# GNSS LIABILITY

## *THE NEED FOR AN INTERNATIONAL LEGAL INSTRUMENT*

*Unidroit Rome 11 November 2011*


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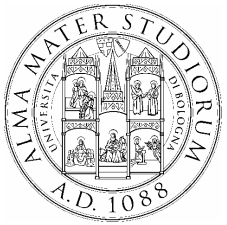


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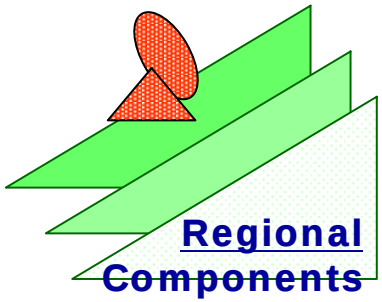
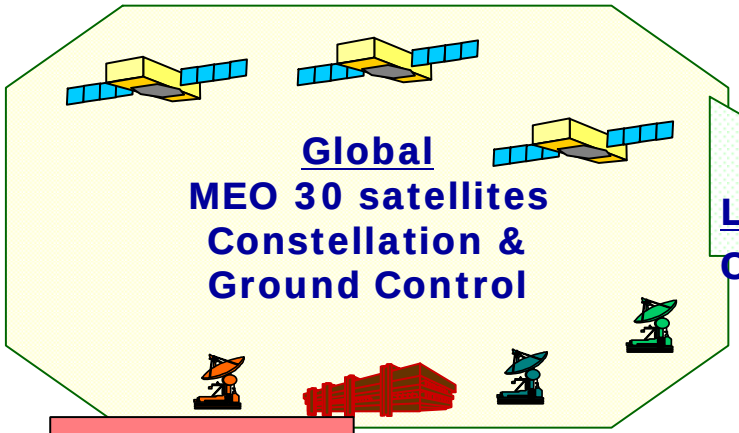
# Europe has stressed the importance of Space Strategy:

- Space policy responds to three types of needs: social, economic, strategic.
- Satellite technology increases efficiency, safety, security and environmental protection.
- Key infrastructures are Galileo, GMES and SATCOM. International view and cooperation is vital when it comes to space.
- EU will continue to support efforts of international community and organisations.

