

U. S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

CLASSIFICATION ORDER 1835

SEPTEMBER 7, 2004

Project No. E-6675

**The following classification changes will be effected by this order:**

	<u>Class</u>	<u>Subclass</u>	<u>Art Unit</u>	<u>Ex'r Search Room No.</u>
<b>Abolished:</b>	709	400	2115	ELEC 00-00
<b>Established:</b>	713	375	2115	ELEC 00-00
<b>Position Changes:</b>	709	200	2141	ELEC 00-00
<b>Indent Changes:</b>	709	201-253	2141	ELEC 00-00
<b>Title Changes:</b>	709	200	2141	ELEC 00-00
	709	Class Title		

**The following classes are also impacted by this order.**

**Classes:** 340, 341, 342, 345, 348, 356, 358, 360, 370, 375, 379, 380, 386, 400, 455, 700, 702, 705, 706, 710, 711, 712, 714, 717, 719, 725, and 902

**This order includes the following:**

- A. CLASSIFICATION MANUAL CHANGES;
- B. LISTING OF PRINCIPAL SOURCE OF ESTABLISHED AND DISPOSITION OF ABOLISHED SUBCLASSES;
- C. CHANGES TO THE U.S. - I.P.C. CONCORDANCE;
- D. DEFINITION CHANGES AND NEW OR ADDITIONAL DEFINITIONS

CLASSIFICATION ORDER 1835

SEPTEMBER 7, 2004

Project No. E-6675

Project Leader: Doug Shute  
Project Classifier: Doug Shute  
Examiner: Dennis Butler  
Editor: James E. Doyle, Jr.  
CSS Reviewer:

@ 201 DISTRIBUTED DATA PROCESSING  
 @ 202 .Processing agent  
 @ 203 .Client/server  
 @ 204 COMPUTER CONFERENCING  
 @ 205 .Cooperative computer processing  
 @ 206 .Demand based messaging  
 @ 207 .Priority based messaging  
 @ 208 MASTER/SLAVE COMPUTER CONTROLLING  
 @ 209 .Master/slave mode selecting  
 @ 210 .Slave computer locking  
 @ 211 .Master accessing slave storage  
 @ 212 COMPUTER-TO-COMPUTER DIRECT MEMORY ACCESSING  
 @ 213 MULTICOMPUTER DATA TRANSFERRING VIA SHARED MEMORY  
 @ 214 .Plural shared memories  
 @ 215 .Partitioned shared memory  
 @ 216 .Accessing another computer's memory  
 @ 217 REMOTE DATA ACCESSING  
 @ 218 .Using interconnected networks  
 @ 219 .Accessing a remote server  
 @ 220 NETWORK COMPUTER CONFIGURING  
 @ 221 .Reconfiguring  
 @ 222 .Initializing  
 @ 223 COMPUTER NETWORK MANAGING  
 @ 224 .Computer network monitoring  
 @ 225 .Computer network access regulating  
 @ 226 .Network resource allocating  
 @ 227 COMPUTER-TO-COMPUTER SESSION/CONNECTION ESTABLISHING  
 @ 228 .Session/connection parameter setting  
 @ 229 .Network resources access controlling  
 @ 230 COMPUTER-TO-COMPUTER PROTOCOL IMPLEMENTING  
 @ 231 .Computer-to-computer data streaming  
 @ 232 .Computer-to-computer data transfer regulating  
 @ 233 ..Transfer speed regulating  
 @ 234 ..Data flow compensating  
 @ 235 ..Congestion avoiding  
 @ 236 .Computer-to-computer data framing  
 @ 237 .Computer-to-computer handshaking  
 @ 238 COMPUTER-TO-COMPUTER DATA ROUTING  
 @ 239 .Alternate path routing  
 @ 240 .Prioritized data routing  
 @ 241 .Least weight routing  
 @ 242 .Routing data updating  
 @ 243 .Decentralized controlling  
 @ 244 .Centralized controlling  
 @ 245 COMPUTER-TO-COMPUTER DATA ADDRESSING  
 @ 246 COMPUTER-TO-COMPUTER DATA MODIFYING  
 @ 247 .Compressing/decompressing  
 @ 248 MULTICOMPUTER SYNCHRONIZING  
 @ 249 MULTIPLE NETWORK INTERCONNECTING  
 @ 250 NETWORK-TO-COMPUTER INTERFACING  
 @ 251 RING COMPUTER NETWORKING  
 @ 252 STAR OR TREE COMPUTER NETWORKING  
 @ 253 BUSED COMPUTER NETWORKING  
 # 200 MISCELLANEOUS  
 \*\*\*\*\*  
 FOREIGN ART COLLECTIONS  
 \*\*\*\*\*  
 FOR 000 CLASS-RELATED FOREIGN DOCUMENTS

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

FOR 100 .Communication engineering (364/FOR 514)  
 FOR 101 ..Object detection or tracking (364/FOR 516)  
 FOR 102 ..Signal evaluation (target or noise) (364/FOR 517)  
 FOR 103 MULTICOMPUTER DATA TRANSFERRING (364/200.3)  
 FOR 104 .Distributed data processing (395/200.31)  
 FOR 105 ..Processing agent (395/200.32)  
 FOR 106 ..Client/server (395/200.33)  
 FOR 107 .Computer conferencing (395/200.34)  
 FOR 108 ..Cooperative computer processing (395/200.35)  
 FOR 109 ..Demand based messaging (395/200.36)  
 FOR 110 ..Priority based messaging (364/200.37)  
 FOR 111 .Master/slave computer controlling (364/200.38)  
 FOR 112 ..Master/slave mode selecting (395/200.39)  
 FOR 113 ..Slave computer locking (395/200.4)  
 FOR 114 ..Master accessing slave storage (395/200.41)  
 FOR 115 .Computer-to-computer direct memory accessing (395/200.42)  
 FOR 116 .Multicomputer data transferring via shared memory (395/200.43)  
 FOR 117 ..Plural shared memories (395/200.44)  
 FOR 118 ..Partitioned shared memory (395/200.45)  
 FOR 119 ..Accessing another computer's memory (395/200.46)  
 FOR 120 .Remote data accessing (395/200.47)  
 FOR 121 ..Using interconnected networks (395/200.48)  
 FOR 122 ..Accessing a remote server (395/200.49)  
 FOR 123 .Network computer configuring (395/200.5)  
 FOR 124 ..Reconfiguring (395/200.51)  
 FOR 125 ..Initializing (395/200.52)  
 FOR 126 .Computer network managing (395/200.53)  
 FOR 127 ..Computer network monitoring (395/200.54)  
 FOR 128 ..Computer network access regulating (395/200.55)  
 FOR 129 ..Network resource allocating (395/200.56)  
 FOR 130 .Computer-to-computer session/connection establishing (395/200.57)  
 FOR 131 ..Session/connection parameter setting (395/200.58)

# Title Change  
 \* Newly Established Subclass

@ Indent Change  
 & Position Change

## MULTICOMPUTER DATA TRANSFERRING

(364/200.3)

.Computer-to-computer session/connection  
establishing (395/200.57)

