

Index to the ACM Computing Classification System

[1998 Version]

Valid In 1998

The terms listed alphabetically in this index represent items in the 1998 version of the ACM Computing Classification System.

The entries are composed of words and phrases that occur in the three numbered levels of categories, the subject descriptors, and the General Terms. Implicit subject descriptors (or proper nouns) are not included. The entries are listed alphabetically. Each entry is identified by its location in the tree, or its designation as a General Term, using the legend below. The entries were created in the following ways:

- (1) Each node name, subject descriptor, and General Term is listed just as it appears in the tree, except that items shown in the tree as "e.g." appear by themselves, that is, they are not accompanied by the subject descriptors they are an example of.
- (2) Word phrases from the tree are permuted and are sequenced on each *important* word in the phrase. Thus, both "Design Languages" and "Languages, Design" (node D.3.2) are shown. Similarly, "Vision and Scene Understanding" (node I.2.10) has entries under "Scene Understanding, Vision" and "Understanding, Vision and Scene."
- (3) Short forms, such as abbreviations or acronyms, that occur in the tree are listed. For example, "SIMD" (a subject descriptor from node C.1.2) and "DDL" (a subject descriptor from node H.2.3) are included.
- (4) Words, phrases, or acronyms used as examples are included. Thus, "Factoring" and "Primality testing" are included because they are examples of the subject descriptor "Number-theoretic computations" (node F.2.1). Similarly, "MIS" from the parenthetical example in node H.4.2 is listed.
- (5) In some cases, words or phrases from items in the tree are deliberately omitted or combined, in order to

provide a more meaningful entry. In such cases, a dagger (†) appears after the level symbol to indicate the modification. For example, the entry "Languages, assembly" is a shortened form of the subject descriptor "Macro and assembly languages" (node D.3.2) and the entry "Language control structures" is a combination of the subject descriptor "Control structures" and its higher-level node (node D.3.3, "Language Constructs and Features").

- (6) In cases where permutations or truncations of a node or subject descriptor would sort adjacent to the node's or subject descriptor's original form, they are not included.

Each index term (except the General Terms) indicates the most specific or lowest relevant node number. For example, the subject descriptor "Complexity hierarchies" points to "Complexity Measures and Classes" (node F.1.3). The same phrases often appear in different parts of the tree; in such cases, the node name is shown in square brackets next to the term. For example, "File organization [File Systems Management]" (node D.4.3) appears next to "File organization [Information Storage]" (node H.3.2). Additionally, second- or third-level node names have been added to some subject descriptors for clarification.

LEVELS: Legend	
Symbol	Meaning of Level
*	First level node (in boldface)
**	Second level node
***	Third level node
SD	Subject Descriptor
GT	General Term
†	Modified entry

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LEVEL	CATE- GORY	WORDS AND PHRASES
SD	I.2.10	3D/stereo scene analysis [Artificial Intelligence]
SD	D.3.3	Abstract data types [Language Constructs]
**	F.1	Abstract Devices, Computation by
SD	H.3.1	Abstracting methods [Information Storage and Retrieval]
SD	D.2.11	Abstraction, Data
SD	K.4.1	Abuse and crime involving computers
SD	K.4.2	Abuse and crime involving computers [retired January 1998]

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	D.4.6	Access controls [Security and Protection; Operating Systems]
SD	B.6.1	Access, Memory control and [retired January 1998] [Logic Design; Hardware]
SD	H.2.2	Access methods [Database Management]
SD	D.4.3	Access methods [File Systems Management; Operating Systems]
SD†	F.1.1	Access, Random access machines [Computation by Abstract Devices]

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	C.2.5	Access schemes [Local and Wide-Area Networks]	SD	B.7.1	Algorithms implemented in hardware [Integrated Circuits]
SD	B.3.2	Access, Sequential-access memory	SD	G.1.2	Algorithms, Minimax approximation and [Approximation; Numerical Analysis]
SD	K.6.5	Access, Unauthorized [Security and Protection]	SD	I.1.2	Algorithms, Nonalgebraic
SD	K.3.2	Accreditation	SD	G.1.0	Algorithms, Numerical [Numerical Analysis]
SD	K.3.m	Accreditation [retired January 1998]	SD	G.1.0	Algorithms, Parallel
SD	I.2.6	Acquisition, Knowledge	SD	G.3	Algorithms, Probabilistic
SD	I.2.6	Acquisition, Language	***	I.1.2	Algorithms [Symbolic and Algebraic Manipulation]
SD	C.1.3	Adaptable architectures	SD	I.3.3	Algorithms, Viewing
SD	G.1.4	Adaptive and iterative quadrature	SD	I.3.7	Algorithms, Visible line/surface [Computer Graphics]
***	H.2.7	Administration, Database [Database Management]	SD	K.6.2	Allocation, Pricing and resource [Management of Computing and Information Systems]
**	J.1	Administrative Data Processing [Computer Applications]	SD	D.4.2	Allocation/deallocation strategies [Storage Management; Operating Systems]
SD	B.7.1	Advanced technologies [Integrated Circuits]	SD	F.1.2	Alternation and nondeterminism [Modes of Computation]
SD	J.2	Aerospace [Computer Applications]	SD	C.1.3	Analog computers
SD	I.2.11	Agents, Intelligent [Artificial Intelligence]	SD	C.1.m	Analog computers [retired January 1998]
***	B.1.2	Aids, Control Structure Performance Analysis and Design	SD	I.2.6	Analogies [Artificial Intelligence]
SD	D.2.5	Aids, Debugging	SD	I.2.10	Analysis, 3D/stereo scene [Artificial Intelligence]
***	B.6.3	Aids, Design [Logic Design; Hardware]	SD	G.4	Analysis, Algorithm design and [Mathematical Software]
***	B.7.2	Aids, Design [Integrated Circuits]	***	B.1.2	Analysis and Design Aids, Control Structure Performance
***	B.5.2	Aids, Design [Register-Transfer-Level Implementation]	***	B.8.2	Analysis and Design Aids, Performance [Performance and Reliability]
***	B.1.4	Aids, Microprogram Design	***	B.2.2	Analysis and Design Aids, Performance [retired January 1998] [Arithmetic and Logic Structures]
***	B.8.2	Aids, Performance Analysis and Design [Performance and Reliability]	***	H.3.1	Analysis and Indexing, Content
***	B.2.2	Aids, Performance Analysis and Design [retired January 1998] [Arithmetic and Logic Structures]	SD	G.3	Analysis, Contingency table [Probability and Statistics]
***	B.4.4	Aids, Performance Analysis and Design [retired January 1998] [Input/Output and Data Communications]	SD	G.3	Analysis, Correlation and regression [Probability and Statistics]
***	B.3.3	Aids, Performance Analysis and Design [retired January 1998] [Memory Structures]	SD	I.7.5	Analysis, Document
SD	H.3.4	Alert services, User profiles and [Information Storage and Retrieval]	SD	G.1.0	Analysis, Error [Numerical Analysis]
***	G.1.3	Algebra, Numerical Linear	SD	G.1.3	Analysis, Error [Numerical Linear Algebra]
SD	I.1.2	Algebraic algorithms [Symbolic and Algebraic Manipulation]	SD	G.1.7	Analysis, Error [Ordinary Differential Equations]
SD	F.3.2	Algebraic approaches to semantics	SD	G.1.4	Analysis, Error [Quadrature and Numerical Differentiation]
SD	F.4.3	Algebraic language theory	SD	G.1.5	Analysis, Error [Roots of Nonlinear Equations]
SD	I.1.3	Algebraic systems, Special-purpose	***	I.6.4	Analysis, Model Validation and [Simulation and Modeling]
SD	G.4	Algorithm design and analysis [Mathematical Software]	**	G.1	Analysis, Numerical
GT	GT	Algorithms	**	F.2	Analysis of Algorithms and Problem Complexity [Theory of Computation]
SD	I.1.2	Algorithms, Algebraic	SD	I.2.2	Analysis of algorithms, Automatic [Artificial Intelligence]
SD	I.1.2	Algorithms, Analysis of [Symbolic and Algebraic Manipulation]	SD	I.1.2	Analysis of algorithms [Symbolic and Algebraic Manipulation]
**†	F.2	Algorithms, Analysis of [Theory of Computation]	SD	D.4.8	Analysis, Operational
***	F.2.2	Algorithms and Problems, Nonnumerical	SD	I.5.2	Analysis, Pattern
***	F.2.1	Algorithms and Problems, Numerical	***	B.4.4	Analysis, Performance [retired January 1998] [Input/Output and Data Communications]
SD	I.2.2	Algorithms, Automatic analysis of	***	B.3.3	Analysis, Performance [retired January 1998] [Memory Structures]
SD	I.5.3	Algorithms [Clustering; Pattern Recognition]			
SD	G.2.1	Algorithms, Combinatorial			
SD	I.3.3	Algorithms, Display			
SD	I.3.5	Algorithms, Geometric			
SD	G.2.2	Algorithms, Graph			
SD†	B.2.4	Algorithms, High-speed arithmetic			

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	F.3.2	Analysis, Program [Semantics of Programming Languages]
***	I.4.8	Analysis, Scene
***	I.6.6	Analysis, Simulation Output
SD	D.4.8	Analysis, Stochastic
SD	G.3	Analysis, Survival [Probability and Statistics]
SD	H.5.5	Analysis, synthesis, and processing, Signal [Sound and Music Computing]
SD†	K.6.1	Analysis, Systems
SD	I.2.7	Analysis, Text
SD	G.3	Analysis, Time series [Probability and Statistics]
SD	I.2.10	Analysis, Video [Vision and Scene Understanding]
SD	I.5.4	Analysis, Waveform
SD	B.2.2	Analysis, Worst-case [retired January 1998] [Arithmetic and Logic Structures]
SD	B.4.4	Analysis, Worst-case [retired January 1998] [Input/Output and Data Communications]
SD	B.3.3	Analysis, Worst-case [retired January 1998] [Memory Structures]
SD	I.3.7	Animation [Computer Graphics]
SD	I.6.8	Animation [Simulation and Modeling]
SD	H.5.1	Animations [Information Interfaces and Presentation]
SD	G.1.6	Annealing, Simulated [Optimization; Numerical Analysis]
SD	I.2.3	Answer/reason extraction
SD	I.3.3	Antialiasing [retired January 1998]
SD	D.3.2	Application languages, Specialized
SD	I.3.4	Application packages [Computer Graphics]
***	K.8.1	Application Packages [Personal Computing]
**	C.3	Application-Based Systems, Special-Purpose and
***	I.2.1	Applications and Expert Systems [Artificial Intelligence]
***	H.4.3	Applications, Communications
*	J.	Applications, Computer
***	I.3.8	Applications [Computer Graphics]
***	H.2.8	Applications, Database
***	G.2.3	Applications [Discrete Mathematics]
SD	C.2.4	Applications, Distributed [Distributed Systems]
SD	J.1	Applications, Financial [Computer Applications]
***	I.4.9	Applications [Image Processing and Computer Vision]
**	H.4	Applications, Information Systems
***	B.1.5	Applications, Microcode
SD	C.3	Applications, Microprocessor/Microcomputer [Computer Systems Organization]
***	G.1.10	Applications [Numerical Analysis]
***	I.5.4	Applications [Pattern Recognition]
SD†	I.2.9	Applications, Robotics
***	I.6.3	Applications [Simulation and Modeling]
SD	C.2.2	Applications (SMTP, FTP, etc.) [Computer-Communication Networks]
***	I.1.4	Applications [Symbolic and Algebraic Manipulation]
SD	D.3.2	Applicative (functional) languages
***	D.1.1	Applicative (Functional) Programming
SD	F.3.2	Approaches to semantics, Algebraic

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	I.4.2	Approximate methods [Image Processing and Computer Vision]
***	G.1.2	Approximation
SD	G.1.2	Approximation, Chebyshev
SD	G.1.2	Approximation, Elementary function
SD	G.1.2	Approximation, Least squares
SD	G.1.2	Approximation, Linear
SD	G.1.2	Approximation, Minimax
SD	G.1.2	Approximation, Nonlinear
SD	G.1.2	Approximation of surfaces and contours [Numerical Analysis]
SD	G.1.2	Approximation, Rational
SD	G.1.2	Approximation, Spline and piecewise polynomial
SD	G.1.2	Approximations, Special function [Numerical Analysis]
SD	J.2	Archaeology
SD	J.5	Architecture
SD	I.2.10	Architecture and control structures [retired January 1998] [Artificial Intelligence]
SD	C.1.3	Architecture, Cellular
***	I.3.1	Architecture, Hardware [Computer Graphics]
SD	C.0	Architecture, Modeling of computer
***	C.2.1	Architecture, Network
SD	C.2.2	Architecture, Protocol
***	C.1.3	Architecture Styles, Other
SD	C.1.3	Architectures, Adaptable
SD	C.1.3	Architectures, Capability [retired January 1998]
SD	C.1.2	Architectures, Common bus
SD	C.1.2	Architectures, Crossbar-switch [Multiple Data Stream Architectures (Multiprocessors)]
SD	C.1.3	Architectures, Data-flow
SD	C.1.4	Architectures, Distributed
SD	D.2.11	Architectures, Domain-specific [Software Engineering]
SD	C.1.3	Architectures, High-level language [retired January 1998]
SD	H.5.4	Architectures [Hypertext/Hypermedia]
SD	C.1.2	Architectures, Interconnection [Multiple Data Stream Architectures (Multiprocessors)]
***	C.1.2	Architectures, Multiple Data Stream [Multiprocessors]
SD†	C.1.2	Architectures, Multiport memory
SD†	C.1.2	Architectures, Multiprocessor
***	C.1.4	Architectures, Parallel
**	C.1	Architectures, Processor
SD	C.1.1	Architectures, RISC/CISC, VLIW
***	C.1.1	Architectures, Single Data Stream
***	D.2.11	Architectures, Software
SD	I.5.5	Architectures, Special [Pattern Recognition]
SD	C.0	Architectures, System
SD	C.1.1	Architectures, Von Neumann [retired January 1998]
SD	H.3.6	Archives, Large text [Information Storage and Retrieval]
**	B.2	Arithmetic and Logic Structures [Hardware]
SD	B.5.1	Arithmetic and logic units [Register-Transfer-Level Implementation]
SD	G.1.0	Arithmetic, Computer [Numerical Analysis]

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
***	B.2.4	Arithmetic, High-speed [Arithmetic and Logic Structures]	SD	B.6.1	Automata, Cellular arrays and [Logic Design; Hardware]
SD	G.1.0	Arithmetic, Interval [Numerical Analysis]	SD	F.1.1	Automata, Cellular [Models of Computation]
SD	G.1.0	Arithmetic, Multiple precision [Numerical Analysis]	SD	F.4.3	Automata, Classes defined by grammars or
SD	C.1.2	Array and vector processors	SD	F.4.3	Automata, Classes defined by resource-bounded [retired January 1998]
SD	B.6.1	Arrays, Cellular [Logic Design; Hardware]	SD	I.2.2	Automatic analysis of algorithms [Artificial Intelligence]
SD	E.1	Arrays [Data Structures]	SD	G.1.4	Automatic differentiation [Numerical Analysis]
SD	B.7.1	Arrays, Gate [Integrated Circuits]	***	I.2.2	Automatic Programming [Artificial Intelligence]
SD	B.6.1	Arrays, Logic [Logic Design; Hardware]	***	D.1.2	Automatic Programming [Software]
SD	B.1.1	Arrays, Microprogrammed logic [retired January 1998]	SD	B.6.3	Automatic synthesis [Logic Design; Hardware]
SD	H.5.1	Artificial, augmented, and virtual realities [Information Interfaces and Presentation]	SD	B.5.2	Automatic synthesis [Register-Transfer-Level Implementation]
**	I.2	Artificial Intelligence	SD	B.1.2	Automatic synthesis [retired January 1998] [Control Structures and Microprogramming; Hardware]
***	I.2.11	Artificial Intelligence, Distributed	SD	I.2.1	Automation, Industrial [Artificial Intelligence]
**	J.5	Arts and Humanities [Computer Applications]	***	H.3.6	Automation, Library [Information Storage and Retrieval]
SD	J.5	Arts, Fine	SD	I.2.1	Automation, Office [Artificial Intelligence]
SD	J.5	Arts, fine and performing [retired January 1998] [Computer Applications]	***	H.4.1	Automation, Office [Information Systems Applications]
SD	J.5	Arts, Performing	SD	K.4.3	Automation [Organizational Impacts]
**	K.5	Aspects, Legal	SD	I.2.9	Autonomous vehicles
SD	D.3.2	Assembly languages	SD	C.4	Availability [Performance of Systems]
SD	D.2.4	Assertion checkers [Software Engineering]	SD	H.2.2	Avoidance of Deadlock
SD	F.3.1	Assertions [Logics and Meanings of Programs]	SD†	B.4.3	Backplanes [retired January 1998]
SD	C.5.3	Assistants, personal digital	SD	I.2.8	Backtracking [Artificial Intelligence]
SD	K.4.2	Assistive technologies for persons with disabilities	SD	D.4.5	Backup procedures [Operating Systems]
SD	B.3.2	Associative memories	SD	E.5	Backup/recovery [Files; Data]
SD	C.1.2	Associative processors [Processor Architectures]	SD	D.4.7	Batch processing systems [retired January 1998]
SD	K.6.4	Assurance, Quality [Management of Computing and Information Systems]	**	J.4	Behavioral and Social Sciences [Computer Applications]
SD	D.2.9	Assurance, Software quality (SQA)	SD	I.2.3	Belief revision
SD	J.2	Astronomy [Computer Applications]	SD	H.5.2	Benchmarking [Information Interfaces and Presentation]
SD	H.5.3	Asynchronous interaction [Information Interfaces and Presentation]	SD	K.6.2	Benchmarks [Management of Computing and Information Systems]
SD	C.2.1	Asynchronous Transfer Mode (ATM) [Computer-Communication Networks]	SD	A.0	Biographies/Autobiographies [General Literature]
SD	B.4.3	Asynchronous/synchronous operation [Input/Output and Data Communications]	SD	J.3	Biology and genetics [Computer Applications]
SD	C.2.1	ATM [Computer-Communication Networks]	SD	I.3.3	Bitmap and framebuffer operations [Computer Graphics]
SD	J.2	Atmospheric and earth sciences [Computer Applications]	SD	D.2.11	Blackboard [Software Architectures]
SD	I.2.10	Attributes, Modeling and recovery of physical	SD	H.4.3	Boards, Bulletin [Information Systems Applications]
SD	C.4	Attributes, Performance	SD	I.3.5	Boundary representations
SD	H.5.1	Audio input/output [Information Interfaces and Presentation]	SD	G.1.7	Boundary value problems
SD	K.6.4	Audit, Management	SD	F.1.1	Bounded-action devices
SD	H.5.2	Auditory (non-speech) feedback [Information Interfaces and Presentation]	SD	E.3	Breaking, Code [Data Encryption]
SD†	H.5.1	Augmented, artificial, and virtual realities [Information Interfaces and Presentation]	SD	H.4.3	Browsers, Information [Information Systems Applications]
SD	K.6.5	Authentication [Management of Computing and Information Systems]	SD	D.4.4	Buffering [Communications Management; Operating Systems]
SD	D.4.6	Authentication [Security and Protection; Operating Systems]	SD	B.4.5	Built-in tests [retired January 1998] [Input/Output and Data Communications]
SD†	A.0	Autobiographies	SD	B.7.3	Built-in tests [retired January 1998] [Integrated Circuits]
SD	F.1.1	Automata			

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	B.6.2	Built-in tests [retired January 1998] [Logic Design]	**	B.7	Circuits, Integrated [Hardware]
SD	B.5.3	Built-in tests [retired January 1998] [Register-Transfer-Level Implementation]	SD	B.6.1	Circuits, Parallel [Logic Design; Hardware]
SD	H.4.3	Bulletin boards [Information Systems Applications]	SD	B.6.1	Circuits, Sequential [Logic Design; Hardware]
SD†	B.4.3	Bus interconnections [Input/Output and Data Communications]	SD	C.0	CISC [Computer Systems Organization]
SD†	C.1.2	Bus interconnections [Multiple Data Stream Architectures (Multiprocessors)]	SD	D.2.4	Class invariants [Software Engineering]
SD	C.2.5	Buses [Local and Wide-Area Networks]	SD	D.3.3	Classes and objects [Language Constructs and Features]
SD	J.1	Business [Computer Applications]	***	F.1.3	Classes, Complexity
SD†	B.4.3	Cables [retired January 1998]	SD	F.4.3	Classes defined by grammars or automata
SD	B.3.2	Cache memories	SD	F.4.3	Classes defined by resource-bounded automata [retired January 1998]
SD	J.6	CAD (Computer-aided design) [Computer Applications]	SD	F.1.3	Classes, Relations among complexity
SD	K.3.1	CAI (Computer-aided instruction)	SD	I.6.1	Classification, Model
SD	B.2.1	Calculator [retired January 1998] [Design Styles; Arithmetic and Logic Structures]	SD	I.4.6	Classification, Pixel
SD	F.4.1	Calculus, Lambda	SD	H.3.2	Classification, Record [retired January 1998] [Information Storage and Retrieval]
SD	H.4.1	Calendars	***	D.3.2	Classifications, Language
SD	I.7.2	CALS [Document and Text Processing]	SD	I.5.2	Classifier design and evaluation [Pattern Recognition]
SD	J.6	CAM (Computer-aided manufacturing) [Computer Applications]	SD	C.2.4	Client/server [Computer-Communication Networks]
SD	I.4.1	Camera calibration [Image Processing and Computer Vision]	SD	D.2.11	Client/server [Software Architectures]
SD	C.1.3	Capability architectures [retired January 1998]	SD	H.3.3	Clustering [Information Storage and Retrieval]
***	I.7.5	Capture, Document	***	I.5.3	Clustering [Pattern Recognition]
SD	I.2.1	Cartography	SD	K.3.1	CMI (Computer-managed instruction)
SD	D.2.2	CASE (Computer-aided software engineering) [Software Engineering]	SD	D.2.9	CMM [Management; Software Engineering]
SD†	K.4.4	Cash, digital and Cybercash	SD	E.3	Code breaking [Data Encryption]
SD	B.7.1	Cells, Standard [retired January 1998] [Integrated Circuits]	SD	D.3.4	Code generation
SD	C.1.3	Cellular architecture	SD	D.2.5	Code inspections and walk-throughs [Software Engineering]
SD	B.6.1	Cellular arrays and automata [Logic Design; Hardware]	SD	D.2.3	Code, Reentrant
SD	F.1.1	Cellular automata [Models of Computation]	SD	E.4	Codes, Error control [Coding and Information Theory]
SD	K.5.2	Censorship [Legal Aspects of Computing]	SD	K.7.4	Codes of ethics [The Computing Profession]
SD	K.6.4	Centralization/decentralization [Management of Computing and Information Systems]	SD	K.7.m	Codes of good practice [retired January 1998] [The Computing Profession]
SD	C.2.1	Centralized networks [retired January 1998]	SD	K.7.4	Codes of good practice [The Computing Profession]
SD	G.4	Certification and testing [Mathematical Software]	**	E.4	Coding and Information Theory
***†	K.7.3	Certification, Testing, and Licensing [The Computing Profession]	***	I.4.2	Coding, Compression [Image Processing and Computer Vision]
SD	I.3.6	CGM [Computer Graphics]	SD	I.4.2	Coding, Exact [retired January 1998] [Image Processing and Computer Vision]
SD	B.4.2	Channels and controllers [Input/Output Devices]	***	D.2.3	Coding Tools and Techniques [Software Engineering]
SD	G.1.7	Chaotic systems [Numerical Analysis]	SD	I.2.0	Cognitive simulation
SD	I.7.5	Character recognition, Optical	SD	I.2.11	Coherence and coordination [Artificial Intelligence]
SD	D.2.2	Charts, Flow	SD	H.5.3	Collaborative computing [Information Interfaces and Presentation]
SD	G.1.2	Chebyshev approximation and theory	SD	K.3.1	Collaborative learning [Computers and Education]
SD	D.2.4	Checkers, Assertion [Software Engineering]	SD	K.4.3	Collaborative work, Computer-supported [Organizational Impacts]
SD	D.2.4	Checking, Model [Software/Program Verification]	SD	D.4.2	Collection, Garbage [Operating Systems]
SD	D.4.5	Checkpoint/restart [Operating Systems]	SD	D.3.4	Collection, garbage [Processors; Programming Languages]
SD	J.2	Chemistry [Computer Applications]	SD	H.3.7	Collection [Information Storage and Retrieval]
SD	G.2.2	Circuit problems, Path and [Graph Theory]	SD	I.4.8	Color [Image Processing And Computer Vision]
SD	C.2.1	Circuit switching networks			
SD	B.7.1	Circuits, Input/Output			