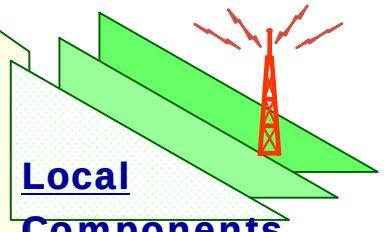
# The Galileo Architecture



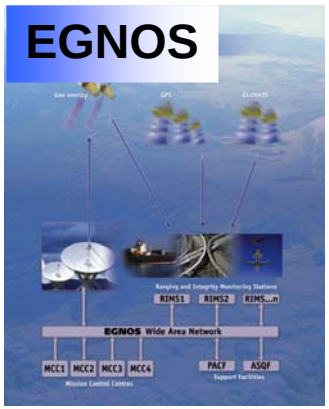
**Regional Components**



**Global**
**MEO 30 satellites Constellation & Ground Control**

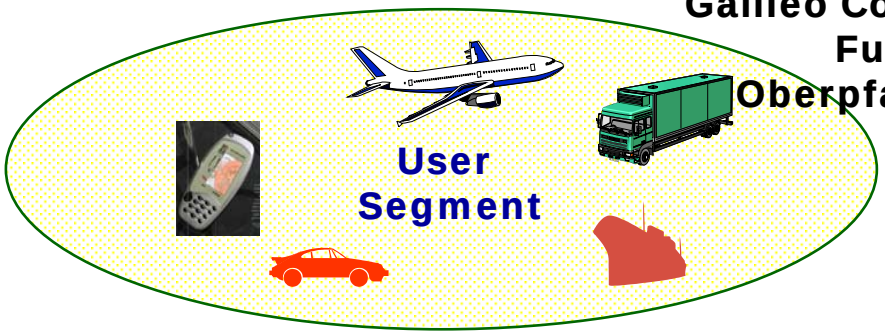


**Local Components**




**SAR**

**Galileo Control Centres Fucino & Oberpfaffenhofen**

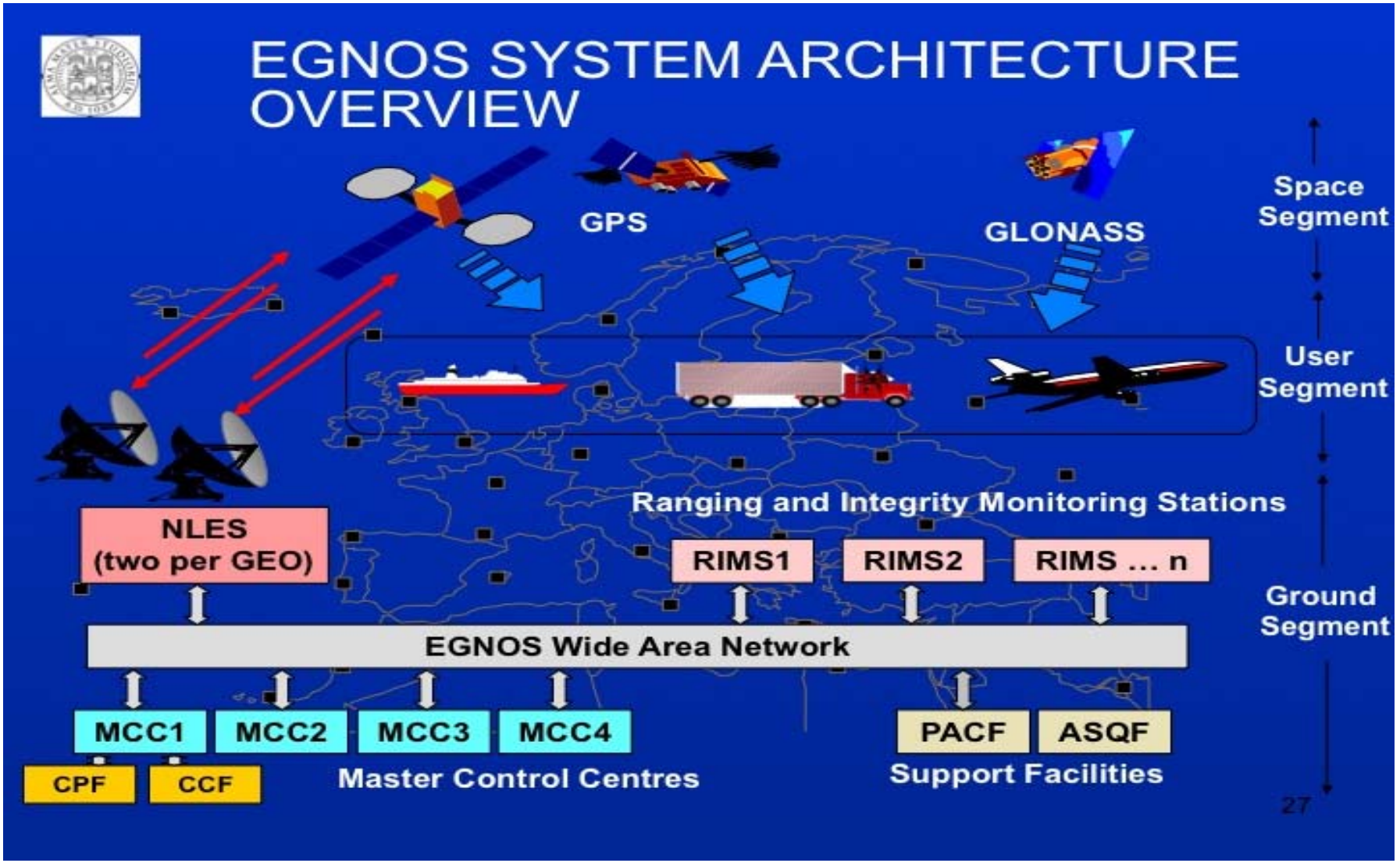


**User Segment**

# Galileo Status

- Two experimental satellites already in orbit: Giove A and Giove B launched by Soyuz from Baikonour in December 2005 and April 2008.
- Two initial IOV (In Orbit Validation) satellites launched on 20 October 2011.
- The 26 FOC (Full Operational Capability) satellites completing the whole System, should be launched by 2014.
- In January 2010 ESA assigned a contract for 14 Galileo satellites to OHB and Surrey Satellite Technology Ltd.
- Fucino and Oberpfaffenhofen Galileo Control Centres are nearly completed. A third GCC is located in Torrejon (Spain).

