

An Awesome Asset Play...

FastFlow® within...

MEMS on Steroid—*fluidic* MEMS

FastFlow® fluidic Flow Control/Fluid Logic Regulated

Micohydraulic Actuators

Unimaginable Intellectual Property

Patents – Trademarks – Trade Secrets

[Technology, Faith & Synchronicity](#)

LatchTool Group

The saga of LatchTool Group began with three fellows drawn together by the prospect of commercializing a patented hand tool technology for embedded hydraulics.

Things never go as planned: In the course of re-engineering the tool's hydraulics, a fortunate accident led to the discovery of what has become the **annular *fluidic* seal-valve** and with these seal-valves, a new way to design and construct hydraulic actuators as *closed* resistance regulated units.

The technology presents a **new paradigm** for generating linear force that is SMART, GREEN and FRUGAL; and a **power density** breakthrough that is Compact and Modular—adding *plug-n-play* simplicity for maintenance, repairs & operations (MRO).



You Will Never-Ever Be Confronted With a More Awesome Opportunity than This.

LTG lays claim to an emerging technology that is as significant as the transistor. That discovery made the vacuum tube irrelevant and gave birth to the semiconductor industry. The semiconductor market was \$226 billion in 2009. With the development of silicon microfabrication, the \$6.5 billion MEMS industry supplies the *chips* that control the world...

MEMS sense and process *real-time* information.

THE LTG TECHNOLOGY IS THE GOOSE THAT LAYS GOLDEN EGGS



Miniature (as opposed to micro) Electromechanical Systems powered by fluidics— is a paradigm befuddled by a paradox, conflicted by terminology and besieged by the times.

MEMS on Steroids or [fluidic MEMS](#) are based on the *discontinuous* discovery of the **annular fluidic seal-valve**: Latest patent US 7,827,903 B2. The aluminum casting foundry and micromachining are the fab-plants for *fluidic* MEMS.

fluidic MEMS **do work**—in accordance to the *fluid logic programmed* into each system. They hydraulically leverage a motor's torque into a load sensing linear force. As actuators, they can be either semi-automatic or automatic linear transmissions. *Firmware* controls the gearmotor.



Crystallization...a mind map

On June 22, LTG presented [MEMS on Steroids](#) to Robotics Trends followers as a technology that will help enable robots to move into the disruptive universe. Subsequently, LTG learned that the quest for the Smart Grid was leading to the convergence of Information Technology (IT) and Operating Technology (OT). On a related venue, Japan announced a discovery that challenges China's control of 97% of the global supply of Rare Earth Elements—the ingredient that makes small motors powerful. See [Progress in a nutshell](#).

Obama announces manufacturing effort with leading-edge technology, robots

Associated Press June 24, 2011

President Obama Launches Advanced Manufacturing Partnership

White House—June 24, 2011

Obama Announces \$70M Robotics Initiative

PC Magazine June 25, 2011



Crucial mix of characters...

Philippe Content had area responsibility for MEMS and Nanotechnology in Lucent's Corporate Development section. **Larry Kiefer** had been General Counsel for Prudential's Bach Securities and Real Estate Groups; he is also a LTG director and 40-year friend of Bob McPherson. Bob is LTG's Chair/CEO and co-founder – previously, he had been Vice Chair/EVP & COO of Haber Inc., an Advanced Separations Technology Company. He is a Cornell University Chemical Engineer and a John McMillan Scholar.

Philippe is founder and General Manager of Sweerts & Vaas, a boutique merchant bank focused on middle market technology companies. He was retained to merge the three predecessor technology companies into LatchTool Group, LLC. This included establishing a value for the underlying technology. LTG emerged in July 2006.

Philippe was the first to draw the analogy between LTG's technology and the transistor. The formative documents are recorded with the [Colorado Secretary of State](#)—search for LatchTool Group or ID 20041130873.

It was Philippe who mused; *imagine if Bill Shockley had to have a business plan to get funding to develop his transistor...*

Josh Hoyt, founder of Gearhead Associates, has his Ph.D. from a MIT/WHOI program—and is eminently familiar with deep sea robotics and piezo signaling. Josh is LTG’s CTO. He was the first to recommend an Open Source approach to promulgating the LTG Technology—*i.e.* **FastFlow@Syndicate**.

Dave Marshall, the Tishman project exec directly responsible for building the Freedom Tower at the World Trade Center in NYC, is a director of LTG. He is a graduate of Illinois Institute of Technology and figures greatly in unraveling the value of **FastFlow@fluidic**/Microhydraulic Actuators, particularly when the operating technology is integrated wirelessly with billing and control. See [HydrAssembly](#), particularly the later section which speaks of merging the OT with IT and WTA. Marshall and McPherson are friends of over 30-years.

Shrinking in a Bad Economy: America's Entrepreneur Class

WSJ—August 12, 2011

Robots are a boon for the economy

Politico—August 19, 2011

Market Rout Goes Global

WSJ—MARKETS August 21, 2011

LTG through **FastFlow@Syndicate** opens the LTG Technology to Scientists and Research Engineers funded through grants, connected to venture capital or hired to develop specific applications of **FastFlow@fluidics**/Microhydraulic Actuator technology. Members have the right to license developed applications to third parties and pursue application patents for themselves. Members will receive 20% of subsequent fees or royalties collected by LTG. Membership costs \$50,000 per year. Depending on the particulars, fees maybe discounted or waived. The [LTG website expands](#) on the term and conditions governing membership. See the banner ads at [Robotics Trends](#).

On the LatchTool website, visit the panel [LatchTool isn't about tools, it's about technology!](#)

LatchTool Group

...FastFlow@within

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