

Recent IBM patents

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

2,557,079 E. Ebert, E. Mirbach, and A. Bogh

Silicon Oxide/Silicon Nitride Mask with Improved Integrity for Semiconductor Fabrication

3,067,861,608 A. Bogh and K. Hartmann

Bank for Accommodating Several Print Hammer Units

France

32,197 R. Cullet

Test Method and Structures for Semiconductor Integrated Circuits for Electrically Determining Certain Tolerances During the Photolithographic Steps

40,669 B. Pottier

Method for Eliminating Solder Pads Remaining on a Ceramic Substrate After Removal of a Semiconductor Chip by Absorption in a Porous Copper Block and Application of the Method to Module Reworking

53,213 F. Delaporte and J. P. Pantani

Quadripole Structured Integrated Capacitor

United Kingdom

42,020 P. Burr and B. D. Chase

Convergence Unit for Cathode-Ray Tube

50,692 J. S. Beeteson, B. L. Holloway, and K. T. Jarzebowski

Colour Cathode Ray Tube Display Apparatus

United States

4,409,722 R. C. Dockerty and P. L. Garbarino

Borderless Diffusion Contact Process and Structure

4,409,893 D. A. Newman and R. T. Emerson

Process for Printing Porous Image

4,410,286 E. Y. Ko and R. A. Pascoe

Printing Complex Characters

4,410,440 M. Ko

Polyurethane Magnetic Disk Coatings

4,410,622 H. D. Dalal, B. Patnaik, and H. G. Sarkary

Forming Interconnections for Multilevel Interconnection Metallurgy Systems

4,410,647 J. R. Susko and R. A. Wheeler

Epoxy Composition and Sealing of Integrated Circuit Modules Therewith

4,410,840 J. S. Beeteson, B. L. Holloway, and K. T. Jarzebowski

Color Cathode Ray Tube Display Apparatus with Compensation for Errors Due to Interfering Magnetic Fields

4,410,862 P. C. Tien

MOSFET Multivibrator with Dual Timing

4,410,940 E. D. Carlson, H. M. Gladney, P. Lucas, D. L. Weller, and S. N. Zilles

Transfer of Control Method and Means Among Hierarchical Cooperating Sequential Processes

