

# Recent IBM patents

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*The following patents were recently issued by the countries in which the inventions were made. For U.S. patents, titles and names supplied to us by the U.S. Patent Office are reproduced exactly as they appear on the original published patent.*

## Federal Republic of Germany

39 29 137.5	W. G. Erlmann	Method of Continuously Removing and Obtaining Ethylene Diamine Tetraacetic Acid (EDTA) from the Process Water of Electroless CoP
3,580,909,408	A. Blum	Test & Diagnostic Arrangement for Digital Computers
3,581,758,508	W. Zapka	Error-Corrected Corpuscular Beam Lithography
3,581,941,308	D. Pietsch, H. Moritz, J. Wuestenhagen, and J. Ziegler	Process for Producing a Photoresist Pattern
3,675,766,708	G. Goldrian, L. Fischer, and V. Zimmermann	Revolving Endless Bands Comprising Means for Compensating for a Displacement Perpendicular to their Direction of Movement
3,675,925,208	H. Schettler, O. Wagner, W. Loehlein, and W. Lohlein	Non-Clocked Static Memory Cell
3,677,000,008	B. Gantz and W. Bruegmann	Elastic Backstop for a Print Hammer Actuator in an Impact Printer
3,677,005,108	J. Kempf, J. Keyser, K. Asch, and W. Zapka	Mask for Ion Electron or X-Ray Lithography and Method of Making It
3,677,601,708	A. Blum, K. Najmann, and M. Briska	Integrated Silicon Wiring System for VLSI
3,677,986,508	H. Schettler, O. Wagner, R. Zuehlke, and T. Ludwig	Method for Digital Slope Control of Output Signals of Power Amplifiers in Semiconductor Chips
3,678,296,308	F. Druschke	Surface Treatment Composition for Glass Fibers, Method of Coating Glass Fibers with Said Composition, and Method of Preparing Glass

## France

212,030	F. Maddens	Devise for Detecting a Data Signal Energy Drop
212,031	J. Calvignac and P. Secondo	Dynamic Bandwidth Allocation Mechanism Between Circuit Slots and Packet Bit Stream in a Communication Network
214,352	J. Calvignac and P. Secondo	Adaptive Packet/Circuit Switched Transportation Method and System
215,992	C. Poiraud, D. Sazbon-Natansohn, and J. Picon	Method for Storing the Control Code of a Processor Allowing Effective Code Modification and Addressing
226,688	J. Calvignac, J. M. Munier, and M. Bouillot	Serial Link Adapter for a Communication Controller
241,622	J. Calvignac, J. M. Munier, and M. Bouillot	An Efficient Transmission Mechanism Integrating Data and Non-coded Information
243,563	J. Calvignac, J. M. Munier, and M. Bouillot	Non-Coded Information and Companion Data Switching Mechanism
244,544	D. Dalbousiere, K. Barker, and M. Costes	Very High Speed Line Adapter for a Communication Controller
320,556	B. Denis, C. Akrou, P. Coppens, and P. Y. Urena	Super Lift

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**Japan**

1,578,780 M. Segawa Japanese Wordprocessor

**Sweden**

463,213 P. H. Sundstrom Method and Device for Providing an Impact Resistant Surface on a Metal Substrate

**Switzerland**78,943 D. Ramm and J. Bruck Method and Apparatus for Automated Optical Inspection of Printed Circuits  
252,174 C. Gerber and G. K. Binnig Coarse-Approach Positioning Device**United Kingdom**166,043 J. P. Woodley, R. M. West, and V. P. Thomas MTL Storage Cell with Inherent Output Multiplex Capability  
179,955 D. C. Teale and J. Dunsmore Robotic Assembly System  
193,663 G. Bailey and M. Miessler Video Display System  
200,172 A. S. Murphy and R. A. Cottrell Image Transformations on an Interactive Raster Scan or Matrix Display  
213,246 A. J. Morrish, G. J. Cockburn, and J. H. Wells Interlaced Colour Cathode Ray Tube Display with Reduced Flicker  
222,939 C. P. Hatchett, F. E. Castle, J. S. Heath, and M. R. Hatchett Disk File with In-Hub Motor  
243,543 C. D. Wilson, G. Wilson, and G. J. Sarvary Robotic Assembly Apparatus with Robot Tool for Placing a Plurality of Component Parts on a Workpiece  
246,371 E. L. Newman Integrated Injection Logic Output Circuit  
2,006,420 M. H. Sharp A Data Storage Device  
2,201,316 D. A. Clarke Display System with Symbol Font Memory  
2,204,131 M. H. Miessler and R. Pascual Graphics Input Tablet  
2,204,216 D. A. Clarke and R. W. Farr Curve Generation in a Display System**United States**4,926,490 T. Mano Method and Apparatus for Recognizing Characters on a Document  
4,927,387 D. F. Eckler, J. R. Mankus, F. J. Ripp, and G. J. Saxenmeyer, Jr. Method and Device for Connection to Wires in a Flexible Cable  
4,927,477 T. L. Ellis Method for Making a Flush Surface Laminate for a Multilayer Circuit Board  
4,927,779 S. H. Dhong, N. C. Lu, and W. H. Henkels Complementary Metal-Oxide-Semiconductor Transistor and One-Capacitor Dynamic-Random-Access Memory Cell and Fabrication Process Therefor  
4,927,983 A. L. Jones, K. A. Snyder, and P. E. Winkler Circuit Board  
4,928,061 M. S. Dampier, R. J. Prilik, and N. R. Rapoport Multi-Layer Printed Circuit Board  
4,928,147 G. W. Baumann, A. N. Garthwaite, and C. D. Hutchings Printers with Simplex and Duplex Cut Sheet Fusing  
4,928,193 R. J. Agoglia, R. A. Dayan, and B. A. Smith Diskette Drive Type Determination  
4,928,207 G. Chrysler, R. C. Chu, and R. E. Simons Circuit Module with Direct Liquid Cooling by a Coolant Flowing Between a Heat Producing Component and the Face of a Piston  
4,928,222 J. J. Vriezen and R. N. Niemeyer Enhanced Semaphore Architecture  
4,928,233 D. B. Millis System for Providing Three Dimensional Object Descriptions  
4,928,237 R. Bealkowski, R. A. Dayan, D. J. Doria, S. G. Kinnear, J. I. Krantz, R. B. Liverman, G. G. Sotomayor, D. D. Williams, and G. A. Vaaskauckas Computer System Having Mode Independent Addressing  
4,928,280 M. C. Nielson and K. R. Woodruff Fast Processor for Multi-Bit Error Correction Codes  
4,928,306 G. Biswas, D. C. Black, M. G. Duncan, G. R. Key, G. D. Leak, and R. D. Whittington Dynamically Configurable Telephone  
4,929,100 W. A. Patterson, D. H. Tong, and J. R. Wooden Taut Band Piezoelectric Actuator for Wire Matrix Printing Elements  
4,929,301 N. Beechko Anisotropic Etching Method and Etchant  
4,929,918 P. W. Chung, R. L. Gee, L. C. K. Lang, and P. Saber Setting and Dynamically Adjusting VCO Free-Running Frequency at System Level  
4,929,939 A. M. Varma and C. J. Georgiou High-Speed Switching System with Flexible Protocol Capability  
4,929,940 P. A. Franaszek and C. J. Georgiou Collision Crossbar Switch

4,929,982	M. Ainoya, T. Ishihara, T. Kanno, T. Kikuchi, S. Mori, S. Nobumori, and J. Shirakawa	Sheet Path in an Electrophotographic Printer
4,930,069	S. P. Batra, W. E. Hammer, G. A. Lushinsky, D. W. Marquart, W. H. Schwane, and F. J. Ziecina	Mechanism and Method for Transferring Data Between Bus Units Having Varying Master and Slave DMA Capabilities
4,930,159	J. K. Kravitz and C. C. Palmer	NETBIOS Name Authentication
4,931,310	M. Anschel and W. P. Pawlowski	Process for Treating the Surface of Polyimides to Improve Properties to Receive Metal Layer
4,931,348	D. R. Klueh, J. W. Morris, K. G. Urdahl, and M. K. Zimmer	Reduced Thickness Resin Substrate in Film Printing Ribbon
4,931,379	W. R. Brunsvold, W. E. Conley, D. M. Crockatt, and N. E. Iwamoto	High Sensitivity Resists Having Autodecomposition Temperatures Greater than About 160° C.
4,931,606	D. A. Bruner	Key Switch Mechanism and Membrane Actuator
4,931,887	S. G. Hegde, R. A. Scranton, and E. J. Yarmchuk	Capacitive Measurement and Control of the Fly Height of a Recording Slider
4,931,970	P. W. Cook and R. K. Montoye	Apparatus for Determining If There Is a Loss of Data During a Shift Operation
4,931,971	P. W. Cook and R. K. Montoye	Partial Decode Shifter/Rotator
4,931,985	R. J. Glaise and P. Huon	Programmable Sequencing Device for Controlling Fast Complex Processes
4,931,989	J. C. Rhodes, Jr., V. S. Moore, W. R. Kraft, and J. W. Barrs	Microword Generation Mechanism Utilizing a Separate Programmable Logic Array for First Microwords
4,932,023	J. E. Geyer, J. K. Lee, V. R. Norman, and K. T. Wilson	Frame Stripping Protocol for Early Token Release in a Ring Communication Network
4,932,883	L.-C. Hsia, T. P. McAndrew, and F. E. Stuebner	Elastomeric Connectors for Electronic Packaging and Testing
4,933,045	T. H. DiStefano and S. G. Ehrenberg	Thin Film Multilayer Laminate Interconnection Board Assembly Method
4,933,302	G. Costrini and C. G. Jambotkar	Formation of Laser Mirror Facets and Integration of Optoelectronics Inspection System Utilizing Retarding Field Back Scattered Electron Collection
4,933,552	K.-L. Lee	In-Line Process Monitors for Thin Film Wiring
4,933,635	A. Deutsch, M. M. Oprysko, J. J. Ritsko, L. B. Rothman, H. L. Yeh, and A. Zupicich	
4,933,672	A. R. Blanc, P. J. Jeannot, and R. L. Leotard	Data Transmission System with a Digital Alarm Facility
4,933,847	V. Chau, H. F. Frye, M. R. Funk, L. A. McMahon, and B. R. Petz	Microcode Branch Based Upon Operand Length and Alignment
4,933,848	D. J. Haderle and J. A. Watts	Method for Enforcing Referential Constraints in a Database Management System
4,933,880	K. W. Borgendale, M. D. Flannery, M. B. Geiger, and A. D. Ross	Method for Dynamically Processing Non-Text Components in Compound Documents
4,933,883	W. B. Pennebaker and J. L. Mitchell	Probability Adaptation for Arithmetic Coders
4,933,889	S. N. Meshkat, L. R. Nackman, and V. Srinivasan	Method for Fine Decomposition in Finite Element Mesh Generation
4,933,930	Y.-C. Lien and R. A. Guerin	High Speed Switch as for an Optical Communication System
4,933,957	F. Bottau, C. Galand, Jean Menez, and M. Rosso	Low Bit Rate Voice Coding Method and System
4,934,102	M. A. Leach, J. K. Paulsen, B. J. Machesney, D. J. Venditti, and C. R. Whitaker	System for Mechanical Planarization
4,934,309	P. G. Ledermann and L. T. Nguyen	Solder Deposition System
4,934,778	J. B. Gillett	Zero Insertion Force Optical Connector
4,935,278	M. T. Krounbi, A. M. Patlach, and I. L. Sanders	Thin Film Magnetic Recording Disk and Fabrication Process
4,935,646	C. W. Peterson, Jr. and S. J. Quinlan	Fully Static CMOS Cascode Voltage Switch Logic Systems
4,935,797	C. G. Jambotkar	Heterojunction Bipolar Transistors
4,935,882	W. B. Pennebaker and J. L. Mitchell	Probability Adaptation for Arithmetic Coders
4,935,953	A. Appel and M. Zohar	Cyclic Video Region Transmission for Videoconferencing Systems
4,937,006	H. R. Bickford, R. R. Horton, I. C. Novan, M. J. Palmer, and J. C. Zzyo	Method and Apparatus for Fluxless Solder Bonding
4,937,469	T. R. Larson and L. L. Tretter	Switched Current Mode Driver in CMOS with Short Circuit Protection
4,937,563	G. A. Shekita and R. C. Williams	Positioning Scheme for Multiple Mounting Positions of Input/Output Devices
4,937,567	M. A. Orr, C. L. Storm, and J. M. White	Communication Adapter for Store Loop Communication System
4,937,640	F. F. Fang and G. A. Sai-Halasz	Short Channel MOSFET
4,937,707	D. G. McBride and T. I. Ellis	Flexible Carrier for an Electronic Device