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	H.5.2	Color [Information Interfaces and Presentation]	***	I.4.2	Compression (Coding) [Image Processing and Computer Vision]
SD	I.2.10	Color, photometry, intensity, and thresholding [Vision and Scene Understanding; Artificial Intelligence]	SD	E.4	Compression, Data compaction and [Coding and Information Theory]
SD	I.3.7	Color, shading, shadowing, and texture [Computer Graphics]	SD	F.4.1	Computability theory [Mathematical Logic and Formal Languages]
SD	B.6.1	Combinational logic [Logic Design; Hardware]	SD	F.1.1	Computability theory [Models of Computation]
SD	G.2.1	Combinations and permutations	**	F.1	Computation by Abstract Devices
SD	G.2.1	Combinatorial algorithms	SD	F.1.2	Computation, Interactive and reactive [Computation by Abstract Devices]
***	G.2.1	Combinatorics	***	F.1.1	Computation, Models of
SD	I.6.8	Combined simulation	***	F.1.2	Computation, Modes of
SD	J.7	Command and control [Computer Applications]	SD†	F.2.1	Computation of transforms (e.g., Fast Fourier transform)
SD	D.4.9	Command and control languages [Operating Systems]	SD	F.1.2	Computation, Online [Computation by Abstract Devices]
SD	H.5.2	Commands [Information Interfaces and Presentation]	SD	F.1.2	Computation, Probabilistic
***	K.4.4	Commerce, Electronic [Computers and Society]	SD	F.1.2	Computation, Relativized
SD	I.2.9	Commercial robots and applications	*	F.	Computation, Theory of
SD	H.3.5	Commercial services [Information Storage and Retrieval]	***	I.3.5	Computational Geometry and Object Modeling [Computer Graphics]
SD	K.4.4	Commercial transactions, Distributed [Computers and Society]	SD	F.4.1	Computational logic
SD	E.4	Communication, Formal models of	SD	F.2.2	Computations, Geometrical problems and
SD	D.4.4	Communication, Network [Operating Systems]	SD	F.2.1	Computations in finite fields
SD	C.2.1	Communication, Wireless [Computer-Communication Networks]	SD	F.2.1	Computations, Number-theoretic
***	H.4.3	Communications Applications [Information Systems Applications]	SD	F.2.2	Computations on discrete structures
SD	C.2.0	Communications, Data [Computer-Communication Networks]	SD	F.2.1	Computations on matrices [Numerical Algorithms and Problems]
**	B.4	Communications, Data [Hardware]	SD	F.2.1	Computations on polynomials
SD	K.8.1	Communications, Data [Personal Computing]	***	K.3.2	Computer and Information Science Education
***	B.4.1	Communications Devices, Data	*	J.	Computer Applications
***	D.4.4	Communications Management [Operating Systems]	SD	C.0	Computer architecture, Modeling of [Computer Systems Organization]
SD	C.2.1	Communications, Network [Computer Systems Organization]	SD	G.1.0	Computer arithmetic
SD	E.4	Compaction, Data	SD	H.4.3	Computer conferencing, teleconferencing, and videoconferencing
SD	D.3.4	Compiler generators	**	I.3	Computer Graphics
SD	D.3.4	Compilers	**	K.1	Computer Industry, The
SD	D.3.4	Compilers, Incremental	SD	K.3.m	Computer literacy [retired January 1998]
SD	B.1.4	Compilers, Languages and [Control Structures and Microprogramming]	SD	K.3.2	Computer science education
SD	D.3.4	Compilers, Retargetable	SD	K.6.2	Computer selection [Management of Computing and Information Systems]
SD†	F.1.3	Completeness and reducibility	**	C.5	Computer System Implementation [Computer Systems Organization]
**	F.2	Complexity, Analysis of Algorithms and Problem [Theory of Computation]	*	C.	Computer Systems Organization
SD	F.1.3	Complexity classes, Relations among	***	K.3.1	Computer Uses in Education
SD	F.1.3	Complexity hierarchies	SD	**	Computer Vision, Image Processing and
SD	F.1.3	Complexity, Machine-independent [retired January 1998]	SD	I.5.4	Computer vision [Pattern Recognition]
***	F.1.3	Complexity Measures and Classes	SD	J.6	Computer-aided design (CAD) [Computer Applications]
SD	F.1.3	Complexity measures, Relations among	**	J.6	Computer-Aided Engineering [Computer Applications]
SD	D.2.8	Complexity measures [Software Engineering]	SD	J.6	Computer-aided manufacturing (CAM) [Computer Applications]
***	F.2.3	Complexity Measures, Tradeoffs among	SD	D.2.2	Computer-aided software engineering (CASE) [Software Engineering]
SD	F.2.2	Complexity of proof procedures [Analysis of Algorithms and Problem Complexity]	SD	K.3.1	Computer-assisted instruction (CAI)
SD	E.2	Composite structures [retired January 1998] [Data Storage Representations]	**	C.2	Computer-Communication Networks
			SD	K.3.1	Computer-managed instruction (CMI)

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	K.4.1	Computer-related health issues	SD	F.4.1	Constraint programming, Logic and [Mathematical Logic and Formal Languages]
SD	K.4.1	Computers, Abuse and crime involving	SD	D.3.3	Constraints [Language Constructs and Features]
SD	K.4.2	Computers, Abuse and crime involving [retired January 1998]	SD	I.3.5	Constructive solid geometry (CSG) [retired January 1998]
SD	C.1.3	Computers, Analog	SD	F.3.3	Constructs, Functional [Logics and Meanings of Programs]
SD	C.1.m	Computers, Analog [retired January 1998]	***	D.3.3	Constructs, Language [Programming Languages]
**	K.3	Computers and Education	SD	F.3.3	Constructs, Object-oriented [Logics and Meanings of Programs]
**	K.4	Computers and Society	***	F.3.3	Constructs, Program [Logics and Meanings of Programs]
**	J.7	Computers in Other Systems [Computer Applications]	SD	J.7	Consumer products [Computer Applications]
***	C.5.1	Computers, Large and Medium	***	H.3.1	Content Analysis and Indexing [Information Storage and Retrieval]
***†	C.5.1	Computers, Mainframe	SD†	F.4.2	Context-free grammar types
SD	C.5.3	Computers, Personal [Computer System Implementation]	SD†	F.4.3	Context-free languages
SD	C.5.1	Computers, Super	SD	F.4.2	Context-sensitive grammar types
SD	K.4.3	Computer-supported collaborative work [Organizational Impacts]	SD	E.2	Contiguous representations [retired January 1998] [Data Storage Representations]
SD	H.5.3	Computer-supported cooperative work [Information Interfaces and Presentation]	SD	G.3	Contingency table analysis [Probability and Statistics]
**	K.6	Computing and Information Systems, Management of	SD	G.1.5	Continuation (homotopy) methods [Roots of Nonlinear Equations]
SD	H.5.3	Computing, Collaborative [Information Interfaces and Presentation]	SD	I.6.1	Continuous Simulation
SD	K.6.2	Computing equipment management [Management of Computing and Information Systems]	SD	G.1.2	Contours, Approximation of surfaces and [Numerical Analysis]
**	K.2	Computing, History of	SD	D.2.4	Contract, Programming by [Software/Program Verification]
**	K.5	Computing, Legal Aspects of	SD	K.5.m	Contracts [retired January 1998] [Legal Aspects of Computing]
*	G.	Computing, Mathematics of	SD	E.4	Control codes, Error [Coding and Information Theory]
*	I.	Computing Methodologies	SD	J.7	Control, Command and [Computer Applications]
*	K.	Computing Milieux	SD	B.5.1	Control design [Register-Transfer-Level Implementation]
**	K.8	Computing, Personal	***	B.1.1	Control Design Styles [Control Structures and Microprogramming]
**	K.7	Computing Profession, The	SD	B.1.1	Control, Hardwired [retired January 1998] [Hardware]
***	H.5.5	Computing, Sound and Music	SD	J.7	Control, Industrial [Computer Applications]
SD	G.3	Computing, Statistical	SD	D.4.9	Control languages, Command and [Operating Systems]
SD	I.2.6	Concept learning [Artificial Intelligence]	SD	B.6.1	Control, Memory [retired January 1998] [Logic Design; Hardware]
SD	D.4.1	Concurrency [Operating Systems]	***	I.2.8	Control Methods and Search [Artificial Intelligence]
SD	F.1.2	Concurrency, Parallelism and [Computation by Abstract Devices]	SD	B.1.5	Control, Peripheral [retired January 1998] [Microcode Applications]
SD	H.2.4	Concurrency [Systems]	SD	F.3.3	Control primitives
SD	D.3.2	Concurrent, distributed, and parallel languages	SD	J.7	Control, Process [Computer Applications]
***	D.1.3	Concurrent Programming	***	B.1.2	Control Structure Performance Analysis and Design Aids
SD	D.3.3	Concurrent programming structures [Language Constructs]	***	B.1.3	Control Structure Reliability, Testing, and Fault-Tolerance [retired January 1998]
SD	G.1.0	Conditioning (and ill-conditioning) [Numerical Analysis]	**	B.1	Control Structures and Microprogramming [Hardware]
SD	G.1.3	Conditioning [Numerical Linear Algebra]			
SD	F.3.1	Conditions, Pre- and post-conditions [Logics and Meanings of Programs]			
SD	A.0	Conference proceedings [General Literature]			
SD	H.4.3	Conferencing, teleconferencing, and videoconferencing, Computer [Information Systems Applications]			
SD	D.2.9	Configuration management, Software			
SD	C.1.2	Connection machines [Processor Architectures]			
SD	I.2.6	Connectionism and neural nets			
SD	G.1.6	Constrained optimization			
SD	D.3.2	Constraint and logic languages [Programming Languages]			

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	I.2.10	Control structures, Architecture and [retired January 1998] [Vision and Scene Understanding; Artificial Intelligence]	SD	K.4.4	Cybercash, digital cash
SD	D.3.3	Control structures [Language Constructs]	SD	K.6.1	Cycle, Life [Management of Computing and Information Systems]
SD	C.3	Control systems, Process	SD	D.2.9	Cycle, Life [Software Engineering]
SD	I.2.8	Control theory [Artificial Intelligence]	SD	J.5	Dance
SD	I.7.1	Control, Version [Document and Text Processing]	*	E.	Data
SD	D.2.7	Control, Version [Software Engineering]	SD	D.3.3	Data, Abstract data types
SD	B.1.1	Control, Writable store [Hardware]	SD	D.2.11	Data abstraction [Software Architectures]
SD	B.4.2	Controllers, Channels and [Input/Output and Data Communications]	SD	C.2.0	Data communications [Computer-Communication Networks]
SD	D.4.6	Controls, Access	***†	B.4.1	Data Communications Devices, Input/Output and
SD	D.4.6	Controls, Cryptographic	**	B.4	Data Communications [Hardware]
SD	D.4.6	Controls, Information flow	SD	K.8.1	Data communications [Personal Computing]
SD	G.1.7	Convergence and stability [Ordinary Differential Equations]	SD	E.4	Data compaction and compression
SD	G.1.5	Convergence [Roots of Nonlinear Equations]	SD	H.2.3	Data description languages (DDL) [Database Management]
SD	G.1.6	Convex programming [Optimization; Numerical Analysis]	SD	H.2.7	Data dictionary/directory [Database Management]
SD	H.5.3	Cooperative work, Computer-supported [Information Interfaces and Presentation]	**	E.3	Data Encryption
SD	I.2.11	Coordination, Coherence and [Artificial Intelligence]	SD	E.3	Data encryption standard (DES) [retired January 1998]
SD	K.5.1	Copyrights [Hardware/Software Protection]	SD	K.4.1	Data flow, Transborder
SD	D.2.9	Copyrights [retired January 1998] [Software Engineering]	SD†	D.2.5	Data generators, Test
SD	D.3.3	Coroutines [Language Constructs]	SD	K.4.4	Data interchange, Electronic [Electronic Commerce]
SD	I.4.3	Correction, Geometric [Image Processing and Computer Vision]	SD	B.1.5	Data manipulation, Direct [retired January 1998] [Microcode Applications]
SD	D.2.7	Corrections [retired January 1998] [Software Engineering]	SD	H.2.3	Data manipulation languages (DML) [Database Management]
SD	D.2.4	Correctness proofs [Software/Program Verification; Software Engineering]	SD	D.2.12	Data mapping [Interoperability; Software Engineering]
SD	G.3	Correlation and regression analysis [Probability and Statistics]	SD	H.2.8	Data mining [Database Applications]
SD	D.2.9	Cost estimation [Software Engineering]	SD	H.2.1	Data models [Database Management]
SD	B.2.4	Cost/performance [Arithmetic and Logic Structures]	SD	E.2	Data, Primitive [retired January 1998] [Data Storage Representations]
SD	G.2.1	Counting problems [Discrete Mathematics]	**	J.1	Data Processing, Administrative [Computer Applications]
SD	D.2.5	Coverage testing [Software Engineering]	SD	I.4.8	Data, Range [Scene Analysis; Image Processing and Computer Vision]
SD†	K.6.1	CPM [Management of Computing and Information Systems]	SD†	B.4.1	Data Receivers [retired January 1998] [Data Communications Devices]
SD	K.4.1	Crime involving computers, Abuse and	SD	H.3.5	Data sharing [Online Information Services]
SD	K.4.2	Crime involving computers, Abuse and [retired January 1998]	**	E.2	Data Storage Representations
SD†	C.1.2	Crossbar switch [Multiple Data Stream Architectures (Multiprocessors)]	***	C.1.2	Data Stream Architectures, Multiple
SD	D.4.6	Cryptographic controls [Security and Protection; Operating Systems]	***	C.1.1	Data Stream Architectures, Single
SD	E.3	Cryptosystems, Public key	**	E.1	Data Structures
SD	I.3.5	CSG [retired January 1998] [Computer Graphics]	SD	I.3.6	Data structures and data types, Graphics
SD	I.4.8	Cues, Depth [Scene Analysis; Image Processing and Computer Vision]	SD	E.1	Data structures, Distributed [Data Structures; Data]
SD	H.3.4	Current awareness systems (selective dissemination of information—SDI) [retired January 1998]	SD†	I.2.10	Data structures, representations, and transforms [Artificial Intelligence]
SD	K.3.2	Curriculum	SD	B.4.2	Data terminals and printers [Input/Output Devices]
SD	I.3.3	Curve generation, Line and	SD	D.2.5	Data, Text data generators
SD	I.3.5	Curve, surface, solid, and object representations [Computer Graphics]	SD†	K.4.1	Data, Transborder data flow [Public Policy Issues]
			SD	H.2.5	Data translation [retired January 1998] [Database Management]
			SD	D.3.3	Data types, Abstract [Language Constructs]

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	D.3.3	Data types and structures [Language Constructs]
SD	I.3.6	Data types, Graphics data structures and
SD	H.2.7	Data warehouse and repository [Database Ad- ministration]
***	H.2.7	Database Administration [Database Management]
***	H.2.8	Database applications
***	H.2.6	Database Machines [Database Management]
**	H.2	Database Management
SD	H.2.3	Database (persistent) programming languages [Database Management]
SD	K.8.1	Database processing [Personal Computing]
SD	H.2.8	Databases and GIS, Spatial
SD	C.2.4	Databases, Distributed [Computer-Communication Networks]
SD	H.2.4	Databases, Distributed [Database Management]
***	H.2.5	Databases, Heterogeneous [Database Manage- ment]
SD	H.2.8	Databases, Image
SD	H.2.4	Databases, Multimedia
SD	H.2.4	Databases, Object-oriented
SD	H.2.4	Databases, Parallel
SD	H.2.4	Databases, Relational
SD	H.2.4	Databases, Rule-based
SD	H.2.8	Databases, Scientific
SD	H.2.8	Databases, Statistical
SD	H.2.4	Databases, Textual
SD	C.1.3	Data-flow architectures
SD	D.3.2	Data-flow languages
SD	B.5.1	Data-path design [Register-Transfer-Level Imple- mentation]
SD	H.2.3	DDL (Data description languages)
SD	H.2.2	Deadlock avoidance [Database Management]
SD	D.4.1	Deadlocks [Operating Systems]
SD	I.4.3	Deblurring, Sharpening and [retired January 1998] [Image Processing and Computer Vision]
SD	D.3.4	Debuggers [Processors; Programming Languages]
SD	D.2.5	Debugging aids
SD†	D.2.5	Debugging, Distributed [Software Testing and Debugging]
***	D.2.5	Debugging, Testing and
SD	K.6.4	Decentralization/centralization [Management of Computing and Information Systems]
SD	F.4.3	Decision problems [Formal Languages]
SD	F.4.2	Decision problems [Grammars and Other Rewrit- ing Systems]
SD	H.4.2	Decision support [Types of Systems; Information Systems Applications]
SD	D.2.2	Decision tables
SD	G.1.8	Decomposition methods, Domain [Partial Differ- ential Equations]
SD	G.1.3	Decomposition, Singular value [Numerical Linear Algebra]
***	I.2.3	Deduction and Theorem Proving
SD	I.2.3	Deduction (e.g., natural, rule-based)
SD	D.2.12	Definition languages, Interface [Interoperability; Software Engineering]
SD†	D.2.11	Definition languages [Software Architectures]
***	D.3.1	Definitions and Theory, Formal [Programming Languages]

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	G.1.9	Delay equations [Integral Equations]
SD	F.3.2	Denotational semantics
SD	I.4.8	Depth cues [Image Processing and Computer Vision]
SD	E.3	DES (Data encryption standard) [retired January 1998]
SD†	E.3	DES [Data Encryption Standard]
SD	H.2.3	Description languages, Data (DDL)
SD	B.6.3	Description languages, Hardware [Logic Design; Hardware]
SD	B.5.2	Description languages, Hardware [Register- Transfer-Level Implementation]
SD	I.3.4	Description languages, Picture [retired January 1998] [Computer Graphics]
SD†	D.2.11	Description languages [Software Architectures]
GT	GT	Design
***	B.1.2	Design Aids, Control Structure Performance Analysis and [Control Structures and Micropro- gramming]
***	B.6.3	Design Aids [Logic Design; Hardware]
***	B.7.2	Design Aids [Integrated Circuits]
***	B.1.4	Design Aids, Microprogram [Control Structures and Microprogramming]
***	B.8.2	Design Aids, Performance Analysis and [Perfor- mance and Reliability]
***	B.2.2	Design Aids, Performance Analysis and [retired January 1998] [Arithmetic and Logic Structures]
***	B.4.4	Design Aids, Performance Analysis and [retired January 1998] [Input/Output and Data Commu- nications]
***	B.3.3	Design Aids, Performance Analysis and [retired January 1998] [Memory Structures]
***	B.5.2	Design Aids [Register-Transfer-Level Implemen- tation]
SD	G.4	Design and analysis, Algorithm [Mathematical Software]
SD	I.5.2	Design and evaluation, Classifier [Pattern Recog- nition]
SD	J.6	Design, Computer-aided (CAD) [Computer Ap- plications]
SD	B.5.1	Design, Control [Register-Transfer-Level Imple- mentation]
SD	B.5.1	Design, Data-path [Register-Transfer-Level Im- plementation]
SD	G.3	Design, Experimental [Probability and Statistics]
SD	D.4.7	Design, Hierarchical [retired January 1998] [Op- erating Systems]
SD	C.0	Design, Instruction set [Computer Systems Organization]
SD	D.3.2	Design languages [Language Classifications]
**	B.6	Design, Logic [Hardware]
***	H.2.1	Design, Logical [Database Management]
SD	B.m	Design management [Hardware]
SD	B.5.1	Design, Memory [Register-Transfer-Level Imple- mentation]
***	I.5.2	Design Methodology [Pattern Recognition]
SD	D.2.2	Design methods, Object-oriented [Software En- gineering]
***	C.2.1	Design, Network Architecture and

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
***	D.4.7	Design, Organization and [Operating Systems]	***	B.4.1	Devices, Data Communications
SD	H.5.3	Design, Organizational [Information Interfaces and Presentation]	SD	I.3.1	Devices, Hardcopy [retired January 1998] [Computer Graphics]
***	H.2.2	Design, Physical [Database Management]	SD	I.3.1	Devices, Input [Computer Graphics]
SD	B.2.3	Design, Redundant [retired January 1998] [Arithmetic and Logic Structures]	***	B.4.2	Devices, Input/Output
SD	B.1.3	Design, Redundant [retired January 1998] [Control Structures and Microprogramming]	SD	C.5.3	Devices, Portable
SD	B.6.2	Design, Redundant [retired January 1998] [Logic Design; Hardware]	SD	I.3.1	Devices, Raster display [Computer Graphics]
SD	B.4.5	Design, Redundant [retired January 1998] [Input/Output and Data Communications]	SD	D.4.2	Devices, Secondary storage [Operating Systems]
SD	B.7.3	Design, Redundant [retired January 1998] [Integrated Circuits]	SD	I.3.1	Devices, Storage [retired January 1998] [Computer Graphics]
SD	B.3.4	Design, Redundant [retired January 1998] [Memory Structures]	SD	F.1.1	Devices, Unbounded-action [Computation by Abstract Devices]
SD	B.5.3	Design, Redundant [retired January 1998] [Register-Transfer-Level Implementation]	SD	I.3.1	Devices, Vector display [retired January 1998] [Computer Graphics]
***	B.5.1	Design [Register-Transfer-Level Implementation]	SD	B.2.3	Diagnostics [retired January 1998] [Arithmetic and Logic Structures]
***	D.2.10	Design [retired January 1998] [Software Engineering]	SD	B.1.3	Diagnostics [retired January 1998] [Control Structures and Microprogramming]
SD	H.5.2	Design, Screen [Information Interfaces and Presentation]	SD	B.4.5	Diagnostics [retired January 1998] [Input/Output and Data Communications]
SD	C.4	Design studies [Performance of Systems]	SD	B.3.4	Diagnostics [retired January 1998] [Memory Structures]
***	B.2.1	Design Styles [Arithmetic and Logic Structures]	SD	D.2.5	Diagnostics [Testing Tools; Software Engineering]
***	B.1.1	Design Styles, Control [Control Structures and Microprogramming]	SD	D.2.2	Diagrams, State [Software Engineering]
***	B.6.1	Design Styles [Logic Design; Hardware]	***†	A.2	Dictionaries [General Literature]
***	B.3.2	Design Styles [Memory Structures]	SD	H.3.1	Dictionaries [Information Storage and Retrieval]
***	B.7.1	Design Styles, Types and [Integrated Circuits]	SD	H.2.7	Dictionary/directory, Data [Database Management]
SD	K.6.1	Design, Systems analysis and [Management of Computing and Information Systems]	SD	G.2.1	Difference equations, Recurrences and
***	D.2.2	Design Tools and Techniques [Software Engineering]	SD	G.1.1	Difference formulas [retired January 1998]
SD	H.5.2	Design, User-centered [Information Interfaces and Presentation]	SD	G.1.4	Difference methods, Finite
SD	I.7.2	Desktop publishing [Document and Text Processing]	SD	G.1.7	Difference methods, Finite [Ordinary Differential Equations]
SD	H.4.1	Desktop publishing [Information Systems Applications]	SD	G.1.8	Difference methods [Partial Differential Equations]
SD	I.4.6	Detection, Edge and feature	***	G.1.7	Differential Equations, Ordinary
SD	G.1.3	Determinants [retired January 1998]	***	G.1.8	Differential Equations, Partial
SD	I.5.1	Deterministic [retired January 1998] [Models; Pattern Recognition]	SD	G.1.7	Differential-algebraic equations [Ordinary Differential Equations]
***	I.6.5	Development, Model	SD	G.1.4	Differentiation, Automatic [Numerical Analysis]
SD	K.6.3	Development, Software	***	G.1.4	Differentiation, Quadrature and Numerical
SD	K.6.1	Development, Systems [Management of Computing and Information Systems]	SD	C.5.3	Digital assistants, personal
SD†	F.4.2	Developmental systems [Grammars and Other Rewriting Systems]	SD	K.4.4	Digital cash, Cybercash,
SD	I.3.4	Device drivers [retired January 1998] [Computer Graphics]	***	H.3.7	Digital Libraries
SD	I.3.6	Device independence [retired January 1998] [Computer Graphics]	***	I.4.1	Digitization and Image Capture [Image Processing and Computer Vision]
SD	I.3.4	Device interfaces, Virtual [Computer Graphics]	SD	I.3.3	Digitizing and scanning [Computer Graphics]
SD	H.5.2	Devices and strategies, Input [Information Interfaces and Presentation]	SD	K.7.4	Dilemmas, Ethical [The Computing Profession]
SD	F.1.1	Devices, Bounded-action	SD†	G.1.3	Direct and iterative methods, Eigenvalues and eigenvectors [Numerical Linear Algebra]
**	F.1	Devices, Computation by Abstract	SD†	G.1.3	Direct and iterative methods, Linear systems [Numerical Linear Algebra]
			SD	B.1.5	Direct data manipulation [retired January 1998] [Microcode Applications]
			SD	H.5.2	Direct manipulation [Information Interfaces and Presentation]
			SD	H.2.7	Directory, Data dictionary [Database Management]

