State Succession in the Space Object Catalogue

A Machine-Readable Dataset of Responsibility for Objects Whose Owners No Longer Exist

Daniel Cheah
Space Finance Institute
https://www.spacefi.institute/

Working paper, version 2, July 2026. Draft for comment; not yet peer reviewed. This version revises the July 2026 draft; every change is listed in the dated revision note at the end of the paper. Comments and corrections are welcome and will be incorporated as dated, attributed revisions.

JEL classification: K33, K13, O33.

Abstract

Many objects in the public space catalogue are still attributed to owners that no longer exist: the Soviet Union, Czechoslovakia, the European Space Research Organisation, and the three treaty-based satellite organisations (INTELSAT, INMARSAT, EUTELSAT) whose fleets passed to private companies between 1999 and 2001. Liability for space objects attaches at launch and does not expire, and under the law of state succession it survives the disappearance of the launching state. For any given object, then, a responsible party exists today. Identifying that party currently requires doctrinal work, because catalogue owner codes record the historical attribution and no public dataset supplies the current one. This paper introduces such a dataset. It maps each affected SATCAT owner code to the party liable under the space treaties today and, where the two have come apart, to the operational successor as well, using a five-value relationship taxonomy (continuator, dissolution, IGO succession, IGO privatisation, and a reserved merger class). Every ruling carries an effective date, a cited legal basis, and stated caveats; codes that were considered and excluded are documented with reasons. The dataset is small by construction, since it is grounded in the catalogue's own vocabulary, and it is joined live to every object in the Orbital Asset Registry, where rulings appear beside citations to hash-verified authoritative texts held in the Space Law Corpus, drawn from the instruments that were in force at each object's launch.

Keywords: space law; state succession; Liability Convention; Registration Convention; satellite catalogue; INTELSAT; space situational awareness.

1. Introduction

On 24 January 1978 the Soviet satellite Cosmos 954 re-entered over northern Canada and spread radioactive debris from its reactor across the Northwest Territories. Canada claimed a little over six million Canadian dollars, invoking the 1972 Liability Convention together with general international law. The Soviet Union paid three million in 1981 under a settlement protocol expressed to be in full and final satisfaction, without admitting liability and without the payment being tied expressly to the Convention. It remains the only claim in which the Convention has been invoked, and its ambiguities are well documented (Cohen 1984). For present purposes the episode establishes something simpler: launching-state liability is not a paper doctrine. It attaches to particular catalogued objects, and states act on it.

Cosmos 954 fell four months after launch, so there was no doubt about who had launched it. The catalogue now presents the harder case thousands of times over. An object launched in 1975 by an entity dissolved in 1991 is still in orbit, still tracked, and still capable of causing damage, but the owner recorded against it in the public catalogue has ceased to exist. The Soviet Union is gone; Czechoslovakia is gone; ESRO was absorbed into the European Space Agency in 1975; and between 1999 and 2001 INTELSAT, INMARSAT and EUTELSAT each transferred their satellites and operations to a company, leaving a residual intergovernmental organisation behind. When one of these objects re-enters, collides, or becomes the subject of a removal mission that needs someone's consent, the first question is who answers for it now.

The law supplies an answer in every case. What is missing is a place to look the answer up. This paper describes a dataset built to fill that gap: one row per affected catalogue owner code, each row carrying the responsible party, the type of succession, the effective date, the legal basis with its citation, and the caveats a careful lawyer would insist on. The dataset is short. The claim made for it is correspondingly narrow: not new doctrine, but the reduction of settled doctrine to a sourced, machine-readable artefact keyed to the catalogue's own vocabulary and joined per object in a public registry.

2. Legal background

Three provisions carry the analysis. Article VI of the Outer Space Treaty makes states internationally responsible for national activities in outer space. Article VII, elaborated by the Liability Convention, makes every launching state liable for damage caused by its space objects; liability is absolute for damage on the surface of the Earth or to aircraft in flight, and fault-based in orbit. Article VIII, elaborated by the Registration Convention, gives the state of registry jurisdiction and control, and provides that ownership is unaffected by an object's presence in space or return to Earth.

