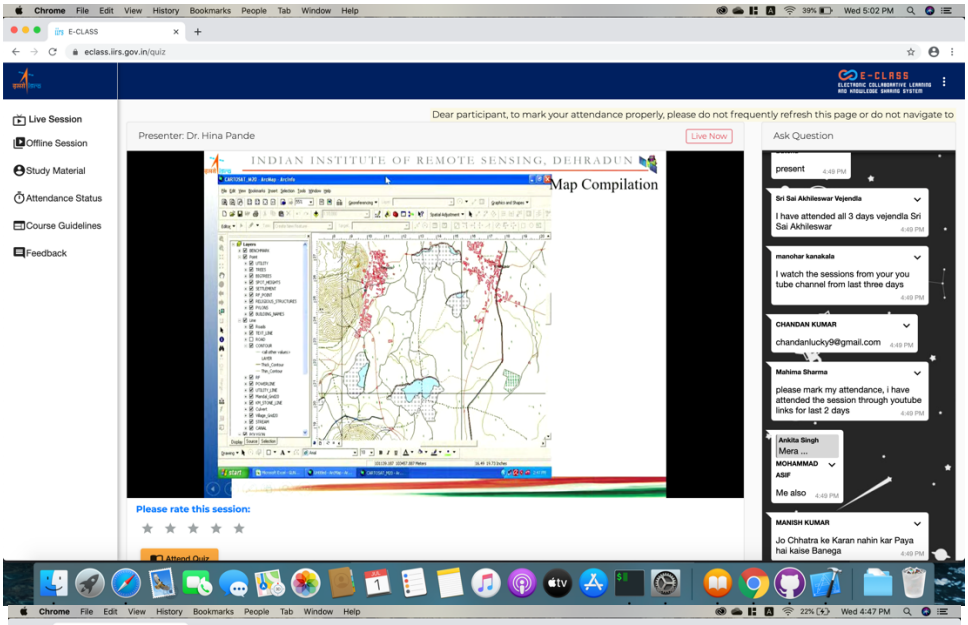
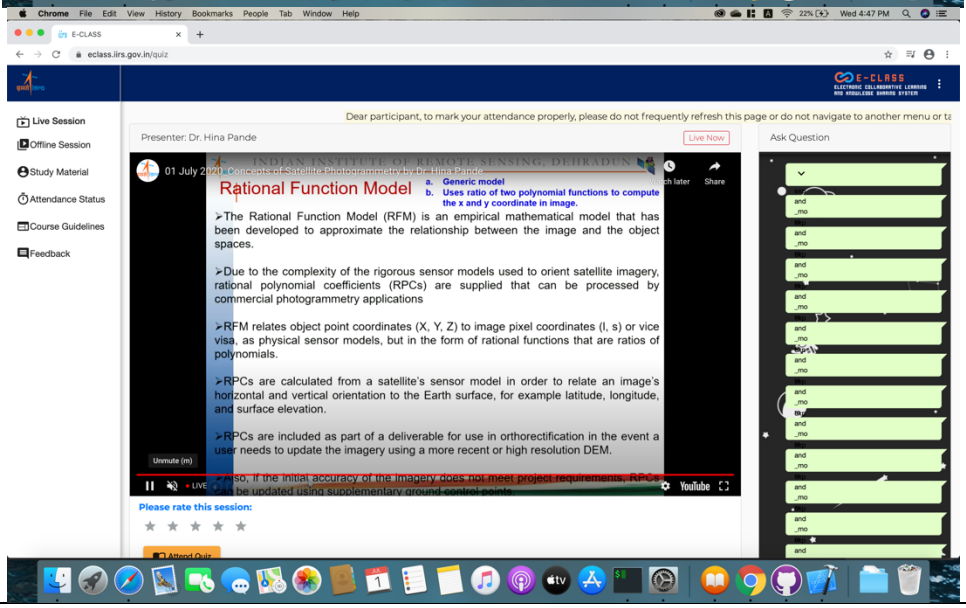
DAILY ASSESSMENT FORMAT