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	D.4.3	Directory structures [File Systems Management; Operating Systems]	***	I.7.1	Document and Text Editing
SD	K.4.2	Disabilities, Assistive technologies for persons with	**	I.7	Document and Text Processing [Computing Methodologies]
SD	I.2.7	Discourse [Artificial Intelligence]	***	I.7.5	Document Capture
SD	I.6.8	Discrete event [Simulation and Modeling]	SD	I.7.1	Document management
**	G.2	Discrete Mathematics	***	I.7.2	Document Preparation [Document and Text Processing]
SD	I.6.1	Discrete simulation and modeling	GT	GT	Documentation
SD	F.2.2	Discrete structures, Computations on [Nonnumerical Algorithms and Problems]	SD	G.4	Documentation [Mathematical Software]
SD	H.5.1	Disk [Information Interfaces and Presentation]	SD	D.2.7	Documentation [Software Engineering]
SD	I.3.3	Display algorithms [Computer Graphics]	SD	H.5.2	Documentation, Training, help, and [Information Interfaces and Presentation]
SD	I.3.1	Display devices, Raster [Computer Graphics]	SD	G.1.8	Domain decomposition methods [Partial Differential Equations]
SD	I.3.1	Display devices, Vector [retired January 1998] [Computer Graphics]	SD	D.2.13	Domain engineering [Reusable Software]
SD	B.4.2	Display, Image [Input/Output Devices]	SD	D.2.11	Domain-specific architectures [Software Engineering]
SD	I.4.0	Displays, Image [Image Processing and Computer Vision]	SD	I.3.4	Drivers, Device [retired January 1998] [Computer Graphics]
SD	I.3.1	Displays, Three-dimensional [retired January 1998]	SD	D.2.5	Dumps [retired January 1998]
SD	H.3.7	Dissemination [Information Storage and Retrieval]	SD	H.5.1	DVI [Information Interfaces and Presentation]
SD	H.3.4	Dissemination of information, Selective—SDI [retired January 1998]	SD†	B.3.1	Dynamic memory (DRAM) [Semiconductor Memory Structures]
SD	K.3.1	Distance learning	SD	I.2.8	Dynamic programming [Artificial Intelligence]
SD	C.2.4	Distributed applications [Computer-Communication Networks]	SD	D.3.3	Dynamic storage management [Programming Languages]
SD	C.1.4	Distributed architectures [Processor Architectures]	SD	I.2.9	Dynamics, Kinematics and [Robotics]
***	I.2.11	Distributed Artificial Intelligence	SD	J.2	Earth and atmospheric sciences [Computer Applications]
SD	K.4.4	Distributed commercial transactions [Computers and Society]	GT	GT	Economics
SD†	D.3.2	Distributed, concurrent, and parallel languages	SD	J.4	Economics [Computer Applications]
SD	E.1	Distributed data structures	SD	K.6.0	Economics [Management of Computing and Information Systems]
SD	C.2.4	Distributed databases [Computer-Communication Networks]	SD	I.4.6	Edge and feature detection [Image Processing and Computer Vision]
SD	H.2.4	Distributed databases [Database Management]	SD	K.4.4	EDI [Electronic Commerce]
SD	D.2.5	Distributed debugging [Software Testing and Debugging]	***	I.7.1	Editing, Document and Text
SD	D.4.3	Distributed file systems [File Systems Management; Operating Systems]	SD	I.3.4	Editors, Graphics
SD	D.4.2	Distributed memories	SD	D.2.3	Editors, Program
SD	C.2.1	Distributed networks	***	K.3.2	Education, Computer and Information Science
SD	D.2.12	Distributed objects [Interoperability; Software Engineering]	SD	J.1	Education [Computer Applications]
SD	D.1.3	Distributed programming	SD	K.3.2	Education, Computer science
SD	I.6.8	Distributed [Simulation and Modeling]	***	K.3.1	Education, Computer Uses in
***	C.2.4	Distributed Systems [Computer-Communication Networks]	**	K.3	Education, Computers and
SD	H.3.4	Distributed systems [Information Storage and Retrieval]	SD	K.3.2	Education, Information systems
SD	D.4.7	Distributed systems [Operating Systems]	SD	H.3.4	Efficiency and effectiveness [Systems and Software; Information Storage and Retrieval]
SD	I.3.2	Distributed/network graphics [Computer Graphics]	SD	G.4	Efficiency [Mathematical Software]
SD	G.3	Distribution functions [Probability and Statistics]	SD†	J.1	EFTS [Computer Applications]
***	D.2.7	Distribution, Maintenance, and Enhancement [Software Engineering]	SD	G.1.3	Eigenvalues and eigenvectors (direct and iterative methods)
SD	H.2.3	DML (Data manipulation languages)	***	K.4.4	Electronic Commerce
SD	I.7.5	Document analysis	SD	K.4.4	Electronic data interchange (EDI) [Electronic Commerce]
			SD	H.4.3	Electronic mail [Information Systems Applications]
			***	I.7.4	Electronic Publishing [Document and Text Processing]
			SD	J.2	Electronics [Computer Applications]

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LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	G.1.8	Element methods, Finite	SD	G.2.1	Equations, Recurrences and difference [Discrete Mathematics]
SD	G.1.2	Elementary function approximation	***	G.1.5	Equations, Roots of Nonlinear
SD	D.2.1	Elicitation methods (e.g., rapid prototyping, interviews, JAD) [Requirements/Specifications; Software Engineering]	SD	G.1.7	Equations, Stiff
SD	G.1.8	Elliptic equations	SD	G.1.5	Equations, Systems of nonlinear
SD	D.4.7	Embedded systems, Real-time and [Organization and Design]	SD	G.1.9	Equations, Volterra
SD	C.3	Embedded systems, Real-time and [Special-Purpose and Application-Based Systems]	SD	K.6.2	Equipment management, Computing
SD	K.4.3	Employment [Organizational Impacts]	SD	H.4.1	Equipment [retired January 1998] [Office Automation]
SD	K.4.2	Employment [Social Issues]	SD	I.3.6	Ergonomics [Computer Graphics]
SD	E.4	Encoding schemes, Nonsecret [retired January 1998]	SD	H.5.2	Ergonomics [Information Interfaces and Presentation]
**	E.3	Encryption, Data	SD	G.1.0	Error analysis [Numerical Analysis]
SD	E.3	Encryption standard, Data (DES) [retired January 1998]	SD	G.1.3	Error analysis [Numerical Linear Algebra]
***†	A.2	Encyclopedias [General Literature]	SD	G.1.7	Error analysis [Ordinary Differential Equations]
**	J.2	Engineering and Physical Sciences [Computer Applications]	SD	G.1.4	Error analysis [Quadrature and Numerical Differentiation]
SD	J.2	Engineering [Computer Applications]	SD	G.1.5	Error analysis [Roots of Nonlinear Equations]
**	J.6	Engineering, Computer-Aided [Computer Applications]	SD	E.4	Error control codes [Coding and Information Theory]
SD	D.2.2	Engineering, Computer-aided software (CASE)	SD	D.2.5	Error handling and recovery
SD	D.2.13	Engineering, Domain [Reusable Software]	SD	B.2.3	Error-checking [retired January 1998] [Arithmetic and Logic Structures]
SD	B.1.4	Engineering, Firmware	SD	B.1.3	Error-checking [retired January 1998] [Control Structures and Microprogramming]
**	D.2	Engineering, Software	SD	B.6.2	Error-checking [retired January 1998] [Logic Design; Hardware]
SD	I.2.3	Engines, Inference [Deduction and Theorem Proving]	SD	B.4.5	Error-checking [retired January 1998] [Input/Output and Data Communications]
***	D.2.7	Enhancement, Distribution, Maintenance, and [Software Engineering]	SD	B.7.3	Error-checking [retired January 1998] [Integrated Circuits]
***	I.4.3	Enhancement [Image Processing and Computer Vision]	SD	B.3.4	Error-checking [retired January 1998] [Memory Structures]
SD	D.2.7	Enhancement [retired January 1998] [Software Engineering]	SD	B.5.3	Error-checking [retired January 1998] [Register-Transfer-Level Implementation]
SD†	D.2.6	Environments, Graphical programming [Software Engineering]	SD	D.2.9	Estimation, Cost [Software Engineering]
SD†	D.2.6	Environments, Integrated programming [Software Engineering]	SD	D.2.9	Estimation, Time [Software Engineering]
***	D.2.6	Environments, Programming [Software Engineering]	SD	K.7.4	Ethical dilemmas [The Computing Profession]
SD	D.3.4	Environments, Run-time [Processors]	SD	K.7.4	Ethics, Codes of [The Computing Profession]
SD	I.6.7	Environments [Simulation and Modeling]	SD	K.4.1	Ethics [Computers and Society]
SD	G.1.4	Equal interval integration [retired January 1998]	***	K.7.4	Ethics, Professional [The Computing Profession]
SD	G.1.7	Equations, Convergence of differential	SD	K.7.m	Ethics [retired January 1998] [The Computing Profession]
SD	G.1.5	Equations, Convergence of nonlinear	SD	I.5.2	Evaluation and selection, Feature [Pattern Recognition]
SD	G.1.9	Equations, Delay [Integral Equations]	SD	I.5.2	Evaluation, Classifier design and [Pattern Recognition]
SD	G.1.7	Equations, Differential-algebraic [Ordinary Differential Equations]	SD	F.3.2	Evaluation, Partial [Logics and Meanings of Programs]
SD	G.1.8	Equations, Elliptic	SD	H.3.4	Evaluation, Performance [Systems and Software; Information Storage and Retrieval]
SD	G.1.9	Equations, Fredholm	SD	I.1.3	Evaluation strategies [Symbolic and Algebraic Manipulation]
SD	G.1.8	Equations, Hyperbolic	SD	H.5.3	Evaluation/methodology [Group and Organization Interfaces; Information Interfaces and Presentation]
***	G.1.9	Equations, Integral	SD	H.5.1	Evaluation/methodology [Multimedia Information Systems; Information Interfaces and Presentation]
SD	G.1.9	Equations, Integro-differential			
SD†	G.1.5	Equations, Nonlinear iterative methods			
***	G.1.7	Equations, Ordinary Differential			
SD	G.1.8	Equations, Parabolic			
***	G.1.8	Equations, Partial Differential			

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	H.5.2	Evaluation/methodology [User Interfaces; Information Interfaces and Presentation]	***	D.3.3	Features, Language Constructs and [Programming Languages]
SD	I.6.8	Event, Discrete [Simulation and Modeling]	SD	H.5.2	Feedback, Auditory [Information Interfaces and Presentation]
SD	D.2.2	Evolutionary prototyping [Design Tools and Techniques; Software Engineering]	SD	H.3.3	Feedback, Relevance [Information Storage and Retrieval]
SD	I.4.2	Exact coding [retired January 1998] [Image Processing and Computer Vision]	SD	G.1.2	FFT [Approximation; Numerical Analysis]
SD	D.4.1	Exclusion, Mutual [Operating Systems]	SD	B.4.3	Fiber optics [Input/Output and Data Communications]
SD	I.2.8	Execution, Plan [Artificial Intelligence]	SD	A.0	Fiction [General Literature]
SD	D.2.5	Execution, Symbolic [Testing and Debugging; Software Engineering]	SD	F.2.1	Fields, Computations in finite
SD	I.4.5	Expansion methods, Series [Image Processing and Computer Vision]	SD	D.4.3	File organization [File Systems Management; Operating Systems]
SD	G.3	Experimental design [Probability and Statistics]	SD	H.3.2	File organization [Information Storage and Retrieval]
GT	GT	Experimentation	SD	D.4.3	File systems, Distributed [Operating Systems]
SD	I.2.5	Expert system tools and techniques [Artificial Intelligence]	***	D.4.3	File Systems Management [Operating Systems]
***	I.2.1	Expert Systems, Applications and [Artificial Intelligence]	**	E.5	Files [Data]
***	I.1.1	Expressions and Their Representation [Symbolic and Algebraic Manipulation]	SD	I.3.4	Files, Meta [retired January 1998] [Computer Graphics]
SD	I.1.1	Expressions, Simplification of [Symbolic and Algebraic Manipulation]	SD	I.4.3	Filtering [Enhancement; Image Processing and Computer Vision]
SD	D.2.7	Extensibility [retired January 1998] [Software Engineering]	SD	H.3.3	Filtering, Information
SD	D.3.2	Extensible languages	SD	I.4.4	Filtering, Inverse [retired January 1998] [Restoration; Image Processing and Computer Vision]
SD	I.2.3	Extraction, Answer/reason [Artificial Intelligence]	SD	I.4.4	Filtering, Kalman
SD	G.1.1	Extrapolation	SD	I.4.4	Filtering, Wiener [retired January 1998]
SD	H.3.4	Fact retrieval systems [retired January 1998] [Information Storage and Retrieval]	SD	J.1	Financial [Computer Applications]
SD†	F.2.1	Factoring	SD	J.5	Fine and performing arts [retired January 1998] [Computer Applications]
SD	H.1.2	Factors, Human	SD	J.5	Fine arts
SD†	F.2.1	Fast Fourier transform	SD†	F.1.1	Finite automata
SD	G.1.2	Fast Fourier transforms (FFT) [Approximation; Numerical Analysis]	SD	G.1.4	Finite difference methods
SD	C.4	Fault tolerance [Performance of Systems]	SD	G.1.7	Finite difference methods [Ordinary Differential Equations]
***	B.1.3	Fault-Tolerance, Control Structure Reliability, Testing, and [retired January 1998] [Control Structures and Microprogramming]	SD	G.1.8	Finite element methods
SD	D.4.5	Fault-tolerance [Operating Systems]	SD	F.2.1	Finite fields, Computations in
***	B.8.1	Fault-Tolerance, Reliability, Testing, and [Performance and Reliability; Hardware]	SD	G.1.8	Finite volume methods [Partial Differential Equations]
***	B.2.3	Fault-Tolerance, Reliability, Testing, and [retired January 1998] [Arithmetic and Logic Structures]	SD	B.1.4	Firmware engineering [retired January 1998] [Control Structures and Microprogramming]
***	B.4.5	Fault-Tolerance, Reliability, Testing, and [retired January 1998] [Input/Output and Data Communications]	SD	B.1.5	Firmware support of operating systems/instruction sets [retired January 1998] [Microcode Applications]
***	B.3.4	Fault-Tolerance, Reliability, Testing, and [retired January 1998] [Memory Structures]	SD	I.4.8	Fitting, Surface [Image Processing and Computer Vision]
SD	I.4.6	Feature detection, Edge and [Image Processing and Computer Vision]	SD	D.2.2	Flow charts
SD	I.5.2	Feature evaluation and selection [Pattern Recognition]	SD	D.4.6	Flow controls, Information
***	I.4.7	Feature Measurement [Image Processing and Computer Vision]	SD	K.4.1	Flow, Transborder data [Computers and Society]
SD	I.4.7	Feature representation [Image Processing and Computer Vision]	***	D.3.1	Formal Definitions and Theory [Programming Languages]
			**	F.4	Formal Languages, Mathematical Logic and [Theory of Computation]
			***	F.4.3	Formal Languages [Mathematical Logic and Formal Languages]
			SD	D.2.4	Formal methods [Software/Program Verification]
			SD	E.4	Formal models of communication [Coding and Information Theory]

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	B.1.2	Formal models [retired January 1998] [Control Structures and Microprogramming]
SD	B.4.4	Formal models [retired January 1998] [Input/Output and Data Communications]
SD	B.3.3	Formal models [retired January 1998] [Memory Structures]
***	I.2.4	Formalisms and Methods, Knowledge Representation [Artificial Intelligence]
SD	I.7.2	Format and notation [Document and Text Processing]
SD	I.2.8	Formation, Plan [Artificial Intelligence]
SD	H.5.2	Forms [Information Interfaces and Presentation]
SD	H.2.1	Forms, Normal [Database Management]
SD	G.1.1	Formulas, Difference [retired January 1998]
SD	G.1.1	Formulas, Interpolation
SD	H.3.3	Formulation, Query [Information Storage and Retrieval]
SD	C.2.1	Forward networks, Store and [Computer-Communication Networks]
SD	I.2.0	Foundations, Philosophical [Artificial Intelligence]
SD†	F.2.1	Fourier transform, Fast
SD	G.1.2	Fourier transforms, Fast [Approximation; Numerical Analysis]
SD	I.3.7	Fractals [Computer Graphics]
SD	G.1.2	Fractals, Wavelets and [Approximation; Numerical Analysis]
SD	C.2.1	Frame relay networks [Computer-Communication Networks]
SD	I.3.3	Framebuffer operations, Bitmap and [Computer Graphics]
SD	I.2.4	Frames and scripts [Knowledge Representation Formalisms and Methods]
SD	D.3.3	Frameworks [Programming Languages]
SD	G.1.9	Fredholm equations
SD	K.8.1	Freeware/shareware [Personal Computing]
SD	C.2.2	FTP [Network Protocols; Computer-Communication Networks]
SD	G.1.2	Function approximation, Elementary
SD	G.1.2	Function approximations, Special [Numerical Analysis]
SD	F.4.1	Function theory, Recursive
SD	F.3.3	Functional constructs [Logics and Meanings of Programs]
***†	D.1.1	Functional Programming
SD	G.3	Functions, Distribution [Probability and Statistics]
SD	G.2.1	Functions, Generating
SD†	D.3.3	Functions, procedures, and subroutines [Language Constructs]
SD	I.4.8	Fusion, Sensor [Image Processing and Computer Vision]
SD	I.2.3	"Fuzzy," and probabilistic reasoning, Uncertainty, [Artificial Intelligence]
SD	I.5.1	Fuzzy Set [Models; Pattern Recognition]
SD	I.2.1	Games [Artificial Intelligence]
SD	K.8.0	Games [Personal Computing]
SD	K.8	Games [retired January 1991] [Personal Computing]

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	I.6.8	Gaming [Simulation and Modeling]
SD	D.4.2	Garbage collection [Operating Systems]
SD	D.3.4	Garbage collection [Processors; Programming Languages]
SD	B.7.1	Gate arrays [Integrated Circuits]
SD	G.1.4	Gaussian quadrature
SD	I.1.1	General and polynomial representations
SD	A.0	General literary works (e.g., fiction, plays)
*	A.	General Literature
SD†	I.1.1	General representations of expressions [Symbolic and Algebraic Manipulation]
SD	H.1.1	General systems theory
SD	G.2.1	Generating functions
SD	D.3.4	Generation, Code
SD	I.7.2	Generation, Index [Document and Text Processing]
***	I.7.3	Generation, Index [retired January 1998]
SD	I.2.7	Generation, Language
SD	I.3.3	Generation, Line and curve
SD	B.1.4	Generation, Machine-independent microcode [retired January 1998]
***	I.3.3	Generation, Picture/Image
SD	I.2.8	Generation, Plan execution, formation, [Artificial Intelligence]
SD	G.3	Generation, Random number
SD	B.2.3	Generation, Test [retired January 1998] [Arithmetic and Logic Structures]
SD	B.1.3	Generation, Test [retired January 1998] [Control Structures and Microprogramming]
SD	B.6.2	Generation, Test [retired January 1998] [Logic Design; Hardware]
SD	B.4.5	Generation, Test [retired January 1998] [Input/Output and Data Communications]
SD	B.7.3	Generation, Test [retired January 1998] [Integrated Circuits]
SD	B.3.4	Generation, Test [retired January 1998] [Memory Structures]
SD	B.5.3	Generation, Test [retired January 1998] [Register-Transfer-Level Implementation]
SD	D.3.4	Generators, compiler [Programming Languages]
SD†	D.2.5	Generators, Test data [Software Engineering]
SD	J.3	Genetics, Biology and
SD	I.3.5	Geometric algorithms, languages, and systems [Computer Graphics]
SD	I.4.3	Geometric correction [Image Processing and Computer Vision]
SD	I.5.1	Geometric [Models; Pattern Recognition]
SD	I.3.5	Geometric transformations, Hierarchy and [Computer Graphics]
SD	F.2.2	Geometrical problems and computations [Nonnumerical Algorithms and Problems]
***	I.3.5	Geometry, Computational, and Object Modeling [Computer Graphics]
SD	I.3.5	Geometry, Constructive solid [retired January 1998]
SD	I.4.1	Geometry, Imaging [Image Processing and Computer Vision]
SD	H.2.8	GIS, Spatial databases and
SD	I.3.6	GKS [Computer Graphics]

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	G.1.6	Global optimization [Numerical Analysis]	SD	B.6.3	Hardware description languages [Logic Design; Hardware]
SD	K.7.m	Good practice, Codes of [retired January 1998]	SD	B.5.2	Hardware description languages [Register-Transfer-Level Implementation]
SD	K.7.4	Good practice, Codes of [The Computing Profession]	SD	K.2	Hardware [History of Computing]
SD	J.1	Government [Computer Applications]	SD	K.5.m	Hardware patents [retired January 1998]
***	K.5.2	Governmental Issues	***	K.8.2	Hardware [Personal Computing]
SD	G.1.6	Gradient methods	SD	B.4.5	Hardware reliability [retired January 1998] [Input/Output and Data Communications]
SD	F.4.2	Grammar types, Context-free	SD	I.1.3	Hardware, Special-purpose [retired January 1998] [Symbolic and Algebraic Manipulation]
SD	F.4.2	Grammar types, Context-sensitive	SD	C.0	Hardware/software interfaces [Computer Systems Organization]
***	F.4.2	Grammars and Other Rewriting Systems	***	K.5.1	Hardware/Software Protection [Legal Aspects of Computing]
SD	F.4.3	Grammars or automata, Classes defined by	SD	B.1.1	Hardwired control [retired January 1998] [Hardware]
SD	G.2.2	Graph algorithms [Graph Theory]	SD	E.2	Hash-table representations [Data Storage Representations]
SD	I.2.8	Graph and tree search strategies [Artificial Intelligence]	SD	J.3	Health [Computer Applications]
SD	G.2.2	Graph labeling [Discrete Mathematics]	SD	K.4.1	Health issues, Computer-related
***	G.2.2	Graph Theory [Discrete Mathematics]	SD	H.5.2	Help, and documentation, Training,
SD†	D.2.6	Graphical programming environments [Software Engineering]	***	H.2.5	Heterogeneous Databases [Database Management]
SD	H.5.2	Graphical user interfaces (GUI)	SD	C.1.3	Heterogeneous (hybrid) systems [Processor Architectures]
**	I.3	Graphics, Computer	SD	I.2.8	Heuristic methods [Artificial Intelligence]
SD	I.3.6	Graphics data structures and data types	SD	I.3.7	Hidden line/surface removal [Computer Graphics]
SD	I.3.2	Graphics, Distributed/network	SD	D.2.11	Hiding, Information [Software Architectures]
SD	I.3.4	Graphics editors	SD	D.4.7	Hierarchical design [retired January 1998] [Operating Systems]
SD	H.5.2	Graphics [Information Interfaces and Presentation]	SD	I.4.10	Hierarchical [Image Processing and Computer Vision]
SD	B.7.2	Graphics [Integrated Circuits]	SD	F.1.3	Hierarchies, Complexity [Computation by Abstract Devices]
SD	I.3.4	Graphics packages [Computer Graphics]	SD	I.3.5	Hierarchies, Object [Computer Graphics]
SD	K.8.1	Graphics [Personal Computing]	SD	D.4.2	Hierarchies, Storage [Operating Systems]
SD	I.3.1	Graphics processors	SD	I.3.5	Hierarchy and geometric transformations [Computer Graphics]
SD	I.7.5	Graphics recognition and interpretation [Document Capture]	SD	C.1.3	High-level language architectures [retired January 1998]
***	I.3.2	Graphics Systems [Computer Graphics]	SD	D.3.2	High-level languages, Very
***	I.3.7	Graphics, Three-Dimensional, and Realism	***	B.2.4	High-speed Arithmetic [Arithmetic and Logic Structures]
***	I.3.4	Graphics Utilities [Computer Graphics]	SD†	C.2.5	High-speed Networks
SD	E.1	Graphs and networks [Data Structures]	**	K.2	History of Computing
SD	I.4.3	Grayscale manipulation	SD	G.1.5	Homotopy [Numerical Analysis]
***	H.5.3	Group and Organization Interfaces [Information Interfaces and Presentation]	SD	K.6.5	Horses, Trojan [Management of Computing and Information Systems]
SD	H.4.1	Groupware [Office Automation]	SD	D.4.6	Horses, Trojan [Operating Systems]
SD†	I.4.6	Growing, Region growing and partitioning [Image Processing and Computer Vision]	GT	GT	Human Factors
SD†	H.5.2	GUI [User Interfaces]	SD	H.1.2	Human factors [Information Systems]
SD	H.5.2	Guides, Style [Information Interfaces and Presentation]	SD	H.1.2	Human information processing
SD	K.6.5	Hacking [Management of Computing and Information Systems]	SD	K.4.1	Human safety [Computers and Society]
SD	K.4.2	Handicapped persons/special needs [retired January 1998] [Computers and Society]	**	J.5	Humanities, Arts and [Computer Applications]
SD	D.2.5	Handling and recovery, Error [Software Engineering]	SD†	C.1.3	Hybrid Systems [Processor Architectures]
SD	H.5.2	Haptic I/O [Information Interfaces and Presentation]	SD	C.1.m	Hybrid systems [retired January 1998] [Processor Architectures]
SD	I.3.1	Hardcopy devices [retired January 1998] [Computer Graphics]			
*	B.	Hardware			
SD	B.7.1	Hardware, Algorithms implemented in [Integrated Circuits]			
***	I.3.1	Hardware architecture [Computer Graphics]			

