

Brief Overview

Non-Planned Procedures

Hon Fai Ng

Space Services Department





Launch Vehicle

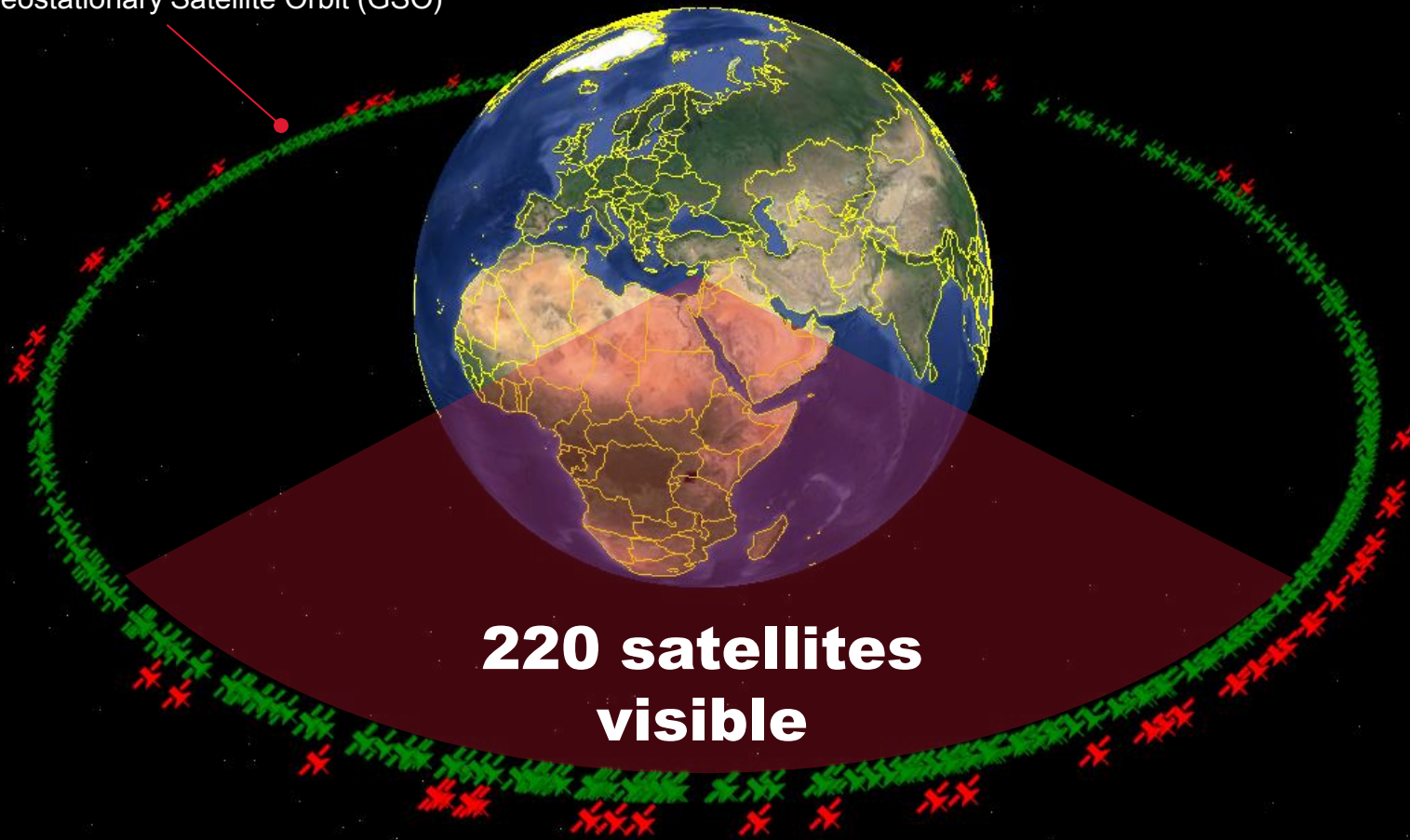
COMMON GOAL

Access to spectrum/orbit resources
Ensure rational, equitable, efficient, economical use
Interference-free operation



