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(54) **CLIPVIEW APPLICATIONS**

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Publication Classification

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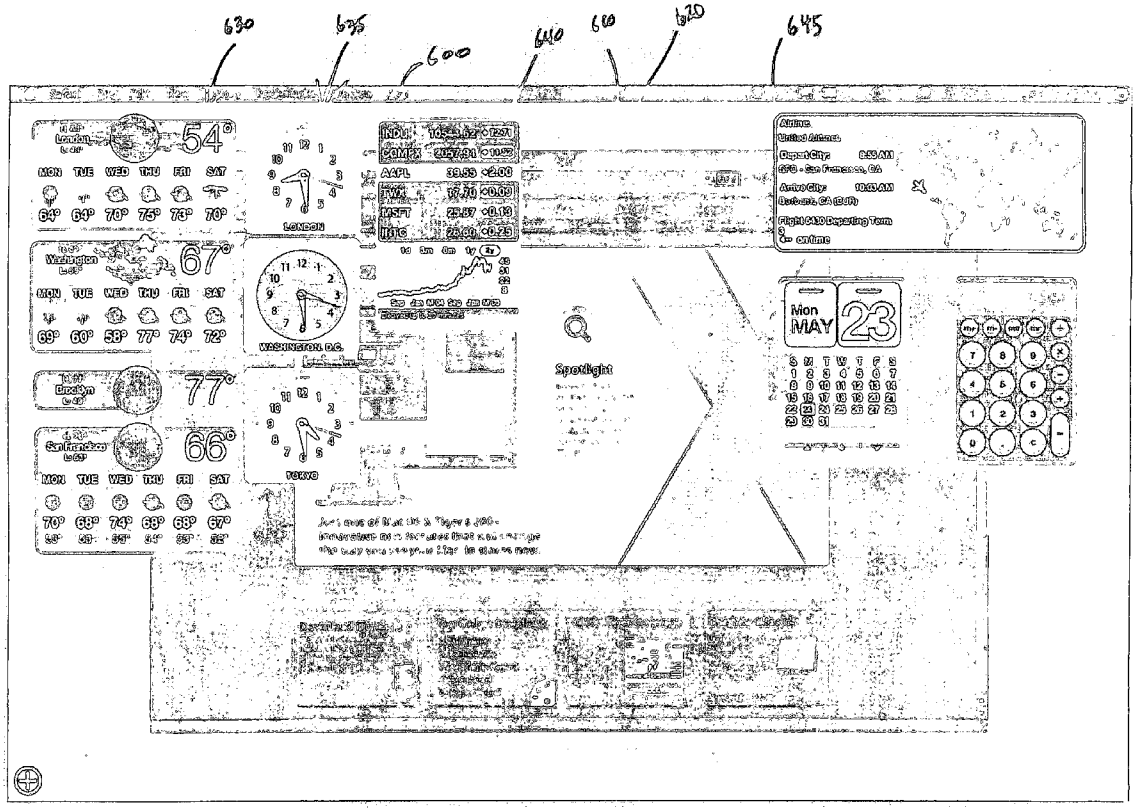
G09G 5/00 (2006.01)

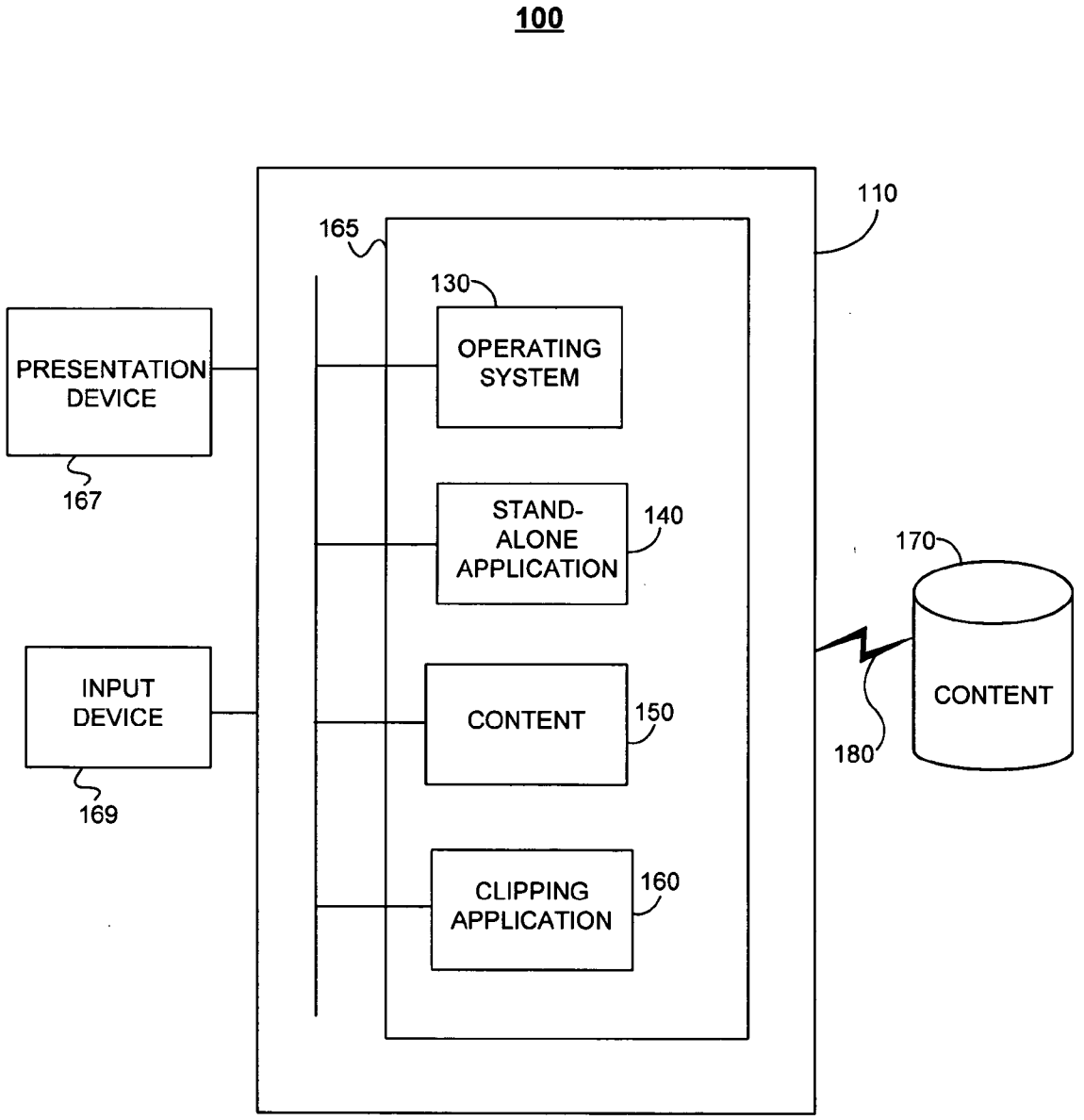
(52) **U.S. Cl.** **345/629**

(57) **ABSTRACT**

An implementation allows a user to select an area of interest in a content source and to clip content from the area of interest. A variety of content types may be clipped and presented to a user, and the clipped content may be refreshed from the selected area of interest. Various configuration parameters, as well as the clipped content, may be stored for future retrieval by a clipping application that presents the clipped content. Methods, computer program products, systems, and data structures are provided. One method includes identifying one or more content sources, identifying a portion of a content source to be included in each of a first and second view, storing information associated with the identified content source for each view including a name and identifying information for designating a respective portion of a content source, and displaying both the first and second view in an aggregate view.



DISH EXHIBIT 1019
DISH Network L.L.C. et al. v. Digital Broadcasting Solutions, LLC, IPR2023-00976, Page 1 of 56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OPERATING SYSTEM
PRESENTATION DEVICE
167
STAND-ALONE APPLICATION
140
170
INPUT DEVICE
CONTENT
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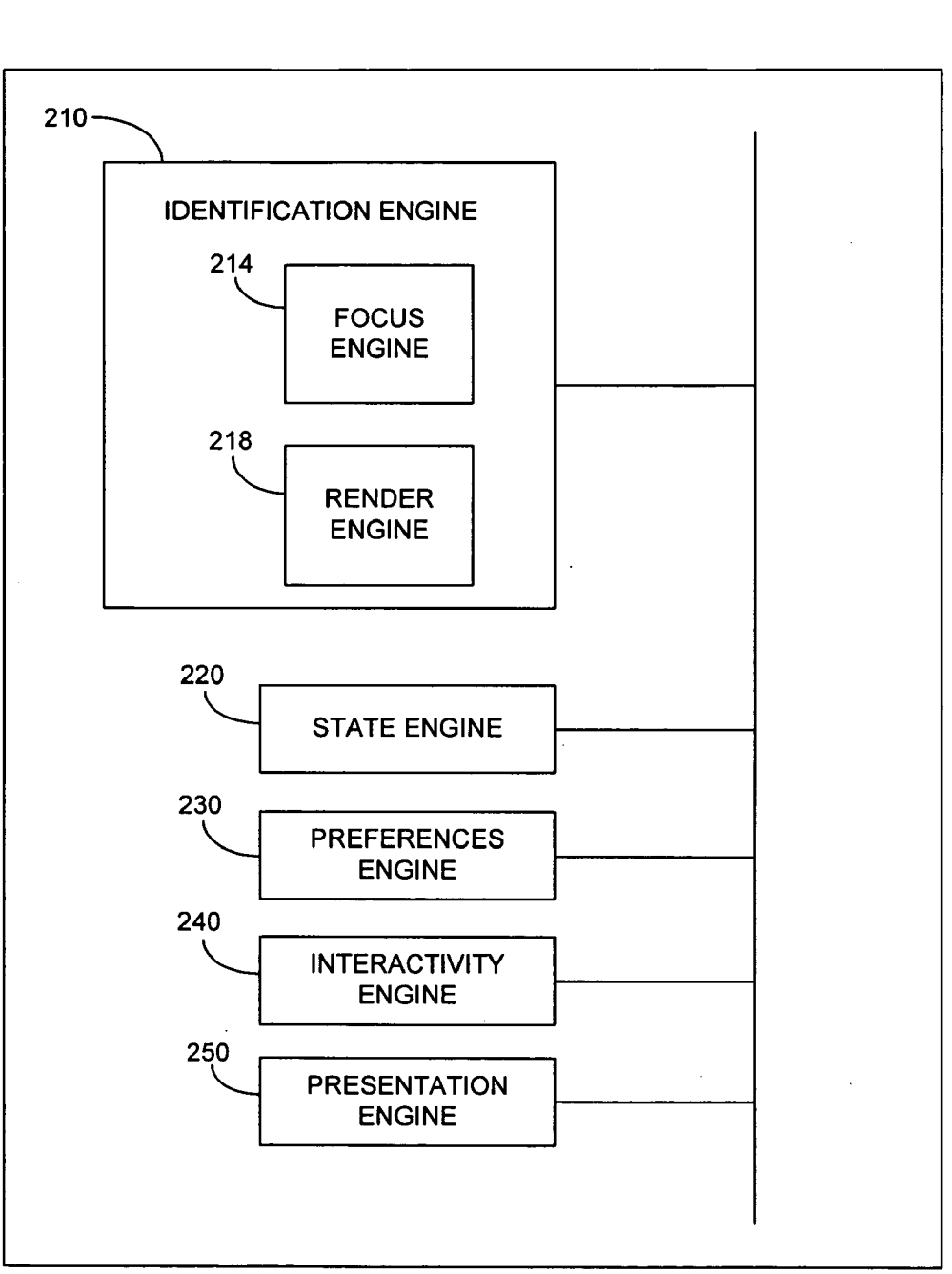
CONTENT
180
169
CLIPPING APPLICATION
160

FIG. 1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IDENTIFICATION ENGINE
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FOCUS ENGINE
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RENDER ENGINE
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STATE ENGINE
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PREFERENCES ENGINE
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INTERACTIVITY ENGINE
250
PRESENTATION ENGINE

FIG. 2

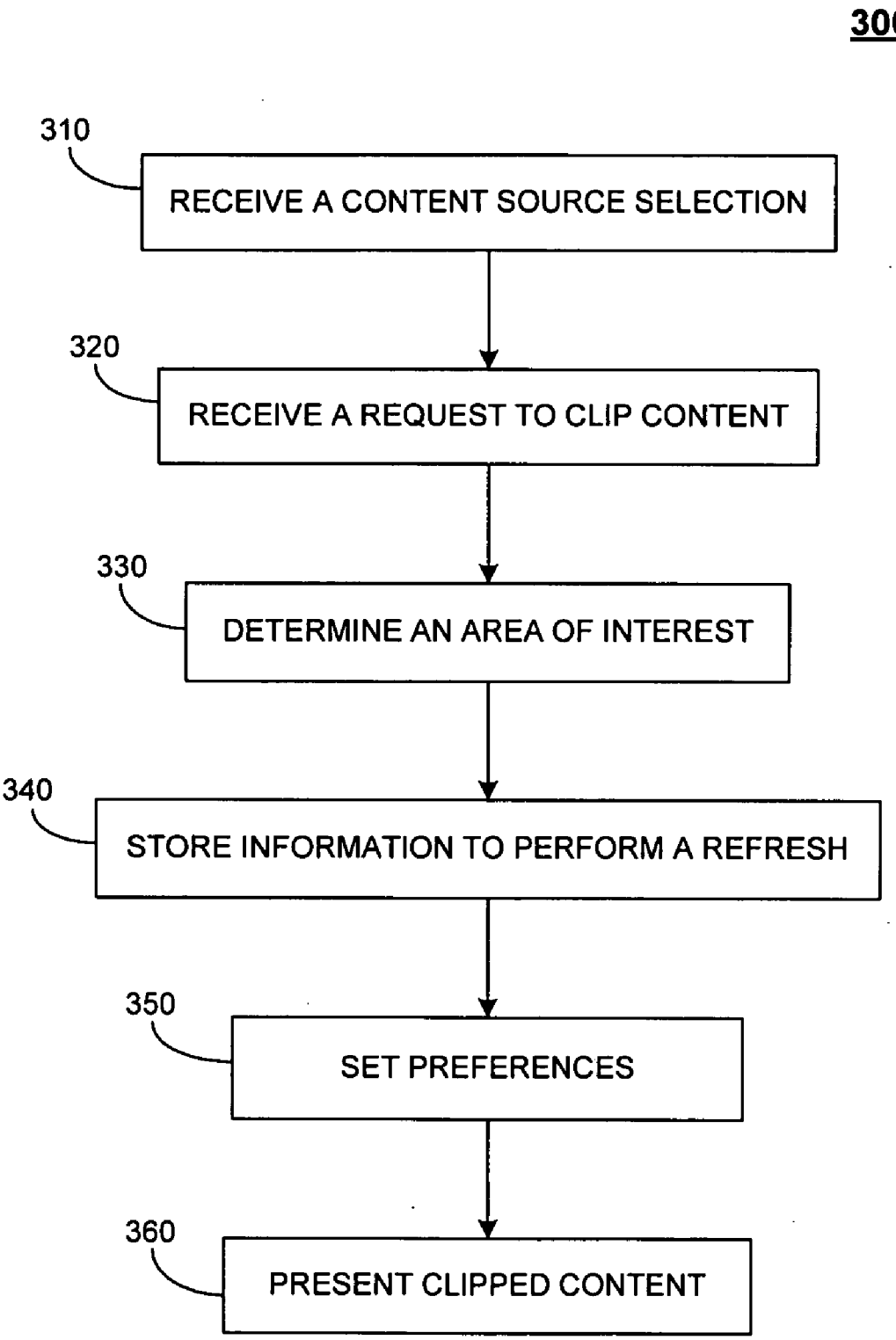

300
310
RECEIVE A CONTENT SOURCE SELECTION
320
RECEIVE A REQUEST TO CLIP CONTENT
330
DETERMINE AN AREA OF INTEREST
340
STORE INFORMATION TO PERFORM A REFRESH
350
SET PREFERENCES
360
PRESENT CLIPPED CONTENT

FIG. 3

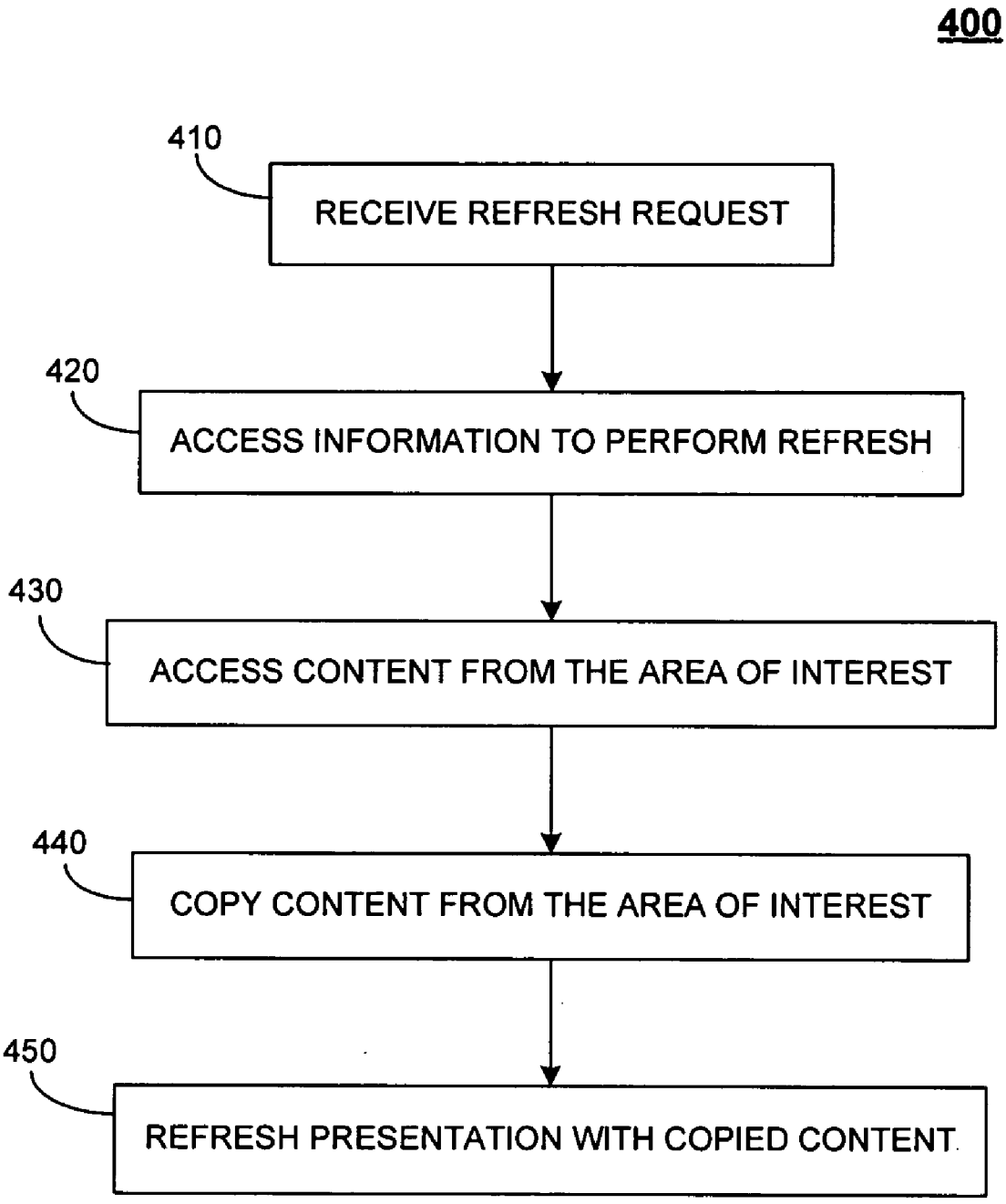
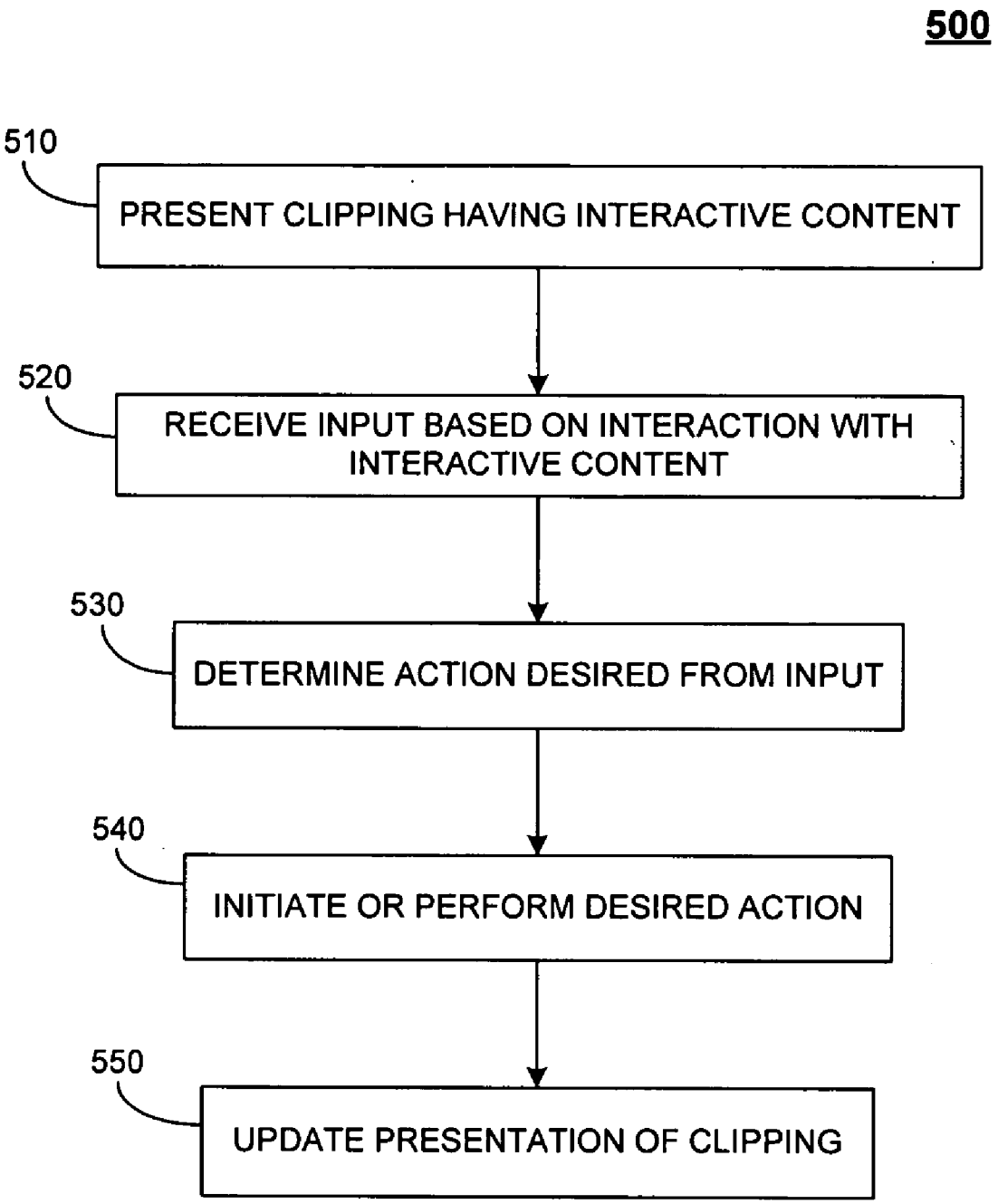

400
410
RECEIVE REFRESH REQUEST
420
ACCESS INFORMATION TO PERFORM REFRESH
430
ACCESS CONTENT FROM THE AREA OF INTEREST
440
COPY CONTENT FROM THE AREA OF INTEREST
450
REFRESH PRESENTATION WITH COPIED CONTENT

FIG. 4


500
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PRESENT CLIPPING HAVING INTERACTIVE CONTENT
520
RECEIVE INPUT BASED ON INTERACTION WITH INTERACTIVE CONTENT
530
DETERMINE ACTION DESIRED FROM INPUT
540
INITIATE OR PERFORM DESIRED ACTION
550
UPDATE PRESENTATION OF CLIPPING

