Legal aspects of GNSS applications – the case of liability

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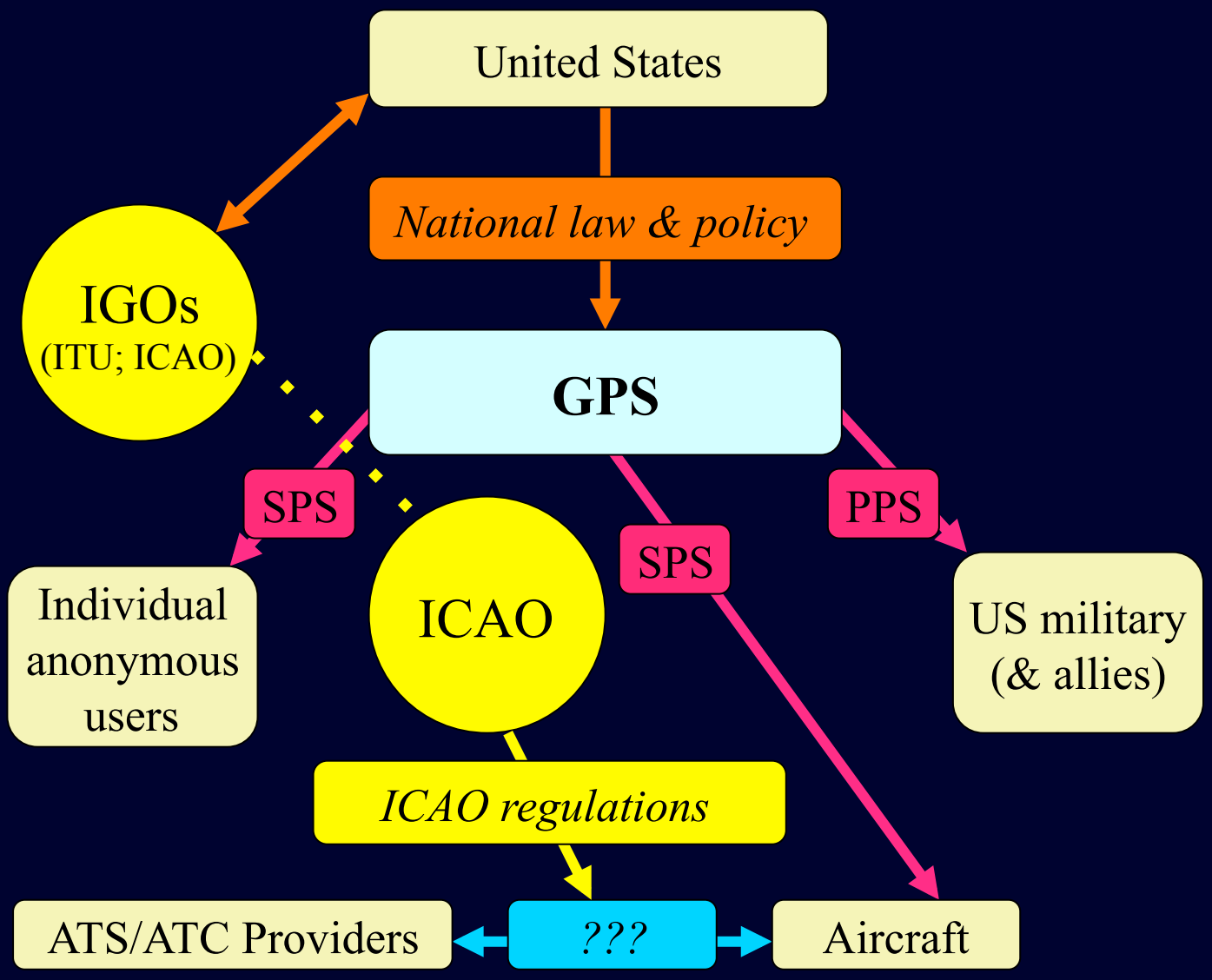
Introduction

- Primary systems & augmentation
  - GPS & GLONASS ←→ Galileo & others
- No GNSS-(applications-)dedicated legal regime ←→ general existing law
- Overarching: GNSS sats & ops
  - E.g. space law; international telecom law (ITU)

←→ Sector-specific: per application

  - E.g. air law, maritime law, railroad law, etc.

