CLASS 715, DATA PROCESSING: PRESENTATION PROCESSING OF DOCUMENT, OPERATOR INTERFACE PROCESSING, AND SCREEN SAVER DISPLAY PROCESSING

SECTION I - CLASS DEFINITION

This class provides for data processing means or steps wherein a) human perceptible elements of electronic information (i.e., text or graphics) are gathered, associated, created, formatted, edited, prepared, or otherwise processed in forming a unified collection of such information storable as a distinct entity, b) a user s interaction with a computer system is used to control the presentation of display data; such interaction is interpreted and used by a data processor or computer architecture wherein system level elements of computation or data processing techniques are used prior to use with or in a specific display system, or c) a small program takes over a display screen if there are no keystrokes or mouse movements for a specified duration.

Class 715 is structured into 3 main divisions:

(A) Presentation Processing of Document

(B) Operator Interface Processing

(C) Screen Saver Display Processing

SECTION II - REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

235, Registers, appropriate subclasses for data bearing record controlled systems, basic machines and associated indicating mechanisms for ascertaining the number of movements of various devices and machines, plus machines made from these basic machines alone (e.g., cash registers, voting machines), and in combination with various perfecting features, such as printers and recording means.

345, Computer Graphics Processing and Selective Visual Display Systems, particularly subclasses 418 through 475 for computer graphics processing which may include operator interface processing detail; subclasses 156-184 for display peripheral interface input devices, and subclasses 1.1-111 for visual display systems with selective electrical control including display memory organization and structure for storing image data and manipulating image data between a display memory and display device.

358, Facsimile and Static Presentation Processing, appropriate subclasses for transmitting, processing, or reproducing a permanent picture or static presentation processing for a hard copy (e.g., printer) device.

379, Telephonic Communications, appropriate subclasses for two-way electrical communication of intelligible audio information of arbitrary content over a link including an electrical conductor.

381, Electrical Audio Signal Processing Systems and Devices, appropriate subclasses for wired one-way audio systems, per se.

382, Image Analysis, appropriate subclasses for operations performed on image data with the aim of measuring a characteristic of an image, detecting variations, detecting structures, or transforming the image data, and for procedures for analyzing and categorizing patterns present in image data.

600, Surgery, subclasses 300 through 595 for diagnostic testing applications of computers in the life sciences including patient monitoring and medical imaging.

700, Data Processing: Generic Control Systems or Specific Applications, subclasses 1 through 89 for data processing generic control systems; subclasses 90-306 for applications of computers in various environments.

702, Data Processing: Measuring, Calibrating, or Testing, appropriate subclasses for application of computers in measuring and testing.

703, Data Processing: Structural Design, Modeling, Simulation, and Emulation, subclasses 3 through 22 for data processing simulation.

704, Data Processing: Speech Signal Processing, Linguistics, Language Translation, and Audio Compression/Decompression, subclasses 1 through 10 for linguistics.

705, Data Processing: Financial, Business Practice, Management, or Cost/Price Determination, appropriate subclasses for business data processing.

706, Data Processing: Artificial Intelligence, appropriate subclasses for artificial intelligence in general.

707, Data Processing: Database and File Management or Data Structures, appropriate subclasses for database and file management or data structures.

708,   Electrical Computers: Arithmetic Processing and Calculating, subclasses 1 through 9 for hybrid computers; subclasses 100-714 for calculators, digital signal processing and arithmetical processing, per se; subclasses 800-854 for electric analog computers.

711,   Electrical Computers and Digital Processing Systems: Memory, subclasses 1 through 6 for addressing particular memory configurations and systems; subclasses 100-173 for memory accessing and control, per se; subclasses 200-221 for address formation processing.

717,   Data Processing: Software Development, Installation, and Management, appropriate subclasses for a data processing software development tool.

SECTION III - GLOSSARY

ALPHANUMERIC

Any symbol found in the ASCII character

CELL

The intersection of a row and a column of DATA*.

COMPUTER

A machine that inputs DATA*, processes data, stores data, and outputs data.

DATA

Representation of information in a coded manner suitable for communication, interpretation, or processing.

DATA PROCESSING

See PROCESSING*, below.

DIGITAL DATA PROCESSING SYSTEMS

An arrangement of processor(s) in combination with either memory or peripherals, or both, performing data PROCESSING*.

DISPLAY ATTRIBUTE

A value or code that determines how its representative element is presented.

DISPLAY CONTROLLER

An electrical circuit which actuates a DISPLAY DEVICE* in accordance with received IMAGE DATA*.

DISPLAY DEVICE

A communication device which converts IMAGE DATA* into a VISUAL IMAGE*.

DOCUMENT

An electronic FILE*.

FILE

A block of stored INFORMATION*.

HYPERLINK

An embedded link including code directing process flow to an alternate or additional DOCUMENT* or location in a document.

IMAGE

See VISUAL IMAGE below.

IMAGE DATA

DATA* representing a VISUAL IMAGE*.

INFORMATION

Meaning that a human being assigns to DATA* by means of the conventions applied to that data.

MARKUP LANGUAGE

Any language that provides ways to indicate attributes in TEXT*.

MEDIA/MEDIA TYPES

A way of presenting information, including TEXT, audio, video or image.

PRESENTATION

The visually perceptible display of IMAGE DATA*. This term is synonymous with VISUAL IMAGE (see below).

PRESENTATION PROCESSING

The manipulation of IMAGE DATA* for display.

PROCESSING

Method or apparatus performing systematic operations upon DATA* or INFORMATION* exemplified by functions such as data or information transferring, merging, sorting, and calculating, i.e., arithmetic operations or logical operations.

PROCESSOR

A functional unit that interprets and executes instruction DATA*.

STYLESHEET

A file of DISPLAY ATTRIBUTES* to be applied to a document.

TEXT

DATA* including ALPHANUMERIC* characters representing words and symbols. Usually text characters are coded using a standard such as ASCII, which assigns numeric values to each character, number, or symbol.

VISUAL IMAGE

The image shown by a DISPLAY DEVICE*.

SUBCLASSES

200   **PRESENTATION PROCESSING OF DOC-
UMENT:**
This subclass is indented under the class definition. Subject matter wherein elements of text-only or diverse media type data* are gathered, associated, created, formatted, edited, prepared, or otherwise processed to be presented or wherein the relationship between the elements in a document or portion thereof is defined.

    (1)   Note. Processes of this subclass type are independent of the content of the document or dependent on it only in a generic sense.

201   **Integration of diverse media:**
This subclass is indented under subclass 200. Subject matter wherein distinct multiple media types* are unified into a single document* presentation*.

202   **Authoring diverse media presentation:**
This subclass is indented under subclass 201. Subject matter wherein a diverse media* presentation is created.

203   **Synchronization of presentation:**
This subclass is indented under subclass 201. Subject matter wherein a particular timing relationship between the presentation of diverse media is achieved.

204   **Presentation attribute (e.g., layout, etc.):**
This subclass is indented under subclass 201. Subject matter wherein a particular characteristic of document presentation is specified, e.g., a color or text attribute, etc.

    SEE OR SEARCH THIS CLASS, SUB-
CLASS:
207,   for hyperlink display attributes.

205   **Hypermedia:**
This subclass is indented under subclass 200. Subject matter wherein textual information in a document* includes an embedded link that directs process flow to an alternate or additional document or location within a document, i.e., a hyper link*.

206   **Hyperlink organization (e.g., grouping, bookmarking, etc.):**
This subclass is indented under subclass 205. Subject matter wherein multiple hyperlinks* are arranged in a particular manner.

207   **Hyperlink display attribute (e.g., color, shape, etc.):**
This subclass is indented under subclass 205. Subject matter wherein a particular visual characteristic of a hyperlink* is specified.

    SEE OR SEARCH THIS CLASS, SUB-
CLASS:
204,   for presentation attributes of diverse media.
275,   for color attribute display processing, in general.

208 Hyperlink editing (e.g., link authoring, rerouting, etc.):
This subclass is indented under subclass 205. Subject matter wherein some path designated by a hyperlink* is modified.

SEE OR SEARCH THIS CLASS, SUB-CLASS:
255, for editing, composition, or storage control, in general.

SEE OR SEARCH CLASS:
707, Data Processing: Database and File Management or Data Structures, subclass 100 for the method of traversal of general links.

209 Compound document:
This subclass is indented under subclass 200. Subject matter wherein the document* includes elements having distinct functionalities combined and used together while remaining distinct, e.g., a spreadsheet embedded in a word processing document, etc.

210 Matching application process to displayed media:
This subclass is indented under subclass 209. Subject matter wherein processes specific to elements of different types of media* within a common document* are accessed and executed.

211 Drawing:
This subclass is indented under subclass 200. Subject matter including simple shapes in a document* combined with other media types*, e.g., an arrow in a word processing document, etc.

(1) Note. Graphical representations of spreadsheet information are classified elsewhere.