FIG. 5

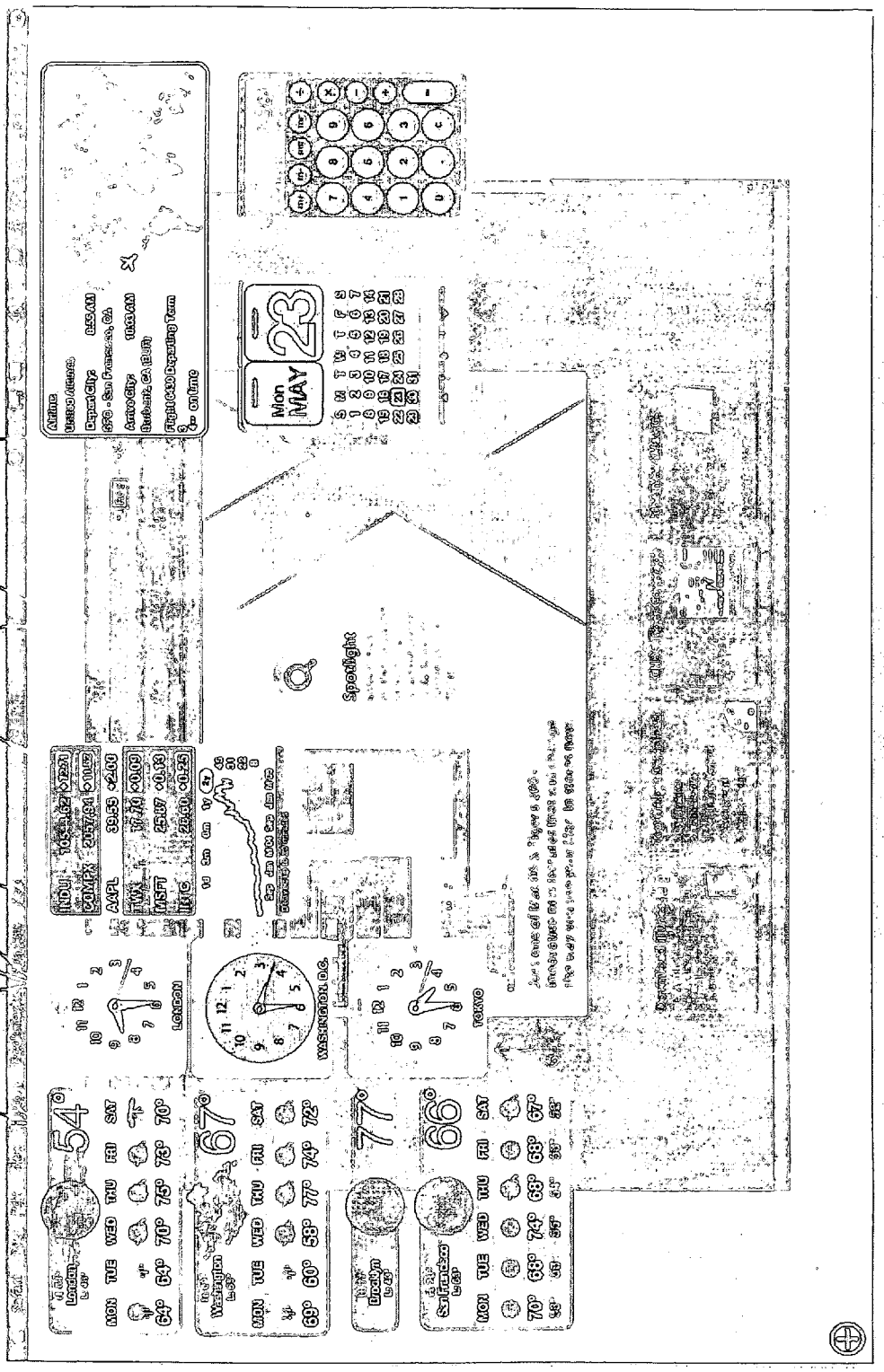
645
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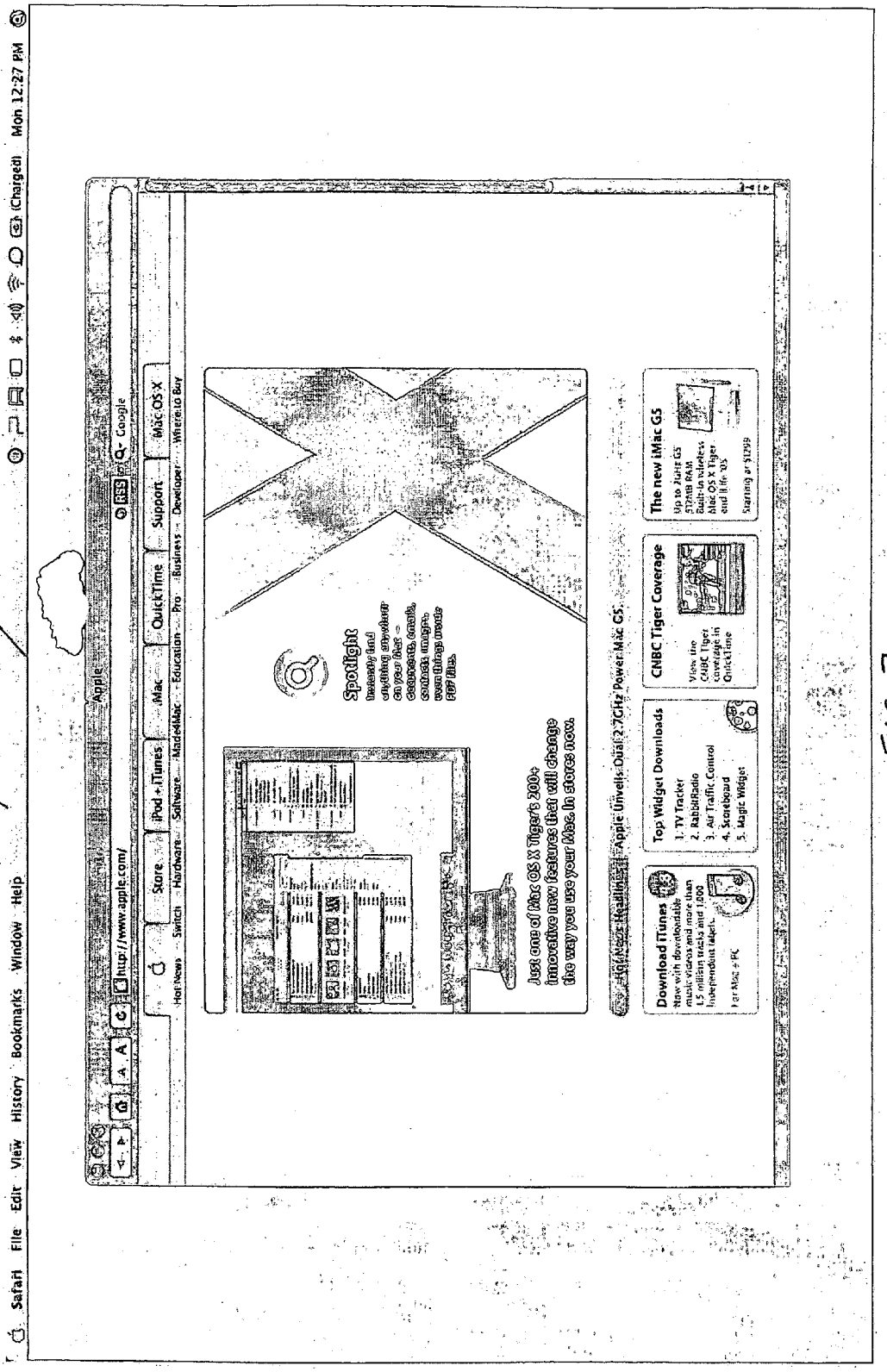
FIG. 6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Just one of Mac OS X Tiger's 200+ innovative new features that will change the way you use your Mac. In stores now.
Download iTunes
Top Widget Downloads
1. TV Tracker
2. RabbitRadio
3. Air Traffic Control
4. Scoreboard
5. Magic Widget
CNBC Tiger Coverage
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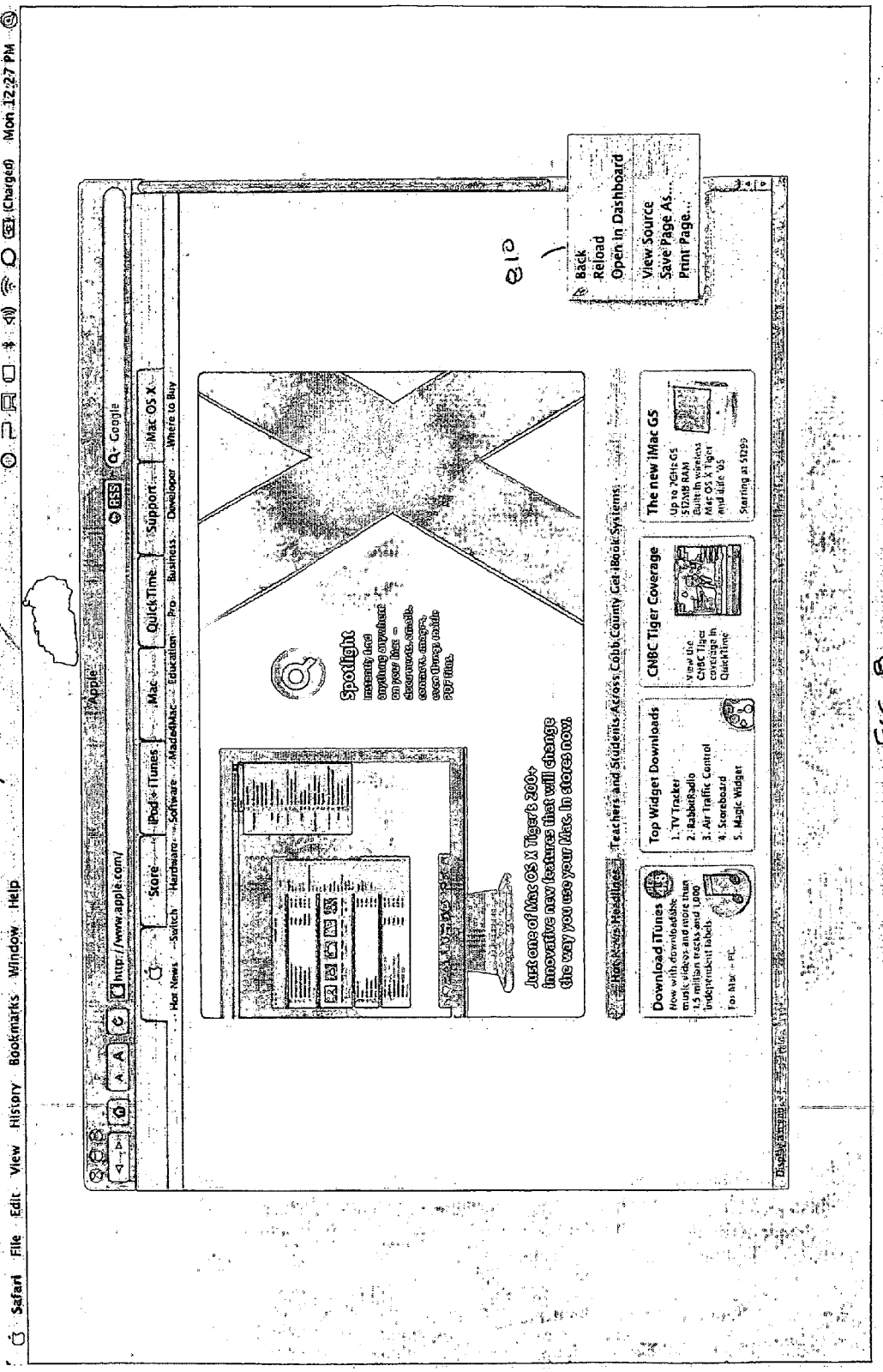
FIG. 7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Just one of Mac OS X Tiger's 200+ innovative new features that will change the way you use your Mac. In stores now.
Top Widget Downloads
1. TV Tracker
2. RabbitRadio
3. Air Traffic Control
4. Scoreboard
5. Magic Widget
CNBC Tiger Coverage
View the CNBC Tiger coverage in QuickTime
The new iMac G5
Up to 2GHz G5
512MB RAM
Built-in wireless
Mac OS X Tiger and iLife '05
Starting at $1299
Download iTunes
Now with downloadable music videos and more than 1.5 million tracks and 1,000 independent labels.
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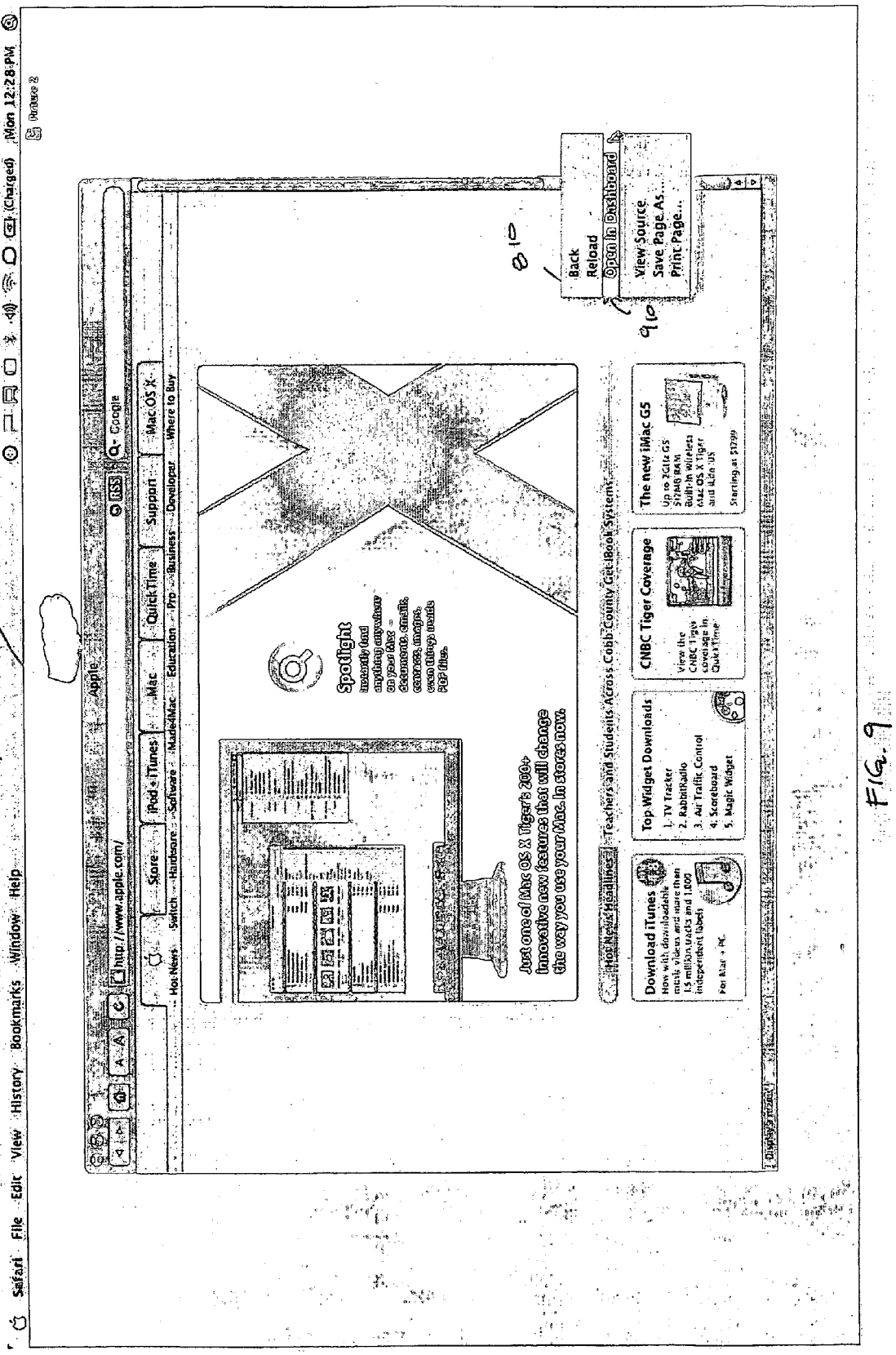
FIG. 8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Business
Developer
Where to Buy
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Just one of Mac OS X Tiger's 200+ innovative new features that will change the way you use your Mac. In stores now.
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Teachers and Students Across Cobb County Get iBook Systems
Download iTunes
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2. RabbitRadio
3. Air Traffic Control
4. Scoreboard
5. Magic Widget
CNBC Tiger Coverage
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FIG. 9

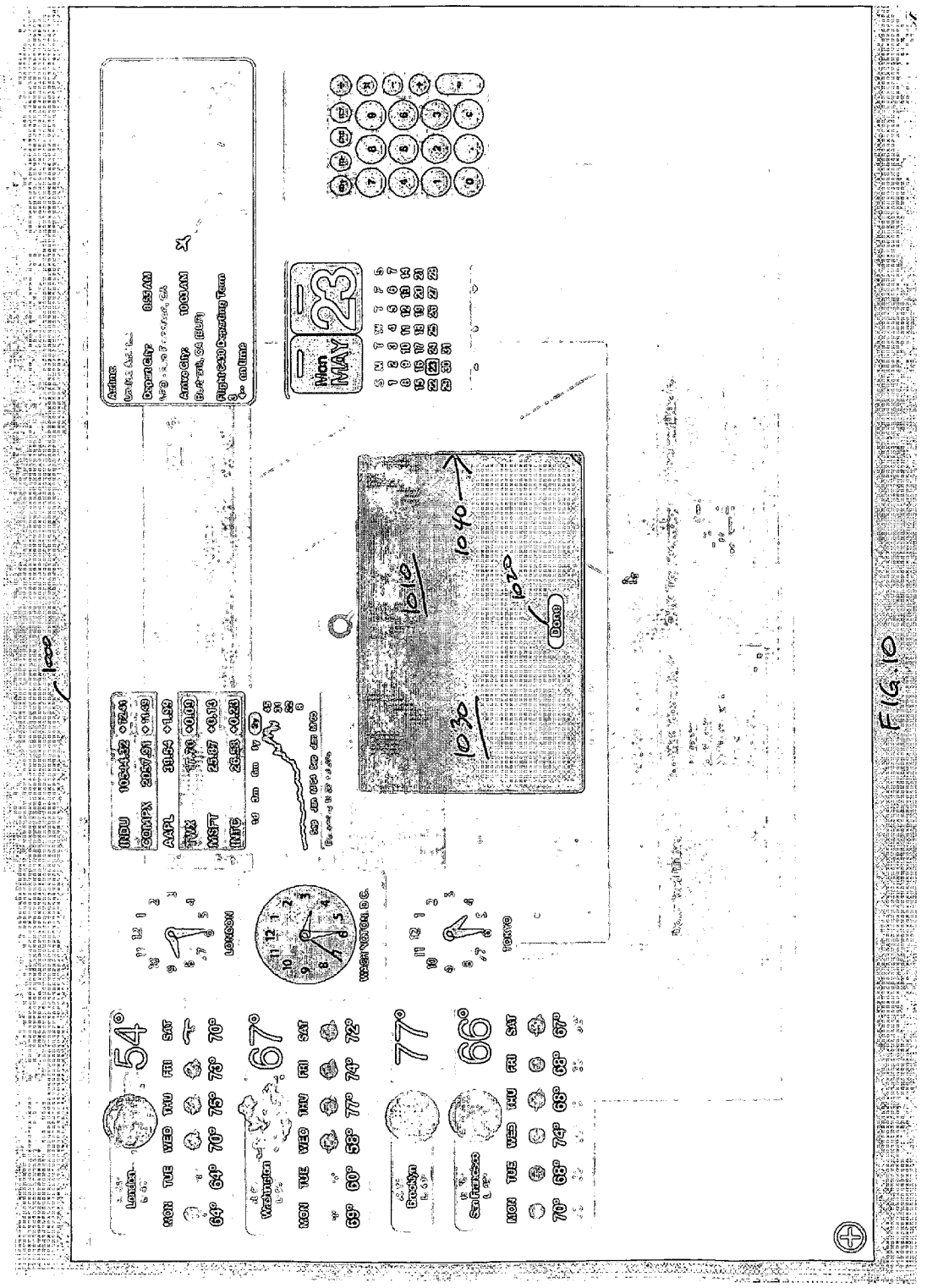
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FIG. 10

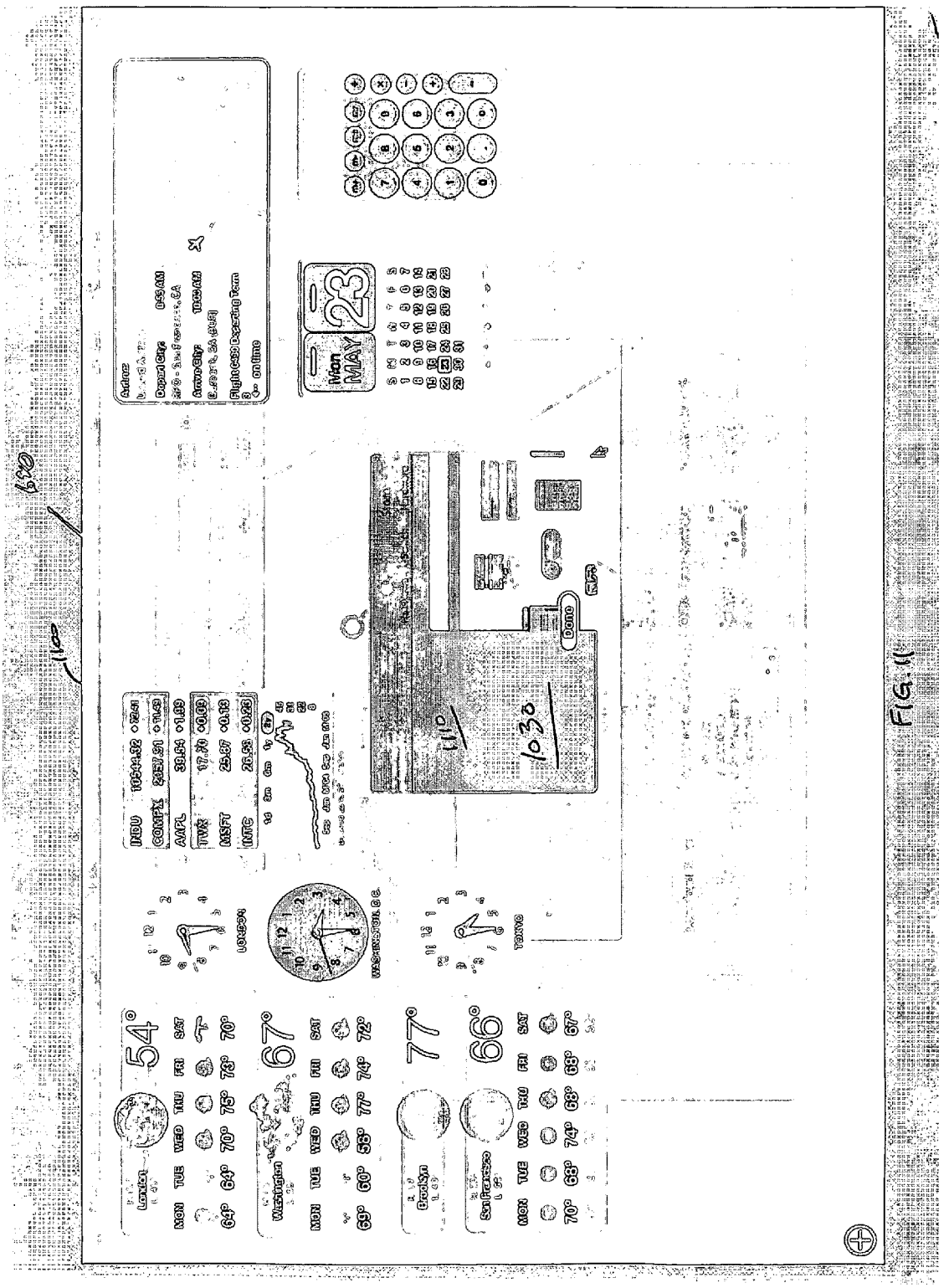
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FIG. 11

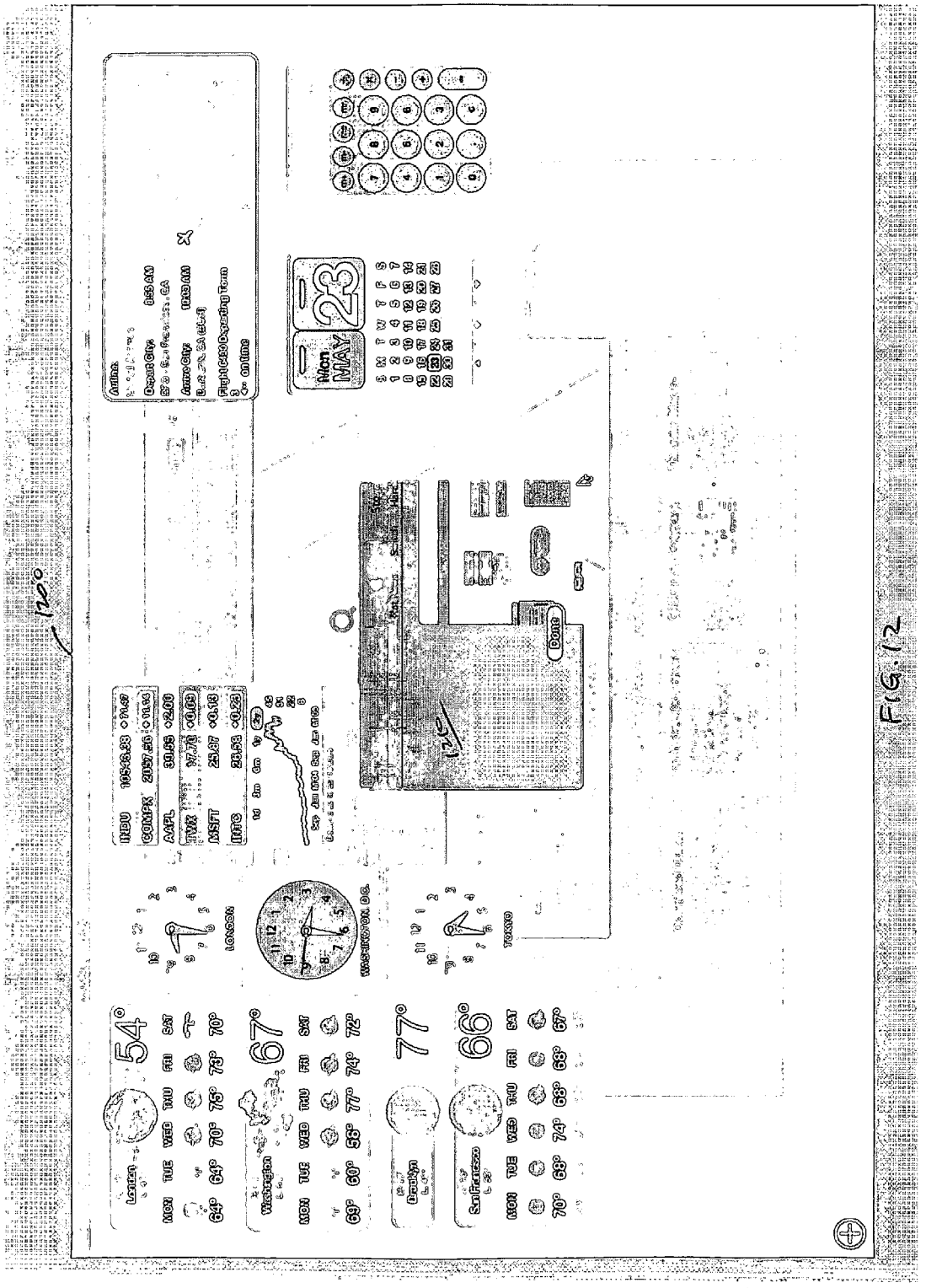
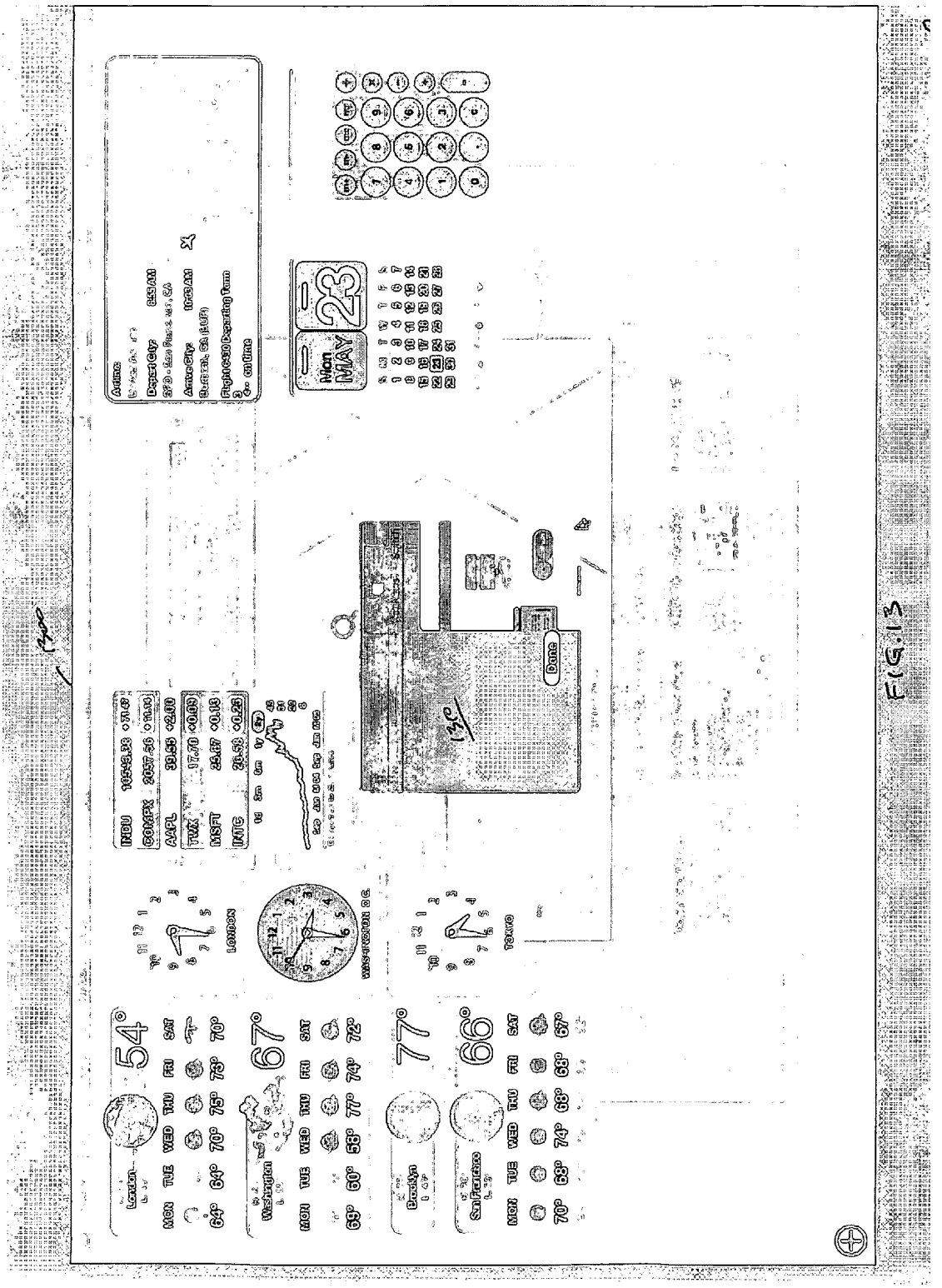


