

తెలంగాణ తెలంగాణ TELANGANA

*C. Ashok*  
BM 666784

Tran Id: 250424140815007511  
Date: 24 APR 2025, 02:11 PM  
Purchased By:  
RAJKUMAR  
S/o GEORGE  
R/o M M DIST  
For Whom  
ADDL. SG, NIGST, SURVEY OF INDIA

CHALLAGONDA ASHOK  
REDDY  
LICENSED STAMP VENDOR  
Lic. No. 15-07-002/2025  
Ren.No. NEW LICENSE  
1-84/A, Laxmareddy Colony, Uppal,  
Medchal Malkajgiri District  
Ph 9949766288

## Memorandum of Understanding

for

Drone Pilot Training, Data Acquisition with Data Processing and  
Product Generation for Geospatial applications

between

National Institute for Geo-Informatics Science and Technology  
Survey of India  
Uppal, Hyderabad - 500039, Telangana

And

Telangana State Aviation Academy  
Gate No.3, Old Airport Road  
Near New Bowenpally  
Hyderabad -500 011  
Telangana

Signed on this day 5<sup>th</sup> of May Month, Year 2025

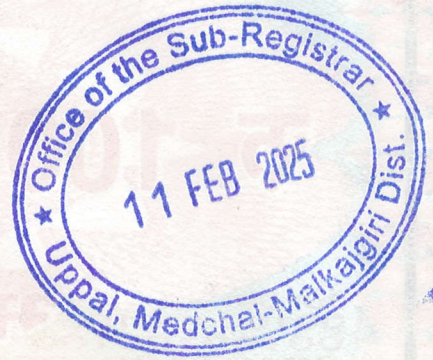
*S. N. Reddy*

CEO,  
TGSA  
(Seal)

*Challagonda Ashok Reddy*

Additional Director General,  
NIGST, SOI  
(Seal)

జి. వరుణ కుమార్/G. VARUNA KUMAR  
అధిక నిర్వాహక/Additional Surveyor General  
రా.మ. సు. వి. అం. ప్రొ.సం/N.I.G.S.T.  
భారతీయ సర్వేషన్ విభాగం/Survey of India  
ఉప్పల, హైదరాబాద్/Uppal, Hyderabad-39.



BH 66784

CHALLAN NO. 100  
REGD. STATE VENDOR  
Lic. No. 12-11-00003  
REGD. NEW LICENSE  
1-884, Laxmipuri Colony, Uppal,  
Medchal-Malkajgiri Dist.  
HYDRABAD-500039

ఆంధ్ర ప్రదేశ్ ప్రభుత్వం  
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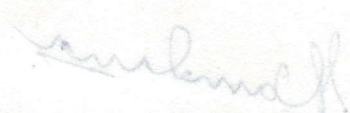
### Memorandum of Understanding

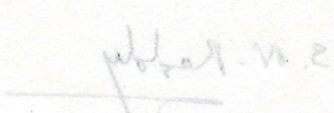
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between  
National Institute for Geo-Information Science and Technology  
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Uppal, Hyderabad - 500039, Telangana

And  
Telangana State Aviation Academy  
Gate No.3, Old Airport Road  
Near New Bowenpally  
Hyderabad - 500 011  
Telangana

Signed on this day \_\_\_\_\_ of \_\_\_\_\_ Month, Year 2025

  
Additional Director General,  
NIGST, SOI  
(Seal)  
శ్రీ. అమర్తేజ్ వర్మ  
Additional Director General  
NIGST, SOI  
National Institute for Geo-Information Science and Technology  
Uppal, Hyderabad-39, Telangana

  
CEO,  
TGSA  
(Seal)

## 1.0 Preamble

This Memorandum of Understanding (MoU) is between Telangana State Aviation Academy (TGSAA) and National Institute for Geo-Informatics Science and Technology (NIGST), Survey of India (SOI), to jointly conduct two week Drone training courses at regular intervals on Drone Pilot Training, Data processing and Product generation for Geospatial Remote Sensing applications.