- FOR 132 ..Network resources access controlling  
(395/200.59)
- FOR 133 .Computer-to-computer protocol  
implementing (395/200.6)
- FOR 134 ..Computer-to-computer data streaming  
(395/200.61)
- FOR 135 ..Computer-to-computer data transfer  
regulating (395/200.62)
- FOR 136 ...Transfer speed regulating  
(395/200.63)
- FOR 137 ...Data flow compensating (395/200.64)
- FOR 138 ...Congestion avoiding (395/200.65)
- FOR 139 ..Computer-to-computer data framing  
(395/200.66)
- FOR 140 ..Computer-to-computer handshake  
(395/200.67)
- FOR 141 .Computer-to-computer data routing  
(395/200.68)
- FOR 142 ..Alternate path routing (395/200.69)
- FOR 143 ..Prioritized data routing (395/200.7)
- FOR 144 ..Least weight routing (395/200.71)
- FOR 145 ..Routing dating updating (395/200.72)
- FOR 146 ..Decentralized controlling (395/200.73)
- FOR 147 ..Centralized controlling (395/200.74)
- FOR 148 .Computer-to-computer data addressing  
(395/200.75)
- FOR 149 .Computer-to-computer data modifying  
(395/200.76)
- FOR 150 ..Compressing/decompressing (395/200.77)
- FOR 151 .Multicomputer synchronizing  
(395/200.78)
- FOR 152 .Multiple network interconnecting  
(395/200.79)
- FOR 153 .Network-to-computer interfacing  
(395/200.8)
- FOR 154 .Ring computer networking (395/200.81)
- FOR 155 .Star or tree computer networking  
(395/200.82)
- FOR 156 .Bused computer networking (395/200.83)

SEPTEMBER 2004

1	DIGITAL DATA PROCESSING SYSTEM	188	COMPUTER VIRUS DETECTION BY CRYPTOGRAPHY
	INITIALIZATION OR CONFIGURATION	189	DATA PROCESSING PROTECTION USING
	(E.G., INITIALIZING, SET UP,		CRYPTOGRAPHY
	CONFIGURATION, OR RESETTING)	190	.Computer instruction/address encryption
2	.Loading initialization program (e.g.,	191	.Upgrade/install encryption
	booting, rebooting, warm booting,	192	.Having separate add-on board
	remote booting, BIOS, initial	193	.By stored data protection
	program load (IPL), bootstrapping)	194	.Tamper resistant
100	RECONFIGURATION (E.G., CHANGING SYSTEM	200	SECURITY
	SETTING)	201	.Computer network
150	MULTIPLE COMPUTER COMMUNICATION USING	202	.Password
	CRYPTOGRAPHY	300	COMPUTER POWER CONTROL
151	.Protection at a particular protocol	310	.By external command
	layer	320	.Power conservation
152	..Application layer security	321	..Programmable calculator with power
153	.Particular node (e.g., gateway, bridge,		saving feature
	router, etc.) for directing data and	322	..By clock speed control (e.g., clock
	applying cryptography		on/off)
154	..Including filtering based on content	323	..Active/idle mode processing
	or address	324	..By shutdown of only part of system
155	.Central trusted authority provides	330	.Power sequencing
	computer authentication	340	.Having power source monitoring
156	..By certificate	* 375	SYNCHRONIZATION OF PLURAL PROCESSORS
157	...Chain or hierarchical certificates	400	SYNCHRONIZATION OF CLOCK OR TIMING
158	...Revocation or expiration		SIGNALS, DATA, OR PULSES
159	..Including intelligent token	401	.Using delay
160	.Packet header designating	500	CLOCK, PULSE, OR TIMING SIGNAL
	cryptographically protected data		GENERATION OR ANALYSIS
161	..Data authentication	501	.Multiple or variable intervals or
162	.Having particular address related		frequencies
	cryptography	502	.Counting, scheduling, or event timing
163	..Multicast	503	.Correction for skew, phase, or rate
164	.Security kernel or utility	600	CLOCK CONTROL OF DATA PROCESSING SYSTEM,
165	..File protection		COMPONENT, OR DATA TRANSMISSION
166	..Security levels	601	.Inhibiting timing generator or
167	..Object protection		component
168	.Particular communication authentication		*****
	technique		FOREIGN ART COLLECTIONS
169	..Mutual entity authentication		*****
170	..Authentication of an entity and a		*****
	message	FOR 000	CLASS-RELATED FOREIGN DOCUMENTS
171	..Having key exchange		
172	..Intelligent token		
173	...Pre-loaded with certificate		
174	...Including particular multiplication		
	or exponentiation circuit		
175	..By generation of certificate		
176	..Authentication by digital signature		
	representation or digital watermark		
177	...Signature tree		
178	...Time stamp		
179	...Including generation of associated		
	coded record		
180	..Generating specific digital signature	FOR 123	ELECTRIC SIGNAL MODIFICATION (E.G.,
	type (e.g., blind, shared, or		SCRAMBLING) (380/9)
	undeniable)	FOR 125	.Having cryptographic user or record
181	..Message digest travels with message		actuated authentication (380/23)
182	SYSTEM ACCESS CONTROL BASED ON USER	* FOR 400	..Computer (380/25)
	IDENTIFICATION BY CRYPTOGRAPHY		SYNCHRONIZATION OF PLURAL PROCESSORS
183	.Solely password entry (no record or		(709/FOR 158)
	token)		
184	.PIN/password generator device		
185	.Using record or token		
186	..Biometric acquisition		
187	COMPUTER PROGRAM MODIFICATION DETECTION		
	BY CRYPTOGRAPHY		

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

# Title Change  
\* Newly Established Subclass

@ Indent Change  
& Position Change

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

PROJECT: E6675

New Classification -----	Number Of ORs -----	Source Classification -----	Number Of ORs -----
713/375	172	709/400	86

DISPOSITION CLASSIFICATION(S) OF PATENTS

Page: 1

FROM ABOLISHED SUBCLASSES REPORT

PROJECT: E6675

Source Classification	Number Of ORs	New Classification	Number Of ORs
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709/400	86	713/375	172

CLASSIFICATION ORDER 1835

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Project No. E-6675

C. CHANGES TO THE U.S. - I.P.C. CONCORDANCE

U.S.

I.P.C.