FIG. 12


Arrive
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TOKYO
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64° 64° 70° 75° 73° 70°
Washington
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69° 60° 58° 77° 74° 72°
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77°
San Francisco
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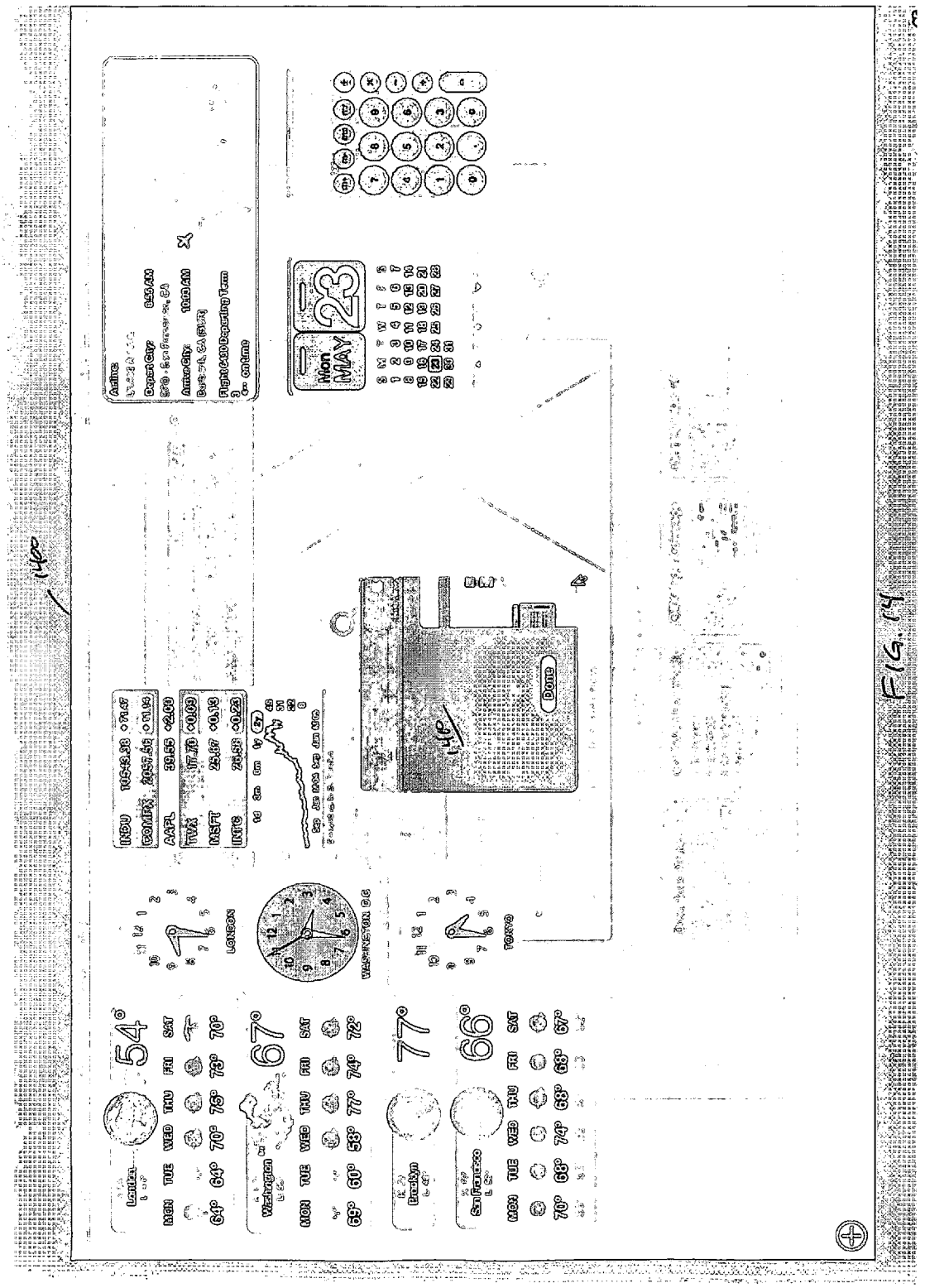
MON TUE WED THU FRI SAT
70° 68° 74° 68° 68° 67°

FIG. 13


1400
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Done
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LONDON
WASHINGTON D.C.
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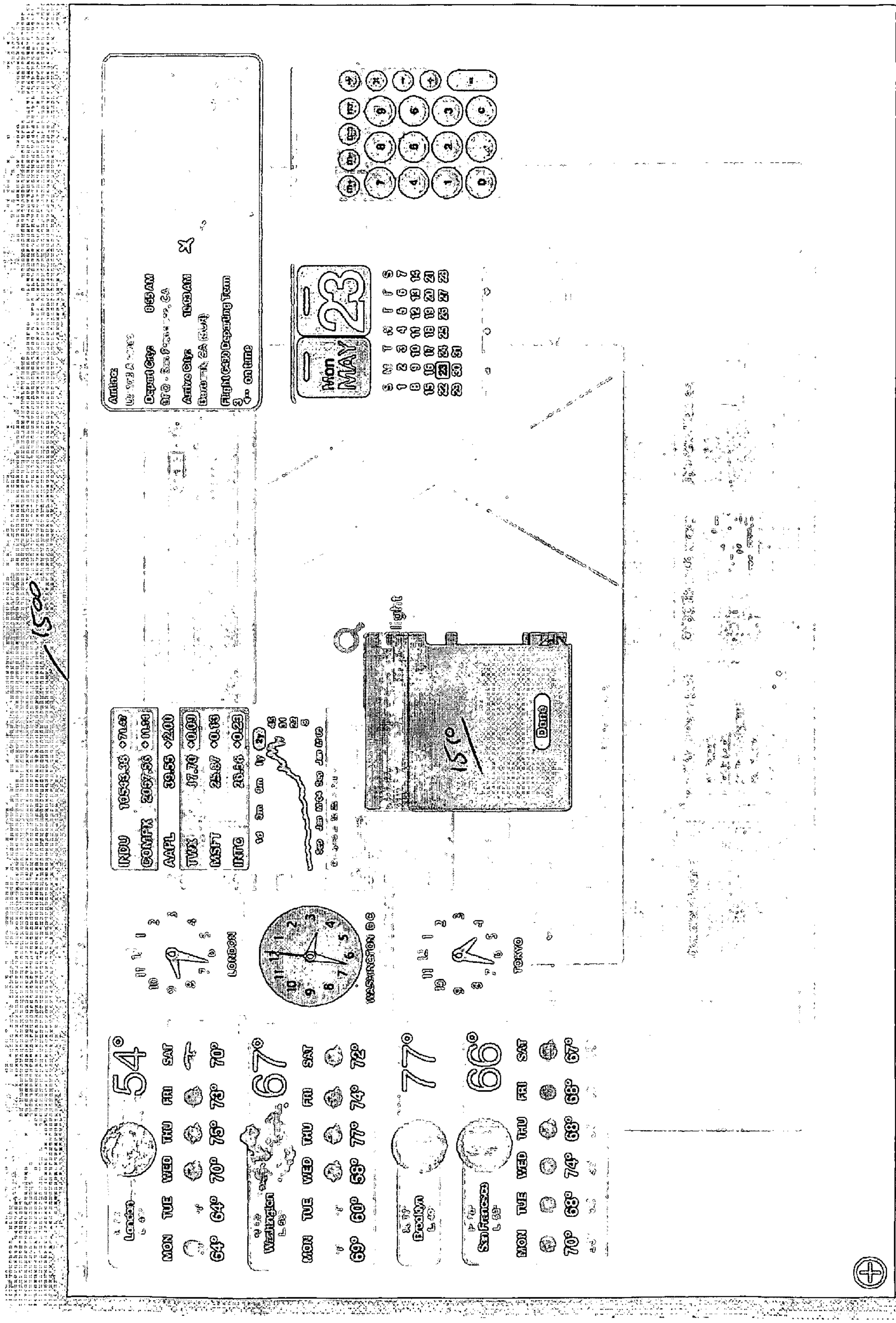
FIG. 14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INDU 10543.38 +71.67
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FIG. 15

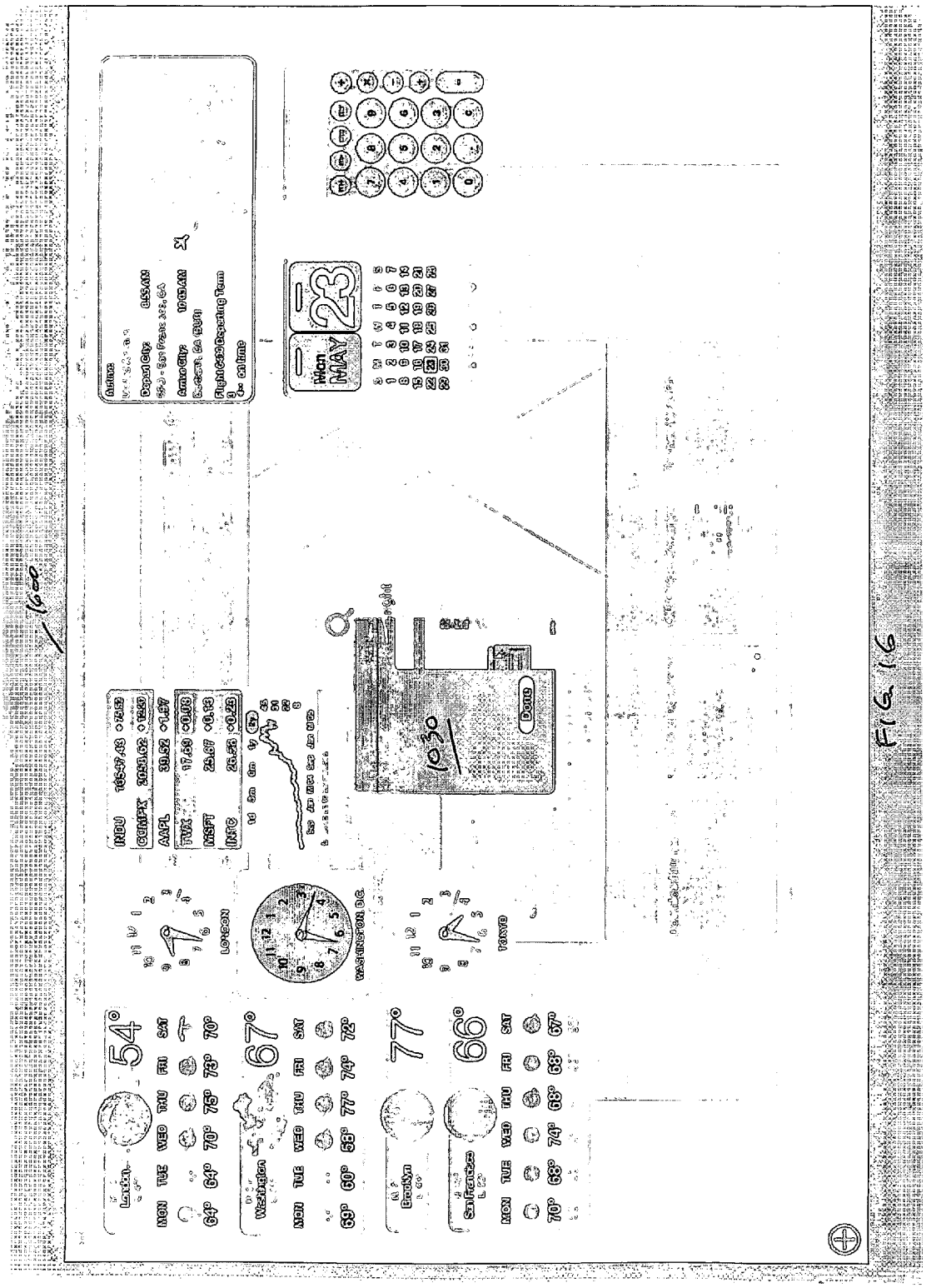

1600
1030
Done
Mon
MAY
23
LONDON
WASHINGTON, D.C.
TOKYO
Washington
Brooklyn
San Francisco
54°
67°
77°
66°

FIG. 16

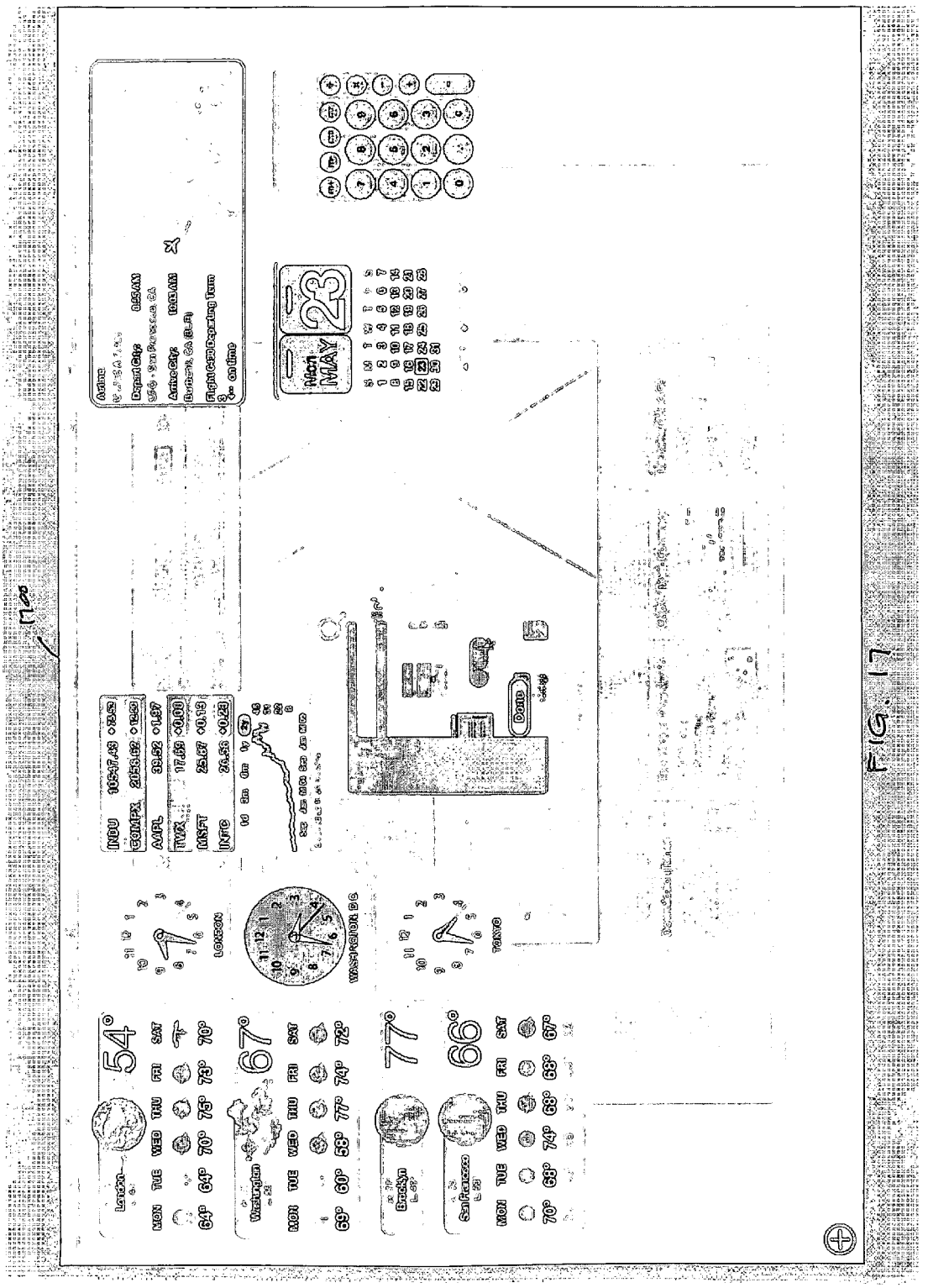


FIG. 17

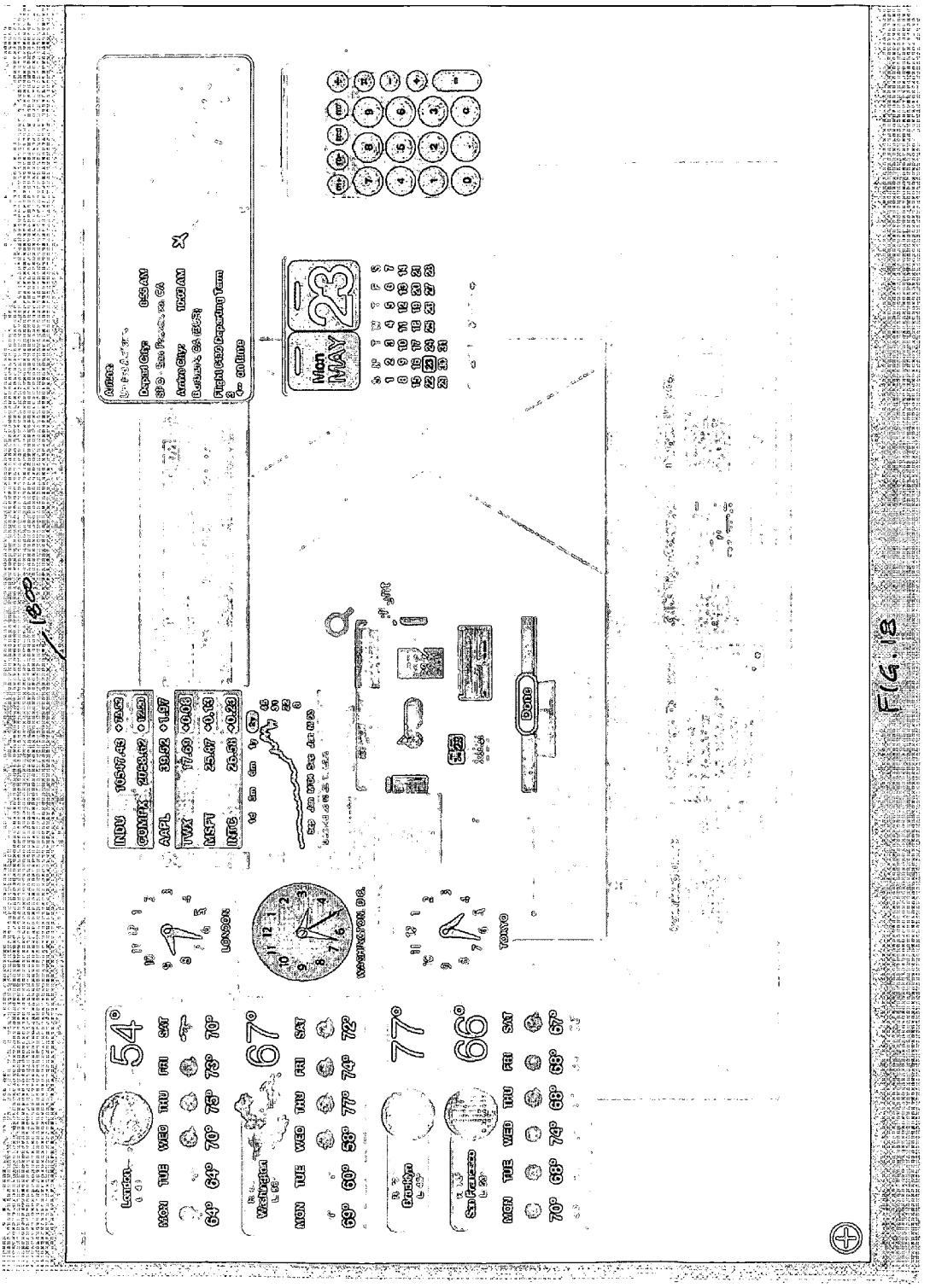


FIG. 18

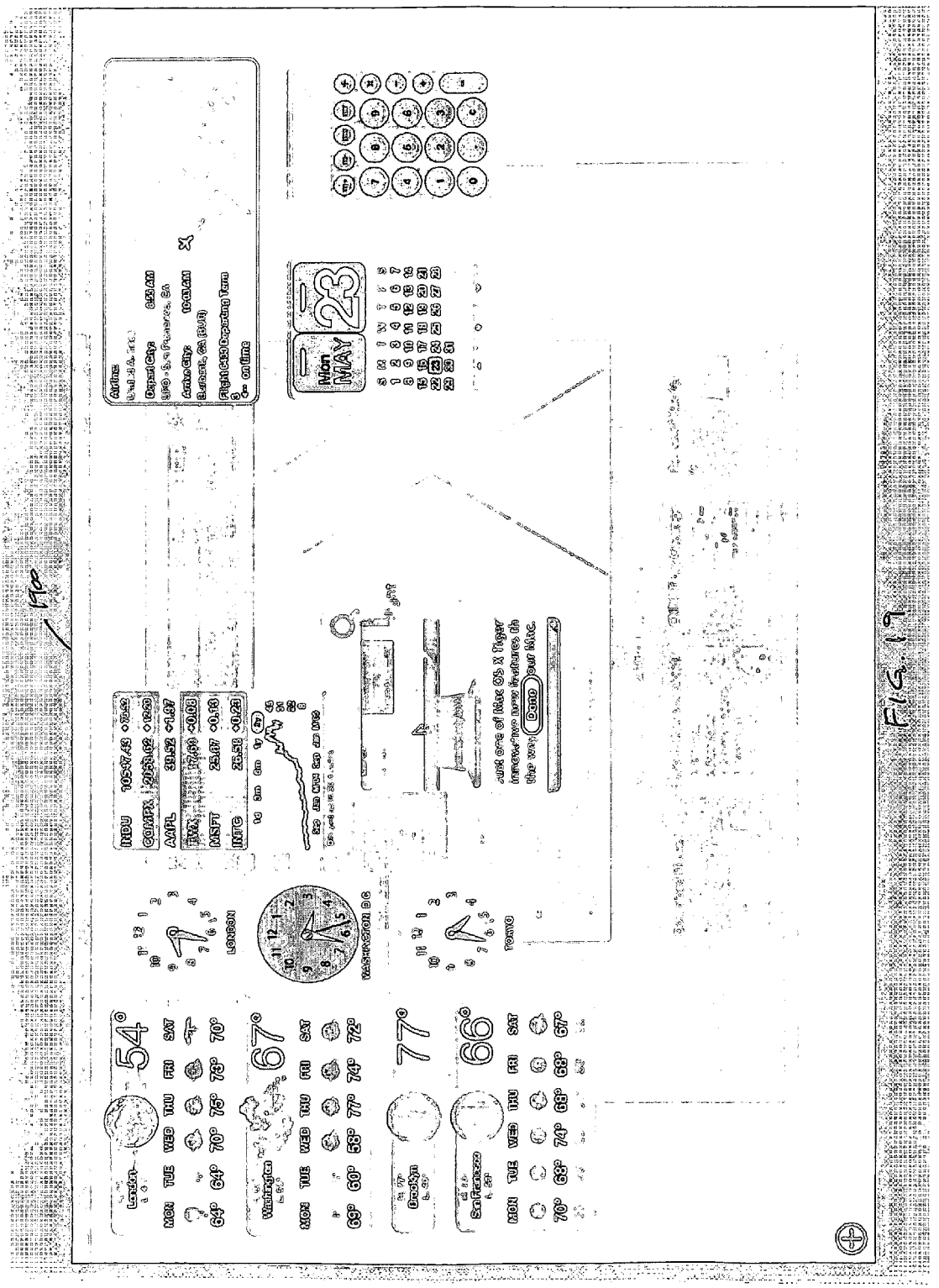

190
Airline
Depart City
Arrive City
Flight 0450 Departing Term
Mon
MAY
23
INDU
COMPX
AAPL
TWX
MSFT
INTC
LONDON
WASHINGTON DC
TOKYO
London
54°
MON TUE WED THU FRI SAT
64° 64° 70° 75° 73° 70°
Washington
67°
MON TUE WED THU FRI SAT
69° 60° 58° 77° 74° 72°
Brooklyn
77°
San Francisco
66°
MON TUE WED THU FRI SAT
70° 68° 74° 69° 68° 67°
Just one of Mac OS X Tiger
Done