4,937,708	T. K. Bristol	Computer Assembly
4,937,736	A. Chang, J. Cocke, M. F. Mergen, and R. R. Oehler	Memory Controller for Protected Memory with Automatic Access Granting Capability
4,937,737	W. H. Schwane and F. J. Ziecina	Process Transparent Multi Storage Mode Data Transfer and Buffer Control
4,937,760	B. J. Beitel, R. D. Gordon, M. C. Hao, S. V. Kauffman, R. L. Obermarck, A. M. Sherman, L. C. Thieme, G. E. Trivett, and L. C. Trivett	Method for Sharing Common Values Implicitly Among Communicating Generative Objects
4,937,800	D. M. Oldham	Method of Recording Using Selective-Erasure Directions for Magnetooptic Record Members
4,937,825	C. P. Ballard, R. Bell, W. V. Evans, Jr., C. J. Frantz, J. D. Hajian, W. G. Kreps III, R. D. Martin, B. A. Smith, M. E. Sprague, J. B. Staton III, J. G. Stevenson, P. N. Turcu, and R. C. Williams	Method and Apparatus for Diagnosing Problems in Data Communication Networks
4,937,930	J. N. Humenik, E. F. Miersch, C. H. Perry, and J. S. Wilczynski	Method for Forming a Defect-Free Surface on a Porous Ceramic Substrate
4,938,351	W. D. Lewis	Modular Electrical Component Packaging System
4,939,389	D. T. Cox, D. L. Guertin, C. L. Johnson, B. G. Rudolph, M. E. Turner, and R. R. Williams	VLSI Performance Compensation for Off-Chip Drivers and Clock Generation
4,939,559	D. J. DiMaria and D. W. Dong	Duel Electron Injector Structures Using a Conductive Oxide Between Injectors
4,939,563	F. F. Fang and D. D. Tang	Double Carrier Deflection High Sensitivity Magnetic Sensor
4,939,567	D. M. Kenney	Trench Interconnect for CMOS Diffusion Regions
4,939,570	H. R. Bickford, L. S. Mok, and M. J. Palmer	High Power, Pluggable Tape Automated Bonding Package
4,939,598	J. E. Kulakowski and R. J. Means	Managing Data Storage Space on Large Capacity Record Media
4,939,599	T. J. Chainer and E. J. Yarmchuk	Method and Apparatus for Measuring Dynamic Track Misregistration
4,939,668	G. T. Brown, D. B. Millis, P. R. Reynolds, and R. P. Nowak	System for Designing Intercommunications Networks
4,939,735	K. J. Fredericks, J. J. Kubik, M. R. Wiegand, and L. H. Wilson	Information Handling System Having Serial Channel to Control Unit Link
4,939,837	M. T. Krounbi	Batch Fabrication Process for Magnetic Heads
4,940,348	A. L. Akers, R. M. Carpenter, W. D. Freeman, and J. E. Passafiume	Platen Controlled Sheetfeed Permitting Back-Up for Erasure
4,940,511	R. E. Fontana, Jr., J. K. Howard, J. H. Lee, and H. Lefakis	Method for Making a Magnetoresistive Read Transducer
4,940,606	H. Hilgers, R. Morbitzer, and J. Windeln	Method of Increasing the Lubricant Retention of Magnetic Disks
4,940,651	L. M. Brown, J. D. Gelorme, J. P. Kuczynski, and W. H. Lawrence	Method for Patterning Cationic Curable Photoresist
4,941,086	T. A. Kriz	Program Controlled Bus Arbitration for a Distributed Array Processing System
4,941,102	M. J. Darnell, J. M. Hary, and R. J. Quinn	Two-Step Debugger for Expert Systems
4,941,115	J. D. Nihart and S. M. Prabhakar	Hand-Held Tester for Communications Ports of a Data Processor
4,941,120	J. D. Brown, D. L. Freerksen, S. A. Hilker, and D. L. Stasiak	Floating Point Normalization and Rounding Prediction Circuit
4,941,139	J. E. Kulakowski, R. J. Means, D. M. Oldham, and M. Tayefeh	Checking Media Operations and Recording During Optical Recording
4,941,152	Y. Medan	Signal Coding Process and System for Implementing Said Process
4,941,175	M. A. Enescu and J. Lum	Tamper-Resistant Method for Authorizing Access to Data Between a Host and a Predetermined Number of Attached Workstations
4,941,176	S. M. Matyas, D. G. Abraham, D. B. Johnson, R. K. Karne, A. V. Le, R. Prymak, J. Thomas, J. D. Wilkins, and P. C. Yeh	Secure Management of Keys Using Control Vectors
4,941,377	T. Ishihara and T. Kanno	Apparatus for Feeding a Continuous Form and Cutforms
4,941,724	D. V. Couden, P. C. Karr, and L. Balliet	Optical Fiber Connection Utilizing Photodiode Means
4,941,753	H. K. Wickramasinghe	Absorption Microscopy and/or Spectroscopy with Scanning Tunneling Microscopy Control
4,941,829	M. W. Estes, I. R. Eisen, and A. M. Peters	Method for Providing a Dynamic Tutorial Display
4,941,830	W. J. Tkazyik and R. G. Urfer	Edge Design for Printed Circuit Board Connector
4,941,835	C. Lasmayoux and A. Pantani	Machine-Pluggable Electronic Package Having a Mechanical Interlock

4,941,941	L. W. Austin and H. G. Linde	Method of Anisotropically Etching Silicon Wafers and Wafer Etching Solution
4,942,108	W. M. Moreau, K. N. Chiong, M.-F. Chow, and N. W. Snyder	Process of Making Diazoquinone Sensitized Polyamic Acid Based Photoresist Compositions Having Reduced Dissolution Rates in Alkaline Developers
4,942,316	H. Béranger, A. Brunin, B. Caplier, and J.-P. Rousseau	Cascode Logic Circuit Including a Positive Level Shift at the Input of the Top Logic Stage
4,942,390	P. K. Do, K. K. Kellam, R. C. Tong, R. W. Willis, and C. E. Wyke	Method and Apparatus for Generating a Character Image
4,942,437	A. B. Fowler and G. L. Timp	Electron Tuned Quantum Well Device
4,942,548	S. Vassiliadis	Parallel Adder Having Removed Dependencies
4,942,572	J.-L. Picard	Process and Device for High Speed Polling
4,943,242	R. F. Frankeny, J. Haj-ali-Ahamadi, R. L. Imken, and R. Wustrau	Zero Insertion Force High Density Connector System
4,943,602	W. T. Baker, Jr., C. M. Buffum, C. H. Jolissaint, and G. W. Kerlin	Coordinated Transfer of Voice and Information Through a Network of Digital Switches
4,943,753	J. F. Hevesi	Magnetic Shunt for Deflection Yokes
4,943,769	S. D. Golladay, F. J. Hohn, D. J. Hutson, W. D. Meisburger, and J. Rasch	Apparatus and Method for Opens/Shorts Testing of Capacitively Coupled Networks in Substrates Using Electron Beams
4,943,815	C. S. Aldrich, J. A. Craft, J. P. Harden, S. R. Komplin, W. S. Rousey, P. M. Shah, E. D. Ward II, B. L. Wilzbach, and T. L. King	Laser Printer with Light-Exposure Prevention
4,943,816	A. H. Sporer	High Quality Thermal Jet Printer Configuration Suitable for Producing Color Images
4,943,875	J. R. Reidenbach and R. E. Schopp	Magnetic Disk File Head Suspension Assembly Mounting Means
4,943,908	P. G. Emma, J. W. Knight III, J. H. Pomerene, R. N. Rechtschaffen, and F. J. Sparacio	Multiple Branch Analyzer for Prefetching Cache Lines
4,943,913	C. E. Clark	Operating System Accessing Control Blocks by Using Home Address Space Segment Table to Control Instruction and Operand Fetch and Store Operations
4,943,945	F. S. Lai	Reference Voltage Generator for Precharging Bit Lines of a Transistor Memory
4,943,984	G. G. Pechanek, D. J. Shippy, M. C. Snedaker, and S. S. Woodward	Data Processing System Parallel Data Bus Having a Single Oscillator Clocking Apparatus
4,943,996	W. T. Baker, Jr., C. M. Fubbum, C. H. Jolissaint, and G. W. Kerlin	Shared Access to Voice and Information
4,944,682	J. E. Cronin, S. F. Cronin, C. W. Kaanta, C. W. Koburger III, S. E. Luce, and D. J. Pearson	Method of Forming Borderless Contacts
4,944,836	K. D. Beyer, W. L. Guthrie, S. R. Makarewicz, E. Mendel, W. J. Patrick, K. A. Perry, W. A. Pliskin, J. Riseman, P. M. Schaible, and C. L. Standley	Chem-Mech Polishing Method for Producing Coplanar Metal/Isulator Films on a Substrate
4,945,246	D. E. Davis, C. T. Ho, J. E. Lieberman, H. C. Pfeiffer, and M. A. Sturans	Tri-Deflection Electron Beam System
4,945,399	M. B. Brown, W. S. Ebert, L. T. Olson, and R. R. Sloma	Electronic Package with Integrated Distributed Decoupling Capacitors
4,945,427	E. A. Cunningham	Magnetic Disk Recording with Variable Track Width and Variable Track Density
4,945,428	E. J. Waldo	Method of Managing a Media Library
4,945,435	J. F. Boigenzahn, D. E. Bratvold, J. J. Rigotti, and L. R. Tufty	Noninfluencing Fastener for Disk Drives
4,945,474	L. C. Elliott, G. R. Horn, L. E. Jordan II, F. E. Levine, C.-F. Shih, and W. W. Myre, Jr.	Method for Restoring a Database After I/O Error Employing Write-Ahead Logging Protocols
4,945,480	C. E. Clark, A. G. Ganek, M. G. Mall, and D. R. Page	Data Domain Switching on Program Address Space Switching and Return
4,945,509	S. B. Barrett, J. Bula, and A. A. Dean	Dual Look Ahead Mask Generator
4,945,538	A. M. Patel	Method and Apparatus for Processing Sample Values in a Coded Signal Processing Channel
4,945,828	C. F. Gabriel, R. J. Kisacky, J. Mako, and L. A. Stone	Pulley for Driving a High Performance Printer
4,945,857	J. C. Marinace	Plasma Formation of Hydride Compounds
4,946,259	H. Matino, T. Ueki, Y. Oana, and M. Kajimura	Color Liquid Crystal Display and Method of Manufacture
4,946,708	A. B. Habich, K. Hermann, R. E. Hunt, and V. E. Whitehead	Pin Transfer Adhesive Application for Surface Mount Component Processes