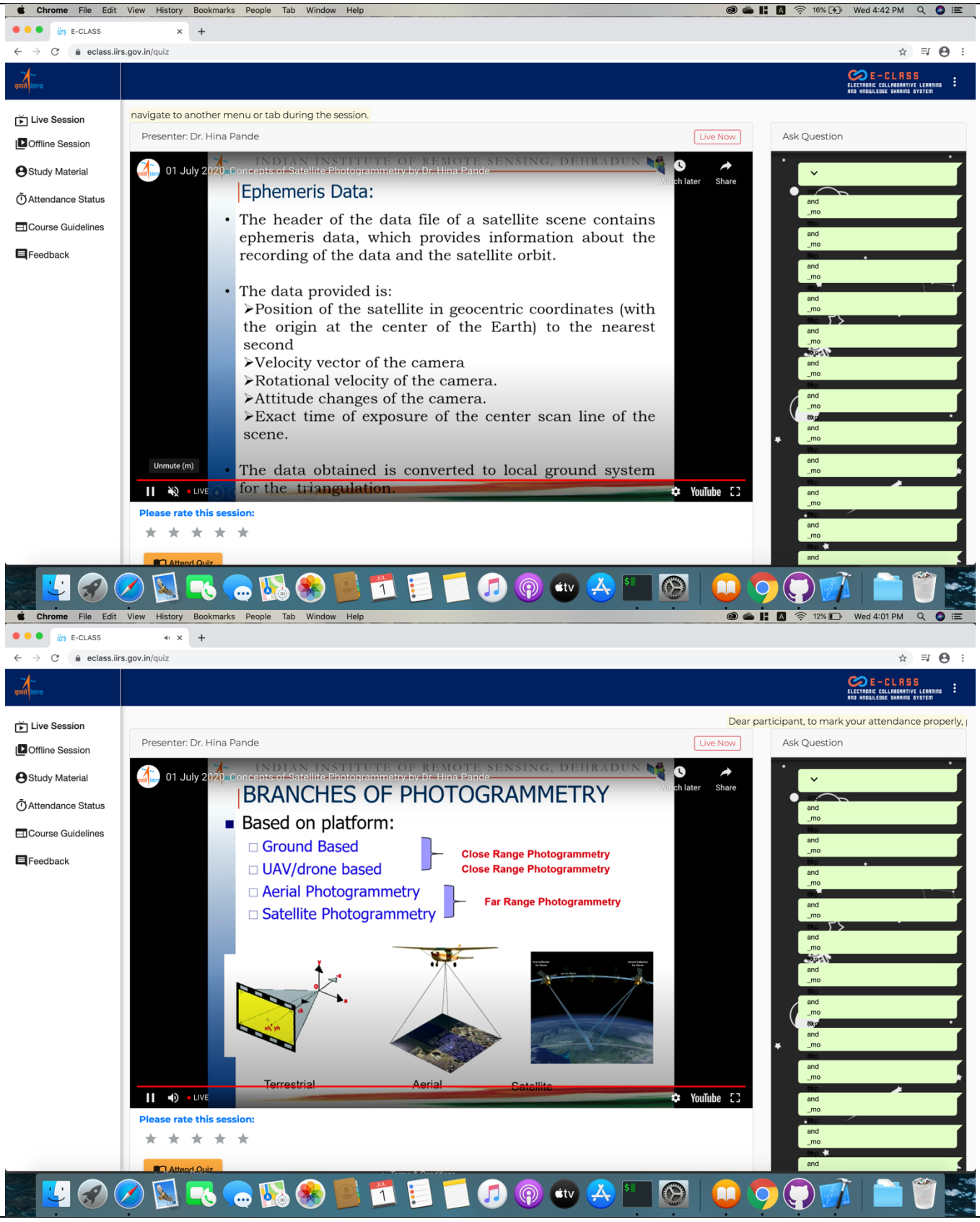
Date:	01/07/2020	Name:	Prajwal Kamagethi Chakravarti P L
Course:	Satellite Photogrammetry and its Application	USN:	4AL17EC073
Topic:	Steriophotogrammtery	Semester & Section:	6 & B
Github Repository:	https://github.com/alvas-education-foundation/Prajwal-Kamagethi.git		

