Captain Charles T. Nash USN (RET) 709 S Union St. Alexandria VA 22314

To whom it may concern,

I am writing this letter to most strongly endorse the plasma antenna technology developed by Dr. Ted Anderson and his company, Haleakala R&D, Inc. I have known Dr. Anderson for 12 years and have closely followed his research and development efforts throughout that time. He is without doubt the world's leading expert in the field having: authored the first and only book on plasma antennas published by Artech House; published journal and conference articles on plasma antennas, and invented and owned over 20 patents on plasma antennas. I am told that the second edition of his book "Plasma Antennas" is due out in October 2020. As testament to his preeminence in the field, researchers across the globe routinely reach out to him for assistance and understanding that shapes their own efforts.

As a retired Navy Captain/Naval Aviator, and Defense and National Security Analyst, I am aware of the potential game-changing military applications of this technology. It is because of those tremendous potential applications that I am stepping forward with this letter. It is also somewhat personal. In my final assignment before retiring from the Navy, I held a position on the staff of the Chief of Naval Operations in the Pentagon where I was directly responsible for overseeing the requirements and budgetary planning/execution for all of the Navy's current and planned tactical aviation assets (platforms/weapons/systems). In that capacity, I saw the problems that the Systems Commands had attempting to develop new capability while insisting on sticking with and trying to squeeze out the last 2% of performance from old technology. This was an expensive and schedule damaging process.

In addition to the above, one of the capabilities I was very much championing as I approached leaving the Pentagon was hypersonic missile technology. After I departed the Pentagon in 1998, the effort was without a strong advocate and was cut from the Navy POM-00 budget process. The headlines of today tell the rest of that story. Today, we find ourselves in a desperate race to catch up and counter Chinese and Russian hypersonic programs. This never should have been allowed to happen and I am determined to do anything I can to ensure that plasma antenna technology will not suffer the same fate.

Russia, China, Iran, France, India and other countries are pursuing this technology and for good reason. When successfully implemented, it will bring entirely new levels of performance to antennas for RADAR, telecommunications, GPS, jamming, Directed Energy Weapons (DEW), Active Denial System technologies, IED defeaters, ground penetrating RADAR, plasma Magnetic Resonance Imaging/PET, and tracking and destroying hypersonic missiles.

If you can move this technology forward, I strongly urge you to do so. As we were back at the dawn of the 21<sup>st</sup> Century, we continue to risk cost/schedule/performance by using old technology instead of moving forward and capturing a truly remarkable, breakthrough technology This time we can and must do better.

Very sincerely,

Charles T. Nash

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