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	G.1.8	Hyperbolic equations	***	K.3.2	Information Science Education, Computer and
SD	G.2.2	Hypergraphs [Discrete Mathematics]	***	H.3.3	Information Search and Retrieval [Information
SD	H.5.1	Hypertext navigation and maps [retired January 1998] [Information Interfaces and Presentation]			Storage and Retrieval]
SD	I.7.2	Hypertext/hypermedia [Document and Text Processing]	SD	H.3.4	Information, selective dissemination of—SDI [retired January 1998]
***	H.5.4	Hypertext/Hypermedia [Information Interfaces and Presentation]	***	H.3.5	Information Services, On-line
SD	I.3.6	IGES [Computer Graphics]	**	H.3	Information Storage and Retrieval
SD	G.1.0	Ill-conditioning [Numerical Analysis]	***	H.3.2	Information Storage [Information Storage and Retrieval]
***	I.4.1	Image capture, Digitization and [Image Processing and Computer Vision]	*	H.	Information Systems
SD	H.2.8	Image databases	**	H.4	Information Systems Applications
SD	B.4.2	Image display [Input/Output Devices]	SD	K.3.2	Information systems education
SD	I.4.0	Image displays [Image Processing and Computer Vision]	**	K.6	Information Systems, Management of [Computing Milieux]
**	I.4	Image Processing and Computer Vision	SD	J.3	Information systems, Medical [Computer Applications]
SD	I.4.0	Image processing software	***	H.5.1	Information Systems, Multimedia
***	I.4.10	Image Representation	SD	K.6.1	Information systems planning, Strategic [Management of Computing and Information Systems]
SD	I.4.8	Imagery, Time-varying	***†	H.4.2	Information Systems, Types of [Information Systems Applications]
SD	I.4.1	Imaging geometry [Image Processing and Computer Vision]	**	E.4	Information Theory, Coding and
***	K.4.3	Impacts, Organizational [Computers and Society]	SD	H.1.1	Information theory [Information Systems]
SD†	B.7.1	Implementation, Algorithms implemented in hardware [Integrated Circuits]	***	H.1.1	Information Theory, Systems and [Models and Principles]
**	C.5	Implementation, Computer System [Computer Systems Organization]	SD	H.1.1	Information, Value of
***	I.5.5	Implementation [Pattern Recognition]	SD	D.3.3	Inheritance [Programming Languages]
**	B.5	Implementation, Register-Transfer-Level [Hardware]	SD	G.1.7	Initial value problems
SD	G.4	Implementations, Parallel and vector [Mathematical Software]	SD	H.5.2	Input devices and strategies (e.g., mouse, touch-screen) [Information Interfaces and Presentation]
SD	D.3.4	Incremental compilers	SD	I.3.1	Input devices [Computer Graphics]
SD	I.3.6	Independence, Device [retired January 1998] [Computer Graphics]	**	B.4	Input/Output and Data Communications [Hardware]
SD	I.7.2	Index generation [Document and Text Processing]	SD	H.5.1	Input/output, Audio [Information Interfaces and Presentation]
***	I.7.3	Index Generation [retired January 1998] [Document and Text Processing]	SD	B.7.1	Input/Output circuits
***	H.3.1	Indexing, Content Analysis and [Information Storage and Retrieval]	SD	D.4.4	Input/Output [Communications Management; Operating Systems]
SD	H.3.1	Indexing methods [Information Storage and Retrieval]	***	B.4.2	Input/Output Devices [Input/Output and Data Communications]
SD	I.2.6	Induction [Artificial Intelligence]	SD	D.3.3	Input/Output [Language Constructs]
SD	I.2.3	Induction, Mathematical	SD	D.2.5	Inspections and walk-throughs, Code [Software Engineering]
SD	I.2.1	Industrial automation [Computer Applications]	SD	G.1.0	Instability (and stability) [Numerical Analysis]
SD	J.7	Industrial control [Computer Applications]	***	K.6.2	Installation Management [Management of Computing and Information Systems]
**	K.1	Industry, Computer	SD	K.3.1	Instruction, Computer-assisted (CAI)
SD	I.2.3	Inference engines [Deduction and Theorem Proving]	SD	K.3.1	Instruction, Computer-managed (CMI)
SD	H.4.3	Information browsers [Information Systems Applications]	SD	C.0	Instruction set design (e.g., RISC, CISC)
SD	H.3.3	Information filtering	SD	B.1.5	Instruction set interpretation [Microcode Applications]
SD	D.4.6	Information flow controls [Security and Protection; Operating Systems]	SD†	B.1.5	Instruction sets, Firmware support of [retired January 1998]
SD	D.2.11	Information hiding [Software Architectures]	SD	K.6.m	Insurance [retired January 1991] [Management of Computing and Information Systems]
**	H.5	Information Interfaces and Presentation	SD	K.6.5	Insurance [retired January 1998] [Management of Computing and Information Systems]
SD	H.3.4	Information networks [Information Storage and Retrieval]	SD	G.1.6	Integer programming
SD	H.1.2	Information processing, Human	***	G.1.9	Integral Equations

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
**	B.7	Integrated Circuits [Hardware]	SD	D.2.2	Interfaces, User [Design Tools and Techniques; Software Engineering]
SD†	D.2.6	Integrated programming environments [Software Engineering]	SD	G.4	Interfaces, User [Mathematical Software]
SD	C.2.1	Integrated Services Digital Network (ISDN)	SD	I.3.4	Interfaces, Virtual device [Computer Graphics]
SD	G.1.4	Integration, Equal interval [retired January 1998]	SD	B.3.2	Interleaved memories [retired January 1998]
SD	B.7.1	Integration, very large scale (VLSI)	SD	C.2.5	Internet [Local and Wide-Area Networks]
SD	H.2.7	Integrity, and protection, Security, [Database Management]	***	C.2.6	Internetworking [Computer-Communication Networks]
SD	H.2.0	Integrity [retired January 1998] [Database Management]	***	D.2.12	Interoperability [Software Engineering]
SD	G.1.9	Integro-differential equations	***	G.1.1	Interpolation
SD	K.4.4	Intellectual property [Electronic Commerce]	SD	G.1.1	Interpolation formulas
SD	K.4.1	Intellectual property rights [Public Policy Issues]	SD†	G.1.1	Interpolation, Piecewise polynomial
**	I.2	Intelligence, Artificial	SD	G.1.1	Interpolation, Spline polynomial
***	I.2.11	Intelligence, Distributed Artificial	SD	I.7.5	Interpretation, Graphics recognition and [Document Capture]
SD	I.2.11	Intelligent agents [Artificial Intelligence]	SD	B.1.5	Interpretation, Instruction set [Microcode Application]
SD	I.2.10	Intensity, color, photometry, and thresholding [Artificial Intelligence]	SD	D.3.4	Interpreters [Processors; Programming Languages]
SD	H.5.3	Interaction, Asynchronous [Information Interfaces and Presentation]	SD	G.1.0	Interval arithmetic
SD	H.5.2	Interaction styles (e.g., commands, menus, forms, direct manipulation) [Information Interfaces and Presentation]	SD	G.1.4	Interval integration, Equal [retired January 1998]
SD	H.5.3	Interaction, Synchronous [Information Interfaces and Presentation]	SD	D.2.1	Interviews [Requirements/Specifications; Software Engineering]
SD	I.3.6	Interaction techniques [Computer Graphics]	**	A.1	Introductory and Survey [General Literature]
SD	H.5.3	Interaction, Web-based	SD	D.2.4	Invariants, Class [Software Engineering]
SD	F.1.2	Interactive and reactive computation [Computation by Abstract Devices]	SD	I.4.7	Invariants [Image Processing and Computer Vision]
SD†	D.2.6	Interactive programming environments	SD	F.3.1	Invariants [Logics and Meanings of Programs]
SD	D.4.7	Interactive systems [Operating Systems]	SD	K.6.5	Invasive software (e.g., viruses, worms, Trojan horses) [Management of Computing and Information Systems]
SD	I.5.5	Interactive systems [Pattern Recognition]	SD	D.4.6	Invasive software (e.g., viruses, worms, Trojan horses) [Operating Systems]
SD	K.4.4	Interchange, Electronic data [Electronic Commerce]	SD	I.4.4	Inverse filtering [retired January 1998] [Image Processing and Computer Vision]
SD	C.1.2	Interconnection architectures [Multiple Data Stream Architectures (Multiprocessors)]	SD	G.1.8	Inverse problems [Partial Differential Equations]
SD†	D.2.11	Interconnection Languages [Software Architectures]	SD	G.1.3	Inversion, Matrix
SD	C.2.0	Interconnection, Open System reference model (OSI)	SD	H.5.2	I/O, Haptic [Information Interfaces and Presentation]
***	B.4.3	Interconnections (subsystems) [Input/Output and Data Communications]	SD	B.4.3	I/O, Parallel [Input/Output and Data Communications]
SD	D.2.12	Interface definition languages [Interoperability; Software Engineering]	SD	H.5.2	I/O, Voice [Information Interfaces and Presentation]
SD	H.5.2	Interface management systems, User	SD	C.2.1	ISDN (Integrated Services Digital Network)
**	H.5	Interfaces and Presentation, Information [Information Systems]	SD†	D.2.9	ISO [Software Engineering Management]
SD	H.5.2	Interfaces, Graphical user	SD	K.4.1	Issues, Computer-related health
***	H.5.3	Interfaces, Group and Organization	***	K.5.2	Issues, Governmental
SD	C.0	Interfaces, Hardware/software [Computer Systems Organization]	***	K.4.1	Issues, Public Policy
SD	B.4.3	Interfaces [Input/Output and Data Communications]	***	K.4.2	Issues, Social
SD	D.2.2	Interfaces, Modules and [Software Engineering]	SD	H.3.7	Issues, Systems [Digital Libraries]
SD	I.2.1	Interfaces, Natural language [Artificial Intelligence]	SD	H.3.7	Issues, User [Digital Libraries]
SD	I.2.9	Interfaces, Operator [Robotics]	SD	H.5.4	Issues, User [Hypertext/Hypermedia]
***	H.5.2	Interfaces, User	SD	E.2	Items, Primitive data [retired January 1998] [Data Storage Representations]
			SD	G.1.4	Iterated methods [Quadrature and Numerical Differentiation]
			SD	G.1.3	Iterative methods [Numerical Linear Algebra]
			SD	G.1.5	Iterative methods [Roots of Nonlinear Equations]
			SD	G.1.4	Iterative quadrature, Adaptive and

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	G.1.8	Iterative solution techniques [Partial Differential Equations]	SD†	I.3.6	Languages, Graphics
SD	D.2.1	JAD [Requirements/Specifications; Software Engineering]	SD	B.6.3	Languages, Hardware description [Logic Design; Hardware]
SD	I.4.4	Kalman filtering [Image Processing and Computer Vision]	SD	B.5.2	Languages, Hardware description [Register-Transfer-Level Implementation]
SD	D.4.6	Kernels, Security [retired January 1998]	SD	D.2.12	Languages, Interface definition [Interoperability, Software Engineering]
SD	E.3	Key, Public key cryptosystems	SD	D.3.2	Languages, Macro and assembly
SD	I.2.9	Kinematics and dynamics [Robotics]	SD	I.7.2	Languages, Markup [Document and Text Processing]
SD	I.2.6	Knowledge acquisition [Artificial Intelligence]	**	F.4	Languages, Mathematical Logic and Formal [Theory of Computation]
***	I.2.4	Knowledge Representation Formalisms and Methods	SD†	B.1.4	Languages, Microprogram
SD	G.2.2	Labeling, Graph [Discrete Mathematics]	SD	D.3.2	Languages, Microprogramming [retired January 1998]
SD	F.4.1	Lambda calculus and related systems	SD	D.3.2	Languages, Multiparadigm [Programming Languages]
SD	I.2.6	Language acquisition [Artificial Intelligence]	SD	D.3.2	Languages, Nondeterministic [retired January 1998]
SD	C.1.3	Language architectures, High-level [retired January 1998]	SD	D.3.2	Languages, Nonprocedural [retired January 1998]
***	D.3.2	Language Classifications	SD	I.1.3	Languages, Nonprocedural [retired January 1998] [Symbolic and Algebraic Manipulation]
***	D.3.3	Language Constructs	SD	D.3.2	Languages, Object-oriented
SD†	D.3.3	Language control structures	SD	F.4.3	Languages, Operations on
SD	I.2.7	Language generation [Artificial Intelligence]	SD	I.3.4	Languages, Picture description [retired January 1998]
SD	I.2.1	Language interfaces, Natural	**	D.3	Languages, Programming [Software]
SD†	H.5.2	Language interfaces, Natural [Information Interfaces and Presentation]	***	I.2.5	Languages, Programming, and Software [Artificial Intelligence]
SD	I.2.7	Language models [Artificial Intelligence]	SD	H.2.3	Languages, Query
SD	I.2.7	Language parsing and understanding [Natural Language Processing; Artificial Intelligence]	SD	I.2.4	Languages, Representation
***	I.2.7	Language Processing, Natural [Artificial Intelligence]	SD	I.7.1	Languages [retired January 1998] [Document and Text Processing]
SD	F.4.3	Language theory, Algebraic	SD	I.7.2	Languages, Scripting [Document and Text Processing]
SD	J.5	Language translation [Computer Applications]	***	F.3.2	Languages, Semantics of Programming
GT	GT	Languages	***	I.6.2	Languages, Simulation
SD	B.1.4	Languages and compilers [Microprogram Design Aids; Hardware]	SD	D.2.1	Languages [Software Engineering]
SD	I.2.11	Languages and structures [Artificial Intelligence]	SD	D.3.2	Languages, Specialized application
SD	I.7.2	Languages and systems [Document and Text Processing]	SD	D.3.2	Languages, Very high-level
***	I.1.3	Languages and Systems [Symbolic and Algebraic Manipulation]	SD	C.5.3	Laptops
SD	D.3.2	Languages, Applicative (functional)	***	C.5.1	Large and Medium ("Mainframe") Computers
SD†	D.3.2	Languages, Assembly	SD	G.1.3	Large systems, Sparse, structured, and very [Numerical Analysis]
SD	D.4.9	Languages, Command and control [Operating Systems]	SD	H.3.6	Large text archives [Information Storage and Retrieval]
SD	I.3.6	Languages [Computer Graphics]	SD	I.2.1	Law [Artificial Intelligence]
SD	D.3.2	Languages, Concurrent, distributed, and parallel	SD	J.1	Law [Computer Applications]
SD	D.3.2	Languages, Constraint and logic [Programming Languages]	SD†	F.2.2	Layout and Routing [Analysis of Algorithms and Problem Complexity]
SD	H.2.3	Languages, Data description (DDL)	SD	B.7.2	Layout [Integrated Circuits]
SD	H.2.3	Languages, Data manipulation (DML)	***	C.5.1	"Mainframe" [Computer System Implementation]
***	H.2.3	Languages [Database Management]	***	I.2.6	Learning [Artificial Intelligence]
SD	H.2.3	Languages, Database programming [Database Management]	SD	K.3.1	Learning, Collaborative [Computers and Education]
SD	D.3.2	Languages, Data-flow	SD	I.2.6	Learning, Concept
SD	D.3.2	Languages, Design [Language Classifications]	SD	K.3.1	Learning, Distance [Computers and Education]
SD	D.2.11	Languages (e.g., description, interconnection, definition) [Software Architectures]	SD	I.2.6	Learning, Parameter
SD	D.3.2	Languages, Extensible	SD	G.1.2	Least squares approximation
***	F.4.3	Languages, Formal			
SD	I.3.5	Languages, Geometric [Computer Graphics]			

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	G.1.6	Least squares methods
GT	GT	Legal Aspects
**	K.5	Legal Aspects of Computing
***	H.3.7	Libraries, Digital
SD†	D.2.13	Libraries, Reusable Software
SD	D.2.2	Libraries, Software
***	H.3.6	Library Automation [Information Storage and Retrieval]
SD	K.5.1	Licensing [Legal Aspects of Computing]
***	K.7.3	Licensing, Testing, and Certification [The Computing Profession]
**	J.3	Life and Medical Sciences [Computer Applications]
SD	K.6.1	Life cycle [Management of Computing and Information Systems]
SD	D.2.9	Life cycle [Software Engineering]
SD	G.3	Life testing, Reliability and [Probability and Statistics]
SD	I.3.3	Line and curve generation [Computer Graphics]
***	G.1.3	Linear Algebra, Numerical
SD	G.1.2	Linear approximation
SD	G.1.6	Linear programming
SD	G.1.3	Linear systems (direct and iterative methods)
SD	G.1.8	Lines, Method of [Partial Differential Equations]
SD	I.3.7	Line/surface algorithms, Visible
SD	I.3.7	Line/surface removal, Hidden [Computer Graphics]
SD	H.3.1	Linguistic processing [Content Analysis and Indexing; Information Storage and Retrieval]
SD	J.5	Linguistics [Computer Applications]
SD	E.2	Linked representations [Data Storage Representations]
SD	D.4.9	Linkers [retired January 1998]
SD	E.1	Lists, stacks, and queues [Data Structures]
SD	K.3.m	Literacy, Computer [retired January 1998]
SD	K.3.2	Literacy [Computers and Education]
SD	A.0	Literary works, General
SD	J.5	Literature [Computer Applications]
*	A.	Literature, General
SD	D.4.9	Loaders [retired January 1998]
***	C.2.5	Local and Wide-Area Networks
SD	H.2.7	Logging and recovery [Database Management]
SD	F.4.1	Logic and constraint programming [Mathematical Logic and Formal Languages]
SD	B.6.1	Logic arrays [Logic Design; Hardware]
SD	B.1.1	Logic arrays, Microprogrammed [retired January 1998]
SD	B.6.1	Logic, Combinational [Logic Design; Hardware]
SD	F.4.1	Logic, Computational
**	B.6	Logic Design [Hardware]
SD	D.3.2	Logic languages, Constraint and [Programming Languages]
***	F.4.1	Logic, Mathematical
**	F.4	Logic, Mathematical, and Formal Languages
SD	B.6.1	Logic, Memory used as [retired January 1998] [Logic Design; Hardware]
SD	I.2.4	Logic, Modal [Artificial Intelligence]
SD	F.4.1	Logic, Modal [Mathematical Logic and Formal Languages]

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	I.2.4	Logic, Predicate
***	D.1.6	Logic Programming
SD	I.2.3	Logic programming [Deduction and Theorem Proving; Artificial Intelligence]
**	B.2	Logic Structures, Arithmetic and [Hardware]
SD	I.2.4	Logic, Temporal [Artificial Intelligence]
SD	F.4.1	Logic, Temporal [Mathematical Logic and Formal Languages]
SD	B.5.1	Logic units, Arithmetic and
***	H.2.1	Logical Design [Database Management]
**	F.3	Logics and Meanings of Programs
SD	F.3.1	Logics of programs [Logics and Meanings of Programs]
SD	H.4.2	Logistics [Types of Systems; Information Systems Applications]
SD†	F.4.2	L-Systems [Grammars and Other Rewriting Systems]
SD	I.2.7	Machine translation [Artificial Intelligence]
SD	F.1.3	Machine-independent complexity [retired January 1998]
SD	B.1.4	Machine-independent microcode generation [retired January 1998]
SD	C.1.2	Machines, Connection [Processor Architectures]
***	H.2.6	Machines, Database
SD	F.1.1	Machines, Networks of
SD†	F.1.1	Machines, Random access
SD	F.1.1	Machines, Self-modifying
SD†	F.1.1	Machines, Turing
***†	H.1.2	Machine/User Systems
SD	D.3.2	Macro and assembly languages
SD	B.3.2	Magnetic [Memory Structures]
SD	H.4.3	Mail, Electronic
SD	D.4.2	Main memory [Operating Systems]
***†	C.5.1	Mainframe Computers
***	D.2.7	Maintenance, and Enhancement, Distribution, [Software Engineering]
***	K.8.3	Maintenance [Personal Computing]
SD	D.4.3	Maintenance [retired January 1998] [File Systems Management]
SD	K.6.3	Maintenance, Software
GT	GT	Management
SD	K.6.4	Management audit [Management of Computing and Information Systems]
***	D.4.4	Management, Communications [Operating Systems]
SD	K.6.2	Management, Computing equipment
**	H.2	Management, Database
SD	B.m	Management, Design [Hardware]
SD	I.7.1	Management, Document [Document and Text Processing]
SD	D.3.3	Management, Dynamic storage [Programming Languages]
***	D.4.3	Management, File Systems
***	K.6.2	Management, Installation
SD	D.3.4	Management, Memory [Processors; Programming Languages]
SD	C.2.3	Management, Network
**	K.6	Management of Computing and Information Systems