<u>Class</u>	<u>Subclass</u>	<u>Subclass</u>	<u>Notation</u>
713	375	G06F	1/04 1/12 15/16



D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 340 – COMMUNICATIONS: ELECTRICAL

Class Definition: In Section IV, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

Subclass 7.29: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Subclass 825: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 341 - CODED DATA GENERATION OR CONVERSION

Class Definition: Section IV: In the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 342 - COMMUNICATIONS: DIRECTIVE RADIO WAVE SYSTEMS AND DEVICES  
(E.G., RADAR, RADIO NAVIGATION)

Class Definition: Section II, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

## CLASS 345 - COMPUTER GRAPHICS PROCESSING, OPERATOR INTERFACE PROCESSING, AND SELECTIVE VISUAL DISPLAY SYSTEMS

Subclass 1.1: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Subclass 733: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Subclass 969: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 348 – TELEVISION

Class Definition: Section IV, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 356 - OPTICS: MEASURING AND TESTING

Class Definition: Section IV, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 358 – FACSIMILE AND STATIC PRESENTATION PROCESSING

Class Definition: Section II, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Subclass 400: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 360 - DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL

Class Definition: Section IV, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses



D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 370 – MULTIPLEX COMMUNICATIONS

Class Definition: Section III, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

## CLASS 375 – PULSE OR DIGITAL COMMUNICATIONS

Class Definition: Section III, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

Subclass 222: Under SEE OR SEARCH CLASS in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

Subclass 354: Under SEE OR SEARCH CLASS

Delete:

709, Electrical Computers and Digital Processing Systems: Multiple Computer or Process Coordinating, subclasses 248 and 400 for synchronization of plural computers or processors.

713, Electrical Computers and Digital Processing Systems: Support, subclasses 400 through 601 for digital data processing system timing, per se.

Insert:

709, Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, subclasses 248 for synchronization of plural computers.

713, Electrical Computers and Digital Processing Systems: Support, subclasses 375 through 601 for digital data processing system timing, per se.

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

## CLASS 379 – TELEPHONIC COMMUNICATIONS

Subclass 88.17: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Subclass 93.01: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

Subclass 284: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 380 – CRYPTOGRAPHY

Class Definition: Section II, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 386 - TELEVISION SIGNAL PROCESSING FOR DYNAMIC RECORDING OR REPRODUCING

Class Definition: Section II, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 400 - TYPEWRITING MACHINES

Subclass 63: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 455 – TELECOMMUNICATIONS

Class Definition: Section III, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 700 - DATA PROCESSING: GENERIC CONTROL SYSTEMS OR SPECIFIC APPLICATIONS

Class Definition: Section II, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Subclasses 19 and 20: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses



## D. CHANGES TO THE DEFINITIONS (Project E-6675)

## CLASS 702 – DATA PROCESSING: MEASURING, CALIBRATING, OR TESTING

Subclass 125: Under SEE OR SEARCH CLASS

Delete:

- 709, Electrical Computers and Digital Processing Systems: Multiple Computer or Process Coordinating, subclass 400 for synchronization of plural processors.
- 713, Electrical Computers and Digital Processing Systems: Support, subclasses 400 and 401 for synchronization of clock or timing signals, data, or pulses; and subclasses 500-503 for clock, pulse, or timing signal generation or analysis.

Insert:

- 713, Electrical Computers and Digital Processing Systems: Support, subclass 375 for synchronization of plural processors; subclasses 400 and 401 for synchronization of clock or timing signals, data, or pulses; and subclasses 500-503 for clock, pulse, or timing signal generation or analysis.

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 705 - DATA PROCESSING: FINANCIAL, BUSINESS PRACTICE, MANAGEMENT,  
OR COST/PRICE DETERMINATION

Class Definition: Section II, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Subclass 21: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

## CLASS 706 - DATA PROCESSING: ARTIFICIAL INTELLIGENCE

Class Definition: Section II:

Delete:

709, Electrical Computers and Digital Processing Systems: Multiple Computer or Process Coordinating, subclasses 100 through 108 for task management system, subclasses 200-253 for multicomputer data transferring, and subclass 400 for synchronization of plural processors.

713, Electrical Computers and Digital Processing Systems: Support, subclasses 200 through 202 for data processing security, subclasses 300-340 for power control; subclasses 400 and 401 for synchronization of clock or timing signals, data, or pulses; subclasses 500-503 for clock, pulse, or timing signal generation or analysis; and subclasses 600 and 601 for clock control of data processing system, component, or data transmission.

Insert:

709, Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, appropriate subclasses for multiple computer data transferring.

713, Electrical Computers and Digital Processing Systems: Support, subclasses 200 through 202 for data processing security, subclasses 300-340 for power control; subclass 375 for synchronization of plural processors; subclasses 400 and 401 for synchronization of clock or timing signals, data, or pulses; subclasses 500-503 for clock, pulse, or timing signal generation or analysis; and subclasses 600 and 601 for clock control of data processing system, component, or data transmission.

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 709 - ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS:  
MULTICOMPUTER DATA TRANSFERRING

Abolished:

Subclasses 400, FOR 158

Modified:

Class Title:

Delete:

OR PLURAL PROCESSOR SYNCHRONIZATION

Class Definition:

Delete:

The entire Class Definition section

Insert:

## SECTION I - CLASS DEFINITION

## GENERAL STATEMENT OF THE CLASS SUBJECT MATTER

This class provides for an electrical computer or digital data processing system or corresponding data processing method including apparatus or steps for transferring data or instruction information between a plurality of computers wherein the computers employ the data or instructions before or after transferring and the employing affects said transfer of data or instruction information.

The class includes the following subject matter:

Process or apparatus for transferring data among a plurality of spatially distributed (i.e., situated, at plural locations) computers or digital data processing systems via one or more communications media (e.g., computer networks).

## SCOPE OF THE CLASS

This class is limited to digital data processing systems and functions for transferring unspecified data or instruction information and the processing thereof by digital data processing systems. Systems concerned with movement or processing of other specific types of information and digital signals, per se, are classified elsewhere. See the SEE OR SEARCH CLASS notes below.

#### LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

##### A. Electrical Computers and Data Processing Systems, Related Systems and Functions in General

(1) Systems directed to a specific end use of information, for example, sensor data processed by a computer means for control purposes in systems classified external to this class, are classified elsewhere. See the SEE OR SEARCH CLASS notes below.

##### B. Communications Classes

This class includes significant data processing in combination with communication of data, and allowed types of information, amongst digital data processing systems.

For multiplexing, see the SEE OR SEARCH CLASS notes below.

For systems directed to selective communication systems, see the SEE OR SEARCH CLASS notes below.

For systems directed to communication techniques such as pulse or digital communications, see the SEE OR SEARCH CLASS notes below.

##### C. Additional Notes

- (1) Note. The subject matter of this class is characterized by data transfer occurring as an external communication between separate computers which themselves are distinguishable processing entities.
- (2) Note. The basic distinctions between this class and the communications classes are (a) the subclasses herein include computers, rather than other data communications devices, and (b) the computers perform data processing in addition to transferring data therebetween; overall combinations directed to a system for performing communications functions only are classified in the communications art classes. See the SEE OR SEARCH CLASS notes below.
- (3) Note. Processes and apparatus for preprocessing or postprocessing of signals in the data transfer to effect a particular method of communications (e.g., modulating, demodulating, encoding, decoding, phase locking) are classified in the appropriate communications class. See the SEE OR SEARCH CLASS notes below for examples.

