

# 100+ years vision

- **IPNSIG Vision promotion video**
  - Public Outreach
  - External communications and other purposes
- **Concept**
  - Illustration of an Interplanetary Network and its progression
  - Modern, professional outlook - 3D look
  - Video and Static images
  - 2min max

(current version can be found on the last page)

# 100+ years vision

- **Design features**

- Evolutionary scenario - Projection of 2030s, 2050s, 2100s of IPN. During its evolution,
  - More than one deep space network on Earth
  - Ground facilities, Habitats on and around Moon Mars, Jupiter...
  - More purpose-built nodes in planetary or solar orbits
    - Comm Relays:
      - Show a comm relay in each solar orbit that provide connectivity inward and outward to relays on other solar orbits; power could be a significant issue in when dealing with communication at interplanetary distances
    - Asteroid, Astronomy Missions

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# Animation Outline

## General:

- **Solar System used as graphic background**
  - Show **Scale** of Solar system
  - Animation starts from Earth/Moon domain and scales to Mars and beyond - Show the gradual build up of SSI, and its expansion.
  - No details of each planet required (size, rings, color etc..) - simple spheres could be used.
- **Comm links**
  - Show dynamic connection of links (no static lines)
    - Link “connection and disconnection” to be animated: Disconnect occurs when planetary motion gets in the way of line of site. (Re) connects when nodes are in view.
- **Nodes**
  - No detail of each facility. Each node can be expressed in dots/spheres. Aggregation of comm nodes expressed in spheres.
- **Visual Touch**
  - <https://www.youtube.com/watch?v=N4opxiuN92c>
  - <https://www.youtube.com/watch?v=QEtawc79imM>

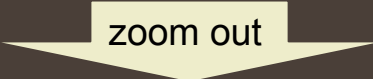
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## Animation Outline

### Now:

- Earth - Moon - Mars domain illustrated.
- Point to Point comm.
- 1 or 2 nodes on the Moon, Mars communicating with Earth ground station. Direct and relay links are used.

zoom out



### 2030s:

- Earth - Moon - Mars domain illustrated.
- Add 1 Earth Station.
- Add 1 Lunar orbit station (Gateway) and 1 Lunar base.
- Show addition of 2-3 free flyers (comm relays) around Earth, Moon, and in deep space (L2).
- Add ~3 surface nodes on Moon, Mars.
- Direct and relay links are used.

zoom out



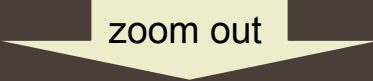
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## Animation Outline

### 2050s:

- Earth - Moon - Mars - Jupiter domain illustrated.
- Add 1 Earth Station.
- Add 1 Mars orbit station and 1 Mars base.
- Show addition of 2-3 free flyers (comm relays) around Earth, Moon, and in deep space (L2).
- Add ~3 surface nodes on Moon, Mars.
- Add 1 node on Jupiter surface.
- Show a developing relay **“Network”**