- 4,947,034 H. K. Wickramasinghe and C. C. Williams
- 4,947,316 D. E. Fisk, L. W. Pereira, and G. Radin
- 4,947,319 G. P. Bozman
- 4,947,320 R. A. Crus, R. W. Engles, D. J. Haderle, and H. W. Herron
- 4,947,344 Y. Hayashi, K. Oka, and H. Satoh
- 4,947,359 S. Vassiliadis, M. Putrino, A. E. Huffman, B. J. Feal, and G. G. Pechanek
- 4,947,369 N. G. Thoma, V. S. Moore, and W. R. Kraft
- 4,948,281 A. Werner
- 4,948,623 D. B. Beach and J. M. Jasinski
- 4,948,629 N. P. Hacker and G. W. Tyndall III
- 4,948,707 R. W. Johnson, W. H. Lawrence, G. K. Lemon, R. H. Magnuson, V. R. Markovich, R. E. Parsons, and C. J. Sambucetti
- 4,948,793 S. J. Falcone, R. M. Pheland, and D. R. Smith
- 4,948,992 E. R. Bukowski, Jr.
- 4,949,169 L. Lumelsky, S. M. Choi, and A. W. PeEVERS
- 4,949,196 N. R. Davie, M. A. Hassner, T. D. Howell, R. Karabed, and P. H. Siegel
- 4,949,254 D. U. Shorter
- 4,949,255 J. A. Gerth and M. T. Wheatley
- 4,949,278 K. E. Davies, W. C. Geddes, M. J. Kline, A. T. Maluta, B. E. Naylor, H. Scofield, and J. N. Stevens
- 4,949,300 P. J. Christenson, C. W. Martens, D. G. Wenz, and D. N. Youngers
- 4,949,302 H. H. Arnold and T. E. Hintz
- 4,949,360 G. R. Martin
- 4,949,373 W. T. Baker, Jr., C. M. Buffum, C. H. Jolissaint, and G. W. Kerlin
- 4,949,651 B. Frank and U. Hengstler
- 4,950,889 R. A. Budd, B. D. Gibson, S. Kantor, W. A. Overby, and M. J. Stanich
- 4,950,927 G. Boudon, A. Brunin, B. Denis, P. Mollier, and P. Stoppa
- 4,951,088 J. C. Bonvallet, J. R. Brewster, J. R. Champion, and K. S. Shouldice
- 4,951,115 David L. Haramé, G. L. Patton, and J. M. C. Stork
- 4,951,195 R. G. Fogg, Jr. and A. M. de Nicolas
- 4,951,225 H. S. Lee and M. I. Schor
- 4,951,229 P. D. DiNicola, F. N. Dumas, and J. J. Lawless
- 4,951,231 B. Dickinson, D. J. Friend, I. G. Holden, P. H. Jackson, and R. J. Padzieski
- 4,951,284 K. Abdel-Ghaffar and M. A. Hassner
- 4,951,859 J. V. Gatto and J. T. Wilson III
- 4,952,818 C. K. Erdelyi and T. P. Reed
- 4,952,863 A. L. Sartwell and E. P. Thoma
- 4,952,930 P. A. Franaszek and C. J. Georgiou
- 4,953,077 M. J. Alvarez II and E. W. Jackson, Jr.
- 4,953,081 B. J. Feal, D. J. Hanrahan, and D. J. Shippy
- 4,953,180 J. Fieschi, M. Glisse, and J.-F. Le Pennec
- Apertureless Near Field Optical Microscope
- Internal Bus Architecture Employing a Simplified Rapidly Executable Instruction Set
- Arbital Dynamic Cache Using Processor Storage
- Method for Referential Constraint Enforcement in a Database Management System
- Method of Rotating Image Data in a Partitioned Display Buffer Apparatus and Method for Prediction of Zero Arithmetic/Logic Results
- Microword Generation Mechanism Utilizing a Separate Branch Decision Programmable Logic Array
- Keyboard Protected Against Vandalism and Spill
- Method of Chemical Vapor Deposition of Copper, Silver, and Gold Using a Cyclopentadienyl/Metal Complex
- Deposition of Diamond Films
- Conditioning a Non-Conductive Substrate for Subsequent Selective Deposition of a Metal Thereon
- Ultraviolet Light Curable Composition and Use Thereof
- Static Method to Negate Offset Voltages in CMOS Operational Amplifiers
- Audio-Video Data Interface for a High Speed Communication Link in a Video-Graphics Display Window Environment
- Method and Apparatus for Asymmetrical RLL Coding
- Method to Manage Concurrent Execution of a Distributed Application Program by a Host Computer and a Large Plurality of Intelligent Work Stations on an SNA Network
- Message Interface and Method for Recursive Calling Between Interpretive and Compiled Computer Processes
- Expert System Architecture
- Sharing Word-Processing Functions Among Multiple Processors
- Message File Formation for Computer Programs
- Synchronizing Circuit
- Host Load Balancing
- Locking Means for a Gate in an Automatic Teller Machine
- Chromatic and Misalignment Compensation in a Multiple Beam Laser Scanning System
- Logic Circuits for Forming VLSI Logic Networks
- Toner Mass Developed Control Ratio Modification System
- Complementary Transistor Structure and Method for Manufacture
- Condition Code Graph Analysis for Simulating a CPU Processor Updating Pattern-Matching Networks
- Apparatus and Method for Managing Multiple Images in a Graphic Display System
- Image Display System with Transformation Operation Ordering
- Method and Means for Correcting Random and Burst Errors
- Anti-Flutter Tractor Door
- Transmission Line Driver Circuits
- Voltage Regulator with Power Boost System
- Multipath Hierarchical Network
- Accelerated Data Transfer Mechanism Using Modified Clock Cycle
- Least Recently Used Arbiter with Programmable High Priority Mode and Performance Monitor
- Bit Rate Adaptation System for Digital Transmission Systems