Google earth

Geostationary Satellite Orbit (GSO)



**220 satellites
visible**

Source: Norad Data of 11.03.2014

Google earth

Geostationary Satellite Orbit (GSO)



**Up to 200+
countries visible**

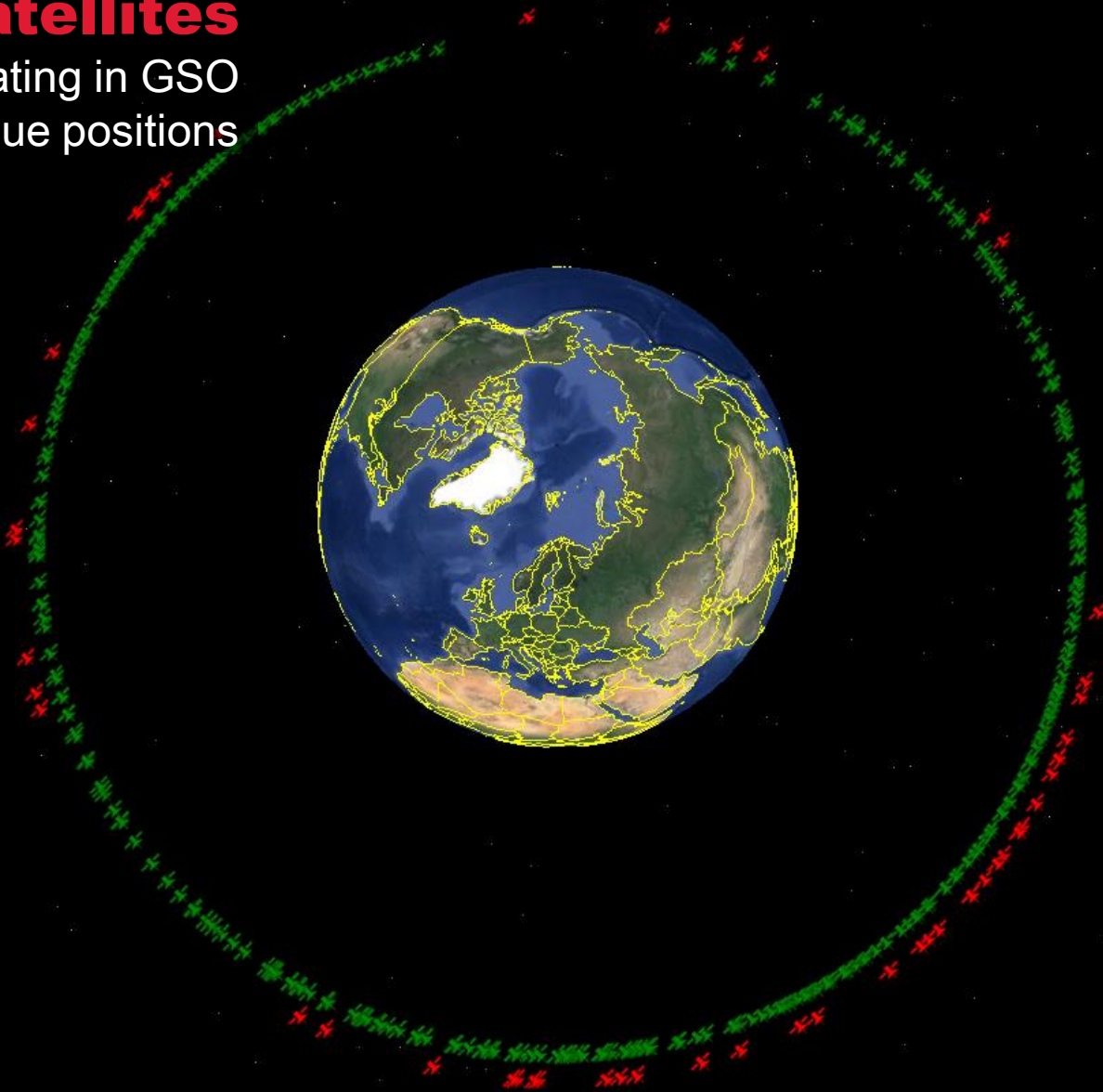
Source: Norad Data of 11.03.2014

Google earth

400+ Satellites

currently operating in GSO

350+ unique positions



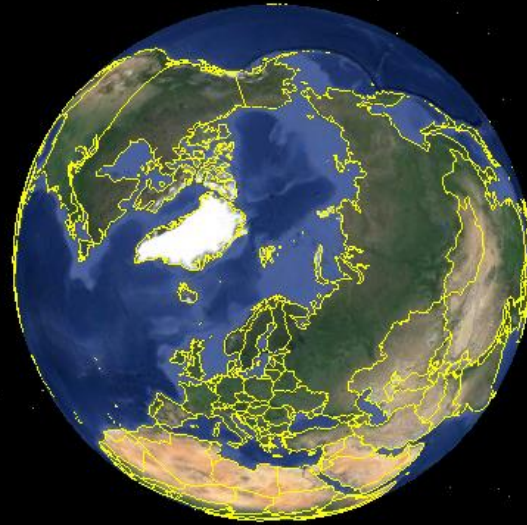
Source: Norad Data of 11.03.2014

Google earth

400+ Satellites