GPS Legal / Functional Model & aviation



Legend

GPS = Global Positioning System
IGOs = InterGovernmental Organisations
ITU = International Telecommunication Union
ICAO = International Civil Aviation Organisation
PPS = Precise Positioning Signal
US = United States
SPS = Standard Positioning Signal
ATS = Air Traffic Services
ATC = Air Traffic Control

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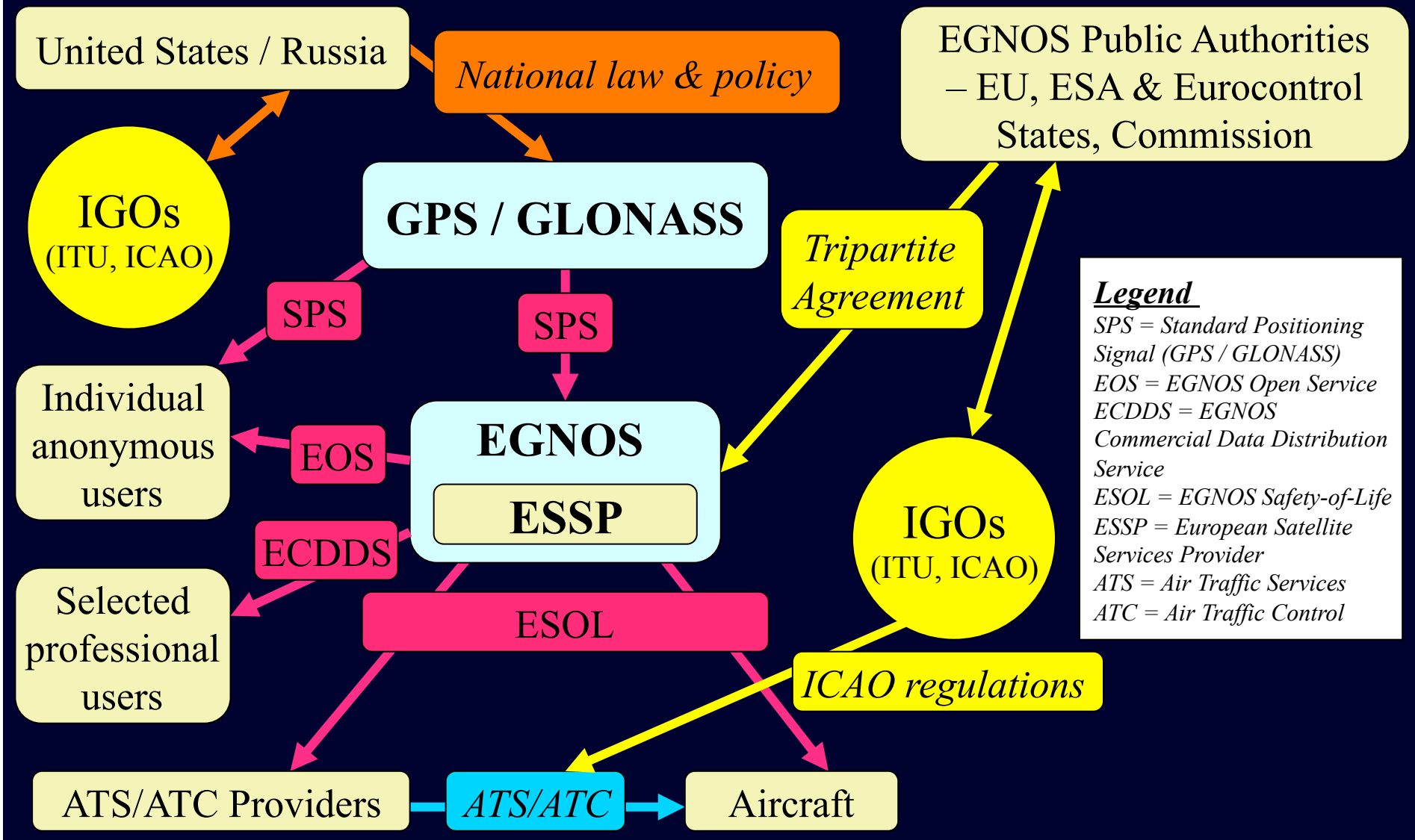
GPS/GLONASS+EGNOS Legal / Functional Model & aviation