A launching state, under both the Treaty and the Convention, is any state that launches a space object, procures its launching, or from whose territory or facility an object is launched. The four limbs matter later in this paper: they are why a single Soviet-era object can implicate more than one liable state, and why joint owner codes name several liable states at once. A point of chronology is worth making explicit, because most of the objects this dataset governs predate the treaties usually cited for them. For objects launched before the Outer Space Treaty entered into force in October 1967, the same four-limb formula operated as customary international law. It was declared in Principle 8 of UN General Assembly Resolution 1962 (XVIII) of 13 December 1963 and later carried into Article VII, and registration practice under Resolution 1721 B (XVI) ran from 1962. The treaty article is not a verbatim codification, since it confines the liable and protected classes to States Parties and extends its reach to the moon and other celestial bodies, but the limbs themselves are unchanged across eras, so the proposition that liability attaches at launch holds for the early objects too. The Liability Convention's temporal trigger is in any event the damage rather than the launch: an object launched in 1965 that causes damage today engages the Convention, and its launching state is identified from the facts at launch.

One further provision is needed before the rulings can be read properly. Under Article XXII of the Liability Convention, an intergovernmental organisation that conducts space activities and declares its acceptance of the Convention's rights and obligations becomes itself liable, jointly and severally with those of its member

states that are parties to the Convention; Article VII of the Registration Convention provides the parallel mechanism for registration. This is the channel through which an organisation, rather than a state, can occupy the responsible position at all. It is why ESA can stand as the answerable entity for ESRO-era objects, and it is also the genuinely intricate layer of the satellite-IGO privatisations, since the effect of a predecessor organisation's declarations on its residual successor is a question about particular instruments rather than about codes. The dataset takes a deliberately conservative line: it records the launching-state answer, which is safe on any view, and confines the Article XXII layer to the caveat fields, where it is flagged as an instrument-level question the code-level table does not resolve.

Launching-state status is fixed at launch. It cannot be transferred or renounced, and the liability that follows it has no time limit. States, however, are not permanent, and when a launching state ceases to exist its obligations do not vanish. The law of state succession, reflected partly in the 1978 Vienna Convention on Succession of States in respect of Treaties and more reliably in customary practice, supplies a responsible successor in almost every configuration: a continuator that maintains the predecessor's legal personality, as Russia does for the USSR; successor states that allocate obligations by agreement, as the Czech and Slovak Republics did; or a successor organisation that assumes rights and obligations expressly, as ESA did for ESRO and ELDO. An object whose recorded owner is extinct is therefore not ownerless, and extinction of the owner is no basis for treating the object as abandoned. The responsible party has to be derived rather than read off the catalogue, and the derivation is settled in each instance. The dataset described below is that derivation, written down.

3. Prior art

Four existing resources come close to this function, and locating the gap precisely requires crediting them precisely. Jonathan McDowell's General Catalog of Artificial Space Objects (GCAT) includes an organisations database that is the standard identity genealogy for the field. It tracks organisations, and countries, through named phases with start and end dates, connected by a unified code, so that Czechoslovakia's path through CSSR, CSFR and CZ is recorded as one continuous history. GCAT answers the question of what an entity became. It does not claim to answer which entity bears treaty obligations for a given object now; that is a legal conclusion, not a genealogical fact, and it is outside GCAT's design.

Second, the public SATCAT embeds one implicit succession of its own: Soviet objects are carried under the code CIS, for the Commonwealth of Independent States. Legally the recode fails twice over. The CIS is not a state, and it is not the continuator of the USSR; the Russian Federation is. The catalogue's own vocabulary is thus an argument for an explicit attribution layer.

Third, ASTRIAGraph, the University of Texas knowledge graph led by Moriba Jah, joins the public catalogues to United Nations registration data and analyses launch-state liability and registration compliance across that joined data (Simone et al. 2021). It is the closest existing system in mechanism, since it links legal-instrument data to catalogued objects at scale. Its attribution runs to the launching states of record, however, and it does not rule on what happens to responsibility when the recorded owner has ceased to exist: it carries no succession relationships, no responsible-party-today field, and no treatment of the IGO privatisations. The two efforts are complementary in the same way GCAT is: ASTRIAGraph

measures the behaviour of states that exist, while this dataset supplies the answerable party where the recorded owner does not.

Fourth, the doctrinal literature. State succession in respect of space activities has been treated in the standard works (Cheng 1997; Lyall and Larsen 2018; the Cologne Commentary; von der Dunk and Tronchetti 2015), and the transformation of the satellite IGOs has a book-length treatment of its own (McCormick and Mechanick 2013). This paper takes its legal conclusions from that literature and claims no advance on it. The contribution is the artefact: to the author's knowledge no prior work reduces these conclusions to a dataset keyed to catalogue owner codes, published with per-ruling sources and caveats, and joined mechanically to the objects themselves.

