DIRECTORATE GENERAL BORDER SECURITY FORCE
(TRAINING DIRECTORATE)

EXPRESSION OF INTEREST

Dy Inspector General (Trg)
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The Sub-group of Technical Experts constituted by MHA vide their letter No. IV-24011/12/2011-Prov-1 dated 13th June, 2012 and Letter No. IV-24011/12/2011-Prov-1 dated 28th Dec'2012 held its meeting at HQ DG BSF on 20th Dec'2013, 29th Jan'2014, 07th April 2014, 13th Aug'2014, 9th Oct'2014, 17th Mar'2015, 09th Dec'2015 and 26th Oct'2017 to formulate the revised **QRs & Trial Directives of "INFANTRY WEAPON EFFECT SIMULATOR SYSTEM (IWESS)"**

2. After detailed deliberations, the referred Sub-Group has formulated the draft revised QRs of **"INFANTRY WEAPON EFFECT SIMULATOR SYSTEM(IWESS)"** which as under :-

S.No	QRs/Specification
01.	**GENERAL** The IWESS is an electronic laser based devise designed to provide a real-time, accurate overview of the level of weapon handling skills developed during training in the field itself and also helps in coordinating various training assignment related to real time field exposure thus enhancing the overall reaction capability to a particular situation. Using the system requires recruits to wear a harness on which laser sensors are mounted and to attach a Laser Projector on the barrel of their weapons/ to specific rails in case available in a particular kind of weapon where normally a bayonet would be mounted or the laser projector can also be fitted on the rails (picatiny) if available in a particular kind of weapon. The harness shall consist sufficient number of sensors covering the head, arms as well as the body so as to cover the requisite area as needed during the training. The system comes with separate Master Control Unit and associated Instructor Control Units. The Master Control Unit gives real time tracking of movement of all participants as well as real time reporting of events within a specified exercise area. It also receives and process data. The Instructor Control Unit are like an oversized Pistol which is manned by an instructor. When a weapon is fired, laser pulses are trapped by the sensors on a target's harness and transmitted to the Master Control unit and Instructor Control Units. The Master Control unit analyses the pulses and is able to tell whether the simulated bullet is on target or, if it has missed. The Instructor Control unit is also capable of resetting and reactivating the trainees' harness individually.

	a) The system should be able to withstand the vagaries of all types of climatic conditions including weather conditions of high altitudes upto 10,000 feet, such as rain, fog, dust, snow, temperature etc during day and night time.
	b) The system should conform to the basic climatic, environmental and durability test prescribed by the MIL STD 810GwithIP - 65.
	c) Capable of simulating effect of dry and blank round firing by 5.56mm INSAS LMG, 5.56mm INSAS Rifle, 5.56mm SIG 7.62mm SSG-69, 5.56mm X-95, 9mm X-95, 9mm Beretta, 9mm MP5, 9mm CM and 7.62mm AK-47/AK Glock Pistol and any other weapon as per the user's requirement.
	d) Capable of handling up to 100 trainees collectively / individually.
	e) Should be capable for real time tracking of movement of all the participants as well as real time reporting of event in an area upto 3x3 sq km.
	f) Should provide for low battery indicator on all sub systems/ units.
	g) System should not get activated due to firing by other weapons in near vicinity or due to use of bicat stripes and crackers.
	h) Software backup should be provided in a CD/USB drive/ Any compatible drive.
	i) Total time (Calibrating/ Zeroing and programming of laser projector and harness) taken to activate one set of eqpt at a time shall be two minutes or lesser and thus for the complete set of 100 trainees should not be more than 3 hr when calibration is done individually for each trainee. However the total time will get reduced corresponding to the number of umpire control units available at a given point of time.
	j) Should depict visual display on map pertaining to area of exercise on control station along with depiction of real time position of individual participant so as to coordinate the movement as per design of training. **Its functions without any faults when the troops are exercising inside a building/house/urban scenario.**
	k) System shall operate in basic IWESS mode (When no real time tracking & reporting of events is needed). In this basic mode of operation, system should capable to retrieve entire data of action wirelessly for reviewing upto a minimum storage capacity of 500 GB data.