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350+ unique positions

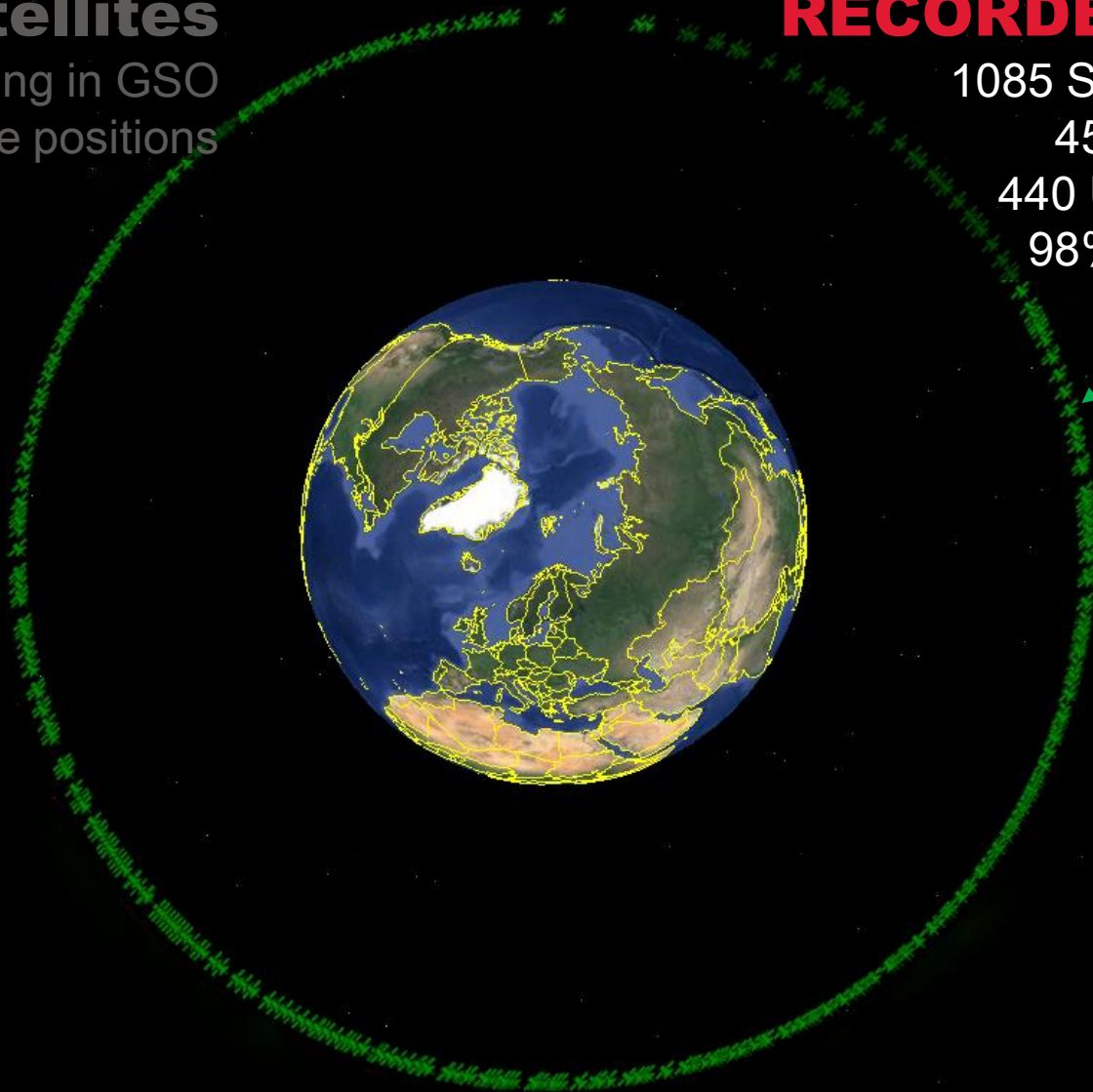


400+ Satellites

currently operating in GSO
350+ unique positions

RECORDED in MIFR

1085 Satellite Networks
45 Administrations
440 Unique Positions
98% Confirmed BIU



Source: SRS Database of 21.02.2014



RECORDED in MIFR

1085 Satellite Networks

45 Administrations

440 Unique Positions

98% Confirmed BIU

COORDINATION

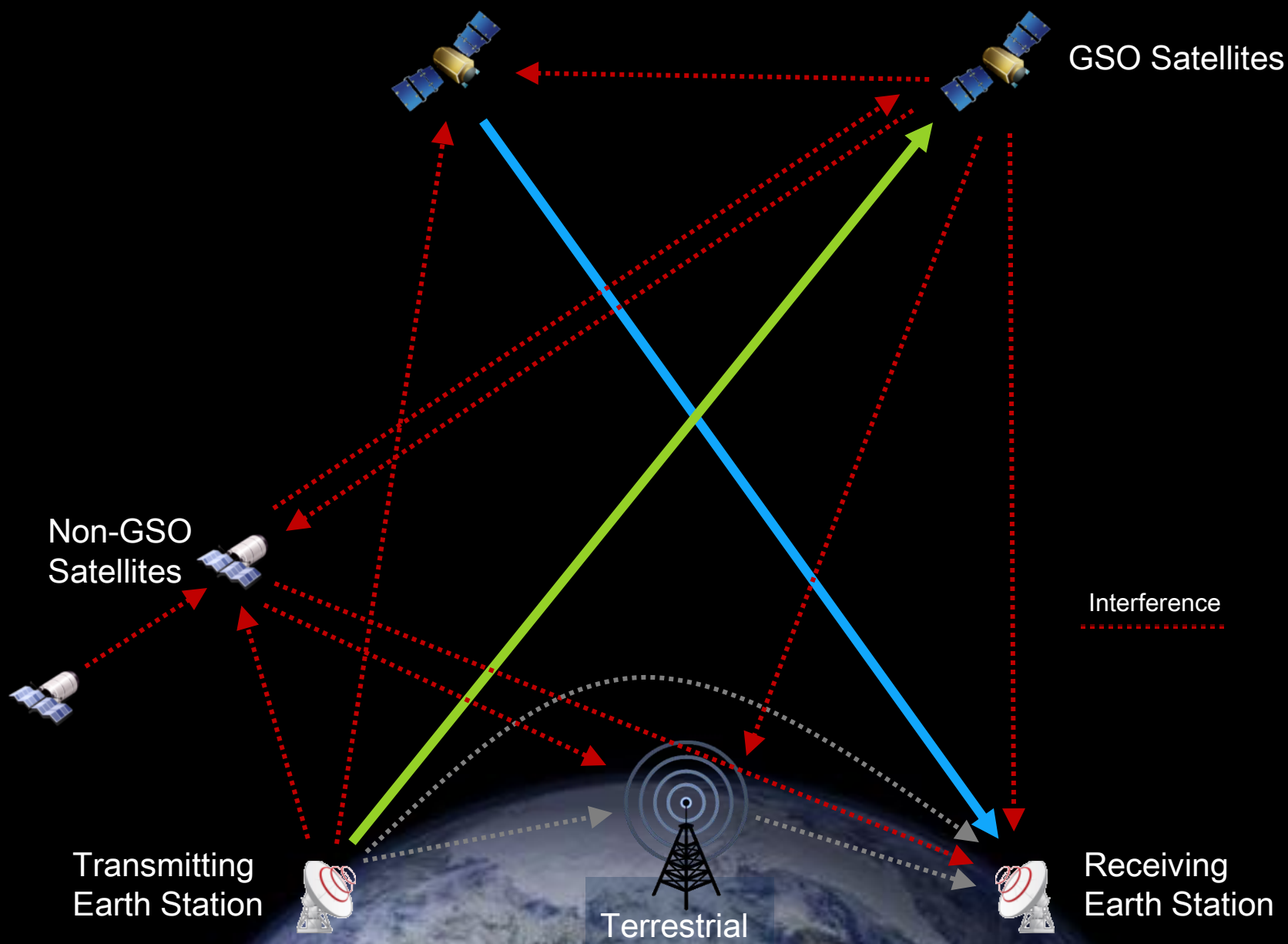
+1350 Satellite Networks

+20 Administrations

+680 Unique orbital positions

Source: SRS Database of 21.02.2014

Google earth





INTERFERENCE THREAT

Radio waves do not stop at borders
High risk in space radiocommunications
Interference-free operation through Radio Regulations

RADIO REGULATIONS

Intergovernmental treaty governing use of spectrum/orbit resources by Administrations

Define rights / obligations

Principles of orbit/spectrum use

Allocation of frequency bands and services

Procedures and Plans

Radio Regulations

Articles

Edition of 2012



Source: No. 31 of ITU Constitution

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INTERFERENCE CONTROL MECHANISMS

Frequency Allocation	Article 5
Technical & Operational Limits	Articles 21, 22
Monitoring/Interference	Articles 16/15
Licensing	Article 18
Plan	Appendices 30/30A/30B
Coordination	Articles 9, 11

Radio Regulations

Articles

Edition of 2012



Source: Articles 5, 9, 11, 15, 16, 18, 21, 22, Appendices 30/30A/30B of Radio Regulations