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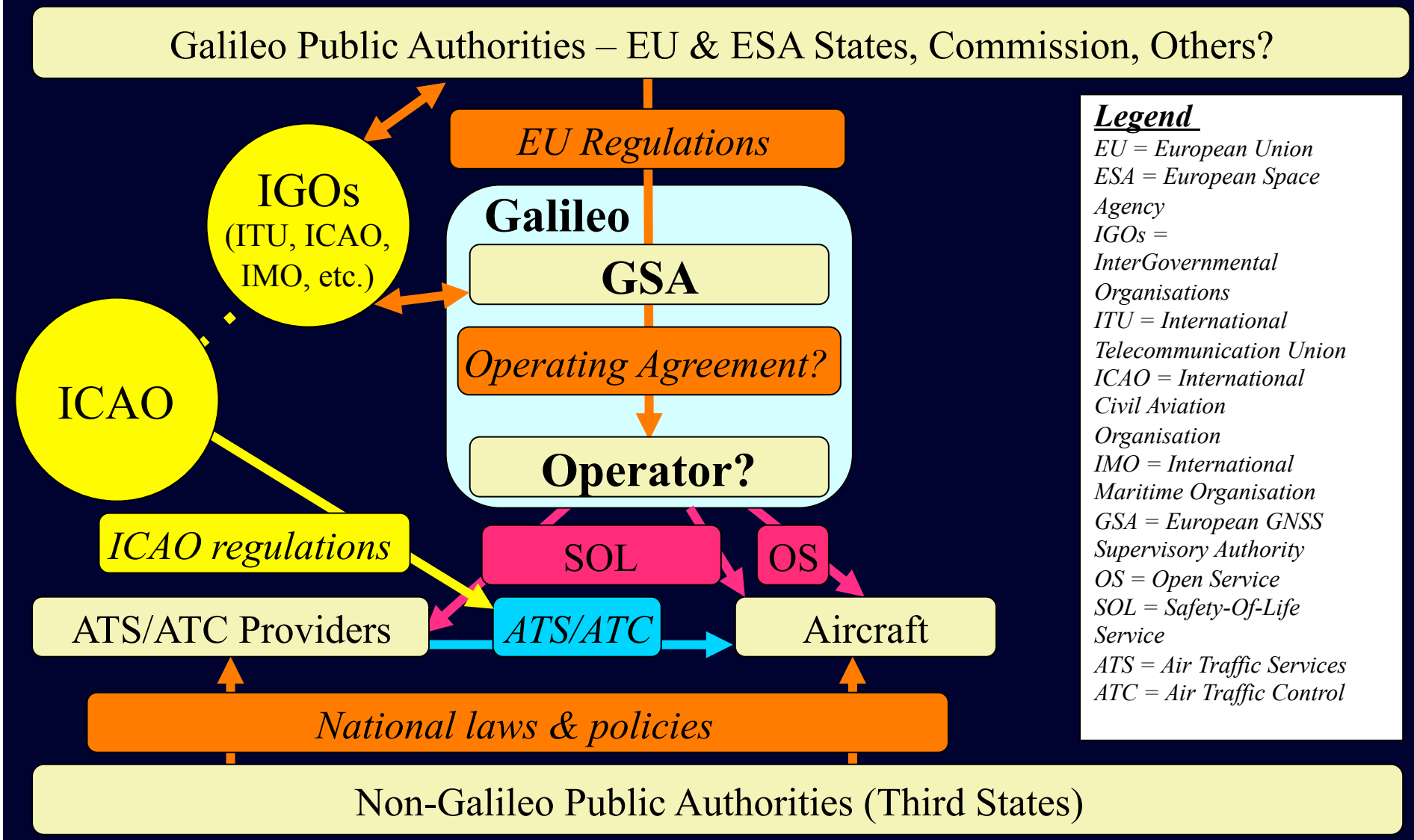
Galileo Legal / Functional Model & aviation