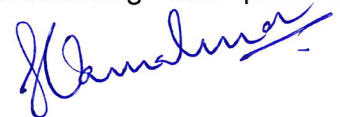
Whereas, Telangana State Aviation Academy (TGSAA) has been in the Indian Aviation sector since 1932 and has been contributing to the development of Aviation in domains such as Commercial Pilot License Training, Aircraft Maintenance Engineering Training, M. Sc. Aviation Academic Training. All our students are gainfully employed. TGSAA, has also ventured into Drone trainings. As a qualified and approved flying training organization, we ensure training as per world class standards with special emphasis on safety standards.

Whereas, Survey of India (SOI) The Survey of India is India's central engineering agency in charge of mapping and . Set up in 1767 to help consolidate the territories of India, Its one of the oldest Engineering Departments of the Government of India. Survey of India takes a leadership role in providing user focused, cost effective, reliable and quality geospatial data, information and intelligence for meeting the needs of national security, sustainable national development, and new information markets. Survey of India dedicates itself to the advancement of theory, practice, collection and applications of geospatial data, and promotes an active exchange of information, ideas, and technological innovations amongst the data producers and users who will get access to such data of highest possible resolution at an affordable cost in the near real-time environment.

The present MoU is to leverage on the unique expertise of both the organizations to provide unified training course on Drone Pilot training, data acquisition , data processing and Product generation since Drones are becoming increasingly important Survey platform for various geospatial applications.

## 2.0 Objective

The objective of the course is to provide Drone Pilot training, Drone data acquisition training , DGCA Drone Pilot Certification, Drone Data processing and product generation.



### 3.0 Parties involved in MOU

#### 3.1 TGSAA

Telangana State Aviation Academy (TGSAA)  
Gate No.3, Old Airport Road  
Near New Bowenpally  
Hyderabad -500 011  
Telangana

#### 3.2 SOI

National Institute for Geo-Informatics Science and Technology  
Survey of India Hyderabad - 500039, TELANGANA

#### 3.3 Functionaries from TGSAA

The following functionaries are focal points from TGSAA for this MoU.

S. No.	Name	Contact Address	Phone / Fax	Email
1	Dinakar Devireddy Head , Drone Pilot Training	TGSAA, Old Airport Road, New Bowenpally, Hyderabad-500 011 Telangana	96186334 56	<a href="mailto:dir-droneacademy@telangana.gov.in">dir-droneacademy@telangana.gov.in</a>
2	S Rahul Reddy Manager (Operations )	TGSAA, Old Airport Road, New Bowenpally, Hyderabad-500 011	91778878 78	<a href="mailto:info-droneacademy@telangana.gov.in">info-droneacademy@telangana.gov.in</a>

#### 3.4 Functionaries from NIGST, SOI

The following functionaries are the focal points from NIGST, SOI for this MoU.

S. No.	Name	Contact Address	Phone/Fax	Email
1.	Shri Pankaj Mishra, Deputy Surveyor General	NIGST	9915772864	pankej.mishra.soi @gov.in
2.				

*S. W. Reddy*

*Pankaj Mishra*

#### 4.0 Date of signing, Effective date and Duration of MoU

- 4.1 **Date of signing and Effective Date of MoU:** This MoU shall be effective from the date of signing by Competent Authorities of both the Organizations.
- 4.2 **Duration of MoU:** The duration of the MoU shall be for a period of 2 years from the effective date. However, the same can be revived /renewed depending on the mutual interest of the parties at the end of 2<sup>nd</sup> year.

#### 5.0 Scope of work

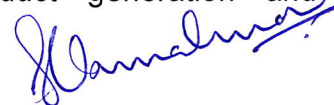
The course content is designed for two weeks (excluding Saturdays and Sundays), out of total 10days, initial 5 days training will be conducted by TGSA and the remaining 5 days by SOI.

- 5.1 TGSA will provide Drone Pilot Training as per DGCA prescribed syllabus. The training curriculum covers theory and practical sessions. The theory includes Drone Rules 2021, aerodynamics, meteorology, radio telephony, Drone internals, drone hardware assembly & trouble shooting, mission planning, Drone flying simulation training and practical field flight training including data acquisition
- 5.2 SOI will provide training on GNSS , Surveys concepts & elements , Drone data processing, generation of products and its Geospatial applications in Remote Sensing. The duration of the SOI component of the training is five days and will be conducted at NIGST Uppal , Hyderabad.

