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#### **Computer Systems**

- Computer architecture and organization
- Processing architectures and instruction processing (e.g., processors)
- Input/output systems
- Graphics processing
- Visual display systems
- Operator interfaces
- Memory
- Static information storage and retrieval
- Dynamic information storage or retrieval
- · Recording, communication, and information retrieval equipment
- Arithmetic processing and calculating
- Error detection/correction and fault detection/recovery
- Data processing
- · control systems and applications
- · measuring, calibrating, and testing processes
- speech signal processing, linguistics, language translation, and audio compression/decompression
- financial, business practice, management, and cost/benefit determination
- artificial intelligence
- database and file management and data structures
- design and analysis of circuit and semiconductors
- software development, installation, and management
- Multicomputer data transferring or plural processor synchronization
- Virtual machine task or process management or task management/control
- Interprogram communication or interprocess communication

#### Communications

- Coded data generation or conversion
- Switch fabrics
- Directive radio wave systems and devices (e.g., radar, radio navigation)
- Radio wave antennas
- Wireless and cellular communications
- Multiplex communications
- Pulse or digital communications
- Telephonic communications
- Cryptography
- Optical communications
- Telecommunications
- Interactive video distribution systems
- Electronic funds transfer

# **Avionics and Aeronautics**

- Cockpit display systems
- Flight control systems
- Aircraft noise reduction
- Aircraft control
- Radar and transponders
- Collision and avoidance
- Pilot interfaces and controls
- Ground control and information
- Passenger comforts and features

### **Electrical Systems and Devices**

- Electrical transmission or interconnection systems
- Battery or capacitor charging or discharging
- Power supply and regulation systems
- Active solid-state devices (e.g., transistors, solid-state diodes)
- Digital logic circuitry
- Active electrical nonlinear devices, circuits, and systems
- Modulators and demodulators
- Coders and decoders
- Amplifiers
- Oscillators
- Wave transmission lines and networks
- Tuners
- Magnetically operated switches, magnets, and electromagnets
- Electrothermally or thermally actuated switches
- Electrical resistors
- Electrical pulse counters, pulse dividers, or shift registers: circuits and systems
- Electric resistance heating devices
- Electric heating tapes

## Semiconductor Manufacturing, Processing and Testing

- Growth processes
- Substrate etching processes and systems
- Semiconductor device structure and process
- Semiconductor testing

## **Light and Optics**

- · Optical systems and elements
- Liquid crystal cells, elements, and systems
- Organic light emitting diode systems
- Image projectors
- Microdisplays
- Lasers and other coherent light generators
- X-ray or gamma ray systems or devices
- Image analysis
- Optical waveguides
- Photography
- Electrophotography
- Photography and optical equipment

#### **Acoustics**

- Acoustic wave communication systems and devices
- Audio signal processing systems and devices
- Transducers

# Power Generation, Storage and Transmission

- Batteries and other energy storage systems
- Electric power conversion systems
- Electrical generator or motor structure
- Electric motor control systems
- Interrelated power delivery controls
- Engine control
- Equipment for production, distribution, or transformation of energy

# Medical/Dentistry

- Surgical and medical instruments
- Light, thermal, and electrical surgical instruments and procedures
- Prosthetics
- Medical and laboratory equipment
- Imaging equipment
  Hospital records management
- Ultrasound equipment

# Fires and Explosions

- Fire extinguishing and control systems
- Fire extinguishing materials

### Television

- Display systems
- Television signal processing
- Recording systems

### **Amusement Devices**

- Toys
- Games
- Exercise devices
- Sporting goods

### Other

- Measuring and testing instruments
- Valves and valve actuation
- Hazardous or toxic waste destruction or containment
- Robotics
- Nuclear technology