



Technology for Advancement

# MIST newsletter

## Military Institute of Science and Technology

14th Year

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Issue 26



Students in sessional class



Front View of two Faculty Towers



Comdt's Visit at project fair of Arch Dept

### DEVELOPMENT OF POP UP TGT AND FIRING RESULT AUTOMATION SYSTEM (FRAS)

BY R&D WING, MIST



Under the supervision of headquarters ARTDOC, R&D Wing of MIST innovated Digital Pop Up Target system and Firing Result Automation System (FRAS) which are of great use for military training. The systems were exhibited to the CAS on 14 May 2015 at Rajendrapur Firing Range. The systems have been already introduced in Bangladesh Army. The systems are very effective to increase firing efficiency of the soldiers during peace time.

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### INTELLIGENT TARGET SYSTEMS DEVELOPED BY R&D WING, MIST

#### POP UP TARGET SYSTEM

This is a portable and very user friendly system which can be set anywhere to conduct firing training. The target of this system pops down and up very fast on bullet hits and sends sms to a predefined mobile phone of firing point for confirmation. The main features of the system are:

- ❖ Operation range is 100m-1000m.
- ❖ Suitable for long range/ sniper firing.
- ❖ Pops down and up within 3-4 sec after hit.
- ❖ Target does not require frequent repair.
- ❖ It saves a lot of time for firer to check hit on target.
- ❖ SMS is generated for mobile phone on every hit for reconfirmation of hit in addition to pop up and down.
- ❖ Portable system which can be placed anywhere independently or in a group.

Presently the system is in use at SI&T and 46 Independent Infantry Brigade.

#### FIRING RESULT AUTOMATION SYSTEM (FRAS)

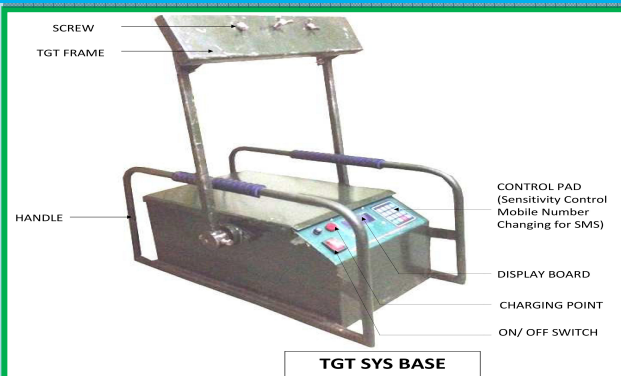
This system consists of 4 x camera, 1 x laptop, 1x monitor, 2 x Wifi routers, batteries and so on. Using this system, firing result (Grouping length & MPI) of grouping fire can be easily generated without any sorts of physical movement from firing point to butt point. Physical labor and wastage of time can be minimized to a great extent due to the following key features of the system:

- ❖ Hits on target are visible on large monitor from firing point through live streaming
- ❖ Target does not require frequent repair.
- ❖ Correction to firer can be given instantly.
- ❖ Requires only 2-3 minutes to compile firing result of a detail of firer.
- ❖ Result and images of hits on target are permanently saved on local database.
- ❖ Saves lot of time and physical movement.
- ❖ Zeroing of weapon can be carried out easily.