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LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
***	D.4.1	Management, Process [Operating Systems]	SD	D.2.8	Measures, Performance [Metrics; Software Engineering]
***	K.6.1	Management, Project and People	SD	F.1.3	Measures, Relations among Complexity [Complexity Measures and Classes; Computation by Abstract Devices]
***	K.6.3	Management, Software	SD	I.5.3	Measures, Similarity [Clustering; Pattern Recognition]
SD	D.2.9	Management, Software configuration	***	F.2.3	Measures, Tradeoffs among Complexity [Analysis of Algorithms and Problem Complexity]
***	D.2.9	Management [Software Engineering]	SD	F.4.1	Mechanical theorem proving
***	D.4.2	Management, Storage [Operating Systems]	SD	F.3.1	Mechanical verification [Logics and Meanings of Programs]
***	K.6.4	Management, System	SD	I.2.9	Mechanisms, Propelling [Robotics; Artificial Intelligence]
SD	H.5.2	Management systems, User interface	SD	D.2.0	Mechanisms, Protection [Software Engineering]
SD	K.6.1	Management techniques [Management of Computing and Information Systems]	SD	I.1.3	Mechanisms, Substitution [retired January 1998] [Languages and Systems; Symbolic and Algebraic Manipulation]
SD	D.4.4	Management, Terminal [retired January 1998]	SD	I.7.2	Media, Multi/mixed [Document and Text Processing]
SD	H.4.1	Management, Time [Information Systems Applications]	SD	J.3	Medical information systems [Computer Applications]
SD	H.4.1	Management, Workflow [Office Automation]	**	J.3	Medical Sciences, Life and [Computer Applications]
***	K.8.3	Management/Maintenance [Personal Computing]	SD	I.2.1	Medicine and science [Artificial Intelligence]
SD	D.4.9	Managers, Window [Operating Systems]	***	C.5.1	Medium Computers, Large and
SD	H.5.2	Manipulation, Direct [Information Interfaces and Presentation]	SD	B.3.2	Memories, Associative [Memory Structures]
SD	B.1.5	Manipulation, Direct data [retired January 1998]	SD	B.3.2	Memories, Cache [Memory Structures]
SD	I.4.3	Manipulation, Grayscale	SD	D.4.2	Memories, Distributed [Operating Systems]
SD	H.2.3	Manipulation languages, Data	SD	B.3.2	Memories, Interleaved [retired January 1998] [Memory Structures]
**	I.1	Manipulation, Symbolic and Algebraic	***	B.3.1	Memories, Semiconductor
SD	I.2.9	Manipulators [Robotics; Artificial Intelligence]	SD	B.6.1	Memory control and access [retired January 1998] [Logic Design; Hardware]
SD	J.1	Manufacturing [Computer Applications]	SD	B.5.1	Memory design [Register-Transfer-Level Implementation]
SD	J.6	Manufacturing, Computer-aided (CAM) [Computer Applications]	SD†	B.3.1	Memory, Dynamic [Semiconductor Memory Structures]
SD	D.2.12	Mapping, Data [Interoperability; Software Engineering]	SD	D.4.2	Memory, Main [Operating Systems]
SD	H.5.1	Maps, Hypertext navigation and [retired January 1998] [Information Interfaces and Presentation]	SD	D.3.4	Memory management (garbage collection) [Processors; Programming Languages]
SD	J.1	Marketing [Computer Applications]	SD†	C.1.2	Memory, Multiport [Multiple Data Stream Architectures (Multiprocessors)]
SD	K.1	Markets [The Computer Industry]	SD	B.3.2	Memory, Primary [Memory Structures]
SD	G.3	Markov processes [Probability and Statistics]	SD†	B.3.1	Memory, Read-only [Semiconductor Memory Structures]
SD	I.7.2	Markup languages [Document and Text Processing]	SD	B.3.2	Memory, Sequential-access [retired January 1998] [Memory Structures]
SD	B.3.2	Mass storage (e.g., magnetic, optical)	SD	B.3.2	Memory, Shared [Memory Structures]
SD	F.2.2	Matching, Pattern	SD†	B.3.1	Memory, Static [Semiconductor Memory Structures]
SD	I.2.3	Mathematical induction	**	B.3	Memory Structures [Hardware]
***	F.4.1	Mathematical Logic	SD	B.7.1	Memory technologies [Integrated Circuits]
**	F.4	Mathematical Logic and Formal Languages	SD	B.6.1	Memory used as logic [retired January 1998] [Logic Design; Hardware]
**	G.4	Mathematical Software	SD	B.3.2	Memory, Virtual [Memory Structures]
SD	J.2	Mathematics and statistics [Computer Applications]	SD	D.4.2	Memory, Virtual [Storage Management; Operating Systems]
**	G.2	Mathematics, Discrete	SD	H.5.2	Menus [Information Interfaces and Presentation]
*	G.	Mathematics of Computing			
SD	F.2.1	Matrices, Computations on [Numerical Linear Algebra]			
SD	G.1.3	Matrix inversion [Numerical Linear Algebra]			
**	F.3	Meanings of Programs, Logics and			
GT	GT	Measurement			
***	I.4.7	Measurement, Feature			
SD	K.6.2	Measurement, Performance, and Usage [Management of Computing and Information Systems]			
SD	C.4	Measurement techniques [Performance of Systems]			
SD	D.4.8	Measurements [Performance; Operating Systems]			
SD	D.2.8	Measures, Complexity [Metrics; Software Engineering]			

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	D.4.4	Message sending [Communications Management; Operating Systems]	SD	G.1.8	Methods, Multigrid and multilevel [Partial Differential Equations]
SD	I.3.4	Meta files [retired January 1998] [Computer Graphics]	SD	G.1.7	Methods, Multistep and multivalued [Ordinary Differential Equations]
SD	I.2.3	Metatheory [retired January 1998] [Deduction and Theorem Proving; Artificial Intelligence]	SD	D.2.2	Methods, Object-oriented design [Software Engineering]
SD	G.1.8	Method of lines [Partial Differential Equations]	SD	G.1.7	Methods, One-step (single-step) [Ordinary Differential Equations]
SD	H.5.5	Methodologies and techniques [Sound and Music Computing]	SD	G.1.6	Methods, Quadratic programming [Optimization; Numerical Analysis]
*	I.	Methodologies, Computing	SD	I.4.5	Methods, Series expansion [Reconstruction; Image Processing and Computer Vision]
SD	D.2.1	Methodologies (e.g., object-oriented, structured) [Software Engineering]	SD	G.1.8	Methods, Spectral [Partial Differential Equations]
SD	I.6.5	Methodologies, Modeling	SD	D.2.4	Methods, Statistical [Software/Program Verification]
SD	D.2.10	Methodologies [retired January 1998] [Design; Software Engineering]	SD	I.4.5	Methods, Summation [retired January 1998] [Reconstruction; Image Processing and Computer Vision]
***	I.3.6	Methodology and Techniques [Computer Graphics]	SD	H.5.2	Methods, Theory and [Information Interfaces and Presentation]
***	I.5.2	Methodology, Design [Pattern Recognition]	SD	I.4.5	Methods, Transform [Reconstruction; Image Processing and Computer Vision]
SD	C.0	Methodology, Systems specification [Computer Systems Organization]	SD	D.2.8	Metrics, Process [Software Engineering]
SD	H.3.1	Methods, Abstracting [Information Storage and Retrieval]	SD	D.2.8	Metrics, Product [Software Engineering]
SD	H.2.2	Methods, Access [Database Management]	***	D.2.8	Metrics [Software Engineering]
SD	D.4.3	Methods, Access [File Systems Management; Operating Systems]	***	B.1.5	Microcode Applications
SD	I.4.2	Methods, Approximate [Image Processing and Computer Vision]	SD	B.1.4	Microcode generation, Machine-independent [retired January 1998]
SD	G.1.5	Methods, Continuation [Roots of Nonlinear Equations]	***	C.5.3	Microcomputers [Computer System Implementation]
SD	G.1.8	Methods, Difference [Numerical Analysis]	SD	B.7.1	Microcomputers, Microprocessors and [Integrated Circuits]
SD	G.1.3	Methods, direct and iterative [Numerical Analysis]	SD	C.3	Microprocessor/microcomputer applications [Special-Purpose and Application-Based Systems]
SD	G.1.8	Methods, Domain decomposition [Partial Differential Equations]	SD	B.7.1	Microprocessors and microcomputers [Integrated Circuits]
SD	D.2.1	Methods, Elicitation [Requirements/Specifications; Software Engineering]	SD	C.5.3	Microprocessors [Computer System Implementation]
SD	G.1.7	Methods, Finite difference [Ordinary Differential Equations]	SD†	B.1.4	Microprogram compilers
SD	G.1.4	Methods, Finite difference [Quadrature and Numerical Differentiation]	***	B.1.4	Microprogram Design Aids
SD	G.1.8	Methods, Finite element [Partial Differential Equations]	SD†	B.1.4	Microprogram languages
SD	G.1.8	Methods, Finite volume [Partial Differential Equations]	SD	B.1.1	Microprogrammed logic arrays [retired January 1998]
SD	G.1.5	Methods for Polynomials [Roots of Nonlinear Equations]	**	B.1	Microprogramming, Control Structures and [Hardware]
SD	D.2.4	Methods, Formal [Software/Program Verification]	SD	D.3.2	Microprogramming languages [retired January 1998] [Programming Languages]
SD	G.1.6	Methods, Gradient [Optimization]	*	K.	Milieux, Computing
SD	I.2.8	Methods, Heuristic [Artificial Intelligence]	SD	J.1	Military [Computer Applications]
SD	H.3.1	Methods, Indexing [Information Storage and Retrieval]	SD	J.7	Military Systems [Computer Applications]
SD	G.1.4	Methods, Iterative [Quadrature and Numerical Differentiation]	SD	C.1.2	MIMD
SD	G.1.5	Methods, Iterative [Roots of Nonlinear Equations]	***	C.5.2	Minicomputers [retired January 1998] [Computer System Implementation]
***	I.2.4	Methods, Knowledge Representation Formalisms and [Artificial Intelligence]	SD	G.1.2	Minimax approximation and algorithms
SD	G.1.6	Methods, Least squares [Optimization]	SD	H.2.8	Mining, Data [Database Applications]
			SD†	H.4.2	MIS (Management Information Systems)
			SD	C.1.1	MISD [retired January 1998]
			SD	C.1.4	Mobile processors

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	I.2.4	Modal logic [Artificial Intelligence]	SD	F.1.2	Modes, Relations among [retired January 1998] [Modes of Computation]
SD	F.4.1	Modal logic [Mathematical Logic and Formal Languages]	SD	I.2.2	Modification, Program [Artificial Intelligence]
SD	D.2.4	Model checking [Software/Program Verification]	SD	D.2.2	Modules and interfaces [Software Engineering]
SD	I.6.1	Model classification [Simulation Theory]	SD	D.3.3	Modules, packages [Language Constructs; Pro- gramming Languages]
***	I.6.5	Model Development [Simulation and Modeling]	SD	I.4.7	Moments [Image Processing and Computer Vi- sion]
SD	C.2.0	Model, Open System Interconnection reference (OSI)	SD	C.2.3	Monitoring, Network
SD	F.4.1	Model theory [Mathematical Logic]	SD	D.4.8	Monitors [Performance; Operating Systems]
***	I.6.4	Model Validation and Analysis [Simulation and Modeling]	SD	D.2.5	Monitors [Testing and Debugging; Software Engineering]
SD	D.4.8	Modeling and prediction [Performance; Operat- ing Systems]	SD	G.3	Monte Carlo algorithms
SD	I.2.10	Modeling and recovery of physical attributes [Vision and Scene Understanding; Artificial Intelligence]	SD	I.6.8	Monte Carlo [Simulation and Modeling]
***	I.6.3	Modeling and Simulation Applications	SD	I.4.10	Morphological [Image Processing and Computer Vision]
***	I.3.5	Modeling, Computational Geometry and Object [Computer Graphics]	SD	I.2.10	Motion [Artificial Intelligence]
SD	I.6.5	Modeling methodologies [Simulation and Mod- eling]	SD	I.4.8	Motion [Image Processing And Computer Vision]
***	I.3.5	Modeling, Object [Computer Graphics]	SD	H.5.2	Mouse [Information Interfaces and Presentation]
SD	C.0	Modeling of computer architecture	SD	I.2.11	Multiagent systems [Artificial Intelligence]
SD	I.3.5	Modeling packages [Computer Graphics]	SD	I.4.10	Multidimensional [Image Processing and Com- puter Vision]
SD	I.3.5	Modeling, Physically based [Computer Graphics]	SD	G.1.4	Multidimensional (multiple) quadrature
**	I.6	Modeling, Simulation and [Computing Method- ologies]	SD	G.1.8	Multigrid and multilevel methods [Partial Differ- ential Equations]
SD	H.5.5	Modeling [Sound and Music Computing]	SD	H.2.4	Multimedia databases
SD	C.4	Modeling techniques [Performance of Systems]	***	H.5.1	Multimedia Information Systems
**	H.1	Models and Principles [Information Systems]	SD	I.7.2	Multi/mixed media [Document and Text Process- ing]
SD	H.2.1	Models, Data [Database Management]	SD	D.3.2	Multiparadigm languages [Programming Lan- guages]
SD	I.5.1	Models, Deterministic [Pattern Recognition]	***	C.1.2	Multiple Data Stream Architectures (Multipro- cessors)
SD	B.4.4	Models, Formal [retired January 1998] [In- put/Output and Data Communications]	SD	G.1.0	Multiple precision arithmetic [Numerical Analy- sis]
SD	B.3.3	Models, Formal [retired January 1998] [Memory Structures]	SD†	C.1.2	Multiple-data-stream, Single-instruction-stream processors (SIMD)
SD	B.1.2	Models, Formal [retired January 1998] [Control Structures and Microprogramming]	SD	C.1.2	Multiple-instruction-stream, multiple-data-stream processors (MIMD)
SD	I.5.1	Models, Fuzzy set [Pattern Recognition]	SD	C.1.1	Multiple-instruction-stream, single-data-stream processors (MISD) [retired January 1998]
SD	I.5.1	Models, Geometric [Pattern Recognition]	SD†	C.1.2	Multiport memory [Multiple Data Stream Archi- tectures (Multiprocessors)]
SD	I.2.7	Models, Language	SD	D.4.1	Multiprocessing/multiprogramming/multitasking [Operating Systems]
SD	E.4	Models of communication, Formal [Coding and Information Theory]	***	C.1.2	Multiprocessors [Multiple Data Stream Architec- tures; Processor Architectures]
***	F.1.1	Models of Computation [Computation by Ab- stract Devices]	SD†	D.4.1	Multiprogramming/multitasking/multiprocessing [Operating Systems]
***	I.5.1	Models [Pattern Recognition]	SD	G.1.7	Multistep and multivalued methods [Ordinary Differential Equations]
SD	F.3.2	Models, Process [Logics and Meanings of Programs]	SD	D.4.1	Multitasking/multiprocessing/multiprogramming
SD	F.1.1	Models, Relations among	SD	G.3	Multivariate statistics
SD	H.3.3	Models, Retrieval [Information Storage and Retrieval]	SD	J.5	Music
SD†	D.2.13	Models, Reuse [Reusable Software]	***	H.5.5	Music Computing, Sound and [Information Inter- faces and Presentation]
SD†	D.2.9	Models, Software process [Software Engineering Management]	SD	J.5	Music [retired January 1998] [Computer Appli- cations]
SD	I.5.1	Models, Statistical [Pattern Recognition]	SD	D.4.1	Mutual exclusion [Operating Systems]
SD	I.5.1	Models, Structural [Pattern Recognition]			
SD	H.5.3	Models, Theory and [Information Interfaces and Presentation]			
***	F.1.2	Modes of Computation			

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD†	I.2.3	Natural and rule-based deduction	SD	G.3	Nonparametric statistics
SD	I.2.1	Natural language interfaces [Artificial Intelligence]	SD	D.3.2	Nonprocedural languages [retired January 1998] [Programming Languages]
SD†	H.5.2	Natural language interfaces [Information Interfaces and Presentation]	SD	I.1.3	Nonprocedural languages [retired January 1998] [Symbolic and Algebraic Manipulation]
***	I.2.7	Natural Language Processing [Artificial Intelligence]	SD	E.4	Nonsecret encoding schemes [retired January 1998]
SD	H.5.1	Navigation and maps, Hypertext [retired January 1998] [Information Interfaces and Presentation]	SD†	H.5.2	Non-speech interfaces [Information Interfaces and Presentation]
SD	H.5.4	Navigation [Hypertext/Hypermedia]	SD	H.2.1	Normal forms [Database Management]
SD	I.2.6	Nets, Connectionism and neural	SD	I.7.2	Notation, Format and [Document Preparation; Document and Text Processing]
SD	I.5.1	Nets, Neural [Pattern Recognition]	SD	G.3	Number generation, Random
SD	C.1.3	Nets, Neural [Processor Architectures]	SD	F.2.1	Number-theoretic computations
SD	D.2.2	Nets, Petri [Software Engineering]	***	F.2.1	Numerical Algorithms and Problems
***	C.2.1	Network Architecture and Design	SD	G.1.0	Numerical algorithms [Numerical Analysis]
SD	D.4.4	Network communication [Operating Systems]	**	G.1	Numerical Analysis
SD	C.2.1	Network communications [Network Architecture and Design]	***	G.1.4	Numerical Differentiation, Quadrature and
SD	C.2.1	Network, Integrated Services Digital [Computer-Communication Networks]	***	G.1.3	Numerical Linear Algebra
SD	C.2.3	Network management	SD	I.3.5	Object hierarchies [Computer Graphics]
SD	C.2.3	Network monitoring	***	I.3.5	Object Modeling, Computational Geometry and
SD	C.2.4	Network operating systems [Distributed systems]	SD	I.4.8	Object recognition [Image Processing And Computer Vision]
***	C.2.3	Network Operations	SD	E.2	Object representation [Data Storage Representations]
SD	G.2.2	Network problems [Graph Theory]	SD	I.3.5	Object representations, Curve, surface, solid, and [Computer Graphics]
***	C.2.2	Network Protocols	SD	F.3.3	Object-oriented constructs [Logics and Meanings of Programs]
SD	C.2.1	Network topology	SD	H.2.4	Object-oriented databases
SD	C.2.1	Networks, Centralized [retired January 1998]	SD	D.2.2	Object-oriented design methods [Software Engineering]
SD	C.2.1	Networks, Circuit switching	SD	D.3.2	Object-oriented languages
**	C.2	Networks, Computer-Communication	SD†	D.2.1	Object-oriented methodologies [Software Engineering]
SD	C.2.1	Networks, Distributed	***	D.1.5	Object-oriented Programming
SD	C.2.1	Networks, Frame relay	SD	D.2.3	Object-oriented programming [Software Engineering]
SD	E.1	Networks, Graphs and	SD	D.3.3	Objects, Classes and [Language Constructs and Features]
SD	H.3.4	Networks, Information [Systems and Software; Information Storage and Retrieval]	SD	D.2.12	Objects, Distributed [Interoperability; Software Engineering]
***	C.2.5	Networks, Local and Wide-Area	***	K.7.1	Occupations [The Computing Profession]
SD	F.1.1	Networks, Neural [Computation by Abstract Devices]	SD	I.7.5	OCR [Document Capture]
SD	F.1.1	Networks of machines [Models of Computation]	SD	I.7.2	ODA [Document and Text Processing]
SD	C.2.1	Networks, Packet-switching	SD	I.2.1	Office automation [Artificial Intelligence]
SD	C.2.3	Networks, Public	***	H.4.1	Office Automation [Information Systems Applications]
SD	I.2.4	Networks, Semantic [Artificial Intelligence]	SD	G.1.7	One-step (single step) methods [Ordinary Differential Equations]
SD	C.2.1	Networks, Store and forward	SD	F.1.2	Online computation [Computation by Abstract Devices]
SD	I.2.6	Neural nets, Connectionism and	***	H.3.5	Online Information Services [Information Storage and Retrieval]
SD	I.5.1	Neural nets [Pattern Recognition]	SD	C.2.0	Open System Interconnection reference model (OSI)
SD	C.1.3	Neural nets [Processor Architectures]	**	D.4	Operating Systems
SD	F.1.1	Neural networks [Computation by Abstract Devices]	SD	C.2.4	Operating systems, Network
SD	I.1.2	Nonalgebraic algorithms [Symbolic and Algebraic Manipulation]			
SD	F.1.2	Nondeterminism, Alternation and [Computation by Abstract Devices]			
SD	D.3.2	Nondeterministic languages [retired January 1998]			
SD	G.1.2	Nonlinear approximation			
***	G.1.5	Nonlinear Equations, Roots of			
SD	G.1.6	Nonlinear programming			
SD	I.2.3	Nonmonotonic reasoning and belief revision			
***	F.2.2	Nonnumerical Algorithms and Problems			

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	B.1.5	Operating systems/instruction sets, Firmware support of [retired January 1998] [Microcode Applications]	SD	G.4	Parallel and vector implementations [Mathematical Software]
SD	B.4.3	Operation, Asynchronous/synchronous	***	C.1.4	Parallel Architectures
SD	D.4.8	Operational analysis [Performance; Operating Systems]	SD	B.6.1	Parallel circuits [Logic Design; Hardware]
SD	F.3.2	Operational semantics [Semantics of Programming Languages]	SD	H.2.4	Parallel databases
SD	I.3.3	Operations, Bitmap and framebuffer [Computer Graphics]	SD	B.2.1	Parallel [Design Styles; Arithmetic and Logic Structures]
***	C.2.3	Operations, Network	SD	B.4.3	Parallel I/O [Input/Output and Data Communications]
SD	F.4.3	Operations on languages	SD	D.3.2	Parallel languages, Concurrent, distributed, and
SD	I.2.9	Operator interfaces [Robotics]	SD	I.3.1	Parallel processing [Computer Graphics]
SD	I.7.5	Optical character recognition (OCR) [Document Capture]	SD	C.1.2	Parallel processors [retired January 1998]
SD	B.3.2	Optical [Memory Structures]	SD	D.1.3	Parallel programming
SD	B.4.3	Optics, Fiber	SD	F.4.2	Parallel rewriting systems
SD	G.1.6	Optimization, Constrained	SD	I.6.8	Parallel [Simulation and Modeling]
SD	B.1.4	Optimization [Control Structures and Microprogramming]	SD	F.1.2	Parallelism and concurrency [Computation by Abstract Devices]
SD	B.6.3	Optimization [Logic Design; Hardware]	SD	I.2.6	Parameter learning [Artificial Intelligence]
SD	G.1.6	Optimization, Global [Numerical Analysis]	SD	I.2.7	Parsing and understanding, Language [Natural Language Processing; Artificial Intelligence]
***	G.1.6	Optimization [Numerical Analysis]	SD	F.4.2	Parsing [Grammars and Other Rewriting Systems]
SD	D.3.4	Optimization [Processors; Programming Languages]	SD	D.3.4	Parsing [Processors]
SD	B.5.2	Optimization [Register-Transfer-Level Implementation]	***	G.1.8	Partial Differential Equations
SD	E.5	Optimization [retired January 1998] [Files]	SD	F.3.2	Partial evaluation [Logics and Meanings of Programs]
SD	G.1.6	Optimization, Unconstrained [Numerical Analysis]	SD	I.4.6	Partitioning, Region growing [Image Processing and Computer Vision]
***	G.1.7	Ordinary Differential Equations	SD	K.5.m	Patents, Hardware [retired January 1998]
***	D.4.7	Organization and Design [Operating Systems]	SD	K.5.1	Patents [Hardware/Software Protection]
SD	I.2.9	Organization and planning, Workcell [Robotics]	SD	G.2.2	Path and circuit problems [Graph Theory]
*	C.	Organization, Computer Systems	SD	I.5.2	Pattern analysis [Pattern Recognition]
SD	H.3.2	Organization, File [Information Storage and Retrieval]	SD	F.2.2	Pattern matching [Nonnumerical Algorithms and Problems]
SD	D.4.3	Organization, File [Operating Systems]	**	I.5	Pattern Recognition
***	H.5.3	Organization Interfaces, Group and [Information Interfaces and Presentation]	SD	D.2.11	Patterns (e.g., client/server, pipeline, blackboard) [Software Architectures]
SD	H.5.3	Organizational design [Information Interfaces and Presentation]	SD	D.3.3	Patterns [Programming Languages]
***	K.4.3	Organizational Impacts [Computers and Society]	SD	K.4.4	Payment schemes [Electronic Commerce]
***	K.7.2	Organizations [The Computing Profession]	SD	K.2	People [History of Computing]
SD	E.5	Organization/structure [Files; Data]	***	K.6.1	People Management
SD	C.2.2	OSI model [Network Protocols]	SD	I.2.10	Perceptual reasoning [Artificial Intelligence]
SD	C.2.0	OSI, Open System Interconnection reference model	GT	GT	Performance
***	I.6.6	Output Analysis, Simulation	***	B.1.2	Performance Analysis and Design Aids, Control Structure [Control Structures and Microprogramming]
SD	I.3.4	Packages, Application [Graphics Utilities]	***	B.8.2	Performance Analysis and Design Aids [Performance and Reliability]
***	K.8.1	Packages, Application [Personal Computing]	***	B.2.2	Performance Analysis and Design Aids [retired January 1998] [Arithmetic and Logic Structures]
SD	I.3.4	Packages, Graphics [Graphics Utilities]	***	B.4.4	Performance Analysis and Design Aids [retired January 1998] [Input/Output and Data Communications]
SD	I.3.5	Packages, Modeling [Computer Graphics]	***	B.3.3	Performance Analysis and Design Aids [retired January 1998] [Memory Structures]
SD	D.3.3	Packages, Modules [Language Constructs; Programming Languages]	**	B.8	Performance and Reliability [Hardware]
SD	C.2.1	Packet-switching networks	SD	K.6.2	Performance and usage measurement [Management of Computing and Information Systems]
SD	I.3.4	Paint systems [Computer Graphics]	SD	C.4	Performance attributes [Performance of Systems]
SD	G.1.8	Parabolic equations [Partial Differential Equations]			
SD	G.1.0	Parallel algorithms [Numerical Analysis]			