4. The dataset

4.1 Design

The dataset is a single table keyed on the SATCAT owner code, with rulings only for codes whose responsible entity has changed since the code was assigned. The columns are: predecessor_code (the SATCAT term); predecessor_name; responsible_entity (the party answerable under the space treaties today); operational_successor (populated only for the privatisation rows); relationship; effective_date; legal_basis, with citation; caveat; and source_url, source_citation and retrieved_at for provenance. The effective_date convention is the date on which the succession took practical effect (the dissolution, the restructuring, the assumption of operations); where the operative instrument entered into force on a different date, that date is recorded in legal_basis. The ESRO row, for example, carries 31 May 1975, the day ESA began operating de facto, while its legal basis records both the Convention's signature on 30 May 1975 and its entry into force on 30 October 1980.

The relationship taxonomy has five values: continuator (the successor maintains the predecessor's legal personality), dissolution (the predecessor split and obligations were allocated by agreement), igo_succession (one intergovernmental organisation expressly assumed another's rights and obligations), igo_privatisation (a treaty organisation's satellites and operations passed to a company under national law while a residual intergovernmental organisation retained treaty oversight), and merger, which is reserved and currently unused.

The schema separates two questions that the privatisations force apart. The responsible_entity field holds the party answerable under the space treaties today; the operational_successor field holds the entity that runs or oversees the assets where that is someone else, and is populated only for the privatisation rows. A company can appear in the second field but never meaningfully in the first, since a company cannot bear Liability Convention obligations. An earlier revision of the schema carried a single field named successor_state, which for the privatisation rows conflated the two answers; that field has been renamed and split as described, and the presentation below mirrors the shipped schema.

4.2 The rulings

Six rulings as of July 2026. The treaty-liability column states who is answerable under the Outer Space Treaty and Liability Convention for objects carried under the code; the operational column states who runs, or ran, the assets where that is a different entity.

Code	Predecessor	Treaty-liable party today	Operational successor / oversight	Relationship
CIS	USSR (SATCAT recode)	Russian Federation, as continuator (see caveats)	—	continuator, 1991
CZCH	Czechoslovakia	Czech Republic (Slovakia severally where attributable)	—	dissolution, 1993
ESRO	European Space Research Organisation	European Space Agency, per its Art. XXII / Art. VII declarations	—	igo_succession, 1975
ITSO	INTELSAT (IGO)	Launching states of record for IGO-era objects (unchanged)	Intelsat S.A.; residual ITSO oversight	igo_privatisation, 2001
IM	INMARSAT (IGO)	Launching states of record for IGO-era objects (unchanged)	Inmarsat Ltd (UK); residual IMSO oversight	igo_privatisation, 1999
EUTE	EUTELSAT (IGO)	Launching states of record for IGO-era objects (unchanged)	Eutelsat S.A. (France); residual EUTELSAT IGO oversight	igo_privatisation, 2001

CIS. The Russian Federation continued the legal personality of the USSR: it took the Soviet seat on the UN Security Council, and by the Alma-Ata Declaration of 21 December 1991 and the Russian Foreign Ministry's note of 13 January 1992 it assumed performance of the USSR's treaty obligations. Two caveats attach. First, the code covers two distinct populations: Soviet-era objects, to which the continuator ruling applies, and post-1991 Russian launches that the catalogue also files under CIS, for which Russia is simply the launching state and no succession is involved. Second, objects specifically attributable to Ukraine, Kazakhstan or Belarus are assigned their own catalogue codes under current practice. For Soviet-era objects themselves, all four launching-state limbs attached to the USSR at launch: the constituent republics were not states, and a 1965 launch from Baikonur was a launch from Soviet territory. Launch-site and procurement facts therefore do not distribute launching-state status among the successors. Those facts matter instead to how the continuator ruling is applied, and to post-independence launches, for which Kazakhstan (Baikonur, from 16 December 1991), Ukraine and Belarus are launching states in their own right.

CZCH. Czechoslovakia was dissolved with effect from 1 January 1993 by Constitutional Act No. 542/1992 Coll., and the Czech and Slovak Republics each declared succession to the federation's treaty obligations. The catalogue code follows the Czech Republic; objects attributable to Slovakia, jointly or otherwise, are noted in the caveat rather than absorbed silently.