4,953,209	J. H. Ryder, Sr. and S. R. Smith	Self-Verifying Receipt and Acceptance System for Electronically Delivered Data Objects
4,953,929	J. F. Basista, W. M. Ma, and J. J. Squires	Fiber Optic Connector Assembly and Adapter for Use Therewith
4,954,142	J. W. Carr, L. D. David, W. L. Guthrie, F. B. Kaufman, W. J. Patrick, K. P. Rodbell, R. W. Pasco, and A. Nenadic	Method of Chemical-Mechanical Polishing an Electronic Component Substrate and Polishing Slurry Therefor
4,954,226	I. S. Mahmoud	Additive Plating Bath and Process
4,954,370	I. S. Mahmoud	Electroless Plating of Nickel on Anodized Aluminum
4,954,457	C. G. Jambotkar	Method of Making Heterojunction Bipolar Transistors
4,954,578	M. Ree, S. A. Swanson, W. Volksen, and D. Y. Yoon	Fine Domain Composite Films of Polyimide Mixtures
4,954,711	H.-W. Fink, R. Morin, H. Schmid, and W. Stocker	Low-Voltage Source for Narrow Electron/Ion Beams
4,954,731	S. H. Dhong, W. Hwang, and N. C. Lu	Wordline Voltage Boosting Circuits for Complementary MOSFET Dynamic Memories
4,954,738	G. J. Gaudenzi	Current Source Technology
4,954,821	J. P. Gray, J. G. Knauth, D. P. Pozefsky, and L. M. Rafalow	Method of Establishing Transmission Group Numbers for Network Links
4,954,854	S. H. Dhong, W. Hwang, and N. C.-C. Lu	Cross-Point Lightly-Doped Drain-Source Trench Transistor and Fabrication Process Therefor
4,954,907	K. Takita	Head Positioning Control Method and System
4,954,950	W. A. Freeman, J. S. Pogorzelski, D. W. Solie, and J. H. Wilson	Terminal Communications Circuit
4,954,965	J. M. Johnson, J. A. Rocke, and D. K. R. Udupa	Enhanced Frame Utilization for CSMA/CD Communication Protocol
4,956,022	I. S. Mahmoud	Chemical Polishing of Aluminum Alloys
4,956,197	S. V. Babu, N.-H. Lu, and G. W. Jones	Plasma Conditioning of a Substrate for Electroless Plating
4,956,313	W. J. Cote, C. W. Kaanta, M. A. Leach, and J. K. Paulsen	Via-Filling and Planarization Technique
4,956,605	H. R. Bickford, W. L. Boland, D. P. Morris, and T. C. Reiley	Tab Mounted Chip Burn-In Apparatus
4,956,638	S. P. Larky, B. D. Lucas, D. H. McCabe, and T. K. Rodgers	Display Using Ordered Dither
4,956,766	D. Dhopeswarkar, S. A. Hightower, M. A. Mathis, and J. W. Mehl	Systems for Inhibiting Errors Caused by Memory Cartridge Insertions/Removal Using an Idle Loop
4,956,774	A. Shibamiya and M. R. Zimowski	Data Base Optimizer Using Most Frequency Values Statistics
4,956,791	H. S. Lee and M. I. Schor	Merging Pattern-Matching Networks Including RETES
4,956,803	G. E. Tayler and R. E. Wagner	Sequentially Processing Data in a Cached Data Storage System
4,956,806	A. S. Crowe and D. T. Lai	Method and Apparatus for Editing Source Files of Differing Data Formats Using an Edit Tracking File
4,956,808	D. E. Aakre, R. L. Hoffman, D. N. Moen, and Q. G. Schmierer	Real Time Data Transformation and Transmission Overlapping Device
4,956,810	A. M. Sherman and P. C. Yanker	High Speed Method for Data Transfer
4,957,380	P. J. Gerstle, M. A. Mathis, D. R. Smith, and K. R. Stilz	Tab Adjust Function for an Electronic Typewriter to Permit the Shifting of Tabs from a First to a Second Format
4,957,875	S. Akbar, P. L. Kroesen, S. Ogura, and N. Rovedo	Vertical Bipolar Transistor
4,958,093	J. S. Kosson and M. J. McLennan	Voltage Clamping Circuits with High Current Capability
4,958,195	R. V. D. Firth III, Q. C. Hunter, Jr., R. A. Kohlin, and W. W. Sitton	Method and Apparatus for Fusing Envelopes
4,958,243	S. C. Chen and L. D. Provazek	Phase Discrimination and Data Separation Method and Apparatus
4,958,273	P. E. Anderson, R. J. Bunten, W. T. Higgins, R. J. Hrubby, and S. Mirabeau	Multiprocessor System Architecture with High Availability
4,958,278	S. Meguro	Method for Loading Data or Program to a Plurality of Terminal Stations
4,959,540	B. Fan, M. M. Oprysko, and R. A. Rand	Optical Clock System with Optical Time Delay Means
4,959,773	J. D. Landers, Jr.	Adapter for Attaching I/O Devices to I/O Communications with Alternating Read and Write Modes Link
4,959,832	P. H. Bardell, Jr.	Parallel Pseudorandom Pattern Generator with Varying Phase Shift
4,960,491	H. G. Youlton	Process for Etching Organic Polymeric Materials
4,960,609	A. M. Homola, L.-J. J. Lin, and D. D. Saperstein	Process for Bonding Lubricant to a Thin Film Magnetic Recording Disk
4,960,634	C. M. Boyko, C. N. Johnston, J. R. Loomis, C. E. Samuelson, and R. A. Schumacher	Epoxy Composition of Increased Thermal Conductivity and Use Thereof
4,960,717	V. J. Silvestri and P. J. Tsang	Fabrication of Dielectrically Isolated Integrated Circuit Devices

4,960,726	J. S. Lechaton and D. J. Schepis	BICMOS Process
4,961,121	H. Astheimer, H. Friedmann, and H. Schuy	Air Bearing Slider Rail Design with Trumpet-Shaped Rail Portion
4,961,134	R. A. Crus, D. J. Haderle, and J. Z. Teng	Method for Minimizing Locking and Reading in a Segmented Storage Space
4,961,140	G. G. Pechanek, D. J. Shippy, M. C. Snedaker, and S. S. Woodward	Apparatus and Method for Extending a Parallel Synchronous Data and Message Bus
4,961,141	M. E. Hopkins and H. S. Warren, Jr.	Generating Efficient Code for a Computer with Dissimilar Register Spaces
4,961,157	H. H. Nick, B. E. Osborn, and C. Y. Wu	Method and Apparatus for Electrostatic Discharge Testing of Machines which Repetitively Execute a Storage Program with a Plurality of Program Steps
4,961,162	M. Nguyenphu and L. E. Thatcher	Multiprocessing System for Performing Floating Point Arithmetic Operations
4,961,189	M. Cuckier, D. Pilost, and D. Rigal	Multiplexing System Setting Through Mask Registration
4,961,192	D. W. Grimes	Data Error Detection and Correction
4,961,193	P. Debord and R. Glaise	Extended Errors Correcting Device Having Single Package Error Correcting and Double Package Error Detecting Codes
4,962,058	J. C. Cronin and P. P. Lee	Process for Fabricating Multi-Level Integrated Circuit Wiring Structure from a Single Metal Deposit
4,962,086	W. J. Gallagher, E. A. Giess, A. Gupta, R. B. Laibowitz, E. J. O'Sullivan, and R. L. Sandstrom	High $T_c$ Superconductor-Gallate Crystal Structures
4,962,294	K. F. Beckham, D. C. Challener, A. Gupta, J. M. Harvilchuck, J. M. Leas, J. R. Lloyd, D. C. Long, H. Quinones, K. Seshan, and M. Shatzkes	Method and Apparatus for Causing an Open Circuit in a Conductive Line
4,962,306	R. T. Hodgson and F. K. LeGoues	Magnetically Filtered Low Loss Scanning Electron Microscopy
4,962,409	P. M. Solomon	Staggered Bandgap Gate Field Effect Transistor
4,962,416	A. L. Jones and K. A. Synder	Electronic Package with a Device Positioned Above a Substrate by Suction Force Between the Device and Heat Sink
4,962,451	D. R. Case and W. M. Conner	Cache-Effective Sort String Generation Method
4,962,468	G. M. Beauregard, L. K. Loucks, K. D. Nguyen, and R. J. Urquhart	System and Method for Utilizing Fast Polygon Fill Routines in a Graphics Display System
4,962,474	P. D. Kreiser	LSSD Edge Detection Logic for Asynchronous Data Interface
4,962,475	I. H. Hernandez and R. A. McCaskill	Method for Generating a Document Utilizing a Plurality of Windows Associated with Different Data Objects
4,962,532	C. Kasiraj and T. J. Wolf	Method for Providing Notification of Classified Electronic Message Delivery Restriction
4,962,919	I. Azuchi, H. Fujikura, Y. Haruna, R. Onomoto, and M. Nishikawa	Bill Handler
4,963,824	E. P. Hsieh, M. T. McMahon, and H. D. Schnurmann	Diagnostics of a Board Containing a Plurality of Hybrid Electronic Components
4,963,900	R. A. Budd, J. S. Goddard, and M. J. Stanich	Multiple Laser Beam Scanning Optics
4,964,036	J. B. De Azevedo, Jr. and P. N. James	Channel Hardware Diagnostic Apparatus and Method
4,964,038	P. P. R. Louis, G. M. Montanari, and R. L. Leotard	Data Processing System Having Automatic Address Allocation Arrangements for Addressing Interface Cards
4,964,069	J. C. Ely	Self Adjusting Video Interface
4,964,107	R. L. Galbraith, R. A. Richetta, and T. J. Schmerbeck	Relative Timing Precompensation of High-Speed Pulse Signals for Digital Magnetic Recording
4,964,113	J. E. Geyer, J. K. Lee, and K. T. Wilson	Multi-Frame Transmission Control for Token Ring Networks
4,964,127	J. Calvignac, M. Dauphin, R. A. Lenoir, and J.-L. Picard	Data Validity Checking Means
4,964,145	J. R. Maldonado	System for Magnification Correction of Conductive X-Ray Lithography Mask Substrates
4,964,458	E. B. Flint, K. R. Grebe, P. A. Gruber, and A. R. Zingher	Flexible Finned Heat Exchanger
4,965,217	B. H. Desilets, C.-M. Hsieh, and L. L. Hsu	Method of Making a Lateral Transistor
4,965,512	D. E. DeBar and I. J. Shah	Transient Current Peak Detector
4,965,645	P. M. Solomon	Saturable Charge FET
4,965,652	I. E. Magdo and S. Magdo	Dielectric Isolation for High Density Semiconductor Devices
4,965,654	F. A. Karner, D. W. Phelps, Jr., S. G. Starr, and W. C. Ward	Semiconductor Package with Ground Plane
4,965,677	W. B. Pennebaker, K. L. Anderson, and J. L. V. Mitchell	Compression of Binary Halftones
4,965,700	D. B. McBride	Thin Film Package for Mixed Bonding of Chips



