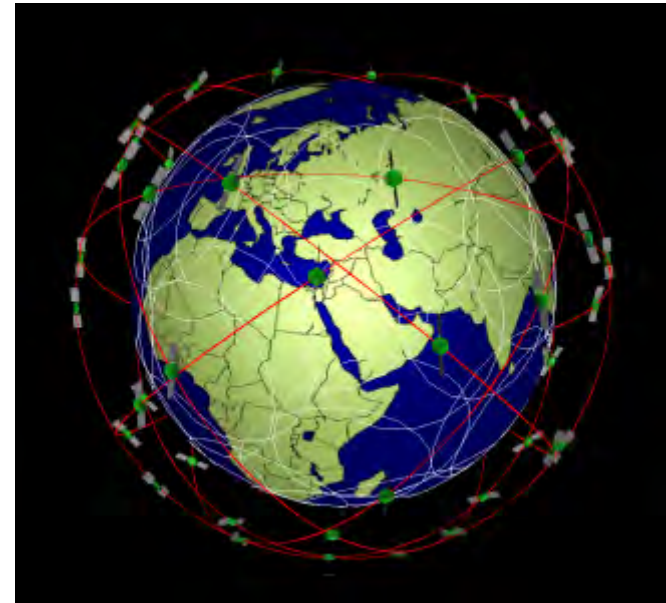


How Do You Regulate  
Constellations of Satellites?

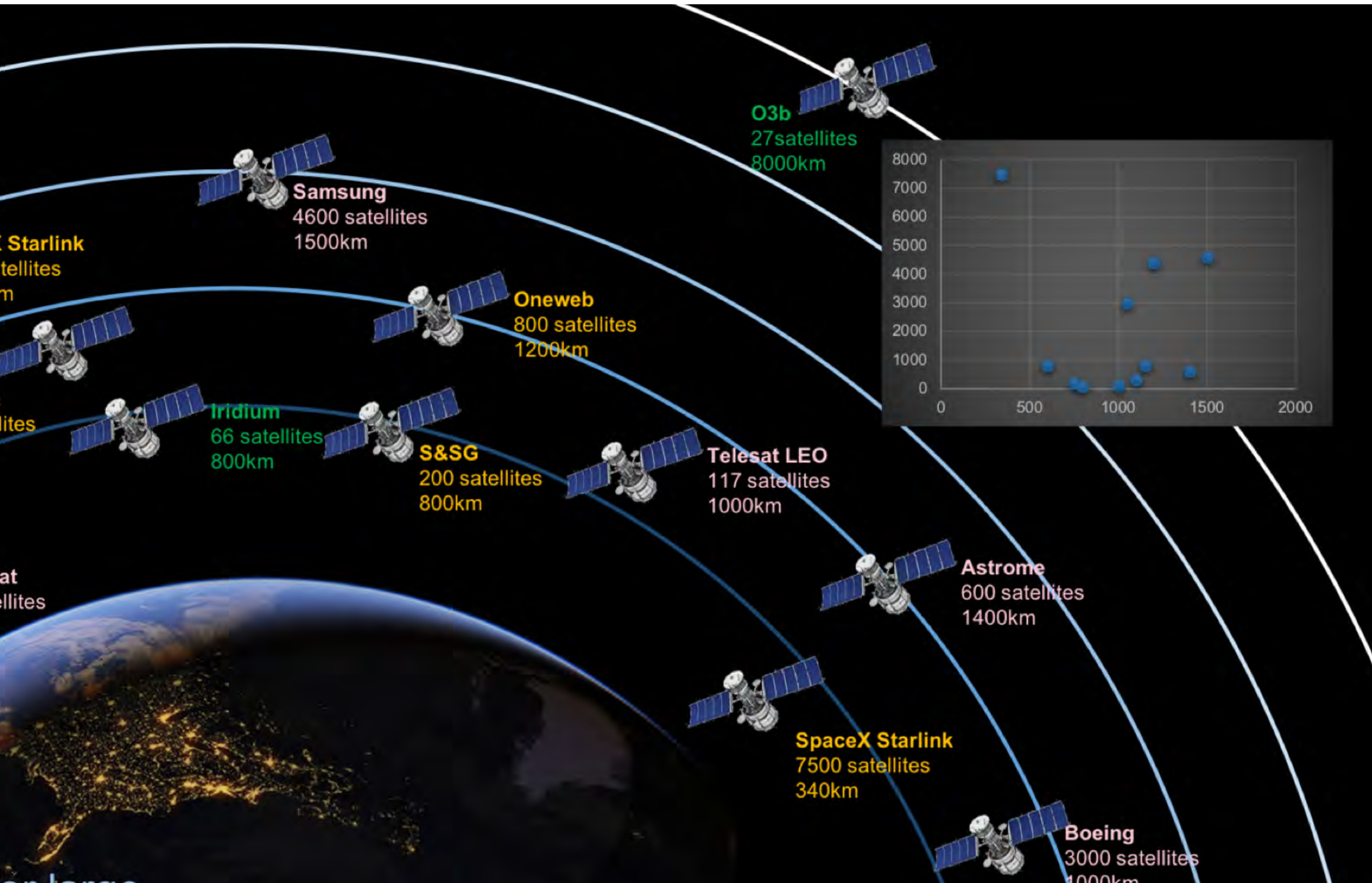
# There are many plans for constellations

- Constellation concepts vary in design/approach:
  - Altitude
  - Spectrum usage
  - Number of satellites
  - Capability of platforms
  - Launch epoch/cadence
  - Replenishment frequency
  - Concept of operations (CONOPS)
  - Obsolescence/Upgrade
  - Ground segment solutions
  - Independency/Dependency/Interdependency
  - Design Evolution/Revolution/Delusion
  - Payload



# Established space licensing processes developed to address single system concepts

- A comsat in GEO is a single system with independent operation and control introduced into a stable orbital environment
- A constellation of satellites is distributed in space (altitude/inclination/intra plane)
- A large constellation of satellites is distributed in time (as the overall system is built up over a number of launches)
- The lifetime of constellation systems could be multiples of platform lifetime



# How do you licence such a system?

- By constellation?
  - By launch?
  - By satellite?
  - By event?
- 
- Are there dependencies that need to be reflected in any regulatory approach?