4,410,942 C. A. Milligan, E. R. Videki II, and W. F. Yates

Synchronizing Buffered Peripheral Subsystems to Host Operations

4,410,946 D. R. Spencer

Cache Extension to Processor Local Storage

4,410,957 W. C. Cason and J. W. Snyder

Keystroke Queueing System

4,410,958 K. R. Demke and J. L. Mumola

Displaying a Proportionally Outlined Miniature Page

4,433,424 L. Taber and D. G. East

Multichannel Common Clock

4,433,909 K. G. I. Center and F. J. Schell

Pivoting Reference Edge

4,434,134 R. E. Darrow, J. Funari, G. S. Kotrch, and G. C. Phillips

Pinned Ceramic Substrate

4,434,207 T. E. Franey

Radiation Hardened Lift-Off Correction Medium and Process of Manufacture

4,434,220 J. J. Abbott, S. C. Crossan, S. R. Fuller, Jr., and P. D. Jachimiak

Electrophotographic Toner and Carrier

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4,434,356	T. P. Craig, J. W. Pettit, and M. R. Timperman	Regulated Current Source for Thermal Printhead
4,434,432	J. R. Dailey, H. C. Kuntzleman, C. S. Ng, and J. W. Pike	Universal Image Coder and Controller for Multicolor Electrolytic Printing
4,434,434	S. Bhattacharya, S.-M. Hu, N. G. Koopman, and C. C. Oldakowski	Solder Mound Formation on Substrates
4,434,460	K.-G. Drakenborn, M. A. Enser, K. G. E. Grebner, and E. I. Wallmark	Hierarchical Computer System for Generating Selective Output Signals in Response to Received Input Signals
4,434,475	R. A. McCaskill, J. W. McInroy, and P. D. Waldo	Method of Entering Criteria for Selecting Records of Spatially Related Data Stored in an Interactive Text Processing System
4,434,478	H. C. Cook and R. R. Troutman	Programming Floating Gate Devices
4,434,486	R. P. Barner, Jr., J. M. Bensadon, J. A. Besseyre, and H. G. Markey	Self-Switched Data Port In-Band Signaling Protocol
4,435,247	J. S. Basi and E. Mendel	Method for Polishing Titanium Carbide
4,435,634	F. J. Horlander	Thermal Printer Edge Compensation
4,435,740	B. F. Huckabee and W. L. Wright	Electric Circuit Packaging Member
4,435,753	J. R. Rizzi	Register Allocation System Using Recursive Queuing During Source Code Compilation
4,435,755	A. S. Meritt	Balanced Channel Finding Method
4,435,758	R. A. Lorie and H. R. Strong, Jr.	Method for Conditional Branch Execution in SIMD Vector Processors
4,435,759	R. L. Baum and F. E. Sakalay	Hardware Monitor for Obtaining Processor Software/Hardware Interrelationships
4,435,762	C. A. Milligan, E. R. Videki II, and W. F. Yates	Buffered Peripheral Subsystems
4,435,766	J. G. Haber, K. L. Jeffries, and P. J. Kilpatrick	Nested Resource Control Using Locking and Unlocking Routines With Use Counter for Plural Processes
4,435,777	R. A. McCaskill, J. W. McInroy, and P. D. Waldo	Interactively Rearranging Spatially Related Data
4,435,778	W. C. Cason, R. A. McCaskill, and F. A. Karner	Method for Editing Spatially Related Data in an Interactive Text Processing System
4,435,780	K. M. Herrington and K. L. Jeffries	Separate Stack Areas for Plural Processes
4,435,782	D. R. Kaufman and G. R. Thompson	Data Processing System With High Density Arithmetic and Logic Unit
4,435,805	J. C. Hsieh and W.-W. Wu	Testing of Logic Arrays
4,435,838	A. R. Gourlay	Method and Apparatus for Tomographical Imaging
4,437,401	H. Heinrich, G. R. Hermann, and M. Schmidt	Separator Plate for Type Band Printer
4,437,659	C. D. Caron and D. W. Schaefer	Rotary Drum for Processing Sheet Materials
4,437,779	W. Goff, Jr. and W. M. Jenkins	Replaceable Ribbon Cartridge
4,437,897	B. M. Kemlage	Fabrication Process for a Shallow Emitter/Base Transistor Using Same Polycrystalline Layer
4,437,922	B. K. Bischoff, W. J. Patrick, and T. H. Strudwick	Method for Tailoring Oxygen Precipitate Particle Density and Distribution
4,438,066	J. A. Aboaf, E. Klokholm, and S. R. Herd	Silicon Wafers
4,438,156	A. M. Homola and M. R. Lorenz	Zero to Low Magnetostriction, High Coercivity, Polycrystalline, Co-Pt Magnetic Recording Media
4,438,419	E. F. Helinski	Mono-Particle Magnetic Dispersion in Organic Polymers for Magnetic Recording
4,438,467	K. H. Schaller and V. Zimmermann	Serial Ring Actuator
4,438,472	G. K. Woodworth	Magnetic Disk Track Following Servo Burst Amplitude Drop Compensation
4,438,489	H. J. Heinrich and D. Schütt	Active Arc Suppression for Switching of Direct Current Circuits
4,438,512	M. H. Hartung, R. E. Rieck, and G. E. Taylor	Interrupt Pre-processor With Dynamic Allocation of Priority Levels to Requests Queued in an Associative CAM
4,438,888	H. D. Seelinger	Method and Apparatus for Verifying Storage Apparatus Addressing
4,438,917	D. M. Janssen, J. P. Mantey, D. C. Roller, and L. A. Walker	Self-Aligning Web Reel
4,439,034	R. A. Daniels	Dual Motor Aligner
4,439,178	A. P. Mulzet	Method and Apparatus for Purging a Copier Developer
4,439,250	S. C. Acharya, T. C. Prizzia, and O. Rutigliano	Sealless Centrifuge Processing Channel and Tube System
4,439,261	P. J. Pavone and R. D. Van Demark	Solder/Braze-Stop Composition
4,439,270	J. L. Powell, C. L., Standley, and J. Suierveld	Composite Pallet
4,439,280	P. L. Gendler and R. J. Twieg	Process for the Controlled Etching of Tapered Vias in Borosilicate Glass Dielectrics
4,439,690	G. A. Maley, R. H. Warren, and D. W. Westcott	Phenothiazine Leucodyes for Electrochromic Recording
4,439,699	A. P. Brende and R. W. Luoma	Three-Gate Hazard-Free Polarity Hold Latch
4,439,727	D. H. Boyle	Linear Moving Coil Actuator
		Low Capacitance Pad for Semiconductor Chip Testing