- (4) Note. Subject matter relating to transmission or interconnection systems not classifiable herein and not appropriate for the communication classes is classified in the residual class for all transmission or interconnection systems. See the SEE OR SEARCH CLASS notes below.
- (5) Note. Processes and apparatus for error detection and correction (EDAC), fault detection and recovery, and for increasing the probability of a computer, digital data processing system, or computer network performing correctly (i.e., increasing its reliability and availability), per se, are classified elsewhere. See the SEE OR SEARCH CLASS notes below.
- (6) Note. Processes and apparatus for enhancing the security of computers, digital data processing systems, and computer networks, per se, are classified elsewhere. See the SEE OR SEARCH CLASS notes below.
- (7) Note. Processes and apparatus for housing or mounting computers, digital data processing systems, calculators, or components thereof are classified elsewhere. See the SEE OR SEARCH CLASS notes below.
- (8) Note. Subject matter relating to neural networks, per se, are classified elsewhere. See the SEE OR SEARCH CLASS notes below.
- (9) Note. Subject matter relating to distributed or remote accessing of databases or files, per se, is classified elsewhere. See the SEE OR SEARCH THIS CLASS, SUBCLASS notes below.

## SECTION II - REFERENCES TO OTHER CLASSES

### SEE OR SEARCH CLASS:

- 235, Registers, appropriate subclasses for 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, and for various data bearing record controlled systems.
- 307, Electrical Transmission or Interconnection Systems, for all subject matter relating to electrical transmission or interconnection systems not classified elsewhere.
- 326, Electronic Digital Logic Circuitry, appropriate subclasses for generic digital logic devices, circuitry, and subcombinations thereof, wherein operations other than arithmetical are performed upon discrete electrical signals representing a value normally described by numerical digits.
- 329, Demodulators, appropriate subclasses for data demodulators.

- 332, Modulators, appropriate subclasses for data modulators.
- 340, Communications: Electrical, subclasses 825 through 825.98 for controlling one or more devices to obtain a plurality of results by transmission of a designated one of plural distinctive control signals over a smaller number of communication lines or channels, particularly subclasses 2.1-2.8 for path selection, subclasses 3.1-3.9 for communication systems where status of a controlled device is communicated, subclass 825.02 for tree or cascade selective communication, subclasses 825.2-825.21 for synchronizing selective communication systems, subclasses 825.5-825.51 for lockout or priority in selective communication systems, subclasses 825.52 and 825.53 for addressing, and subclasses 825.57-825.69 for pulse responsive actuation in selective communication.
- 341, Coded Data Generation or Conversion, subclasses 50 through 172 for electrical pulse and digit code converters (e.g., systems for originating or emitting a coded set of discrete signals or translating one code into another code wherein the meaning of the data remains the same but the formats may differ).
- 342, Communications: Directive Radio Wave Systems and Devices (e.g., Radar, Radio Navigation), various subclasses for communications via directive radio waves and related systems.
- 345, Computer Graphics Processing, Operator Interface Processing, and Selective Visual Display Systems, subclasses 1.1 through 3.4 for plural display systems, subclasses 530 through 574 for visual display, and subclasses 30 through 111 for the selective control of two or more light generating or light controlling display elements in accordance with a received image signal.
- 348, Television, various subclasses for generating, processing, transmitting or transiently displaying a sequence of images, either locally or remotely, in which the local light variations composing the images may change with time (e.g., natural "live" scenes).
- 358, Facsimile and Static Presentation Processing, various subclasses for systems that transmit and reproduce arbitrarily composed pictures in which the local light variations composing each of the pictures are not subject to variation with time; e.g., documents both written and printed, maps, charts, and photographs (other than motion picture film).
- 360, Dynamic Magnetic Information Storage or Retrieval, appropriate subclasses, for record carriers and systems wherein information is stored and retrieved by interaction with a magnetic medium and there is relative motion between said magnetic medium and a transducer, for example, a magnetic disk drive device, and control thereof, per se.
- 361, Electricity: Electrical Systems and Devices, subclasses 683 – 687 for housings or mounting assemblies for computers, digital data processing systems, calculators, or components thereof.

- 365, Static Information Storage and Retrieval, appropriate subclasses for addressable static singular storage elements or plural singular storage elements of the same type (i.e., the internal elements of memory, per se).
- 369, Dynamic Information Storage or Retrieval, appropriate subclasses for record carriers and systems wherein information is stored and retrieved by interaction with a medium and there is relative motion between a medium and a transducer.
- 370, Multiplex Communications, appropriate subclasses, for the simultaneous transmission of two or more signals over a common medium, particularly subclasses 351 - 430 for multiplex switching including time division multiplex (TDM) switching, subclass 475 for asynchronous TDM communications including addressing, and subclasses 498 -545 for time division bus transmission.
- 375, Pulse or Digital Communications, appropriate subclasses for generic pulse or digital communication systems and synchronization of clocking signals from input data.
- 377, Electrical Pulse Counters, Pulse Dividers, and Shift Registers: Circuits and Systems, appropriate subclasses for generic electric circuits for pulse counting.
- 379, Telephonic Communications, appropriate subclasses for two-way electrical communication of intelligible audio information of arbitrary content over a communication link.
- 380, Cryptography, appropriate subclasses for cryptographic apparatus or process in general which includes electric signal modification and foreign art collections FOR 149 and FOR 150 for cryptographic digital signal handling which may include cryptographic computer communication..
- 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.
- 386, Television Signal Processing for Dynamic Recording or Reproducing, various subclasses for apparatus and corresponding processes for processing (which may include receiving) a sequence of images in which the light variation composing the images may change with time (e.g., natural "live" scenes) for dynamic recording or reproducing of the sequence of images.
- 388, Electricity: Motor Control Systems, cross-reference art collection 907.5 for computer or processor control of DC motor acceleration or speed.



- 398, Optical Communications, various subclasses for optical communication in combination with electrical communication and subclasses 43 through 103 for multiplexing in an optical communication system.
- 455, Telecommunications, appropriate subclasses for modulated carrier wave communication, per se, and subclass 26.1 for subject matter which blocks access to a signal source or otherwise limits usage of modulated carrier equipment.
- 700, Data Processing: Generic Controls Systems or Specific Applications, subclasses 1 through 89 for generic data processing control system, apparatus, or process, particularly subclasses 2 through 7 for plural processors in a digital generic control system, and subclasses 90 through 306 for applications of computers in various environments where there is significant claim recitation of the data computer system or calculating computer and only nominal recitation of an external art environment (where significant structure of an external device is claimed, classification is in the appropriate device class).
- 701, Data Processing: Vehicles and Navigation, appropriate subclasses, for applications of computers in vehicular and navigational environments.
- 702, Data Processing: Measuring and Testing, appropriate subclasses, for applications of computers in measuring and testing.
- 703, Data Processing: Structural Design, Modeling, Simulation, and Emulation, appropriate subclasses.
- 704, Data Processing: Speech Signal Processing, Linguistics, Language Translation, and Audio Compression/Decompression, subclasses 1 - 10 for applications of computers in linguistics, subclasses 200 - 278 for applications of computers in speech signal processing, particularly subclass 270.1 for speech assisted network, and subclasses 500 - 504 for applications of computers in audio compression/decompression.
- 705, Data Processing: Financial, Business Practice, Management, or Cost/Price Determination, appropriate subclasses, for applications of computers and calculators in business and management environments.
- 706, Data Processing: Artificial Intelligence, appropriate subclasses, for subject matter directed to artificial intelligence data computer which is disclosed or claimed in plural diverse arts both in combination and in the alternative (e.g., digital data computer system for use in image analysis or electrical audio signal computer, and for artificial intelligence per se), particularly subclasses 15 - 44 for neural networks.
- 707, Data Processing: Database and File Management or Data Structures, subclasses 1 - 10 for computerized database and file accessing and retrieving, subclasses 100 - 104.1 for organizing and interrelating data or files, and subclasses 200 - 206 for managing and maintaining files and databases.
- 708, Data Processing: Arithmetic Processing and Calculating, subclasses 1 - 9 for hybrid computers; and subclasses 100 - 714 for calculators, digital signal

computer, and arithmetical and logical computer, per se; and subclasses 800 - 854 for electric analog computers.