SEE OR SEARCH CLASS:
345, Computer Graphics Processing and Selective Visual Display Systems, subclass 440 and 441 for graphic drawings, etc.

212 Spreadsheet:
This subclass is indented under subclass 200. Subject matter wherein the elements include data values organized in cells* where the relationship between the cells* is defined by formulas.

213 Alternative scenario management:
This subclass is indented under subclass 212. Subject matter wherein multiple instances of spreadsheet input values with their resulting calculated output values in a given spreadsheet are produced and manipulated.

(1) Note. Often, scenario management is used to optimize in some fashion the result in a particular spreadsheet cell.

214 Having dimension greater than two:
This subclass is indented under subclass 212. Subject matter wherein cells* are organized in structures of three or more dimensions.

215 Including graph or chart of spreadsheet information:
This subclass is indented under subclass 212. Subject matter wherein spreadsheet data is represented in equivalent pictorial form.

SEE OR SEARCH THIS CLASS, SUB-CLASS:
211, for drawing presentation processing.

SEE OR SEARCH CLASS:
345, Computer Graphics Processing and Selective Visual Display Systems, subclasses 440 through 443 for graph generating via computer graphics.

216 Cell protection:
This subclass is indented under subclass 212. Subject matter wherein modification of the content of a spreadsheet cell* is inhibited.

217 Cell format:
This subclass is indented under subclass 212. Subject matter wherein the display attributes* within a spreadsheet entry are edited.

218 Cell hiding:
This subclass is indented under subclass 217. Subject matter wherein the display of the contents of a spreadsheet cell* is inhibited.

219 Particular calculation of cell content:
This subclass is indented under subclass 212. Subject matter wherein a specific mathematical technique is used to generate cell contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:
267, for equation or formula processing, in general.

220 Particular cell content modification:
This subclass is indented under subclass 212. Subject matter wherein a particular method of filling or changing the content of a cell* is specified, e.g., the translation of the contents of a cell from one location to another, etc.

221 Form:
This subclass is indented under subclass 200. Subject matter wherein the elements of data define specific locations reserved for entering data.

(1) Note. This subclass does not cover the processing of entered data.

222 Form creation:
This subclass is indented under subclass 221. Subject matter wherein a form document* is generated.

223 By editing existing form:
This subclass is indented under subclass 222. Subject matter wherein a new form is created by modifying a previously stored base form.

224 Form filling:
This subclass is indented under subclass 221. Subject matter wherein detail of information is placed in a specified location.

225 Fitting data into field on form:
This subclass is indented under subclass 224. Subject matter wherein the entered detail of information or the entered data is modified to meet the geometric limitation of an existing location.

(1) Note. This subclass includes both changing the size of the field and formatting the data to fit within the field.

226 Automatic:
This subclass is indented under subclass 224. Subject matter wherein data is filled into a form without direct user intervention.

227 Table:
This subclass is indented under subclass 200. Subject matter wherein a block of text is organized in rows and/or columns.

228 Ruled lines:
This subclass is indented under subclass 227. Subject matter wherein straight lines indicate rows or columns of text.

SEE OR SEARCH CLASS:
345, Computer Graphics Processing and Selective Visual Display Systems, subclass 443 for the generation of lines.

229 Version management:
This subclass is indented under subclass 200. Subject matter wherein multiple embodiments of a document* (including those which are current or earlier) are retained and organized through the use of various display attributes* for the multiple embodiments.

(1) Note. Processing of multiple versions of one or more documents* through a plurality of display views or simultaneous presentation is classified herein.

SEE OR SEARCH CLASS:
707, Data Processing: Database and File Management or Data Structures, subclass 203 for file or database version management.

230 Annotation control:
This subclass is indented under subclass 200. Subject matter wherein the elements of data * include an optional or selectable limited display of textual data related to data unconditionally displayed, e.g., memo field display related to text, etc.

231 Automatically generated:
This subclass is indented under subclass 230. Subject matter wherein the annotation is generated without direct user intervention.

232 **Positioning of annotation:**
This subclass is indented under subclass 230. Subject matter wherein the manner of spatially locating some type of annotation is specified.

233 **Annotation by other than text (e.g., image, etc.):**
This subclass is indented under subclass 230. Subject matter wherein annotation is represented by other than textual data, e.g., a paper clip marks the location and presence of an annotation, etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:
201, for integration of diverse media.

234 **Structured document (e.g., HTML, SGML, ODA, CDA, etc.):**
This subclass is indented under subclass 200. Subject matter wherein the document* is created and processed according to a standardized arrangement of interrelated hierarchical processing flow and page layout, e.g., hypertext markup language* (HTML), standard generalized markup language (SGML), office document architecture (ODA), or content document architecture (CDA), etc.

(1) Note. The processing of a document according to a standard which directs a receiving application as to the layout of its content is classified herein.

235 **Stylesheet layout creation/editing (e.g., template used to produce stylesheet, etc.):**
This subclass is indented under subclass 234. Subject matter wherein a detail of a stylesheet* generation or modification is specified.

236 **Stylesheet based markup language transformation/translation (e.g., to a published format using stylesheet, etc.):**
This subclass is indented under subclass 234. Subject matter wherein some modification to original markup language* is performed utilizing stylesheet* information.

SEE OR SEARCH THIS CLASS, SUBCLASS:
239, for conversion between markup languages.

237 **Markup language syntax validation:**
This subclass is indented under subclass 234. Subject matter wherein the proper form of markup language* is confirmed.

238 **Accommodating varying screen size:**
This subclass is indented under subclass 234. Subject matter wherein structured document processing adapts to presentation* on multiple displays with different linear dimensions.

(1) Note. Subject matter of this subclass type includes changing the actual structure of the document as opposed to changing merely the size of the rendering of the document.

239 **Conversion from one markup language to another (e.g., XML to HTML or utilizing an intermediate format, etc.):**
This subclass is indented under subclass 234. Subject matter wherein a first variety of structured document is transformed into a second variety of structured document, e.g., XSL transformation, etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:
236, for stylesheet based markup language transformation or translation.

240 **Frames:**
This subclass is indented under subclass 234. Subject matter wherein structured document processing includes separately scrollable areas.

241 **Placemark-based indexing:**
This subclass is indented under subclass 234. Subject matter wherein location of desired relevant portions of a structured document utilizes a previously established location in the document.

242 **Structured document compression:**
This subclass is indented under subclass 234. Subject matter wherein structured document presentation processing includes overall file size reduction of the structured document.

243 **Layout:**
This subclass is indented under subclass 200. Subject matter wherein the geometric position

of an element within the document* is altered or specified.

244   Spacing control:
This subclass is indented under subclass 243. Subject matter wherein a distance between elements within a document is altered or specified.

245   Horizontal spacing:
This subclass is indented under subclass 244. Subject matter wherein the distance between elements in the left and right orientation, e.g., kerning, etc., within a document is altered or specified.

246   Area designation:
This subclass is indented under subclass 243. Subject matter wherein a geometric subset of a presentation surface is specified, e.g., a frame, etc.

247   Boundary processing:
This subclass is indented under subclass 243. Subject matter wherein a perimeter of a geometric subset of a presentation surface within a document or document subset, e.g., flow of text, figure, column or page balancing, etc., is specified, modified, or controlled.

(1)   Note. The layout of elements around other elements whose location has been pre-specified, e.g., a method in which a set of figures flow around a geometrically locked figure, etc., methods for flowing text around figures, or methods for handling text across boundaries, such as line breaks or column breaks, are classified herein.

SEE OR SEARCH THIS CLASS, SUB-CLASS:
251,   for pagination control.

248   Format information in separate file:
This subclass is indented under subclass 243. Subject matter wherein a layout specification is stored separately from the data to which such specification is applied.

249   Format transformation:
This subclass is indented under subclass 243. Subject matter wherein a layout specification is

modified automatically or a translation is performed between specifications.

250   Detecting format code change:
This subclass is indented under subclass 243. Subject matter wherein a modification in a layout specification is recognized.

251   Pagination:
This subclass is indented under subclass 243. Subject matter wherein the document is divided into units, i.e., pages, which are sized according to a display or print medium.

SEE OR SEARCH THIS CLASS, SUB-CLASS:
247,   for boundary processing.

252   Resizing document:
This subclass is indented under subclass 243. Subject matter wherein some overall modification to the linear dimensions of a document is performed.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and Selective Visual Display Systems, subclasses 660 through 663 for scaling utilized in computer graphics processing.

253   Automatic placement of document portion:
This subclass is indented under subclass 243. Subject matter wherein an individual component of a complete document is positioned therein without direct user intervention.

254   Text summarization or condensation:
This subclass is indented under subclass 200. Subject matter wherein an original body of text is transformed into another more compact equivalent.