#### 6.0 Methodology

- 6.1 The curriculum of the training course is designed to cater to Drone flight training , data acquisition, data processing and product generation requirements.
- 6.2 The training content is contemporary and structured such that it includes lectures, hands- on flight simulators, practical Drone flying, practical drone data acquisition by different payloads, hands-on activity on GNSS survey elements, drone data processing, generation of data products which can be used in geospatial applications.
- 6.3 The lectures will be delivered by Experts with relevant experience in the area of Drone flight training/data processing/product generation and end applications





6.4 At the end of the training participants' feedback will be obtained and improvements will be incorporated in the future training courses.

## 7.0 Deliverables & Guidelines on Data Security

### 7.1 Deliverables of Training

The training will be imparted and on successful completion of the course, Drone pilot certification will be provided by TGSAA and the course completion certificate will be provided by SOI.

### 7.2 Data Security

The respective organization will follow their security norms and existing Government rules in terms of Drone flying, data handling and sharing and in accordance with the documents mentioned below in S.No.10.

## 8.0 Data specifications

RGB Digital Camera, LiDAR and Multispectral Sensor data acquired from Drone (GSD 2 cm to 10 cm) will be used for data processing to generate Orthoimages at GSD ranging from 5 cm to 10 cm.

## 9.0 Applicable documents

- 9.1 Drone Rules 2021 dtd. 25th August, 2021 Ministry of Civil Aviation
- 9.2 National Geospatial Policy, 2022 dtd. 28th December, 2022

## 10.0 Responsibility of each party

### 10.1 Roles & Responsibilities of TGSAA

TGSAA will conduct theory and practical sessions. The theory sessions will be conducted at TGSAA, Begumpet and will cover the following topics namely Drone Rules 2021, aerodynamics, meteorology, radio telephony, Drone hardware, assembly & trouble shooting, mission planning, Drone flying on simulators. The practical field training will be conducted at Nadergul Airfield, B.N.Reddy Nagar, Hyderabad. On completion of DGCA Approved Drone Pilot Training, Certificate will be issued TGSAA.

*S. V. Reddy*

*Hanumanth*

## 10.2 Roles & Responsibilities of SOI

10.2.1 SOI will conduct Lectures and practical sessions by subject experts on Drone flight planning, GNSS Surveys for GCP requirements, Drone data processing using images from RGB Digital Camera and Multispectral sensor, generation of data products such as Digital Surface Model (DSM), Digital Terrain Model (DTM), Orthoimage, vegetation indices such as NDVI, NDRE, and heat maps and its applications in Remote Sensing.

10.2.2 During the above training period at SOI, participants will be provided accommodation at SOI Hostel, Balanagar, including Breakfast, Lunch, and Dinner along with pick-up and drop services between SOI, Balanagar and SOI ORF, Jeedimetla will be provided at no extra cost.

## 11.0 Training schedule

The training schedule for a course shall be for a duration of two weeks (excluding Saturdays and Sundays) and training calendar for the year will be finalized by TGSA and SOI after mutual consultation.

## 12.0 Funding

The fee for the Drone training course shall be borne by the participants.

## 13.0 Schedule of prices, Terms and condition of payment

The total fee for Drone training Course is INR 55,000 per participant, in that, TGSA and SOI components are INR 38,000 and INR 17,000 respectively. The participants will credit the total amount to TGSA account through online mode before commencement of the course, TGSA will transfer the fee pertaining to SOI component of all participants through online mode a week prior to the start of SOI training.

## 14.0 Project monitoring

The training programme shall be monitored monthly by the functionaries identified from both the parties.

## 15.0 Confidentiality

15.1 The confidentiality of data shall be maintained by both parties as per the data policy guidelines of Govt. of India.

