

**SPACE- ENABLED LAND WARFARE : LEVERAGING
REMOTE SENSING AND SATELLITE IMAGERY FOR
ISR IN ENHANCING ARMY OPS**

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REMOTE SENSING

Wide Coverage of Strategic & Depth areas

Terrain Analysis – Going maps

Target Recognition

Infrastructure Monitoring

3 D Models of Tgt As – Mov of tps

Visibility Analysis & Dead Zs

Asses Lgs capabilities & limitations of the adversary

REMOTE SENSING

Route Assessment & Planning

Choke Point Analysis

Navigational Assistance

Logistical Planning

Precision Targeting

Change Detection & Battle Damage Assessment

TECHNOLOGICAL ADVANCEMENTS IN SPACE BASED ISR

High Resolution EO Sensors

Synthetic Aperture Radar (SAR)

Hyperspectral Imagery

Fusion of SAR & EO Imagery

CHALLENGES IN SPACE BASED ISR FOR LAND WARFARE

Satellite Constellations

Latency and Timeliness

Avail of Data

Data Overload

TECHNOLOGY ADVANCEMENTS

High Resolution Base Layer – for accurate targeting.

AI – for onboard Data processing & decision making.

Big Data Analysis – realtime insight from vast data sets.

Quantum Technology - for efficient processing & secured data transmission.

Multi-sensor Data fusion to include Satl & other space based / Airborne platforms like UAVs etc.

AI-Powered Data Analysis with the avail of huge data, AI models are being used for tgt detection & identification to assist Image Analysts. Presently the work is in the advanced stage.

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