255   Edit, composition, or storage control:
This subclass is indented under subclass 200. Subject matter including means or steps for developing or changing a document* wherein one or more elements of it, e.g., text data, graphics data, control, or format codes, etc., are added, deleted, or modified, or including means or steps for storing such an altered document or the alteration

256 Text:
This subclass is indented under subclass 255. Subject matter wherein the editing, composition, or storage is peculiar to textual information, e.g., hyphenation or punctuation, etc.

257 Spell check:
This subclass is indented under subclass 256. Subject matter including a means for checking the spelling of a word.

SEE OR SEARCH CLASS:
382, Image Analysis, subclass 231 for checking spelling for pattern recognition.

258 Determining word hyphenation location:
This subclass is indented under subclass 256. Subject matter wherein a lookup table supplies the proper place where a given word may be broken into syllables.

259 Dictionary:
This subclass is indented under subclass 256. Subject matter including a file for maintaining a collection of words related to a language.

SEE OR SEARCH CLASS:
704, Data Processing: Speech Signal Processing, Linguistics, Language Translation, and Audio Compression/ Decompression, subclass 10 for dictionary building, modification, or prioritization.

260 Providing synonym for input word:
This subclass is indented under subclass 259. Subject matter wherein the dictionary supplies a word having meaning close to a designated word.

261 Input of abbreviated word form:
This subclass is indented under subclass 256. Subject matter wherein a relatively short group of pre-selected characters or a symbol is entered and subsequently automatically replaced by a corresponding longer whole word, i.e., long form.

262 Ideographic generator:
This subclass is indented under subclass 256. Subject matter wherein the construction of word, phrase, or sentence is in a pictographic form.

SEE OR SEARCH CLASS:
345, Computer Graphics Processing and Selective Visual Display Systems, subclasses 467 through 473 for computer graphics processing character, particularly subclass 472.3 for generation, per se.

263 Utilizing geometric (e.g., stroke, etc.) data:
This subclass is indented under subclass 262. Subject matter wherein the ideographic character is created from selected components of such characters.

264 Multilingual:
This subclass is indented under subclass 256. Subject matter wherein the processing involves text of more than one spoken language.

SEE OR SEARCH CLASS:
703, Data Processing: Structural Design, Modeling, Simulation, and Emulation, appropriate subclasses for an operator interface which is culturally based, e.g., based on a particular language, etc.
704, Data Processing: Speech Signal Processing, Linguistics, Language Translation, and Audio Compression/ Decompression, subclass 8 for national language support.

265 Having desired language selection:
This subclass is indented under subclass 264. Subject matter wherein a choice of languages is provided to a user for utilization in text processing.

266 Footnoting:
This subclass is indented under subclass 256. Subject matter including primary and related data, i.e., an explanation or comment, where related data is presented at a position separate from but marked as related to primary data.

267 Equation or formula processing:
This subclass is indented under subclass 256. Subject matter wherein an element or other formal code sequence includes an alphanumeric ideogram, e.g., a mathematical or formulaic expression, etc.

SEE OR SEARCH THIS CLASS, SUB-
CLASS:
219,   for particular calculation of spread-
sheet cell content.

268   **Handwritten textual input:**
This subclass is indented under subclass 256.
Subject matter wherein the text includes sym-
bolic data entered by manual transcription of
such symbols.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and
Selective Visual Display Systems,
subclass 179 for stylus-type display
peripheral interface input devices.
382,   Image Analysis, subclasses 119
through 123 for an image analysis
application using a signature; and sub-
classes 186-189 for pattern recogni-
tion of handwritten characters.

269   **Font selection:**
This subclass is indented under subclass 256.
Subject matter wherein a feature of a character
set for a specified collection of information is
determined.

(1)   Note. The subject matter of this subclass
includes the automatic or user-specified
selection of a predefined font.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and
Selective Visual Display Systems,
subclass 467 for the generation of
fonts.

270   **Outlining:**
This subclass is indented under subclass 256.
Subject matter wherein the text may vary in
scope of context and may contain or be con-
tained by information of different scope.

271   **Replacement of element:**
This subclass is indented under subclass 256.
Subject matter wherein a selected text element
is replaced with another text element in the
document.

272   **Block control:**
This subclass is indented under subclass 255.
Subject matter wherein a subset of elements in

a document delineated by a technique of mark-
ing such elements is edited.

273   **Display processing:**
This subclass is indented under subclass 200.
Subject matter wherein the document* is pre-
pared for visual output.

(1)   Note. Subject matter of this subclass
includes processing of a document to
enhance the visibility of particular ele-
ments through the addition of various
display attributes*.

274   **Print preview:**
This subclass is indented under subclass 273.
Subject matter wherein an image of data as
interpreted by an output device is displayed for
operator approval prior to output on a hard
copy.

SEE OR SEARCH CLASS:
358,   Facsimile and Static Presentation Pro-
cessing, subclasses 1.1 through 1.18
for the specific static presentation pro-
cessing to create the image, e.g., for
printing, etc.

275   **Color attribute:**
This subclass is indented under subclass 273.
Subject matter wherein data specifying a color
code is defined or modified.

276   **Utilizing page description language:**
This subclass is indented under subclass 273.
Subject matter wherein a particular type of pro-
gramming language, i.e., PDL, provides a
detailed specification to an output device for
document display.

277   **Plural documents or plural portions of sin-
gle document:**
This subclass is indented under subclass 273.
Subject matter wherein multiple distinct docu-
ments or multiple portions of the same docu-
ment are processed for display.

700   **OPERATOR INTERFACE (E.G., GRAPHI-
CAL USER INTERFACE):**
This subclass is indented under the class defini-
tion. Subject matter wherein a user's interac-
tion with a computer system is used to control
the presentation of display data; such interac-
tion is interpreted and used by a data processor

or computer architecture wherein system level elements of computation or data processing techniques are used prior to use with or in a specific display system.

(1)   Note. Significantly claimed structure external to the user interface methods or apparatuses, claimed in combination with subject matter under this operator interface subclass, which displays or produces an image or sensory message related to such external structure or its function, is classified in the class appropriate to the external structure; however, nominally claimed structure external to this subclass, claimed in combination with subject matter under this subclass definition (e.g., creation or manipulation of icons, menus, windows, and user interactive functions, etc.), is classified in these subclasses unless provided for in the appropriate external subclass.

(2)   Note. Processing of interactive data for presentation with at most a nominal recitation of the input device (e.g., where the user's input is used to control the presentation of display data, etc.) is classified herein.

(3)   Note. Windowing techniques that can include interactive processes are classified herein.

(4)   Note. A graphical user interface in a television environment will be classified elsewhere, see the SEE OR SEARCH CLASS notes below.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and Selective Visual Display Systems, subclasses 418 through 475 , for a specific hardware for performing graphical data processing; subclasses 155-184, for details of a user input interface device with a specific display system, per se, both physical (e.g., mouse, joystick, keyboard, light pen, touch screen, etc.) and logical (e.g., cursor-pick, select-choice, etc.); subclass 521 for specific display systems that include display memory organization and structure for storing an image and manipulating image data between the display memory and the display system.

705,   Data Processing: F inancial, Business Practice, Management, or Cost/Price Determination, subclasses 1 through 45 , for use of operator interface in electronic financial or business management systems, particularly subclasses 26-27 for electronic shopping systems utilizing operator interface.

725,   Interactive Video Distribution Systems, subclasses 37 through 61 , for a graphical user interface in a television environment.

701   **Force feedback interaction:**
This subclass is indented under subclass 700. Subject matter wherein a mechanical resistance is applied to the user in response to a user initiated event (i.e., resistance to movement of a mouse when a region of the display is traversed).

702   **Tactile based interaction:**
This subclass is indented under subclass 700. Subject matter wherein there is tactile as well as visual interaction between a user and an operator interface (i.e., vibration).

703   **Cultural based (including language, time, monetary unit displayed):**
This subclass is indented under subclass 700. Subject matter wherein the interface customization is based upon the ideas, activities, or ways of behaving that are special to a country, people, or region.

704   **Playback of recorded user events (e.g., script or macro playback):**
This subclass is indented under subclass 700. Subject matter wherein user interactions on the interface are stored and regenerated.

705   **Help presentation:**
This subclass is indented under subclass 700. Subject matter wherein a user can access assistance or information regarding an application or operation interactively.

706   **Virtual character or avatar (e.g., animated person):**
This subclass is indented under subclass 705. Subject matter wherein the assistance or infor-

mation is given via a metaphorical graphical image.

707   Adaptive to user skill level:
This subclass is indented under subclass 705. Subject matter wherein the assistance or information provided is adjusted according to determined user proficiency

708   Context sensitive:
This subclass is indented under subclass 705. Subject matter wherein the assistance or information provided is determined by current conditions or a desired operation.

709   Coaching (e.g., animated example, or hand-holding or show me execution):
This subclass is indented under subclass 708. Subject matter wherein the user is shown a pattern to follow in order to achieve a desired result.

710   Input alert:
This subclass is indented under subclass 708. Subject matter wherein the current conditions pertain to warning or reminding a user about an input event.