- 710, Electrical Computers and Digital Processing Systems: Input/Output, subclasses 1 through 74 for transferring data from one or more peripherals to one or more computers for the latter to process, store, or further transfer, or for transferring data from the computers to the peripherals, subclasses 100-132 for transferring data among the memories, processors, and buses of a single computer, and subclass 316 for cross-bar switching.
- 711, Electrical Computers and Digital Processing Systems: Memory, appropriate subclasses, for memory addressing and management in a computer system particularly subclasses 100 -173 for transferring data between locations in the same memory or between memories.
- 712, Electrical Computers and Digital Processing Systems: Processing Architecture and Instruction Processing (e.g., Processors), appropriate subclasses for computer architecture and instruction processing, particularly subclasses 1 -43 for digital data computer system architectures such as multiple instruction multiple data (MIMD) computers, vector and array computers, and single-chip computers, and subclass 225 for computer control for data transfer.
- 713, Electrical Computers and Digital Processing Systems: Support, subclass 1 and 2 for digital processing system initialization and configuration (e.g., initializing, set-up, resetting), subclass 100 for reconfiguring digital data computer system (e.g., changing system settings), subclasses 150 through 181 for multiple computer communication protection by cryptography, subclass 187 for computer program modification detection by cryptography, subclass 188 for computer virus detection by cryptography, subclass 189 – 194 for data processing protection using cryptography, subclasses 200 – 202 for security, subclasses 300 -340 for computer power control, subclass 375 for synchronization of plural processors, subclasses 400 and 401 for synchronization of computer clocks or timing signals, data, or pulses, and subclasses 500 - 503 for computer clock, pulse, or timing signal or analysis.
- 714, Error Detection/Correction and Fault Detection/Recovery, various subclasses for detecting or correcting errors in generic electrical pulse or pulse data and for detecting and recovering from faults of computers, digital data computer systems, and logic level based systems, particularly subclasses 1- 57 for increasing the probability of a computer, digital data computer system, or a computer network performing correctly (i.e., increasing its reliability and availability) and subclasses 746 – 797 for correcting errors in the transmitted data such as parity checking and cyclical redundancy checking..
- 715, Data Processing: Presentation Processing of Document, subclasses 500 –542 for document processing.
- 716, Data Processing: Design and Analysis of Circuit or Semiconductor Mask, appropriate subclasses.
- 717, Data Processing: Software Development, Installation, and Management, appropriate subclasses.

- 718, Electrical Computers and Digital Processing Systems: Virtual Machine Task or Process Management or Task Management/Control, appropriate subclasses for administering over processor or job execution in a digital data processing system.
- 719, Electrical Computers and Digital Processing Systems: Interprogram Communication or Interprocess Communication (IPC), appropriate subclasses for exchanging data or messages between two executing programs or processes, independent of the hardware used in the communication.

### SECTION III - GLOSSARY

#### ACCESS

To obtain entry to, or to locate, read into memory, and make ready for, some operation, for example, regarding disks, files, records, and network entry procedures.

#### APPLICATION PROGRAM

A computer program designed to perform a certain type of work, such as an application to manipulate text, numbers, graphics, or a combination of these elements. An application differs from an operating system (which runs a computer), a utility (which performs maintenance or general-purpose chores), and a language (with which computer programs are created).

#### BUS

A conductor used for transferring data, signals, or power.

#### 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.

Address data: data that represent or identify a source or destination.

Instruction data: data that represent an operation and identify its operands, if any.

Status data: data that represent conditions of data, digital data processing systems, computers, peripherals, memory, etc.

Streamed data: data consisting of a more-or-less continuous series of bits, bytes, or other small, structurally uniform units.

User data: data other than address data, instruction data, or status data.

## DATA PROCESSING

See PROCESSING, below.

## DIGITAL DATA PROCESSING SYSTEM

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

## ENTITY

A computer or process that can be treated as a unit and, often, as a member of a particular category or type.

## ENVIRONMENT

A set of resources made available to the user of a system which defines specifications such as the command path (where to look for files), the system prompt and, sometimes, the location of resources or working files.

## INFORMATION

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

## INTERFACE

A connection between two elements so that they can work with one another.

## MEMORY

A functional unit to which data can be stored and from which data can be retrieved.

## MULTITASKING

A mode of operation in which a computer works on more than one task at a time.

## NETWORK

A group of computers and associated devices that are connected by communications facilities which exists to provide computer users with the means of communicating and transferring information electronically. Some types of communication are simple user-to-user messages; others, of the type known as distributed processes, can involve several computers and the sharing of workloads or cooperative efforts in performing a task.

## OBJECT

A variable comprising routines and data that is treated as a discrete entity.

## OPERATING SYSTEM

Software responsible for controlling the allocation and usage of hardware resources such as memory, central processing unit (CPU) time, disk space, and peripheral devices. The operating system is the foundation on which applications programs (e.g., word processing, spreadsheets) are built.

### PERIPHERAL

A functional unit that transmits data to or receives data from a computer to which it is coupled.

### PROCESS

A coherent sequence of steps undertaken by a program to manipulate data such as an internal or external data-transfer operation, handling an interrupt, or evaluation of a function.

### PROCESSING

Methods or apparatus performing systematic operations upon data or information exemplified by functions such as data or information transferring, merging, sorting, and computing (e.g., arithmetic operations or logical operations).

- (1) Note. In this class, the glossary term data is used to modify processing in the term data processing; whereas the term digital data processing system refers to a machine performing data processing.
- (2) Note. In an effort to avoid redundant constructions, in this class, where appropriate, the term address data processing is used in place of address data data processing.

### PROCESSOR

A functional unit that interprets and executes instruction data.

### PROTOCOL

A set of rules or processes which enable computers to exchange information with as little error as possible.

### RESOURCE

Any part of computer system or a network, such as a disk drive, printer, or memory, that can be allotted to a program or process while it is running. In programming, a resource can be used by more than one program or in more than one place in a program; for example, dialog boxes, bitmaps, and fonts are resources in many windowing programs.

### ROUTING

Receiving transmitted messages within a network and forwarding them to their correct destinations over a available route selected according to a predetermined criteria.