SESSION DETAILS

Session images



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Ephemeris Data:
The header of the data file of a satellite scene contains ephemeris data, which provides information about the recording of the data and the satellite orbit.
The data provided is:
➢Position of the satellite in geocentric coordinates (with the origin at the center of the Earth) to the nearest second
➢Velocity vector of the camera
➢Rotational velocity of the camera.
➢Attitude changes of the camera.
➢Exact time of exposure of the center scan line of the scene.
The data obtained is converted to local ground system for the triangulation.
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BRANCHES OF PHOTOGRAMMETRY
Based on platform:
Ground Based
UAV/drone based
Aerial Photogrammetry
Satellite Photogrammetry
Close Range Photogrammetry
Close Range Photogrammetry
Far Range Photogrammetry
Terrestrial
Aerial
Satellite
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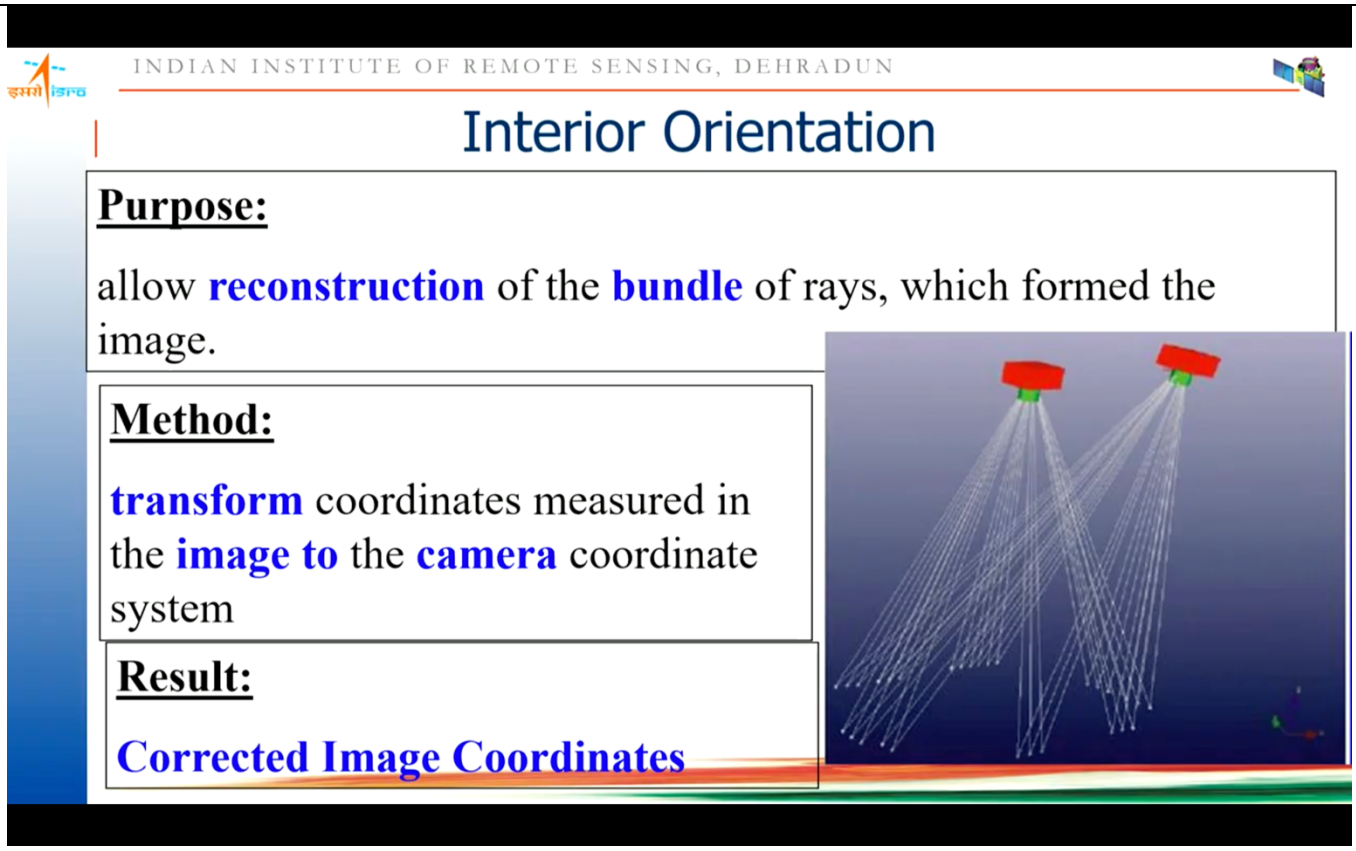

Report:

The primary mission goal of TH-1 is for topographic mapping at 1:50,000 scale without GCPs. In order to achieve its goal, the on-orbit calibration camera parameters based on LMCCD image and EFP Multi-functional bundle adjustment are put forward and realized in ground image processing, and the initial interior and exterior orientation parameters have been further refined. Using the orientation parameters, RPCs of three-line arrays image are generated. Based on stereo image with RPCs, the location accuracy of TH-1 is assessed systematically using many CPs from 5 testing fields. In this paper, the location performance of 1st satellite is presented without GCPs and with different number of GCPs. The results indicate that the horizontal accuracy and the vertical accuracy can fulfil for topographic mapping at 1:50,000 scale without GCPs. The location performance of 2nd satellite is equivalent with 1st satellite, and location performance of 3rd satellite is ongoing evaluating systematically. In addition, variety of products will satisfy for different users in the field of photogrammetry and remote sensing.

- **The most common class of 3D surface imaging system is based on digital stereophotogrammetric technology. These systems are capable of accurately reproducing the surface geometry of the face, and map realistic color and texture data onto the geometric shape resulting in a lifelike rendering .**
- **The mathematical and optical engineering principles involved in the creation of 3D photogrammetric surface images have been thoroughly described.**
- **The combination of fast acquisition speed and expanded surface coverage (up to 360 degrees) offer distinct advantages over older surface imaging modalities like laser scanning.With decreasing cost, 3D stereophotogrammetric imaging systems are becoming increasingly common in clinical and research settings .**
- **With any new technology, a number of factors must be considered in order to achieve optimal performance.**
- **Though camera manufacturers provide suggestions for device set up and calibration, limited information is available on the practical issues that will inevitably confront new users of this technology.**

- **However, such issues can adversely impact the reliability of data collection, and consequently, influence the clinical and research study results. In**
- **order to ensure optimal interpretation of the study results, all aspects of data collection should be rigorously evaluated .**
- **The name photogrammetry comes from two Greek words, phos 'light' and gramma 'writing'; it has been defined as the art, science and technology of obtaining reliable quantitative information about physical objects and the environment through the process of recording, measuring and interpreting images and patterns of radiant or transmitted energy derived from sensor systems**.