711   Tool tip (e.g., cursor position based):
This subclass is indented under subclass 708. Subject matter wherein the condition is based on the graphical location of a user controlled tool.

712   Topic roadmap or index:
This subclass is indented under subclass 708. Subject matter wherein the on-line help provides either a detailed explanation or an ordered list of items that guide a user s progress towards a desired outcome.

713   Hierarchical:
This subclass is indented under subclass 712. Subject matter wherein the explanation or list is organized in a pyramidal manner in which each item is linked to items directly beneath it.

714   Combining diverse help information (e.g., different sources):
This subclass is indented under subclass 705. Subject matter wherein a user can simultaneously access assistance or information regarding plural diverse applications or operations interactively.

715   Balloon or bubble appearance:
This subclass is indented under subclass 705. Subject matter wherein the assistance or information is presented in a balloon or bubble format.

716   On screen video or audio system interface:
This subclass is indented under subclass 700. Subject matter wherein the interface is used for interacting with video or audio systems and applications.

717   Multiple diverse systems:
This subclass is indented under subclass 716. Subject matter wherein a user can simultaneously access plural diverse systems interactively.

718   Mode switching interface (e.g., switching between TV and computer):
This subclass is indented under subclass 717. Subject matter wherein a user can traverse between the plural diverse systems (i.e., switching between TV and computer).

719   Video interface:
This subclass is indented under subclass 716. Subject matter wherein the system or application deals specifically with video data.

720   Video traversal control:
This subclass is indented under subclass 719. Subject matter wherein the video data segments may be traversed interactively.

721   Indexed control:
This subclass is indented under subclass 719. Subject matter wherein the video program segments are indexed for accessibility (e.g., program guide, etc.).

722   Video parameter control:
This subclass is indented under subclass 719. Subject matter wherein the parameters of the video data are controlled interactively (e.g., brightness control, etc.).

723   For video segment editing or sequencing:
This subclass is indented under subclass 716. Subject matter wherein portions of video material are arranged into a different order than that in which it was originally arranged.

724   **Cut and paste operation:**
This subclass is indented under subclass 723. Subject matter wherein the arranging is performed by selecting material from one location, removing it to storage, and placing it in another.

725   **Trimming:**
This subclass is indented under subclass 723. Subject matter wherein the arranging causes a reduction to specific video material (i.e., deleting excess frames to save on memory space).

726   **Effects or transitions interface:**
This subclass is indented under subclass 723. Subject matter wherein the arranging causes video special effects and juxtapositions (e.g., scene meshing, etc.).

727   **Audio user interface:**
This subclass is indented under subclass 700. Subject matter wherein there is audio as well as visual interaction between a user and an operator interface.

SEE OR SEARCH CLASS:
340,   Communications: Electrical, subclass 692 for electrical audible alarms, and subclasses 384.1-404.3 for electrical audible indication.
381,   Electrical Audio Signal Processing Systems and Devices, appropriate subclasses, for audio signal processing in general.
704,   Data P rocessing: Speech Signal Processing, Linguistics, Language Translation, and Audio Compression/ Decompression, subclasses 200 through 278 , for speech signal processing.

728   **Audio input for on-screen manipulation (e.g., voice controlled GUI):**
This subclass is indented under subclass 727. Subject matter wherein audio input is used to interact with the interface (e.g., voice controlled GUI, etc.).

729   **For a visually challenged user:**
This subclass is indented under subclass 727. Subject matter designed to help a user who has impaired eyesight.

730   **Presentation to audience interface (e.g., slide show):**
This subclass is indented under subclass 700. Subject matter wherein the interface is used interactively to convey data to an audience.

731   **Authoring tool:**
This subclass is indented under subclass 730. Subject matter wherein a user creates a presentation interactively.

732   **Slide manipulating or editing:**
This subclass is indented under subclass 730. Subject matter wherein the data is presented on slides (e.g., slide show, etc.).

733   **For plural users or sites (e.g., network):**
This subclass is indented under subclass 700. Subject matter wherein concurrently established related or collaborative interfaces are provided to multiple displays.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and Selective Visual Display Systems, subclasses 418 through 475 , for plural displays.
709,   Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, appropriate subclasses for details of the transfer of data among a plurality of computers or digital data processing systems.

734   **Interactive network representation of devices (e.g., topology of workstations):**
This subclass is indented under subclass 733. Subject matter wherein an interface permits a user to perceive or control the distribution or operation of the components making up an arrangement of interconnected systems.

735   **Configuration:**
This subclass is indented under subclass 734. Subject matter wherein the interface permits the user to observe, control, or modify the layout or specific function of the individual components.

SEE OR SEARCH CLASS:
709,   Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, subclasses 220 through 222, for details of the configuration of computer networks.

736   **Network managing or monitoring status:**
This subclass is indented under subclass 734. Subject matter wherein the interface permits the user to conduct administrative operations or perform observations of the current state of the components.

SEE OR SEARCH CLASS:
709,   Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, subclasses 223 through 226, for details of the management of computer networks.

737   **User navigation between devices:**
This subclass is indented under subclass 734. Subject matter wherein a user's central point of focus in the interface may traverse from one network node to another.

SEE OR SEARCH THIS CLASS, SUBCLASS:
854   through 855, for navigation throughout a hierarchy or network-structured interface.

738   **Network resource browsing or navigating:**
This subclass is indented under subclass 733. Subject matter wherein a user has interactive access to distributed information or functions made available through acertain given user site.

SEE OR SEARCH THIS CLASS, SUBCLASS:
205,   through 208, for hypermedia document processing.

739   **Selecting from a resource list (e.g., address book):**
This subclass is indented under subclass 738. Subject matter wherein the items of information are organized into a group from which the user makes a choice.

740   **Remote operation of computing device:**
This subclass is indented under subclass 733. Subject matter wherein a user has access to and control of a data processing system or component at a location removed from the user.

741   **Access control or permission:**
This subclass is indented under subclass 733. Subject matter wherein a user must have permission before gaining control of a graphical user interface.

(1)   Note. Permission is usually granted by correctly entering a password.

SEE OR SEARCH CLASS:
726,   Information Security, subclasses 1 through 36 for information security in computers or digital processing system.

742   **Interactive portal (e.g., secure point of access):**
This subclass is indented under subclass 741. Subject matter wherein a network location acts to coordinate availability, retrieval, or execution of resources associated with that location.

743   **Access rights to interactive controls:**
This subclass is indented under subclass 741. Subject matter wherein the user interface is capable of establishing, modifying, or observing the function of processes enabled by one or more of the plural sites.

744   **Interface customization or adaption (e.g., client server):**
This subclass is indented under subclass 733. Subject matter wherein an interactive user environment is specifically established or modified to suit the needs of the user at a given site.

745   **Based on stored usage or user profile (e.g., frequency of use, cookie):**
This subclass is indented under subclass 744. Subject matter wherein the user environment is established using memory contents developed during previous user interactions.

746   **Interface conversion:**
This subclass is indented under subclass 744. Subject matter wherein the user environment is transformed to a different environment afford-

ing similar or analogous function through a new presentation mode.

747   End user based (e.g., preference setting):
This subclass is indented under subclass 744. Subject matter wherein the operator has direct access to and control of the particulars of the interactive environment.

748   User interactive multicomputer data transfer (e.g., file transfer):
This subclass is indented under subclass 700. Subject matter wherein information is accessed at one site and made available at a second site.

SEE OR SEARCH CLASS:
709,   Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, subclasses 217   through 219 for details of accessing data across a computer network.

749   Downloading remote executable (e.g., JAVA CGI):
This subclass is indented under subclass 748. Subject matter wherein the information enables a function or functions not initially held at the second site.

(1)   Note. The executables are usually program modules or scripts designed to run on either the platform of the first (i.e., server) side or second (i.e., client) side.

SEE OR SEARCH CLASS:
709,   Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring: subclasses 201 through 203 for details of processes distributed among a number of networked systems.

750   Multiple users on a single workstation:
This subclass is indented under subclass 700. Subject matter wherein a plurality of operators are given access to or control of the functions or data maintained in one computer system.

751   Computer supported collaborative work between plural users:
This subclass is indented under subclass 700. Subject matter wherein users at the multiple displays join in completing a given task as a group.

SEE OR SEARCH CLASS:
709,   Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring**,** subclasses 201   through 203 for data processing that is distributed across a computer network.

752   Interactive email:
This subclass is indented under subclass 751. Subject matter wherein specifically addressed messages are created and transmitted between sites.

SEE OR SEARCH CLASS:
709,   Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, appropriate subclasses and   particularly   subclass   206   for email systems, per se.

753   Computer conferencing:
This subclass is indented under subclass 751. Subject matter wherein data from participants at the display sites is distributed to other participants at other collaborative sites.

SEE OR SEARCH CLASS:
709,   Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, subclasses 204   through 207 for email systems, per se.