Presently the system is in use at SI&T and 6 Independent ADA Brigade



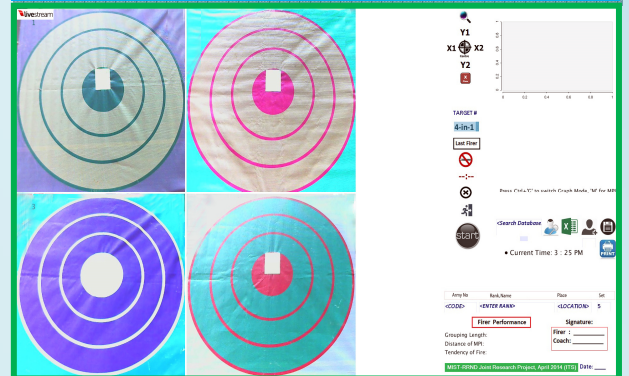
Pop Up Target Sets at Butt Point



A Pop Up Target System



Target System of FRAS at Butt Point



Monitor Screen View at Firing Point

### 13TH GRADUATION CEREMONY



The 13th Graduation Ceremony of Military Institute of Science and Technology (MIST) was held on 27 January 2015 at GMMPH, MIST, Mirpur Cantonment, Dhaka. Honorable Minister, Ministry of education, Mr. Nurul Islam Nahid, MP graced the occasion as the Chief Guest. Honorable Minister handed over B.Sc. Engineering certificates to the new graduates. Commandant MIST, Maj Gen Md Siddiqur Rahman Sarker, SGP, hdmc, psc presided over the ceremony. Chiefs of three services, members of parliament, High Commissioners, ambassadors, secretaries of different ministries, vice chancellors of different universities, civil and military high officials and academicians were also present in the ceremony.

Rasel A Sultan of ME department was awarded with the "Osmany Memorial Gold Medal" for his best academic performance. Sangeeta Bhattacharjee of CE, Major Md Rifath Sayeed Chowdhury of CSE, Mahdia Tahsin of EECE and Pracheta Dutta Tumpa of AE department were awarded with "MIST Medal" for best result of their respective departments. Prof. Dr. G M Jahid Hasan of CE Department was awarded Best faculty in research work, Sakib Tanzim of AE Department was awarded Best student in research work and "MONGOL BAROTA" was awarded as the best project of MIST.

### CERTIFICATE AWARDING CEREMONY OF SHORT COURSE ON "MOBILE APPLICATION DEVELOPMENT-2015"



A short course on "**Mobile Application Development**" was conducted by CSE Department of MIST from 01 Jan to 28 Jan 2015. In this course total 56 participants joined from different institutions. The main objective of this course was to enable the participants to design and create the Android based Mobile Application software. The course was very effective for developing user friendly mobile apps and the participants also designed and implemented some interesting apps.

Certificate awarding ceremony of the course was held at MIST on 02 April 2015. Shyam Sunder Sikder, Secretary, Division of ICT graced the occasion as chief guest. Maj Gen Md Siddiqur Rahman Sarker, SGP, hdmc, psc Commandant, MIST, senior military and civil officials and students of MIST were present in the ceremony.

### SEMINAR ON “CYBER SECURITY” & CERTIFICATE AWARDING CEREMONY OF “THE CERTIFICATE COURSE ON CYBER SECURITY – 2015”



A seminar on “**Cyber Security**” and a Certificate Awarding Ceremony of the “**Certificate Course on Cyber Security-2015**” was held on 8th June 2015 under the supervision of CSE Dept, MIST. Respected Assistant Chief of Air Staff (M), BAF Air Vice Marshal M Mazharul Islam, BSP, psc graced the occasion as the Chief Guest and Commandant MIST, Maj Gen Md Siddiqur Rahman Sarker, SGP, hdmc, psc was the special guest in that event. Two renowned person from ICT Division Mrs Mahbooba Panna, Programme Director, Cyber Security Programme’ and Engr Mr. Tanvir Hassan Zoha, CSIRT Specialist were the guest speakers in the seminar.

### SEMINAR ORGANIZED BY BIOMEDICAL ENGINEERING DEPARTMENT



MIST has started four years B.Sc engineering course in Biomedical Engineering from 01 Feb 2015 along with traditional fields of engineering education. This department organized the first departmental seminar titled “**The Essential Prerequisite for Effective Healthcare in Bangladesh**” on 25 Feb 2015. The Chief Guest of this seminar was Architect Yeafesh Osman, MP, the Honorable State Minister of Science and Technology, Bangladesh, Dr. Ferdousi Qadri, the member of UN on ‘Technology Bank’ delivered a speech in this seminar for appropriate medical intervention for large population of our country. There were several guest speakers in this seminar notably Prof. Dr. Siddique-e Rabbani, Department of Biomedical Physics, Dhaka University, Dr. Ashesh Kumar Chowdhury, BIRDEM, Dr. Sharif Hossain, Department of Biotechnology and Genetic Engineering, Jahangirnagar University and Soomna Lohani, Deputy General Manager, Beximco Pharmaceuticals Industry. Maj Gen Harunur Rashid, FCPS, FRCS, acting DGMS of Bangladesh Army and Maj Gen Md Siddiqur Rahman Sarker, SGP, hdmc, psc, Commandant, MIST were present in this seminar as special guests. Honorable Minister, the Chief guest of the seminar highlighted the importance of Biomedical Engineering for the development of Bangladesh during his address.