FIG. 19

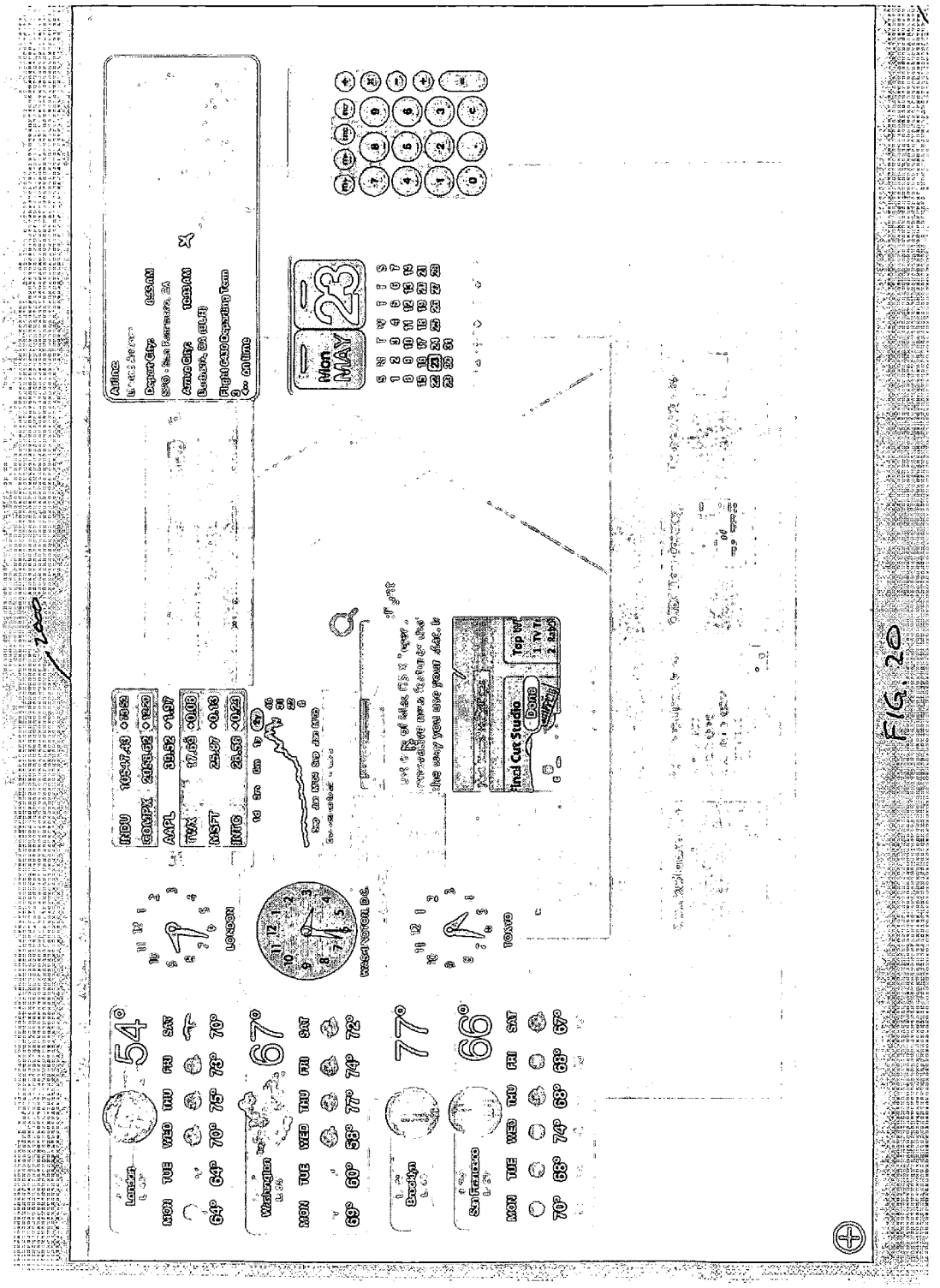


FIG. 20

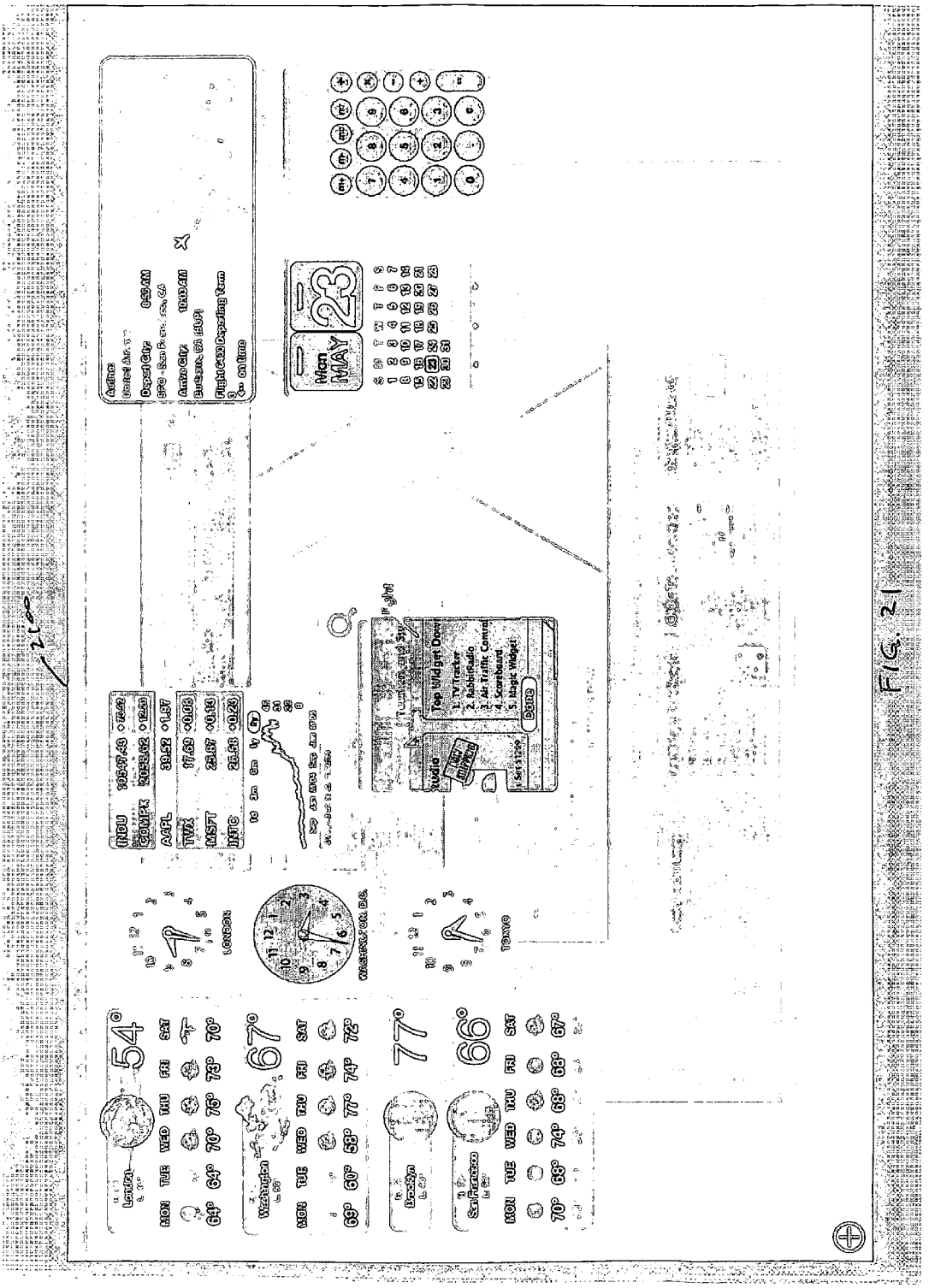


FIG. 21

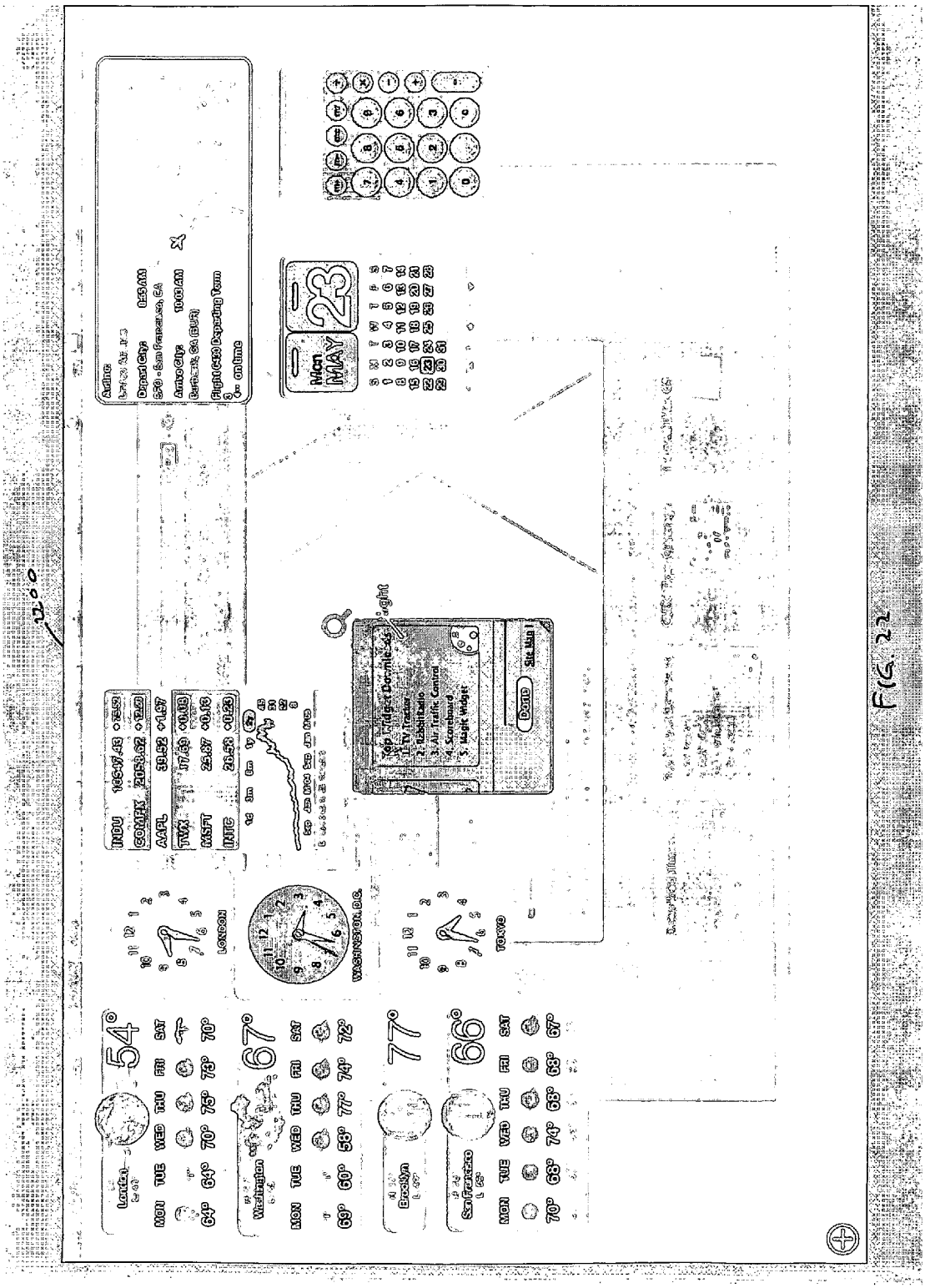

1200
Mon
MAY
23
LONDON
WASHINGTON, D.C.
TOKYO
Top Widget Dormitories
1. TV Tractor
2. Rabbitrado
3. Air Traffic Control
4. Scoreboard
5. Magic Widget
Done
Site Map
54°
67°
77°
66°
MON TUE WED THU FRI SAT

FIG. 22

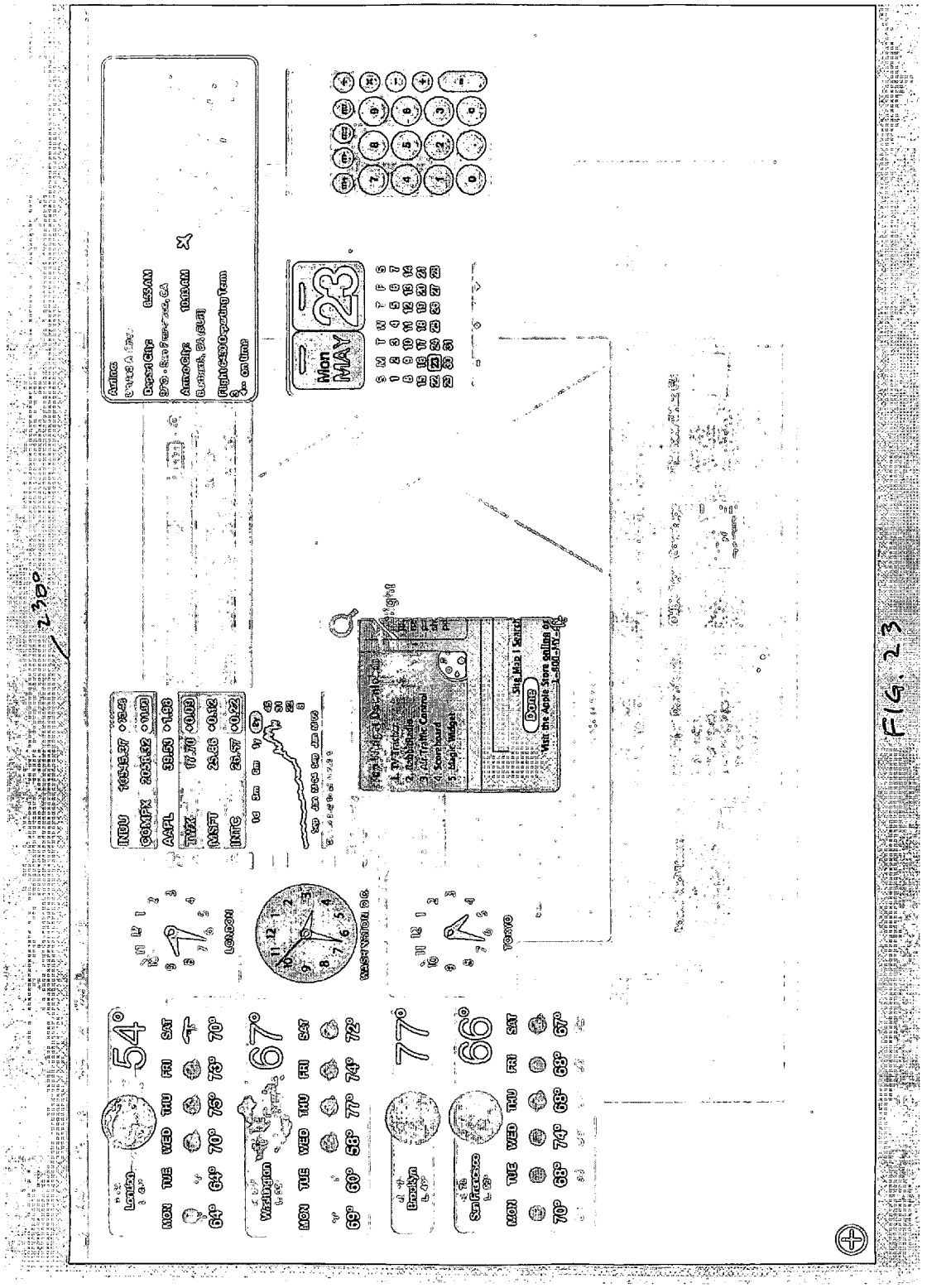

INDU
COMPX
AAPL
MSFT
INTC
Mon
MAY
23
LONDON
TOKYO
Washington
Brooklyn
San Francisco
MON TUE WED THU FRI SAT
54°
67°
77°
69°

