Innovative Solutions Canada Program

Challenge EN578-170003/03: Robust "Beyond Line of Sight" (BLOS) Communications in Satellite-Denied Environments

Amendment 001

This amendment is raised to answer bidder questions.

Question #1:
What is the power supply available?

Response #1:
At this point, to be determined. Ideally, the terminals would be man or snowmobile-portable and amenable to battery power. Ship and fixed stations are also envisioned and, for a concept demonstration, one should not consider man or snowmobile portability as a driving constraint.

Question #2:
Minimum range?

Response #2:
Solutions should work beyond line of sight (in mountainous terrain, out of valleys and over ridges and on the open sea, well over-the-horizon). As there are a number of conventional solutions available using VHF and UHF, proposed solutions should extend well beyond those ranges. Ideally, this means 100's of km.

Question #3:
Any restrictions on frequency?

Response #3:
Frequencies should be those available for military/security use.

Question #4:
Is there a latency requirement?

Response #4:
While latency should be minimized, a few minutes could be tolerable for text and computer-computer communications. (Clearly significant latency would prevent effective digital voice comms but digital voice is only one application).

Question #5:
From the description I read the actual need is a bit vague and it's hard to come up with a practical proposal unless there is a bit more detail.

Response #5:

Innovative Solutions Canada is designed to seek truly novel solutions from Canadian small business. Challenges posted through ISC may appear to provide few details or specifications on what the desired solutions should look like. This is intentional. Challenge statements will contain some guidance on desired outcomes, but will not prescribe how a solution should work or function. We leave that to the creativity and ingenuity of Canada's innovators

Without restricting the solutions, we are seeking innovative solutions for the general problem of over the horizon (beyond line of sight) communications as a back-up to SATCOM. Potential solutions include new waveforms for conventional long-haul channels (ie HF), using long-endurance, high altitude UAVs as relays and innovative concepts such as troposcatter. Automated spectrum management is also of interest, particularly for HF options. This includes protocols for automatic channel selection and channel sharing.

Question #6:
We are interested in submitting a proposal for this challenge. Can you please clarify if the closing date is March 26, 2018 or August 31, 2018?

Response #6:
This Challenge currently closes March 26, 2018. Bidders should monitor the Challenge Notice on Buy and Sell for any potential amendments.

The Call for Proposals (CFP) document will remain open until August 31, 2018 2:00pm EDT. Each individual challenge subject to this CFP will have its own closing date and time indicated on the Buy and Sell page for the specific challenge.