4,439,813	W. E. Dougherty, I. Feinberg, J. N. Humenik, and A. Platt	Thin Film Discrete Decoupling Capacitor
4,439,828	D. B. Martin	Instruction Substitution Mechanism in an Instruction Handling Unit of a Data Processing System
4,439,842	S. D. Malaviya	Bipolar Transistor Read Only or Read-Write Store With Low Impedance Sense Amplifier
4,439,859	R. A. Donnan	Method and System for Retransmitting Incorrectly Received Numbered Frames in a Data Transmission System
4,440,013	G. E. Adams	Gas Chromatograph, Fourier Transform, Infrared Spectroscopy System
4,440,079	D. A. Dayger, M. D. Hryck, D. W. Skinner, and G. R. Westcott	Control System for Timing Hammers of Impact Printers
4,440,515	E. G. Nassimbene	Keybar Keyboard
4,440,609	M. C. Blakeslee, J. D. Olsen, and L. T. Romankiw	Method of Electrodepositing a Low Coercive Force, Corrosion-Resistant Alloy of Nickel, Iron and Boron
4,440,713	E. B. Rigby	Process for Making Fine Magnetic Ferrite Powder and Dense Ferrite Blocks
4,440,801	A. Aviram, I. Mayne-Banton, and R. Srinivasan	Method for Depositing a Metal Layer on Polyesters
4,440,831	J. M. Brownlow and I. F. Chang	Zinc Silicate Phosphor Particles and Method for Making Them
4,441,039	S. E. Schuster	Input Buffer Circuit for Semiconductor Memory
4,441,057	S. Wrona	Correction Apparatus for a Cathode Ray Tube
4,441,075	M. T. McMahon	Circuit Arrangement Which Permits the Testing of Each Individual Chip and Interchip Connection in a High Density Packaging Structure Having a Plurality of Interconnected Chips, Without Any Physical Disconnection
4,441,077	D. F. Dodgen and L. R. Siegl	Real Time Eddy Current Responsive Hall Effect Device Tachometer
4,441,081	M. O. Jenkins	Switching Power Driving Circuit Arrangement
4,441,088	C. J. Anderson	Stripline Cable with Reduced Crosstalk
4,441,114	R. A. Muggli	CMOS Subsurface Breakdown Zener Diode
4,441,153	R. J. Bullions III and T. A. Enger	Instruction Register Content Modification Using Plural Input Gates and a Data Flow Register
4,441,155	R. P. Fletcher and D. B. Martin	Page Controlled Cache Directory Addressing
4,441,163	G. E. Leikam, R. L. Wierwille, and R. S. Wood	Dynamic Send Queue Modification System
4,441,166	W. J. Kabelac and I. L. Sanders	Passive Annihilator for Contiguous-Disk Bubble Devices
4,441,616	R. Konig, H.-U. Freund, H. Heide, and R. A. Sieglen	Process for Sorting Coarse to Fine Materials According to Their Chemical Composition
4,441,784	H.-E. Korth	Paraboloidal Coupler for Light Wave Guides
4,441,785	J. R. Petrozello	Rotary Fiber Optic Switch
4,441,805	G. L. Smith	Means for Positioning Optical Components for a Variable Magnification/Reduction Copier Optics System
4,441,829	R. A. Hebert, Jr., L. J. Levine, and K. O. Shipp, Jr.	Method for Performing a Multiple Page Get in a Text Processing System
4,441,938	R. M. Poliak, D. L. Rivenburgh, and C. J. Sambucetti	Soldering Flux
4,442,137	A. H. Kumar	Maskless Coating of Metallurgical Features of a Dielectric Substrate
4,442,144	D. J. Pipkin	Method for Forming a Coating on a Substrate
4,442,356	S. L. Ludwick, S. L. Pond, and R. T. Rhodes	Corona Wire Assembly and Method
4,442,408	T. Le	Differential Amplifier With Auto Bias Adjust
4,442,428	M. E. Dean, D. A. Kummer, and J. A. Saenz	Composite Video Color Signal Generation from Digital Color Signals
4,442,450	L. D. Lipschutz, R. E. Meagher, and F. P. Presti	Cooling Element for Solder Bonded Semiconductor Devices
4,442,463	R. Krishnamurty and J. A. Voltin	Safeguarding of Data Recording on Disk by Tunnel Erase Magnetic Head Assembly
4,442,487	R. P. Fletcher, D. M. Stein, and I. Wladawsky-Berger	Three Level Memory Hierarchy Using Write and Share Flags
4,442,503	D. Schütt, M. Schwengler, H. Ulland, and H. H. Weis	Device for Storing and Displaying Graphic Information
4,442,519	R. E. Jones and D. H. Wood	Memory Address Sequence Generator
4,442,589	V. Y. Doo and P. J. Tsang	Method for Manufacturing Field Effect Transistors
4,443,278	A. R. Zingher	Inspection of Multilayer Ceramic Circuit Modules by Electrical Inspection of Green Specimens
4,443,302	P. L. Gendler and R. Twieg	Printing Medium and Use Thereof
4,443,824	N. K. Frater, G. G. Gill, and R. B. Watrous	Magnetic Head Arm Assembly
4,443,847	D. J. Bradley, L. C. Eggebrecht, D. G. Gibbs, and D. J. Kostuch	Page Addressing Mechanism
4,443,863	D. G. Busch, R. J. Grafe, and G. E. Leikam	Timer Driven Display Updating

