

Detailed data collection and filtering criteria

Initial data collection criteria

- Dates: 2017 - 2022 inclusive (6 years)
- Satellites: 10 or more
- Orbit type: NGSO
- Filing type: API or CR

Data collected

- Filing type
- Submission reference number
- Name
- Administration
- Date filed
- Operating Agency
- Number of satellites

Operating agency was also added if known from similar filing.

Filtering criteria

- 1) Filings with same name or details but with substantially different dates
 - *Justification: likely same satellite constellation but just an updated filing*
 - *Outcome: count the earliest filing but do not count the later filing*
- 2) API & CR with similar details
 - *Justification: likely same satellites using different frequency types*
 - *Outcome: consider same constellation and only keep one filing, label API & CR under filing type*
- 3) Same operator with similar satellite numbers
 - *Justification: likely same satellite system*
 - *Outcome: Only count one set of satellite but note outliers below (e.g. different administrations)*
- 4) Similar name and satellite numbers
 - *Likely to multiple filings for the same satellites, though it is possible they are different satellites*
 - *Detail decision in table below*

Outlier decisions

Administration	Filings	Decision	Notes
Rwanda	CINNAMON-937 INZOVU-7 INGWE-6 INTARE-5 AGACA-4 UMUSAMBI-3 IMBOGO-2 INGAGI-1 UMUTEKANO-2 UMUTEKANO API-1 CINNAMON-217 ANTON-1N0 UMUTEKANO API-1 GUHUZA-1 GUHUZA-2 UMUTEKANO 2 UMUTEKANO Totalling 1,321,920 satellites	Include CINNAMON-937 and CINNAMON-217 filings in filtered dataset. Disregard the other filings.	Many are explicitly linked to one company - Marvel Space Communications Co.. Some are likely APIs and CRs for the same satellites. Anton-1N0 is reportedly an incorrectly made filing, later corrected by the CINNAMON filings, though the satellite numbers are different.
China	CSN-V[X]-[X]	APIs & CRs combined when name same. Filings kept separate, totalling > 20,000 satellites.	
Japan	STRIX	Earlier date (3-Jun-19) but higher number of satellites (60) selected.	
Norway	STEAM-[XX]	Filings with identical names combined, taking the larger satellite #.	
US	USASAT-NGSO-3[X] SpaceX constellations filed on 7-Oct-19	Combined similar filings ending -1, -2 and -3, resulting in 33,000 satellites.	Public reports list 30,000 satellites in gen2 constellation.
France, UK	Filings filed by WORLDVU or ONEWEB	March 2017 filings for 1,280 satellites were consolidated, though we note that they were filed across two	L5 filing changes largely between 2017 and 2022 versions.

		<p>administrations (UK and France).</p> <p>November 2019 filings for 6,116 satellites consolidated, though note that they were filed across three administrations.</p>	
Germany	Globalstar filings: D-NGSO1120-[x]	Three filings for 3080 treated as one.	
Germany	Odyssey-NGSO-[x]	Three filings for 216 satellites treated as one.	