# EGNOS


EGNOS SYSTEM ARCHITECTURE OVERVIEW
GPS
GLONASS
Space Segment
User Segment
Ground Segment
Ranging and Integrity Monitoring Stations
NLES (two per GEO)
RIMS1
RIMS2
RIMS … n
EGNOS Wide Area Network
MCC1
MCC2
MCC3
MCC4
CPF
CCF
Master Control Centres
PACF
ASQF
Support Facilities
27

# EGNOS Status

- Since 1 April 2009 all assets have been transferred from ESA to the European Commission on behalf of European Community, which becomes the owner.

- ESSP (European Satellite Services Provider) is the operator under contract with the European Commission.

- EGNOS has been operating since January 2010.

# Other GNSS Systems

- USA should complete GPS III (a civil system like Galileo) by 2021 .

- China is progressing rapidly in creating its BeiDou Navigation System ESSP - also in competition with Galileo.

- Other area navigation systems are operating in Japan, India and Brasil.

# Galileo Services

| | | | |
|---|---|---|---|
| Navigation | Open Access | Free to air; Mass market; Simple positioning |  |
| | Commercial | Encrypted; High accuracy; Guaranteed service |  |
| | Safety of Life | Open Service + Integrity and Authentication of signal |  |
| | Public Regulated | Encrypted; Integrity; Continuous availability |  |
| SAR | Search and Rescue | Near real-time; Precise; Return link feasible |  |

# Damage caused by GNSS signal malfunctioning

- The absence or degradation of the signal may cause economic losses but also huge damage in a vast area or to a very large number of people.
- Such incidents may involve the interests of a number of jurisdiction and people and organisation from different nations.
- Damage to property and environment may affect several countries.
- In such circumstances, due to the absence of uniform international legislation, many difficulties could arise in the effort to solve legal problems.

# GNSS Legal considerations

The major utilisation of GNSS is the Air Navigation Services (ANS).

Most countries will not provide GNSS signal directly and will receive the service from other countries.

Accidents caused by malfunctioning of a GNSS signal would involve various parties (GNSS operator, Air Navigation Service Providers, air carriers) of different countries. So...

- ANS activity is mainly governed by domestic legislation.
- Since the beginning experts have noted the absence of international regulation (international Convention).

# Legal issues arising from the lack of international regulation

- Conflicts of laws and jurisdictions;
- State immunity (ANSP) ?
- Definition of ‘damage compensation’;
- Identification of the liable party;
- Civil liability regime for catastrophic events as a consequence of the use of the systems.

# Principal International Civil Liability Conventions

- Convention on Civil Liability for Oil Pollution Damage, Brussels 1969, as modified by the Protocol of London 1992

- International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND), 1971

- Convention on Civil liability for Nuclear Damage, Vienna, 1963

- International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, London, 1996

# Main principles of the TPL regulation

- The channelling of liability to a single liable party (LP).
- Strict liability of the liable party.
- Limited liability of the liable party (first tier).
- Compulsory insurance of the liable party, up to the limit of the first tier, and direct claim against the insurer.
- Supplementary compensation if the damage exceeds the first tier (entering the second tier).
- Limitations of the amount of compensation.

# The Balance of Interests in the TPL Regulation at international level

An international set of regulations for GNSS may create a fair balance between the:

- protection of victims
  (*the channelling of liability and strict liability*), and

- financial interests of the players in the marketplace
  (e. g. *limitation of compensation in both liability tiers*).

# Definition of Damage

***General principle: compensation for material losses as represented by physical damage derived from personal injury or loss of property.***

In keeping with this general principle the regulation covers:

- **loss of life, personal injury*** and loss of / or **damage to property**;
- **economic loss** arising from the above loss or damage, if incurred by a person entitled to claim in respect of such loss or damage;
- the **costs of measures to reinstate impaired environments**, unless such impairment is insignificant;
- the **costs of preventive measures**

* Personal injury is defined as:
any *physical damage* with the exclusion of any *psychological damage*.