4,965,712	W. S. Duspiva, J. B. Gillett, and J. H. Spreen	Transformer Having Plural-Turn Core
4,965,716	M. A. Sweeney	Fast Access Priority Queue for Managing Multiple Messages at a Communications Node or Managing Multiple Programs in a Multiprogrammed Data Processor
4,965,718	D. A. George and B. D. Rathi	Data Processing System Incorporating a Memory Resident Directive for Synchronizing Multiple Tasks Among Plurality of Processing Elements by Monitoring Alternation of Semaphore Data
4,965,719	K. A. Shoens and R. K. Treiber	Method for Lock Management, Page Coherency, and Asynchronous Writing of Changed Pages to Shared External Store in a Distributed Computing System
4,965,720	G. R. Mitchell, R. G. Mustain, J. H. Peterson, and L. D. Whitley	Directed Address Generation for Virtual-Address Data Processors
4,965,763	E. M. Zamora	Computer Method for Automatic Extraction of Commonly Specified Information from Business Correspondence
4,965,772	A. A. Daniel, R. E. Moore, C. J. Anderson, T. J. Gelm, R. F. Kiter, J. P. Meeham, J. G. Slevenson, and L. E. Troan	Method and Apparatus for Communication Network Alert Message Construction
4,965,789	F. Bottau, C. Galand, and M. Rosso	Multi-Rate Voice Encoding Method and Device
4,966,870	J. R. Barber, C. P. Breiten, D. Stanasolovich, and J. F. Theisen	Method for Making Borderless Contacts
4,967,104	T. Ludwig, H. Schettler, O. M. Wagner, and R. Zuhlke	Circuit for Increasing the Output Impedance of an Amplifier
4,967,151	A. E. Barish, D. A. Kiesling, M. D. Mayo, and W. A. Svarczkopf	Method and Apparatus for Detecting Faults in Differential Current Switching Logic Circuits
4,967,211	R. S. Colby, W. M. Doumas, J.-C. Fouere, R. M. Rectenwald	Printing Machine with Toner Density Balance in Solid Areas and Line Strokes
4,967,253	C. G. Jambotkar	Bipolar Transistor Integrated Circuit Technology
4,967,301	R. M. Lopez, J. L. Nix, and R. E. Weinstein	Shallow Magnetic Head Shield for Reducing Feedthrough
4,967,343	C. H. Ngai, E. R. Wassel, and G. J. Watkins	Pipelined Parallel Vector Processor Including Parallel Configured Element Processors for Processing Vector Elements in Parallel Fashion
4,967,345	K. E. Clarke, J. E. Drake, Jr., D. P. Pozefsky, and W. E. Siddall	Method of Selecting Least Weight Routes in a Communications Network
4,967,353	L. B. Brenner and P. W. VanLeer	System for Periodically Reallocating Page Frames in Memory Based Upon Non-Usage Within a Time Period or After Being Allocated
4,967,414	R. F. Lusch and J. J. Dulzo	LRU Error Detection Using the Collection of Read and Written LRU Bits
4,967,662	W. D. Clark, H. C. Lee, and J. R. O'Toole	High Speed Printer with Interposer
4,967,690	E. O. Fey, P. Haselbauer, D. Y. Jung, R. A. Kaschak, H.-D. Kiltbau, R. H. Magnuson, and R. J. Wagner	Electroless Plating with Bi-Level Control of Dissolved Oxygen, with Specific Location of Chemical Maintenance Means
4,967,950	S. P. Legg and G. Schrottke	Soldering Method
4,968,120	S. W. Depp and H. L. Ong	Multicolor Liquid Crystal Display
4,968,415	J. W. Bartha, T. Bayer, J. Greschner, G. Kraus, and G. Schmid	PECVD (Plasma Enhanced Chemical Vapor Deposition) Method for Depositing of Tungsten or Layers Containing Tungsten by in situ Formation of Tungsten Fluorides
4,968,552	H. G. Linde	Versatile Reactive Ion Etch Barriers from Polyamic Acid Salts
4,969,088	K. P. McAuliffe, V. A. Norton, G. F. Pfister, and B. D. Rathi	Hardware Mechanism for Automatically Detecting Hot-Spot References and Diverting Same from Memory Traffic in a Multiprocessor Computer System
4,969,092	D. U. Shorter	Method for Scheduling Execution of Distributed Application Programs at Preset Times in an SNA LU 6.2 Network Environment
4,969,093	B. A. Barker, T. R. Edel, and J. A. Stark	Method of Data Stream Construct Management Utilizing Format Shells and Shell Fragments
4,969,118	R. K. Montoye and J. Cocke	Floating Point Unit for Calculating $A = XY + Z$ Having Simultaneous Multiply and Add
4,969,120	M. J. Azevedo, P. W. Hunter, and D. J. Lang	Data Processing System for Time Shared Access to a Time Slotted Bus
4,969,125	M. K. Ciraula, C. M. Durham, R. E. Harrison, D. J. Jallice, D. C. Lawson, and C. L. Stephen	Asynchronous Segmented Precharge Architecture
4,969,163	G. Ungerboeck	Timing Control for Modem Receivers
4,969,198	J. S. Batchelder, R. E. Bonner, B. E. Dom, and R. S. Jaffe	System for Automatic Inspection of Periodic Patterns
4,969,259	J. S. Macek, J. R. Petrozello, and R. E. Tomek	Pin with Tubular Elliptical Compliant Portion and Method for Affixing to Mating Receptacle

- 4,969,979 B. K. Appelt, P. Bindra, R. D. Edwards, J. R. Loomis, J. M. Park, J. D. Reid, and J. R. White Direct Electroplating of Through Holes
- 4,970,098 J. Ayala-Esquilin, W. H. Dickstein, J. L. Hedrick, Jr., J. C. Scott, and A. C. Yang Coatings for Hot Roll Fusers
- 4,970,106 T. H. DiStefano and S. G. Ehrenberg Thin Film Multilayer Laminate Interconnection Boarded  
4,970,365 P. A. Chalco Method and Apparatus for Bonding Components Leads to Pads Located on a Non-Rigid Substrate
- 4,970,551 R. C. Moore Cartridge Containing a Reciprocating Photoconductor Ribbon for Serial Electrophotographic Printing
- 4,970,570 B. N. Agarwala, P. H. Palmateer, and D.-Y. Shih Use of Tapered Head Pin Design to Improve the Stress Distribution in the Braze Joint
- 4,970,579 B. D. Arldt, P. H. Bruhn, M. L. Buller, P. G. Ledermann, S. D. Linam, B. J. McNelis, L. S. Mok, and P. A. Moskowit Integated Circuit Package with Improved Cooling Means
- 4,970,610 L. F. Knappe Magnetic Disk Drive Start Procedure for Starting Reaction Torque Amplification
- 4,970,639 R. L. Diefendorf, J. A. Farrell, G. N. Kustas, G. V. Madl III, and F. M. Nesgoda Virtual Machine Architecture Independent Program Loader
- 4,970,640 B. C. Beardsley, E. P. Hefferon, K. R. Lynch, S. W. Schimke, L. R. Shipman, Jr., and S. M. Wethington Device Initiated Partial System Quiescing
- 4,970,641 P. D. Hester and W. A. Johnson Exception Handling in a Pipelined Microprocessor
- 4,970,678 R. Sladowski, D. G. Wenz, and D. N. Youngers System for Providing Context-Sensitive On-Line Documentation in a Data Processor
- 4,970,689 D. M. Kenney Charge Amplifying Trench Memory Cell
- 4,970,714 M.-S. Chen, B. C. Goldstein, H. E. Meleis, and D. A. Zumbo Adaptive Data Link Protocol
- 4,970,868 K. R. Grebe, R. E. Schwall, and H.-M. Tong Apparatus for Temperature Control of Electronic Devices
- 4,971,715 R. G. Armant, E. L. Arrington, A. C. Bhatt, D. M. Egleton, F. M. Ortloff, J. J. Sniezek, and J. A. Welsh Phenolic-Free Stripping Composition and Use Thereof
- 4,971,738 L. W. Herron, S. H. Knickerbocker, A. H. Kumar, G. Natarajan, and S. S. N. Reddy Enhanced Removal of Carbon from Ceramic Substrate Laminates
- 4,971,894 I. Memis and R. M. Rovente Method and Structure for Preventing Wet Etchant Penetration at the Interface Between a Resist Mask and an Underlying Metal Layer
- 4,971,927 J. M. Leas Method of Making Embedded Integrated Laser Arrays and Support Circuits
- 4,972,069 D. R. Grischkowsky Direct Generation of Ultrafast Electrical Pulses
- 4,972,158 P. H. Sutterlin Transistor Amplifier with Variable Bias Circuits
- 4,972,188 C. S. Clement and C. T. Ho Push Pull Double Digital-To-Analog Converter
- 4,972,246 M. H. Brodsky, F. F. Fang, and B. S. Meyerson Effective Narrow Band Gap Base Transistor
- 4,972,264 M. S. Bishop, N. A. Burns, J. J. Deacon, and S. C. Penn Method and Apparatus for Viewing an Overscanned Image
- 4,972,298 G. E. Casa and J. W. Gernon High Density Circuit Assembly
- 4,972,316 J. D. Dixon and G. G. Sotomayor, Jr. Method of Handling Disk Sector Errors in DASD Cache
- 4,972,317 J. P. Buonomo, R. W. Callahan, S. R. Houghtalen, S. K. Kodukula, R. E. Losinger, B. N. Shimamoto, H. L. Tredennick, and J. W. Valashinas Microprocessor Implemented Data Processing System Capable of Emulating Execution of Special Instructions Not Within the Established Microprocessor Instruction Set By Switching Access from a Main Store Portion of a Memory
- 4,972,342 G. T. Davis and B. D. Mandalia Programmable Priority Branch Circuit
- 4,972,345 J.-M. Munier, M. Peyronnenc, and M. Poret Apparatus for Error Detection and Reporting on a Synchronous Bus
- 4,972,360 M. Cuckier, D. Mauduit, and G. Orengo Digital Filter for a Modem Sigma-Delta Analog-to-Digital Converter
- 4,972,364 G. G. Barrett, S. Z. Pasha, and A. A. Shaheen-Gouda Memory Disk Accessing Apparatus
- 4,972,414 J. M. Borkenhagen, S. M. Douskey, and J. M. Meyer Method and Apparatus for Detecting Oscillator Stuck Faults in a Level Sensitive Scan Design (LSSD) System
- 4,972,437 A. P. Citron, J. E. Drake, Jr., M. E. Ferree, J. E. Fetvedt, J. P. Gray, and Z. Ordanic Method of Controlling Limited Resource Sessions in a Data Communications Network
- 4,972,444 C. G. Melrose and J. D. Rose Digital Phase-Locked Device and Method
- 4,973,496 B. P. Kruger and T. S. Petersen Method for Texturing Magnetic Disks
- 4,973,858 L.-G. Chang Resonant Tunneling Semiconductor Devices

