## Hyperstealth Developing Exotic Anti-Radar Technology

(Vancouver, B.C., February 7, 2021) Hyperstealth Aero4ce (pronounced Aero Force) is a program to develop a new method to allow conventional aircraft to become low observable (LO) to radar and increase current stealth aircraft into ultra-low observable (ULO).

The current 5<sup>th</sup> generation fighter jets; all-aspect stealth even when armed, low-probability-of-intercept radar (LPIR)... provides a substantial advantage over 4<sup>th</sup> generation fighter jets such as the



F-15, F-16, F-18 which are easier to detect with radar especially when armed with external fuel tanks, sensors and weapons compared radar cross section of 5<sup>th</sup> generation fighters when they are limited to internal carried munitions for fighters such as the F-22 and F-35.

... could be used to reduce the radar cross section of any aircraft including large aircraft such as Air Force One and even helicopters ... it should also work for concealment of surface ships, above water submarine photonics masts or periscopes and even on military ground vehicles and spacecraft.

While the new F-15EX, F-16V (Block 70/72) and F-18E/F Block 3's are incorporating upgraded items that can increase their low observable radar cross section, pushing some to a 4.5 generation designation, their shape, external weapons, airframe coating... limit their LO capacity below the threshold of 5<sup>th</sup> generation.

The developer of Aero4ce<sup>™</sup> low observable technology is Guy Cramer, Hyperstealth's President/CEO, who believes this technology could potentially turn a 4<sup>th</sup> generation fighter into a 5<sup>th</sup> generation and conversely a 5<sup>th</sup> Gen. into a 5.5 or 6<sup>th</sup> Gen.

Guy is the inventor of four recent patent pending applications for Hyperstealth. This resulted in 204 total claims approved (96%) by the WIPO (World Intellectual Property Office). The fourth patent application just received approval of all 40 claims just over three weeks ago in January 2021.

The four separate patent applications, all based on optics;

- Improved Camouflage light bending material "invisibility" (73 claims approved) <u>Reuters Video</u>
- Solar panel amplifier which can triple the power output (All 45 claims approved) Video
- A new display system which can create holographic like videos (All 46 claims approved) Video
- A laser splitter which can split a single laser into millions of lasers, useful for improving LiDAR systems and potential detection of stealth aircraft (All 40 claims approved) Video

The WIPO has also determined the four applications contained 14 separate inventions and each one will have to be a separate patent application in each country Hyperstealth files in. See:

https://www.hyperstealth.com/WIPO-identifies-14-Separate-Hyperstealth-Inventions.pdf Guy's expertise in this field was recognized by NASA's JPL (Jet Propulsion Laboratory) ... as he was asked to help them on a classified program regarding military aircraft...

Guy won't divulge the details of this potential low observable technology as he is still working on this and other new patent applications for the company and any disclosure could cause this application to be denied. The patent application could also become classified when it is submitted and reviewed by the patent office. Cramer points out to any skeptics of his low observable radar claims that his claims of developing an invisibility material were challenged by the scientific community at large, known as the "Hyperstealth Hoax" for years until Guy released videos on the Hyperstealth website in the summer of 2019 after the WIPO published the four patent applications. There were still a number of critics until the WIPO approval of <u>73 claims</u> of that particular patent application just two months ago in December 2020. This is the first practical "Negative Refractive Index" material which conceals by invisibility.



Video from above photos: https://vimeo.com/356760336

Guy is no novice in the area of radar, he was a research assistant for 6 years to his Grandfather, Donald L. Hings, P. Eng, M.B.E., C.M. (Member of British Empire and Order of Canada). Hings was considered a leading expert in radar, he invented the technology used for the DEW Line (Distant Early Warning Line) operated by NORAD (North American Aerospace Defense Command) for over 30 years.

Hings is best known as the inventor of the Walkie-Talkie and had 56 other patents. He received the Order of Canada in 2001, the highest award for a Canadian civilian. He passed away in 2004 at the age of 96. <u>Discovery Channel Video: Walkie-Talkie History feature about Donald Hings</u>

Cramer states, "I've had specialized training in many areas of science as I began to work with my Grandfather in 1986. Among the many things he educated me about was radar and the interaction with low observable technology that he began to work on during the war in 1943." See end of paper.

Guy's expertise in this field was recognized by NASA's JPL (Jet Propulsion Laboratory) shortly after his Grandfather had passed as he was asked to help them on a classified program regarding military aircraft, the details of the program were not shared with him. NASA JPL later responded that they believed Guy's contribution helped saved them between 10-15 years of research and development. Later, he similarly corresponded with NASA's deputy director, in regards to related subject matter.