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	H.3.4	Performance evaluation (efficiency and effective- ness) [Systems and Software; Information Stor- age and Retrieval]
SD†	D.4.8	Performance measurements [Operating Systems]
SD	D.2.8	Performance measures [Metrics; Software Engi- neering]
**	C.4	Performance of Systems
***	D.4.8	Performance [Operating Systems]
SD	J.5	Performing arts (e.g., dance, music)
SD	J.5	Performing Arts, Fine and [retired January 1998] [Computer Applications]
SD	B.1.5	Peripheral control [retired January 1998] [Mi- crocode Applications]
SD	G.2.1	Permutations and combinations
SD	H.2.3	Persistent [Database Management Languages]
SD	C.5.3	Personal computer [Computer System Implemen- tation]
**	K.8	Personal Computing
SD	C.5.3	Personal digital assistants
SD	K.4.2	Persons with disabilities, Assistive technologies for
SD†	K.6.1	PERT/CPM
SD	D.2.2	Petri nets [Software Engineering]
SD	E.3	PGP [Data Encryption]
SD	I.3.6	PHIGS [Computer Graphics]
SD	I.2.0	Philosophical foundations [Artificial Intelligence]
SD	I.7.2	Photocomposition/typesetting [Document and Text Processing]
SD	I.2.10	Photometry [Vision and Scene Understanding; Artificial Intelligence]
SD	I.4.8	Photometry [Image Processing and Computer Vision]
SD	K.6.5	Phreaking [Security and Protection]
SD	I.2.10	Physical attributes, Modeling and recovery of
***	H.2.2	Physical Design [Database Management]
**	J.2	Physical Sciences and Engineering [Computer Applications]
SD	K.6.m	Physical security [retired January 1991]
SD	K.6.5	Physical security [retired January 1998] [Man- agement of Computing and Information Systems]
SD	B.4.3	Physical structures [retired January 1998] [In- put/Output and Data Communications]
SD	I.3.5	Physically based modeling [Computer Graphics]
SD	J.2	Physics [Computer Applications]
SD	I.3.4	Picture description languages [retired January 1998] [Computer Graphics]
***	I.3.3	Picture/Image Generation [Computer Graphics]
SD	G.1.2	Piecewise polynomial approximation, Spline and
SD	G.1.1	Piecewise polynomial interpolation, Spline and
SD	B.2.1	Pipeline [Arithmetic and Logic Structures]
SD	C.1.3	Pipeline processors
SD	C.1.2	Pipeline processors [retired January 1998] [Multi- ple Data Stream Architectures (Multiprocessors)]
SD	C.1.1	Pipeline processors [retired January 1998] [Single Data Stream Architectures]
SD	D.2.11	Pipeline [Software Architectures]
SD†	B.5.1	Pipelined styles [Register-Transfer-Level Imple- mentation]

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	I.4.6	Pixel classification [Image Processing and Com- puter Vision]
SD	B.7.2	Placement and routing [Integrated Circuits]
SD	I.2.8	Plan execution, formation, generation [Artificial Intelligence]
SD	K.6.1	Planning, Strategic information systems [Man- agement of Computing and Information Systems]
SD	I.2.9	Planning, Workcell organization and [Robotics]
SD	A.0	Plays [General Literature]
SD	B.4.3	Point-to-point interconnections [Input/Output and Data Communications]
SD†	B.4.3	Point-to-point topology
***	K.4.1	Policy Issues, Public
SD	D.3.3	Polymorphism [Programming Languages]
SD	G.1.2	Polynomial approximation, Spline and piecewise
SD†	I.1.1	Polynomial, General and [Symbolic and Alge- braic Manipulation]
SD	G.1.1	Polynomial interpolation, Spline and piecewise
SD	F.2.1	Polynomials, Computations on
SD	G.1.5	Polynomials, methods for [Roots of Nonlinear Equations]
SD	G.4	Portability [retired January 1998] [Mathematical Software]
SD	D.2.7	Portability [Software Engineering]
SD	C.5.3	Portable devices (e.g., laptops, personal digital assistants)
SD	F.3.1	Post-conditions [Logics and Meanings of Pro- grams]
SD	K.4.1	Power, Use/abuse of [Public Policy Issues]
SD	K.7.4	Practice, Codes of good [The Computing Profes- sion]
SD	F.3.1	Pre- and post-conditions [Logics and Meanings of Programs]
SD	G.1.0	Precision arithmetic, Multiple [Numerical Anal- ysis]
SD	I.2.4	Predicate logic [Knowledge Representation For- malisms and Methods]
SD	D.4.8	Prediction, Modeling and [Performance; Operat- ing Systems]
***	I.7.2	Preparation, Document [Document and Text Processing]
SD	D.3.4	Preprocessors
**	H.5	Presentation, Information Interfaces and
SD	D.2.3	Pretty printers
SD	K.6.2	Pricing and resource allocation [Management of Computing and Information Systems]
SD†	F.2.1	Primality testing
SD	B.3.2	Primary memory
SD	E.2	Primitive data items [retired January 1998] [Data Storage Representations]
SD	F.3.3	Primitives, Control [Logics and Meanings of Programs]
**	H.1	Principles, Models and [Information Systems]
SD	B.4.2	Printers, Data terminals and [Input/Output and Data Communications]
SD	D.2.3	Printers, Pretty [Coding; Software Engineering]
SD	K.4.1	Privacy
SD	G.3	Probabilistic algorithms (including Monte Carlo)

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	F.1.2	Probabilistic computation [Modes of Computa- tion]	SD	H.5.5	Processing, Signal analysis, synthesis, and [Sound and Music Computing]
SD	I.2.3	Probabilistic reasoning, Uncertainty, "fuzzy," and [Artificial Intelligence]	SD	I.4.0	Processing software, Image
**	G.3	Probability and Statistics	SD	D.4.7	Processing systems, Batch [retired January 1998] [Operating Systems]
**	F.2	Problem Complexity, Analysis of Algorithms and	SD	C.3	Processing systems, Signal [Special-Purpose and Application-Based Systems]
***	I.2.8	Problem Solving, Control Methods, and Search [Artificial Intelligence]	SD	I.5.4	Processing, Text [Applications; Pattern Recogni- tion]
SD	F.2.2	Problems and computations, Geometrical	SD	H.2.4	Processing, Transaction [Database Management]
SD	G.1.7	Problems, Boundary value [Ordinary Differential Equations]	SD	H.4.1	Processing, Word
SD	G.2.1	Problems, Counting [Combinatorics]	SD	K.8.1	Processing, Word [Personal Computing]
SD	F.4.3	Problems, Decision [Formal Languages]	**	C.1	Processor Architectures
SD	F.4.2	Problems, Decision [Grammars and Other Rewrit- ing Systems]	SD	C.1.2	Processors, Array and vector [Multiple Data Stream Architectures (Multiprocessors)]
SD	G.1.7	Problems, Initial value [Ordinary Differential Equations]	SD	C.1.2	Processors, Associative
SD	G.1.8	Problems, Inverse [Partial Differential Equations]	SD	I.3.1	Processors, Graphics [Computer Graphics]
SD	G.2.2	Problems, Network	SD	C.1.4	Processors, Mobile
***	F.2.2	Problems, Nonnumerical Algorithms and	SD	C.1.2	Processors, Multiple-instruction-stream, multiple- data-stream (MIMD)
***	F.2.1	Problems, Numerical Algorithms and	SD	C.1.1	Processors, Multiple-instruction-stream, single- data-stream (SIMD) [retired January 1998]
SD	G.2.2	Problems, Path and circuit	SD	C.1.2	Processors, Parallel [retired January 1998] [Multi- ple Data Stream Architectures (Multiprocessors)]
SD	I.2.4	Procedural and rule-based representations	SD	C.1.3	Processors, Pipeline
SD	D.4.5	Procedures, Backup	SD	C.1.2	Processors, Pipeline [retired January 1998] [Mul- tiple Data Stream Architectures (Multiproc- essors)]
SD	F.2.2	Procedures, Complexity of proof	SD	C.1.1	Processors, Pipeline [retired January 1998] [Sin- gle Data Stream Architectures (Multiprocessors)]
SD	D.3.3	Procedures, functions, and subroutines [Language Constructs; Programming Languages]	***	D.3.4	Processors [Programming Languages]
SD	A.0	Proceedings, Conference	SD	B.4.1	Processors [retired January 1998] [Data Commu- nications Devices]
SD	J.7	Process control [Computer Applications]	SD	C.1.2	Processors, Single-instruction-stream, multiple- data-stream (MISD)
SD	C.3	Process control systems [Special-Purpose and Application-Based Systems]	SD	C.1.1	Processors, Single-instruction-stream, single-data- stream (SISD) [retired January 1998]
***	D.4.1	Process Management [Operating Systems]	SD	C.1.3	Processors, Stack-oriented [retired January 1998]
SD	D.2.8	Process metrics [Software Engineering]	SD	D.2.8	Product metrics [Software Engineering]
SD	F.3.2	Process models [Logics and Meanings of Pro- grams]	SD	D.2.9	Productivity [Software Engineering]
SD†	D.2.9	Process models, Software [Software Engineering Management]	SD	J.7	Products, Consumer [Computer Applications]
SD	H.3.3	Process, Search [Information Storage and Re- trieval]	**	K.7	Profession, The Computing
SD	H.3.3	Process, Selection [Information Storage and Retrieval]	***	K.7.4	Professional Ethics [The Computing Profession]
SD	K.6.3	Process, Software [Management of Computing and Information Systems]	SD	H.3.4	Profiles and alert services, User
SD	G.3	Processes, Markov [Probability and Statistics]	SD	F.3.2	Program analysis [Logics and Meanings of Programs]
SD	G.3	Processes, Stochastic	SD	F.3.3	Program and recursion schemes
**	J.1	Processing, Administrative Data [Computer Ap- plications]	***	F.3.3	Program Constructs, Studies of [Logics and Meanings of Programs]
SD	K.8.1	Processing, Database [Personal Computing]	SD	D.2.3	Program editors
**	I.7	Processing, Document and Text [Computing Methodologies]	SD	I.2.2	Program modification [Artificial Intelligence]
SD	H.1.2	Processing, Human information	SD	I.2.2	Program synthesis [Artificial Intelligence]
**	I.4	Processing, Image, and Computer Vision	SD	I.2.2	Program transformation [Artificial Intelligence]
SD	H.3.1	Processing, Linguistic	SD	H.2.5	Program translation [retired January 1998] [Data- base Management]
***	I.2.7	Processing, Natural Language	SD	I.2.2	Program verification [Artificial Intelligence]
SD	I.3.1	Processing, Parallel [Computer Graphics]	SD	D.2.2	Programmer workbench [retired January 1998] [Design Tools and Techniques]
SD	H.2.4	Processing, Query	SD	D.2.6	Programmer workbench [Software Engineering]
SD	I.5.4	Processing, Signal [Applications; Pattern Recogni- tion]			

LEVEL	CATE- GORY	WORDS AND PHRASES
***	D.1.1	Programming, Applicative (Functional) [Programming Techniques]
***	I.2.2	Programming, Automatic [Artificial Intelligence]
***	D.1.2	Programming, Automatic [Programming Techniques]
SD	D.2.4	Programming by contract [Software/Program Verification]
***	D.1.3	Programming, Concurrent
SD	G.1.6	Programming, Convex [Optimization; Numerical Analysis]
SD	D.1.3	Programming, Distributed
SD	I.2.8	Programming, Dynamic [Artificial Intelligence]
***	D.2.6	Programming Environments [Software Engineering]
***†	D.1.1	Programming, Functional [Programming Techniques]
SD	G.1.6	Programming, Integer
**	D.3	Programming Languages
***	I.2.5	Programming Languages and Software [Artificial Intelligence]
SD	H.2.3	Programming languages, Database [Database Management]
***	F.3.2	Programming Languages, Semantics of [Logics and Meanings of Programs]
SD	G.1.6	Programming, Linear
SD	I.2.3	Programming, Logic [Deduction and Theorem Proving; Artificial Intelligence]
***	D.1.6	Programming, Logic [Programming Techniques]
SD	F.4.1	Programming, Logic and constraint [Mathematical Logic and Formal Languages]
SD	G.1.6	Programming methods, Quadratic [Optimization; Numerical Analysis]
SD	G.1.6	Programming, Nonlinear
***	D.1.5	Programming, Object-oriented
SD	D.2.3	Programming, Object-oriented [Software Engineering]
SD	D.1.3	Programming, Parallel
***	D.1.4	Programming, Sequential [Programming Techniques]
SD	G.1.6	Programming, Stochastic [Optimization; Numerical Analysis]
SD	D.2.2	Programming, Structured [retired January 1998] [Design Tools and Techniques]
SD	D.2.3	Programming, Structured [Software Engineering]
SD	D.3.3	Programming structures, Concurrent [Language Constructs]
SD	D.2.9	Programming teams [Software Engineering]
**	D.1	Programming Techniques
SD	D.2.2	Programming, Top-down [retired January 1998] [Design Tools and Techniques]
SD	D.2.3	Programming, Top-down [Software Engineering]
***	D.1.7	Programming, Visual
***	D.4.9	Programs and Utilities, Systems [Operating Systems]
**	F.3	Programs, Logics and Meanings of [Theory of Computation]
SD	F.3.1	Programs, Logics of [Logics and Meanings of Programs]

LEVEL	CATE- GORY	WORDS AND PHRASES
***	F.3.1	Programs, Reasoning about [Logics and Meanings of Programs]
***	F.3.1	Programs, Specifying and Verifying and Reasoning about [Logics and Meanings of Programs]
***†	D.4.9	Programs, Systems [Operating Systems]
***	F.3.1	Programs, Verifying [Logics and Meanings of Programs]
***	K.6.1	Project and People Management
SD	I.4.7	Projections [Image Processing and Computer Vision]
SD	F.2.2	Proof procedures, Complexity of
SD	F.4.1	Proof theory [Mathematical Logic]
SD	D.2.4	Proofs, Correctness [Software/Program Verification; Software Engineering]
SD	I.2.9	Propelling mechanisms [Robotics; Artificial Intelligence]
SD	K.4.4	Property, Intellectual [Electronic Commerce]
SD	K.4.1	Property rights, Intellectual [Public Policy Issues]
SD	K.5.1	Proprietary rights [Hardware/Software Protection]
SD	H.2.0	Protection [retired January 1998] [Database Management]
***	K.5.1	Protection, Hardware/Software [Legal Aspects of Computing]
SD	D.2.0	Protection mechanisms [Software Engineering]
SD	C.2.0	Protection, Security and [Computer-Communication Networks]
***	K.6.5	Protection, Security and [Management of Computing and Information Systems]
***	D.4.6	Protection, Security and [Operating Systems]
SD	H.2.7	Protection, Security, integrity, and [Database Management]
SD	C.2.2	Protocol architecture (OSI model)
SD	C.2.2	Protocol verification
***	C.2.2	Protocols, Network [Computer-Communication Networks]
SD	C.2.2	Protocols, Routing
SD	D.2.2	Prototyping, Evolutionary [Design Tools and Techniques; Software Engineering]
SD	H.5.2	Prototyping [Information Interfaces and Presentation]
SD	D.2.1	Prototyping, rapid [Requirements/Specifications; Software Engineering]
SD	D.2.m	Prototyping, Rapid [retired January 1998] [Software Engineering]
***	I.2.3	Proving, Deduction and Theorem
SD	F.4.1	Proving, Mechanical theorem [Mathematical Logic and Formal Languages]
SD	I.4.4	Pseudoinverse restoration [retired January 1998] [Image Processing and Computer Vision]
SD	G.1.3	Pseudoinverses [retired January 1998] [Numerical Linear Algebra]
SD†	D.2.9	PSP [Software Engineering Management]
SD	J.4	Psychology [Computer Applications]
SD	D.m	Psychology, Software [retired January 1998]
SD	H.1.2	Psychology, Software [User/Machine Systems; Models and Principles]
SD	E.3	Public key cryptosystems
SD	C.2.3	Public networks

LEVEL	CATE- GORY	WORDS AND PHRASES
***	K.4.1	Public Policy Issues
SD	J.7	Publishing [Computers in Other Systems]
SD	I.7.2	Publishing, Desktop [Document and Text Processing]
SD	H.4.1	Publishing, Desktop [Information Systems Applications]
***	I.7.4	Publishing, Electronic [Document and Text Processing]
SD†	F.1.1	Push-down automata
SD	G.1.6	Quadratic programming methods [Optimization; Numerical Analysis]
SD	G.1.4	Quadrature, Adaptive and iterative
***	G.1.4	Quadrature and Numerical Differentiation
SD	G.1.4	Quadrature, Gaussian
SD	G.1.4	Quadrature, Multidimensional (multiple)
SD	D.2.9	Quality assurance, Software (SQA)
SD	K.6.4	Quality assurance [System Management]
SD	I.4.1	Quantization [Image Processing and Computer Vision]
SD	H.3.3	Query formulation [Information Storage and Retrieval]
SD	H.2.3	Query languages [Database Management]
SD	H.2.4	Query processing [Database Management]
SD	H.3.4	Question-answering (fact retrieval) systems [retired January 1998] [Information Storage and Retrieval]
SD	D.4.8	Queueing theory [Performance; Operating Systems]
SD	G.3	Queueing theory [Probability and Statistics]
SD	G.m	Queueing theory [retired January 1998] [Mathematics of Computing]
SD	E.1	Queues, Lists, stacks, and [Data Structures]
SD	I.4.1	Radiometry [Image Processing and Computer Vision]
SD	I.3.7	Radiosity [Computer Graphics]
SD†	F.1.1	Random access machines
SD	G.3	Random number generation
SD	I.4.8	Range data [Image Processing and Computer Vision]
SD	D.2.1	Rapid prototyping [Requirements/Specifications; Software Engineering]
SD	D.2.m	Rapid prototyping [retired January 1998] [Software Engineering]
SD	I.3.1	Raster display devices [Computer Graphics]
SD	G.1.2	Rational approximation
SD	I.3.7	Raytracing [Computer Graphics]
SD	F.1.2	Reactive computation, Interactive and [Computation by Abstract Devices]
SD†	B.3.1	Read-only memory (ROM) [Semiconductor Memory Structures]
SD	J.7	Real time [Computer Applications]
***	I.3.7	Realism, Three-Dimensional Graphics and
SD	H.5.1	Realities, Artificial, augmented, and virtual [Information Interfaces and Presentation]
SD	I.3.7	Reality, Virtual [Computer Graphics]
SD	D.4.7	Real-time and embedded systems [Organization and Design]
SD	C.3	Real-time and embedded systems [Special-Purpose and Application-Based Systems]

LEVEL	CATE- GORY	WORDS AND PHRASES
***	F.3.1	Reasoning about Programs, Specifying and Verifying and [Operating Systems]
SD	I.2.3	Reasoning and belief revision, Nonmonotonic
SD	I.2.10	Reasoning, Perceptual
SD	I.2.3	Reasoning, Uncertainty, "fuzzy," and probabilistic [Artificial Intelligence]
SD	B.4.1	Receivers [retired January 1998] [Data Communications Devices]
SD	I.7.5	Recognition and interpretation, Graphics [Document Capture]
SD	I.2.7	Recognition and synthesis, Speech
SD	I.4.8	Recognition, Object [Image Processing And Computer Vision]
SD	I.7.5	Recognition, Optical character [Document Capture]
**	I.5	Recognition, Pattern
***	I.4.5	Reconstruction [Image Processing and Computer Vision]
SD	H.3.2	Record classification [retired January 1998] [Information Storage and Retrieval]
SD	E.1	Records [Data Structures]
SD†	E.5	Recovery [Files; Data]
SD	H.2.2	Recovery and restart [Database Management]
SD	D.2.5	Recovery, Error handling and [Testing and Debugging; Software Engineering]
SD	H.2.7	Recovery, Logging and [Database Management]
SD	I.2.10	Recovery of physical attributes, Modeling and [Artificial Intelligence]
SD	G.2.1	Recurrences and difference equations
SD	D.3.3	Recursion [Programming Languages]
SD	F.3.3	Recursion schemes, Program and
SD	F.4.1	Recursive function theory
SD	F.1.3	Reducibility and completeness [Complexity Measures and Classes; Computation by Abstract Devices]
SD	B.2.3	Redundant design [retired January 1998] [Arithmetic and Logic Structures]
SD	B.1.3	Redundant design [retired January 1998] [Control Structures and Microprogramming]
SD	B.6.2	Redundant design [retired January 1998] [Logic Design; Hardware]
SD	B.4.5	Redundant design [retired January 1998] [Input/Output and Data Communications]
SD	B.7.3	Redundant design [retired January 1998] [Integrated Circuits]
SD	B.3.4	Redundant design [retired January 1998] [Memory Structures]
SD	B.5.3	Redundant design [retired January 1998] [Register-Transfer-Level Implementation]
SD	K.4.3	Reengineering [Organizational Impacts]
SD	D.2.3	Reentrant code
**	A.2	Reference (e.g., dictionaries, encyclopedias, glossaries) [General Literature]
SD	C.2.0	Reference model, Open System Interconnection (OSI)
SD	I.4.1	Reflectance [Image Processing and Computer Vision]
SD	I.4.6	Region growing, partitioning [Image Processing and Computer Vision]

