



**AHS Montréal - Ottawa Chapter**

**invites you to a presentation on the subject of**

**“The coaxial compound helicopter (CCH)  
configuration: A means to increase helicopter  
lifting and cruise efficiency”**

**by**

**Troy Gaffey**

**President & Chief Engineer, AVX Company**



**Thursday 21<sup>st</sup> February, 2013 at 6 pm**

*(registration begins at 5pm)*

**Sheraton Montreal Airport Hotel**

Join AHS today @ <http://vtol.org/>

*Veillez prendre note que la présentation sera faite en anglais*

<b>Place:</b>	<b>Sheraton Montreal Airport Hotel, 555 Boulevard McMillan, Dorval, QC H9P 1B7</b>	
<b>Date:</b>	<b>Thursday February 21<sup>st</sup>, 2013</b>	
<b>Agenda:</b>	17h-18h	Registration & Cocktails
	18h-19h	Supper
	19h-20h	Presentation
	20h-20h30	Questions & Closing remarks
<b>Cost:</b>	AHS member	\$ 40 (\$70 member + spouse)
	Non-member	\$ 60 (\$100 non-member + spouse)
	Students & retirees	\$ 25
<b>RSVP:</b>	Space is limited, so please book your seat ASAP (at the latest by <u>Wednesday 13<sup>th</sup> February, 2013</u> ). Register with: Andrew Sayer - <a href="mailto:asayer@bh.com">asayer@bh.com</a> 450-971-6500 x2597	

### **About the speaker**

Troy Gaffey received his BSAE from Purdue in 1960. Following his graduation he worked for Boeing and attended graduate school for several years and entered the US Army in 1962 to fulfill his ROTC obligation. He was a dual rated fixed wing and helicopter pilot during his Army service. In 1965 Gaffey joined Bell Helicopter and had a 38 year career in the Bell engineering department retiring in 2003 after serving as Bell's Chief Engineer and Senior Vice-President Research and Engineering from 1991 to 2001. During his engineering career he initially specialized in rotorcraft dynamics and aeroelasticity, moving into technology management and then project and general management. During his tenure as Chief Engineer a number of new helicopters were developed as well as the Bell-Boeing V-22 Osprey and the Bell-Agusta 609 tilt rotor aircraft. Following retirement from Bell, Gaffey has consulted for NASA, DOD, and the rotorcraft industry. He is currently President and Chief Engineer of AVX Aircraft Company and is developing an aerodynamically efficient helicopter configuration based on integration of advanced technology.

Mr. Gaffey has been honored by the American Helicopter Society with the Haueter Award for VTOL development and the Klemin award for contributions to rotorcraft technology. The AIAA has awarded Gaffey the Newbold Award for contributions to powered lift technology.

### **About the presentation**

The inherent performance advantages of the coaxial main rotor, compound helicopter configuration provide the opportunity to significantly increase the useful load and the speed of the conventional helicopter. The coaxial main rotor can, for the same power, lift more weight than a single rotor/tail rotor helicopter and can therefore accommodate the added weight normally associated with compounding, thereby enabling increased speed.

The presentation will briefly explain the coaxial compound helicopter concept in layman's terms and will then describe two potential commercial applications. First, a 3,200 lb. gross weight, five seat, modern commuter/utility helicopter with a maximum speed of 150+ knots and second, a 12,000 lb. gross weight, 14 seat utility helicopter with a 180+ knot speed capability. The presentation concludes with a suggestion for a low cost coaxial compound research vehicle.

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