### SEMINAR ON “SCOPE OF MECHANICAL ENGINEERS IN POWER PLANT”



Mechanical Engineering Department of MIST organized a seminar titled **"Scope of Mechanical Engineers in Power Plant"** on 18 February 2015. Mr. Nasrul Hamid, MP, Honorable State Minister, Ministry of Power, Energy and Mineral Resources graced the occasion as the Chief Guest. Mohammad Hossain, Director General, Power Cell, Power Division, Ministry of Power, Energy and Mineral Resources, was present in the seminar as Special Guest. Maj Gen Md Siddiqur Rahman Sarker, SGP, hdmc, psc, Commandant, MIST chaired the session. The keynote speech was delivered by Prof Dr. Fazli Ilahi, former VC, IUT.

### “CHALLENGES AND PROSPECT IN THE SECTIONS OF ENVIRONMENT, WATER RESOURCES AND COASTAL ZONES: PERSPECTIVE FROM POTENTIAL ENGINEERS”– SEMINAR BY EWCE DEPARTMENT



A seminar was held on 9 April 2015 on **“Challenges and Future Prospects in the Sectors Of Environment, Water Resources, and Coastal Zones: Perspective From Potential Engineers”** by the Environmental, Water Resources and Coastal Engineering Department of MIST. Honorable minister of the ministry of water resources Mr. Anisul Islam Mahmud was the Chief Guest. Also Dr. Zafor Ahmed Khan, Secretary, Ministry of Water Resources and renowned water resources specialist Professor Ainun Nishat were the special guests. EWCE dept has started its journey this year. Bangladesh is the largest delta in the world. Every year it has to face lots of natural calamities. So managing the water resources and controlling the environmental pollution are two of the most burning issues for us. But we have the lacking of expertise in these sectors. Also Sustainable development is the prerequisite of any development activity. The objective of the seminar was to expose the newly admitted students of the department with the vast future prospects and associated challenges related to Environment, Water Resources, and Coastal Zones. So it will help them to explore new research perspectives and views in these sectors. Professors and professionals from various renowned universities and organizations attended the seminar. They delivered highly informative speeches regarding these topics. Faculty members and students from different departments of MIST and also the students from the department of WRE, BUET attended the seminar.

### SEMINAR ON "PERSPECTIVE FUTURE OF NUCLEAR ENGINEERING IN BANGLADESH"



Nuclear science & Engineering department organized the first departmental seminar titled "**Perspective Future of Nuclear Engineering in Bangladesh**" on 12 Apr 2015. The Chief Guest of this seminar was Dr. Tawfiq-e-Elahi Chowdhury, BB, the honorable Advisor (Minister) to the Prime Minister, Ministry of Power, Energy & Mineral Resources. The Chief of General Staff of Bangladesh Army Lt Gen Md. Mainul Islam, awc, psc, the Vice Chancellor of Bangladesh University of Professionals Maj Gen Shiekh Mamun Khaled, SUP, ndc, psc, Advisor of Banco Group Brig Gen (Retd) Md Nazrul Islam Sarker, afwc, psc, and Commandant of MIST Maj Gen Md Siddiqui Rahman Sarker, SGP, hdmc, psc were present in this seminar.

The honorable Advisor (Minister) highlighted the importance of nuclear engineering for the development of Bangladesh in this seminar.

### MOU SIGNING CEREMONY WITH OHIO STATE UNIVERSITY, USA



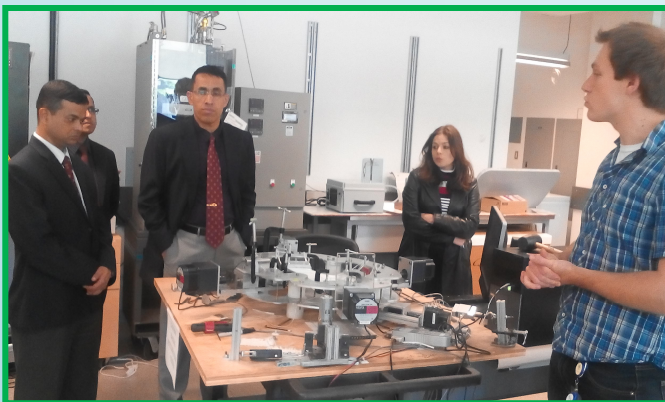
Prof. J. Craig Jeukin and Prof. C.K. Shum of OHIO State University, USA visited MIST for signing MOU between MIST and OHIO State University on 03 Apr 2015.