FIG. 23

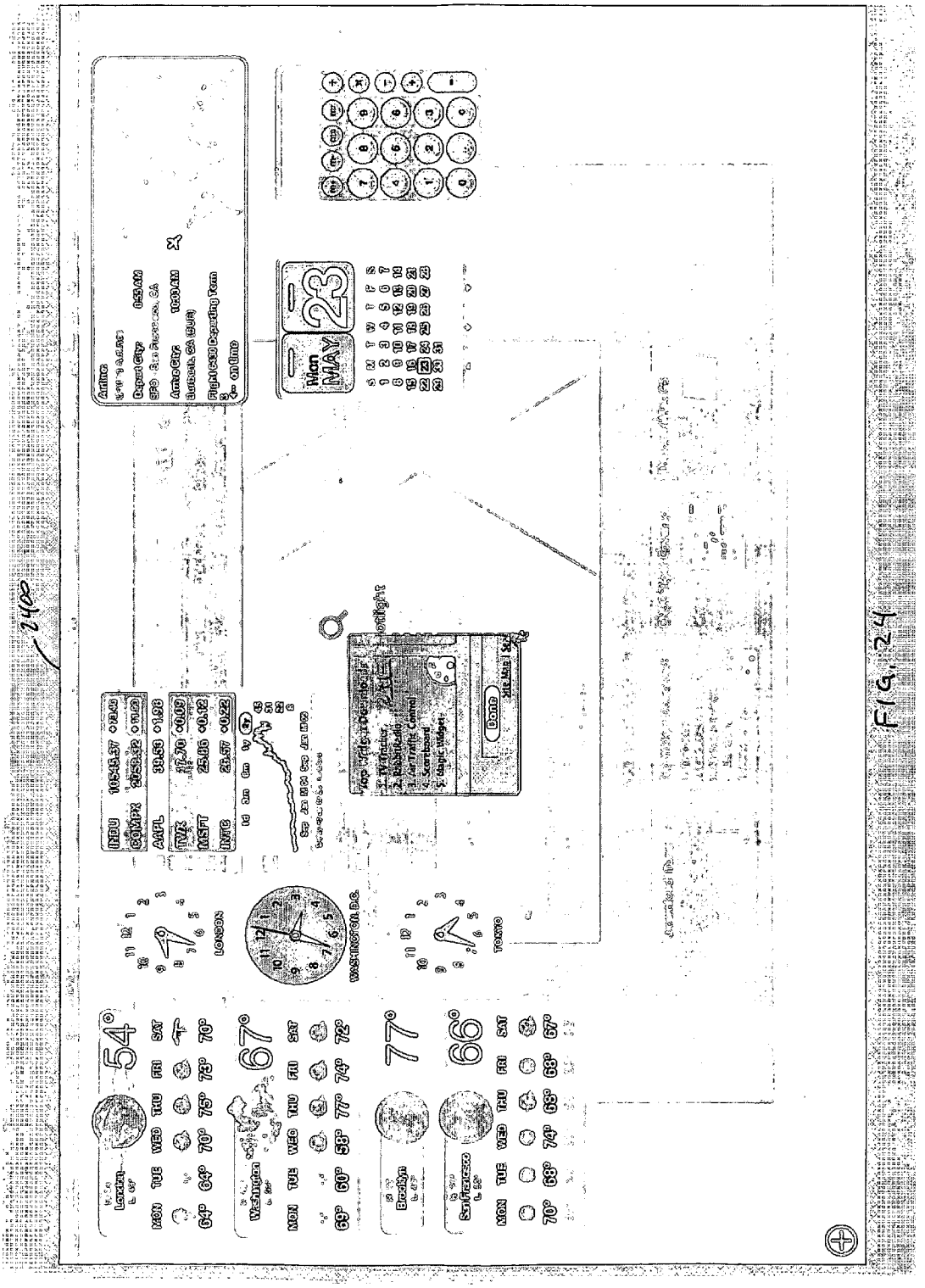


FIG. 24

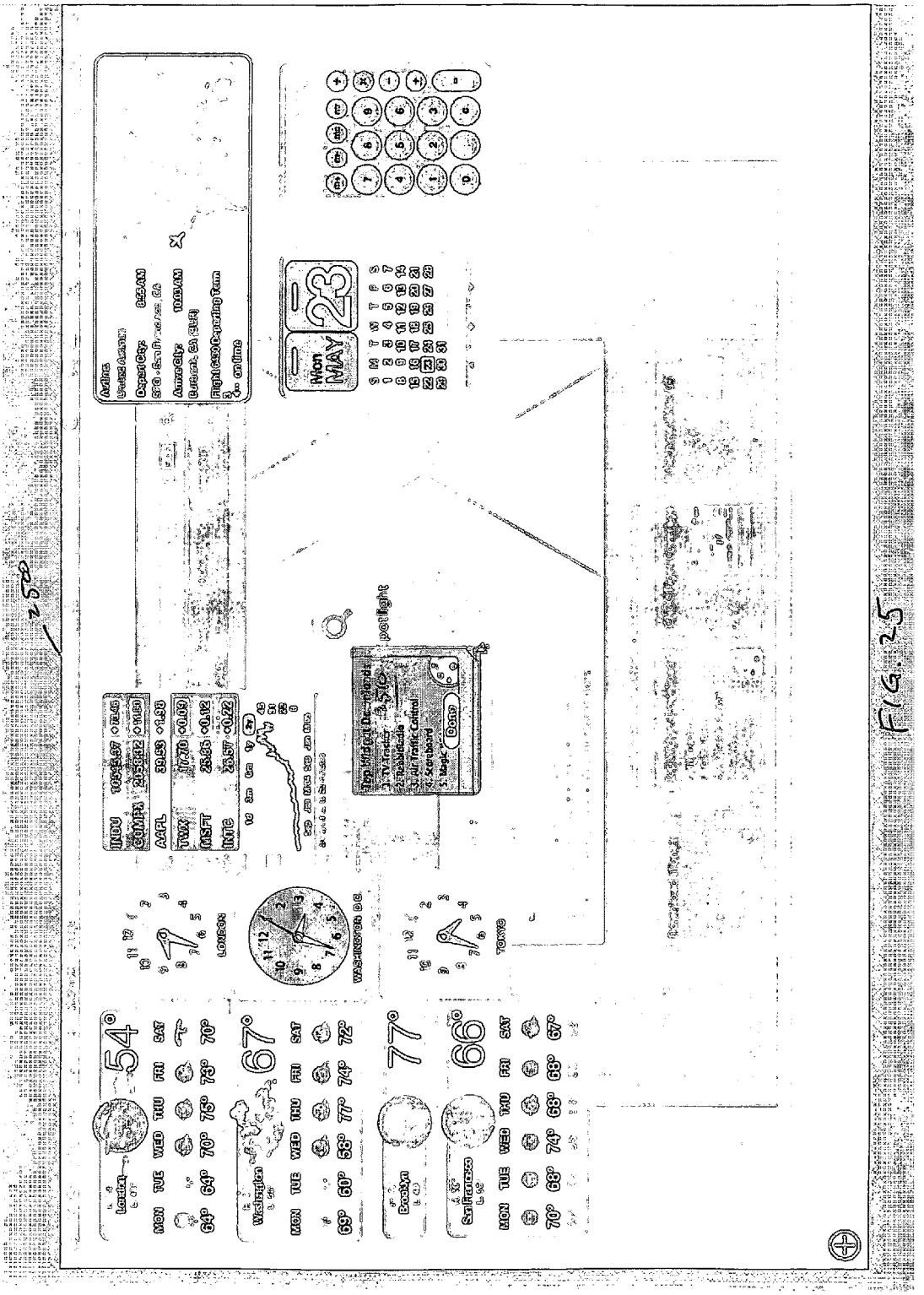


FIG. 25

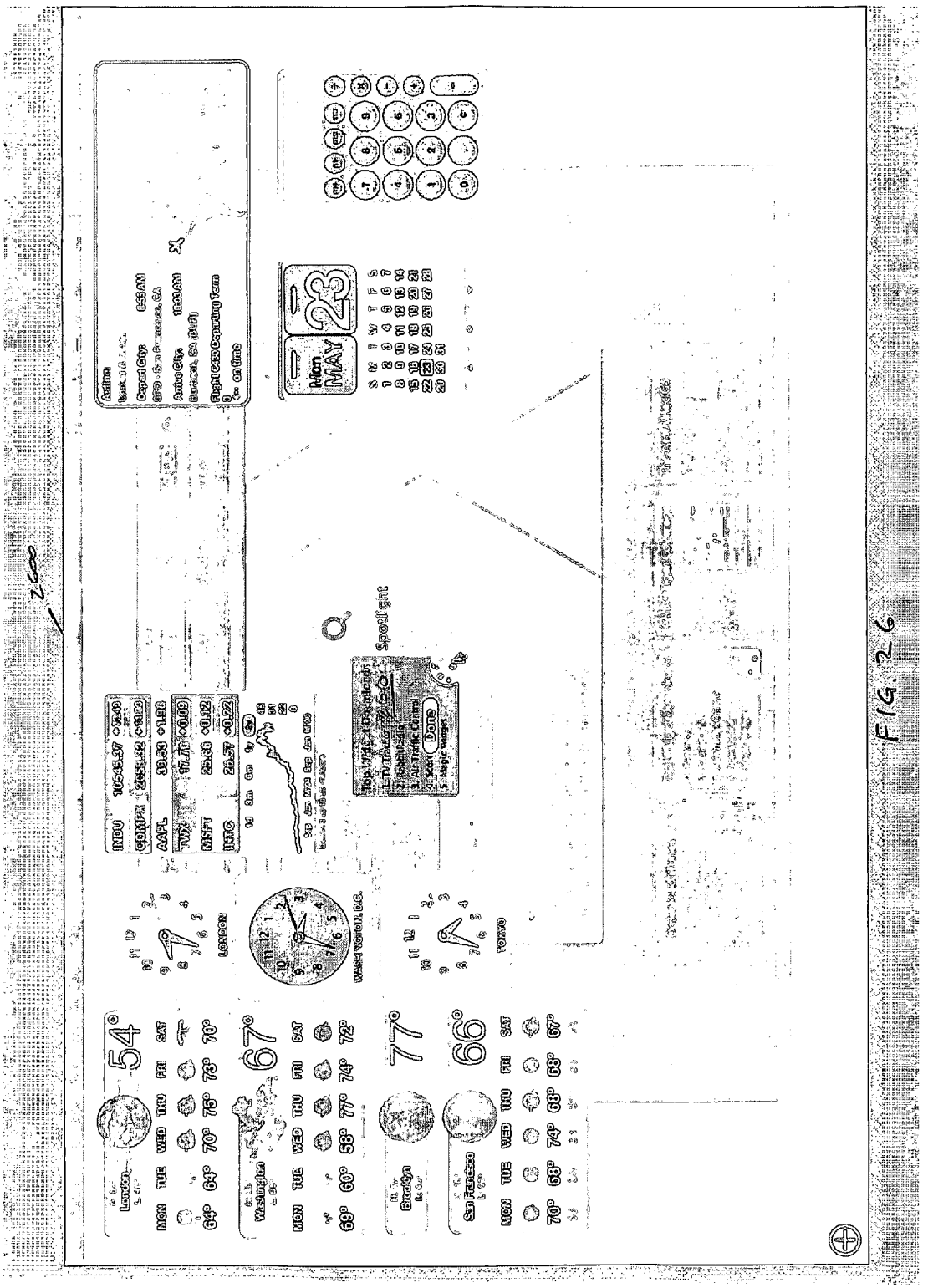


FIG. 26

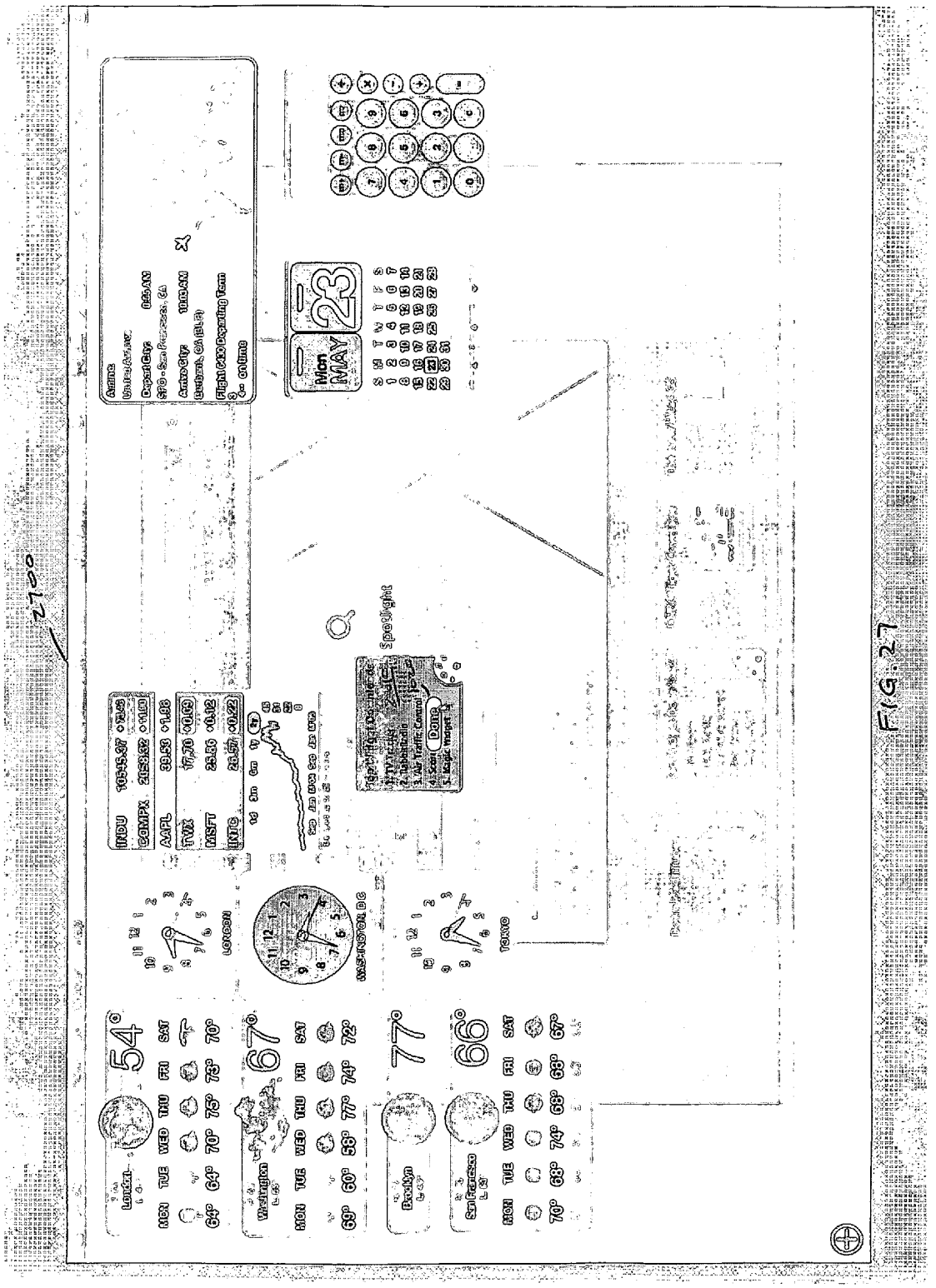

2700
Mon
MAY
23
Spotlight
LONDON
WASHINGTON, DC
TOKYO
54°
67°
77°
66°

FIG. 27

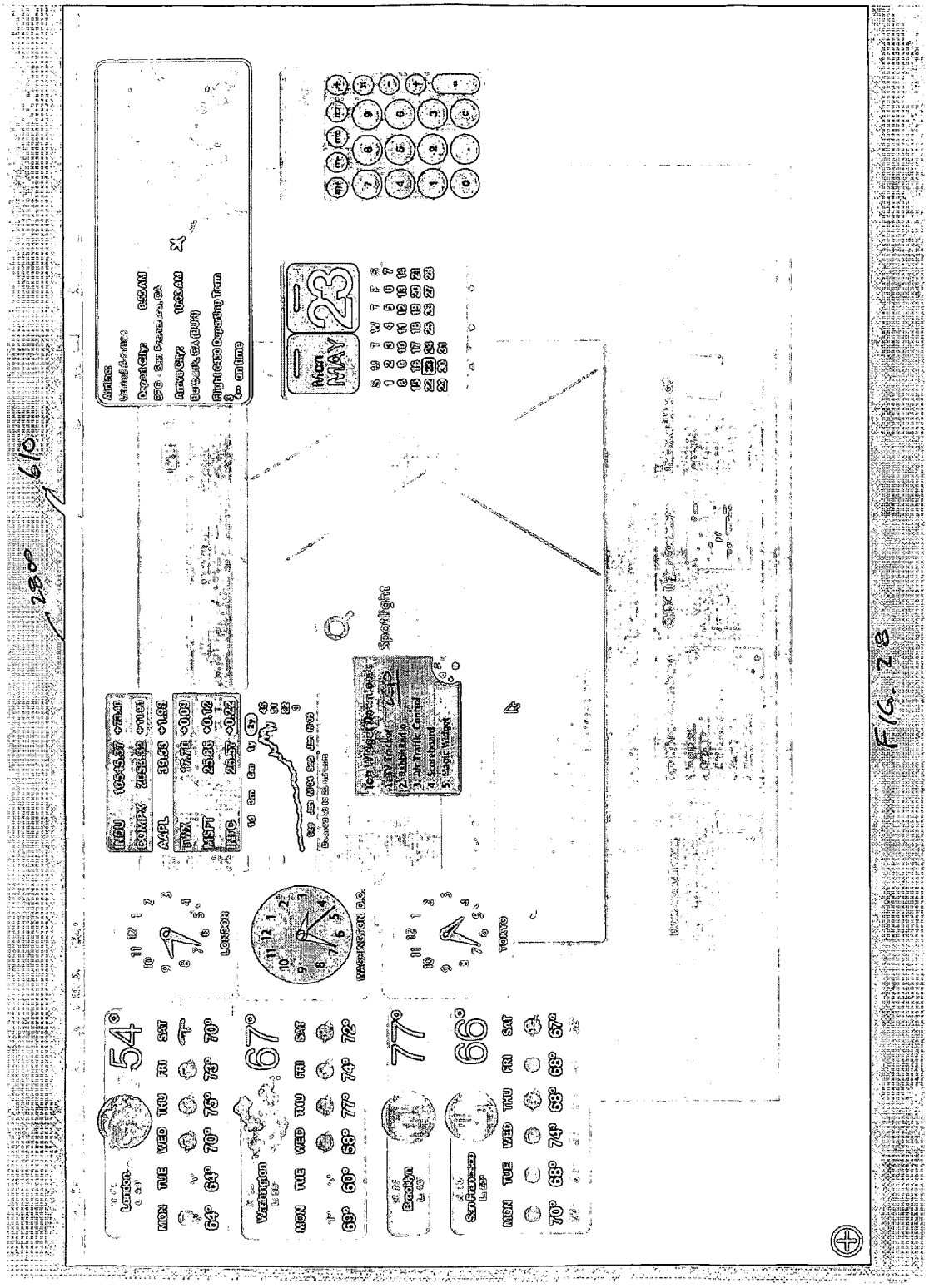


FIG. 28

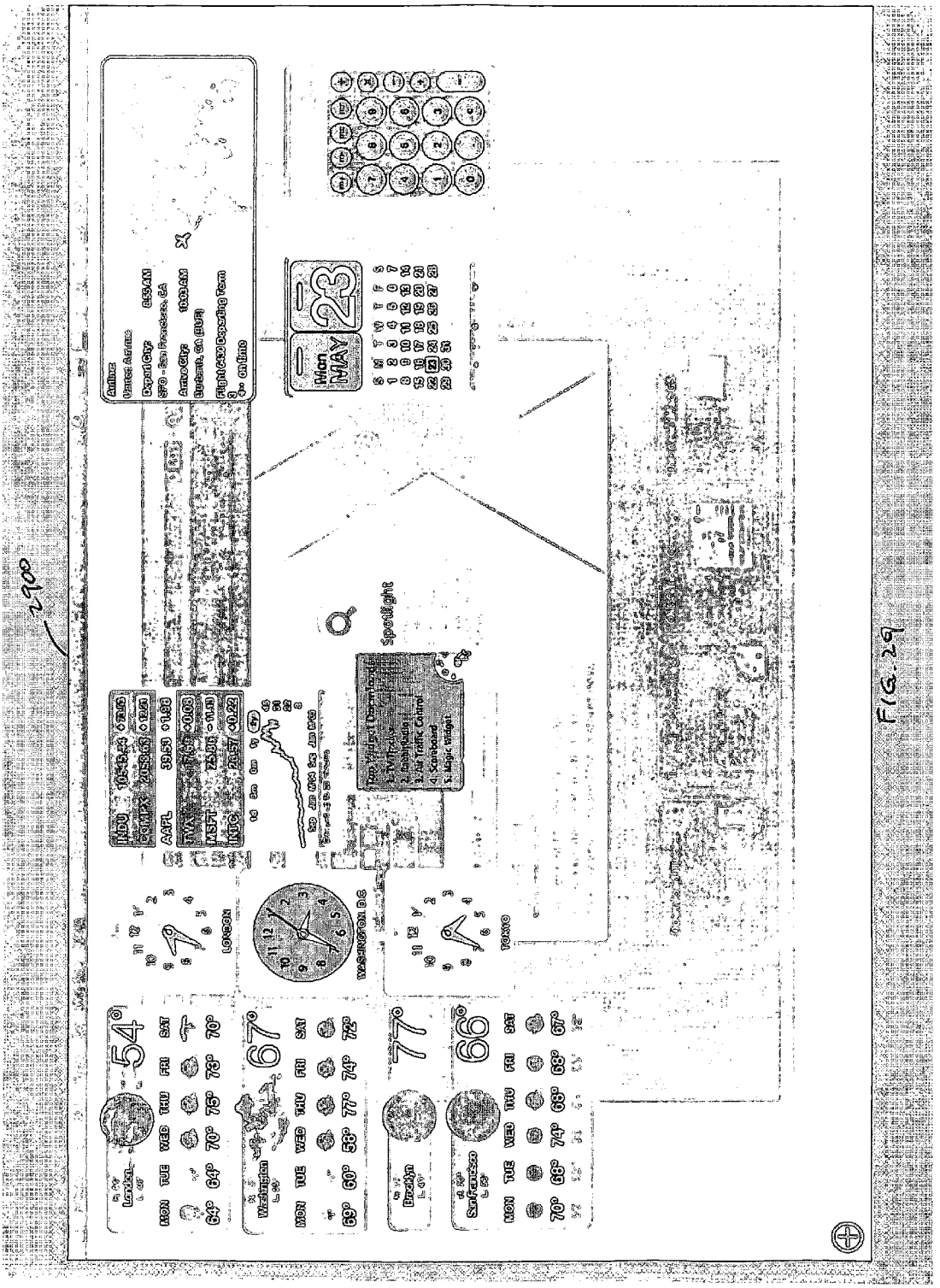

2900
Mon
MAY
23
Spotlight
LONDON
WASHINGTON D.C.
TOKYO
54°
67°
77°
66°

FIG. 29

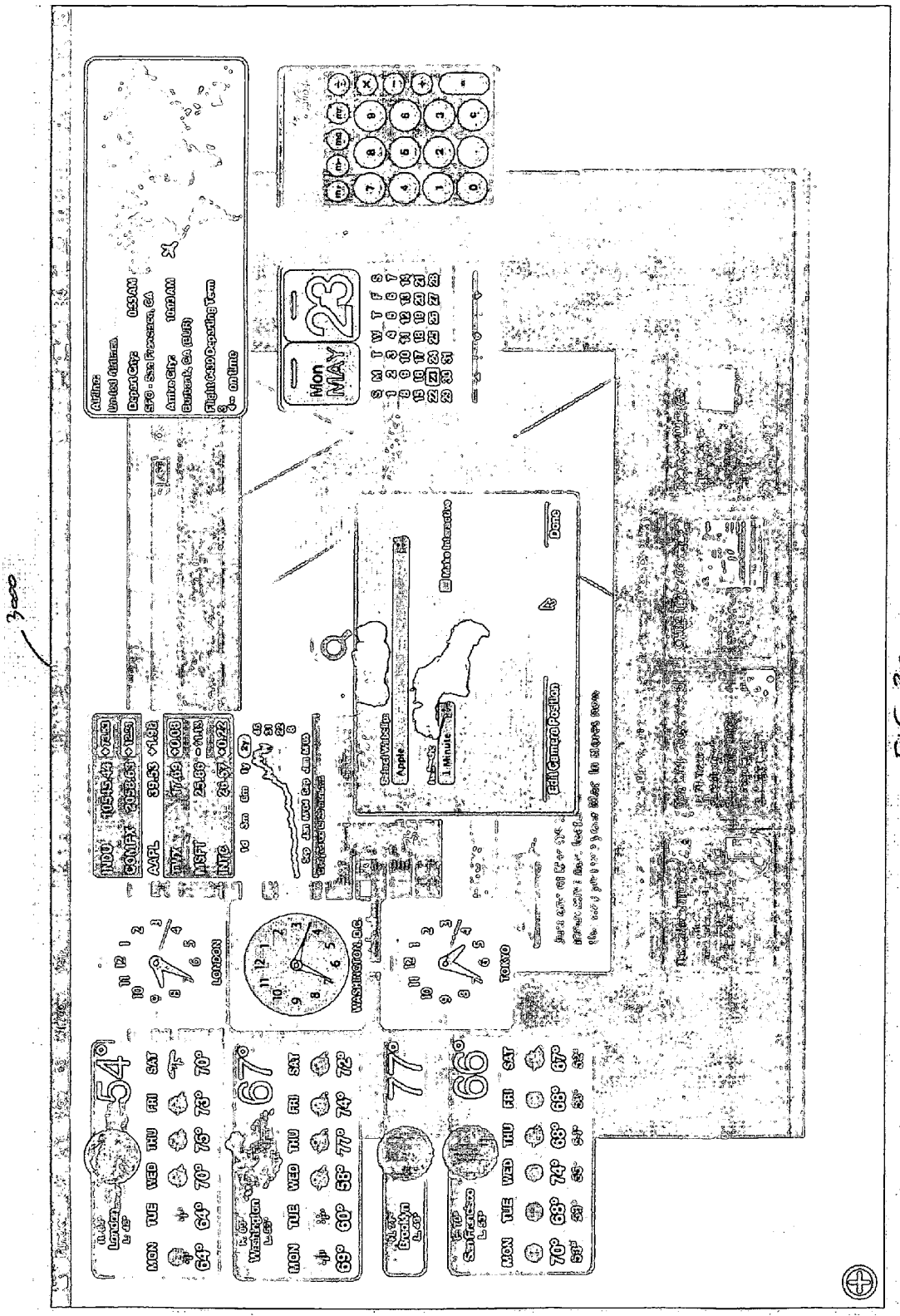

3000
Mon
MAY
23
LONDON
WASHINGTON, D.C.
TOKYO
Edit Camera Position
Done

FIG. 30

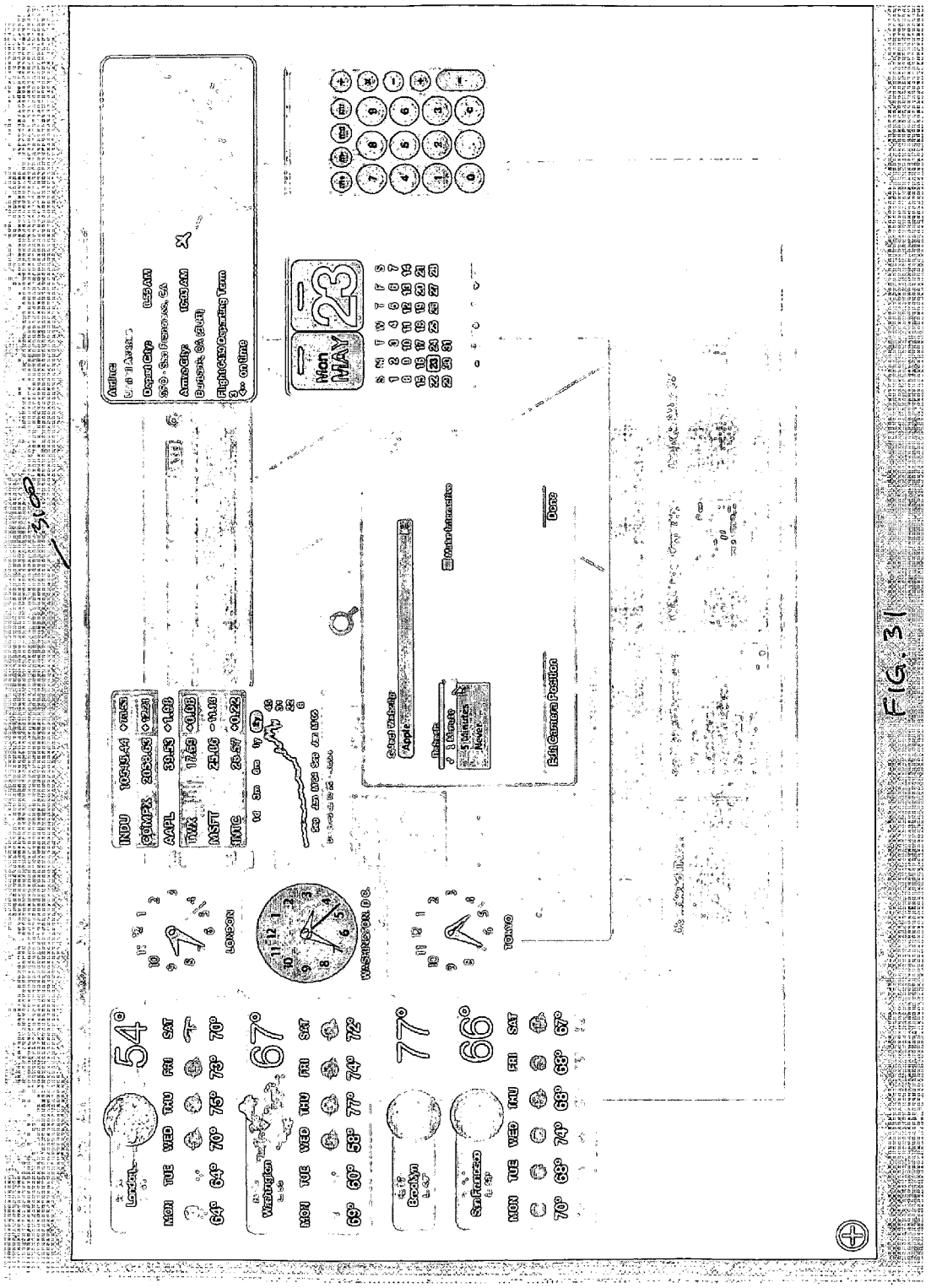


FIG. 31

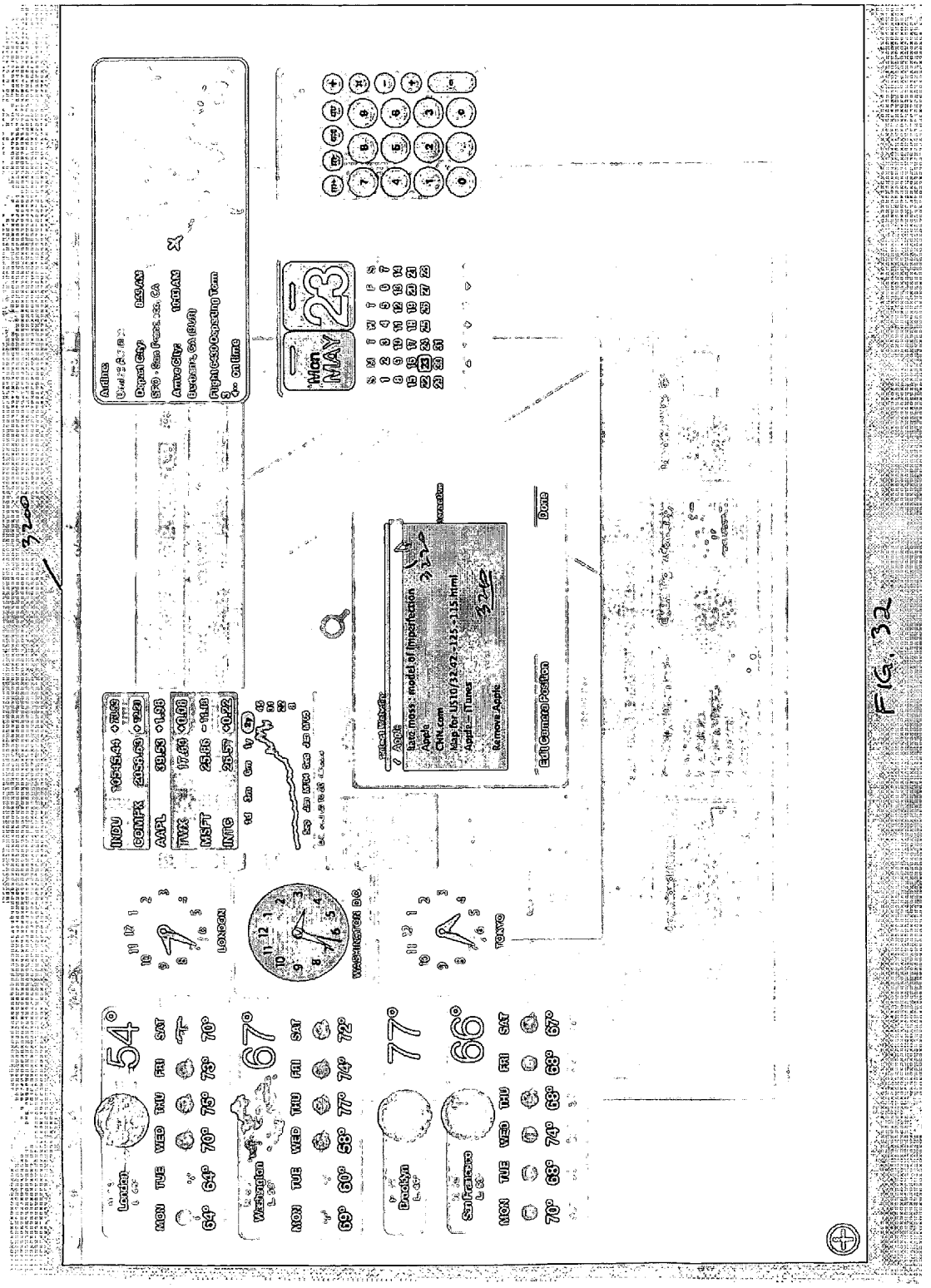

3200
Mon
MAY
23
Edit Camera Position
Done
LONDON
WASHINGTON D.C.
TOKYO
54°
67°
77°
66°

FIG. 32

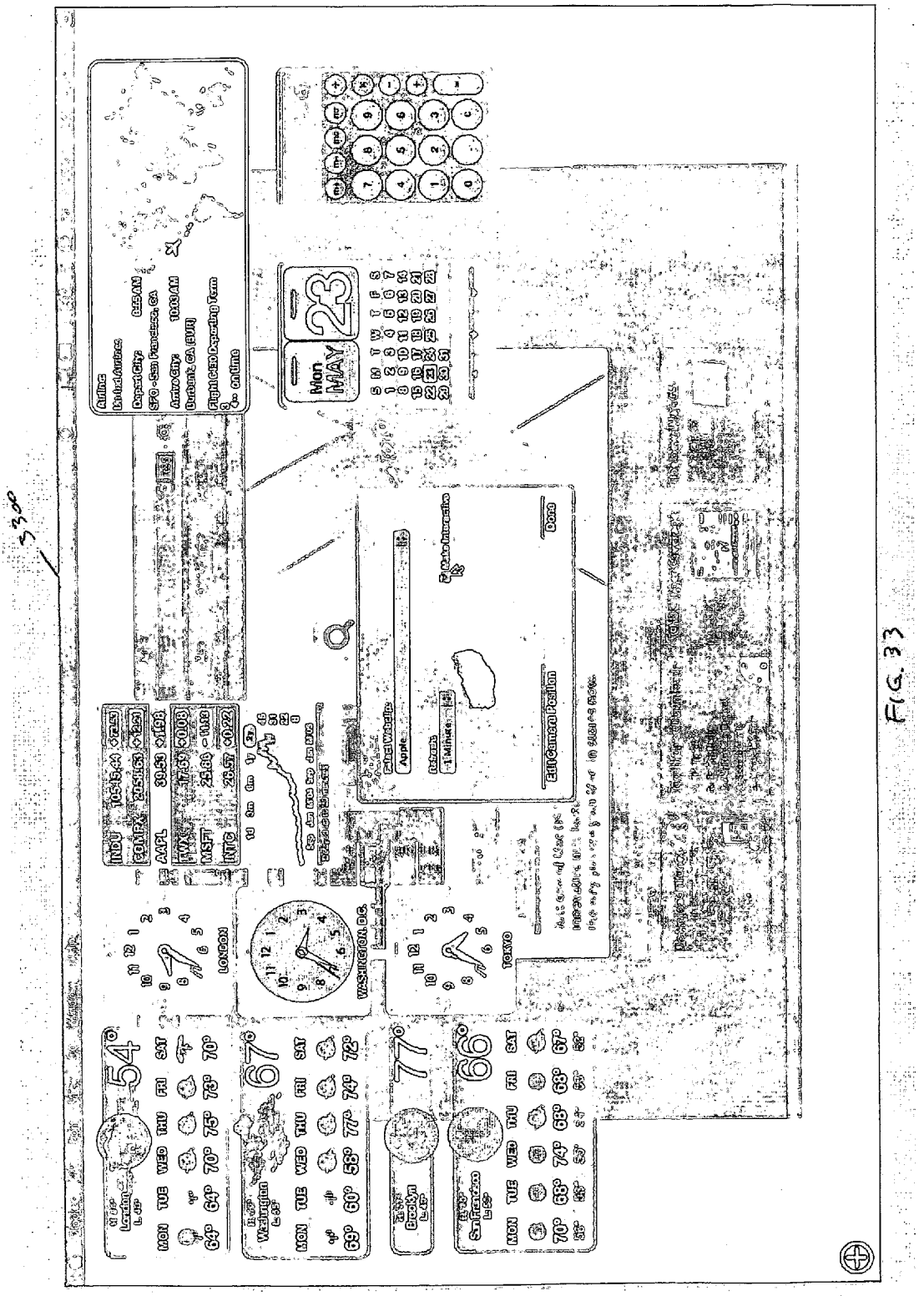

3300
Airline
Depart City
Arrive City
Mon
MAY
23
Apple
Edit Camera Position
Done
LONDON
WASHINGTON, D.C.
TOKYO
54°
67°
77°
66°

FIG. 33

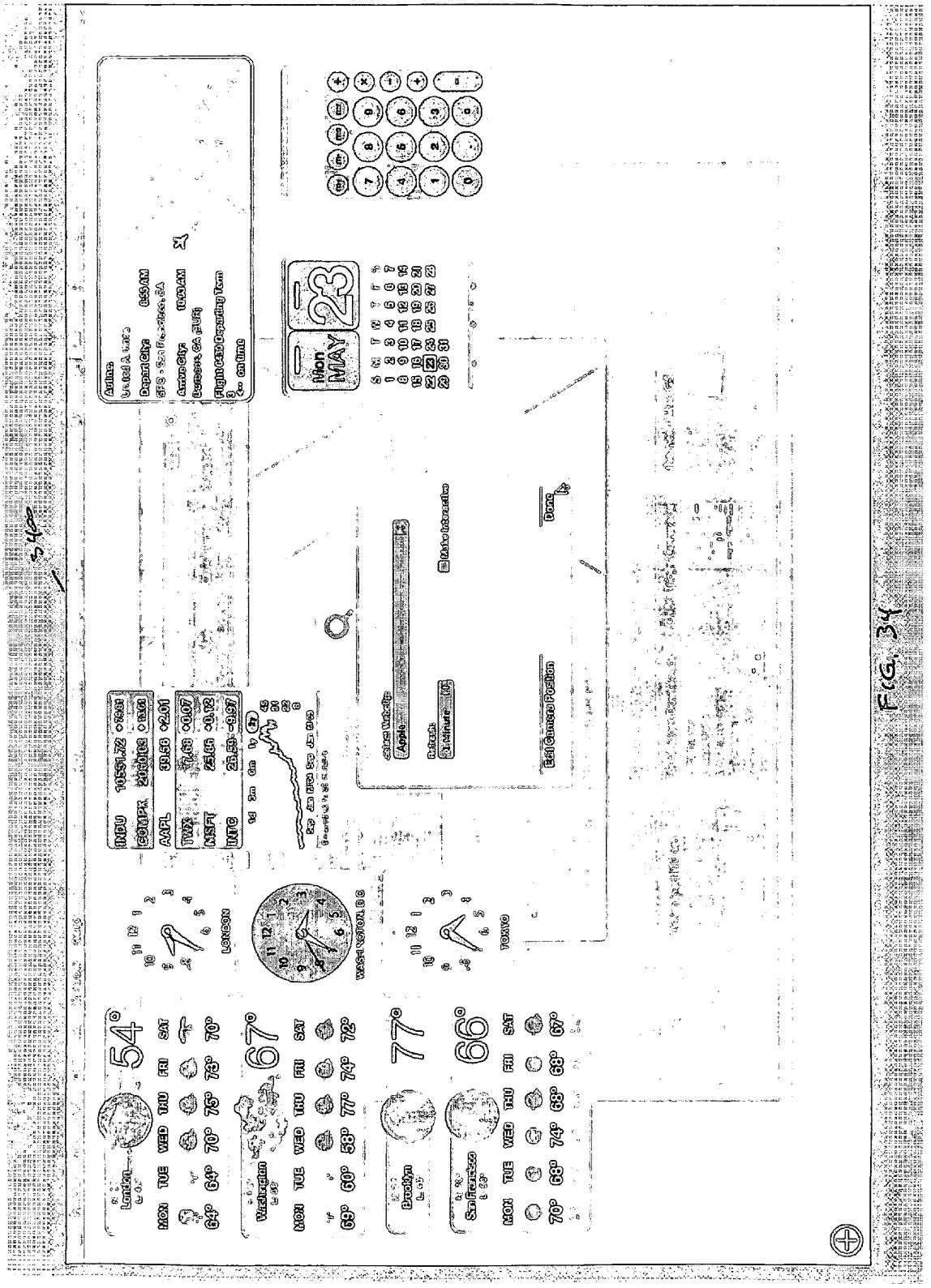
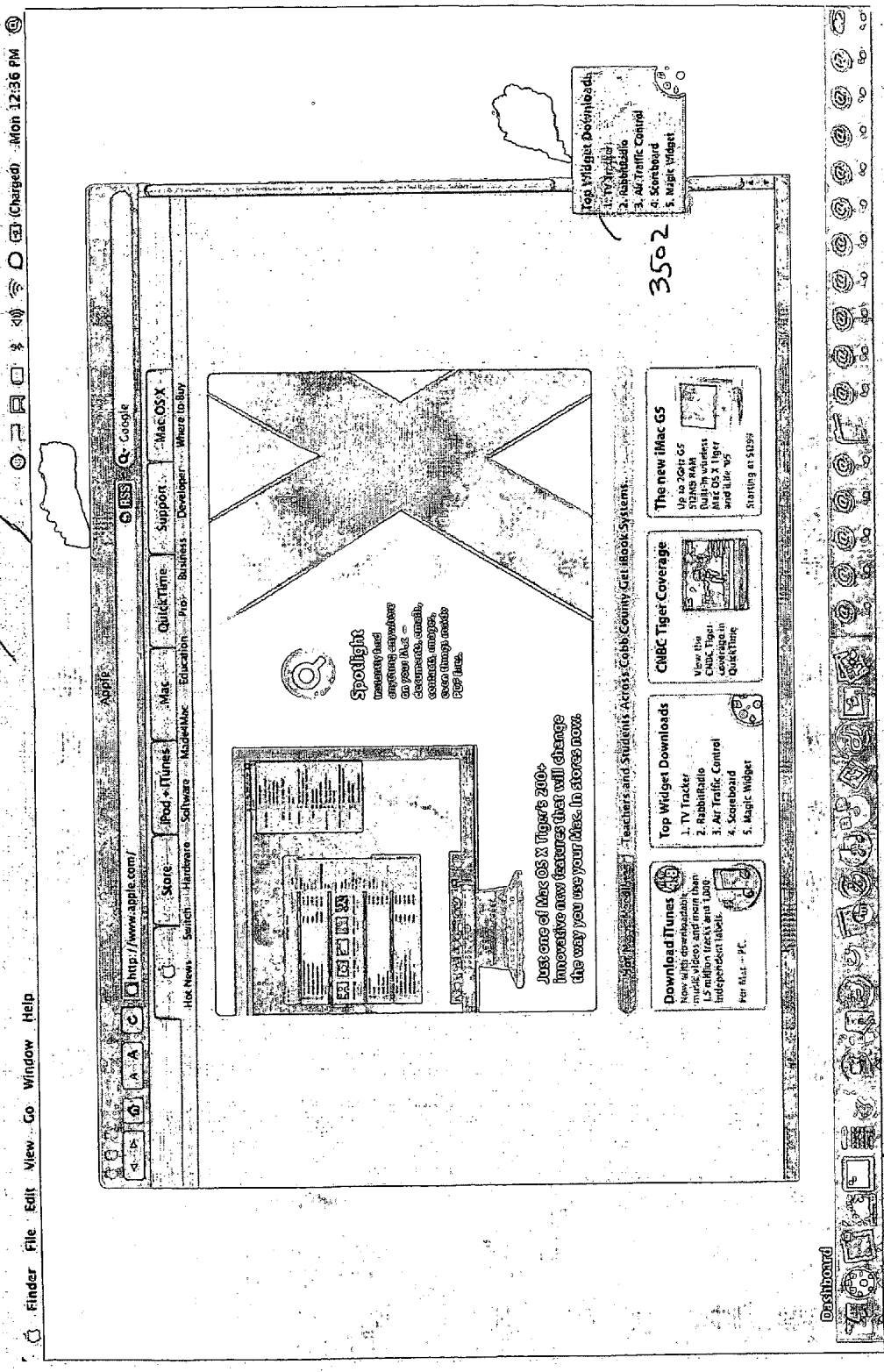


FIG. 34


Finder File Edit View Go Window Help
Mon 12:36 PM
Apple
http://www.apple.com/
Google
Store
iPod + iTunes
Mac
QuickTime
Support
Mac OS X
Hot News Switch Hardware Software MadeForMac Education Pro Business Developer Where to Buy
Spotlight
instantly find anything anywhere on your Mac – documents, emails, contacts, images, even things inside PDF files.
Just one of Mac OS X Tiger's 200+ innovative new features that will change the way you use your Mac. In stores now.
Teachers and Students Across Cobb County Get iBook Systems
Download iTunes
Top Widget Downloads
1. TV Tracker
2. RabbitRadio
3. Air Traffic Control
4. Scoreboard
5. Magic Widget
CNBC Tiger Coverage
View the CNBC Tiger coverage in QuickTime
The new iMac G5
Up to 2GHz G5
512MB RAM
Built-in wireless
Mac OS X Tiger and iLife '05
Starting at $1299
Top Widget Downloads
1. TV Tracker
2. RabbitRadio
3. Air Traffic Control
4. Scoreboard
5. Magic Widget
Dashboard
620
3500
3502
3510
3520
3530
3540
FIG. 35.

CLIPVIEW APPLICATIONS

TECHNICAL FIELD

[0001] This disclosure relates to the presentation of content.

BACKGROUND

[0002] Existing computer systems allow a user to clip an item of interest, such as a block of text, from a first document into a clipboard. The user may then paste the contents of the clipboard into a second document. If the user becomes aware that the item of interest has been modified in the first document, the user may again clip the now-modified item of interest from the first document, and re-paste the now-modified clipboard portion into the second document.

[0003] Common browsers allow a user to select a web page, and to further select an area of interest in the web page for display by scrolling until the area of interest displays in the browser's display window. If the user desires to have the browser display the most current content in the selected area of interest in the web page, the user may manually request a refresh of the web page. After closing the browser, if the user again desires to view the area of interest, the user may launch the browser and repeat the process of selecting the area of interest.

SUMMARY

[0004] One or more disclosed implementations allow a user to select an area of interest in a content source, such as a document or a web page. An area of interest can represent a contiguous area of a content source, such as a frame or the like, or can be an accumulation of two or more non-contiguous or unrelated pieces of content from a single or multiple sources. The content from the area of interest is presented to the user in a viewing application, and can be refreshed automatically. Further, the content may be stored in non-transitory memory or generated programmably so that upon closing and relaunching the viewing application, the user is presented with the content. Additionally, information required for accessing the area of interest and presenting content from the area of interest may be stored in non-transitory memory so that upon closing and relaunching the viewing application, the user may automatically be presented with the current content from the area of interest.