754   Multicursor (e.g., multiple on-screen pointers):
This subclass is indented under subclass 753. Subject matter wherein a plurality of representations corresponding to individual user pointing device inputs are represented at a single site.

755   Floor control:
This subclass is indented under subclass 753. Subject matter having the ability to moderate meetings and prevent everyone from talking at once by controlling "who has the floor."

756   Real Time Video:
This subclass is indented under subclass 753. Subject matter wherein the distributed data includes moving images that are immediately displayed.

SEE OR SEARCH THIS CLASS, SUB-
CLASS:
716   through 726, for details of textual
      form filling.

757   **Virtual 3D environment:**
This subclass is indented under subclass 753.
Subject matter wherein an artificial workspace
is created and presented to user in such a way
that it appears like a real volumetric spatial
region.

SEE OR SEARCH THIS CLASS, SUB-
CLASS:
848   through 852, for details of operator
      interfaces involving video for details
      of operator interfaces represented by a
      three-dimensional space.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and
      Selective Visual Display Systems,
      subclasses 419 through 427 for details
      of three-dimensional graphics pro-
      cessing.

758   **Chat room:**
This subclass is indented under subclass 753.
Subject matter wherein the distributed data
comprises a series of messages submitted and
made available to other participants.

759   **Group window:**
This subclass is indented under subclass 751.
Subject matter wherein a display representing
the group s work appears at the sites in a con-
strained screen region.

760   **Mark up language interface (e.g., HTML):**
This subclass is indented under subclass 700.
Subject matter wherein a document-based pro-
tocol is used to implement the components of
an interactive environment.

SEE OR SEARCH THIS CLASS, SUB-
CLASS:
234,   through 242, for detail of structured
      documents such as HTML.

761   **Plural adjacent interactive display devices:**
This subclass is indented under subclass 700.
Subject matter wherein the display data is pre-
sented in two or more display devices.

762   **User interface development (e.g., GUI
builder):**
This subclass is indented under subclass 700.
Subject matter wherein a user is able to author,
create, or manage the user interface.

SEE OR SEARCH CLASS:
717,   Data Processing: Software Develop-
      ment, Installation, and Management,
      subclasses 100 through 167 for details
      of software programming develop-
      ment tools.

763   **Graphical or iconic based (e.g., visual pro-
gram):**
This subclass is indented under subclass 762.
Subject matter wherein a graphical shape or
picture to be selected and manipulated by a
user is created directly on a display part of a
monitor.

764   **On-screen workspace or object:**
This subclass is indented under subclass 700.
Subject matter providing a specific element in
an interface with which a user can interact.

765   **Customizing multiple diverse workspace
objects:**
This subclass is indented under subclass 764.
Subject matter wherein distinct interface ele-
ments, such as icons, buttons, or menus, may
be manipulated.

766   **Z order of multiple diverse workspace
objects:**
This subclass is indented under subclass 764.
Subject matter wherein the priority or overlap
of distinct elements may be altered.

767   **Focus control of multiple diverse workspace
objects:**
This subclass is indented under subclass 764.
Subject matter wherein the element that is
made the active component may be altered.

768   **Translucency or transparency interface ele-
ment (e.g., invisible control):**
This subclass is indented under subclass 764.
Subject matter wherein the relative transpar-
ency of an interface element may be modified.

769 Data transfer operation between objects (e.g., drag and drop):
This subclass is indented under subclass 764. Subject matter wherein data is moved from one location on the screen to another by dragging elements on the screen.

SEE OR SEARCH CLASS:
719, Electrical Computers and Digital Processing System: Interprogram Communication or Interprocess Communication (IPC), appropriate subclasses for details of interprogram and interprocess communication.

770 Cut and paste:
This subclass is indented under subclass 769. Subject matter wherein data to be moved is selected, removed to storage, and then placed at a different location.

771 Instrumentation and component modeling (e.g., interactive control panel, virtual device):
This subclass is indented under subclass 764. Subject matter wherein graphical representations of systems elements are used to display variable information relating to operating state or acquired parameter values.

772 Progress or activity indicator:
This subclass is indented under subclass 771. Subject matter wherein the interface element indicates the status or progress of a task being processed.

773 Virtual input device (e.g., virtual keyboard):
This subclass is indented under subclass 771. Subject matter wherein a user can enter information from an on-screen representation of an input device.

774 Ticker metaphor:
This subclass is indented under subclass 764. Subject matter wherein the interface element resembles a scrolled region that dynamically displays information in real time.

775 Office layout metaphor (e.g., filing cabinet, desk):
This subclass is indented under subclass 764. Subject matter wherein the metaphoric object or objects suggest a business environment, enabling access to various items commonly found in a real-world workspace.

776 Indexed book or notebook metaphor:
This subclass is indented under subclass 764. Subject matter wherein the metaphoric object suggests a multi-page text-or document-based item, and wherein user interaction with an associated sub-element causes a corresponding page to be displayed or selected.

SEE OR SEARCH CLASS:
345, Computer Graphics Processing and Selective Visual Display Systems, subclass 473 for details of the animation procedure used to indicate progression to various book pages.

777 Tab metaphor (e.g., property sheet):
This subclass is indented under subclass 764. Subject matter wherein the on-screen object simulates a short projecting extension of a larger region.

778 Multiple virtual screen or desktop switching:
This subclass is indented under subclass 764. Subject matter wherein the display includes plural configurations of a desktop configuration.

779 Task bar or desktop control panel:
This subclass is indented under subclass 764. Subject matter wherein the interface element is an arrangement of graphic indicia that is used to select one of a number of application processes.

780 Entry field (e.g., text entry field):
This subclass is indented under subclass 764. Subject matter wherein information is entered at a particular location.

SEE OR SEARCH THIS CLASS, SUBCLASS:
224, through 226, for details of textual form filling.

781 Window or viewpoint:
This subclass is indented under subclass 764. Subject matter wherein all interactions are constrained to one or more portions or regions of the display, which may display all or part of their related information.

782   **3D Perspective view of window layout:**
This subclass is indented under subclass 781. Subject matter wherein the windows are displayed so as to simulate a volumetric spatial arrangement.

SEE OR SEARCH THIS CLASS, SUBCLASS:
848   through 852, for details of operator interfaces represented by three-dimensional space.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and Selective Visual Display Systems, subclasses 419 through 427   for details of three-dimensional graphics processing.

783   **On-screen window list or index:**
This subclass is indented under subclass 781. Subject matter wherein the interface element is a list of windows from which the user may select.

784   **Window scrolling:**
This subclass is indented under subclass 781. Subject matter wherein, when a window displays only part of its related information, the user can selectively control which portion is displayed.

785   **Autoscroll:**
This subclass is indented under subclass 784. Subject matter wherein the determination of whether to scroll is based upon factors other than user input.

786   **Scroll tool (e.g., scroll bar):**
This subclass is indented under subclass 784. Subject matter wherein there is displayed an object which, when manipulated by a user, causes a display to show consecutive lines of data.

787   **With content attribute on scroll tool:**
This subclass is indented under subclass 786. Subject matter wherein the object displays a value related to a characteristic.

788   **Layout modification (e.g., move or resize):**
This subclass is indented under subclass 781. Subject matter wherein the placement, loca-

tion, or size of windows relative to the display may be modified.

789   **Based on usage or user profile (e.g., frequency of use):**
This subclass is indented under subclass 788. Subject matter wherein the layout modification is based upon significant features of how an individual has used the interface.

790   **Overlap control:**
This subclass is indented under subclass 788. Subject matter wherein the placement of displayed windows relative to each other is such that one window may extend over or past and cover a part of another window.

791   **Always on top:**
This subclass is indented under subclass 790. Subject matter wherein one window is, at all times, displayed as if it were placed so as to cover a portion of another window.

(1)   Note. "A portion" as used herein includes all and none as well as any portion in between.

792   **Tiling or split pane:**
This subclass is indented under subclass 790. Subject matter wherein windows are displayed as if arranged so that no portion of one window overlaps a portion of another window.

793   **Cascading:**
This subclass is indented under subclass 790. Subject matter wherein windows are displayed in an arrangement such that they overlap one another.

794   **Priority or overlap change (e.g., z-order):**
This subclass is indented under subclass 790. Subject matter wherein priority is used to determine which window of a plurality is in the foreground when windows overlap.

795   **Minimizing or send to bottom:**
This subclass is indented under subclass 794. Subject matter wherein the window is hidden, or the priority of the window is modified so that the window appears in the background behind all other windows.

796   Bring to top:
This subclass is indented under subclass 794. Subject matter wherein the window is restored to its previous size and the priority of the window is modified so that the window appears in the foreground above all other windows.

797   Viewing lower priority window (e.g., overlapped windows):
This subclass is indented under subclass 790. Subject matter wherein the priority attributes are changed when the user needs to operate within a lower priority window.

798   Combining moving and resizing operations (e.g., moving causes resizing):
This subclass is indented under subclass 788. Subject matter wherein a window's place or position relative to the display and size relative to the display may both be modified.