4,974,056	S. B. Brodsky, D. Moy, and R. V. Joshi	Stacked Metal Silicide Gate Structure with Barrier
4,974,104	N. S. Ferguson and J. L. Wang	Linear Actuator Disk File with Symmetric Housing
4,974,147	D. J. Hanrahan, B. J. Morehead, and D. J. Shippy	Programmable Quiesce Apparatus for Retry, Recovery, and Debug
4,974,151	H. Advani and W. L. Terrell	Configuration Capability for Devices in an Open System Having the Capability of Adding or Changing Devices by User Commands
4,974,156	W. B. Harding, R. D. Tennison, and W. O. Vomaska	Multi-Level Peripheral Data Storage Hierarchy with Independent Access to all Levels of the Hierarchy
4,974,194	B. A. Barker, I. H. Hernandez, and B. H. Machart	Method for Modifying Intermingled Text Object and Graphic Object Within an Object Set Individually or Correspondingly
4,974,197	M. K. Blount, C. M. Clark, W. B. Harding, and H. T. S. Tang	Batching Data Objects for Recording on Optical Disks with Maximum Object Count
4,974,219	H.-E. Korth	Polarizing Beam Splitter Using Dielectric Multilayers
4,974,223	T. C. Ancheta, A. Birman, P.-C. Chang, and R. Guerin	Parallel Architecture for High Speed Flag Detection and Packet Identification
4,974,238	S. Kobayashi, Y. Shibata, and S. Tanaka	Counter Arrangements for Determining the Life of Consumables in Office Equipment
4,974,390	E. J. Gill, R. E. Hunt, and V. E. Whitehead	System and Method for Loading Electronic Component Carrier Tubes
4,975,068	J. J. Squires	Flexible Cable Connector
4,975,079	B. S. Beaman, K. E. Fogel, J. Kim, W. Mayr, J. M. Shaw, and G. F. Walker	Connector Assembly for Chip Testing
4,975,141	N. A. Greco and J. P. Nogay	Laser Ablation for Plasma Etching Endpoint Detection
4,975,599	J. G. Petrovick, Jr. and R. S. Taylor	Method and Resulting Devices for Compensating for Process Variables in a CMOS Device Driver Circuit
4,975,637	R. F. Frankeny and K. Hermann	Method and Apparatus for Integrated Circuit Device Testing
4,975,690	R. J. Torres	Method for Concurrent Data Entry and Manipulation in Multiple Applications
4,975,785	S. Kantor	Pel Resolution Addressing Conversion
4,975,868	D. L. Freerksen	Floating-Point Processor Having Pre-Adjusted Exponent Bias for Multiplication and Division
4,975,869	L. M. Ammann, H. C. Jackson, C. D. Johnson, and E. P. Lutter	Fast Emulator Using Slow Processor
4,975,914	J. L. Ashton, R. T. Gibbs, M. F. Gierlach, J. P. Gray, J. G. Knauth, G. Platel, S. W. Pretzman, and L. E. Troan	Non-Disruptive Session Recovery
4,975,916	G. H. Miracle, R. A. Neuner, and L. H. Wilson	Character Synchronization
4,976,626	E. P. Dibble and A. D. Knight	Connector for Connecting Flexible Film Circuit Carrier to Board or Card
4,977,499	W. L. Banning and H. D. Ingles, Jr.	Method and Apparatus for Commanding Operations on a Computer Network
4,977,520	H. S. McGaughey III, L. A. Melkus, and R. J. Torres	Method to Facilitate a Reply to Electronic Meeting Invitation in an Interactive Multi-Terminal System Employing Electronic Calendars
4,977,599	L. R. Bahl, P. V. DeSouza, R. L. Mercer, and M. A. Picheny	Speech Recognition Employing a Set of Markov Models that Includes Markov Models Representing Transitions to and from Silence
4,978,239	R. W. Alexander and D. Troupes	Temperature Limiting Apparatus and Method for Printer
4,978,419	M. M. Nanda, S. L. Peterman, and D. Stanasolovich	Process for Defining Vias Through Silicon Nitride and Polyamide
4,978,421	E. Bassous, J. M. Blum, K. K. Chan, A. C. Lamberti, C. Lapadula, I. Lovas, and A. D. Wilson	Monolithic Silicon Membrane Device Fabrication Process
4,978,594	J. A. Bruce, M. L. Kerbaugh, R. W. Kwong, T. N. Lee, H. G. Linde, and H. S. Sachdev	Fluorine-Containing Base Layer for Multi-Layer Resist Processes
4,978,638	M. L. Buller, B. J. McNelis, and C. H. Snyder	Method for Attaching Heat Sink to Plastic Packaged Electronic Component
4,978,847	S. Fukunaga, T. Nakamura, and H. Ono	Pulse Generator and Disk Sector Boundary Signal Generator with Wow and Flutter Compensation
4,978,849	J. S. Goddard, W. A. Overby, and J. A. Valent	Pel Placement Correction in the Scan Dimension of a Multiple Beam Laser Scanning System
4,978,927	K. A. Hausman, G. J. Gaudenzi, J. M. Mosley, and S. L. Tempest	Programmable Voltage Controlled Ring Oscillator
4,979,098	R. I. Baum, T. L. Borden, J. R. Butwell, C. E. Clark, A. G. Ganek, J. Lum, M. G. Mall, K. E. Plambeck, C. A. Scalzi, R. J. Schmalz, R. M. Smith, and J. Thomas	Multiple Address Space Token Designation, Protection Controls, Designation Translation and Lookaside

4,979,105	J. C. Daly, J. M. Nick, and F. J. Rodegeb	Method and Apparatus for Automatic Recovery from Excessive Spin Loops in an <i>N</i> -Way Multiprocessing System
4,979,107	H. Advani and W. T. Terrell	Modification of Device Configuration Wherein the System Specifies and Prompts the User with Only Parameters Required to be Changed
4,979,142	R. G. Allen and D. L. Freerksen	Two-Bit Floating Point Divide Circuit with Single Carry-Save Adder
4,979,148	G. F. Bush, D. S. Keener, J. E. Morel, and R. W. Voorhees	Increasing Options in Mapping ROM in Computer Memory Space
4,980,264	K. N. Chiong, B.-J. L. Yang, and J.-M. Yang	Photoresist Compositions of Controlled Dissolution Rate in Alkaline Developers
4,980,317	O. Koblinger, R. Mühl, and H.-J. Trumpp	Method of Producing Integrated Semiconductor Structures Comprising Field-Effect Transistors with Channel Lengths in the Submicron Range Using a Three-Layer Resist System
4,980,492	J. L. Dektar and N. P. Hacker	Synthesis of Triarylsulfonium Salts
4,980,536	K. Asch, J. Keyser, K. Meissner, and W. Zapka	Removal of Particles from Solid-State Surfaces by Laser Bombardment
4,980,676	H. Nomura and M. Takemoto	Electronic Apparatus with Keyboard
4,980,751	M. Eizenberg and K.-N. Tu	Electrical Multilayer Contact for Microelectronic Structure
4,980,820	L. D. Youngblood	Interrupt Driven Prioritized Queue
4,980,822	W. C. Brantley, Jr., K. P. McAuliffe, V. A. Norton, G. F. Pfister, and J. Weiss	Multiprocessing System Having Nodes Containing a Processor and an Associated Memory Module with Dynamically Allocated Local/Global Storage in the Memory Modules
4,980,823	L. Liu	Sequential Prefetching with Deconfirmation
4,980,852	D. G. Giroir, A. P. Mullery, and A. Pauporte	Non-Locking Queueing Mechanism for Enabling a Receiver Device to Read from a Queue Without Access Synchronization with a Sending Device
4,980,918	L. R. Bahl, P. S. Cohen, and R. L. Mercer	Speech Recognition System with Efficient Storage and Rapid Assembly of Phonological Graphs
4,981,244	J. T. Wilson III	Pin Belt for Movement of Perforated Strip
4,981,530	D. J. Clodgo, R. A. Previti-Kelly, R. R. Uttecht, and E. G. Walton	Planarizing Ladder-Type Silsesquioxane Polymer Insulation Layer
4,981,568	A. R. Taranko and D. A. Smith	Apparatus and Method for Producing High Purity Diamond Films at Low Temperatures
4,981,716	P. Sundstrom	Method and Device for Providing an Impact Resistance Surface on a Metal Substrate
4,981,807	C. G. Jambotkar	Process for Fabricating Complementary Vertical Transistor Memory Cell
4,981,817	E. H. Stone, Jr.	Tab Method for Implementing Dynamic Chip Burn-In
4,981,840	C. A. Brown, E. M. Engler, and V. Y. Lee	Process for Preparing Metal-Ceramic Coatings Electrically Superconducting Above 77 Degrees Kappa
4,981,909	E. D. Babich, M. Hatzakis, S. L. Jacobs, J. R. Parasczack, J. M. Shaw, and D. F. Witman	Plasma-Resistant Polymeric Material, Preparation Thereof, and Use Thereof
4,982,187	B. C. Goldstein, H. E. S. Meleis, A. N. Tantawi, and D. A. Zumbo	Low-End High-Performance Switch Subsystem Architecture
4,982,235	T. Fujino	Image Scan Apparatus
4,982,248	R. B. Laibowitz and C. P. Umbach	Gated Structure for Controlling Fluctuations in Mesoscopic Structures
4,982,254	A. W. Vinal	Differentially Magnetically Sensitive Diode Structure
4,982,257	S. Akbar, P. L. Kroesen, S. Ogura, and N. Rovedo	Vertical Bipolar Transistor with Collector and Base Extensions
4,982,292	M. Itoh, K. Toyokawa, and H. Yanagisawa	Method and Apparatus for Processing Pel Signals of an Image
4,982,324	J. M. McConaughy and S. T. Pancoast	Method of and System for Using Device Drivers to Couple the Communication and Data Storage of Remote Computer Systems
4,982,345	R. M. Callahan and B. C. Liang	Interactive Computer Graphics Display System Processing Method for Identifying an Operator Selected Display Object
4,982,357	R. A. Bechade	Plural Dummy Select Chain Logic Synthesis Network
4,982,892	A. J. Parla and H. F. Tepper	Solder Interconnects for Selective Line Coupling
4,983,544	N. C. Lu, B. J. Machesney, R. L. Mohler, G. L. Miles, C.-Y. Ting, and S. D. Warley	Silicide Bridge Contact Process
4,984,133	W. J. Casanova, A. P. Reckinger, Jr., M. D. Seyfert, J. R. Thorpe, and S. E. Wheeler	Unitized Central Electronics Complex Construction
4,984,146	A. G. Black, J. R. Mazzuca, C. J. Palmucci, and S. K. Rao	Suppression of Radiated EMI for Power Supplies
4,984,214	N. R. Hildebeitel, R. Tamlyn, and S. W. Tomashot	Multiplexed Serial Register Architecture for VRAM
4,984,237	P. A. Franaszek	Multistage Network with Distributed Pipelined Control
4,984,912	H. T. Findlay, K. H. Froman, and J. F. Martone	Multicolored Fabric Printing Ribbon Including Nonbleeding, Nonmigrating Flushed Pigment