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MECHANISMS FOR SHARING

2

Planning Approach

Equitable access

Based on current and future requirements

Limited to certain frequency spectrum

Coordination (Non-planned) Approach

Efficient / economical use

First come, first served based on current requirements

Obligatory negotiation for interference-free operation

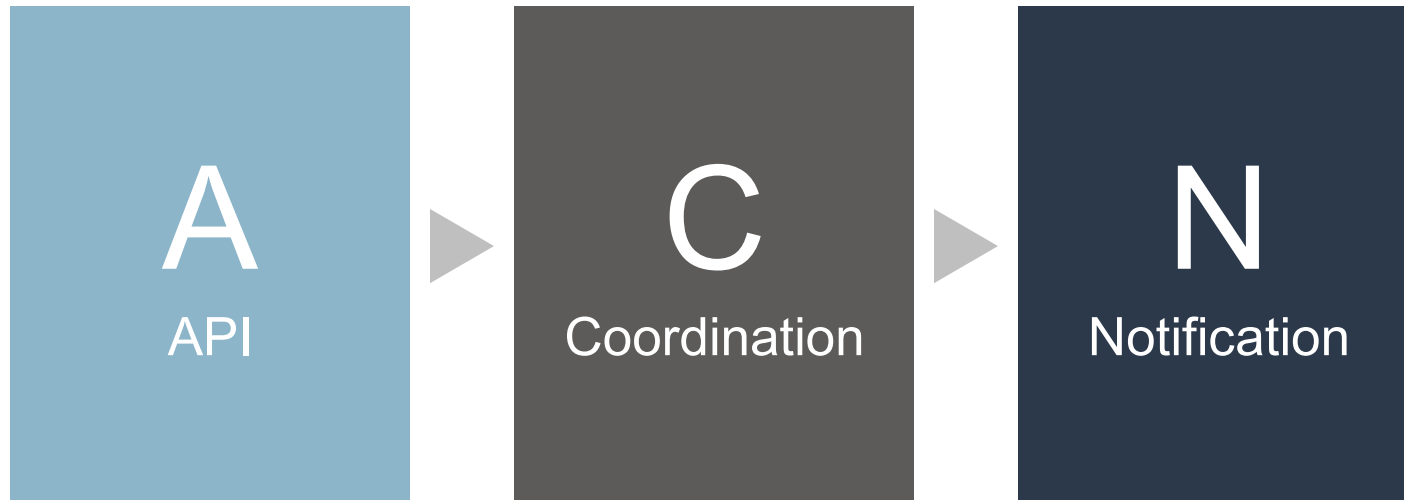
Covers major part of frequency spectrum

To bring frequency assignments into use,

WHAT ARE THE REGULATORY PROCEDURES ?



Non-planned Procedures (Articles 9 & 11)



Non-planned Procedures (Articles 9 & 11)

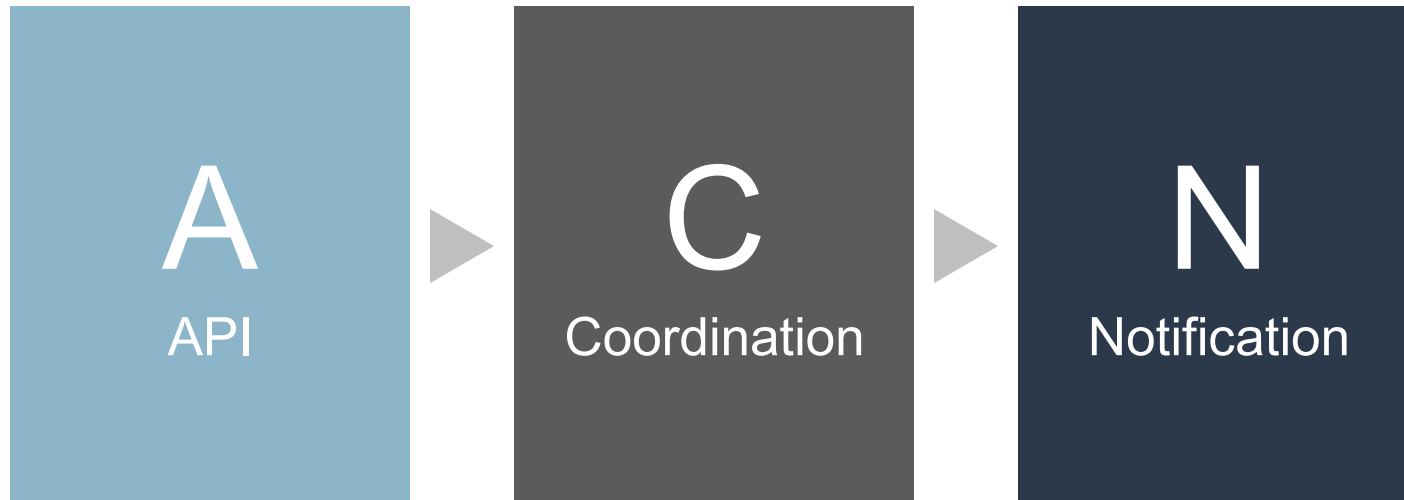
A

API

ADVANCED PUBLICATION OF INFORMATION

- Section I of Article 9
- Within 7 years before BIU (No. 9.1)
- Starts Regulatory Clock
- Purpose: General description of satellite network (GSO & NGSO) to inform all administrations

Non-planned Procedures (Articles 9 & 11)

