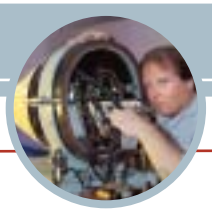



2000 Patents Issued




In addition to the featured patent, the following is a list of all other patents issued by the U.S. Patent Office to Draper engineers during the 2000 calendar year.

Anderson, Jamie M.; Kerrebrock, Peter A.; Sebelius, Peter W.
Pelagic Free-Swimming Aquatic Vehicle
No. 6138604 Issued October 31, 2000

A pelagic free-swimming aquatic vehicle includes a rigid forebody having a predetermined volume, a watertight chamber in the forebody, and a flexible afterbody having a lesser volume than the forebody and including a maneuvering and propulsion structure and a drive system to drive the structure with a traveling sinusoidal wave motion.

Bernstein, Jonathan J.
Micromachined Piezoelectric Transducer
No. 6028389 Issued February 22, 2000

A micromachined piezoelectric acoustic transducer includes a substrate; at least one piezoelectric actuator means attached at least one proximal edge to the substrate, a gap around at least a portion of the remaining edges of the piezoelectric actuator means, and a flexible corrugated membrane in at least a portion of the gap and interconnecting the actuator means with at least one of the substrate or a neighboring actuator means.

Boyle, John J.; Robbins, William L.
Integrated Circuit Die Assembly
No. 6020646 Issued February 1, 2000

An integrated circuit (IC) die carrier assembly includes a thinned IC die mounted to a substrate or carrier. The IC die is mounted to the carrier via a thin layer of glass. The carrier facilitates fixturing and provides support during the lapping process used to thin the die. Ball bonding, wire bonding, thin film or thick film conductors can be used to interconnect the pads on the IC die to the pads on the carrier. The coefficients of the thermal expansion of the IC die and the carrier are closely matched to avoid damage to the IC die due to uneven expansion of the thinned IC die relative to the carrier. The IC die carrier assembly is better suited for ultrahigh vacuum and high-temperature environments than conventional IC die carrier assemblies.

Deyst Jr., John J.; Harper, Richard E.; Lala, Jaynarayan H.
Reliable Wafer-Scale Integrated Computing Systems
No. 6018812 Issued January 25, 2000

Wafer-scale integrated circuitry that uses a cluster of wafer components, each component having a plurality of processing elements and a network element connected thereto for controlling the transfer of information to and from the processing elements. The network element is connected to network elements of other wafer components of the cluster for controlling the transfer of information to and from such other network elements. One or more redundant groups of processing elements are formed on the wafer components of the cluster, each redundant group being configured so that the processing elements in the group reside on different ones of the wafer components.

Ward, Paul A.; Kourepenis, Anthony S.; Weinberg, Marc S.
Motor Amplitude Control Circuit in Conductor-on-Insulator Tuning-Fork Gyroscope
No. 6064169 Issued May 16, 2000

A control system for a tuning-fork gyroscope uses motor frequency to control motor amplitude. The tuning-fork gyroscope has a drive signal input and an output signal from which motor frequency is determined. A phase/frequency detector generates an error signal by comparing the actual oscillation phase of the output signal with the phase of a reference signal from a crystal-controlled frequency synthesizer. The error signal is filtered in a feedback loop control to reduce phase detector ripple. The output of the loop controller is then used to determine the appropriate drive signal to drive the error signal to a constant and maintain a predetermined oscillation frequency.