4,985,112	F. D. Egitto and W. E. Mlynko	Enhanced Plasma Etching
4,985,310	B. N. Agarwala, K. F. Beckman, A. H. Cooper-Joselow, C. Narayan, S. Purushothaman, and S. K. Ray	Multilayered Metallurgical Structure for an Electronic Component
4,985,627	S. F. A. Gutierrez, A. Barattoff, and W. D. Pohl	Spin-Polarized Scanning Tunneling Microscope
4,985,855	G. R. Aldrich, G. T. Brown, D. B. Millis, and R. P. Nowak	Method for Producing Installation Instructions for Three Dimensional Assemblies
4,985,990	J. E. Cronin, C. W. Kaanta, and M. A. Leach	Method of Forming Conductors Within an Insulating Substrate
4,986,637	H. Yamaguchi	Arrangement of Picture Elements for Color Display
4,987,095	J. Batey, S. Tiwari, and S. L. Wright	Method of Making Unpinned Oxide-Compound Semiconductor Structures
4,987,100	D. G. McBride and T. L. Ellis	Flexible Carrier for an Electronic Device
4,987,101	C. W. Kaanta and S. Roberts	Method for Providing Improved Insulation in VLSI and ULSI Circuits
4,987,211	C. J. Araps, J. A. Casey, R. S. Divakaruni, S. M. Kandetzke, and C. A. Lotsko	Phenyl-Endcapped Depolymerizable Polymer
4,987,312	D. M. Eigler	Process for Repositioning Atoms on a Surface Using a Scanning Tunneling Microscope
4,987,318	R. D. Burke and C. J. Mattes	High Level Clamp Driver for Wire-or Buses
4,987,533	C. M. Clark, W. B. Harding, and H. T. S. Tang	Method of Managing Data in a Data Storage Hierarchy and a Data Storage Hierarchy Therefor with Removal of the Least Recently Mounted Medium
4,987,550	A. G. Leonard and R. L. Verburg	Selective Processing of a Data Stream Based on Font Format
4,987,587	C. H. Jolissaint	Method and Apparatus for Providing 800 Number Service
4,988,168	J. A. Dickerson, J. C. Greeon, Jr., and N. M. Poley	TFT LCD Device Having Color Filter Layer Decal
4,988,636	R. P. Masleid and P. T. Patel	Method of Making Bit Stack Compatible Input/Output Circuits
4,988,637	S. H. Dhong and W. Hwang	Method for Fabricating a Mesa Transistor-Trench Capacitor Memory Cell Structure
4,988,646	S. P. Mukherjee	Method for Producing a Ceramic
4,988,668	E. M. Engler, V. Y. Lee, A. I. Nazzal, and S. S. P. Parkin	Ti-Ca-Ba-Cu-D Compositions Electrically Superconducting Above 120 Degrees K and Processes for Their Preparation
4,988,893	M. Bonneau, G. Boudon, J.-C. Le Garrec, P. Mollier, and F. Wallart	Latch Cell Family in CMOS Technology Gate Array
4,988,896	A. M. Chu	High Speed CMOS Latch Without Pass-Gates
4,988,984	J. Gonzalez-Lopez	Image Interpolator for an Image Display System
4,988,997	E. S. Prame	Method for Character Code Generation
4,989,131	H. S. Stone	Technique for Parallel Synchronization
4,989,258	G. Takahashi and A. Yamashita	Character Recognition Apparatus
4,990,224	I. S. Mahmoud	Copper Plating Bath and Process for Difficult to Plate Metals
4,990,426	A. F. Diaz, A. R. Gutierrez, and D. R. McKean	Di- and Tricationic Negative Charge Control Agents for Electrophotographic Developers
4,990,833	A. J. Morrish	Self-Adapting Vertical Scan Circuit for Raster-Scanned Cathode Ray Tube Displays
4,990,967	D. F. Colglazier, J. H. Hubbard, M. L. Morris, and R. T. Ritchie	Copying Method and Apparatus
4,991,080	P. G. Emma, J. H. Pomerene, R. N. Rechtschaffen, and F. J. Sparacio	Pipeline Processing Apparatus for Executing Instructions in Three Streams, Including Branch Stream Pre-Execution Processor for Pre- Executing Conditional Branch Instructions
4,991,084	W. K. Rodiger, J. E. Thorson, and Y.-M. Ting	N×M Round Robin Order Arbitrating Switching Matrix System
4,991,089	D. U. Shorter	Method for Establishing Current Terminal Addresses for System Users Processing Distributed Application Programs in an SNA LU 6.2 Network Environment
4,991,090	P. G. Emma, J. W. Knight III, J. H. Pomerene, R. N. Rechtschaffen, and F. J. Sparacio	Posting Out-of-Sequence Fetches
4,991,094	J. L. Fagan, M. D. Gunther, P. D. Over, G. Passon, C. C. Tsao, A. Zamora, and E. M. Zamora	Method for Language-Independent Text Tokenization Using a Character Categorization
4,991,118	A. A. Akiyama, L. J. H. Busboom, and W. J. Maitland, Jr.	Enhanced Data Stream Processing in a Fixed Function Terminal
4,991,133	G. T. Davis, R. E. Lands, B. D. Mandalia, J. W. van den Berg, and D. C. Van Voorhis	Specialized Communications Processor for Layered Protocols
4,991,134	M. Ivsin	Concurrent Sorting Apparatus and Method Using FIFO Stacks
4,991,138	J. R. Cavaliere, A. K. Chan, and M. S. Michail	High Speed Memory Cell with Multiple Port Capability

4,991,169	G. T. Davis, M. G. H. Lung, B. D. Mandalia, R. J. Millas, O. E. Ortega, R. J. Picon, L. R. Queen, R. H. Robinson, W. R. Robinson, Jr., L. A. Sharp, Jr. and J. W. van den Berg	Real-Time Digital Signal Processing Relative to Multiple Digital Communication Channels
4,991,172	I. Cidon and I. S. Gopal	Design of a High Speed Packet Switching Node
4,991,217	M. A. Garrett and G. Shichman	Dual Processor Speed Recognition System with Dedicated Data Acquisition Bus
4,991,829	L. Fischer, M. Haas, and H. Pape	Method for Controlling Two Interrelated Transport Means and Machine Thus Controlled, Especially a Personal Banking Machine
4,992,650	P. J. Somerville	Method and Apparatus for Barcode Recognition in a Digital Image
4,992,659	D. W. Abraham and H. K. Wickramasinghe	Near-Field Lorentz Force Microscopy
4,992,728	M. A. McCord and L. Berenbaum	Electrical Probe Incorporating Scanning Proximity Microscope
4,992,933	J. L. Taylor	SIMD Array Processor with Global Instruction Control and Reprogrammable Instruction Decoders
4,992,935	L. D. Comerford and B. C. Goldstein	Bit Map Search by Competitive Processors
4,992,938	J. Cocke, G. F. Grohoski, and V. G. Oklobdzija	Instruction Control Mechanism for a Computing System with Register Renaming, Map Table and Queues Indicating Available Registers
4,992,972	W. A. Brooks, D. A. Charland, J. V. DiCecco, D. D. Snyder, R. G. Waite, and C. B. Young	Flexible Context Searchable On-Line Information System with Help Files and Modules for On-Line Computer System Documentation
4,992,979	F. J. Aichelman, Jr. and V. F. Sollitto, Jr.	Memory Structure for Nonsequential Storage of Block Bytes in Multi Bit Chips
4,992,981	K. Gansloser, D. F. Wendel, and S. K. Wiedmann	Double-Ended Memory Cell Array Using Interleaved Bit Lines and Method of Fabrication Therefore
4,992,984	R. E. Busch, W. F. Ellis, T. M. Redman, and E. P. Thoma	Memory Module Utilizing Partially Defective Memory Chips
4,993,029	R. K. Galbraith and N. N. Heise	Method and Apparatus for Randomizing Data in a Direct Access Storage Device
4,993,069	S. M. Matyas, D. G. Abraham, D. B. Johnson, D. B. Johnson, A. V. Le, R. Prymak, J. D. Wilkins, and P. C. Yeh	Secure Key Management Using Control Vector Translation
4,993,853	J. K. Brown III, J. P. Kolb, L. M. Olivers, M. A. Robb, and S. R. Troyer	Matrix Character Modification Information Unique to a Given Font
4,994,119	B. L. Gutierrez and J. Sickler	Water Soluble Soldering Flux
4,994,154	C. J. Chen and R. J. von Gutfeld	High Frequency Electrochemical Repair of Open Circuits
4,994,861	F. Y. Brandom, J. P. Harden, P. D. Horrall, T. A. Lee, and K. A. Meece	Printing Machine with Charge Neutralizing System
4,994,912	L. Lumelsky and A. W. Peevers	Audio Video Interactive Display
4,994,985	C. M. N. Cree and M. G. MacPhail	Methods of Appending a Reply in an Electronic Mail System
4,994,986	P. K. Cihwsky and A. C. Jaw	Online Performance Monitoring and Fault Diagnosis Technique for Direct Current Motors as Used in Printer Mechanisms
4,994,995	R. W. Anderson, R. L. Gee, T. L. Nguyen, and M. A. Hassner	Bit-Serial Division Method and Apparatus
4,995,001	J. W. Dawson and P. A. Phillips	Memory Cell and Read Circuit
4,995,035	L. J. Cole, C. J. Frantz, J. Lee, Z. Ordanic, and L. K. Plank	Centralized Management in a Computer Network
4,995,056	R. G. Fogg, Jr., J. R. Martin, and C. Zeitler, Jr.	System and Method for Data Communications
4,995,942	L. D. David	Effective Near Neutral pH Etching Solution for Molybdenum or Tungsten
4,996,670	M. K. Ciraula, C. M. Durham, and D. L. Jallice	Zero Standby Power, Radiation Hardened, Memory Redundancy Circuit
4,996,629	R. A. Christiansen and J. A. DiGirolamo	Circuit Board with Self-Supporting Connection Between Sides
4,996,623	A. D. Erpelding, D. D. Palmer, and R. K. Wilmer	Laminated Suspension for a Negative Pressure Slider in a Data Recording Disk File
4,996,616	A. Aoyagi, T. Endo, and H. Terashima	Head Suspension Load Beam With Reinforcing Ribs
4,996,587	K. Hinrichsmeyer, W. Straehle, G. A. Kelley, Jr., and R. W. Noth	Integrated Semiconductor Chip Package
4,996,585	H. Gruber, K. Hinrichsmeyer, H. G. Horbach, and E. E. Stadler	Electronic Package
4,996,487	R. A. McSparran, W. S. Moore, and J. R. Wooden	Apparatus for Detecting Failure of Thermal Heaters in Ink Jet Printers
4,996,164	P. A. Habitz, C.-M. Hsieh, and Y.-S. Huang	Method for Forming Lateral PNP Transistor
4,996,653	N. D. Butler, A. C. Gay, and J. E. Bresenham	Line Generation in a Display System