# The principle of Channelling Liability

- The channelling of liability is the most common solution adopted at international level to:

- Protect victims, who can easily identify the liable party and take legal action without risk that their claims can be rejected.

# The Advantages of a Strict Liability Regime

- **Greater protection of victims:**
  - the victims do not need to prove the liable party's negligence or fault in order to make it liable.
- **Mitigation of the strict liability regime**:
  - there is no liability in case of *force majeure* or
  - when the LP proves that the damage was caused by an act or omission of a claimant.
- Exemption for open services:
  - exclusion of liability if the damage is caused by a malfunctioning of the GNSS Signal used to provide an open service (OS)].

# Limited Liability of the Liable Party (first tier)

- **Protection of the liable party**
  - The amount of the liable party's liability cannot exceed [X*] million euros

* The actual amount will be established in consultation with the insurance market.

# Supplementary Compensation (second tier)

It would be desirable to establish a two-tier liability system that comprises a first tier funded by compulsory contributions and a second tier that could be made available when necessary.

**The second tier of compensation has two basic purposes:**

(i) increase the amount of compensation available to the victims, and...

(ii) share the financial risk borne by private industry (if one or more operators is identified for the exploitation phase) with public parties.

# Circumstances in which Supplementary Compensation is envisaged

- Supplementary compensation is envisaged in three cases:
- when the damage exceeds the liable party's liability,
- when the LP is not liable because the damage was a consequence of force majeure,
- when the LP liable for the damage under a regulation is financially incapable of meeting its obligations in full, and any financial security available does not cover the claims or is insufficient.

# Compulsory Insurance of the Liable Party

- The aim of compulsory insurance is twofold:

  **(i) to assure victims of the financial strength of the liable party.**

  **(i) to avoid the risk of financial difficulties or bankruptcy of the LP.**

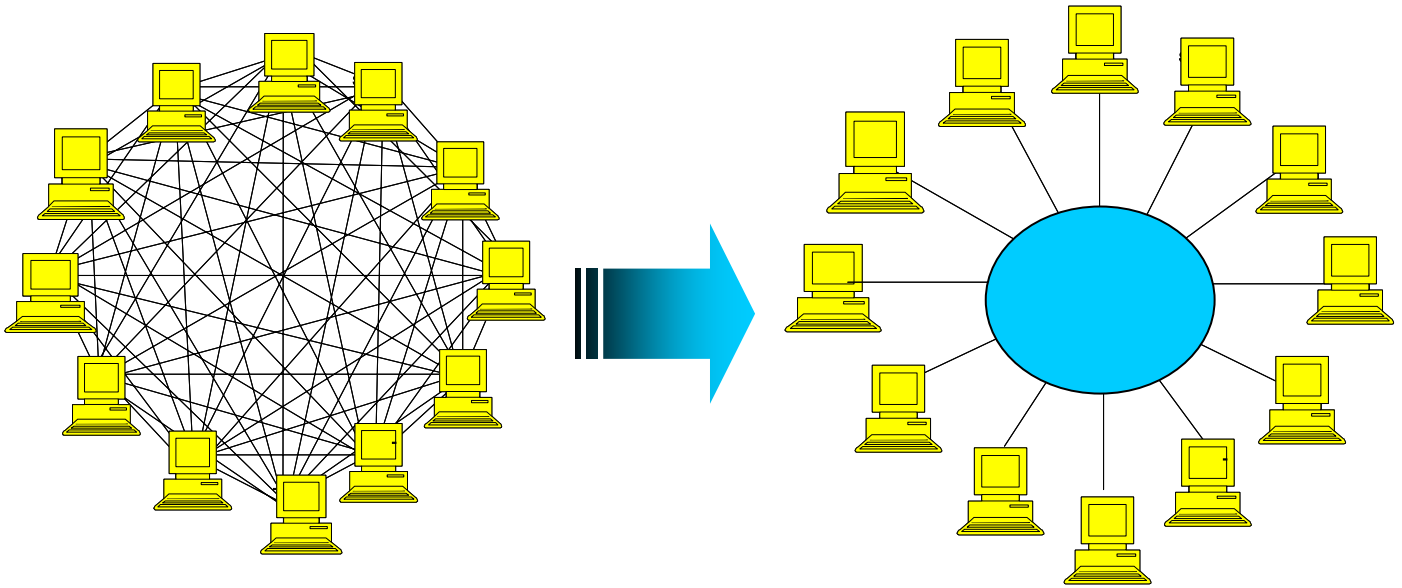
- The liable party shall be required to maintain insurance or other financial security covering its liability for damages up to the maximum of the first tier, or a lower amount if so established by its Member State.

