

Amendment 0001  
Questions and Answers

Broad Agency Announcement (BAA) 10-012

Electronics Technology

The purpose of Amendment 0001 is to provide answers to questions.

**Question 1:** Would the development of nanoscale sensors for use in the 1 - 10 THz range, with potential for integration into focal plane arrays for real-time video imaging, be an area of interest under ONR BAA 10-012.

**Answer 1:** The proposed topic is not an area of interest under ONR BAA 10-012.

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**Question 2:** Are some topologies or technologies preferred in the areas of band pass and extreme spur-free dynamic range analog-to-digital converters (ADC's)

**Answer 2:** There are no preferred topologies or technologies but as a Discovery and Invention Program, innovative concepts whose success could have a large impact on the state of the art are preferred.

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**Question 3:** What are the requested specs, such as: resolution, sampling speed, SFDR, SNR, full power bandwidth, power dissipation (ADC's)?

**Answer 3:** The area of Supporting Technologies in the BAA is not associated with specifications driven by a particular application. The goal is to advance the overall ADC state-of-the-art and ADC's suitable for many different applications are preferred to those that are particular to a single application. There is some prioritization of SNR and SFDR over wide IBW and sensitivity over other metrics.

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**Question 4:** In the area of technologies for simultaneous transmission and reception, do you envision a partition of the spectrum into banks of transmit channels and banks of receive channels?

**Answer 4:** Yes, but TDM and frequency blanking are viewed as supports make the system work in the nearest term. The goal is to decrease the number of channels that must

be used by increasing component performance, especially with respect to increasing the achieved isolation of the transmitter and receiver.

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**Question 5:** In the area of technologies for simultaneous transmission and reception, do you see the system operating in a TDM fashion to access to individual channels sequentially (or possibly a hybrid operational strategy).

**Answer 5:** The TDM approach is used today and replacement with true simultaneous transmission and reception in the same frequency band is our goal.

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**Question 6:** In the area of supporting technologies, we are applying our technology to the development of programmable and low power ADC's. Are these ideas of interest to you?

**Answer 6:** These areas are of interest under BAA 10-012.

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**Question 7:** Does the Navy's interest extend to: 1. Shipboard generation of electrical power via alternators driven by main (propulsion) diesel engines; 2. Shipboard generation of electrical power via alternators driven by auxiliary diesel engines or stand-alone diesel-powered engines

**Answer 7:** Under BAA 10-012, the Navy's interest does not extend to any of the areas referenced in the question.

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**Question 8:** Can you advise us with respect to the desired format of the white papers the Navy seeks (length, content, etc.)?

**Answer 8:** The format is provided in Section IV, Subsection 2 of the BAA.

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