ESRO. The ESA Convention established ESA as successor to both ESRO and ELDO, assuming their rights and obligations, and ESA's declarations of acceptance under Article XXII of the Liability Convention and Article VII of the Registration Convention are what allow it to stand as the answerable entity in its own

right, jointly and severally with its member states that are Convention parties. The row's caveat says so, since for a specific object the member-state channel may also be engaged. ELDO itself needs no ruling, for a reason that illustrates the method: no catalogued object carries an ELDO attribution, because ELDO never placed one in orbit.

ITSO, IM, EUTE. These three rulings are the ones mapped in no other public dataset. Between 1999 and 2001 the member states of the satellite IGOs restructured them on a common pattern. The satellites, operations and commercial business were transferred to a company: Intelsat Ltd, later Intelsat S.A.; Inmarsat Ltd under English law; Eutelsat S.A. under French law. An amended constituent instrument continued a residual intergovernmental organisation (ITSO, IMSO, and the EUTELSAT IGO respectively) to supervise the surviving public-service obligations: lifeline connectivity, the maritime distress and safety service, and the EUTELSAT Basic Principles. The corporate transfers did not and could not move treaty liability. For objects launched in the IGO era the launching states of record remain the liable parties; what the privatisations changed is the operational and supervisory chain, which the dataset records in the operational_successor field. Whether and how the predecessor organisations' own Article XXII declarations bear on the residual organisations is an instrument-level question that a code-level table cannot resolve, and the caveat field of each privatisation row says exactly that rather than implying an answer. The privatised operators' own obligations are a matter of national licensing, by the United Kingdom for Inmarsat and France for Eutelsat.

All three rulings are now verified against primary sources. The Inmarsat ruling is verified against the institutional texts published by IMSO. The ITSO ruling is verified against the amended ITSO Agreement itself (consolidated text published by ITSO): the amendments were approved by the 25th (Extraordinary) Assembly of Parties in Washington, D.C. on 17 November 2000, and the transfer to Intelsat, Ltd. was effected on 18 July 2001, a date corroborated by the United States Government Accountability Office (GAO-04-891). The EUTELSAT ruling is verified against the EUTELSAT IGO's institutional texts: the transfer to Eutelsat S.A. took place on 2 July 2001, with the Amended Convention applied provisionally from that date and definitively in force on 28 November 2002. In the first version of this paper the ITSO and EUTELSAT rulings rested on secondary sources and their rows carried flags saying so; those flags have been cleared against the instruments, and the interim flagged state is preserved in the dataset's dated migration history, so the verification trail is itself inspectable.

4.3 Negative rulings

A ruling table is only as trustworthy as its account of what it leaves out, so exclusions are documented with reasons. East Germany has no owner code in the SATCAT source vocabulary (checked against the published code list on 4 July 2026; GDR payloads flew under Soviet attribution), so German unification is moot at code level, as is the ELDO succession noted above. NATO, EUMETSAT, Arabsat, ESA and the ISS partnership persist, so no succession has occurred. Corporate transitions, from New ICO and Sea Launch to every routine acquisition since, are excluded on principle rather than oversight: state-level treaty responsibility does not turn on corporate events, and companies are tracked in a separate operator-resolution layer. Joint owner codes such as France/Germany and China/Brazil record joint launching-state attributions

rather than successions; under Article V of the Liability Convention, joint launching states are jointly and severally liable, so each named state remains fully answerable.

5. Provenance and live integration

Every row carries its sources and a retrieval timestamp. Refinements are made by dated, versioned migration rather than by overwriting, so the ruling history is inspectable. Uncertainty is recorded in the data itself, and the ITSO and EUTELSAT rulings now illustrate the full cycle: both carried caveat flags stating that their primary texts had not been consulted, both were later verified against the amended instruments, and the flags were cleared by dated migration. A reader can therefore see what is verified, when it became so, and what the dataset said in the interim. The author regards this as the dataset's most important design decision, since a reader who cannot see what has not been verified cannot calibrate trust in what has.

The dataset does not only sit in a repository waiting to be found. It is joined in production to the Orbital Asset Registry, a public registry that assigns stable identifiers to every catalogued object. The page for a Soviet-era rocket body states the responsible successor, the relationship and the legal basis. Beside it, the registry now records the four launching-state limbs of Section 2 as a per-object claims table (state of registry, launch facility, launch territory, launching agency and procurement; about 293,000 claims in all), so the facts that can displace a code-level default are themselves on the page. The attribution respects the succession boundary: for a Soviet-era Baikonur launch the territory limb records the USSR, with a note that the law fixes the launch-time sovereign, and Kazakhstan appears only from 16 December 1991. The claims layer is thus kept consistent with the succession rulings.