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Liability as a case study

- Liability = directly quantifiable (…)

⇔ Very frequently used concept

- Definition **here**: *"the accountability of a person or legal entity to compensate damage caused to another person or legal entity, as determined by specific legal rules and principles and based upon specified sources of law"*

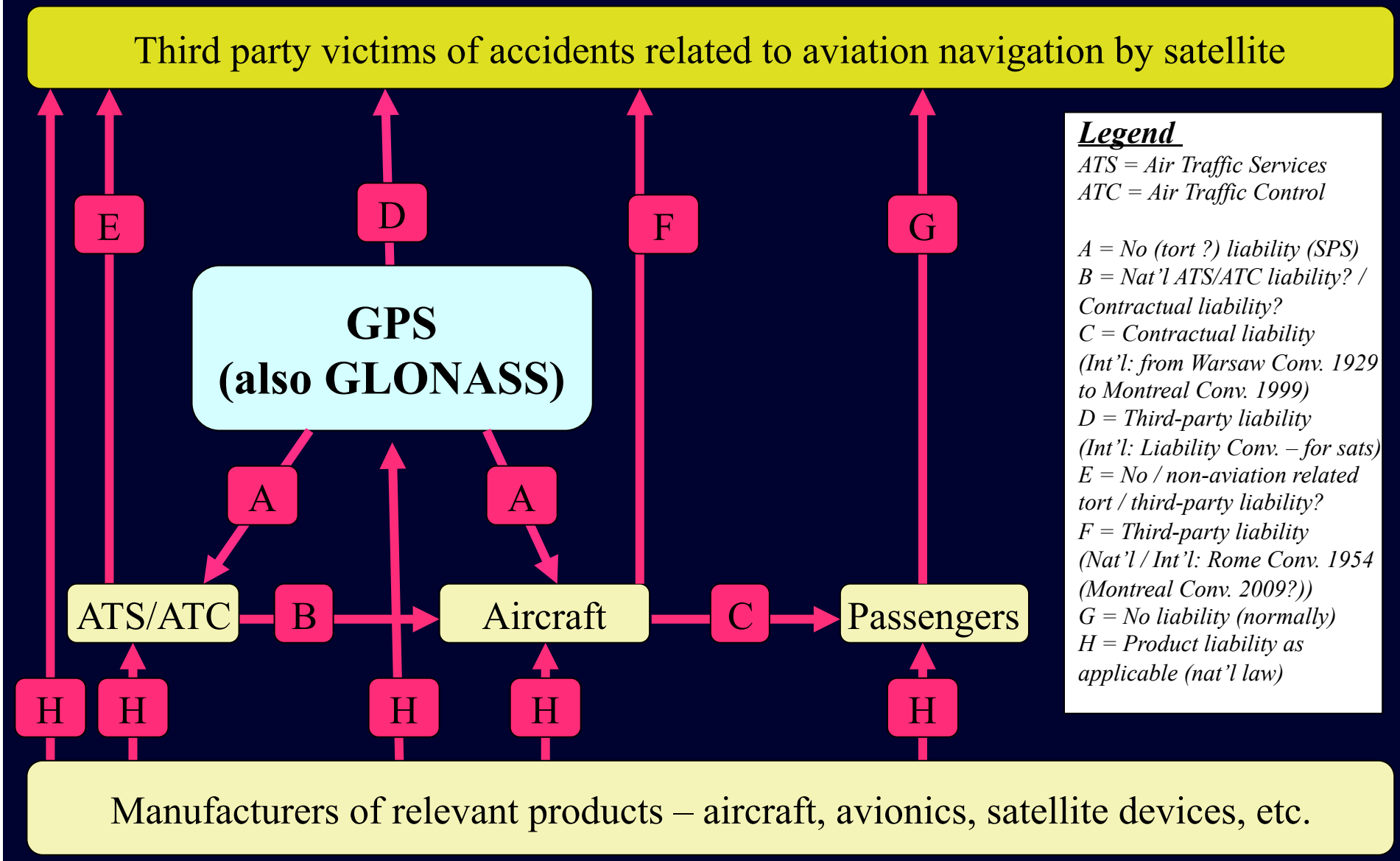
Key elements concept

1. Type of liability
   - Contractual; tort / third-party; product
2. Fault *versus* absolute character
3. Accountable entities & claimants
4. Compensable damage
   - Direct / indirect / moral / lost revenue / punitive
5. Level of compensation
   - Unlimited or subject to (tiered) limit(s)

Liability & GNSS

- No GNSS-dedicated legal regime
  ←→ many partially applicable ones
  - Space law liability – to damage caused by sats
  - Air law liability – to damage caused by aircraft
  - Maritime liability – to damage caused by ships
  - Railroad liability – to damage caused by trains
- → Nature of damage to be focused on
  - 'Indirect' from space law perspective:
    'downstream accidents' = key

GPS Legal / Functional Model for aviation & liability



Legend

ATS = Air Traffic Services
ATC = Air Traffic Control

A = No (tort ?) liability (SPS)
B = Nat'l ATS/ATC liability? / Contractual liability?
C = Contractual liability (Int'l: from Warsaw Conv. 1929 to Montreal Conv. 1999)
D = Third-party liability (Int'l: Liability Conv. – for sats)
E = No / non-aviation related tort / third-party liability?
F = Third-party liability (Nat'l / Int'l: Rome Conv. 1954 (Montreal Conv. 2009?))
G = No liability (normally)
H = Product liability as applicable (nat'l law)