[0005] In one general aspect, a method is provided for displaying content in a user interface. The method includes identifying one or more content sources. The method includes identifying a portion of a content source to be included in each of a first and second view. The method includes storing information associated with the identified content source for each view including a name and identifying information for designating a respective portion of a content source. The method includes displaying both the first and second view in an aggregate view.

[0006] Advantageous implementations may include one or more of the following features. The first view can be displayed in the second view. The first view and the second view can be interleaved in the aggregate view and displayed at different times. The first view can control at least one aspect of the display of the second view. The first and second views can be displayed simultaneously and in different portions of the aggregate view. The first and second views can be displayed side by side in the aggregate view. The first view can be called and displayed in the second view.

[0007] In another general aspect, a method is provided for displaying content in a user interface. The method includes identifying an application. The application includes one or more user interfaces that are interactive with a user of the application. The method includes identifying a portion of one or more of the user interfaces to be included in a view. The method includes storing information associated with the identified user interface portion including a name and identifying information. The method includes displaying the identified portion in a view separate from the application.

[0008] Advantageous implementations can include one or more of the following features. The identified portion can include an interactive portion that initiates a command in the application. The application can be the Mac OS X operating system and the identified portion includes a finder frame. The application can be a spreadsheet application and the identified portion includes one or more cells of a spreadsheet. The portions of the one or more cells can be non-contiguous in the spreadsheet. One or more of the one or more cells can be identified in different spreadsheets. Displaying the identified portion can include not initiating the application and directly accessing the identified portion from a datastore associated with the application. The application can be a media player and the identified portion is a portion of media configured to be played on the media player. The media can be television clips. The method further can include receiving an interaction with the displayed view and processing the interaction. Processing can include launching the application and loading the identified portion into a user interface associated with the application. The application can be a game, and the interaction is a move required to further the game. The game can be multiplayer game, and the view provides an alert associated with determining another player in the game has provided an input. The application can be an authoring application and the identified portion is a portion of a document. The application can be a mail application and the identified portion is an inbox. The application can be is a mail application and the identified portion is an address book. The application can be a player application and the identified portion is a sound clip. The application can be a webcam and the identified portion is a portion of content associated with the webcam.

[0009] In another general aspect, a method is provided for sharing content between applications. The method includes identifying content and an associated application. The method includes providing a viewer application that facilitates viewing a portion of the content without initiating the associated application. The method includes displaying a portion of the content in a view presented by the viewer including automatically updating the view in accordance with a refresh strategy.

[0010] Advantageous implementations can include one or more of the following features. The associated application can be a mail application, and the content is stored in a mail server associated with the mail application. The associated application can be a document processing application and the content is stored in a datastore associated with the associated application. The shared content can be selected from the group consisting of folder, a file, and a document.

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The refresh strategy can be selected from the group consisting of automatically, continuously, intermittently, manually, selectively, or all provided. The identifying content can include receiving input indicating portions of content that are available for ready inclusion in the view.

[0011] In another general aspect, a method is provided for sharing content between applications. The method includes identifying a content source including a portion of the content source to be included in a view. The content source is associated with an application. The method includes providing a viewer application that facilitates viewing the portion of the content. The method includes displaying the portion of the content in a view presented by the viewer application, including automatically updating the view in accordance with a refresh strategy.

[0012] Advantageous implementations can include one or more of the following features. Identifying a portion of content can include receiving input indicating portions of content that are available for ready inclusion in the view. The content can be located by a searching application and the searching application returns a portion of the content as a search result. The portion of content can be identified from prior portions of content presented to a user. The process of displaying the portion can include responding to a user interaction to the view. The response can be selected from the group consisting of returning a page request, updating the display, navigating in the view, and displaying received content. The method further can include interacting with a user when provided an input there from. The method further can include selectively allowing for user interaction with the view. Selectively allowing for user interaction can include selecting from no interaction, partial interaction, and full interaction. Full interaction can include launching the application associated with the content being displayed to facilitate the full interaction. Displaying a portion of the content in accordance with the refresh strategy can include tracking changes in the portion of content in the content source and providing an update to the portion of the content displayed in accordance with the refresh strategy. The application can be a browser. The application can be messaging application, and the view provides an alert whenever a new message is received in a message store associated with the messaging application. Displaying a portion of the content can include applying a function to the portion of the content prior to display. The function can be a graphical operation. The function can be a filter. Displaying the portion can include displaying the portion in a widget. The steps of identify, providing, and displaying can be instantiated by a widget. Displaying the view can include displaying the view in an overlay of a display environment. The display environment can be selected from the group consisting a desktop environment and a dashboard environment. The display environment can be a display of an electronic device. The method can further includes maintaining a script describing a process for refreshing the portion of the content. The step of displaying can be performed selectively for different users depending on permissions associated with a given user. The content source can be associated with a subscription service and refreshing the view is performed in accordance with a subscription agreement.

[0013] In another general aspect, a method is provided for displaying web content in a user interface. The method includes maintaining first and second information. Each of the first and second information is associated with a content source including a name and identifying information for designating a selected portion of the content source. The method includes displaying a view including respective selected portions associated with the first and second information.

[0014] Advantageous implementations can include one or more of the following features. The method further includes identifying a first content source associated with the first information. The method can further include selecting a portion of the content source to be included in the view. The method can further include identifying a second content source associated with the second information. The method can further include selecting a portion of the content source to be included in the view. Identifying the content source can include determining a script for accessing the content source, maintaining information includes maintaining the script, and displaying includes using the script to access current content associated with the selected portion. Selecting can include determining view characteristics including a dimension of a display area to display the selected portion. Selecting can include determining view characteristics including a location of the view in a display environment. The method can further include rendering the content source and deriving reference data describing the selected portion using the rendered data. The method can further include detecting a trigger event for activating an overlay in the user interface and where displaying the view includes displaying the view in the overlay. The overlay can be a dashboard that includes one or more graphical user interface elements. The method can further include detecting a trigger event for dismissing the overlay and reactivating the user interface. The method can further include detecting a user interaction with the view and providing a response. The response can be selected from the group consisting of returning a page request, updating the display, navigating in the view, and displaying received content. The method can further include interacting with a user when provided an input there from. The method can further include selectively allowing for user interaction with the view.

[0015] In another general aspect, a data structure is provided for content to be displayed in a user interface. The data structure includes metadata identifying a first and second content source. The data structure includes metadata describing an area of interest in each content source. The data structure includes metadata describing a relationship for displaying both areas of interest in a unified view. The data structure includes preference data describing at least refresh preferences to be used when displaying the areas of interest in a user interface.

[0016] Advantageous implementations can include one or more of the following features. The data structure can further include navigation metadata including a script for accessing each area of interest. The metadata describing an area of interest can include a selection definition including information describing a selected portion including reference information and view dimension information. The reference information can include information defining geographic coordinates for locating the selected portion. The reference information can include information defining a locator in the content source selected from the group consisting of a frame, a view, or a widget. The data structure can further includes a script for locating the area of interest. The

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script can include one or more processes for authenticating a user for accessing the content source. The metadata describing the area of interest can include information for identifying selected portions of a plurality of different content sources. The metadata describing the area of interest can include information for identifying selected non-contiguous portions of a content source. The refresh preferences can be selected from the group consisting of automatically, continuously, intermittently, manually, selectively or as provided.

[0017] In another general aspect, a method is provided for identifying content to be displayed in a user interface. The method includes identifying two or more digital content sources. The method includes selecting a portion of each digital content source to be included in a view defined by a selection definition. The method includes maintaining information associated with each digital content source including navigation information to the digital content source. The selection definition and metadata describe a relationship for displaying each portion in a unified view.

[0018] Advantageous implementations can include one or more of the following features. The digital content source can be selected from the group consisting of a web page, a file, a document, or a spreadsheet. Selecting a portion can be performed by a user. Selecting further can include identifying the navigation information including a script for accessing the selected portion. Selecting can further include determining the selection definition, the selection definition including information describing the selected portion including reference information and view dimension information. The reference information can include information defining geographic coordinates for locating the selected portion. The reference information can include information defining a locator in the digital content source selected from the group consisting of a frame, a view, or a widget. Identifying the digital content source can include determining a script for accessing the digital content source, and maintaining information includes maintaining the script. Selecting can include determining view characteristics including a dimension of a display area to display the selected portion and maintaining includes maintaining the view characteristics. Selecting can include determining view characteristics including a location of the view in a display environment and maintaining includes maintaining the view characteristics. Selecting can include determining reference data for identifying a particular portion of the digital content source to be displayed and the maintaining step includes storing the reference data. The method can further include rendering the digital content source and deriving reference data describing the selected portion using the rendered data. The method can further include maintaining user interaction preferences to be active when displaying the view, the interaction preferences providing a selective level of interaction with the view.

[0019] In another general aspect, a data structure is provided for a graphical display element. The data structure includes a plurality of content definitions, each including a description of a digital content source and a pre-selected portion of the digital content source. The data structure includes metadata describing a relationship for displaying each pre-selected portion in a unified view. The data structure includes preference data including refresh preferences to be used when displaying the pre-selected portion of the digital content source in a user interface.

[0020] In another general aspect, a graphical display element is provided. The graphical display element includes a plurality of content definitions, each including a description of a digital content source and an area of interest of the digital content source. The graphical display element includes metadata describing a relationship for displaying each area of interest in a unified view. The graphical display element includes preference data including refresh preferences to be used when displaying the area of interest of the digital content source in a user interface. The graphical display element includes a viewer for displaying the areas of interest in the unified view and updating content associated with the area of interest in accordance with the preference data.

[0021] Advantageous implementations can include one or more of the following features. The digital content source can be selected from the group consisting of a web page, a file, a document, or a spreadsheet. The content definition can further includes navigation information including a script for accessing the area of interest. The content definition can further include a selection definition including information describing the area of interest including reference information and view dimension information. The reference information can include information defining geographic coordinates for locating the selected portion. The reference information can include information defining a locator in the digital content source selected from the group consisting of a frame, a view, or a widget. The content definition can include view characteristics including a dimension of a display area to display the area of interest. The content definition can include view characteristics including a location of the view in a display environment. The content definition can further include data associated with the digital content source that can be used to locate the area of interest in subsequent views. The data can be rendered data. The content definition can further include user interaction preferences to be active when displaying the view, the interaction preferences providing a selective level of interaction with the view.

[0022] In another general aspect, a computer program product is provided that includes instructions for causing a computing device to identify one or more content sources. The product includes instructions to identify a portion of a content source to be included in each of a first and second view. The product includes instructions to store information associated with the identified content source for each view including a name and identify information for designating a respective portion of a content source. The product includes instructions to display both the first and second view in an aggregate view.

[0023] In another general aspect, a computer program product is provided that includes instructions for causing a computing device to identify an application, the application including one or more user interfaces that are interactive with a user of the application. The product includes instructions to identify a portion of one or more of the user interfaces to be included in a view. The product includes instructions to store information associated with the identified user interface portion including a name and identifying information. The product includes instructions to display the identified portion in a view separate from the application.

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[0024] In another general aspect, a computer program product is provided that includes instructions for causing a computing device to identify content and an associated application. The product includes instructions to provide a viewer application that facilitates viewing a portion of the content without initiating the associated application. The product includes instructions to display a portion of the content in a view presented by the viewer including automatically updating the view in accordance with a refresh strategy.

[0025] In another general aspect, a computer program product is provided that includes instructions for causing a computing device to identify a content source including a portion of the content source to be included in a view. The content source is associated with an application. The product includes instructions to provide a viewer application that facilitates viewing the portion of the content. The product includes instructions to display the portion of the content in a view presented by the viewer application including automatically updating the view in accordance with a refresh strategy.

[0026] In another general aspect, a computer program product is provided that includes instructions for causing a computing device to maintain first and second information. Each of the first and second information is associated with a content source including a name and identifying information for designating a selected portion of the content source. The product includes instructions to display a view including respective selected portions associated with the first and second information.

[0027] In another general aspect, a computer program product is provided that includes instructions for causing a computing device to identify two or more digital content sources. The product includes instructions to select a portion of each digital content source to be included in a view defined by a selection definition. The product includes instructions to maintain information associated with each digital content source including navigation information to the digital content source, the selection definition and metadata describing a relationship for displaying each portion in a unified view.

[0028] The above general aspects may be implemented, for example, using a method and an apparatus. An apparatus may include one or more computer readable media having instructions stored thereon and configured to result in one or more of the general aspects being performed. An apparatus may include one or more pieces of structure for performing operations in one or more of the general aspects. A method may include the operations that are performed, or the operations that structure is configured to perform, in one or more of the general aspects.

[0029] Various disclosed implementations provide for views of various pieces of content to be presented using a viewing application. The views may be refreshed automatically or upon demand, and may be tailored to a user-selected area of interest from the content source. The views may further be tailored to display in a window having a user-configurable size and a user-configurable location. The information identifying the view, such as the location of the area of interest and the size and position of the viewing window, may be stored so that the user may redisplay the view, after closing and relaunching the viewing application, without needing to reconfigure the view. The views also may be interactive, allowing the user to edit text, enter data on a form, click on a hyperlink, or perform other interactions with the view.

[0030] The details of one or more implementations are set forth in the accompanying drawings and the description below. Other features will be apparent from the description and drawings, and from the claims.

DESCRIPTION OF DRAWINGS

[0031] **FIG. 1** is a block diagram showing a system for clipping content.

[0032] **FIG. 2** is a block diagram showing a clipping application.

[0033] **FIG. 3** is a flow chart showing a process for creating a clipping of content.

[0034] **FIG. 4** is a flow chart showing a process for refreshing clipped content.

[0035] **FIG. 5** is a flow chart showing a process for responding to user interactions with clipped content.

[0036] **FIG. 6** is a screen shot showing a dashboard.

[0037] **FIG. 7** is a screen shot showing a browser with selected content.

[0038] **FIG. 8** is a screen shot showing a contextual menu in the browser of **FIG. 7**.

[0039] **FIG. 9** is a screen shot showing the contextual menu of **FIG. 8** with a menu item selected.

[0040] **FIG. 10** is a screen shot showing a result of selecting the selected menu item from **FIG. 9**.

[0041] **FIG. 11** is a screen shot showing a widget loaded with the selected content.

[0042] **FIGS. 12-15** are a series of screen shots showing the widget of **FIG. 11** being resized.

[0043] **FIGS. 16-23** are a series of screen shots showing the selected content being repositioned within the widget of **FIG. 15**.

[0044] **FIGS. 24-26** are a series of screen shots showing the widget of **FIG. 23** being resized.

[0045] **FIG. 27** is a screen shot showing a final step in creating a widget.

[0046] **FIG. 28** is a screen shot showing a completed widget after the final step of **FIG. 27**.

[0047] **FIG. 29** is a screen shot showing selection of a control for accessing a preferences interface.

[0048] **FIG. 30** is a screen shot showing a preferences interface on the widget of **FIG. 29**.

[0049] **FIGS. 31-33** are a series of screen shots showing preference lists accessed from the preferences interface of **FIG. 30**.

[0050] **FIG. 34** is a screen shot showing a final step in modifying preferences of the widget.

[0051] **FIG. 35** is a screen shot showing a view displayed on a desktop.

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DETAILED DESCRIPTION

[0052] U.S. patent application Ser. No. 10/877,968, filed Jun. 25, 2004, and titled "Unified Interest Layer for User Interface," and U.S. Provisional Patent Application No. 60/642,025, filed Jan. 7, 2005, and titled "Unified Interest Layer Widgets," and U.S. patent application entitled "Widget Authoring and Editing Environment" filed concurrently, and assigned Ser. No. _____ are hereby incorporated by reference in their entirety for all purposes.

[0053] We begin with a brief introductory summary of a general description of a system, associated applications, methods, processes and computer program products for presenting clipped content in association with an initial set of figures. Thereafter, a discussion of the later figures is presented that includes more specific examples of presenting clipped content.

[0054] Turning now to the general description, and with reference to **FIG. 1**, a system **100** is shown for clipping content and presenting the clippings (or sometimes referred below as a clipview, webview, or other "X"views) to a user. System **100** includes a processing device **110** having an operating system **130**, a stand-alone application **140**, a content source **150**, and a clipping application **160**. Each of elements **130-160** is communicatively coupled, either directly or indirectly, to each other. Elements **130-160** are stored on a memory structure **165**, such as, for example, a hard drive. System **100** also includes a presentation device **167** and an input device **169**, both of which are communicatively coupled to processing device **110**. System **100** further includes a content source **170** external to processing device **110**, and communicatively coupled to processing device **110** over a connection **180**.

[0055] Processing device **110** may include, for example, a computer, a gaming device, a messaging device, a cell phone, a personal/portable digital assistant ("PDA"), or an embedded device. Operating system **130** may include, for example, MAC OS X from Apple Computer, Inc. of Cupertino, Calif. Stand-alone application **140** may include, for example, a browser, a word processing application, a database application, an image processing application, a video processing application or other application. Content source **150** and content source **170** may each include, for example, a document having any of a variety of formats, files, pages, media, or other content, and content sources **150** and **170** may be compatible with stand-alone application **140**. Presentation device **167** may include, for example, a display, a computer monitor, a television screen, a speaker or other output device. Input device **169** may include, for example, a keyboard, a mouse, a microphone, a touch-screen, a remote control device, a speech activation device, or a speech recognition device or other input devices. Presentation device **167** or input device **169** may require drivers, and the drivers may be, for example, integral to operating system **130** or stand-alone drivers. Connection **180** may include, for example, a simple wired connection to a device such as an external hard disk, or a network, such as, for example, the Internet. Clipping application **160** is described in more detail below, and may be a stand-alone application as shown in system **100** or may be, for example, integrated in whole or part into operating system **130** or stand-alone application **140**.

[0056] Referring to **FIG. 2**, components of clipping application **160** are shown. Clipping application **160** provides functionality for clipping content and presenting the clippings to a user. Clipping application **160** includes an identification engine **210** that includes a focus engine **214** for identifying the content to be clipped and a render engine **218** for rendering content. Clipping application **160** further includes a state engine **220** for enabling a refresh of clipped content, a preferences engine **230** for setting preferences, an interactivity engine **240** for processing interactions between a user and the clipped content, and a presentation engine **250** for presenting clipped content to a user. Engines **210-250** are communicatively coupled to one or more of each other. Though the engines identified above are described as being separate or distinct, one or more of the engines may be combined in a single process or routine. The functional description provided herein including separation of responsibility for distinct functions is exemplary. Other groupings or other divisions of functional responsibilities can be made as necessary or in accordance with design preferences.

[0057] Focus engine **214** may be used to initially identify, possibly with the assistance of the user, content to be clipped. Such an identification may include accepting input from a user and providing assistance or suggestions to a user. Focus engine **214** also may be used to access a previously selected area of interest during a refresh of clipped content. Identifying content or accessing a previously identified area of interest may include numerous operations that may be performed, in whole or in part, by focus engine **214**, or may be performed by another module such as one of engines **210**, **218**, or **220-250**. **FIG. 3** discusses many of the operations that may be performed, for example, in creating a clipping of content, and focus engine **214** may perform various of those and other operations. For example, focus engine **214** may (1) identify a content source, (2) enable a view to be presented, such as a window, that displays the content source, (3) enable the view to be shaped (or reshaped), sized (or resized) and positioned (or repositioned), and (4) enable the content source(s) to be repositioned within the view to select an area of interest.

[0058] Enabling a view to be presented may include, for example, (1) identifying a default (or user specified, for example) size, shape and screen position for a new view, (2) accessing parameters defining a frame for the new view including shape, form, size, etc., (3) accessing parameters identifying the types of controls for the new view, as well as display information for those controls that are to be displayed, with display information including, for example, location, color, and font, and (4) rendering the new view.

[0059] Further, as discussed in more detail below, focus engine **214** may be initialized in various ways, including, for example, by a user selecting clipping engine **160** to clip content, by receiving a user's acceptance of a prompt to create a clipping, or automatically. An automatic initialization may occur, for example, if a user displays in an application content that includes a pre-defined view, in which case the application may automatically initialize focus engine **214** to create the pre-defined view.

[0060] In clipping content from a content source, focus engine **214** also may obtain information about the configuration of the application from which the content was clipped. Such configuration information may be required to identify the area of interest within the content source. For example, when a web page is accessed from a browser, the configu-

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ration of the browser (e.g. size of the browser window) may affect how content from the web page is actually displayed (e.g., page flow, line wrap, etc.), and therefore which content the user desires to have clipped.

[0061] Render engine **218** may be used to render content that is to be presented to a user in a clipping or during a clip setup process. Render engine **218** may, alternatively, be placed in whole or in part outside of identification engine **210**. Such alternate locations include, for example, another engine, such as, for example, presentation engine **250** which is discussed below, and a separate stand-alone application that renders content.

[0062] Implementations may render one or more entire content sources or only a portion of one or more of the content sources, such as, for example, the area of interest. As discussed above, an area of interest can represent a contiguous area of a content source, such as a frame or the like, or can be an accumulation of two or more non-contiguous or unrelated pieces of content from a single or multiple sources. In particular implementations, an entire web page (e.g., one form of a content source) is rendered, and only the area of interest is actually presented. Rendering the whole web page allows identification engine **210** to locate structural markers such as a frame that includes part of the area of interest or an (x,y) location coordinate with reference to a known origin (e.g., creating reference data). Such structural markers, in a web page or other content, may be useful, for example, in identifying the area of interest, particularly during a refresh/update after the content source has been updated and the area of interest may have moved. Thus, a selected area of interest may be tracked. The entire rendered page, or other content source, may be stored (e.g., in a transitory or non-transitory memory) and referenced to provide a frame of reference in determining the selected area of interest during a refresh, for example. In one implementation, the entire rendered page is stored non-transitorily (e.g. on a hard disk) to provide a frame of reference for the initial presentation and for all refresh operations, and content that is accessed and presented in a refresh is not stored non-transitorily. In various implementations, render engine **218** renders content that has been identified using focus engine **214**. Identification engine **210** typically is capable of processing a variety of different content formats, navigating within those formats, and rendering those formats. Examples include hypertext markup language ("HTML"); formats of common word processing, spreadsheet, database, presentation, and other business applications; and common image and video formats.

[0063] State engine **220** may be used to store information (e.g., metadata) needed to refresh clipped content and implement a refresh strategy. Such information is referred to as state information and may include, for example, a selection definition including an identifier of the content source as well as additional navigation information that may be needed to access the content source, and one or more identifiers associated with the selected area of interest within the content source(s). The additional navigation information may include, for example, login information and passwords (e.g., to allow for authentication of a user or subscription verification), permissions (e.g., permissions required of users to access or view content that is to be included in a given clipping), and may include a script for sequencing such information. State engine **220** also may be used to set refresh timers based on refresh rate preferences, to query a user for refresh preferences, to process refresh updates pushed or required by the source sites or otherwise control refresh operations as discussed below (e.g., for live or automatic updates).

[0064] Preferences engine **230** may be used to query a user for preferences during the process of creating a clipping. Preferences engine **230** also may be used to set preferences to default values, to modify preferences that have already been set, and to present the preference selections to a user. Preferences may relate to, for example, a refresh rate, an option of muting sound from the clipping, a volume setting for a clipping, a setting indicating whether a clipping will be interactive, a naming preference to allow for the renaming of a current clipping, a redefinition setting that allows the user to adjust (e.g., change) the area of interest (e.g., reinitialize the focus engine to select a new area of interest to be presented in a clip view), and function (e.g. filter) settings. Preferences also may provide other options, such as, for example, listing a history of previous content sources that have been clipped, a history of changes to a current clipping (e.g., the changes that have been made over time to a specific clipping thus allowing a user to select one for the current clipping) and view preferences. View preferences define characteristics (e.g., the size, shape, controls, control placement, etc. of the viewer used to display the content) for the display of the portions of content (e.g., by the presentation engine). Some or all of the preferences can include default settings or be configurable by a user.

[0065] Interactivity engine **240** may process interactions between a user and clipped content by, for example, storing information describing the various types of interactive content being presented in a clipping. Interactivity engine **240** may use such stored information to determine what action is desired in response to a user's interaction with clipped content, and to perform the desired action. For example, interactivity engine **240** may (1) receive an indication that a user has clicked on a hyperlink displayed in clipped content, (2) determine that a new web page should be accessed, and (3) initiate and facilitate a request and display of a new requested page. As another example, interactivity engine **240** may (1) receive an indication that a user has entered data in a clipped form, (2) determine that the data should be displayed in the clipped form and submitted to a central database, (3) determine further that the next page of the form should be presented to the user in the clipping, and (4) initiate and facilitate the desired display, submission, and presentation. As another example, interactivity engine **240** may (1) receive an indication that a user has indicated a desire to interact with a presented document, and (2) launch an associated application or portion of an application to allow for a full or partial interaction with the document. Other interactions are possible.

[0066] Presentation engine **250** may present clipped content to a user by, for example, creating and displaying a user interface on a computer monitor, using render engine **218** to render the clipped content, and presenting the rendered content in a user interface. Presentation engine **250** may include an interface to a variety of different presentation devices for presenting corresponding clipped content. For example, (1) clipped web pages, documents, and images may be presented using a display (e.g., a computer monitor or other display device), (2) clipped sound recordings may be presented using a speaker, and a computer monitor may

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also provide a user interface to the sound recording, and (3) clipped video or web pages having both visual information and sound may be presented using both a display and a speaker. Presentation engine **250** may include other components, such as, for example, an animation engine for use in creating and displaying a user interface with various visual effects such as three-dimensional rotation.

[**0067**] In various implementations, the user interface that presentation engine **250** creates and displays is referred to as a clipview. The clipview includes a first portion including the clipped content and a second portion for presenting the clipped content. In an implementation discussed below, the first portion is referred to as a view portion **1030** in which clipped content is displayed, and the second portion is referred to as a frame **1040** which might also include controls. Implementations need not include a perceivable frame or controls, but may, for example, present a borderless display of clipped content, and any controls may be, for example, keyboard-based controls or mouse-based controls without a displayable tool or activation element, overlay controls, on screen controls or the like. The presentation typically includes a display of the clipped content although other implementations may present audio content without displaying any content. The clipview also may include one or more additional portions for presenting information such as, for example, preferences settings and an identifier of the content source. The display of the clip view may be in the user interface of a device, part of a layer presented in the user interface (e.g., as part of an overlay or an on-screen display).

[**0068**] Clipping application **160** can be a lightweight process that uses, for example, objects defined as part of a development environment such as the Cocoa Application Framework (as referred to as the Application Kit or AppKit, described for example at Mac OS X Tiger Release Notes Cocoa Application Framework, available at http://developer.apple.com/documentation/ReleaseNotes/Cocoa/AppKit.html). Clippings produced by clipping application **160** can be implemented in some instantiations as simplified browser screens that omit conventional interface features such as menu bars, window frame, and the like.

[**0069**] Referring to **FIG. 3**, a process **300** may be used to create a clipping. Process **300** may be performed, at least in part, by, for example, clipping application **160** running on system **110**.

[**0070**] Process **300** includes receiving a content source(s) selection (**310**) and receiving a request to clip content (**320**). Operations **310** and **320** may be performed in the order listed, in parallel (e.g., by the same or a different process, substantially or otherwise non-serially), or in reverse order. The order in which the operations are performed may depend, at least in part, on what entity performs the method. For example, system **100** may receive a user's selection of a content source (**310**), and system **100** may then receive the user's request to launch clipping application **160** to make a clipping of the content source (**320**). As another example, after a user selects a content source and then launches clipping application **160**, clipping application **160** may simultaneously receive the user's selection of the content source (**310**) and the user's request for a clipping of that content source (**320**). As yet another example, a user may launch clipping application **160** and then select a content source(s) from within clipping application **160**, in which case clipping application **160** first receives the user's request for a clipping (for example, a clipview) (**320**), and clipping application **160** then receives the user's selection of the content source(s) to be clipped (**310**). In other implementations, operations **310** and **320** may be performed by different entities rather than by the same entity.

[**0071**] Process **300** includes determining an area of interest in the selected content source(s)

[**0072**] (330). In typical implementations, operation **330** requires that the content source(s) be rendered and presented to the user, so that the user can navigate to or otherwise select the area of interest. The rendering also may be important in helping the user determine an exact extent of the area of interest. For example, in implementations that provide a clipview, the user may desire to see how much content is rendered within the presentation portion of the clipview, and the user's determination of the area of interest may be based on the size and shape of the presentation portion (in some implementations, the user also may resize the presentation portion if desired). Determining the area of interest may also include determining how non-contiguous portions of content are presented in the clipping. For example, determining the area of interest may include a stitching process for joining in the presentation view the non-contiguous portions of the area of interest. Stitching can include dividing the display area into one or more regions that serve as place holders for portions of identified content (e.g., four frames can be associated with a four-up display, each for holding a portion of the identified content). Stitching can also include other interlacing processes that combine identified content in time (e.g., interleaving or sequential presentation) or space (e.g., combing the identified content in a given display space) as desired. Alternatively and or additionally, the processes described above may be implemented in the presentation of the area of interest (e.g., the stitching or combination of the disparate content portions may be combined at presentation time).

