

Commercial Development of Space Sector

Commercialisation and Legal issues

MSTL,

NALSAR

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Starting a space business

- **Business idea:**
- **Establish a multi-beam satellite in higher frequencies (Ka band) for high speed internet delivery to homes and enterprises**
- **Total Satellite Capacity : XXX GBPS, No of Transponders, Power**
- **Market considerations:**
 - **Number of consumers : Demand, Ramping pattern; Target Capacity use %**
 - **Enterprise use of BW, Growth pattern and Target use of capacity in 3 yrs.**
 - **Investment by users for ground terminals, subsidy& recovery plans**
 - **Average User acquisition costs to the company**
 - **Projection of revenues over the lifetime**

Viability of business

- Business Plans (over the Asset life period)
 - CAPEX flows
 - Revenues
 - Operating costs
 - Gross Margins
 - Interest
 - Depreciation and amortisation
 - Taxation
 - Net Profit
- CASH FLOW ANALYSIS
- FINANCING PLANS
- IRR / PAY BACK PERIOD
- RISK ANALYSIS
- Business Strategy Analysis: Competitive strategies

Legal regulatory requirements

- Establishing new company
 - Locational decisions
 - Confirming Name and choice of the form/structure (Companies Act, 2013 as amended further)
 - Memorandum and Articles of association
 - Process with Registrar of Companies
 - Local clearances regarding establishment
- Specifically for the service envisaged:
 - Decide on Location of Satellite Control Centre
 - Tracking station locations
 - User oriented radiating terminals

Establishing Indian Satellite System- Applying for Licensing (Policy so far)

- Applications must be filed with the Committee for Authorising the Establishment and Operation of Indian Satellite Systems (CAISS) in order to register satellite systems belonging to such entities.
- The office of CAISS is located in the SatCom Programmes Office at the ISRO Headquarters in Bangalore.
- Authorisation to operate a satellite system and the orbit spectrum notification/ registration is granted by CAISS are processed for approval by an Inter-Ministerial Committee under the chairmanship of the Secretary of the Department of Space.
- The WPC Wing of the Ministry of Communications is charged with the responsibility of representing private operators of Indian satellite systems before the International Telecommunication Union (ITU) in terms of notification and registration of their orbital slots and radio frequencies.

Licensing Indian Satellite satellite system

- Now Indian private satellite company is allowed to receive foreign equity investment upto 100 % to operate a private satellite system in India. Such investment is allowed after obtaining approval from the government
- The authorisation addresses the country's liability for any potential damages caused by the space object or space activities of Indian entities as owner of the space asset. An Indian entity which owns and operates a space object and provides communication services, shall Department of Space be liable for any potential damages caused to other space objects in outer space and its environment.
- This obligation shall be fulfilled by the entity by providing a financial guarantee or insurance cover to a sum, as determined by the authorizing body by taking into account the risks involved in nature and operations of that space object in outer space.

Policy/ Legal basis for business operations

- Under the provisions of Spacecom Policy-2020, Indian entities can establish and operate satellite systems to provide capacity for communication services with authorizations.
- Indian entities can undertake design, development and realization of satellites and associated communication systems.
- They can establish satellite system through their own built satellite or procured satellite.
- They can establish telemetry, tracking & command (TT&C) earth stations and satellite control centre (SCC) in or outside India.
- can offer the capacity to commercial and societal communications within India as well as outside India.
- They can also supply their systems and solutions to international markets.

Service licensing

- The authorization does not imply granting of any Service License or Frequency/Siting clearances for earth stations. These must be obtained separately from the appropriate authorities under Ministry of Information and Broadcasting (MoIB), Ministry of Communication (MoC) in India or similar regulatory authorities in other countries as the case may be.
- **ORBITAL RESOURCE:** Any Indian Entity who has acquired or in the process of acquiring Indian orbital resources can transfer the use of such ITU filing to another Indian Entity on commercial terms with the permission of Authorizing Authority.

If broadcast service is envisaged

- Application for license (10 year) is applied to MIB for DTH, and applicant is found eligible to set up a DTH platform in India, the applicant will need to obtain security clearance from the Ministry of Home Affairs in order for his application for the grant of permission to use a satellite to be considered by the Department of Space.
- FDI limitations needs to be confirmed and necessary approvals to be got from MoF
- Upon receiving confirmation from the licensing authority of its intention to issue license, an applicant is required to apply for clearance from the Standing Advisory Committee for Frequency Allocation (SACFA).
- Once SACFA clearance is received, the applicant is then required to complete other conditions prior to commencing business.
- Content regulations will also apply

Application to INSPACe/DoS

- **Entity Information**

- a) Name of the Indian Entity:
- b) Category of the Indian Entity* :
 - (* Indian government body, PSU/CPSE, Indian registered non-Government Private Entity
 - (NGPE), company, start-up, MSME, industry, academic institution, others (pl specify))
- c) Details of the Indian Entity (include registration details) :
- d) Financial profile :
- e) Address of the Registered Office:
- f) Ownership pattern (FDI if any):
- g) Address of the Corporate Office:
- h) Address for Correspondence:
- i) Name, Designation and contact details of Authorized Person:
- Mobile No.:

- Telephone No.:

- Fax No.:

- Email address:

- Website:

- **2. Technical Information**

- a) Space segment details (satellite bus, propulsion, operational life, mass, power etc):
- b) Payload details:
- c) Service area:
- d) Target services:
- e) Location and details of TT&C station(s)
- f) Location and details of Satellite Control Center (SCC)

Application for Space com

- g) Whether TT&C station/SCC located outside India, if yes details of
- arrangements made to utilize them:
- h) Ground segment details:
- **3. Orbit-Spectrum Information**
- a) Orbital resource details:
- b) Frequency band and coverage details:
- c) Proof of obtaining orbit resources from designated PSU/CPSE, in case
- of utilizing available Indian orbital resources:
- d) Details of new ITU filing(s) in case of new Indian orbital resources:
- e) Interference analysis with respect to Indian ITU filings (GSO & NGSO).

- **4. Management Information**
- a) Plan for satellite realization:
- b) Launch service to be used:
- c) Expected launch schedule:
- d) Arrangements for third party liability insurance:
- e) Project schedule with key milestones:
- f) Estimated budget & funding details:
- *(Please provide detailed information a annexures/enclosures, as necessary)*
- **5. Undertakings**