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
**	B.5	Register-Transfer-Level Implementation [Hard- ware]	SD	I.3.7	Removal, Hidden line/surface [Computer Graph- ics]
SD	I.4.3	Registration [Image Processing and Computer Vision]	SD	G.3	Renewal theory [Probability and Statistics]
SD	G.3	Regression analysis, Correlation and [Probability and Statistics]	SD	H.2.3	Report writers [Database Management]
SD	G.3	Regression, Robust [Probability and Statistics]	SD	H.2.7	Repository, Data warehouse and [Database Ad- ministration]
SD†	F.4.3	Regular sets	***	I.1.1	Representation, Expressions and Their [Symbolic and Algebraic Manipulation]
SD	K.5.2	Regulation [Government Issues; Legal Aspects of Computing]	SD	I.4.7	Representation, Feature [Image Processing And Computer Vision]
SD	K.4.1	Regulation [Public Policy Issues]	***	I.2.4	Representation Formalisms and Methods, Knowl- edge
SD	I.2.4	Relation systems [Knowledge Representation Formalisms and Methods]	***	I.4.10	Representation, Image
SD	H.2.4	Relational databases	***†	I.2.4	Representation, Knowledge [Knowledge Repre- sentation Formalisms and Methods]
SD	F.1.3	Relations among complexity classes	SD	I.2.4	Representation languages
SD	F.1.3	Relations among complexity measures	***†	I.2.4	Representation Methods, Knowledge
SD	F.1.1	Relations among models	SD	E.2	Representation, Object [Data Storage Represen- tations]
SD	F.1.2	Relations among modes [retired January 1998] [Modes of Computation]	SD	D.2.10	Representation [retired January 1998] [Design; Software Engineering]
SD	F.1.2	Relativized computation [Modes of Computation]	SD	I.3.5	Representations, Boundary [Computer Graphics]
SD	I.4.6	Relaxation [Image Processing and Computer Vision]	SD	E.2	Representations, Contiguous [retired January 1998] [Data Storage Representations]
SD	C.2.1	Relay networks, Frame	SD	I.3.5	Representations, Curve, surface, solid, and object
SD	H.3.3	Relevance feedback [Information Storage and Retrieval]	**	E.2	Representations, Data Storage
GT	GT	Reliability	SD	I.2.10	Representations, data structures, and transforms [Artificial Intelligence]
SD	G.3	Reliability and life testing [Probability and Statistics]	SD	I.1.1	Representations (General and Polynomial) [Sym- bolic and Algebraic Manipulation]
SD	G.4	Reliability and robustness [Mathematical Soft- ware]	SD	E.2	Representations, Hash-table [Data Storage Repre- sentations]
***	B.6.2	Reliability and Testing [retired January 1998] [Logic Design; Hardware]	SD	E.2	Representations, Linked [Data Storage Represen- tations]
***	B.7.3	Reliability and Testing [retired January 1998] [Integrated Circuits]	SD	I.2.4	Representations (procedural and rule-based) [Knowledge Representation Formalisms and Methods]
***	B.5.3	Reliability and Testing [retired January 1998] [Register-Transfer-Level Implementation]	***	D.2.1	Requirements/Specifications [Software Engineer- ing]
SD	C.4	Reliability, availability, and serviceability [Per- formance of Systems]	SD	I.2.3	Resolution [Deduction and Theorem Proving; Artificial Intelligence]
SD	B.4.5	Reliability, Hardware [retired January 1998] [Input/Output and Data Communications]	SD	K.6.2	Resource allocation [Management of Computing and Information Systems]
***	D.4.5	Reliability [Operating Systems]	SD	F.4.3	Resource-bounded automata, Classes defined by [retired January 1998] [Formal Languages]
**	B.8	Reliability, Performance and [Hardware]	SD†	F.1.1	Resource-bounded automata [Models of Compu- tation]
SD	D.2.4	Reliability [Software/Program Verification; Soft- ware Engineering]	SD†	D.4.5	Restart [Operating Systems]
***	B.1.3	Reliability, Testing, and Fault-Tolerance, Control Structure [retired January 1998] [Control Struc- tures and Microprogramming]	SD	H.2.2	Restart, Recovery and [Database Management]
***	B.8.1	Reliability, Testing, and Fault-Tolerance [Perfor- mance and Reliability; Hardware]	***	I.4.4	Restoration [Image Processing and Computer Vision]
***	B.2.3	Reliability, Testing, and Fault-Tolerance [retired January 1998] [Arithmetic and Logic Structures]	SD	I.4.4	Restoration, Pseudoinverse [retired January 1998]
***	B.4.5	Reliability, Testing, and Fault-Tolerance [retired January 1998] [Input/Output and Data Commu- nications]	SD	D.2.7	Restructuring, reverse engineering, and reengi- neering [Software Engineering]
***	B.3.4	Reliability, Testing, and Fault-Tolerance [retired January 1998] [Memory Structures]	SD	D.3.4	Retargetable compilers
SD	I.3.2	Remote systems [retired January 1998] [Com- puter Graphics]	SD	H.3.4	Retrieval, fact
			***	H.3.3	Retrieval, Information Search and
			**	H.3	Retrieval, Information Storage and

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	H.3.3	Retrieval models [Information Storage and Retrieval]	***	K.3.2	Science Education, Computer and Information
SD†	H.3.4	Retrieval, Question-answering systems [retired January 1998]	SD	I.2.1	Science, Medicine and [Artificial Intelligence]
SD	D.2.13	Reusable libraries	SD	D.2.8	Science, Software [retired January 1998] [Metrics; Software Engineering]
***	D.2.13	Reusable Software	SD†	J.2	Sciences, Atmospheric [Computer Applications]
SD	D.2.m	Reusable software [retired January 1998]	SD	J.2	Sciences, Earth and atmospheric [Computer Applications]
SD	D.2.13	Reuse models	**	J.3	Sciences, Life and Medical [Computer Applications]
***	F.4.2	Rewriting Systems, Grammars and Other	**	J.2	Sciences, Physical, and Engineering [Computer Applications]
SD	F.4.2	Rewriting systems, Parallel	**	J.4	Sciences, Social and Behavioral [Computer Applications]
SD	K.4.1	Rights, Intellectual property [Public Policy Issues]	SD	H.2.8	Scientific databases
SD	K.5.1	Rights, Proprietary	SD	H.5.2	Screen design (e.g., text, graphics, color) [Information Interfaces and Presentation]
SD	C.2.5	Rings, Token [Local and Wide-Area Networks]	SD	I.7.2	Scripting languages [Document and Text Processing]
SD	C.0	RISC [Computer Systems Organization]	SD	I.2.4	Scripts and Frames [Knowledge Representation Formalisms and Methods; Artificial Intelligence]
SD	C.1.1	RISC/CISC, VLIW architectures	***	H.3.3	Search and Retrieval, Information
***	I.2.9	Robotics	***	I.2.8	Search, Problem Solving, Control Methods, and [Artificial Intelligence]
SD	I.2.9	Robots and applications, Commercial	SD	H.3.3	Search process [Information Storage and Retrieval]
SD	G.3	Robust regression [Probability and Statistics]	SD	I.2.8	Search strategies, Graph and tree
SD	G.4	Robustness, Reliability and [Mathematical Software]	SD	F.2.2	Searching, Sorting and [Nonnumerical Algorithms and Problems]
SD†	B.3.1	ROM [Semiconductor Memory Structures]	SD	D.4.2	Secondary storage devices
***	G.1.5	Roots of Nonlinear Equations	SD	K.5.1	Secrets, Trade [retired January 1998]
SD	C.2.6	Routers [Computer-Communication Networks]	GT	GT	Security
SD	F.2.2	Routing and layout [Nonnumerical Algorithms and Problems]	SD	C.2.0	Security and protection [Computer-Communication Networks]
SD	B.7.2	Routing, Placement and [Integrated Circuits]	***	K.6.5	Security and Protection [Management of Computing and Information Systems]
SD	C.2.2	Routing protocols [Computer-Communication Networks]	***	D.4.6	Security and Protection [Operating Systems]
SD†	E.3	RSA [Data Encryption Standards]	SD	K.4.4	Security [Electronic Commerce]
SD	I.2.4	Rule-based and procedural representations	SD	H.2.7	Security, integrity, and protection [Database Management]
SD	H.2.4	Rule-based databases	SD	H.2.0	Security, integrity, and protection [retired January 1998] [Database Management]
SD†	I.2.3	Rule-based deduction	SD	D.4.6	Security kernels [retired January 1998] [Operating Systems]
SD	D.3.4	Run-time environments [Processors]	SD	K.6.5	Security, Physical [retired January 1998] [Management of Computing and Information Systems]
SD	K.4.1	Safety, Human [Computers and Society]	SD	K.6.m	Security, Physical [retired January 1991]
SD	I.4.1	Sampling [Image Processing and Computer Vision]	***	I.4.6	Segmentation [Image Processing and Computer Vision]
SD	I.3.3	Scanning, Digitizing and [Computer Graphics]	SD	D.4.2	Segmentation [retired January 1998] [Storage Management; Operating Systems]
SD	I.7.5	Scanning [Document Capture]	SD	K.6.2	Selection, Computer
SD	I.4.1	Scanning [Image Processing and Computer Vision]	SD	I.5.2	Selection, Feature evaluation and [Pattern Recognition]
SD	I.2.10	Scene analysis, 3D/stereo [Artificial Intelligence]	SD	H.3.3	Selection process [Information Storage and Retrieval]
***	I.4.8	Scene Analysis [Image Processing and Computer Vision]	SD	K.6.3	Selection, Software
***	I.2.10	Scene Understanding, Vision and [Artificial Intelligence]			
SD	H.4.1	Schedules [Information Systems Applications]			
SD	I.2.8	Scheduling [Artificial Intelligence]			
SD	D.4.1	Scheduling [Operating Systems]			
SD	F.2.2	Scheduling, Sequencing and [Nonnumerical Algorithms and Problems]			
SD	H.2.1	Schema and subschema [Database Management]			
SD	C.2.5	Schemes, Access [Computer-Communication Networks]			
SD	E.4	Schemes, Nonsecret encoding [retired January 1998]			
SD	K.4.4	Schemes, Payment [Electronic Commerce]			
SD	F.3.3	Schemes, Program and recursion			
SD	K.3.2	Science education, Computer			

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	H.3.4	Selective dissemination of information—SDI [retired January 1998] [Information Storage and Retrieval]
SD	K.3.2	Self-assessment [Computers and Education]
SD	F.1.1	Self-modifying machines (e.g., neural networks) [Models of Computation]
SD	I.2.4	Semantic networks [Knowledge Representation Formalisms and Methods]
SD	F.3.2	Semantics, Algebraic approaches to
SD	F.3.2	Semantics, Denotational
***	F.3.2	Semantics of Programming Languages
SD	F.3.2	Semantics, Operational
SD	D.3.1	Semantics [Programming Languages]
***	B.3.1	Semiconductor Memories
SD	D.4.4	Sending, Message
SD	I.4.8	Sensor fusion [Image Processing and Computer Vision]
SD	I.2.9	Sensors [Robotics; Artificial Intelligence]
SD	F.2.2	Sequencing and scheduling [Nonnumerical Algorithms and Problems]
SD	B.6.1	Sequential circuits [Logic Design; Hardware]
***	D.1.4	Sequential Programming
SD	B.3.2	Sequential-access memory [retired January 1998]
SD	G.3	Series analysis, Time [Probability and Statistics]
SD	I.4.5	Series expansion methods [Reconstruction; Image Processing and Computer Vision]
***	C.5.5	Servers [Computer System Implementation]
SD	C.4	Serviceability, Reliability, availability, and [Performance of Systems]
SD	H.3.5	Services, Commercial [Information Storage and Retrieval]
***	H.3.5	Services, Online Information
SD	H.3.4	Services, User profiles and alert [Information Storage and Retrieval]
SD	H.3.5	Services, Web-based [Information Storage and Retrieval]
SD	C.0	Set design, Instruction [Computer Systems Organization]
SD	I.5.1	Set, Fuzzy [Pattern Recognition]
SD	B.1.5	Set interpretation, Instruction [Control Structures and Microprogramming]
SD	F.4.1	Set theory [Mathematical Logic and Formal Languages]
SD	B.1.5	Sets, Firmware support of operating systems/instruction [retired January 1998] [Control Structures and Microprogramming]
SD†	F.4.3	Sets, Recursive
SD†	F.4.3	Sets, Regular
SD	I.7.2	SGML [Document and Text Processing]
SD	I.3.7	Shading [Computer Graphics]
SD	I.4.8	Shading [Image Processing and Computer Vision]
SD	I.3.7	Shadowing [Computer Graphics]
SD	I.4.7	Shape and Size [Image Processing and Computer Vision]
SD	I.2.10	Shape [Artificial Intelligence]
SD	I.4.8	Shape [Image Processing and Computer Vision]
SD	B.3.2	Shared memory
SD	H.3.5	Sharing, Data [Online Information Services]

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	I.4.3	Sharpening and deblurring [retired January 1998] [Image Processing and Computer Vision]
SD	H.5.5	Signal analysis, synthesis, and processing [Sound and Music Computing]
SD	I.5.4	Signal processing [Applications; Pattern Recognition]
SD	C.3	Signal processing systems [Special-Purpose and Application-Based Systems]
SD	C.1.2	SIMD
SD	I.5.3	Similarity measures [Pattern Recognition]
SD	I.1.1	Simplification of expressions [Symbolic and Algebraic Manipulation]
SD	G.1.6	Simulated annealing [Optimization; Numerical Analysis]
**	I.6	Simulation and Modeling [Computing Methodologies]
SD	I.2.0	Simulation, Cognitive
SD†	I.6.1	Simulation, Continuous
SD	B.6.3	Simulation [Logic Design; Hardware]
SD†	I.6.1	Simulation, Discrete
SD	B.7.2	Simulation [Integrated Circuits]
***	I.6.2	Simulation Languages
SD	D.4.8	Simulation [Operating Systems]
***	I.6.6	Simulation Output Analysis
SD	B.5.2	Simulation [Register-Transfer-Level Implementation]
SD	B.2.2	Simulation [retired January 1998] [Arithmetic and Logic Structures]
SD	B.1.2	Simulation [retired January 1998] [Control Structures and Microprogramming]
SD	B.4.4	Simulation [retired January 1998] [Input/Output and Data Communications]
SD	B.3.3	Simulation [retired January 1998] [Memory Structures]
***	I.6.7	Simulation Support Systems
***	I.6.1	Simulation Theory
***	I.6.8	Simulation, Types of
SD†	I.6.1	Simulation, Types of (continuous and discrete) [retired January 1991]
***	C.1.1	Single Data Stream Architectures [Processor Architectures]
SD†	C.1.1	Single-data-stream, Multiple-instruction-stream processors (MISD) [retired January 1998] [Processor Architectures]
SD	C.1.1	Single-data-stream, Single-instruction-stream processors (SISD) [retired January 1998] [Processor Architectures]
SD	C.1.2	Single-instruction-stream, multiple-data-stream processors (SIMD) [Processor Architectures]
SD	C.1.1	Single-instruction-stream, single-data-stream processors (SISD) [retired January 1998] [Processor Architectures]
SD†	G.1.7	Single-step methods [Ordinary Differential Equations]
SD	G.1.3	Singular value decomposition [Numerical Linear Algebra]
SD	C.1.1	SISD [retired January 1998]
SD	I.4.7	Size and shape [Image Processing and Computer Vision]

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	C.3	Smartcards [Special-Purpose and Application-Based Systems]	SD	G.1.8	Solution techniques, Iterative [Partial Differential Equations]
SD	I.4.3	Smoothing [Image Processing and Computer Vision]	SD	F.2.2	Sorting and searching [Nonnumerical Algorithms and Problems]
SD	G.1.1	Smoothing [Interpolation]	SD	E.5	Sorting/searching [Data]
SD	C.2.2	SMTP [Network Protocols]	***	H.5.5	Sound and Music Computing [Information Interfaces and Presentation]
**	J.4	Social and Behavioral Sciences [Computer Applications]	SD	G.1.3	Sparse, structured, and very large systems (direct and iterative methods) [Numerical Linear Algebra]
***	K.4.2	Social Issues	SD	H.2.8	Spatial databases and GIS
**	K.4	Society and Computers	SD	I.5.5	Special architectures [Pattern Recognition]
SD	J.4	Sociology [Computer Applications]	SD	G.1.2	Special function approximations [Numerical Analysis]
*	D.	Software	SD	K.4.2	Special needs, handicapped persons [retired January 1998]
***	D.2.11	Software Architectures	SD	D.3.2	Specialized application languages
SD	D.2.9	Software configuration management [Software Engineering]	SD	I.1.3	Special-purpose algebraic systems [Symbolic and Algebraic Manipulation]
SD	K.6.3	Software development [Management of Computing and Information Systems]	**	C.3	Special-Purpose and Application-Based Systems
**	D.2	Software Engineering	SD	I.1.3	Special-purpose hardware [retired January 1998] [Symbolic and Algebraic Manipulation]
SD	D.2.2	Software engineering, Computer-aided	SD	B.1.5	Special-purpose microcode applications [retired January 1998]
SD	K.2	Software [History of Computing]	SD†	B.5.1	Special-purpose styles [Register-Transfer-Level Implementation]
SD	I.4.0	Software, Image processing	SD	C.0	Specification methodology, Systems
SD	K.6.5	Software, Invasive [Management of Computing and Information Systems]	SD	F.3.1	Specification techniques [Logics and Meanings of Programs]
SD	D.4.6	Software, Invasive [Operating Systems]	***	F.3.1	Specifying and Verifying and Reasoning about Programs [Logics and Meanings of Programs]
SD	D.2.2	Software libraries	SD	G.1.8	Spectral methods [Partial Differential Equations]
SD	K.6.3	Software maintenance [Management of Computing and Information Systems]	SD	I.2.7	Speech recognition and synthesis [Artificial Intelligence]
***	K.6.3	Software Management [Management of Computing and Information Systems]	SD	I.7.1	Spelling [retired January 1998] [Document and Text Processing]
**	G.4	Software, Mathematical	SD	G.1.2	Spline and piecewise polynomial approximation
SD	K.6.3	Software process [Management of Computing and Information Systems]	SD	G.1.1	Spline and piecewise polynomial interpolation
SD†	D.2.9	Software process models (e.g., CMM, ISO, PSP) [Software Engineering Management]	SD	I.3.5	Splines [Computer Graphics]
***	I.2.5	Software, Programming Languages and [Artificial Intelligence]	SD	H.4.1	Spreadsheets [Information Systems Applications]
SD	D.m	Software psychology [retired January 1998]	SD	K.8.1	Spreadsheets [Personal Computing]
SD	H.1.2	Software psychology [User/Machine Systems; Models and Principles]	SD	D.2.9	SQA (Software quality assurance) [Software Engineering]
SD	D.2.9	Software quality assurance (SQA) [Software Engineering]	SD	G.1.2	Squares approximation, Least
***	D.2.13	Software, Reusable	SD	G.1.6	Squares methods, Least
SD	D.2.m	Software, Reusable [retired January 1998]	SD†	B.3.1	SRAM [Semiconductor Memory Structures]
SD	D.2.8	Software science [retired January 1998] [Metrics; Software Engineering]	SD	G.1.0	Stability (and instability) [Numerical Analysis]
SD	K.6.3	Software selection [Management of Computing and Information Systems]	SD	G.1.7	Stability, Convergence and [Ordinary Differential Equations]
SD	G.3	Software, Statistical	SD	C.1.3	Stack-oriented processors [retired January 1998] [Processor Architectures]
SD	I.3.4	Software support [Computer Graphics]	SD	E.1	Stacks, and queues, Lists, [Data Structures]
***	H.3.4	Software, Systems and [Information Storage and Retrieval]	SD	K.6.1	Staffing [Management of Computing and Information Systems]
***†	K.5.1	Software/Hardware Protection [Legal Aspects of Computing]	SD	I.3.2	Stand-alone systems [retired January 1998] [Computer Graphics]
***	D.2.4	Software/Program Verification [Software Engineering]	SD	B.7.1	Standard cells [retired January 1998] [Integrated Circuits]
SD	I.3.5	Solid geometry, Constructive [retired January 1998] [Computer Graphics]			
SD†	I.3.5	Solid representations [Computer Graphics]			

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	E.3	Standard, Data encryption (DES) [retired January 1998]
GT	GT	Standardization
SD	H.5.2	Standardization [User Interfaces; Information Interfaces and Presentation]
SD	D.2.3	Standards [Coding; Software Engineering]
SD	H.3.7	Standards [Digital Libraries]
SD	I.7.2	Standards (e.g., CALS, ODA, SGML) [Document and Text Processing]
SD	E.3	Standards (e.g., DES, PGP, RSA) [Data Encryption]
SD	I.3.6	Standards (e.g., GKS, PHIGS, VDI, CGM, IGES) [Computer Graphics]
SD	C.2.6	Standards (e.g., TCP/IP) [Computer-Communication Networks]
SD	D.3.0	Standards [Programming Languages]
SD	D.2.0	Standards [Software Engineering]
SD	K.1	Standards [The Computer Industry]
SD	D.2.2	State diagrams [Software Engineering]
SD†	B.3.1	Static memory (SRAM) [Semiconductor Memory Structures]
SD	G.3	Statistical computing
SD	H.2.8	Statistical databases
SD	I.4.10	Statistical [Image Processing and Computer Vision]
SD	D.2.4	Statistical methods [Software/Program Verification]
SD	I.5.1	Statistical [Pattern Recognition]
SD	G.3	Statistical software
SD	J.2	Statistics, Mathematics and [Computer Applications]
SD	G.3	Statistics, Multivariate
SD	G.3	Statistics, Nonparametric
**	G.3	Statistics, Probability and
SD	K.1	Statistics [The Computer Industry]
SD	G.1.7	Step methods, Single
SD	I.4.8	Stereo [Image Processing and Computer Vision]
SD	G.1.7	Stiff equations [Ordinary Differential Equations]
SD	D.4.8	Stochastic analysis [Performance; Operating Systems]
SD	G.3	Stochastic processes [Probability and Statistics]
SD	G.1.6	Stochastic programming [Optimization; Numerical Analysis]
**	H.3	Storage and Retrieval, Information
SD	I.3.1	Storage devices [retired January 1998] [Computer Graphics]
SD	D.4.2	Storage devices, Secondary [Operating Systems]
SD	D.4.2	Storage hierarchies [Operating Systems]
***	H.3.2	Storage, Information
SD	D.3.3	Storage management, Dynamic [Programming Languages]
***	D.4.2	Storage Management [Operating Systems]
SD	B.3.2	Storage, Mass
**	E.2	Storage Representations, Data
SD	D.4.2	Storage, Secondary [Operating Systems]
SD	C.2.1	Store and forward networks
SD	B.1.1	Store, Writable control [retired January 1998]
SD	K.6.1	Strategic information systems planning [Management of Computing and Information Systems]

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	D.4.2	Strategies, Allocation/deallocation [Storage Management; Operating Systems]
SD	I.1.3	Strategies, Evaluation [Symbolic and Algebraic Manipulation]
SD	I.2.8	Strategies, Graph and tree search [Artificial Intelligence]
SD	H.5.2	Strategies, Input devices and [Information Interfaces and Presentation]
***	C.1.2	Stream Architectures, Multiple Data
***	C.1.1	Stream Architectures, Single Data
SD	I.5.1	Structural [Pattern Recognition]
SD†	E.5	Structure [Files; Data]
***	B.1.2	Structure Performance Analysis and Design Aids, Control
***	B.1.3	Structure Reliability, Testing, and Fault-Tolerance, Control [retired January 1998]
SD	F.3.3	Structure, Type [Studies of Program Constructs; Logics and Meanings of Programs]
SD†	D.2.1	Structured methodologies [Software Engineering]
SD	D.2.2	Structured programming [retired January 1998] [Design Tools and Techniques]
SD	D.2.3	Structured programming [Software Engineering]
SD	I.3.6	Structures and data types, Graphics data
**	B.1	Structures and Microprogramming, Control
SD	I.2.10	Structures, and transforms, Representations, data [Artificial Intelligence]
SD	I.2.10	Structures, Architecture and control [retired January 1998] [Artificial Intelligence]
**	B.2	Structures, Arithmetic and Logic [Hardware]
SD	E.2	Structures, Composite [retired January 1998] [Data Storage Representations]
SD	F.2.2	Structures, Computations on discrete
SD	D.3.3	Structures, Concurrent programming [Language Constructs]
SD	D.3.3	Structures, Control [Language Constructs; Programming Languages]
**	E.1	Structures, Data [Data]
SD	D.3.3	Structures, Data types and [Language Constructs; Programming Languages]
SD†	I.2.10	Structures, Data [Vision and Scene Understanding; Artificial Intelligence]
SD	D.4.3	Structures, Directory [Operating Systems]
SD	E.1	Structures, Distributed data
SD	I.2.11	Structures, Languages and [Artificial Intelligence]
**	B.3	Structures, Memory [Hardware]
SD	B.4.3	Structures, Physical [retired January 1998] [Input/Output and Data Communications]
SD	C.4	Studies, Design [Performance of Systems]
***	F.3.3	Studies of Program Constructs
SD	H.5.2	Style guides [Information Interfaces and Presentation]
***	B.1.1	Styles, Control Design [Control Structures and Microprogramming]
***	B.2.1	Styles, Design [Arithmetic and Logic Structures]
***	B.6.1	Styles, Design [Logic Design]
***	B.3.2	Styles, Design [Memory Structures]
***†	B.7.1	Styles, Design [Integrated Circuits]
SD	H.5.2	Styles, Interaction [Information Interfaces and Presentation]

