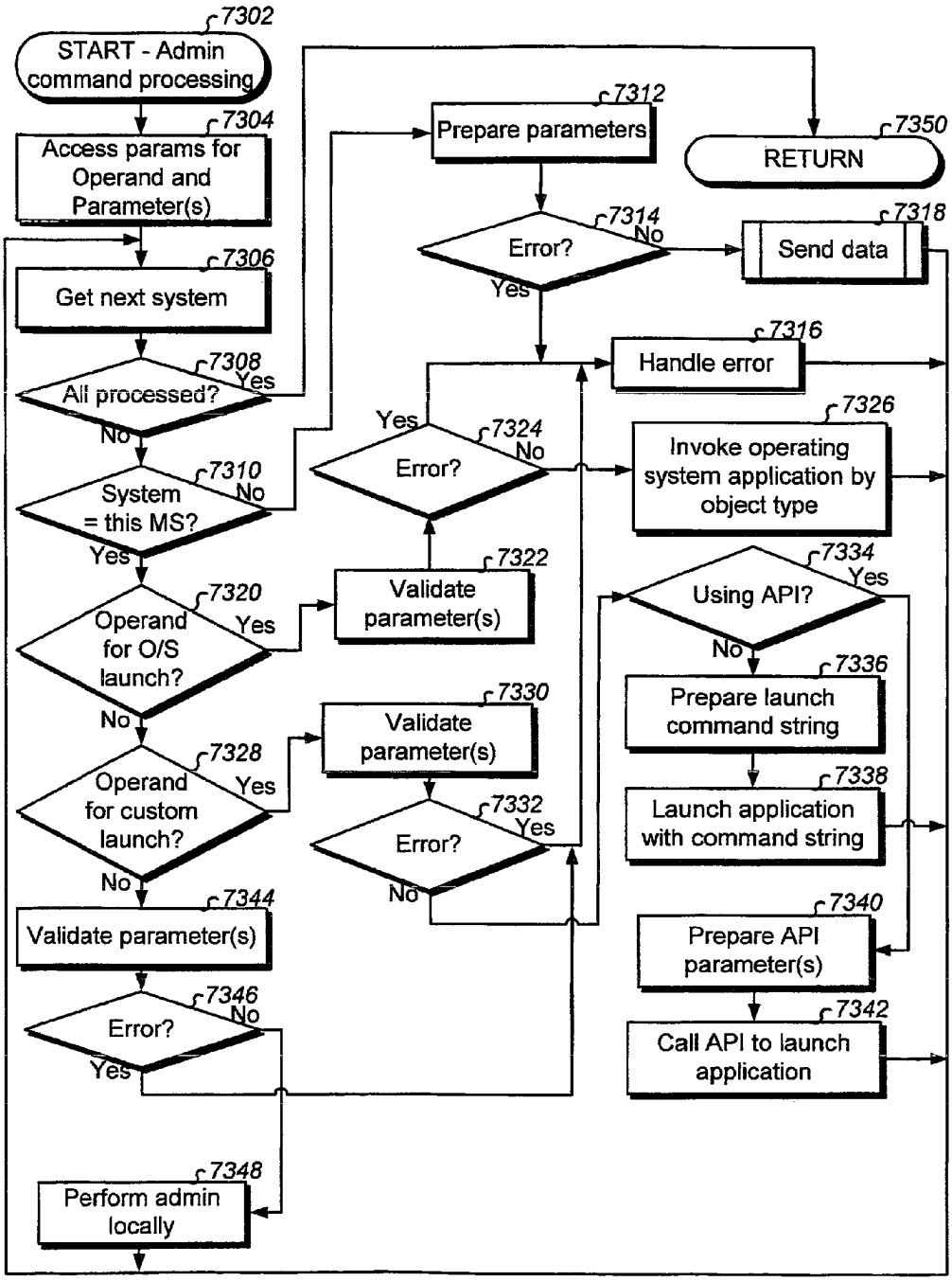
7302
START - Admin command processing
7304
Access params for Operand and Parameter(s)
7306
Get next system
7308
All processed?
Yes
No
7310
System = this MS?
No
Yes
7320
Operand for O/S launch?
Yes
No
7328
Operand for custom launch?
Yes
No
7344
Validate parameter(s)
7346
Error?
No
Yes
7348
Perform admin locally
7312
Prepare parameters
7314
Error?
No
Yes
7316
Handle error
7322
Validate parameter(s)
7324
Error?
Yes
No
7330
Validate parameter(s)
7332
Error?
Yes
No
7350
RETURN
7318
Send data
7326
Invoke operating system application by object type
7334
Using API?
Yes
No
7336
Prepare launch command string
7338
Launch application with command string
7340
Prepare API parameter(s)
7342
Call API to launch application

Fig. 73A

Operand ↓	PM	Preferred embodiment Administrate processing
201	C	Administrating an auto-dial # launches a MS phone number log interface with the auto-dial # parameter for searching. Preferably, both the outgoing and incoming logs are searched. The auto-dial # parameter can be a wildcard (pattern) for matching. In one embodiment, all occurrences found in history are presented with their date/time stamps, log found in, and perhaps other information, of the call and when it took place. In another embodiment, the most recent occurrence from a particular log is presented, and perhaps in an interface which enables calling the # with a minimal user action. The search takes place as though the user manually launched the search, entered the auto-dial # for the search, and then was presented with the result(s) in an appropriate administration interface. Appropriate MS storage is updated and subsequently processed as though the user manually performed the search. Preferably, the administration cmd data is maintained to LBX History, a historical log, or other useful storage for subsequent use. Subsequent administration includes modifying the log entry(s) as desired (e.g. add a 1 prefix since caller id may not have maintained one when it is needed for auto-dial). A new parameter can be specified for which log(s) to search.
203	S	Administrating a weblink launches a search to MS browser history with the weblink parameter (and with the params parameter if specified) for searching. The weblink parameter can be a wildcard (pattern) for matching. In one embodiment, all occurrences found in history are presented with their date/time stamps, folder found in, and perhaps other information, of the link and when it was invoked. In another embodiment, the most recent occurrence from a particular invocation is presented, and perhaps in an interface which enables invoking (transposing to) the weblink with a minimal user action. The search takes place as though the user manually launched the search, entered the weblink for the search, and then was presented with the result(s) in an appropriate administration interface. Appropriate MS storage is updated and subsequently processed as though the user had manually performed the search. Preferably, the administration command data is maintained to LBX History, a historical log, or other useful storage for subsequent use. Subsequent administration includes modifying the weblink(s) as desired (e.g. change description).

Fig. 73B-1