



Amendment 2

Interrogator for Fiber Bragg Grating Distributed Sensing Arrays – Questions and Answers

Q4. You require the use of a narrow swept source, which is the classic approach used by different existing commercial products. In addition, you do not indicate any information on the sampling rate, the fiber type, the reflectance of the networks, their spacing, the minimum and maximum length of the chain and the desired dynamic range.

Without this information, and factoring in the requirement of a narrow swept source, a number of existing commercial products could be satisfactory. What type of innovation are you looking for? Because, theoretically, there are existing products that could already meet your requirements.

A4. The sampling rate is proposed in the challenge (up to 200 kHz), the interrogator should be compatible with SMF-28 type fiber. It is at the latitude of the applicants to propose the best solution they think they can achieve with regards to reflectance of the fiber sensor networks, the sensor spacing, the minimum and maximum length of the sensor chain, and what dynamic range they can achieve.

Q5. Regarding requirement #9, is there a preference for a transmission-based system vs. a reflection-based system?

A5. It would be preferable if the system would function both in transmission and reflection, but definitely it should operate in reflection mode.

Q6. Does the 200 kHz scan rate requirement apply to the WDM operation, TDM operation, or both? Is this a hard requirement?

A6. The scan requirement should apply to both WDM and TDM operation. It is not a hard requirement. 1 kHz is adequate, but the closer the applicant can get to the target specification the better.

Q7. What TRL will be required by the end of Phase 1 for consideration in Phase 2?

A7. Difficult to answer. By the end of Phase 2 we would like to have a working instrument/prototype, not a proof of concept.