LEVEL	CATE- GORY	WORDS AND PHRASES
***	C.1.3	Styles, Other Architecture
SD	B.5.1	Styles [Register-Transfer-Level Implementation]
***	B.7.1	Styles, Types and Design [Integrated Circuits]
SD	D.3.3	Subroutines, Procedures, functions, and [Language Constructs]
SD	H.2.1	Subschema, Schema and [Database Management]
SD	I.1.3	Substitution mechanisms [retired January 1998] [Symbolic and Algebraic Manipulation]
***	B.4.3	Subsystems [Input/Output and Data Communications]
SD	I.4.5	Summation methods [retired January 1998] [Reconstruction; Image Processing and Computer Vision]
SD	C.5.1	Super (very large) computers
SD	K.6.5	Supererogation
SD	K.1	Suppliers [The Computer Industry]
SD	H.4.2	Support, Decision [Types of Systems; Information Systems Applications]
SD	B.1.5	Support of operating systems/instruction sets, Firmware [retired January 1998]
SD	I.3.4	Support, Software [Computer Graphics]
***	I.6.7	Support Systems, Simulation [Simulation and Modeling]
SD	I.4.8	Surface fitting [Image Processing And Computer Vision]
SD	I.3.5	Surface representations [Computer Graphics]
SD	G.1.2	Surfaces and contours, Approximation of [Numerical Analysis]
**	A.1	Survey, Introductory and [General Literature]
SD	G.3	Survival analysis [Probability and Statistics]
SD	D.4.2	Swapping [retired January 1998] [Storage Management; Operating Systems]
SD†	C.1.2	Switch, Crossbar
SD	C.2.1	Switching networks, Circuit
SD	B.6.3	Switching theory [Logic Design; Hardware]
**	I.1	Symbolic and Algebraic Manipulation
SD	D.2.5	Symbolic execution [Testing and Debugging; Software Engineering]
SD	D.4.1	Synchronization [Operating Systems]
SD	H.5.3	Synchronous interaction [Information Interfaces and Presentation]
SD†	B.4.3	Synchronous/Asynchronous operation [Input/Output and Data Communications]
SD	D.3.1	Syntax [Programming Languages]
SD	H.5.5	Synthesis, and processing, Signal analysis, [Sound and Music Computing]
SD	B.5.2	Synthesis, Automatic [Register-Transfer-Level Implementation; Hardware]
SD	B.6.3	Synthesis, Automatic [Logic Design]
SD	B.1.2	Synthesis, Automatic [retired January 1998] [Control Structures and Microprogramming]
SD	I.2.2	Synthesis, Program [Automatic Programming; Artificial Intelligence]
SD	I.2.7	Synthesis, Speech recognition and
SD	C.0	System architectures
**	C.5	System Implementation, Computer
***	K.6.4	System Management [Management of Computing and Information Systems]

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	I.2.5	System tools and techniques, Expert [Artificial Intelligence]
SD	K.6.1	Systems analysis and design [Management of Computing and Information Systems]
SD	D.3.4	Systems and compiler generators, Translator writing [Programming Languages]
***	H.1.1	Systems and Information Theory
***	H.3.4	Systems and Software [Information Storage and Retrieval]
***†	C.3	Systems, Application-Based
***	I.2.1	Systems, Applications and Expert
**	H.4	Systems Applications, Information
SD	D.4.7	Systems, Batch processing [retired January 1998] [Operating Systems]
SD	G.1.7	Systems, Chaotic [Numerical Analysis]
*	C.	Systems, Computer Systems Organization
**	J.7	Systems, Computers in Other
SD	H.3.4	Systems, Current awareness [retired January 1998] [Information Storage and Retrieval]
***	H.2.4	Systems [Database Management]
SD	K.6.1	Systems development [Management of Computing and Information Systems]
***	C.2.4	Systems, Distributed [Computer-Communication Networks]
SD	H.3.4	Systems, Distributed [Information Storage and Retrieval]
SD	D.4.7	Systems, Distributed [Operating Systems]
SD	D.4.3	Systems, Distributed file
SD	K.3.2	Systems education, Information
***	D.4.3	Systems, File Management
SD	H.1.1	Systems, General Systems Theory
SD	I.3.5	Systems, Geometric algorithms, languages, and [Computer Graphics]
***	F.4.2	Systems, Grammars and Other Rewriting
***	I.3.2	Systems, Graphics
SD	C.1.3	Systems, Heterogeneous [Processor Architectures]
SD	K.2	Systems [History of Computing]
SD	C.1.m	Systems, Hybrid [retired January 1998]
*	H.	Systems, Information
***†	H.4	Systems, Information Systems Applications
SD	K.3.2	Systems, Information Systems Education
SD	D.4.7	Systems, Interactive [Operating Systems]
SD	I.5.5	Systems, Interactive [Pattern Recognition]
SD	H.3.7	Systems issues [Digital Libraries]
SD	F.4.1	Systems, Lambda calculus and related [Mathematical Logic and Formal Languages]
SD	I.7.2	Systems, Languages and [Document and Text Processing]
***	I.1.3	Systems, Languages and [Symbolic and Algebraic Manipulation]
SD	G.1.3	Systems, Linear (direct and iterative methods)
***	D.4.3	Systems Management, File
**	K.6	Systems, Management of Computing and Information
SD	J.3	Systems, Medical information [Computer Applications]
SD	I.2.11	Systems, Multiagent [Artificial Intelligence]
***	H.5.1	Systems, Multimedia Information

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	C.2.4	Systems, Network operating [Computer-Communication Networks]	SD	G.1.8	Techniques, Iterative solution [Partial Differential Equations]
SD	G.1.5	Systems of equations [Roots of Nonlinear Equations]	SD	K.6.1	Techniques, Management
**	D.4	Systems, Operating	SD	C.4	Techniques, Measurement [Performance of Systems]
*	C.	Systems Organization, Computer	SD	H.5.5	Techniques, Methodologies and [Sound and Music Computing]
SD	I.3.4	Systems, Paint [Computer Graphics]	***	I.3.6	Techniques, Methodology and [Computer Graphics]
SD	F.4.2	Systems, Parallel rewriting	SD	C.4	Techniques, Modeling [Performance of Systems]
**	C.4	Systems, Performance of	**	D.1	Techniques, Programming [Software]
SD	K.6.1	Systems planning, Strategic information [Management of Computing and Information Systems]	SD	F.3.1	Techniques, Specification [Logics and Meanings of Programs]
SD	C.3	Systems, Process control	SD	B.7.1	Technologies, Advanced [Integrated Circuits]
***	D.4.9	Systems Programs and Utilities [Operating Systems]	SD	K.4.2	Technologies for persons with disabilities, Assistive
SD	H.3.4	Systems, Question-answering (fact retrieval) [retired January 1998]	SD	B.7.1	Technologies, Memory [Integrated Circuits]
SD	D.4.7	Systems, Real-time and embedded [Operating Systems]	SD	H.4.3	Teleconferencing, and videoconferencing, Computer conferencing,
SD	C.3	Systems, Real-time and embedded [Special-Purpose and Application-Based Systems]	SD	I.2.4	Temporal logic [Artificial Intelligence]
SD	I.2.4	Systems, Relation [Artificial Intelligence]	SD	F.4.1	Temporal logic [Mathematical Logic and Formal Languages]
SD	I.3.2	Systems, Remote [retired January 1998] [Computer Graphics]	SD	D.4.4	Terminal management [retired January 1998] [Operating Systems]
SD	C.3	Systems, Signal processing [Special-Purpose and Application-Based Systems]	SD	B.4.2	Terminals and printers, Data [Input/Output Devices]
***	I.6.7	Systems, Simulation Support	SD†	D.2.5	Test data generators [Software Engineering]
SD	H.5.5	Systems [Sound and Music Computing]	SD	B.2.3	Test generation [retired January 1998] [Arithmetic and Logic Structures]
SD	G.1.3	Systems, Sparse, structured, and very large [Numerical Linear Algebra]	SD	B.1.3	Test generation [retired January 1998] [Control Structures and Microprogramming]
SD	I.1.3	Systems, Special-purpose algebraic	SD	B.6.2	Test generation [retired January 1998] [Logic Design; Hardware]
**	C.3	Systems, Special-Purpose and Application-Based	SD	B.4.5	Test generation [retired January 1998] [Input/Output and Data Communications]
SD	C.0	Systems specification methodology	SD	B.7.3	Test generation [retired January 1998] [Integrated Circuits]
SD	I.3.2	Systems, Stand-alone [retired January 1998] [Computer Graphics]	SD	B.3.4	Test generation [retired January 1998] [Memory Structures]
SD	H.1.1	Systems theory, General	SD	B.5.3	Test generation [retired January 1998] [Register-Transfer-Level Implementation]
SD	I.6.1	Systems theory [Simulation and Modeling]	SD	B.6.2	Testability [retired January 1998] [Logic Design; Hardware]
SD	F.4.2	Systems, Thue	SD	B.7.3	Testability [retired January 1998] [Integrated Circuits]
***	H.4.2	Systems, Types of [Information Systems Applications]	SD	B.5.3	Testability [retired January 1998] [Register-Transfer-Level Implementation]
SD	H.5.2	Systems, User interface management (UIMS)	***	D.2.5	Testing and Debugging [Software Engineering]
***	H.1.2	Systems, User/Machine	***	B.8.1	Testing, and Fault-Tolerance, Reliability, [Performance and Reliability; Hardware]
***	C.5.4	Systems, VLSI [Computer System Implementation]	***	B.4.5	Testing, and Fault-Tolerance, Reliability, [retired January 1998] [Input/Output and Data Communications]
SD	H.5.2	Systems, Windowing	SD	G.4	Testing, Certification and [Mathematical Software]
SD	G.3	Table analysis, Contingency [Probability and Statistics]	***	K.7.3	Testing, Certification, and Licensing [The Computing Profession]
SD	D.2.2	Tables, Decision	SD	D.2.5	Testing, Coverage [Software Engineering]
SD	E.1	Tables [retired January 1998] [Data Structures]			
SD	H.5.1	Tape [Information Interfaces and Presentation]			
SD	K.5.2	Taxation			
SD†	C.2.6	TCP/IP [Internetworking Standards]			
SD	D.2.9	Teams, Programming			
***	D.2.3	Techniques, Coding Tools and [Software Engineering]			
***	D.2.2	Techniques, Design Tools and [Software Engineering]			
SD	I.2.5	Techniques, Expert system tools and			
SD	I.3.6	Techniques, Interaction [Computer Graphics]			

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
***	B.6.2	Testing, Reliability and [retired January 1998] [Logic Design; Hardware]	SD	G.m	Theory, Queueing [retired January 1998] [Mathematics of Computing]
***	B.7.3	Testing, Reliability and [retired January 1998] [Integrated Circuits]	SD	F.4.1	Theory, Recursive function
***	B.5.3	Testing, Reliability and [retired January 1998] [Register-Transfer-Level Implementation]	SD	G.3	Theory, Renewal [Probability and Statistics]
***	B.3.4	Testing, Reliability, and Fault-Tolerance [retired January 1998] [Memory Structures]	SD	F.4.1	Theory, Set [Mathematical Logic and Formal Languages]
SD	G.3	Testing, Reliability and life [Probability and Statistics]	***	l.6.1	Theory, Simulation
SD	D.2.5	Testing tools (e.g., data generators, coverage testing) [Software Engineering]	SD	B.6.3	Theory, Switching [Logic Design; Hardware]
SD	B.6.2	Tests, Built-in [retired January 1998] [Logic Design; Hardware]	SD	l.6.1	Theory, Systems [Simulation and Modeling]
SD	B.4.5	Tests, Built-in [retired January 1998] [Input/Output and Data Communications]	***	H.1.1	Theory, Systems and Information [Models and Principles]
SD	B.7.3	Tests, Built-in [retired January 1998] [Integrated Circuits]	SD	H.3.1	Thesauri [Information Storage and Retrieval]
SD	B.5.3	Tests, Built-in [retired January 1998] [Register-Transfer-Level Implementation]	SD	D.4.1	Threads [Operating Systems]
SD	l.2.7	Text analysis [Natural Language Processing; Artificial Intelligence]	SD	l.3.1	Three-dimensional displays [retired January 1998] [Computer Graphics]
SD	H.3.6	Text archives, Large [Information Storage and Retrieval]	***	l.3.7	Three-Dimensional Graphics and Realism [Computer Graphics]
***	l.7.1	Text Editing, Document and	SD	l.2.10	Thresholding, Intensity, color, photometry, and [Vision and Scene Understanding; Artificial Intelligence]
SD	H.5.2	Text [Information Interfaces and Presentation]	SD	F.4.2	Thue systems
**	l.7	Text Processing, Document and	SD	D.2.9	Time estimation [Software Engineering]
SD	l.5.4	Text processing [Pattern Recognition]	SD	H.4.1	Time management (e.g., calendars, schedules) [Information Systems Applications]
SD	H.2.4	Textual databases	SD	J.7	Time, Real [Computer Applications]
SD	l.3.7	Texture [Computer Graphics]	SD	G.3	Time series analysis [Probability and Statistics]
SD	l.2.10	Texture [Artificial Intelligence]	SD	l.4.8	Time-varying imagery [Image Processing and Computer Vision]
SD	l.4.7	Texture [Image Processing and Computer Vision]	SD	C.2.5	Token rings [Local and Wide-Area Networks]
***	l.2.3	Theorem Proving, Deduction and	SD	C.4	Tolerance, Fault [Performance of Systems]
SD	F.4.1	Theorem proving, Mechanical	***	D.2.3	Tools and Techniques, Coding [Software Engineering]
GT	GT	Theory	***	D.2.2	Tools and Techniques, Design [Software Engineering]
SD	F.4.3	Theory, Algebraic language	SD	l.2.5	Tools and techniques, Expert systems
SD	H.5.2	Theory and methods [Information Interfaces and Presentation]	SD	D.2.1	Tools [Requirements/Specifications; Software Engineering]
SD	H.5.3	Theory and models [Information Interfaces and Presentation]	SD	D.2.5	Tools, Testing [Software Engineering]
SD	G.1.2	Theory, Chebyshev approximation and	SD	D.2.2	Top-down programming [retired January 1998] [Design Tools and Techniques]
**	E.4	Theory, Coding and Information [Data]	SD	D.2.3	Top-down programming [Software Engineering]
SD	F.4.1	Theory, Computability [Mathematical Logic and Formal Languages]	SD	B.4.3	Topology [Input/Output and Data Communications]
SD	F.1.1	Theory, Computability [Models of Computation]	SD	C.2.1	Topology, Network
SD	l.2.8	Theory, Control [Artificial Intelligence]	SD	H.5.2	Touchscreen
***	D.3.1	Theory, Formal Definitions and [Programming Languages]	SD	D.2.5	Tracing [Testing and Debugging; Software Engineering]
SD	H.1.1	Theory, General systems [Information Systems]	SD	l.4.8	Tracking [Image Processing and Computer Vision]
***	G.2.2	Theory, Graph [Discrete Mathematics]	SD	K.5.1	Trade secrets [retired January 1998] [Hardware/Software Protection]
SD	K.2	Theory [History of Computing]	***	F.2.3	Tradeoffs among Complexity Measures
SD	H.5.4	Theory [Hypertext/Hypermedia]	SD	H.5.2	Training, help, and documentation
SD	H.1.1	Theory, Information [Models and Principles; Information Systems]	SD	K.6.1	Training [Management of Computing and Information Systems]
SD	F.4.1	Theory, Model [Mathematical Logic]	SD	H.2.4	Transaction processing [Database Management]
*	F.	Theory of Computation	SD	K.4.4	Transactions, Distributed commercial [Electronic Commerce]
SD	F.4.1	Theory, Proof [Mathematical Logic]	SD	K.4.1	Transborder data flow
SD	D.4.8	Theory, Queueing [Operating Systems]			
SD	G.3	Theory, Queueing [Probability and Statistics]			

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	C.2.1	Transfer Mode, Asynchronous [Computer-Communication Networks]
SD†	F.2.1	Transform, Fast Fourier
SD	I.4.5	Transform methods [Reconstruction; Image Processing and Computer Vision]
SD	I.2.2	Transformation, Program [Artificial Intelligence]
SD	I.3.5	Transformations, Hierarchy and geometric [Computer Graphics]
SD	F.2.1	Transforms, Computation of
SD	G.1.2	Transforms, Fast Fourier [Approximation; Numerical Analysis]
SD	I.2.10	Transforms, Representations, data structures, and [Vision and Scene Understanding; Artificial Intelligence]
SD	H.2.5	Translation, Data [retired January 1998] [Database Management]
SD	J.5	Translation, Language [Computer Applications]
SD	I.2.7	Translation, Machine [Artificial Intelligence]
SD	H.2.5	Translation, Program [retired January 1998] [Database Management]
SD	D.3.4	Translator writing systems and compiler generators [Processors]
SD	B.4.1	Transmitters [retired January 1998] [Data Communications Devices]
SD†	I.2.8	Tree and graph search strategies
SD	E.1	Trees [Data Structures]
SD	G.2.2	Trees [Graph Theory]
SD	K.6.5	Trojan horses [Management of Computing and Information Systems]
SD	D.4.6	Trojan horses [Operating Systems]
SD†	F.1.1	Turing machines
SD	F.3.3	Type structure [Studies of Program Constructs; Logics and Meanings of Programs]
SD	D.3.3	Types, Abstract data [Language Constructs; Programming Languages]
***	B.7.1	Types and Design Styles [Integrated Circuits]
SD	D.3.3	Types, Data [Language Constructs; Programming Languages]
SD	I.3.6	Types, Graphics data structures and data [Computer Graphics]
SD	F.4.2	Types of Grammars
***	I.6.8	Types of Simulation
SD	I.6.1	Types of simulation (continuous and discrete) [retired January 1991]
***	H.4.2	Types of Systems [Information Systems Applications]
SD	I.7.2	Typesetting
SD	H.5.2	UIMS (User interface management systems) [Information Interfaces and Presentation]
SD	K.6.5	Unauthorized access (e.g., hacking, phreaking) [Security and Protection]
SD	F.1.1	Unbounded-action devices
SD	I.2.3	Uncertainty, "fuzzy," and probabilistic reasoning [Artificial Intelligence]
SD	G.1.6	Unconstrained optimization [Numerical Analysis]
SD	I.2.7	Understanding, Language parsing and
***	I.2.10	Understanding, Vision and Scene
SD	B.5.1	Units, Arithmetic and logic

LEVEL	CATE- GORY	WORDS AND PHRASES
SD	K.6.2	Usage measurement, Performance and [Management of Computing and Information Systems]
SD	K.4.1	Use/abuse of power [Public Policy Issues]
SD	H.5.2	User interface management systems (UIMS)
***	H.5.2	User Interfaces
SD	D.2.2	User interfaces [Design Tools and Techniques; Software Engineering]
SD	H.5.2	User interfaces, Graphical
SD	G.4	User interfaces [Mathematical Software]
SD	H.3.7	User issues [Digital Libraries]
SD	H.5.4	User issues [Hypertext/Hypermedia]
SD	H.3.4	User profiles and alert services
SD	H.5.2	User-centered design [Information Interfaces and Presentation]
***	H.1.2	User/Machine Systems
***	I.3.4	Utilities, Graphics
***	D.4.9	Utilities, Systems Programs and [Operating Systems]
***	I.6.4	Validation and Analysis, Model [Simulation and Modeling]
SD	D.2.4	Validation [Software Engineering]
SD	G.1.3	Value decomposition, Singular [Numerical Linear Algebra]
SD	H.1.1	Value of information [Systems and Information Theory]
SD	G.1.7	Value problems, Boundary [Ordinary Differential Equations]
SD	G.1.7	Value problems, Initial
SD	I.3.6	VDI [Computer Graphics]
SD	I.3.1	Vector display devices [retired January 1998] [Computer Graphics]
SD	G.4	Vector implementations, Parallel and [Mathematical Software]
SD	C.1.2	Vector processors, Array and [Multiple Data Stream Architectures (Multiprocessors)]
SD	I.2.9	Vehicles, Autonomous
GT	GT	Verification
SD	B.6.3	Verification [Logic Design; Hardware]
SD	B.7.2	Verification [Integrated Circuits]
SD	F.3.1	Verification, Mechanical
SD	I.2.2	Verification, Program [Artificial Intelligence]
SD	C.2.2	Verification, Protocol
SD	B.5.2	Verification [Register-Transfer-Level Implementation]
SD	D.4.5	Verification, Reliability [Operating Systems]
SD	B.1.4	Verification [retired January 1998] [Control Structures and Microprogramming]
SD	B.2.2	Verification [retired January 1998] [Arithmetic and Logic Structures; Hardware]
SD	B.4.4	Verification [retired January 1998] [Input/Output and Data Communications]
SD	G.4	Verification [retired January 1998] [Mathematical Software]
SD	D.4.6	Verification, Security and Protection [retired January 1998] [Operating Systems]
***	D.2.4	Verification, Software/Program [Software Engineering]
***	F.3.1	Verifying and Specifying and Reasoning about Programs [Logics and Meanings of Programs]

LEVEL	CATE- GORY	WORDS AND PHRASES	LEVEL	CATE- GORY	WORDS AND PHRASES
SD	I.7.1	Version control [Document and Text Processing]	SD	C.1.1	Von Neumann architectures [retired January 1998]
SD	D.2.7	Version control [Software Engineering]	SD	D.2.5	Walk-throughs, Code inspections and [Software Engineering]
SD	D.3.2	Very high-level languages	SD	H.2.7	Warehouse and repository, Data [Database Administration]
SD	C.5.1	Very large computers [Computer Systems Organization]	SD	I.5.4	Waveform analysis [Pattern Recognition]
SD	B.7.1	Very large scale integration	SD	G.1.2	Wavelets and fractals [Approximation; Numerical Analysis]
SD	G.1.3	Very large systems, Sparse, structured, and [Numerical Analysis]	SD	H.5.3	Web-based interaction [Information Interfaces and Presentation]
SD	I.2.10	Video analysis [Vision and Scene Understanding]	SD	H.3.5	Web-based services [Information Storage and Retrieval]
SD	H.5.1	Video (e.g., tape, disk, DVI) [Information Interfaces and Presentation]	***	C.2.5	Wide-Area Networks, Local and
SD	H.4.3	Videoconferencing, Computer conferencing, teleconferencing, and	SD	I.4.4	Wiener filtering [retired January 1998] [Image Processing and Computer Vision]
SD	H.4.3	Videotex	SD	D.4.9	Window managers [Operating Systems]
SD	I.3.3	Viewing algorithms [Computer Graphics]	SD	H.5.2	Windowing systems
SD	I.3.4	Virtual device interfaces [Computer Graphics]	SD	C.2.1	Wireless communication [Computer-Communication Networks]
SD	B.3.2	Virtual memory [Memory Structures]	SD	H.4.1	Word processing [Office Automation]
SD	D.4.2	Virtual memory [Operating Systems]	SD	K.8.1	Word processing [Personal Computing]
SD	H.5.1	Virtual realities, Artificial, augmented, and	SD	K.4.3	Work, Computer-supported collaborative [Organizational Impacts]
SD	I.3.7	Virtual reality	SD	H.5.3	Work, Computer-supported cooperative [Information Interfaces and Presentation]
SD	K.6.5	Viruses [Management of Computing and Information Systems]	SD	D.2.2	Workbench, Programmer [retired January 1998]
SD	D.4.6	Viruses [Operating Systems]	SD	D.2.6	Workbench, Programmer [Software Engineering]
SD	I.3.7	Visible line/surface algorithms [Computer Graphics]	SD	I.2.9	Workcell organization and planning [Robotics]
***	I.2.10	Vision and Scene Understanding [Artificial Intelligence]	SD	H.4.1	Workflow management [Office Automation]
SD	I.5.4	Vision, Computer [Pattern Recognition]	SD	A.0	Works, General literary
**	I.4	Vision, Image Processing and Computer	SD	C.5.3	Workstation [Computer System Implementation]
***	D.1.7	Visual Programming	SD	K.6.5	Worms [Management of Computing and Information Systems]
SD	I.6.8	Visual [Simulation and Modeling]	SD	D.4.6	Worms [Operating Systems]
SD	C.1.1	VLIW architectures, RISC/CISC,	SD	B.2.2	Worst-case analysis [retired January 1998] [Arithmetic and Logic Structures]
***	C.5.4	VLSI Systems [Computer System Implementation]	SD	B.4.4	Worst-case analysis [retired January 1998] [Input/Output and Data Communications]
SD	B.7.1	VLSI (very large scale integration) [Integrated Circuits]	SD	B.3.3	Worst-case analysis [retired January 1998] [Memory Structures]
SD	B.4.2	Voice [Input/Output Devices]	SD	B.1.1	Writable control store [retired January 1998] [Hardware]
SD	H.5.2	Voice I/O [Information Interfaces and Presentation]	SD	H.2.3	Writers, Report [Database Management]
SD†	B.4.1	Voice Receivers [retired January 1998] [Data Communications Devices]	SD	D.3.4	Writing systems, Translator [Processors]
SD	G.1.9	Volterra equations			
SD	G.1.8	Volume methods, Finite [Partial Differential Equations]			
SD	I.4.10	Volumetric [Image Processing and Computer Vision]			