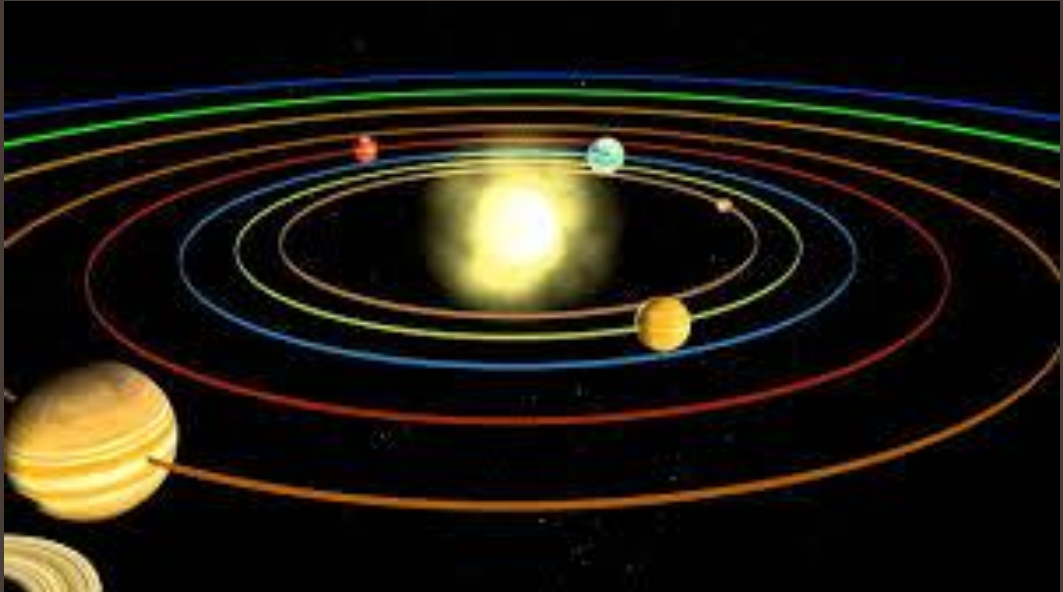
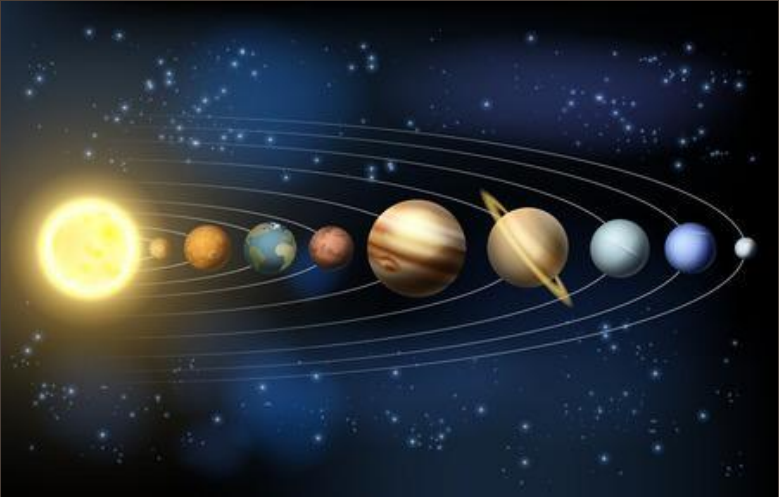
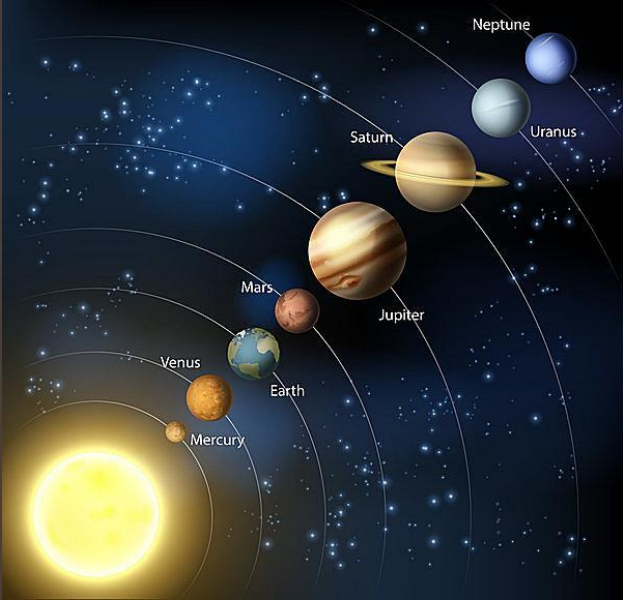
zoom out