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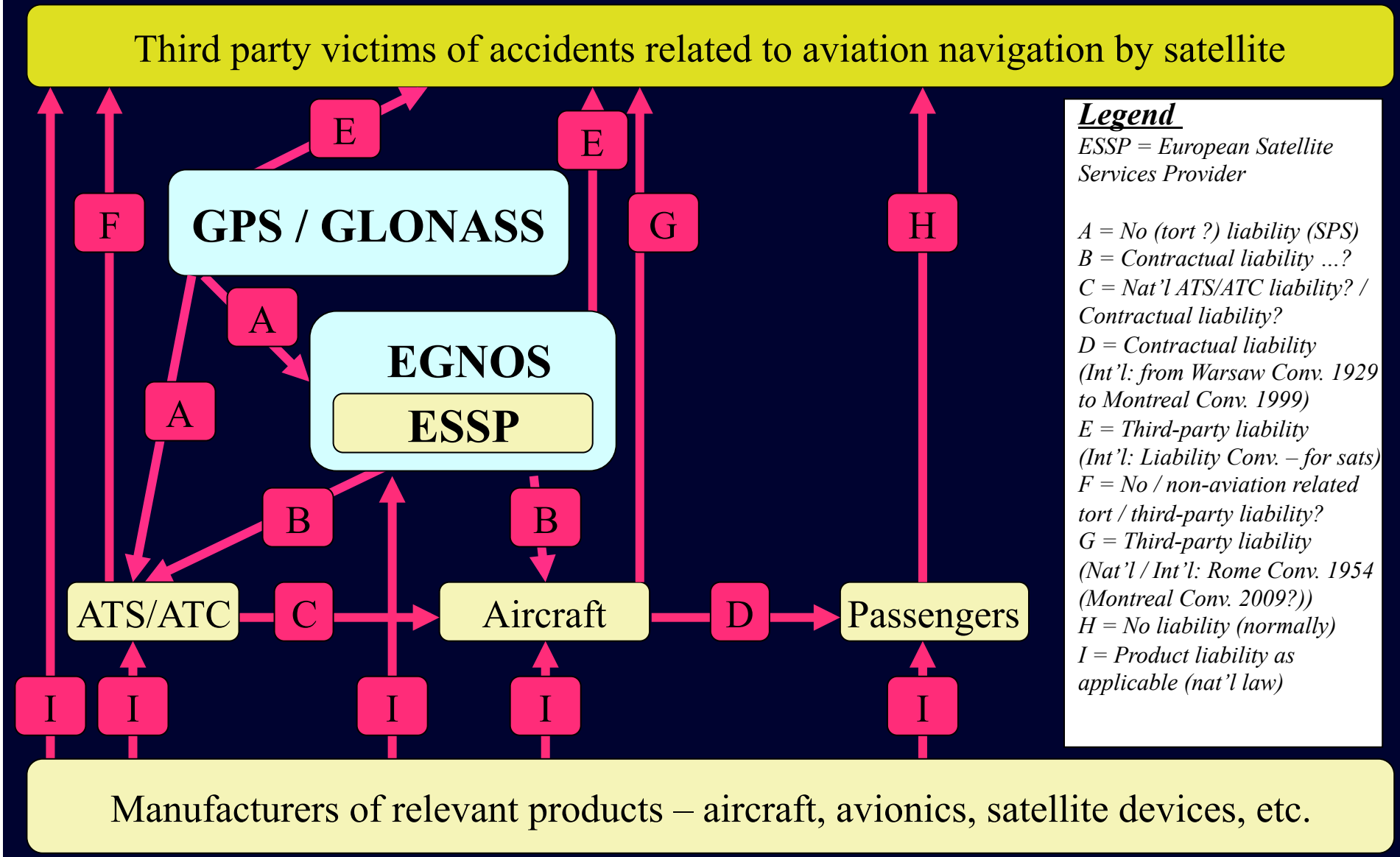
EGNOS Legal / Functional Model for aviation & liability



Legend

ESSP = European Satellite Services Provider

A = No (tort ?) liability (SPS)
B = Contractual liability …?
C = Nat'l ATS/ATC liability? / Contractual liability?
D = Contractual liability (Int'l: from Warsaw Conv. 1929 to Montreal Conv. 1999)
E = Third-party liability (Int'l: Liability Conv. – for sats)
F = No / non-aviation related tort / third-party liability?
G = Third-party liability (Nat'l / Int'l: Rome Conv. 1954 (Montreal Conv. 2009?))
H = No liability (normally)
I = Product liability as applicable (nat'l law)