# Framework agreements versus International Convention

The matter cannot be solved through 'Contractual Framework' agreement between States. Contractual or private instruments per se are unable to guarantee a uniform applicable law without a suitable regulatory framework at international level to assure a reasonable and harmonized compensation to victims. Framework agreement would create a tangled network!

Framework Agreements

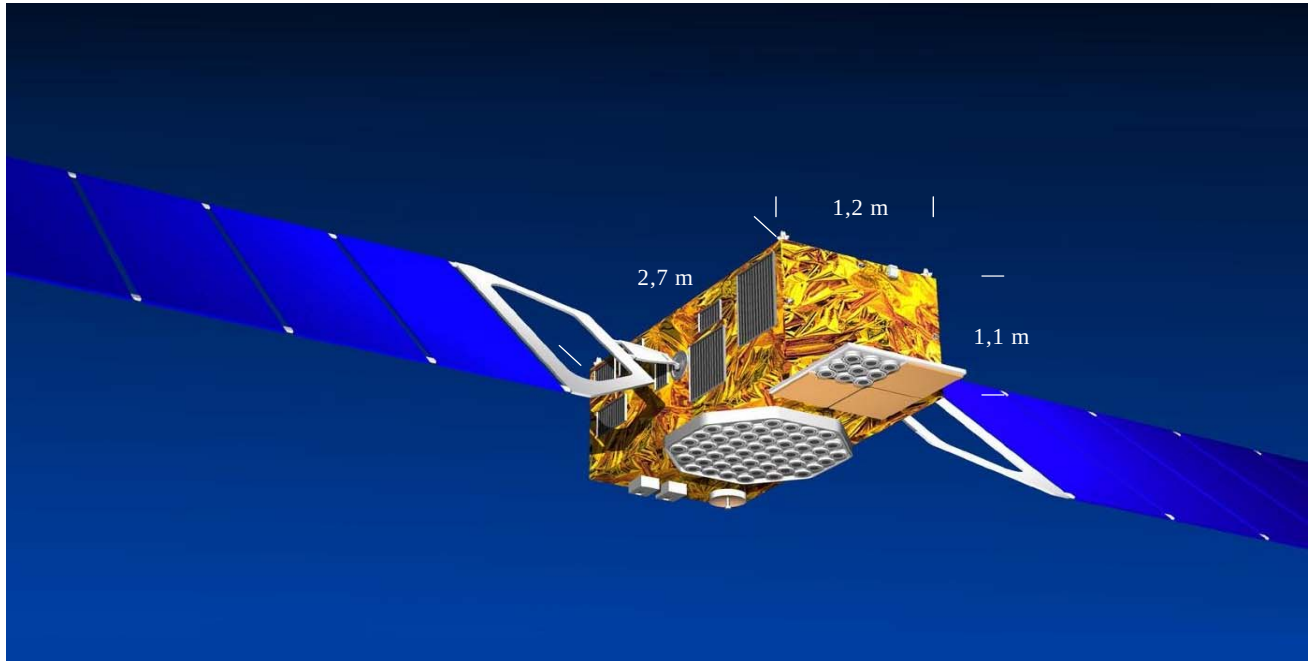
International Convention



# Possible solution for a complex legal framework

International practice has taught us that only an International Convention can regulate effectively:

- the responsibility of the liable party;
- the form of indemnity for the victims (also if they live in different courtiers) of catastrophic incidents;
- The prevention of disparity of treatment arising form paying different indemnity to victims of the same incident;
- The need to protect the parties involved in the GNSS (and the continuity of the services) from being obliged to answer unlimited claims for compensation.




# *THANK YOU*

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