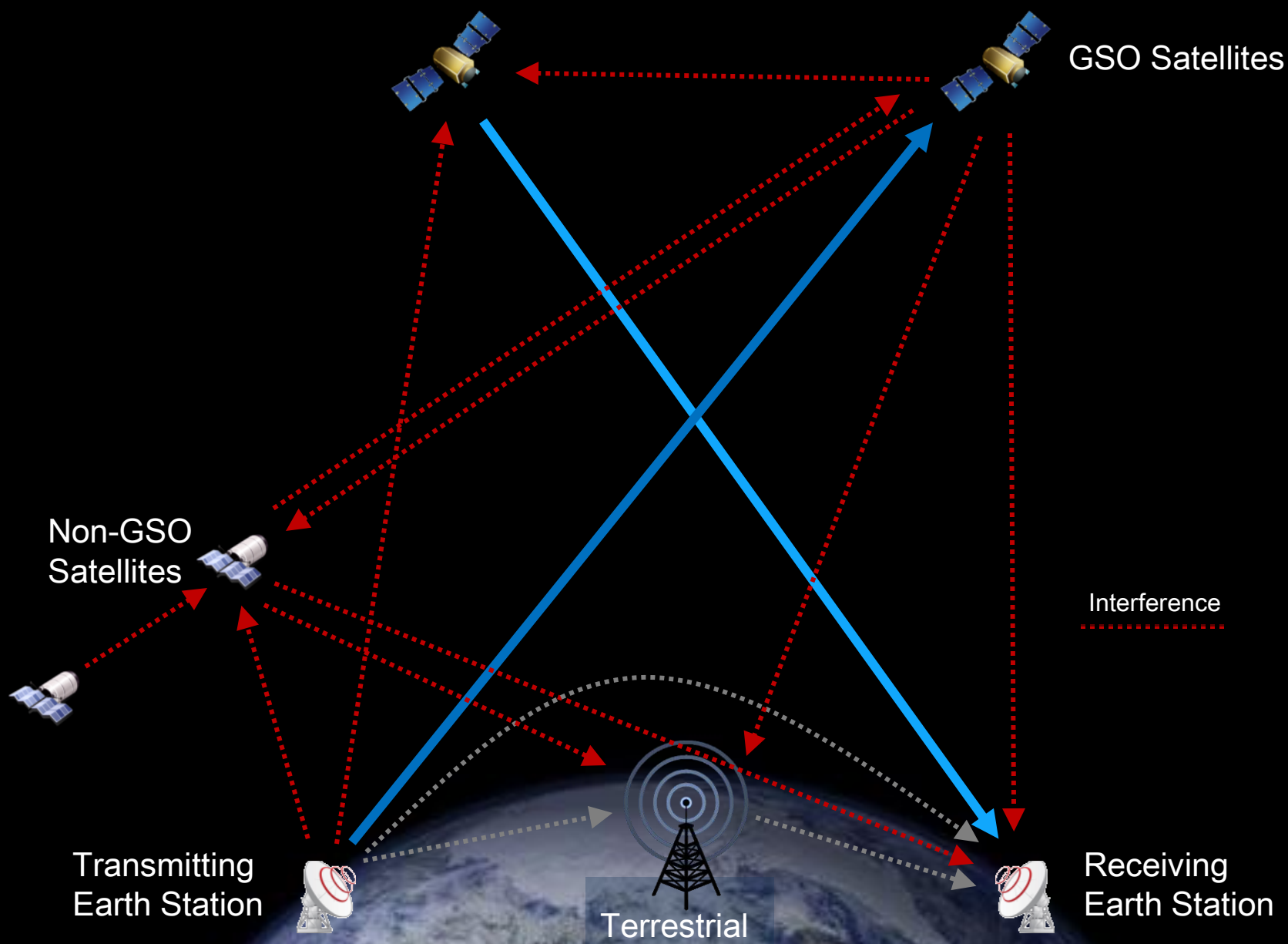


Non-planned Procedures (Articles 9 & 11)



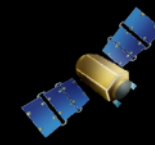
REQUEST FOR COORDINATION

- Section II of Article 9
- 6 to 24 months of API date of receipt (Nos. 9.1 & 9.5D)
- Determines priority (No. 8.3)
- Mutual effort to overcome difficulties (No. 9.53)
- Equal rights, no permanent priority (Res 2)
- Purpose: To effect coordination with administrations (No. 9.53)



Incoming network

(Network requesting coordination)



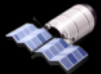
GSO Satellites

9.13
9.21/B

9.7
Ap30#7.1
Ap30A#7.1
9.21/A

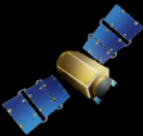
9.11
9.14
9.21/C

Non-GSO Satellites



Terrestrial

GSO Satellites



Incoming network

(Network requesting coordination)