799   Moving (e.g., translating):
This subclass is indented under subclass 788. Subject matter wherein a window's place or position relative to the display may be modified.

800   Resizing (e.g., scaling):
This subclass is indented under subclass 788. Subject matter wherein a window's size relative to the display may be modified.

801   Contained object scale change:
This subclass is indented under subclass 800. Subject matter wherein an interface element within the window is sized relative to the window.

802   Focus control:
This subclass is indented under subclass 781. Subject matter wherein the active window may be altered.

803   Window differentiation:
This subclass is indented under subclass 781. Subject matter wherein windows have attributes that distinguish them from other windows.

804   Interwindow link or communication:
This subclass is indented under subclass 781. Subject matter wherein windows have established relationships to other windows, allowing communication between windows, grouping of related windows into sets, or allowing operations to be applied in common to groups of windows.

SEE OR SEARCH CLASS:
719,   Electrical Computers and Digital Processing System: Interprogram Communication or Interprocess Communication (IPC), subclass 329 for details of data transfer between two windowed programs.

805   On-screen link or communication (e.g., cue):
This subclass is indented under subclass 804. Subject matter wherein an interface element provides visual feedback of the link or communication between windows.

806   Window memory structure:
This subclass is indented under subclass 781. Subject matter wherein a storage system is used for storing window data for display.

807   Stored priority attribute:
This subclass is indented under subclass 806. Subject matter wherein the priority attribute that is ued to determine which window of a plurality is in the foreground when windows overlap is copied into a memory device.

808   Pop-up control:
This subclass is indented under subclass 764. Subject matter wherein an interface element not previously displayed appears on the screen in response to user interaction or when user interaction is required.

809   Dialog box:
This subclass is indented under subclass 764. Subject matter wherein there is displayed an enclosed, immovable, area, resembling a window, on the screen that requests some type of information from a user.

810   Menu or selectable iconic array (e.g., palette):
This subclass is indented under subclass 764. Subject matter wherein the interface element is a list of items from which the user may choose.

811   **Based on usage or user profile (e.g., frequency of use):**
This subclass is indented under subclass 810. Subject matter wherein which particular item is displayed depends upon a past history of user selections.

812   **Preselection (e.g., best guess before mouse click):**
This subclass is indented under subclass 811. Subject matter wherein the interface element is a predicted list of likely items from which the user may choose.

813   **Default selection item:**
This subclass is indented under subclass 811. Subject matter wherein an item is presented for user selection by default.

814   **Limited time selection opportunity:**
This subclass is indented under subclass 810. Subject matter wherein the items listed depend upon a history over a given interval of time.

815   **Sizing modification (e.g., scaling):**
This subclass is indented under subclass 810. Subject matter wherein the dimensions of the list of items is modified.

816   **Partial input lookup (e.g., partial string lookup):**
This subclass is indented under subclass 810. Subject matter wherein a complete item is presented based upon a partial input.

817   **Context location indication (e.g., previous or next menu item indication):**
This subclass is indented under subclass 810. Subject matter wherein indications are provided for navigating among the items.

818   **Simultaneous next and previous indication (e.g., menu road map):**
This subclass is indented under subclass 817. Subject matter wherein the indications include next and previous items.

819   **Next menu indication:**
This subclass is indented under subclass 817. Subject matter wherein the indications include next item indication.

820   **Previous menu indication:**
This subclass is indented under subclass 817. Subject matter wherein the indications include previous item indication.

821   **Emphasis:**
This subclass is indented under subclass 810. Subject matter wherein the particular menu displayed is dependent on what a user is doing at a particular moment.

822   **Preselection emphasis:**
This subclass is indented under subclass 821. Subject matter including a visual indication of a selectable item in focus, e.g., highlighting, etc.

823   **Selection or confirmation emphasis:**
This subclass is indented under subclass 821. Subject matter wherein a particular visual intensity is given to that part of the menu that has been selected.

824   **Unavailable emphasis:**
This subclass is indented under subclass 821. Subject matter wherein visual attention is given to items that are not selectable.

825   **Dynamically generated menu items:**
This subclass is indented under subclass 810. Subject matter wherein the list of menu items is developed during the course of user interaction.

826   **Add on item (e.g., software developed, customized):**
This subclass is indented under subclass 810. Subject matter wherein an item is appended to the interface.

827   **Mnemonic (e.g., accelerator key):**
This subclass is indented under subclass 810. Subject matter wherein instructions are assigned to abbreviated inputs.

828   **Partial menu display (e.g., one menu item at a time):**
This subclass is indented under subclass 810. Subject matter wherein the list of items is partially displayed in response to user interaction.

829 Advancing to next menu item in the same menu:
This subclass is indented under subclass 828. Subject matter wherein selection emphasis is moved to a next menu item in the list.

830 Scrolling (e.g., spin dial):
This subclass is indented under subclass 829. Subject matter wherein the list of items is moved to a particular portion.

831 With specific input device:
This subclass is indented under subclass 828. Subject matter configured for a particular input device.

832 Analog selection style:
This subclass is indented under subclass 810. Subject matter wherein selection takes place over a continuously variable range (e.g., dial, etc.).

833 Slider control:
This subclass is indented under subclass 810. Subject matter wherein a graphical control appears to move smoothly along a surface.

834 Radial based (e.g., radial or pie menu):
This subclass is indented under subclass 810. Subject matter wherein each item is displayed in the form of a sector of a circle.

835 Selectable iconic array:
This subclass is indented under subclass 810. Subject matter wherein an interface element is a graphical representation of a function or system resource that is accessed when the graphical representation is selected by user interaction.

836 3D icons:
This subclass is indented under subclass 835. Subject matter wherein displayed icons have a three-dimensional appearance.

837 Compound or aggregate icon:
This subclass is indented under subclass 835. Subject matter wherein icons are a collection of smaller units.

838 Thumbnail or scaled image:
This subclass is indented under subclass 835. Subject matter wherein the icons are reduced scale images.

839 Imitating real life object:
This subclass is indented under subclass 835. Subject matter wherein an icon graphically suggests a real-world item that performs a function analogous to a function invoked by selection of the icon.

840 Using button array:
This subclass is indented under subclass 810. Subject matter wherein the menu is composed of an arrangement of symbolic graphical selection indicia (e.g., pick region, etc.).

841 Sub-menu structure:
This subclass is indented under subclass 810. Subject matter wherein the user may traverse a number of related and linked menu lists, based upon successive choices.

842 Tear off:
This subclass is indented under subclass 841. Subject matter wherein a sub-menu can be moved around the screen.

843 Pull down:
This subclass is indented under subclass 841. Subject matter wherein a sub-menu appears directly beneath a selected item

844 Timed:
This subclass is indented under subclass 810. Subject matter wherein the displaying of the menu items is influenced by time.

845 Multiple selections in a single menu:
This subclass is indented under subclass 810. Subject matter wherein a plurality of menu items can be simultaneously selected.

846 Non-array icons:
This subclass is indented under subclass 764. Subject matter wherein the icons are not linked to each other.

847 Shortcut:
This subclass is indented under subclass 846. Subject matter wherein the interface element is

a graphical representation that provides an immediate access to a file or function.

848   **Interface represented by 3D space:**
This subclass is indented under subclass 764. Subject matter providing a simulation of the workspace in volumetric space.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and Selective Visual Display Systems, subclasses 419 through 427   for details of particular three-dimensional graphics manipulation, rendering, or presentation techniques used to generate the interface.

849   **Individual object:**
This subclass is indented under subclass 848. Subject matter wherein graphical elements having three-dimensional attributes are used.

850   **Navigation within 3D space:**
This subclass is indented under subclass 848. Subject matter including traversing in the 3D workspace.

851   **On-screen navigation control:**
This subclass is indented under subclass 850. Subject matter including on-screen controls for traversing the 3D workspace.

852   **Picking 3D object:**
This subclass is indented under subclass 848. Subject matter wherein a user selects an object that is graphically represented in three dimensions.

853   **Hierarchy or network structure:**
This subclass is indented under subclass 764. Subject matter wherein interface elements are organized into a tree structure type or a linked node grouping.

854   **Navigation within structure:**
This subclass is indented under subclass 853. Subject matter wherein the user can navigate through the interface by following the links from one node to another.

855   **On-screen roadmap or index:**
This subclass is indented under subclass 854. Subject matter wherein there is provided either a detailed explanation or an ordered list of items that guide a user s progress towards a desired outcome.

856   **Cursor:**
This subclass is indented under subclass 764. Subject matter wherein there is an on screen object that moves as a mouse is moved, and where commands and options are selected by positioning a portion of cursor or pointer over the desired choice and clicking a mouse button.

857   **Pointer direction adjustment:**
This subclass is indented under subclass 856. Subject matter wherein the orientation of the pointer or cursor is changed interactively.