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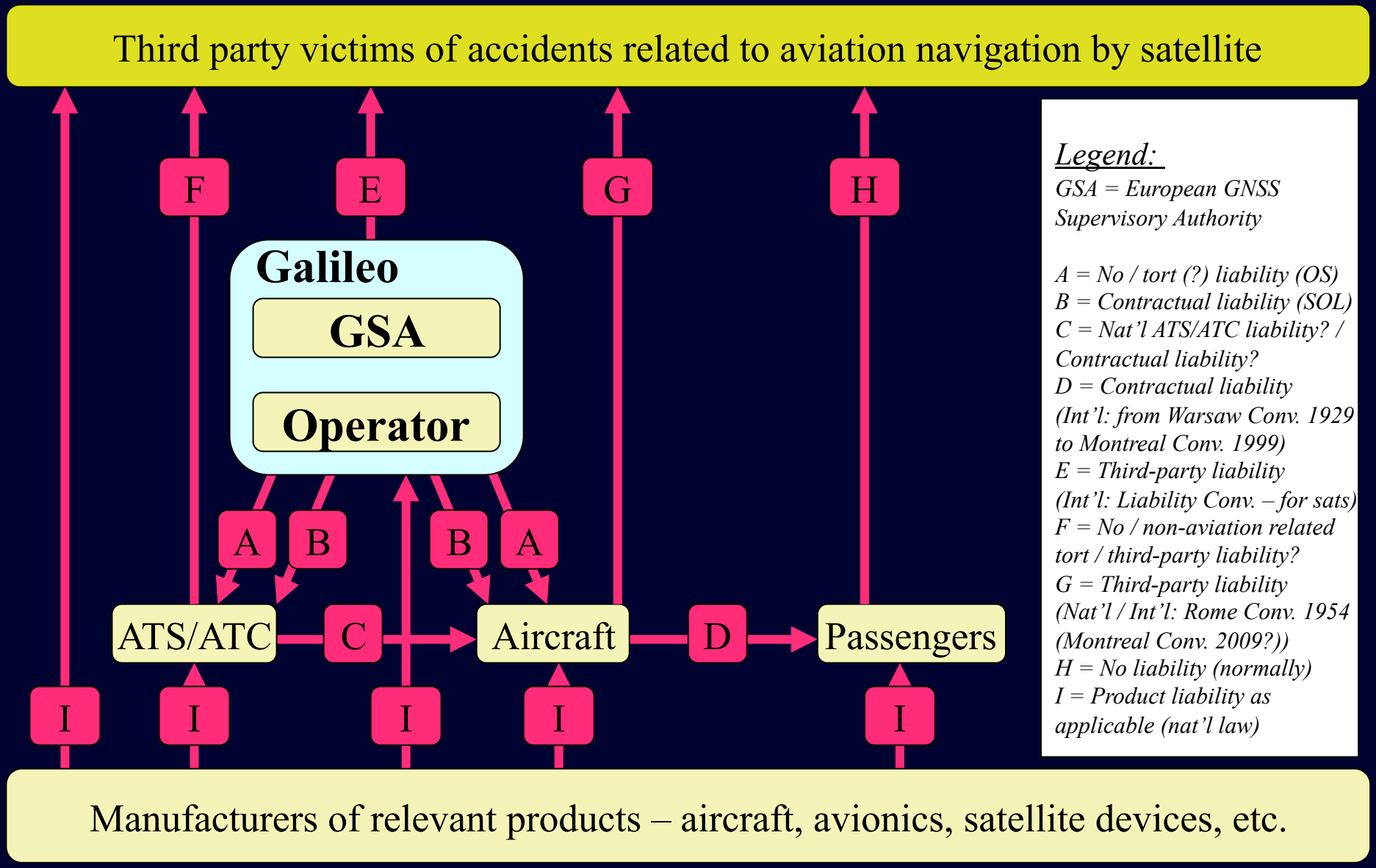
Galileo Legal / Functional Model for aviation & liability



Legend:

GSA = European GNSS Supervisory Authority

A = No / tort (?) liability (OS)
B = Contractual liability (SOL)
C = Nat'l ATS/ATC liability? / Contractual liability?
D = Contractual liability (Int'l: from Warsaw Conv. 1929 to Montreal Conv. 1999)
E = Third-party liability (Int'l: Liability Conv. – for sats)
F = No / non-aviation related tort / third-party liability?
G = Third-party liability (Nat'l / Int'l: Rome Conv. 1954 (Montreal Conv. 2009?))
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Concluding remarks

- The case study of liability shows the complexity also of the ***legal*** issues involved in GNSS & applications
- Same legal/functional model could also be used to map legal 'landscape' in other substantive areas: licensing, intellectual property rights, trade issues, data protection & privacy …