*S. V. Reddy*



*[Handwritten signature]*

- 15.2 Both the parties will maintain utmost confidentiality in Drone operations, data sharing. During the tenure of the agreement and thereafter both partners undertake on their behalf and on behalf of their employees/ representatives to maintain strict confidentiality and prevent disclosure thereof of all the information and data exchanged/ generated pertaining to this agreement.
- 15.3 All Confidential information shall remain the exclusive property of the disclosing Party. The Parties agree that this MoU and the disclosure of the Confidential Information do not grant or imply any license, interest or right to the Recipient in respect to any intellectual property right of the other Party.
- 15.4 Unpublished information, whether oral, in writing or otherwise, discovered or conceived by the scientists or technicians and exchanged under the provisions of this MoU will not be transmitted to a third party, unless otherwise agreed by the Parties.

## 16.0 Intellectual Property Rights

- 16.1 The Intellectual property that is (know-how /process/ design/ technique/ copyrights) generated in the project executed shall be owned by TGSAA or SOI depending on their contribution. Wherever, any of the above work executed in a collaborative way, the extent of the ownership shall be decided mutually, depending on the relative inputs (intellectual/ technical/ financial/physical) made by the parties here to the project.
- 16.2 The procedural formalities for securing and maintaining the intellectual property rights (patents/ trademarks/ copyright) if any, shall be the responsibility of SOI and TGSAA, and the expenditure incurred thereof shall be borne by each party equally, consistent with laws, rules and regulations of India. The question of whether or not the intellectual property rights should be secured and the territory where these shall be secured will be decided by CEO, TGSAA and Director, SOI.

In case research is carried out solely and separately by the Party or the research results are obtained through the sole and separate effort of the Party, the Party concerned alone will apply for grant of IPR and once granted, the IPR will be solely owned by the concerned Party.

In case of research results obtained through joint activities, the grant of intellectual property rights will be sought by both the Parties jointly and once granted these rights will jointly be owned by the Parties.

S. V. Reddy

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- 16.3** The parties shall consult each other for any publications in respect to the project. The publications (research papers, reports etc.) shall be in the names of the research workers, wherein it will be duly acknowledged that the work has been carried out under collaborative program between the parties. The use of the name, logo and/or official emblem of the Parties on any publication, document and/or paper will require prior permission of both the Parties. It may however be ensured that the official emblem and logo is not misused.
- 16.4** Each party will ensure appropriate protection of Intellectual Property Rights generated from cooperation pursuant to MoU, consistent with the laws, rules and regulations of India.
- 16.5** The Parties shall not assign any rights and obligations arising out of the IPR generated to inventions / activities carried out under the MoU to any third party without prior written consent of the other Party.
- 16.6 Commercialization:** In case of training results obtained through joint activities under this MoU, both Parties will apply as co-applicants for the protection of intellectual property rights subject to exclusive rights of both the Parties to commercialize the technology in India. Commercialization in any other country shall be done jointly through a separate agreement.

#### **17.0 Change in scope of work**

The training course on Drone is designed and formulated after detailed discussion. Modification may not be criteria. However, if required it will be done with mutual consent from both the parties and the same to be amendment of this agreement. The modification / changes shall be effective from the date on which they are made, unless otherwise agreed upon.

#### **18.0 Governing Law and Amendment**

This MOU is hereby concluded in terms of understanding of the parties about the law of contract and intended to regulate by relevant applicable Laws. However, party with the written mutual consent of the other party in order to facilitate settlement of dispute or implementation of the provision of this contract may amend provision of this MOU.

*S. N. Reddy*

*[Signature]*

## 19.0 Force majeure

Neither TGSAA nor SOI shall be held responsible for non-fulfillment of their respective obligation under the agreement due to exigency of one or more of the unforeseen events such as but not limited to Acts of God, war, flood, earthquake, cyclones, strikes, lockouts, epidemics, riots, civil commotion etc. provided on the occurrence and cessation of such events, they effected thereby shall give notice in writing to other party within one month of such occurrence or cessation. If the force-majeure conditions continue beyond six months, the parties shall then mutually decide about the future course of action.

## 20.0 Indemnity

Either Party ("Indemnifying Party") shall indemnify and keep indemnified the other Party ("Indemnified Party") against any and all claims, direct losses, injuries, liabilities, reasonable costs and expenses, direct damages, actions or proceedings which may be made or taken against the Indemnified Party by any person arising out of any breach, action or inaction of the Indemnifying Party under this agreement. In no event whatsoever, the Indemnifying Party shall be liable to the Indemnified Party for any loss of revenue, loss of profits, rights or services, incidental, indirect or consequential damages arising from or related to this agreement.