4,998,342	R. E. Bonnell, G. C. Castello, and K. G. Hoebener	Method of Attaching Electronic Components
4,998,792	D. W. Boerstler and D. J. Stigliani, Jr.	Fiber Optic Mode Conditioner
4,998,885	B. S. Beaman	Elastomeric Area Array Interposer
4,999,280	H. Hiraoka	Spray Silylation of Photoresist Images
4,999,518	S. H. Dhong, C.-L. Chen, and H. J. Shin	MOS Switching Circuit Having Gate Enhanced Lateral Bipolar Transistor
4,999,577	J. G. Beha, A. U. Blacha, R. Clauberg, and H. K. Seitz	Method for Contactless Testing of Conducting Paths in a Substrate Using Photon-Assisted Tunneling
4,999,699	F. R. Christie, K. I. Papathomas, and D. W. Wang	Solder Interconnection Structure and Process for Making
4,999,766	A. M. Peters and M. A. Sehorne	Managing Host to Workstation File Transfer
4,999,802	C. Cocanougher, R. K. Montoye, M. Nguyenphu, and S. L. Runyon	Floating-Point Arithmetic Two-Cycle Data Flow
4,999,834	R. P. Leo, M. W. McColgan, J. E. Stockman III, and J. H. Young	Communication Method and Apparatus
4,999,837	F. S. Reynolds and L. W. Ricci	Programmable Channel Error Injection
4,999,769	M. Costes, A. Gach, Y. Hartmann, and M. Peyronnenc	System with Plural Clocks for Bidirectional Information Exchange Between DMA Controller and I/O Devices Via DMA Bus
4,999,815	J. E. Barth, Jr., C. E. Drake, W. P. Hovis, H. L. Kelter, G. A. Kelley, Jr., S. C. Lewis, D. J. Nickel, and J. A. Yankosky	Low Power Addressing Systems
5,000,652	R. G. Christensen and A. Mack	Wafer Transfer Apparatus
5,001,477	D. R. Hicks, G. R. Ricard, and J. J. Vriezen	Encoding Variable Length and Null Data While Preserving Sort Sequence
5,001,478	M. E. Nagy	Method of Encoding Compressed Data
5,001,480	M. Ferry and C. Jacquart	Analog-to-Digital and Digital-to-Analog Conversion System and Echo Cancellation Device Including the Same
5,001,482	P. W. S. Chung, D. S. Lowrie, P. Saber, and C. K. Wang	BICMOS Digital-to-Analog Converter for Disk Drive Digital Recording Channel Architecture
5,001,525	D. M. Kenney	Two Square Memory Cells Having Highly Conductive Word Lines
5,001,559	C. A. Gonzales and T. McCarthy	Transform Coding Using Coefficient Prediction Techniques
5,001,586	J. A. Aboaf, V. N. Kahwaty, J. L. Nix, and F. B. Shelledy	Very Low Noise Magneto-resistive Sensor for High Density Media Applications
5,001,628	D. W. Johnson, L. K. Loucks, C. H. Sauer, and T. A. Smith	Single System Image Uniquely Defining an Environment for Each User in a Data Processing System
5,001,652	S. P. Thompson	Memory Arbitration for Video Subsystems
5,001,653	J. C. Buchanan, J. P. Kolb, L. M. Oliver, and J. F. Webb	Merging Plotter Graphics Within a Text Environment on a Page Printer
5,001,672	T. J. Ebbers, S. Gupta, R. L. Henderson, N. R. Hildebeitel, R. Tamlyn, S. W. Tomashot, and T. Williams	Video RAM with External Select of Active Serial Access Register
5,001,730	P. A. Franaszek and T. K. Philips	Clock Synchronization Algorithm for Address Independent Networks
5,001,758	C. Galand and J. Menez	Voice Coding Process and Device for Implementing Said Process
5,002,375	S. R. Komplin, R. Prakash, and L. L. Wolfe	Variable Pel Density Print Head for Electrophotographic Printers
5,002,441	D. Dierich, W. Rotter, C. Trollmann, and H. Wilken	Drilling Unit
5,002,627	A. Scheithauer, W. Alberth, G. Pohl, and H. Ziegler	Spray Etching Apparatus with Automatic Individually Controllable Etching Jets
5,003,140	W. A. Abell, Jr. and D. A. Bruner	Long Keypbutton Stabilizer
5,003,199	C.-T. K. Chuang and H. J. Shin	Emitter Coupled Logic Circuit Having an Active Pull-Down Output Stage
5,003,308	S. Furnis, A. C. F. Lee, P. J. Murfet, M. J. Palmer, C. N. Wallis, and T. Winlow	Serial Data Receiver with Phase Shift Detection
5,003,462	B. Blaner and A. Y. Ngai	Apparatus and Method for Implementing Precise Interrupts on a Pipelined Processor with Multiple Functional Units with Separate Address Translation Interrupt Means
5,003,465	D. R. Chisholm, R. G. Iseminger, R. A. Kelley, W. L. Leung, J. T. Moyer, and M. C. Snedaker	Method and Apparatus for Increasing System Throughput Via an Input/Output Bus and Enhancing Address Capability of a Computer System During DMA Read/Write Operations Between a Common Memory and an Input/Output Device
5,003,470	M. A. Carpenter and S. H. Goldberg	Method for Tying and Untying Path Access in a CPU-Based, Layered Communications System
5,003,487	A. D. Drumm, R. C. Itskin, and K. W. Todd	Method and Apparatus for Performing Timing Correction Transformations on a Technology-Independent Logic Model During Logic Synthesis
5,003,558	T. A. Gregg	Data Synchronizing Buffers for Data Processing Channels

5,003,582	F. Maddens	Method of Adjusting the End of Transmission in a Modem
5,003,815	Y. Martin and H. K. Wickramasinghe	Atomic Photo-Absorption Force Microscope
5,004,317	K. P. Jackson and N. Raver	Wire Bond Connection System With Cancellation of Mutual Coupling
5,004,508	E. W. Mace, J. Sickler, and V. Srinivasan	Thermally Dissipated Soldering Flux
5,004,866	K. K. Cooke, J. R. Dewitt, P. J. Galinis, and W. B. Koteff	Self-Contained Grounding Strip
5,005,096	M. T. Krounbi, O. Voegeli, and P.-K. Wang	Magneto-resistive Read Transducer Having Hard Magnetic Shunt Bias
5,005,205	H. A. Ellozy, H. H. Jeanty, and C. C. Tappert	Handwriting Recognition Employing Pairwise Discriminant Measures
5,005,638	G. F. Goth, K. P. Moran, and M. L. Zumbrennen	Thermal Conduction Module with Barrel Shaped Piston for Improved Heat Transfer
5,005,820	M. C. Leemhuis	Paper Tray With Leaf Spring
5,005,939	N. C. Arvanitakis, V. J. Black, R. E. Corley, Jr., R. G. Nolan, and L. T. Olson, Jr.	Optoelectronic Assembly
5,005,996	J. H. Paterra and D. K. Rex	Ribbon Cartridge with Endless Ribbon Reinking Mechanism
5,006,412	S. A. Hodgson, J. M. Park, and R. R. Thomas	Substrate of Metal-Complexed Beta-Diketone/Thermosetting Polymer Reaction Product
5,006,488	R. A. Previti-Kelly	High Temperature Lift-Off Process
5,006,917	S. K. Kang, M. J. Palmer, T. C. Reiley, and R. D. Tops	Thermocompression Bonding in Integrated Circuit Packaging
5,006,918	A. Deutsch and B. J. Rubin	Floating Orthogonal Line Structure for X-Y Wiring Planes
5,006,925	M. F. Bregman, R. R. Horton, I. C. Noyan, and M. J. Palmer	Three Dimensional Microelectric Packaging
5,006,942	P. E. Brooks and K. G. Jan	Rigid Magnetic Data Storage Disk Assembly with Grooved Spacer
5,007,053	B. R. Iyer, D. M. Dias, and Y. Dishon	Method and Apparatus for Checksum Address Generation in a Fail-Safe Modular Memory
5,007,089	S. M. Matyas, D. B. Johnson, A. V. Le, W. C. Martin, R. Prymak, and J. D. Wilkins	Secure Key Management Using Programmable Control Vector Checking
5,007,092	C. Galand, J. Menez, and M. Rosso	Method and Apparatus for Dynamically Adapting a Vector-Quantizing Coder Codebook
5,007,163	K. P. Pope and G. Schrottke	Non-Destructive Method of Performing Electrical Burn-in Testing of Semiconductor Chips
5,008,207	J. L. Blouse, I. G. Fulton, R. C. Lange, B. S. Meyerson, K. A. Nummy, M. Revitz, and R. Rosenberg	Method for Fabricating a Narrow Base Transistor
5,008,216	H.-C. W. Huang and P. A. Totta	Process for Improved Contact Stud Structure for Semiconductor Devices
5,008,632	P. H. Sutterlin	Temperature Compensated Feedback Circuit for Setting and Stabilizing Amplifier DC Bias Points
5,008,730	H.-C. W. Huang and P. A. Totta	Contact Stud Structure for Semiconductor Devices
5,008,805	C. A. B. Fiebig, M. R. Fuqua, S. K. Gursahaney, G. M. Margosian, and M. H. Weiss	Real Time, Fail Safe Process Control System and Method
5,008,816	R. G. Fogg, Jr. and J. W. Irwin	Data Processing System with Multi-Access Memory
5,008,820	K. W. Christopher, Jr., B. A. Feigenbaum, J. Kim, and D. C. Love	Method of Rapidly Opening Disk Files Identified by Path Names
5,008,829	R. L. Cox, M. J. DeLoye, and R. L. Myers	Personal Computer Power Supply
5,008,878	H. Ahmadi, J. G. Beha, W. E. Denzel, A. P. Engbersen, R. P. Luijten, C. A. Murphy, and E. Port	High-Speed Modular Switching Apparatus for Circuit and Packet Switched Traffic
5,008,885	K. C. Huang, K. H. Kutz, T. J. McNamara, E. Seals, and G. S. Still	Event-Controlled Error Injection System
5,008,902	G. R. Key and D. C. Black	Automatic Baud Rate Detection