[**0073**] In one implementation, the operation of determining an area of interest (**330**) includes creating and displaying a view window, displaying some portion of the content source within the view window, enabling a user to resize, reshape and reposition the view window, and enabling the user to reposition the content source within the view window. The area of interest is that portion of the content source that is positioned to be displayed in the resized (as necessary) view window. Accordingly, as discussed below with respect to operation **340**, information identifying that portion and how to access that portion is stored to enable a refresh to be performed.

[**0074**] As indicated above, the process of determining the area of interest may allow a user to resize the view window. Accordingly, the view window may be larger than, the same size as, or smaller than the size of the display of the content source from which the content was clipped (for example, a browser's display window, or a display of a document). Additionally, other implementations may provide a large view window, for the process of creating a clipping, that displays more content than will be displayed in the final clipping. In these implementations, the user may be enabled to select a portion of the displayed content as the area of interest without reducing the size of the view window (for

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example, by drawing a box around the area of interest, or selecting portions of the content to form the area of interest).

[0075] As will be further described below, various implementations assist a user in determining the area of interest, or determine the area of interest without direct input from a user. For example, system **110** may recognize that a user has accessed a particular piece of content at least a threshold number of times in the past three days, and may ask the user whether the user would like a clipview of the accessed content. As another example, a content source may pre-identify a particular area as being a probable area of interest and clipping application **160** may automatically create a clipview of the pre-identified area of interest. As yet another example, focus engine **214** may include a snap-location feature, possibly provided on a toolbar in clipping application **160**. The snap-location feature identifies a portion of content that can be clipped and that includes a user's selected area of interest. For example, if a user clicks on an article in a web page, the snap-location feature may clip the entire frame that contains the article. As another example, a search engine can be used to locate clippable items. In one implementation, the search query can include a format definition that allows a user to designate a search that will return clippings. Alternatively, the search engine can include clipping generation functionality (or invoke the same) to return search results to queries that, though otherwise unformatted, are returned to the user in the search results as formatted clippings.

[0076] As with operations **310** and **320**, operation **330** may be performed out of the order shown. For example, operation **330** may be performed before operation **320**.

[0077] Process **300** stores information to perform a refresh of the determined area of interest (**340**), sets preferences (**350**), and presents the clipped content (**360**). In some implementations, one or more functions can be applied to the content identified as the area of interest prior to presentation (step **360**). For example, one or more filters may be used to apply one or more graphical effects including zoom, scale or other graphical operation to the selected portion(s) of the content source prior to display. Selection of functions can be made in accordance with user preferences, implemented for example, by preferences engine **230**. Operations **340-360** may be performed, for example, as described above in the discussion of **FIG. 2**. As with operations **310-330**, operations **340-360** may be performed in various orders.

[0078] In one implementation, process **300** is performed entirely by clipping application **160**. For example, after a user selects a content source and launches clipping application **160**, then identification engine **210**, and in particular focus engine **214**, receives the content source selection (**310**) and the request to clip content (**320**). Focus engine **214** then determines an area of interest (**330**) with the user's input. State engine **220** stores information to perform a refresh of the determined area of interest (**340**), and preferences engine **230** sets preferences (**350**). Presentation engine **250** presents the clipped content (**360**), possibly in a clipview.

[0079] As discussed in more detail below with respect to variations of state engine **220**, a script may be created for performing a refresh. A script may include, for example, an identifier of the content source (e.g. URL) and an identifier of the area of interest (e.g. an (x,y) offset from a frame boundary). More complex scripts also may include identifiers for a login page, and identifiers for navigating to an area of interest after a successful login.

[0080] Referring to **FIG. 4**, a process **400** may be used to refresh the presentation of a clipping, such as, for example, a clipview. Process **400** may be performed, at least in part, by, for example, clipping application **160** running on system **110**.

[0081] Process **400** includes receiving a refresh request (**410**). A refresh request may be received/generated/required, for example, directly from a user, as a result of a timer set to initiate refresh requests at a particular frequency, or in response to an indication from a content source or application that an update is available, required or otherwise necessitated (e.g., live or automatic updates). A refresh request also may be received in response to receiving an update (rather than merely a notification of an available update) pushed from a content source, although receiving the update may obviate the need to perform several remaining operations in process **400** (e.g., the location and accessing steps set forth below).

[0082] Process **400** includes accessing information used to perform a refresh (**420**). The information will typically be that information stored in operation **340** of process **300**. Process **400** then accesses content from the area of interest of the content source, typically, using the accessed information (**430**), and optionally copies (e.g., to a transitory memory such as a random access memory ("RAM"), or to a non-transitory memory such as a disk) the content from the area of interest (**440**). Process **400** then refreshes the presentation of a clipping by presenting the copied content (**450**).

[0083] Typically, the refresh will update the previously clipped and presented content from the area of interest with the newly accessed content from the area of interest. It may occur, however, that the previous presentation has been interrupted or corrupted prior to a refresh. In such cases, the refresh may merely present the new clipped content in the display (e.g., in a blank view window).

[0084] In one implementation, process **400** is performed entirely by clipping application **160**. For example, preferences engine **230** receives a user's preference that a clipview be refreshed, e.g., every five minutes, and clipping application **160** sets a, e.g., five-minute, timer. When the timer goes off, state engine **220** receives a refresh request (**410**), accesses the information that state engine **220** stored to enable a refresh to be performed (**420**), and passes appropriate information to identification engine **210**. Identification engine **210** then initiates an access of the area of interest of the content source. For example, in implementations in which the content source is a web page hosted by an external system, identification engine **210** may use a built-in browser, or a separate stand-alone browser in system **110**, to request the content from the area of interest. The request may be received and responded to by a server on the external system. After the external system's server sends the content, identification engine **210** (e.g., or an associated browser) accesses the content (**430**), optionally copies the content (e.g., to a RAM) (**440**), renders the content, and focuses on the particular area of interest, and presentation engine **250** presents the focused content as a refresh (**450**). The refresh operation can be, as described above in response to a timer or time out. Other forms of refresh are also possible,

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including those associated with automatic refresh of the clipping, refreshes associated with live events, continuous updates, source updates, manual refresh requests, or other conventional forms of refresh.

[0085] Referring to **FIG. 5**, a process **500** may be used to respond to a user's interaction with content in a clipping that is presented to the user in, for example, a clipview. Process **500** may be performed, at least in part, by, for example, clipping application **160** running on system **110**.

[0086] Process **500** includes presenting a clipping that includes interactive content (**510**). The interactive content may include, for example, a webpage (e.g., a hyperlink on a webpage), a data entry field on a form, an electronic mail ("email") address in a directory listing that upon selection automatically creates a "new" blank email message addressed to the selected email address, a text portion of a document that allows edits or comments to be inserted, a link in a web page or document for downloading a file or other information or any other graphical user interface element or control that can be interacted with by a user.

[0087] Process **500** includes receiving input based on a user's interaction with the interactive content (**520**). For example, a user may click a hyperlink, enter data in a form, click an email address, click on a view of an email inbox, edit text in a document, insert a comment in a document, request a download or otherwise interact with the clipping. Based on the user's input, clipping application **160**, for example, may receive input in the form of a message indicating (1) a selection (e.g., the interactive content that the user selected such as a hyperlink, an email address, or a requested download), (2) the field that the user entered data in and the value of that data, or (3) the location and value of the edits/comments made to a document.

[0088] Process **500** includes determining an action desired from the received input (**530**). For example, clipping application **160** may determine that the desired action includes (1) requesting a particular web page or item for download, (2) enabling a user to send an email message to a particular entity, or (3) providing entered data (for example, a field in a form, or edits or comments in a document) to the content source as an update. The desired action may be determined by, for example, embedding information in each interactive portion of a clipped piece of content, the information indicating, for example, the type of interaction that is supported, the type of data that may be entered, the desired action, and the desired update to the presentation of the clipping. Alternatively, all or part of this information may be stored in a data structure and may be accessed when the interactive input is received for a given piece of interactive content.

[0089] Process **500** includes initiating or performing the desired action (**540**). Clipping application **160** may perform the desired action(s) (**540**) by itself, or may initiate the desired action(s) (**540**) and perform the desired actions with the assistance of one or more other components. For example, clipping application **160** may use a stand-alone browser to request a hyperlinked web page from an external system.

[0090] Process **500** includes updating the presentation of the clipping accordingly (**550**). Updating the presentation (**550**) may include, for example, (1) presenting the requested web page in the same presentation window in which the clipping was being presented, (2) presenting a pre-addressed but otherwise blank email form in the same presentation window in which the clipping was being presented, (3) echoing back the entered data to the presentation window or (4) launching an underlying application to allow full or partial interaction. In implementations in which the requested material (web page, email form, downloaded item, etc.) is to be presented outside of the clipping presentation, operation **550** may include highlighting the item that the user selected in the clipping presentation, or providing a message indicating the system's response (for example, "download complete"), or otherwise visually indicating that the request was received or completed. Operations **540** and **550** may be conflated in particular implementations in which the desired action is merely an updated presentation.

[0091] In one implementation, process **500** is performed entirely by clipping application **160**. Presentation engine **250** may present a clipping of a web page that includes a button to download a music file (**510**), and may receive a user's selection of the button (**520**). Presentation engine **250** may provide the user's input to interactivity engine **240**, and interactivity engine **240** may determine that a particular music file has been requested for download (**530**). Interactivity engine **240** may then initiate the request for the particular music file by forwarding the request to identification engine **210** or a stand-alone browser (**540**) which communicates with an external system to effect the download. Upon receipt of the requested music file, clipping engine **160** may use presentation engine **250** to update the presentation of the clipped content with a message that the download is complete or initiate a player/viewer for playing/viewing of the downloaded content (**550**).

[0092] A system, processes, applications, engines, methods and the like have been described above for clipping content associated with an area of interest from one or more content sources and presenting the clippings in an output device (e.g., a display). Clippings as described above can be derived from one or more content sources, including those provided from the web (i.e., producing a webview), a datastore (e.g., producing a docview) or other information sources.

[0093] Clippings as well can be used in conjunction with one or more applications. The clipping system can be a stand alone application, work with or be embedded in one or more individual applications, or be part of or accessed by an operating system. The clipping system can be a tool called by an application, a user, automatically or otherwise to create, modify and present clippings.

[0094] The clipping system described herein can be used to present clipped content in a plurality of display environments. Examples of display environments include a desktop environment, a dashboard environment, an on screen display environment or other display environment.

[0095] Described below are example instantiations of content, applications, and environments in which clippings can be created, presented or otherwise processed. Particular examples include a web instantiation in which web content is displayed in a dashboard environment (described in association with **FIGS. 6-34**). Other examples include "widget" (defined below) instantiation in a desktop display environment. Other instantiations are possible.

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[0096] Web Instantiation

[0097] A dashboard, or sometimes referred to as a "unified interest layer", includes a number of user interface elements. The dashboard can be associated with a layer to be rendered and presented on a display. The layer can be overlaid (e.g., creating an overlay that is opaque or transparent) on another layer of the presentation provided by the presentation device (e.g. an overlay over the conventional desktop of the user interface). User interface elements can be rendered in the separate layer, and then the separate layer can be drawn on top of one or more other layers in the presentation device, so as to partially or completely obscure the other layers (e.g., the desktop). Alternatively, the dashboard can be part of or combined in a single presentation layer associated with a given presentation device.

[0098] One example of a user interface element is a widget. A widget generally includes software accessories for performing useful, commonly used functions. In general, widgets are user interfaces providing access to any of a large variety of items, such as, for example, applications, resources, commands, tools, folders, documents, and utilities. Examples of widgets include, without limitation, a calendar, a calculator, and address book, a package tracker, a weather module, a clipview (i.e., presentation of clipped content in a view) or the like. In some implementations, a widget may interact with remote sources of information (such as a webview discussed below), such sources (e.g., servers, where a widget acts as a client in a client-server computing environment) to provide information for manipulation or display. Users can interact with or configure widgets as desired. Widgets are discussed in greater detail in concurrently filed U.S. patent application entitled "Widget Authoring and Editing Environment." Widgets, accordingly, are a container that can be used to present clippings, and as such, clipping application **160** can be configured to provide as an output a widget that includes clipped content and all its attending structures. In one implementation, clipping application **160** can include authoring tools for creating widgets, such widgets able to present clipped content.

[0099] In one particular implementation described in association with **FIGS. 6-34**, a clipping application allows a user to display a clipping of web content. The clip is displayed in a window of a widget created by the clipping application, and both the widget and the clipping application are separate from the user's browser. The clipping application allows the user to size the window, referred to as a webview, and to select an area of interest from the (one or more) web page(s). The content from the area of interest, including hyperlinks, radio buttons, and other interactive portions, is displayed in the webview and is refreshed automatically, or otherwise by the clipping application or other refresh source to provide the user with the latest (or appropriate) content from the area of interest.

[0100] In this instantiation, the clipping application **160** stores identifying information for the webview as a non-transitory file that the user can select and open. By storing the identifying information as a file, the clipping application enables the user to close the webview and later to reopen the webview without having to repeat the procedure for selecting content and for sizing and positioning the webview. The identifying information includes, for example, a uniform resource locator ("URL") of the one or more web pages, as well as additional information that might be required to locate and access the content in the selected area of interest. The identifying information also may include the latest (or some other version, such as the original clipping) content retrieved from the area of interest. Thus, when the user reopens a webview, the clipping application may use the identifying information to display the latest contents as well as to refresh those contents.

[0101] Referring to **FIGS. 6-35**, we now describe specific implementations, and we include a description of a significant number of details to provide clarity in the description. The first specific implementation involves a clipping application **160** in which a presentation engine **250** provides a widget on a dashboard, as described in part in U.S. patent application Ser. No. 10/877,968 and U.S. Provisional Patent Application No. 60/642,025, both of which were incorporated by reference above. The widget is configured to include a webview, a particular instantiation of a clipview (the webview representing a particular instantiation of a widget as well), for displaying content from a selected area of interest from one or more web pages. The webview may be refreshed at a user-specified interval, automatically, or otherwise and the webview may be closed and reopened preferably without losing configuration information or the clipped content. However, as one of ordinary skill in the art appreciates, and as discussed both before and after the description of this specific implementation, many details and features may be varied, such as, for example, supporting other types of content, providing other mechanisms for presenting clipped content, or providing different configuration parameters. Thereafter, a second specific implementation is presented with reference to a viewer displayed on a desktop of a computing device.

[0102] Referring to **FIG. 6**, a screen shot **600** shows a dashboard **610** including a plurality of webview widgets opened on a computer screen with a Safari® application **620** visible in the background. Safari® is a browser produced by Apple Computer, Inc. As explained in U.S. patent application Ser. No. 10/877,968 and U.S. Provisional Patent Application No. 60/642,025, both of which were incorporated by reference above, an implementation of a dashboard may include a layer that is presented on a computer screen and that overlays other items (for example, a desktop, windows, icons or other graphical elements) being displayed. The overlay may be translucent to enable the overlaid items to be discernible or opaque, and the overlay includes widgets (which may or may not be translucent). As discussed above, widgets are user interfaces providing access to any of a large variety of items, such as, for example, applications, resources, commands, tools, folders, documents, and utilities. When dashboard **610** is activated, the display of other applications may be in one implementation darkened partially to indicate that dashboard **610** is active. Dashboard **610** includes a series of widgets, e.g., weather widgets **630**, clock widgets **635**, a stock quote widget **640**, a flight information widget **645**, a calendar widget **650**, and a calculator widget **655**. Some or all of Widgets **630-655** may provide clippings according to one or more of the implementations described in this disclosure. In particular, widgets **630**, **640**, and **645** as shown, obtain content from the World Wide Web, in which case, the content display portions of widgets **630**, **640**, and **645** display web clips and may be referred to as webviews. Widgets that display web content (such as widgets **630**, **640** and **645**) are referred to as

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webview widgets. Though this instantiation includes webview widgets as part of a dashboard, other instantiations are possible, including those where webview widgets are presented in other display environments, such as a desktop.

[0103] Referring to **FIG. 7**, a screen shot **700** shows Safari® application window **620** in the foreground. With Safari® application window **620** now in the foreground, it can be seen that the apple.com web site is loaded in window **620**. This is one of a number of possible starting points for creating a webview as discussed above. Once a particular webpage has been identified, the clipping application can be initiated. Initiation can occur automatically, or by user prompt. Other means of initiating the clipping application outside of the dashboard are possible, including by an authoring application, by user interaction, by a call or the like as described above.

[0104] Referring to **FIG. 8**, a screen shot **800** shows a contextual menu **810** displayed from within the Safari® application. Referring to **FIG. 9**, a screen shot **900** shows contextual menu **810** with a menu item **910** labeled "Open in Dashboard" being selected. By selecting the menu item "Open in Dashboard", the clipping engine can be initiated.

[0105] Referring to **FIG. 10**, a screen shot **1000** shows a result of selecting menu item **910**. The result is that a new web clip widget **1010** (i.e., a webview widget) is created. Widget **1010** includes a "Done" button **1020** that may be selected by a user when the process of configuring widget **1010** is complete. To create widget **1010**, identification engine **210**, and focus engine **214** in particular, may identify that a new window needs to be displayed. Focus engine **214** may identify the default size, shape and screen position for a new window, and the frame and controls (for example, the "Done" button **1020** and a control **2910** discussed below) of the new window. Presentation engine **250** may then present the new window as widget **1010**, including a view portion **1030** (the clipped portion), a frame **1040**, and controls.

[0106] Referring to **FIG. 11**, a screen shot **1100** shows widget **1010** loaded with the apple.com web site to providing a webview **1110** (the term webview when accompanied by a reference number is used particularly to identify a presentation made to the user. In general, and as described as above, a webview is an instantiation of a clipping (a clipview) and contains all aspects, functional, programmatic and otherwise for creating a clipping of web content). The apple.com web site, or a portion thereof, is thus displayed in the background in Safari® application window **620** and in widget **1010**. To load the apple.com web site into widget **1010**, focus engine **214** may access the content directly from the Safari® application or access the content identifier and download the apple.com web page. Rendered data may be available from the Safari® application, or render engine **218** may render the apple.com web page. Presentation engine **250** may then display the rendered apple.com web page using a default positioning in which the top left corner of the apple.com web page is also positioned in the top left corner of view portion **1030** of widget **1010**.

[0107] Referring to **FIGS. 12-15**, screen shots **1200-1500** show widget **1010** being resized to produce a series of webviews **1210**, **1310**, **1410**, and **1510**. Webviews **1210**, **1310**, **1410**, and **1510** are displayed in a view window The bottom right corner of widget **1010** is being moved up and to the left to produce webviews **1210-1510** of progressively smaller sizes. Widget **1010** may be resized by a user using, for example, a mouse to drag a corner to a new location. Other methods or tools may be used to position, focus, and ultimately identify an area of interest in one or more web pages. For example, clipping tools, selection tools, and navigation tools can be used to locate, present and select desired portions of content to be included in an area of interest, which is ultimately displayed in the webview. In one instantiation, a clip board of clipped content is maintained to allow a user to select and gather non-contiguous or un-related content (e.g., non-contiguous portions of one web page, or portions from multiple web pages). The clip board can be associated with identification engine **210** or focus engine **214** of **FIG. 2**.

[0108] Referring to **FIGS. 16-23**, screen shots **1600-2300** show the apple.com web site being repositioned within widget **1010** so that the portion of the apple.com web site that is displayed in widget **1010** is modified. The content may be repositioned by the user using, for example, a mouse to drag the displayed content across view portion **1030** of widget **1010**, or scroll bars (not shown). The content of the apple.com web site appears to gradually move up and to the left in widget **1010**, producing a series of webviews **1610-2310** until the area of interest in the apple.com web site is positioned in the top left corner of widget **1010**. Other methods or tools may be used to reposition, focus, and ultimately identify an area of interest in one or more web pages.

[0109] Referring to **FIGS. 24-26**, screen shots **2400-2600** show widget **1010** being further resized to produce a series of webviews **2410**, **2510**, and **2610**. The bottom right corner of widget **1010** is being moved up and to the left to produce webviews **2410-2610** of progressively smaller sizes. Widget **1010** is being decreased in size to further select the area of interest that will be displayed in widget **1010**. The process of resizing widget **1010** after the area of interest is within the display portion of widget **1010** may be referred to as cropping widget **1010** around the area of interest. As with resizing widget **1010** in **FIGS. 12-15**, widget **1010** may be cropped by using various controls, such as, for example, a mouse to click and drag a corner or a side of frame **1040**.

[0110] Referring to **FIG. 27**, a screen shot **2700** shows a cursor over Done button **1020** in webview **2610** to select Done button **1020**. After Done button **1020** is selected, configuration of widget **1010** is complete. Presentation engine **250** may receive a user's selection of Done button **1020** and pass the input to focus engine **214**. Focus engine **214** may then close the configuration process and store all of the information characterizing widget **1010**. The information may be stored and saved, for example, as a widget file or other data structure for later access if widget **1010** is ever closed and needs to be reopened. Focus engine **214** also may name the widget file, and may, for example, select a name by default or prompt the user, using presentation engine **250**, for a name.

[0111] Referring to **FIG. 28**, a screen shot **2800** shows the result after selection of Done button **1020** in screen shot **2700**. After selecting Done button **1020**, the configuration of widget **1010** is complete and widget **1010** appears as shown in webview **2610** of screen shot **2800**. A user may move widget **1010** to another location on dashboard **610** by, for

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example, using a drag and drop method with a mouse, or selecting and using arrow keys on a keyboard or using other positioning tools.

[0112] Associated with a webview widget are various preferences. Preferences include, for example, and as discussed above, a refresh rate, a content source location, an interactivity activation preference, a refocus preference and other preferences. A webview widget includes a mechanism for setting and, typically, for viewing preferences. The mechanism may be a default mechanism for setting, or a mechanism for allowing a user to view and set/modify preferences. Referring to **FIG. 29**, a screen shot **2900** shows a cursor over a control **2910** that, upon selection by the cursor, allows display of one or more preferences. The preference(s) may be displayed, for example, by flipping widget **1010** over using an animation technique to reveal various preferences and to reveal an interface to modify the preference(s).

[0113] Referring to **FIG. 30**, a screen shot **3000** shows widget **1010** flipped over, after selection of control **2910** from screen shot **2900**, to reveal a preferences side **3010**. In the implementation shown in **FIG. 30**, preferences side **3010** includes a refresh preference **3020**, a web clip selection preference **3030**, an interactivity preference **3040**, a camera position selection preference (the refocus preference described above that allows for the redefinition of the view presented in the clipping) **3050**, and a Done button **3060**. Preference selections may be viewed, for example, by clicking on a web clip control **3035** or a refresh control **3025** to pull down a menu of possible selections, by clicking on a check box **3045** that is part of interactivity preferences **3040** to toggle the selection, or by clicking on the preference button itself in the case of camera position selection preference **3050** to activate a selection window.

[0114] Referring to **FIGS. 31-33**, screen shots **3100-3300** show preference lists for preferences **3020**, **3030**, and **3040**. Screen shot **3100** includes a preference pull-down menu **3110** showing a currently selected refresh preference **3020** of "1 minute"**3120**. Other preferences, though not shown, are possible, including automatic, continuous, live and other refresh options. Pull-down menu **3110** was activated, as explained above, by clicking on refresh control **3025**. Screen shot **3200** includes a preference pull-down menu **3210** showing a currently selected web clip preference **3030** of "Apple"**3220**. Pull-down menu **3210** was activated, as explained above, by clicking on web clip control **3035**. Screen shot **3300** shows check box **3045** selected to toggle interactivity preference **3040** and make widget **1010** interactive.

[0115] Selection of camera position selection preference **3050** reinitiates the focus operation, with the current view presented. In one implementation, an animation is used to flip widget **1010** over and present the view portion **1030** displaying the clipped content. With view portion **1030**, and the clipped content, displayed, a user may redefine the focus associated with the current view including resizing widget **1010** and repositioning of content within widget **1010**. After a user is finished resizing and repositioning, the user may select a Done button as shown in **FIG. 27**. Upon selection of the Done button, preferences side **3010** may again be displayed, such as, for example, by flipping widget **1010** over. The user may then continue modifying or viewing preferences.

[0116] Referring to **FIG. 34**, a screen shot **3400** shows a cursor over Done button **3050** on preferences side **3010** to select Done button **3050**. After selecting Done button **3050**, the setting, or modifying, of preferences for widget **1010** is complete. Preferences engine **230** may store the preferences and initiate any changes that are needed to the presentation of widget **1010**. For example, if web clip selection preference **3030** was modified, preferences engine **230** may inform interactivity engine **210** of the modification, interactivity engine **210** may then access the newly selected clipping, and presentation engine **250** may present the new clipping. Regardless of whether changes are needed to the presentation of widget **1010**, after a user selects Done button **3050**, presentation engine **250** displays view portion **1030** of widget **1010** with the clipped content by, for example, flipping widget **1010** over. Widget **1010** will then appear as shown in webview **2610** of screen shot **2800**. From screen shot **2800**, if a user clicks out of dashboard **610**, then screen shot **700** again appears.

[0117] Desktop Environment for a Webview

[0118] Clippings, as described above, can be used to clip a wide variety of content, and present the content in a variety of view environments. Above, a webview is described in a dashboard environment. Alternatively, a webview can be presented in other display environments, for example a desktop environment.

[0119] Referring to **FIG. 35**, a screen shot **3500** shows an implementation in which a webview widget including a viewer **3502** is displayed on a desktop **3505** rather than displaying widget **1010** in a dashboard **610**. This is one example of an instantiation of a webview in an alternative display environment. That said, this instantiation is in no way limiting. Other instantiations of webviews in other display environments are possible including particularly instantiations that do not require the webview itself be associated with or contained within a widget.

[0120] In the implementation shown, viewer **3502** may either be created or modified by an authoring application. A dashboard and its attending applications/functional elements are an example of an authoring application (e.g., a webview widget can be created in dashboard **610** and subsequently presented outside of the dashboard). A desktop may include various organizational and functional graphical elements that allow for ease of use or navigation in a given computing environment. As shown, the desktop includes a dock, tool bars and the like to provide such functionality, though for the purposes of this disclosure, a clipping can be presented in any desktop environment that includes or does not include such structures. In the instantiation shown, desktop **3505** includes a dock **3510** that includes a left-hand portion **3520** showing various utilities or applications that may be launched. Left-hand portion **3520** includes an icon **3530** for dashboard **610**. Dock **3510** also includes a right-hand portion **3540** showing various modules that are running and that may be maximized and displayed on the desktop. In some implementations, viewer **3502** may be minimized so that an icon appears on right-hand side **3540**. Additionally, viewer **3502** may be moved to or positioned in another location on desktop **3505**. Similarly, in the implementations shown with reference to screen shots **600-3400**, widget **1010** may be moved to another location on dashboard **610**.

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[0121] Other Content and Other Environments

[0122] As described above, various content can be clipped and presented as a clipping in a display environment. Different combinations of content, authoring applications for creating the clippings, and environments for displaying the clippings are possible. Though great detail has been provided above related to webviews, other forms of content are contemplated as discussed below. In addition, the particular display environments discussed are by way of example and should nor be construed as limiting.

[0123] Referring again to **FIG. 2**, a variety of additional implementations is now presented. These additional implementations are discussed with respect to the engines **210**-**250** in clipping application **160**.

[0124] Identification engine **210** may work with, including, for example, processing, navigating within, and identifying the source of and an area of interest within, various different types of content.

[0125] The content source may include a messaging application, such as, for example, an email application. A user may desire a clipview, for example, showing (1) the user's inbox or another folder, (2) a one-line summary of the most recent entry in the user's inbox, or (3) merely an indicator of how many unread messages are in the user's inbox.

[0126] The content source may include an unshared or shared document or other file. Such documents may include, for example, a document from a standard business application as described earlier, a drawing, a figure, or a design schematic.

[0127] The content source may include a view of a folder, a volume, a disk, a Finder window in MAC OS X, or some other description of the contents of a storage area (either physical or virtual, for example). One folder may be a smart folder, such as a drop box, that receives documents ready for publication. The content source also may include a view of a search window that may display, for example, all documents related to a particular project. The search window, and a clipping of the search window, may automatically update when a new document or item matching the search criteria appears.

[0128] The content source may include television, video, music, radio, movies, or flash content. The content source also may include a media player presentation.

[0129] The content source may include information from a game, including both single player and multiple player games. For example, a clipping may show a view of some portion of a game in progress or of a summary of a game in progress. For example, a user may be waiting on an adversary's next chess move and may have a clipping showing the chess board, showing an indicator of whose turn it is, or showing a timer indicating how much time is left in the adversary's turn.

[0130] The content source may include a portion of a user interface for an application. For example, a user may clip a view of a dialog box for a command that requires four menu selections to view when using the application's user interface. The clipping may allow the user to select the command. When the user selects the command within the clipping, the clipping may close just as the dialog box would if the command were selected in the usual manner, or the clipping may remain active to allow the user to select the command multiple times. Such clippings may serve as macros or shortcuts, allowing the user to effectively redefine the user interface for the application. Such redefinitions of the user interface may be particularly useful because the clipping includes a visual display.