### 2100s:

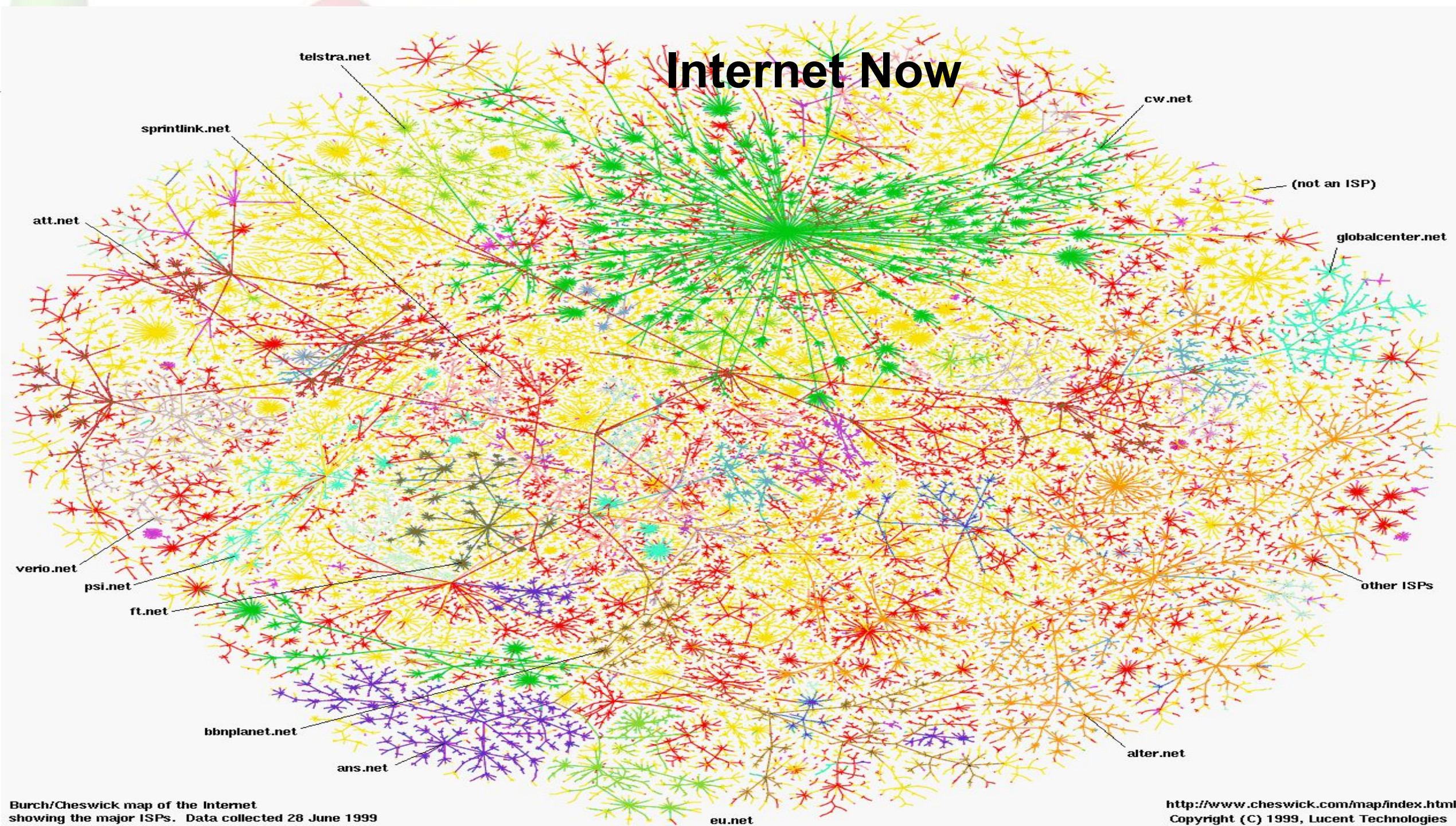
- Full Solar System domain illustrated.
- Add 2-3 orbit stations, and surface base on each planet.
- Show addition of 5 free flyers (comm relays) around Earth, Moon, and in deep space.
- Add several surface nodes on each planet.
- Show a complete relay **“Network”**.

# Examples of Solar orbits





# Internet Now





# Network the Planets 2100 -

Current version (to be renewed)