### SERVER

A computer running administrative software that controls access to all or part of a network and its resources (such as disk drives and printers). A computer acting as a server makes resources available to computers acting as workstations on the network.

**SYNCHRONIZATION**

Matching of timing between separate computers or among the components of a system so that all are coordinated.

**TASK**

A standalone application or a subprogram that is run as an independent entity.

**THREAD**

A path of processing execution within a larger process or program.

**TRANSFER**

The movement of data from one location to another or the passing of program control from one portion of a program to another.

Subclass 200:

Delete:

The entire current subclass 200 definition.

Insert:

**200 MISCELLANEOUS:**

Subject matter under the class definition not provided for in any of the preceding subclasses.

In subclasses 201, 204, 208, 212, 213, 217, 220, 223, 227, 230, 238, 245, 246, 248, 249, 250, 251, 252, and 253:

Delete:

under subclass 200

Insert:

under the class definition

Subclass 248: Under SEE OR SEARCH CLASS:

Delete:

713, Electrical Computers and Digital Processing Systems: Support, subclasses 500+ for generalized processor timing operations.

Insert:

713, Electrical Computers and Digital Processing Systems: Support, subclass 375 for synchronization maintenance of plural processors and subclasses 500-503 for clock, pulse, or timing signal generation or analysis.

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

## CLASS 710 – ELECTRICAL COMPUTERS AND DIGITAL DATA PROCESSING SYSTEMS:INPUT/OUTPUT

Subclass 25: Under SEE OR SEARCH CLASS

Delete:

709, Electrical Computers and Digital Data Processing Systems: Multiple Computer and Process Coordinating, subclasses 1+ for task management, per se, and subclass 400 for synchronization maintenance of plural processors, per se.

713, Electrical Computers and Digital Data Processing Systems: Support, subclasses 400+ for clock synchronization, per se, subclasses 500+ for digital data processing system clock, pulse and timing interval generation, per se.

Insert:

713, Electrical Computers and Digital Data Processing Systems: Support, subclass 375 for synchronization maintenance of plural processors; subclasses 400-401 for clock synchronization, per se, subclasses 500-503 for digital data processing system clock, pulse and timing interval generation, per se.

Subclass 36: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

Subclass 58: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclass 200 through 253

Insert:

appropriate subclasses

Subclass 316: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

200 - 253



Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 711 - ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS:  
MEMORY

Class Definition: Section II, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 712 - ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS:  
PROCESSING ARCHITECTURES AND INSTRUCTION PROCESSING (E.G.,  
PROCESSORS)

Class Definition: Section III, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

Subclass 1: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

Subclass 4: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

Subclass 40: Under SEE OR SEARCH CLASS

Delete:709, Electrical Computers and Digital Processing Systems: Multiple Computer or Process  
Coordinating, subclass 400 synchronization of plural processors.Insert:713, Electrical Computers and Digital Data Processing Systems: Support, subclass 375 for  
synchronization of plural processors.

Subclass 201: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

Subclass 225: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200+

Insert:

appropriate subclasses

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 713 - ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS:  
SUPPORT

Modified:

Class Definition:

Delete:

The entire Class Definition

Insert:

## SECTION I - CLASS DEFINITION

## GENERAL STATEMENT OF THE CLASS SUBJECT MATTER

This class provides, within a computer or digital data processing system, for the following subject matter:

(A) Processes or apparatus for establishing original operating parameters or data for a computer or digital data processing system, such as, allocating extended or expanded memory, specifying device drivers, paths, files, buffers, disk management, etc.;

(B) Processes or apparatus for changing system settings or operational modes in a computer or digital data processing system after they have been set;

(C) Processes or apparatus for increasing a system's extension of protection of system hardware, software, or data from maliciously caused destruction, unauthorized modification, or unauthorized disclosure;

(D) Processes or apparatus for modifying or responding to the available power to a computer or digital data processing system or programmable calculator;

(E) Processes or apparatus for synchronization of two or more processors;

(F) Processes or apparatus wherein a clock or timing signals, timing pulses, or data associated with the control or regulation of any one or combination of processing components, memory components, and peripheral components are caused to operate in synchronization;

(G) Processes or apparatus for generation, division, or distribution of clock signals, pulse signals, or timing signals in a computer or digital data processing system from one or more sources into

groups of continuous and successive time increments, and including event timing and counting, and the correction of the clock signals, pulse signals, or timing signals;

(H) Processes or apparatus wherein there is a significant temporal, incremental or sequencing control provided to one or more computers, digital data processing systems, processors, memory, or peripherals, or to data transmission between these systems or components.

#### SCOPE OF THE CLASS

- (1) Note. Together, a portion of the class directed to Database and File Management or Data Structures, and a series of Electrical Computers and Data Processing classes are the generic classes for electrical computers and digital data processing systems and corresponding data processing processes including processes and apparatus for controlling operations of computers and digital data processing system. See the SEE OR SEARCH CLASS note below.
- (2) Note. Process and apparatus for facilitating or supporting the operation of processing, storing, and inputting/outputting in a computer or digital data processing system are classified herein.
- (3) Note. Process and apparatus used for installation of software or version management of an executable program for a computer or digital data processing system are classified elsewhere. See the SEE OR SEARCH CLASS notes below.
- (4) Note. The species of computer support directed to reliability and availability, fault recovery, or failure or error detection is classified elsewhere. See the SEE OR SEARCH CLASS notes below.
- (5) Note. Process and apparatus for developing, managing, translating or compiling instruction data for a computer or digital data processing system are classified elsewhere. See the SEE SEARCH CLASS notes below.
- (6) Note. Process and apparatus for analyzing or debugging instruction data for a computer or digital data processing system are classified elsewhere. See the SEE OR SEARCH CLASS notes below.
- (7) Note. Process and apparatus used for managing or controlling of process, task, or job execution for a computer or digital data processing system are classified elsewhere. See the SEE OR SEARCH CLASS notes below.
- (8) Note. Process and apparatus for exchanging data or messages between executing processes in a computer or digital data processing system are classified elsewhere. See the SEE OR SEARCH CLASS notes below.