[0131] Clippings may include a time dimension, in addition to or in lieu of a location dimension. For example, a user may select an area of interest as being the first fifteen seconds from a particular video. The fifteen second video clipping may, for example, play continuously, repeating every fifteen seconds, play on command or mouse-over, or play on a refresh.

[0132] Clippings may use pattern recognition to identify an area of interest. For example, a user may inform focus engine **214** that the user desires to view only the box score(s) in a sports web page, or only the left-most person in a video segment that includes a panel of speakers. Pattern recognition thus may include searching a particular content source for the area of interest. Multiple content sources also may be searched, and searches may be performed for text codes (for example, American Standard Code for Information Interchange ("ASCII")), bit map patterns, and other items.

[0133] Clippings may as well interact with various data sources when selecting content for presentation. The data sources can include data stores associated with individual applications, such as databases, dataservers, mailservers, archives, and the like. In some implementations, the clipping application **160** may during initial selection or subsequent refresh of content, directly access various data sources directly without regard for the underlying applications. Accordingly, the clipping application may not require either the presence or the launching of the associated applications in order to access content.

[0134] As mentioned earlier, focus engine **214** may assist a user in selecting an area of interest. Such assistance may include, for example, proposing certain areas as areas of interest based on general popularity, a user's past behavior, or marketing desires. For example, a web page may identify a popular article and suggest that users visiting the web page make a clipping of the article. As another example, focus engine **214** may track the frequency with which a user visits certain content, or visits certain areas of interest within the content, and if a particular area of interest is visited frequently by a user, then focus engine **214** may suggest that the user make a clipping of the area of interest or pre-create a clipping for the user that merely has to be selected and located, in for example, a dashboard. Such areas of interest may include, for example, a web page, a particular portion of a web page such as a weekly editorial, a particular frame of a web page, a folder in an email application (such as, for example, an inbox), and a command in an application that ordinarily requires navigating multiple pull-down menus. As another example, in an effort to secure repeat viewers, web pages may suggest to viewers that the viewers make a clipping of the web page.

[0135] A user may select a content source or an area of interest by copying configuration parameters (for example, state information or preference parameters) from an existing clipping, or simply copying the entire user interface for a presented clipping (such as, for example, a clipview). A user may also modify a clipping to alter one or more configura-

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tion parameters, particularly after copying the configuration parameters from another clipping. A clipping application can have an associated tool bar having tools for performing a variety of functions and operations. Such functions/operations include, for example, (1) selecting other clips, (2) performing operations on the clips (for example, copying, or deleting), (3) editing a clip, (4) storing a clip, (5) renaming a clip, (6) sorting clips or organizing a display of icons/names of available clips, (7) setting a clip as a default clip to present when the clipping application is launched, (8) a general preferences tool for settings such as, for example, whether auto-created clips in accessed content should be saved, and (9) modifying preferences (for example, refresh rate and interactivity) globally for all clips. Additionally, separate toolbars may be available, for example, for the processes of creating a clipping, modifying a clipping, and setting preferences in a clipping. Tools, or a toolbar, may be included, for example, in the clipping view itself, such as, for example, in frame **1040** of **FIG. 10**. Tools, or toolbars, also may be free-standing and be positioned at any location in a display.

[**0136**] A clipping may include content from multiple content sources, or from multiple areas of interest in one or more content sources. The multiple areas of interest may be presented to a user, for example, serially (time separation) or at the same time (location separation). For example, a user may select multiple areas of interest to be displayed in a particular clipview one after another, as in a slideshow. As another example, the multiple areas of interest may be presented at the same time in a single clipview by aggregating the areas of interest, such as, for example, by stitching, as described previously, the areas of interest together. The toolbar can include stitching tools and slide show tools for creating, modifying, and previewing clips having content from multiple content sources. Tools may allow, for example, a user to easily rearrange the multiple content sources and preview a new layout.

[**0137**] State engine **220** may store location information that is, for example, physical or logical. Physical location information includes, for example, an (x, y) offset of an area of interest within a content source, including timing information (e.g., number of frames from a source). Logical location information includes, for example, a URL of a web page, HTML tags in a web page that may identify a table or other information, or a cell number in a spreadsheet. State information may include information identifying the type of content being clipped, and the format of the content being clipped.

[**0138**] State engine **220** also includes refresh information that instructs clipping application **160** how to perform a refresh. Refresh information may include, as described earlier, a script. For example, a script may include (1) an address of a content source that identifies a login page of a service (possibly a subscription service) on the World Wide Web, (2) login information to enter into the login page, and (3) information to navigate to the area of interest within the service after logging-in. Scripts also may be used with multi-stage clips, which are clips that require two clippings to be presented to a user. For example, a service may require that a user (rather than a script) type in the login information, or answer a question, and the script may include state information for both clippings (that is, the login page of the service, and the actual area of interest within the service) and information describing the transition between the two stages/clippings. The transition information may include, for example, a command in the script that causes the script to pause, and wait for an indication from the service that the login was successful, before attempting to navigate to the area of interest within the service. Scripts can be executed in whole or in part by, for example, state engine **220**, another engine **210**, **214**, **218**, or **230-250**, or a combination of engines **210-250**.

[**0139**] Content from an area of interest also may be refreshed by clipping application **160** receiving reloads/updates pushed automatically from the content source. Content sources also may notify clipping application **160** when an update is available, or when new content is received. Notifications and reloads/updates may be provided using, for example, a publish-and-subscribe system. For example, a clipping may be defined to include a subscription definition (e.g., as part of the selection definition) that supports receipt of content from a subscription service. In this paradigm, a clipping may be configured to subscribe to a content source and updates to the underlying material are then provided in accordance with the subscription source and the attending subscription definition (e.g., in accordance with the terms of an underlying subscription agreement). Accordingly, the content displayed can be provided to, and accepted in a clipping by web or net based (or otherwise provided) updates from the subscription service.

[**0140**] State information may include structural cues, such as, for example, information from a document object model ("DOM") or an indication of relative position between the area of interest and known structural boundaries. For example, a user may select an area of interest that begins on a frame boundary in a web page, and state engine **220** may store the (x,y) offset location of the area of interest, as well as the structural cue that the area of interest begins at a particular frame boundary. Then upon refresh, if the web page has been edited and the (x,y) offset is no longer on the frame boundary, the system may automatically modify the (x,y) offset to align with the frame boundary.

[**0141**] State information may include a vast array of information depending on the particularity that clipping application **160** provides to a user. For example, in a clipping of an email application's inbox, state engine **220** may simply store a designation of the inbox as the area of interest and use a default set of configuration parameters or use the current configuration parameter settings when the clipping is presented and refreshed. Such configuration parameters may specify, for example, the style of view (for example, putting the read pane in the bottom of the display), the sort order (for example, by date received in reverse chronological order), and the scroll bar position.

[**0142**] Preferences engine **230** may allow a variety of preferences to be set or modified. Examples of preferences include (1) a refresh rate, (2) whether or not a clipping includes interactive content, (3) whether sound is to be suppressed, (4) whether an alarm is to be activated when, for example, a change in content occurs, (5) the type of alarm that is to be activated, if any, and (6) the selection of the content source and the area of interest. Preferences engine **230** may provide lists of options for a user for one or more of the available preferences. For example, refresh rate options may include "continuous,""once per minute,""once

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every five minutes,""intermittent,""selectively,""on command,""never,""automatically,""manually,""live", "as provided" or otherwise. Refresh rate options also may allow a user to select a particular day and time, which may be useful in refreshing a clipping that gets updated at the content source at, for example, eight a.m. every Monday, or for refreshing a clipping of a live video segment by recording the video segment (or a portion of it) when the segment initially airs. As another example, types of alarms may include audio of various sorts, or a flashing icon. As another example, preferences engine **230** may provide a list of the previous content sources and areas of interest that have been clipped, and allow a user to select one of these historical selections as the current selection for the clipping.

[**0143**] Interactivity engine **240** may support a variety of different types of interactive content. Interactive content may include, as described earlier, a hyperlink to a web page, a form for data entry (for example, text entry, check box, or radio button), and an email address. Interactive content may include content that responds to, for example, a mouse-over, a mouse-click, or a tab key. Interactive content also may include commands in a clipping, such as, for example, a "reply" or "forward" button in an email application. Interactivity engine **240** may enable a user's interaction with a clipping by, for example, embedding the application from which the content was clipped (for example, a browser or an email application), by referring all user interaction to a stand-alone application, or by incorporating functionality without embedding the application. Rather than embed in the application, interactivity engine **240** may launch the application and act as a pass-through with the application itself hidden (for example, launching and working with a mail server directly). If a stand-alone application is used, interactivity engine **240** may work directly with the application via an application program interface ("API"). As an example of incorporating functionality without embedding the application, clipping application **160** may incorporate functionality allowing a user to edit a clipping of a text document. In such an example, clipping application **160** may have the ability to access text documents and update the text documents based on user input, either using the native application or otherwise.

[**0144**] Interactivity engine **240** may support a variety of different levels of interaction and types of interaction. Levels of interaction may be categorized, for example, into the following three categories: (1) no interactivity is provided, (2) partial interactivity is provided, for example, by allowing a user to add notes to a document but not edit the document, or enabling some of the active content on a web page, and (3) full interactivity is provided, for example, by launching an editing application into the clipping application presentation and allowing a user to edit a document.

[**0145**] Interactivity engine **240** may support interactivity between clippings. For example, one clipping can be used to control or otherwise provide input to a second clipping. In one example, a remote control for a display area is included in a first clipping, the display area itself being defined by a second clipping. Interactivity provided by a user in conjunction with the first clipping, (e.g., changing a channel on a remote control that is presented in the first clipping), is used to effectuate change in the second clipping (e.g., the content displayed in the second clipping is changed). The interactivity engine **240** of each clipping can include, for example, publish and subscribe constructs which can be utilized to provide input and output from/to respective clippings.

[**0146**] Presentation engine **250** may present data in various ways, for example, using audio, images, and video. Further, presentation engine **250** may provide a user interface for displaying clippings. The user interface may include, for example, a widget, or a simple window. The user interface may provide varying amounts of information and functionality. The information may include, for example, any or all of the state information, or the preferences. The functionality may include, for example, providing an interface for setting preferences, or providing control bars that include commands for interacting with the clipped content. Such commands may include a play button for video or audio, or a "save as" button for creating another copy of the presently clipped content.

[**0147**] A clipping has been referred to as a clipview in various implementations. The term clipview is not intended to be limiting, and may include audio, images, video, or other types of data. The presentation may display video by downloading a clipped video segment, or by, for example, refreshing continuously. For example, in implementations in which a web page is clipped into a clipview, and in which the area of interest includes a video segment, clipping application **160** may realize that a video segment in is in the area of interest and may determine, accordingly, that a continuous refresh is needed. Alternatively, the user may instruct clipping application **160** to continuously refresh.

[**0148**] Further implementations may include two clippings that are configured to interact with each other. For example, a first clipping may be of selected content, and a second clipping may be a control device (e.g., a toolbar, or a remote control) that can control the content in the first clipping.

[**0149**] Implementations may nest clippings in various ways. Nesting of clippings can include nesting in time or space.

[**0150**] In one instantiation, a first clipping can be nested in a second clipping producing an aggregate clipping (e.g., creating an aggregate or unified view). Each clipping can itself be complete, defined in accordance with the methods and tools described above. A first clipping, the clipping being nested may be formed conventionally as described above with one additional caveat, a positioning dimension. The positioning dimension for the first clipping can define, by for example name and location as necessary, the particular positioning of the first clipping in (or in relation to) a second clipping. Where the first clipping is to be embedded into the display associated with the second clipping, the second clipping can be defined to include, using for example the identification engine **210**, the named first clipping as part of the source content to be displayed in the second clipping. The second clipping can include, for example an instantiation of the first clipping or the functional equivalent (e.g., a call to the actual first clipping).

[**0151**] The position dimension can include not only location data but also timing data. For example, the nesting of the first and the second clipping can be made in accordance with a time division multiplex methodology, where the view portion of the clipping alternates between presentation of the first clipping content and the second clipping content. Alter-

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natively, other presentation options are possible to interleave the first and the second clippings in time (e.g., the second clipping is inserted every 10 seconds, and displayed for 2 seconds etc.).

[0152] In one implementation the clipping authoring application, e.g., clipping application **160**, can include a clipboard or other tool that facilitates the nesting of the plural distinct clippings. For example, a clipboard could be presented in the authoring application. The clipboard may have an associated toolset for identifying, selecting and placing clippings in the clipboard, and converting the clipboard into a single aggregate clipping. The clipboard can include one or more predetermined forms that allows for the convenient layout in space (e.g., different forms including a two-up (two side by side clippings), a four-up, or other display option) or time (e.g., timeline tool or the like).

[0153] In other implementations, nesting can be used to produce a slide show clipping. For example, when used in conjunction with content derived from a spreadsheet application, individual cells (e.g., non-contiguous cells in a conventional spreadsheet) can be selected and presented together in one unified view or sequentially to a user in a slide show.

[0154] In other implementations, the nesting of clippings may be in accordance with a master-slave paradigm where a master clipping defines all aspects of the inclusion of a slave clipping in the master (e.g., the slave clipping may not be specially configured or "know" of its inclusion in the master). Alternatively, a master controller, which itself may or may not be a clipping, may be used to control the presentation of individually configured clippings into a composite or aggregate clipping.

[0155] For example, a clipping may be of a dashboard that itself includes several view widgets (each including one or more clippings) that include content. As another example, a general purpose clipping, such as, for example, a clock clipview may be inserted (for example, by dragging and dropping) into another clipping for which it would be convenient to have the time displayed.

[0156] Processing device **110** may include, for example, a mainframe computer system, a personal computer, a personal digital assistant ("PDA"), a game device, a telephone, or a messaging device. The term "processing device" may also refer to a processor, such as, for example, a microprocessor, an integrated circuit, or a programmable logic device. Content sources **150** and **170** may represent, or include, a variety of non-volatile or volatile memory structures, such as, for example, a hard disk, a flash memory, a compact diskette, a random access memory, and a read-only memory.

[0157] Implementations may include one or more devices configured to perform one or more processes. A device may include, for example, discrete or integrated hardware, firmware, and software. Implementations also may be embodied in a device, such as, for example, a memory structure as described above, that includes one or more computer readable media having instructions for carrying out one or more processes. The computer readable media may include, for example, magnetic or optically-readable media, and formatted electromagnetic waves encoding or transmitting instructions. Instructions may be, for example, in hardware, firmware, software, or in an electromagnetic wave. A processing device may include a device configured to carry out a process, or a device including computer readable media having instructions for carrying out a process.

[0158] A number of implementations have been described. Nevertheless, it will be understood that various modifications may be made. For example, elements of one or more implementations may be combined, deleted, modified, or supplemented to form further implementations. Additionally, in further implementations, an engine **210-250** need not perform all, or any, of the functionality attributed to that engine in the implementations described above, and all or part of the functionality attributed to one engine **210-250** may be performed by another engine, another additional module, or not performed at all. Though one implementation above describes the use of widgets to create webviews, other views can be created with and presented by widgets. Further, a single widget or single application can be used to create, control, and present one or more clippings in accordance with the description above. Accordingly, other implementations are within the scope of the following claims.

What is claimed is:

1. A method for displaying content in a user interface comprising:

identifying one or more content sources;

identifying a portion of a content source to be included in each of a first and second view;

storing information associated with the identified content source for each view including a name and identifying information for designating a respective portion of a content source; and

displaying both the first and second view in an aggregate view.

2. The method of claim 1 where the first view is displayed in the second view.

3. The method of claim 1 wherein the first view and the second view are interleaved in the aggregate view and displayed at different times.

4. The method of claim 1 wherein the first view controls at least one aspect of the display of the second view.

5. The method of claim 1 wherein the first and second views are displayed simultaneously and in different portions of the aggregate view.

6. The method of claim 1 wherein the first and second views are displayed side by side in the aggregate view.

7. The method of claim 1 wherein the first view is called and displayed in the second view.

8. A method for displaying content in a user interface comprising:

identifying an application, the application including one or more user interfaces that are interactive with a user of the application;

identifying a portion of one or more of the user interfaces to be included in a view;

storing information associated with the identified user interface portion including a name and identifying information; and

displaying the identified portion in a view separate from the application.

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9. The method of claim 8 wherein the identified portion includes an interactive portion that initiates a command in the application.

10. The method of claim 8 wherein the application is the Mac OS X operating system and the identified portion includes a finder frame.

11. The method of claim 8 wherein the application is a spreadsheet application and the identified portion includes one or more cells of a spreadsheet.

12. The method of claim 11 wherein the portions of the one or more cells are non-contiguous in the spreadsheet.

13. The method of claim 11 wherein one or more of the one or more cells are identified in different spreadsheets.

14. The method of claim 8 wherein displaying the identified portion includes not initiating the application and directly accessing he identified portion from a datastore associated with the application.

15. The method of claim 8 wherein the application is a media player and the identified portion is a portion of media configured to be played on the media player.

16. The method of claim 15 wherein the media is television clips.

17. The method of claim 8 further comprising receiving an interaction with the displayed view and processing the interaction.

18. The method of claim 17 wherein processing includes launching the application and loading the identified portion into a user interface associated with the application.

19. The method of claim 17 where the application is a game, and the interaction is a move required to further the game.

20. The method of claim 19 where the game is multiplayer game and the view provides an alert associated with determining another player in the game has provided an input.

21. The method of claim 11 wherein the application is an authoring application and the identified portion is a portion of a document.

22. The method of claim 11 wherein the application is a mail application and the identified portion is an inbox.

23. The method of claim 11 wherein the application is a mail application and the identified portion is an address book.

24. The method of claim 11 wherein the application is a player application and the identified portion is a sound clip.

25. The method of claim 11 wherein the application is a webcam and the identified portion is a portion of content associated with the webcam.

26. A method for sharing content between applications comprising:

identifying content and an associated application;

providing a viewer application that facilitates viewing a portion of the content without initiating the associated application; and

displaying a portion of the content in a view presented by the viewer including automatically updating the view in accordance with a refresh strategy.

27. The method of claim 26 wherein the associated application is a mail application and the content is stored in a mail server associated with the mail application.

28. The method of claim 26 wherein the associated application is a document processing application and the content is stored in a datastore associated with the associated application.

29. The method of claim 26 where the shared content is selected from the group consisting of folder, a file, and a document.

30. The method of claim 26 wherein the refresh strategy is selected from the group consisting of automatically, continuously, intermittently, manually, selectively or as provided.

31. The method of claim 26 wherein the identifying content includes receiving input indicating portions of content that are available for ready inclusion in the view.

32. A method for sharing content between applications comprising:

identifying a content source including a portion of the content source to be included in a view, the content source associated with an application;

providing a viewer application that facilitates viewing the portion of the content; and

displaying the portion of the content in a view presented by the viewer application including automatically updating the view in accordance with a refresh strategy.

33. The method of claim 32 wherein identifying a portion of content includes receiving input indicating portions of content that are available for ready inclusion in the view.

34. The method of claim 32 wherein the content is located by a searching application and the searching application returns a portion of the content as a search result.

35. The method of claim 32 wherein the portion of content is identified from prior portions of content presented to a user.

36. The method of claim 32 wherein the process of displaying the portion includes responding to a user interaction to the view.

37. The method of claim 36 wherein the response is selected from the group consisting of returning a page request, updating the display, navigating in the view, and displaying received content.

38. The method of claim 36 further comprising interacting with a user when provided an input there from.

39. The method of claim 36 further comprising selectively allowing for user interaction with the view.

40. The method of claim 39 wherein selectively allowing for user interaction includes selecting from no interaction, partial interaction and full interaction where full interaction includes launching the application associated with the content being displayed to facilitate the full interaction.

41. The method of claim 32 wherein displaying a portion of the content in accordance with the refresh strategy includes tracking changes in the portion of content in the content source and providing an update to the portion of the content displayed in accordance with the refresh strategy.

42. The method of claim 32 wherein the application is a browser.

43. The method of claim 32 wherein the application is a messaging application and the view provides an alert whenever a new message is received in a message store associated with the messaging application.

44. The method of claim 32 wherein displaying a portion of the content includes applying a function to the portion of the content prior to display.

45. The method of claim 44 wherein the function is a graphical operation.

46. The method of claim 44 wherein the function is a filter.

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47. The method of claim 32 wherein displaying the portion includes displaying the portion in a widget.

48. The method of claim 32 wherein the steps of identify, providing and displaying are instantiated by a widget.

49. The method of claim 32 wherein displaying the view includes displaying the view in an overlay of a display environment.

50. The method of claim 49 wherein the display environment is selected from the group consisting a desktop environment and a dashboard environment.

51. The method of claim 49 wherein the display environment is a display of an electronic device.

52. The method of claim 32 further comprising maintaining a script describing a process for refreshing the portion of the content.

53. The method of claim 32 wherein the step of displaying is performed selectively for different users depending on permissions associated with a given user.

54. The method of claim 32 wherein the content source is associated with a subscription service and refreshing the view is performed in accordance with a subscription agreement.

55. A method for displaying web content in a user interface comprising:

maintaining first and second information, each of the first and second information associated with a content source including a name and identifying information for designating a selected portion of the content source; and

displaying a view including respective selected portions associated with the first and second information.

56. The method of claim 55 further comprising

identifying a first content source associated with the first information;

selecting a portion of the content source to be included in the view;

identifying a second content source associated with the second information; and

selecting a portion of the content source to be included in the view.

57. The method of claim 56 wherein identifying the content source includes determining a script for accessing the content source, maintaining information includes maintaining the script, and displaying includes using the script to access current content associated with the selected portion.

58. The method of claim 56 wherein selecting includes determining view characteristics including a dimension of a display area to display the selected portion.

59. The method of claim 56 wherein selecting includes determining view characteristics including a location of the view in a display environment.

60. The method of claim 55 further comprising rendering the content source and deriving reference data describing the selected portion using the rendered data.

61. The method of claim 55 further comprises detecting a trigger event for activating an overlay in the user interface and where displaying the view includes displaying the view in the overlay.

62. The method of claim 61 wherein the overlay is a dashboard that includes one or more graphical user interface elements.

63. The method of claim 61 further includes detecting a trigger event for dismissing the overlay and reactivating the user interface.

64. The method of claim 55 further comprising detecting a user interaction with the view and providing a response where the response is selected from the group consisting of returning a page request, updating the display, navigating in the view, and displaying received content.

65. The method of claim 55 further comprising interacting with a user when provided an input there from.

66. The method of claim 55 further comprising selectively allowing for user interaction with the view.

67. A data structure for content to be displayed in a user interface comprising:

metadata identifying a first and second content source;

metadata describing an area of interest in each content source;

metadata describing a relationship for displaying both areas of interest in a unified view; and

preference data describing at least refresh preferences to be used when displaying the areas of interest in a user interface.

68. The data structure of claim 67 further comprising navigation metadata including a script for accessing each area of interest.

69. The data structure of claim 67 wherein the metadata describing an area of interest includes a selection definition including information describing a selected portion including reference information and view dimension information.

70. The data structure of claim 69 wherein the reference information includes information defining geographic coordinates for locating the selected portion.

71. The data structure of claim 70 wherein the reference information includes information defining a locator in the content source selected from the group consisting of a frame, a view, or a widget.

72. The data structure of claim 67 further comprising a script for locating the area of interest, the script including one or more processes for authenticating a user for accessing the content source.

73. The data structure of claim 67 wherein the metadata describing the area of interest includes information for identifying selected portions of a plurality of different content sources.

74. The data structure of claim 67 wherein the metadata describing the area of interest includes information for identifying selected non-contiguous portions of a content source.

75. The data structure of claim 67 wherein the refresh preferences are selected from the group consisting of automatically, continuously, intermittently, manually, selectively or as provided.

76. A method for identifying content to be displayed in a user interface comprising:

identifying two or more digital content sources;

selecting a portion of each digital content source to be included in a view defined by a selection definition; and

maintaining information associated with each digital content source including navigation information to the

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digital content source, the selection definition and metadata describing a relationship for displaying each portion in a unified view.

77. The method of claim 76 wherein the digital content source is selected from the group consisting of a web page, a file, a document, or a spreadsheet.

78. The method of claim 76 wherein selecting a portion is performed by a user.

79. The method of claim 76 wherein selecting further includes identifying the navigation information including a script for accessing the selected portion.

80. The method of claim 76 wherein selecting further includes determining the selection definition, the selection definition including information describing the selected portion including reference information and view dimension information.

81. The method of claim 80 wherein the reference information includes information defining geographic coordinates for locating the selected portion.

82. The method of claim 80 wherein the reference information includes information defining a locator in the digital content source selected from the group consisting of a frame, a view, or a widget.

83. The method of claim 76 wherein identifying the digital content source includes determining a script for accessing the digital content source, and maintaining information includes maintaining the script.

84. The method of claim 76 wherein selecting includes determining view characteristics including a dimension of a display area to display the selected portion and maintaining includes maintaining the view characteristics.

85. The method of claim 76 wherein selecting includes determining view characteristics including a location of the view in a display environment and maintaining includes maintaining the view characteristics.

86. The method of claim 76 wherein selecting includes determining reference data for identifying a particular portion of the digital content source to be displayed and the maintaining step includes storing the reference data.

87. The method of claim 76 further comprising rendering the digital content source and deriving reference data describing the selected portion using the rendered data.

88. The method of claim 76 further comprising maintaining user interaction preferences to be active when displaying the view, the interaction preferences providing a selective level of interaction with the view.

89. A data structure for a graphical display element comprising:

a plurality of content definitions, each including a description of a digital content source and a pre-selected portion of the digital content source;

metadata describing a relationship for displaying each pre-selected portion in a unified view; and

preference data including refresh preferences to be used when displaying the pre-selected portion of the digital content source in a user interface.

90. A graphical display element comprising:

a plurality of content definitions, each including a description of a digital content source and an area of interest of the digital content source;

metadata describing a relationship for displaying each area of interest in a unified view;

preference data including refresh preferences to be used when displaying the area of interest of the digital content source in a user interface; and

a viewer for displaying the areas of interest in the unified view and updating content associated with the area of interest in accordance with the preference data.

91. The graphical display element of claim 90 wherein the digital content source is selected from the group consisting of a web page, a file, a document, or a spreadsheet.

92. The graphical display element of claim 90 wherein the content definition further includes navigation information including a script for accessing the area of interest.

93. The graphical display element of claim 90 wherein content definition further includes a selection definition including information describing the area of interest including reference information and view dimension information.

94. The graphical display element of claim 93 wherein the reference information includes information defining geographic coordinates for locating the selected portion.

95. The graphical display element of claim 93 wherein the reference information includes information defining a locator in the digital content source selected from the group consisting of a frame, a view, or a widget.

96. The graphical display element of claim 90 wherein the content definition includes view characteristics including a dimension of a display area to display the area of interest.

97. The graphical display element of claim 90 wherein the content definition includes view characteristics including a location of the view in a display environment.

98. The graphical display element of claim 90 wherein the content definition further comprises data associated with the digital content source that can be used to locate the area of interest in subsequent views.

99. The graphical display element of claim 98 wherein the data is rendered data.

100. The graphical display element of claim 90 wherein the content definition further comprises user interaction preferences to be active when displaying the view, the interaction preferences providing a selective level of interaction with the view.

101. A computer program product comprising instructions for causing a computing device to:

identifying one or more content sources;

identify a portion of a content source to be included in each of a first and second view;

store information associated with the identified content source for each view including a name and identify information for designating a respective portion of a content source; and

display both the first and second view in an aggregate view.

102. A computer program product comprising instructions for causing a computing device to:

identify an application, the application including one or more user interfaces that are interactive with a user of the application;

identify a portion of one or more of the user interfaces to be included in a view;

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store information associated with the identified user interface portion including a name and identifying information; and

display the identified portion in a view separate from the application.

103. A computer program product comprising instructions for causing a computing device to:

identify content and an associated application;

provide a viewer application that facilitates viewing a portion of the content without initiating the associated application; and

display a portion of the content in a view presented by the viewer including automatically updating the view in accordance with a refresh strategy.

104. A computer program product comprising instructions for causing a computing device to:

identify a content source including a portion of the content source to be included in a view, the content source associated with an application;

provide a viewer application that facilitates viewing the portion of the content; and

display the portion of the content in a view presented by the viewer application including automatically updating the view in accordance with a refresh strategy.

105. A computer program product comprising instructions for causing a computing device to:

maintain first and second information, each of the first and second information associated with a content source including a name and identifying information for designating a selected portion of the content source; and

display a view including respective selected portions associated with the first and second information.

106. A computer program product comprising instructions for causing a computing device to:

identify two or more digital content sources;

select a portion of each digital content source to be included in a view defined by a selection definition; and

maintain information associated with each digital content source including navigation information to the digital content source, the selection definition and metadata describing a relationship for displaying each portion in a unified view.

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