4,444,456	K. Jain, M. R. Latta, and G. T. Sincerbox	Holographic Method and Apparatus for Transformation of a Light Beam into a Line Source of Required Curvature and Finite Numerical Aperture
4,444,559	K. Schink and H. Wenskus	Process and Apparatus for Unsoldering Solder Bound Semiconductor Devices
4,444,626	W. E. Bernier, F. Emmi, E. O. Fey, P. L. Gendler, and R. J. Twieg	Electrochromic Printing
4,445,134	R. J. Miller	Conductivity WSi_2 Films by Pt Preanneal Layering
4,445,174	R. P. Fletcher	Multiprocessing System Including a Shared Cache
4,445,176	J. L. Burk, R. L. Cormier, M. H. Hartung, R. A. Larner, D. J. Lucas, K. R. Lynch, B. B. Moore, H. L. Page, D. H. Wansor, and C. Zeitler, Jr.	Block Transfers of Information in Data Processing Networks
4,445,190	B. R. Pierschalla, K. L. Jeffries, K. M. Herrington, and R. F. Daugherty	Program Identification Encoding
4,445,193	M. W. Mueller and T. S. Parker	Bisynchronous Host/Terminal Communication System with Non-Clock-Generating Modem & PLL Generated Clock Signal
4,445,194	W. C. Cason, W. A. Kuecker, and S. D. LaPlant	Multidirectional Cursor Motion
4,445,197	R. A. Lorie and H. R. Strong	Weak Synchronization and Scheduling Among Concurrent Asynchronous Processes
4,445,201	W. D. Pricer	Simple Amplifying System for a Dense Memory Array
4,445,202	V. Goetze, E. F. Miersch, and G. Potz	Electrically Switchable Permanent Storage
4,445,267	F. H. De La Moneda and R. C. Dockerty	MOSFET Structure and Process to Form Micrometer Long Source/Drain Spacing
4,445,272	P. H. Bruhn and R. Wustrau	Method and Apparatus for Stacking Rotor Blanks on a Shaft
4,445,795	L. J. Levine and K. O. Shipp, Jr.	Method and Apparatus for Merge Processing in a Text Processing System
4,445,796	V. M. Lisica and C. O. Ross	Print Electrode Control Circuit
4,445,968	H. S. Hoffman and R. T. Howard, Jr.	Surface Treatment for Ceramics to Eliminate Alpha Particle Emitting Elements
4,446,193	A. Afzali-Ardakani, J. I. Crowley, and A. W. Wu	Process for Chemically Bonding Lubricant to an Information Carrier and Products Thereof
4,446,383	M. P. Concannon and C. K. Erdelyi	Reference Voltage Generating Circuit
4,446,385	G. Orengo and M. Verhaeghe	Voltage Comparator with a Wide Common Mode Input Voltage Range
4,446,403	J. J. Cuomo, J. M. E. Harper, and H. R. Kaufman	Compact Plug Connectable Ion Source
4,446,476	R. D. Isaac, T. H. Ning, and D. D. Tang	Integrated Circuit Having a Sublayer Electrical Contact and Fabrication Thereof
4,446,535	D. P. Gaffney, G. D. Grise, and C. H. Lam	Non-Inverting Non-Volatile Dynamic RAM Cell