

**Ridgetop Group, Inc.** 6595 North Oracle Road, Suite 153 Tucson, AZ 85704

Phone: (520) 742-3300 Fax: (520) 544-3180 www.Ridgetop-Group.com

## FOR IMMEDIATE RELEASE...

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## **RIDGETOP GROUP RECEIVES U.S. PATENT 7,196,294** Method and circuit for the detection of solder-joint failures in a digital electronic package

Ridgetop Group, Inc., of Tucson, AZ, a fast-growing high-technology firm, has received U.S. Patent 7,196,294, Method and resistive bridge circuit for the detection of solder-joint failures in a BGA electronic package, which has been named Solder Joint and Connector Sensor<sup>TM</sup> (SJnC Sensor<sup>TM</sup>). The patent is a result of innovative research focused on solder-joint degradation prognostics for a current SBIR Phase II Research and Development Contract from the Naval Air System Command (NAVAIR) Joint Strike Fighter (JSF) program.

Electronic control systems, such as those found on aircraft, have electronic circuit boards with components, such as microprocessors and FPGAs, that are mounted onto the boards using packages that contain an array of closely-spaced solder balls affixed to their input and output pins. Referred to as Ball Grid Arrays, or BGAs, the solder balls in these packages are subject to thermo-mechanical stresses that cause them to crack and eventually fail, causing troublesome intermittent operational faults that are difficult to diagnose. Early definitive detection of a solder-joint failure is an important addition to methodologies to improve operational readiness of aircraft such as the JSF F-35. Ridgetop's Principal Investigator and patent co-inventor is James Hofmeister, Senior Principal Engineer.

Doug Goodman, Ridgetop's CEO stated: "The patented SJnC Sensor, one of our many innovations in electronic prognostics, has both military and commercial application in the mitigation of intermittent problems caused by solder-joint failures. Innovation like this is exactly what the Small Business Innovation Research (SBIR) contract awards are intended to produce."

Ridgetop Group is a privately-held firm founded in 2000 that provides mission-critical electronic prognostic tools, fault-to-failure prognostic libraries, semiconductor IP libraries and engineering services. Ridgetop's customers include NAVAIR, Missile Defense Agency (MDA), DaimlerChrysler, Raytheon Missile Systems (RMS), ATK/Mission Research, Honeywell, and NASA.

For further information, please visit our website at www.ridgetop-group.com or contact Milena Thompson at <u>milena@ridgetop-group.com</u>.