858   **Automatic position adjustment:**
This subclass is indented under subclass 856. . Subject matter wherein the position of the pointer or cursor is corrected automatically (i.e., after an interface is changed in some fashion).

859   **Status indicator:**
This subclass is indented under subclass 856. Subject matter wherein an object that has a cursor or pointer over it is graphically modified.

860   **Selection emphasis:**
This subclass is indented under subclass 859. Subject matter wherein the modification is highlighting.

861   **Dynamically changed appearance (e.g., animated or live action):**
This subclass is indented under subclass 859. Subject matter wherein a simulation of movement of a pointer is created by displaying a series of pictures, or frames (i.e., animated or live action).

(1)   Note. The difference between animation and video is that video takes continuous motion and breaks it up into discrete frames, animation starts with independent pictures and puts them together to form the illusion of continuous motion.

862   **Proximity detection:**
This subclass is indented under subclass 856. Subject matter wherein, for selection of an on-screen object, a portion of the cursor or pointer is placed anywhere in a region close to the selected object.

863   Gesture-based:
This subclass is indented under subclass 700. Subject matter wherein a path or shape described by user input is indicative of a desired operation.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and Selective Visual Display Systems, subclasses 156 through 184 for the details of user input devices used to accomplish such input.
382,   Image Analysis, appropriate subclasses for details of the detection of the identity of a desired operation on the basis of an image defined by the path or shape.

864   For a small display screen (e.g., personal digital assistant, palm-top):
This subclass is indented under subclass 700. Subject matter wherein the interface is used on a portable system.

865   Miscellaneous interface for the handicapped or disabled user:
This subclass is indented under subclass 700. Subject matter designed to help physically or mentally impaired users.

SEE OR SEARCH THIS CLASS, SUBCLASS:
729,   for audio user interfaces designed for visually impaired users.

866   Miscellaneous customization or adaptation:
This subclass is indented under subclass 700. Subject matter wherein an aspect of the operator interface is modified or established.

867   SCREEN SAVER DISPLAY:
This subclass is indented under the class definition. Subject matter wherein a small program takes over the display screen if there are no keystrokes or mouse movements for a specified duration.

CROSS-REFERENCE ART COLLECTIONS

961   OPERATOR INTERFACE WITH VISUAL STRUCTURE OR FUNCTION DICTATED BY INTENDED USE:
This cross-reference art is indented under the class definition. Collection of art wherein a user interactive arrangement is designed around and specific to a given task.

(1)   Note. This cross-reference art collection is intended to include subject matter relating to more than nominal details of operator interfaces which are characteristic of the given task. It is not intended to include subject matter directed to details of the task itself.

SEE OR SEARCH THIS CLASS, SUBCLASS:
700   through 867, for specific details of the visual structure of an operator interface.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and Selective Visual Display Systems, subclasses 700 through 867 , for specific details of the visual structure of an operator interface.

962   Operator interface for marketing or sales:
This cross-reference art is indented under subclass 961. Collection of art wherein the given task is a commercial function involving user response.

SEE OR SEARCH CLASS:
705,   Data Processing: Financial, Business Practice, Management, or Cost/Price Determination, appropriate subclasses when the recitation of user interface is nominal and secondary to the commercial function itself, as may appear in an automated financial, business practice, or management system.

963   Calendar or scheduling:
This cross-reference art is indented under subclass 961. Collection of art wherein the given task is designating the time or date of one or more events.

SEE OR SEARCH CLASS:
705,   Data Processing: Financial, Business Practice, Management, or Cost/Price Determination, subclasses 8 through 9 for automated scheduling related to operations research in a business environment.

964   **CAD or CAM (e.g., interactive design tool):**
This cross-reference art is indented under subclass 961. Collection of art wherein the given task is a part of computer aided design or computer aided manufacturing.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and Selective Visual Display Systems, subclasses 419 through 427 for specific three-dimensional object processing used with such an interface and subclass 619 for specific three-dimensional object processing used with such an interface.
700,   Data Processing: Generic Control Systems or Specific Applications, subclasses 95 through 212 , for use of operator interface in CAD or CAM product manufacturing.

965   **For process control and configuration:**
This cross-reference art is indented under subclass 961. Collection of art wherein the given task is specifying or modeling system functions or connections.

(1)   Note. This cross-reference art collection is intended to include operator interface having only nominal details of the structure of associated system components.

SEE OR SEARCH CLASS:
700,   Data Processing: Generic Control Systems or Specific Applications, subclasses 83 through 85 , for the particular details of control systems including a device or apparatus controlled thereby in which an operator control interface is used with the control system.

965   **For process control and configuration:**
This cross-reference art is indented under subclass 961. Collection of art wherein the given

task is specifying or modeling system functions or connections.

(1)   Note. This cross-reference art collection is intended to include operator interface having only nominal details of the structure of associated system components.

SEE OR SEARCH CLASS:
700,   Data Processing: Generic Control Systems or Specific Applications, subclasses 83 through 85 , for the particular details of control systems including a device or apparatus controlled thereby in which an opera control interface is used to com with the control system.

966   **Computer process (e.g., operation of computer):**
This cross-reference art is indented under subclass 965. Collection of art wherein the system is a data processing system.

(1)   Note. Examples of such an operator interface are those in which a data processing system is controlled or configured in a supervisory manner. This cross-reference art collection is not intended to include operator interfaces whose display content is determined by an arbitrary function of the data processing system.

SEE OR SEARCH THIS CLASS, SUBCLASS:
700   through 867, for general use of operator interfaces for display.

967   **Visual or iconic programming:**
This cross-reference art is indented under subclass 966. Collection of art wherein the functions or connections are graphically and symbolically designated, represented, and edited.

(1)   Note. This cross-reference art collection is intended to include subject matter directly relating to operator interface details involved in the manipulation of computer system functions or connections.

968 Interface for database querying and retrieval:
This cross-reference art is indented under subclass 966. Collection of art wherein the function of the data processing system is accessing stored information on the basis of user specification.

SEE OR SEARCH CLASS:
707, Data Processing: Database and File Management or Data Structures, appropriate subclasses, for details of database accessing methods.

969 Network layout and operation interface:
This cross-reference art is indented under subclass 965. Collection of art wherein connections are designated which establish associative links between a plurality of system components or nodes.

SEE OR SEARCH CLASS:
709, Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, appropriate subclasses for means or steps for detecting or observing characteristics or conditions of the network.

970 Instrumentation and component modelling (e.g., interactive control panel):
This cross-reference art is indented under subclass 965. Collection of art wherein graphical representations of system elements are used to display variable information relating to operating state or acquired parameter values.

970.1 Amusement or marital aid interface:
This cross-reference art is indented under subclass 961. Collection of art wherein the given task is the operation of an amusement device or relating to the state of marriage.

971 COOPERATIVE DECISION SUPPORT SYSTEM FOR GROUP OF USERS:
This cross-reference art is indented under the class definition. Collection of art wherein a group of users at plural display interface sites join in the collaborative effort required to effect a single desired choice related to a common task.

972 INSERTED REAL-TIME VIDEO IN OPERATOR INTERFACE:
This cross-reference art is indented under the class definition. Collection of art wherein a computer graphics display is capable of supporting, within its interactive screen region, the depiction of a live-action sequence or a captured still image from such a sequence.

973 SCROLL TOOL (E.G., WINDOW SCROLL BAR):
This cross-reference art is indented under the class definition. Collection of art wherein operator interface display elements may be used to select a portion to be displayed in a constrained region by interaction with on-screen tools which graphically represent the location of the selected portion.

SEE OR SEARCH CLASS:
345, Computer Graphics Processing and Selective Visual Display Systems, subclass 684, display control scrolling in general.

974 SLIDER CONTROL AS ON-SCREEN OBJECT IN OPERATOR INTERFACE:
This cross-reference art is indented under the class definition. Collection of art wherein an interactive user controls the setting of a value or condition within a computer system by the motion of one sub-portion of an interface element with respect to others.

975 POP-UP DIALOG BOX FOR ENTRY:
This cross-reference art is indented under the class definition. Collection of art wherein a display region appears for an interactive user where it had not been previously for the purpose of obtaining input or information indications from the user.

SEE OR SEARCH THIS CLASS, SUBCLASS:
808, for pop-up control in general.
809, for a dialog box in general.

976 3-D ICON:
This cross-reference art is indented under the class definition. Collection of art wherein a symbolic representation of a function or system resource in an interactive user display appears with a perspective appearance.

SEE OR SEARCH THIS CLASS, SUB-
CLASS:
836,   for a selectable array of 3D icons.
846   through 847 , for non-array icons.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and
Selective Visual Display Systems,
subclasses 419 through 427 , for com-
puter graphics methods or apparatus
for generating the perspective display.

977   **DYNAMIC ICON (E.G., ANIMATED OR
LIVE ACTION):**
This cross-reference art is indented under the
class definition. Collection of art wherein a
symbolic representation of a function or system
resource in an interactive user display appears
with an attribute of real-time motion within the
display screen space.