A legal-framework panel cites the treaty provisions engaged for that object: Articles VI to VIII of the Outer Space Treaty, Articles II and IV of the Registration Convention, and the Liability Convention. The citations are era-aware. An object launched before October 1967 is not given an anachronistic treaty citation; its basis cites customary international law as declared in Resolution 1962 (XVIII) Principle 8, with registration practice under Resolution 1721 B (XVI), later carried into Article VII. Each citation links to, and carries the SHA-256 content hash of, the authoritative text held in the Space Law Corpus, a provenance-tracked and DOI-minted record of the space-law instruments; the two General Assembly resolutions are held in the corpus with provision-level anchors, so a pre-treaty citation resolves to the exact anchored span of the authentic text and carries that span's own hash. If the corpus corrects a text the hash changes, and a stale citation can be detected. The chain from a tracked object to a verifiable authoritative text is mechanical at every step: catalogue code, succession ruling, per-object limb, cited provision, hash-anchored text.

6. Limitations

Three limitations should be stated plainly. The dataset rules at the level of the owner code, and facts about an individual object (a joint launch, a procured launch, a transfer of supervision) can displace the code-level default; the registry's per-object claims layer now surfaces those facts for inspection, but the ruling table itself remains code-level. It maps responsibility rather than registration mechanics; the state of registry and the liable launching states can diverge, and registration practice for IGO-era objects was itself uneven. And the table is short, because the catalogue vocabulary it is grounded in is short; grounding in that

vocabulary is what makes the dataset joinable, but it also caps its size. Planned extensions include ingestion of the succession instruments themselves into the Space Law Corpus so that every legal_basis field cites a hash-anchored text (the corpus so far holds the treaties and the pre-treaty General Assembly resolutions), and review by specialists in the succession literature, which is expressly invited.

7. Data availability

The dataset (CSV and SQL), its methodology note and its complete dated migration history are published as a versioned, DOI-minted deposit on Zenodo under a CC BY 4.0 licence (concept DOI 10.5281/zenodo.21193714, resolving to the latest version; this version, 2026.08, is 10.5281/zenodo.21619000), and the rulings are joined live to every object at orbitalassetregistry.org, which serves as the working demonstration. The registry codebase itself is proprietary; the dataset is not, and the join is reproducible from the public dataset alone, since the key is the catalogue's own owner code. The Space Law Corpus is at github.com/dacheah/space-law-corpus (concept DOI 10.5281/zenodo.21185483; citation anchors pinned at release v2026.08.0) and on Hugging Face as dacheah/space-law-corpus. Corrections are welcome and will be applied as dated, attributed revisions.

References

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, 27 January 1967, 610 UNTS 205.

Convention on International Liability for Damage Caused by Space Objects, 29 March 1972, 961 UNTS 187.

Convention on Registration of Objects Launched into Outer Space, 14 January 1975, 1023 UNTS 15.

UN General Assembly Resolution 1721 B (XVI), International co-operation in the peaceful uses of outer space, 20 December 1961.

UN General Assembly Resolution 1962 (XVIII), Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, 13 December 1963.

Protocol between the Government of Canada and the Government of the USSR in respect of the claim for damage caused by the satellite 'Cosmos 954', 2 April 1981.

Vienna Convention on Succession of States in respect of Treaties, 23 August 1978, 1946 UNTS 3.

Alma-Ata Declaration, 21 December 1991; Note of the Ministry of Foreign Affairs of the Russian Federation, 13 January 1992.

Constitutional Act No. 542/1992 Coll., on the Dissolution of the Czech and Slovak Federal Republic, 25 November 1992.

Convention for the Establishment of a European Space Agency, 30 May 1975 (in force 30 October 1980).

Convention on the International Maritime Satellite Organization, 3 September 1976 (in force 16 July 1979), as amended 1998; institutional texts at imso.org (retrieved 4 July 2026).

Agreement Relating to the International Telecommunications Satellite Organization, as amended by the 25th (Extraordinary) Assembly of Parties, 17 November 2000 (consolidated amended text published by ITSO; consulted July 2026).

Convention establishing the European Telecommunications Satellite Organization, 15 July 1982 (in force 1 September 1985), as amended 1999 (in force 28 November 2002; institutional texts published by the EUTELSAT IGO; consulted July 2026).

United States Government Accountability Office, Telecommunications: Intelsat Privatization and the Implementation of the ORBIT Act, GAO-04-891 (2004).