## SECTION II - REFERENCES TO OTHER CLASSES

## SEE OR SEARCH CLASS:

- 235, Registers, various subclasses for 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, and also for various data bearing record controlled systems.
- 326, Electronic Digital Logic Circuitry, subclass 30 for bus or line terminating circuitry, subclasses 62 - 92 for generic digital logic, gate level interface circuitry, and subclasses 93 - 98 for clocking or synchronization of logic stages or gates.
- 327, Miscellaneous Active Electrical Nonlinear Devices, Circuits, and Systems, subclasses 141 - 163 for synchronizing electrical nonlinear devices, and particularly subclasses 142 - 143 for miscellaneous synchronizing reset circuits which may be power supply responsive.
- 340, Communications: Electrical, subclasses 825 through 825.98 for controlling one or more devices to obtain a plurality of results by transmission of a designated one of plural distinctive control signals over a smaller number of communication lines or channels, particularly subclasses 2.1-2.8 for path selection; subclasses 3.1-3.9 for communication systems where status of a controlled device is communicated, particularly subclass 3.51 for selective communication address polling control; subclasses 5.1-5.92 for security by intelligence comparison (e.g., authorization, etc.) in a selective communication system; subclass 825.02 for tree or cascade selective communication; subclasses 825.2-825.21 for synchronizing selective communication systems; subclasses 825.5-825.51 for lockout or priority in a selective communication system; subclasses 825.52 and 825.53 for addressing in selective system; and subclasses 825.57-825.69 for pulse responsive actuation in selective system.
- 345, Computer Graphics Processing, Operator Interface Processing, and Selective Visual Display Systems, subclasses 1.1 through 3.4 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 peripheral; subclasses 156 - 184 for display peripheral interface input device; subclasses 204 - 215 for display driving control circuitry; subclasses 700-866 for computer operator interface; subclasses 418-475 for computer graphics processing; and subclasses 501 - 522 for computer graphic processing systems.
- 348, Television, subclass 5.5 for use or access blocking, subclasses 500 -551 for synchronization.
- 358, Facsimile and Static Presentation Processing, subclasses 400 - 304 (facsimile) for transmitting data from a facsimile machine peripheral to a computer (e.g., by modem) for transmission over a telephone line to another computer (e.g., by modem) for transmission to another facsimile machine peripheral, subclasses 409-424 for synchronization in a facsimile system, and subclasses 500-540 for natural color facsimile.

- 360, Dynamic Magnetic Information Storage or Retrieval, appropriate subclasses for record carriers and systems wherein data are stored and retrieved by interaction with a medium and there is relative motion between a medium and a transducer, for example, magnetic disk drive devices and control thereof, per se, appropriate subclasses.
- 361, Electricity: Electrical Systems and Devices, subclasses 1 - 138 for safety and protection of systems and devices, and subclasses 236 - 244 for electrical speed signal processing system.
- 365, Static Information Storage and Retrieval, appropriate subclasses for addressable static singular storage elements or plural singular storage elements of the same type (i.e., the internal elements of memory, per se), particularly subclasses 226 - 229 for powering including conservation of power and prevention of loss of stored information due to power interruption.
- 369, Dynamic Information Storage or Retrieval, appropriate subclasses for record carriers and systems wherein data are stored and retrieved by interaction with a medium and there is relative motion between a medium and a transducer.
- 370, Multiplex Communications, for the simultaneous transmission of two or more signals over a common medium, particularly subclasses 351 - 430 for path finding or routing including packet switching, circuit switching, ATM switching, subclasses 254 - 258 for network configuration determination, subclasses 324, 350, 503 - 520 for synchronization over freespace or wire, and subclasses 465 - 473 for adaptive communication protocol.
- 375, Pulse or Digital Communications, appropriate subclasses for generic pulse or digital communication systems and synchronization of clocking signals from input data, particularly subclasses 354 - 376 for synchronizing the operation of the receiving and transmitting mechanism including synchronization fault prevention and self synchronization.
- 377, Electrical Pulse Counters, Pulse Dividers, and Shift Registers: Circuits and Systems, appropriate subclasses for generic circuits for pulse counting, particularly subclass 32 for preventing inaccurate count due to power supply failure, subclasses 78 - 79 for phase clocking or synchronizing in a shift register operation, subclass 80 for parallel clocking, subclasses 104 - 105 for phased clocking.
- 379, Telephonic Communications, appropriate subclasses for two-way electrical communication of intelligible audio data of arbitrary content over a link including an electrical conductor, particularly subclass 145 for fraud or interference prevention, subclasses 188 - 200 for telephone call or terminal access alarm or control (e.g., access blocking equipment), subclasses 322 - 324 for a power supply in a centralized switching system, subclasses 413 - 413.01 for a power supply in a subscriber line or transmission line interface.
- 380, Cryptography, appropriate subclasses and particularly subclass 287 for electric signal modification.
- 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.
- 388, Electricity: Motor Control Systems, cross-reference art collection 907.5 for computer or processor control of motor acceleration or speed.
- 455, Telecommunications, appropriate subclasses for modulated carrier wave communication, per se, and particularly subclass 26.1 for subject matter which blocks access to a signal source or otherwise limits usage of modulated carrier equipment.
- 700, Data Processing: Generic Control Systems or Specific Applications, subclasses 1 - 89 for generic data processing control systems and subclasses 90-306 for specific applications.
- 701, Data Processing: Vehicles, Navigation, and Relative Location, subclasses 1- 124 for vehicle control, guidance, operation, or indication, subclasses 200 -226 for navigation, and subclasses 300 -302 for relative location determination.
- 702, Data Processing: Measuring, Calibrating, or Testing, appropriate subclasses, particularly subclasses 60 -63 for power parameter measuring system, subclass 125 for timing signal generation in a testing system, subclasses 176 -178 for time duration or rate measuring system, and subclass 186 for computer and peripheral benchmarking.
- 703, Data Processing: Structural Design, Modeling, Simulation, and Emulation, appropriate subclasses.
- 704, Data Processing: Speech Signal Processing, Linguistics, Language Translation, and Audio Compression/ Decompression, subclasses 1 - 10 for linguistics; subclasses 200 - 278 for speech processing, and subclasses 500 - 504 for audio signal time or bandwidth compression or expansion.
- 705, Data Processing: Financial, Business Practice, Management, or Cost/Price Determination, subclass 18 for a point of sale terminal or an electronic cash register having security or user identification, subclass 44 for authentication or authorization in a credit or loan processing system.
- 706, Data Processing: Artificial Intelligence, subclasses 1 - 9 for fuzzy logic hardware; subclass 10 for plural processing intelligence systems, subclass 11 for artificial intelligence system having particular user interface; subclasses 12 -13 for machine learning system, subclass 14 for adaptive system; subclasses 15 -44 for neural network; and subclasses 45 -61 for knowledge processing system.
- 707, Data Processing: Database and File Management or Data Structures, particularly subclasses 1 through 10 for database or file accessing, subclasses 100-104.1 for database scheme or structure, and subclasses 200-206 for file or database management.
- 708, Electrical Computers: Arithmetic Processing and Calculating, appropriate subclasses for specialized function or calculation operation performed by an electrical analog computer, an electric hybrid computer, or an electric digital calculating computer.