## 21.0 Arbitration

21.1 In the event of any dispute or difference between the parties hereto, such disputes or differences shall be resolved amicably by mutual consultation. If such resolution is not possible, then unresolved dispute or differences shall be referred to arbitration of one of the arbitrators to be appointed by Director, SOI and Additional CEO of TGSAA. The provisions of Arbitration & Conciliation Act, 1996 (No.26 of 1996) shall be applicable to the Arbitration. The venue of such arbitration shall be at Bengaluru. The language of arbitration proceedings shall be English. The arbitrator shall make a reasoned award (the "Award") which shall be final and binding on the parties. However, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or Special Secretary/Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the parties finally and conclusively. The cost of the arbitration shall be shared equally

*S. V. Reddy*

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*[Signature]*

by the parties to the MoU. However, expenses incurred by each party in connection with preparation, presentation should be borne by the parties itself.

21.2 Pending the submission of and/or decision on a dispute, difference or claim or until the arbitral award is published; the Parties shall continue to perform all of their obligations under this Contract without prejudice to a final adjustment in accordance with such award.

## 22.0 Jurisdiction

Any dispute arising out of the MoU or the terms shall be subject to the exclusive jurisdiction of Hyderabad only.

## 23.0 Termination (for Cause, Convenience, and Force Majeure):

During the tenure of the agreement, either Party may terminate and nullify this Agreement/MoU by providing prior written notice of 30 days to the other party for any of the reasons - Cause/Convenience/Force Majeure.

23.1 Termination for Convenience: For convenience without assigning any reason.

23.2 Termination for Cause: For the breach of any obligations/responsibilities/conditions of this agreement by the other party, with an opportunity to cure/rectify such a situation within thirty (30) days to the defaulting party and no remedial action is taken to the satisfaction of the aggrieved party.

23.3 Termination for Force Majeure: in the event of "Force Majeure" as defined in clause 23.0

23.4 Obligations upon Termination.

Following termination or expiration of this Agreement, in addition to any other obligations existing hereunder or otherwise at law or in equity,

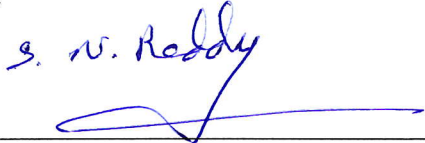

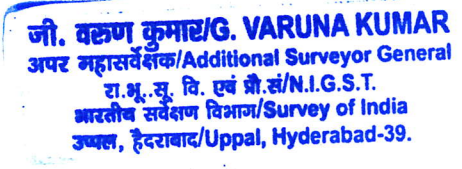
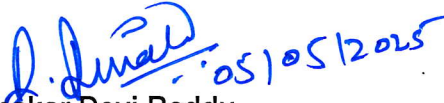


(a) The rights and obligations of the parties thereto shall be settled by mutual discussion; the financial settlement if any shall take into consideration not only the expenditure incurred but also the expenditure committed by the parties hereto.

(b) The agreement arrived at between the parties hereto for the utilization of the intellectual property (defined in clause 20.0) shall survive the termination of the agreement.

*S. V. Reddy*

*[Signature]*

IN WITNESS WHEREOF, the Parties hereto have caused this MoU to be signed in their respective names on the day, the month and the year herein before mentioned.

Parties	
For and on behalf of TGSAA/Government of Telangana	For and on behalf of SOI/, Hyderabad
Signature 	Signature 
Name: <b>Capt. S.N. Reddy</b>  Designation: (CEO, TGSAA)  Address:	Name: <b>Shri G. Varuna Kumar</b>  Designation: (Addl. Surveyor General, NIGST)  Address:
Seal:	Seal: 
Witnesses: (Name & Address)	Witnesses: (Name &Address):
 1. <b>Shri Dinfakar Devi Reddy,</b> Head, Drone Pilot Trainings & Services Telangana State Aviation Academy	 1. <b>Shri T.P. Mallik,</b> DSG, NIGST
2.	 2. <b>Shri Pankaj Mishra,</b> DSG, NIGST