### WORKSHOP ON "REMOTE CONTROLLED AIRCRAFT DESIGN, FABRICATION AND OPERATION"



Aeronautical Engineering department of Military Institute of Science and Technology (MIST) has organized a seven days workshop on "**Remote Controlled Aircraft Design, Fabrication and Operation**". The workshop was inaugurated on 24th March of 2015 by Air Marshal Muhammad Enamul Bari, BBP, ndu, psc the Chief of Air staff Bangladesh Air Force. Chairman of Civil Aviation Authority of Bangladesh (CAAB) Air Vice Marshal Sanaul Haq was present at the inauguration ceremony as special guest while commandant of MIST Maj Gen Md Siddiqur Rahman Sarker, SGP, hdmc, psc presided over the ceremony. Senior officials from Army, Navy and Air Force participated in the opening ceremony. In his speech, the Chief Guest emphasized on the necessity and importance of designing and fabricating indigenous manned as well as un-manned aerial vehicle to meet the challenge of 21st century. He anticipated that in near future young aero-enthusiasts and engineers of Bangladesh will come forward in making commercial production and design of passenger planes, cargo planes and fighter jets. He thanked MIST authority for taking timely steps in arranging national level workshops, seminars and design competition on aeronautical engineering in a regular basis and also encouraged participants of the workshop. About 150 students, professionals and aero-enthusiasts from BUET, KUET, MIST, AUST, SUB, Bangladesh Army, Bangladesh Navy and Air Force took part in the 7 days long workshop.

### VISIT OF MIST DELEGATION TEAM TO CANADA



A four members delegation led by Maj Gen Md Siddiqur Rahman Sarker, SGP, hdmc, psc, Commandant MIST, visited Royal Military College Canada (RMCC), University of British Columbia (Vancouver Campus & Kelowna Campus) & Queen's University from 21-30 May 2015. The purpose of the visit was exploring the opportunities to learn training methodology and progressive program development activities.

## “UNIVERSITY ROVER CHALLENGE (URC) COMPETITION- 2015”



Team “Mongol Barota” from the department of Computer Science and Engineering (CSE) of MIST has performed extremely well in “**University Rover Challenge (URC) Competition- 2015**” on 28- 30 May 2015. The competition was held in the Mars Desert Research Station (MDRS) in Utah, USA where the geographical condition is almost similar to Mars. They have achieved the top position in Asian subcontinent. Also, the rover MAYA with it's fantastic claw has grasped the 9th position among 44 international teams. This year 44 teams from 6 countries spanning 4 continents took part in the competition.

## PARTICIPATION IN “THE FUTURE FLIGHT DESIGN COMPETITION- 2015”

Two teams named Andromeda and Zenith-1 from MIST participated in **The Future Flight Design Competition- 2015** at Turkish Air Force Academy. The competition held on 08-10 May 2015 at Hezarfen Airport, Istanbul, Turkey. Among the registered 49 teams, 37 teams were able to submit their design report. Team Zenith-1 secured 8th position in design report. Team Andromeda got 19th position amongst the participants. Both the team has been honored with certificates from Turkish Air Force Academy.



## INTER-DEPT ATHLETICS COMPETITION- 2015



Inter Department Athletics Competition was held from 01 Mar to 05 Mar 2015. Participants from all departments put up their best to win with joy and enthusiasm. There were 100 M Sprint, 200 M Race, 400 M Race, 4 x 100 M Relay Race, 4 x 200 M Relay Race, Discuss Throw, Short-Put, Long Jump and High Jump events for male and female athletes. Mohd. Mezanur Rahman (CE Dept) and Ridita Afrin Shaila (EECE Dept) became the best male and female athlete respectively. EECE Department became the champion and CE department became runner-up among ten departments.