Cheng, B., Studies in International Space Law (Oxford: Clarendon Press, 1997).

Cohen, A. F., 'Cosmos 954 and the International Law of Satellite Accidents', 10 Yale Journal of International Law 78 (1984).

Hobe, S., Schmidt-Tedd, B., and Schrogl, K.-U. (eds.), Cologne Commentary on Space Law, Vols. I–III (Cologne: Carl Heymanns, 2009–2015).

Lyall, F., and Larsen, P. B., Space Law: A Treatise, 2nd ed. (Abingdon: Routledge, 2018).

McCormick, P., and Mechanick, M. J. (eds.), The Transformation of Intergovernmental Satellite Organisations: Policy and Legal Perspectives (Leiden: Martinus Nijhoff, 2013).

von der Dunk, F. (ed.), with Tronchetti, F., Handbook of Space Law (Cheltenham: Edward Elgar, 2015).

McDowell, J. C., General Catalog of Artificial Space Objects (GCAT), planet4589.org/space/gcat, organisations database and Org Code scheme.

Simone, N., Nagpal, K., Gupta, A., Esteva, M., Xu, W., and Jah, M., 'Transparency and Accountability in Space Domain Awareness: Demonstrating ASTRIAGraph's Capabilities with the United Nations Registry Data', 7th Annual Conference on Space Traffic Management (2021), doi:10.26153/tsw/11754.

CelesTrak, SATCAT ownership source codes, celestrak.org/satcat/sources.php (retrieved 4 July 2026).

Cheah, D., State Succession in the Space Object Catalogue (dataset), Zenodo, 2026, DOI 10.5281/zenodo.21193714 (version 2026.08: 10.5281/zenodo.21619000); Space Law Corpus, DOI 10.5281/zenodo.21185483 (release v2026.08.0); Orbital Asset Registry, orbitalassetregistry.org.

Revision note (version 2, July 2026)

In keeping with the revision policy stated on the title page, the changes from the July 2026 draft (version 2026.07) are listed here with their dates and reasons.

1. Verification of the ITSO and EUTELSAT rulings (Sections 4.2, 5, 6; References). The first version reported these two rulings as resting on secondary sources, with primary verification pending. Both were verified on 4 July 2026 against the consolidated amended ITSO Agreement and the EUTELSAT IGO's institutional texts, and the caveat flags were cleared by dated migration. The paper now reports the verified state and uses the flag-then-clear cycle as the worked illustration of the dataset's provenance design. The limitation that two of the six rulings await confirmation has been removed.

2. Refinement of the CIS caveat (Section 4.2). The first version said that launch-site and procurement facts “can make more than one successor a launching state” for Soviet-era objects. That was loose. The constituent republics were not states, so all four launching-state limbs attached to the USSR at launch, and no successor becomes a launching state for Soviet-era objects by succession; the Russian Federation answers for them as continuator. The caveat now states the launch-time analysis precisely and confines the

successors' own launching-state status to post-independence launches (Kazakhstan from 16 December 1991 for Baikonur). This aligns the paper with the era-split attribution published in the registry on 25 July 2026.

3. Pre-treaty legal basis made explicit (Sections 2 and 5). A paragraph now records that for launches before October 1967 the four-limb formula operated as customary international law, declared in Resolution 1962 (XVIII) Principle 8 and later carried into (not verbatim codified by) Article VII, with registration practice under Resolution 1721 B (XVI) from 1962. The registry's citations were made era-aware on the same basis (24 to 25 July 2026), and both resolutions were ingested into the Space Law Corpus with provision-level, hash-anchored citation spans (release v2026.08.0).

4. Live-integration description updated (Sections 5 and 6). Since the first version, the registry has materialised the four launching-state limbs as a per-object claims layer (approximately 293,000 claims across registration, facility, territory, agency and procurement limbs), era-split at the succession boundary and consistent with the succession rulings by construction. Section 6's limitation list was updated accordingly.

5. Prior art extended (Section 3). A pre-submission prior-art check identified ASTRIAGraph (Simone et al. 2021) as the closest existing system in mechanism: it joins United Nations registration data to the public catalogues for launch-state liability and compliance analysis. Section 3 now credits it and states the delta: ASTRIAGraph attributes to the launching states of record and carries no succession rulings.

6. References updated: the ITSO and EUTELSAT instrument entries no longer carry “not consulted directly”; entries added for Resolutions 1721 B (XVI) and 1962 (XVIII), GAO-04-891, and Simone et al. (2021).