- 709, Electrical Computers and Digital Processing Systems: Multiple Computer or Process Coordinating, appropriate subclasses for transferring data between a plurality of computers even if the transferring employs peripherals (e.g., modems, line adapters, etc.).
- 710, Electrical Computers and Digital Processing Systems, Input/Output, appropriate subclasses for interconnecting or transferring data among processors, memories, and peripherals of computers or digital data processing systems.
- 711, Electrical Computers and Digital Processing Systems: Memory, subclasses 1 -6 for addressing combined with specific memory configurations (e.g., extended, expanded, dynamic, etc.) in a computer, subclasses 100 -173 for accessing or controlling memories that are peripherals, for caching data, particularly subclass 164 for access limiting with password or key; and subclasses 200 -221 for generalized address forming in a computer.
- 712, Electrical Computers and Digital Processing Systems: Processing Architectures and Instruction Processing (e.g., Processors), appropriate subclasses for processing architectures including virtual processors; multiple-instruction-multiple-data (MIMD); vector and array processors; single-chip microprocessors; and for fetching, buffering, decoding, or executing instruction data for operations other than I/O (e.g., logic functions).
- 714, Error Detection/Correction and Fault Detection/Recovery, particularly subclass 707 for synchronization control using an error rate; subclass 731 for a reference timing function or a clock pulse generator in a scan path testing system; subclass 744 for clock or synchronization in digital logic testing using a test pattern generator; subclass 798 for error detection for synchronization control.
- 715, Data Processing: Presentation Processing of Document, appropriate subclasses for document presentation processing.
- 716, Data Processing: Design and Analysis of Circuit or Semiconductor Mask, appropriate subclasses.
- 717, Data Processing: Software Development, Installation, and Management, subclasses 100-167 for software program development tools including systems and functions to develop, manage, translate, or compile instruction data, to analyze or debug instruction data; subclasses 168-173 for software upgrading or updating of an operating system, application program or other executable program; and subclasses 174 – 178 for software installation of an operating system, application program or other executable program.
- 718, Electrical Computers and Digital Processing Systems: Virtual Machine Task or Process Management or Task Management/Control, appropriate subclasses for administering over processor or job execution in a digital data processing system.
- 719, Electrical Computers and Digital Processing Systems: Interprogram Communication or Interprocess Communication (IPC), appropriate subclasses for exchanging data or messages between two executing programs or processes, independent of the hardware used in the communication.

### SECTION III - GLOSSARY

#### APPLICATION PROGRAM

A computer program designed to perform a certain type of work, such as an application to manipulate text, numbers, graphics or a combination of these elements. An application differs from an operating system (which runs a computer), a utility (which performs maintenance or general-purpose chores), and a language (with which computer programs are created).

#### BOOT

To start up a computer or the process of starting or resetting a computer.

#### BUS

A conductor used for transferring data, signals, or power.

#### 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.

Address data - Data that represent or identify a source or destination.

Instruction data - Data that represent an operation and identify its operands, if any.

Status data - Data that represent conditions of data, computers, peripherals, memory, etc.

User data - Data other than address data, instruction data, or status data.

#### DATA PROCESSING

See PROCESSING, below.

#### DIGITAL DATA PROCESSING SYSTEM

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

#### ERROR

Manifestation of a fault as an undesired event that occurs when actual behavior deviates from the behavior that is required by initial specifications.

#### FAILURE

Manifestation of an error as a nonperformance of an expected system service as required by the initial specifications.

#### FAULT

A flaw in a functional unit (hardware or software).

#### INFORMATION

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

#### MEMORY

A functional unit to which data can be stored and from which data can be retrieved.

#### OPERATING SYSTEM

Software responsible for controlling the allocation and usage of hardware resources such as memory, central processing unit (CPU) time, disk space, and peripheral devices. The operating system is the foundation on which application programs are built.

#### PERIPHERAL

A functional unit that transmits data to or receives data from a computer to which it is coupled.

#### PROCESSING

Methods 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).

- (1) Note. In this class, the glossary term data is used to modify processing in the term data processing; whereas the term digital data processing system refers to a machine performing data processing.
- (2) Note. In an effort to avoid redundant constructions, in this class, where appropriate, the term address data processing is used in place of address data data processing.

#### PROCESSOR

A functional unit that interprets and executes instruction data.

#### PROGRAM

A sequence of instructions that can be executed by a computer. The term can refer to the original source code or to the executable (machine language) version.

#### RECOVERY

Responding to a fault in a system by either returning a system to a previous level of correct operation, achieving a degraded level of correct operation, or safely shutting down the system.

#### SECURITY

Extent of protection for system hardware, software, or data from maliciously caused destruction, unauthorized modification, or unauthorized disclosure.

Subclass 150: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Subclass 155: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Established:

**375 SYNCHRONIZATION OF PLURAL PROCESSORS:**

This subclass is indented under the class definition. Subject matter comprising means or steps for synchronizing the control or regulation of clocking or timing operations of two or more processors.

- (1) Note. Classification herein is proper if a single clock or timing circuit controls the processors, plural clocks or timing circuits are synchronized to control the processors, or operations are synchronized to occur on the same clocking or timing cycle.
- (2) Note. Passing of data (e.g., tokens, semaphores) for multicomputer synchronizing is classified elsewhere in this class. See the SEE OR SEARCH CLASS notes below.

SEE OR SEARCH CLASS:

709, Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring, subclass 248 for multicomputer synchronization.

**FOREIGN ART COLLECTIONS**

Any foreign patents/nonpatent literature, which were reclassified, have been transferred directly to the art collection listed below. This art collection contains ONLY foreign documents/nonpatent literature. [Note: Parenthetical references in the titles refer to

the abolished U.S. classifications from which these art collections were derived.]

**FOR400 SYNCHRONIZATION OF PLURAL PROCESSORS:**

Foreign art collection under the class definition including subject matter wherein control or regulation of clocking or timing operations of two or more processors is synchronized.

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

## CLASS 714 - ERROR DETECTION/CORRECTION AND FAULT DETECTION/RECOVERY

Subclass 55: Under SEE OR SEARCH CLASS

Delete:

- 709, Electrical Computers and Digital Processing Systems-Multiple Computer or Process Coordinating, subclasses 1+ for task management, per se, and subclass 400 for synchronization maintenance of plural processors, per se.
- 713, Electrical Computers and Digital Processing Systems-Support, subclasses 400+ , for clock synchronization, per se, and subclasses 500+, for digital data processing system clock, pulse and timing interval generation, per se.

Insert:

- 713, Electrical Computers and Digital Processing Systems-Support, subclass 375 for synchronization maintenance of plural processors, subclasses 400-401 for clock synchronization, per se, and subclasses 500-503 for digital data processing system clock, pulse and timing interval generation, per se.
- 718, Electrical Computers and Digital Processing Systems: Virtual Machine Task or Process Management or Task Management/Control, subclass 1 for virtual machine task or process management and 100-108 for task management or control, in general.



## D. CHANGES TO THE DEFINITIONS (Project E-6675)

## CLASS 717 - DATA PROCESSING: SOFTWARE DEVELOPMENT, INSTALLATION, AND MANAGEMENT

Subclasses 102, 103, 149, and 162: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Subclasses 172, 173, 177, and 178: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 222

Insert:

subclasses 220 through 222

## D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 719 - ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS:  
INTERPROGRAM COMMUNICATION OR INTERPROCESS COMMUNICATION (IPC)

Subclass 315: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

Subclass 328: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 725 – INTERACTIVE VIDEO DISTRIBUTION SYSTEMS

Subclass 54: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses

D. CHANGES TO THE DEFINITIONS (Project E-6675)

CLASS 902 - ELECTRONIC FUNDS TRANSFER

Subclass 24: Under SEE OR SEARCH CLASS, in the reference to class 709:

Delete:

subclasses 200 through 253

Insert:

appropriate subclasses