Guy anticipates his new low observable technology could be used to reduce the radar cross section of any aircraft including large aircraft such as Air Force One and even helicopters which typically have a large radar cross sections. He states, "If it works on aircraft, it should also work for concealment of surface ships, above water submarine photonics masts or periscopes and even on military ground vehicles and spacecraft... that are vulnerable to radar detection. This is quite different to the NASA JPL project."

Many countries just can't afford 5<sup>th</sup> generation fighter jets and while 4<sup>th</sup> or even the recent 4.5 generation upgrades may be suitable for many operations, any adversaries with newer radar technologies would likely take advantage of these differences which could result in substantial aircraft losses.

The B-2 Spirit (stealth) bomber is about \$2.2 billion dollars (USD) per aircraft when you factor in development costs, much of this is due to the advanced LO (radar stealth) technologies. Guy believes his technology will come at a fraction of the cost enabling countries like Canada with smaller defence (U.S. spelling = defense) budgets to best utilize higher capabilities with less expenditures. It could also help the U.S. advance their defensive capabilities in areas not currently considered feasible.

Hings left school at an early age to support his Mother, he was self-taught. He claimed that because no one showed him where the boundaries of the box were, nothing seemed totally impossible in him and he believed that was key to his thought process and problem solving ability. His journey to acceptance into the scientific community was difficult and only came about when his inventions and discoveries came to fruition. Cramer has witnessed a similar trend, he says "when there are no letters behind your name, your work must speak for itself." Hings earned his Professional Engineering certificates in Ontario and B.C. without any post-secondary schooling.

Cramer said on the last day of being Don's research assistant, his Grandfather said to him, "I've taught you all I can, take what you've learned and apply it to whatever you can in life!" Cramer responds, "I would be satisfied if I can do half of what my Grandfather was able to accomplish, but I do so with his knowledge, wisdom and unquenchable curiosity, there is so much we don't know, it's a great journey of discovery and I can thank my Grandfather for much of my unique perspective and abilities."

This picture shows, Donald Hings (top row - second from the right with fellow Canadian Navy Officer, Don Ross) during WWII on May 29, 1943 as part of the International Commission for the U.S. National Advisory Committee for Aeronautics **NACA** (NACA would later become **NASA**). The group worked together on a number of sensitive programs during the latter part of the war. Hings claimed that he was involved in some capacity with a special project called the Philadelphia Experiment where a U.S. Navy ship was designed to be less visible to radar, the ship never physically disappeared as some conspiracy theories and two movies by the same name suggest.

Dr. Archibald Vivian Hill (bottom row) from Great Britain won the 1922 Nobel Prize in Physiology or Medicine and was the expert on the secret Radar. Dr. Harold Eugene Edgerton (bottom row), professor of electrical engineering at MIT, developed a strobe system for night-time aerial photography of ground targets and operations during WWII. It was used effectively in the Normandy invasion in 1944. Dr. Edgerton's two MIT students were working on the secret Manhattan project developing the high-speed strobe circuitry used for triggering the atomic bomb. Hings was working on numerous secret programs for the Canadian military.

Dr. Edgerton formed EG&G after the war with his two students, Germeshausen and Grier (EG&G as the company is now known)



incorporated and assumed major responsibilities for bomb tests. As prime contractors for the Atomic Energy Commission, they designed and operated systems that time and fire US nuclear bomb tests. EG&G has been a contractor on some of the Government's most secret projects (including the secret Groom Lake "Area 51" base in Nevada), where some of the most secret military projects, including the F-117 stealth fighter, were tested. This was confirmed in the Las Vegas Times newspaper dated July 17, 1996 which details a Las Vegas federal judge release of a foot-thick stack of government documents, adding details to a lawsuit brought by former workers at the Air Force's secret Groom Lake base which confirmed EG&G as the prime contractor for the Base. Donald L. Hings, Inventor of the Walkie-Talkie spoke of the Philadelphia Experiment

Hyperstealth has provided over 100 minutes of videos demonstrations and explanations for these four patent applications, these can be seen on each of these Hyperstealth sites: New sites <a href="https://invisibility.ca">https://invisibility.ca</a>. and <a href="https://www.hyperstealth.com/">https://invisibility.ca</a>. and <a href="https://www.hyperstealth.com/">https://invisibility.ca</a>. and <a href="https://www.hyperstealth.com/">https://invisibility.ca</a>. and <a href="https://www.hyperstealth.com/">https://invisibility.ca</a>. and <a href="https://www.hyperstealth.com/">https://www.hyperstealth.com/</a> cannot be modernized without formatting problems which removes images and pages that are required to establish original copyright publication dates for our numerous camouflage patterns. This paper and information © Copyright 2021, Hyperstealth Biotechnology Corp., All Rights Reserved. Hyperstealth is a registered Trademark of Hyperstealth Biotechnology Corp. All Rights Reserved. Hyperstealth Biotechnology Corp.</a> Aero4ce is a Trademarks of Hyperstealth Biotechnology Corp.