SEE OR SEARCH CLASS:
345,   Computer Graphics Processing and
Selective Visual Display Systems,
subclasses 473 through 475   for
details of animation processing used
to create the attribute of real-time
motion.

978   **AUDIO INTERACTION AS PART OF AN
OPERATOR INTERFACE:**
This cross-reference art is indented under the
class definition. Collection of art wherein
sounds are used as input to or output from an
operator interface.

(1)   Note. This collection is intended to
include interface arrangements which, in
addition to graphical features, provide
the user with auditory control or feed-
back to enhance the graphical effect.

SEE OR SEARCH CLASS:
704,   Data Processing: Speech Signal Pro-
cessing, Linguistics, Language Trans-
lation, and Audio Compression/
Decompression, subclasses 200
through 278 , for speech signal pro-
cessing.

FOREIGN ART COLLECTIONS

The definitions below correspond to abolished sub-

classes from which these collections were formed. See
the Foreign Art Collection schedule of this Class for
specific correspondences. [Note: the titles and defini-
tions for indented art collections include all the details
of the one(s) that are hierarchically superior.]

FOR 176   **OPERATOR INTERFACE (345/326):**
This foreign art collection is indented under
the class definition. Foreign art collection
including subject matter wherein a user's
interaction with a computer system is used
to control the presentation of display data.
Such interaction is interpreted and used by a
data processor or computer architecture
wherein system level elements of computa-
tion or data processing techniques areused
prior to use with or in a specific display sys-
tem.

(1)   Note. Significantly claimed structure
external to the user interface methods or
apparatuses, claimed in combination
with subject matter under this operator
interface subclass, which displays or
produces an image or sensory message
related to such external structure or its
function, is classified in the class appro-
priate to the external structure; however,
nominally claimed structure external to
this subclass, claimed in combination
with subject matter under this subclass
definition (i.e., creation or manipulation
of icons, menus, windows, and user
interactive functions), is classified in
these subclasses unless provided for in
the appropriate external subclass.

(2)   Note. Processing of interactive data for
presentation with at most a nominal reci-
tation of the input device (i.e., where the
user s input is used to control the presen-
tation of display data) is classified
herein.

(3)   Note. Windowing techniques which can
include interactive processes are classi-
fied herein.

FOR 177   **Interaction in a television environment
(345/327):**
This foreign art collection is indented under
subclass FOR 176. Foreign art collection
including subject matter wherein the user is
given control over operations involving

broad, real-time, or live-action video signals.

FOR 178 For video segment editing or sequencing (345/328):
This foreign art collection is indented under subclass FOR 177. Foreign art collection including subject matter wherein the operations include arranging portions of acquired video material into a different order than that in which it was originally obtained.

FOR 179 For plural users or sites (345/329):
This foreign art collection is indented under subclass FOR 176. Foreign art collection including subject matter wherein concurrently established related or collaborative interfaces are provided to multiple displays.

FOR 180 Computer conferencing (345/330):
This foreign art collection is indented under subclass FOR 179. Foreign art collection including subject matter wherein data from participants at the display sites is distributed to other participants at other collaborative sites.

FOR 181 Computer supported cooperative work (345/331):
This foreign art collection is indented under subclass FOR 179. Foreign art collection including subject matter wherein users at the multiple displays join in completing a given task as a group.

FOR 182 Group window (345/332):
This foreign art collection is indented under subclass FOR 181. Foreign art collection including subject matter wherein a display representing the group s work appears at the sites in a constrained screen region.

FOR 183 Interface customization or edition (345/333):
This foreign art collection is indented under subclass FOR 176. Foreign art collection including subject matter wherein an aspect of the operator interface is modified or established.

FOR 184 Graphical appearance (345/334):
This foreign art collection is indented under subclass FOR 183. Foreign art collection including subject matter wherein a visual attribute of an element in the operator interface is modified.

FOR 185 Link between object and task or function (e.g., client/server) (345/335):
This foreign art collection is indented under subclass FOR 183. Foreign art collection including subject matter wherein the aspect is a relationship between interface feature and routine performed.

FOR 186 Having on-line help (345/336):
This foreign art collection is indented under subclass FOR 176. Foreign art collection including subject matter wherein a user can access assistance or information regarding an application or operation interactively.

FOR 187 Adaptive to user skill level (345/337):
This foreign art collection is indented under subclass FOR 186. Foreign art collection including subject matter wherein the assistance or information provided is adjusted according to a determined user proficiency.

FOR 188 Context sensitive (345/338):
This foreign art collection is indented under subclass FOR 186. Foreign art collection including subject matter wherein the assistance or information provided is determined by current conditions or a desired operation.

FOR 189 On-screen workspace or object (345/339):
This foreign art collection is indented under subclass FOR 176. Foreign art collection including subject matter providing a specific element in an interface with which a user can interact.

FOR 190 Window (345/340):
This foreign art collection is indented under subclass FOR 189. Foreign art collection including subject matter wherein all interactions are constrained to one or more portions or regions of the display, which may display all or part of their related information.

FOR 191 Window scrolled to needed portion (345/341):
This foreign art collection is indented under subclass FOR 190. Foreign art collection including subject matter wherein, when a window displays only part of its related

information, the user can selectively control which portion is displayed.

FOR 192 Layout modification (e.g., move or resize) (345/342):
This foreign art collection is indented under subclass FOR 190. Foreign art collection including subject matter wherein the place, location, or size of windows relative to the display may be modified.

FOR 193 Window differentiation (345/343):
This foreign art collection is indented under subclass FOR 190. Foreign art collection including subject matter wherein windows have attributes which distinguish them from other windows.

FOR 194 Priority (345/344):
This foreign art collection is indented under subclass FOR 193. Foreign art collection including subject matter wherein the attribute is priority, which is used to determine which window of a plurality is in the foreground when windows overlap.

FOR 195 Viewing lower priority window (345/345):
This foreign art collection is indented under subclass FOR 194. Foreign art collection including subject matter wherein the priority attributes are changed when the user needs to operate within a lower priority window.

FOR 196 Interwindow link or communication (345/346):
This foreign art collection is indented under subclass FOR 190. Foreign art collection including subject matter wherein windows have established relationships to other windows, allowing communication between windows, grouping of related windows into sets, or allowing operations to be applied in common to groups of windows.

FOR 197 Pop-up control (e.g., message or dialog box) (345/347):
This foreign art collection is indented under subclass FOR 189. Foreign art collection including subject matter wherein an interface element not previously displayed appears on the screen in response to user interaction or when user interaction is required.

FOR 198 Icon (345/348):
This foreign art collection is indented under subclass FOR 189. Foreign art collection including subject matter wherein an interface element is a graphical representation of a function or system resource which is accessed when the graphical representation is selected by user interaction.

FOR 199 Metaphoric icon object (345/349):
This foreign art collection is indented under subclass FOR 198. Foreign art collections including subject matter wherein an icon graphically suggests a real-world item which performs a function analogous to a function invoked by selection of the icon.

FOR 200 Indexed book or notebook (345/350):
This foreign art collection is indented under subclass FOR 199. Foreign art collection including subject matter wherein the meta object suggests a multi-page text- or document-based item, and wherein user interaction with an associated sub-element causes a corresponding page to be displayed or selected.

FOR 201 Office layout (e.g., filing cabinet, desk) (345/351):
This foreign art collection is indented under subclass FOR 199. Foreign art collection including subject matter wherein the metaphoric object or objects suggest a business environment, enabling access to various items commonly found in a real-world workspace.

FOR 202 Menu (345/352):
This foreign art collection is indented under subclass FOR 189. Foreign art collection including subject matter wherein the interface element is a list of items from which the user may choose.

FOR 203 Sub-menu structure (345/353):
This foreign art collection is indented under subclass FOR 202. Foreign art collection including subject matter wherein the user may traverse a number of related and linked menu lists, based upon successive choices.

FOR 204 Using button array (345/354):

This foreign art collection is indented under subclass FOR 202. Foreign art collection including subject matter wherein the menu is composed of an arrangement of symbolic graphical selection indicia (e.g., pick region).

FOR 205   Interface represented by 3D space (345/355):
This foreign art collection is indented under subclass FOR 189. Foreign art collection including subject matter wherein the user appears to move within a 3D space of interface elements.

FOR 206   Hierarchy or network structure (345/356):
This foreign art collection is indented under subclass FOR 189. Foreign art collection including subject matter wherein interface elements are organized into a tree structure type or a linked node grouping.

FOR 207   Navigation within structure (345/357):
This foreign art collection is indented under subclass FOR 206. Foreign art collection including subject matter wherein the user can navigate through the interface by following the links from one node to another.

FOR 208   Gestured-based (345/358):
This foreign art collection is indented under subclass FOR 176. Foreign art collection including subject matter wherein a path or shape described by user input is indicative of a desired operation.

END