Non-GSO Satellites



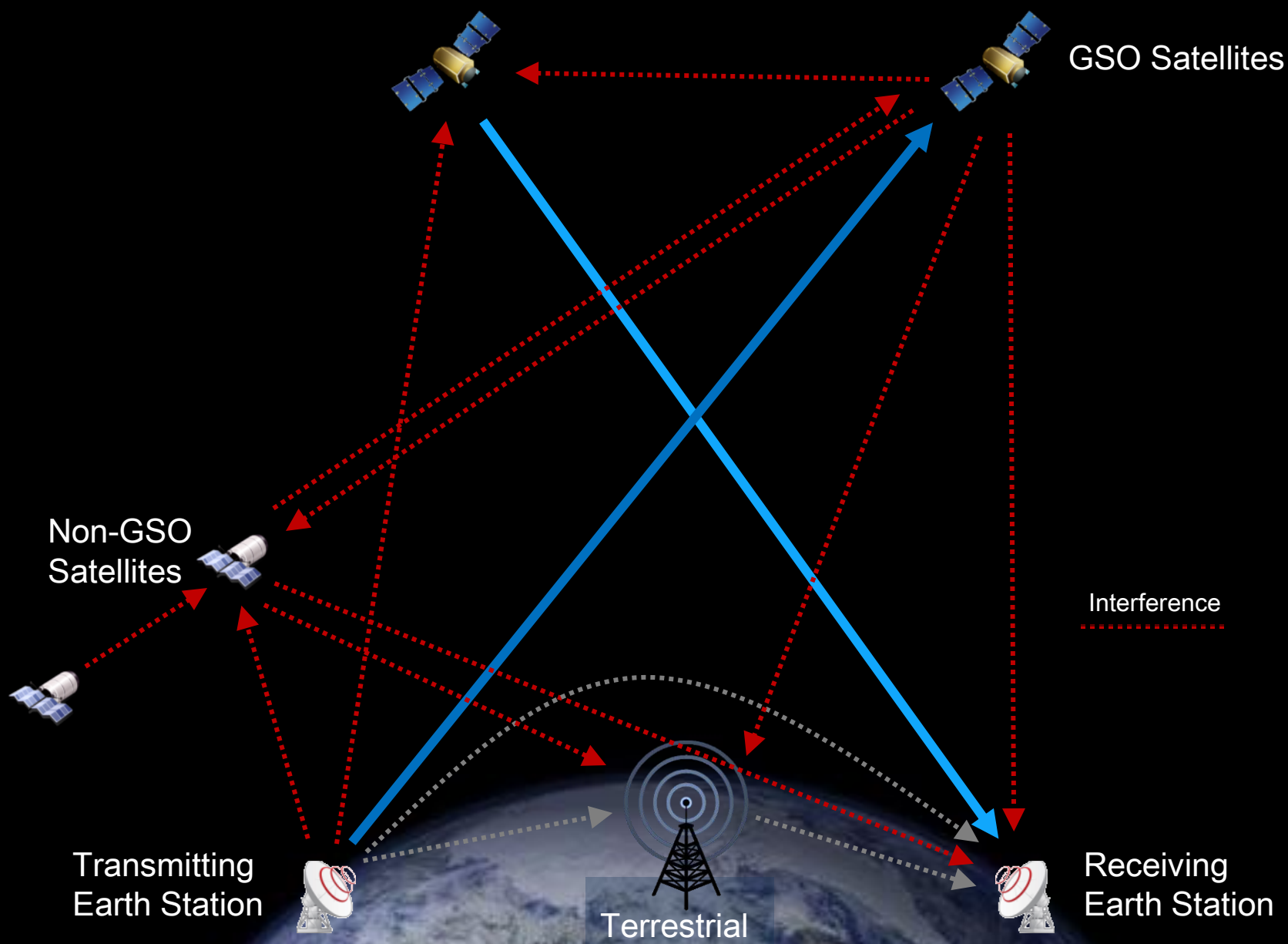
9.12A
9.21/A

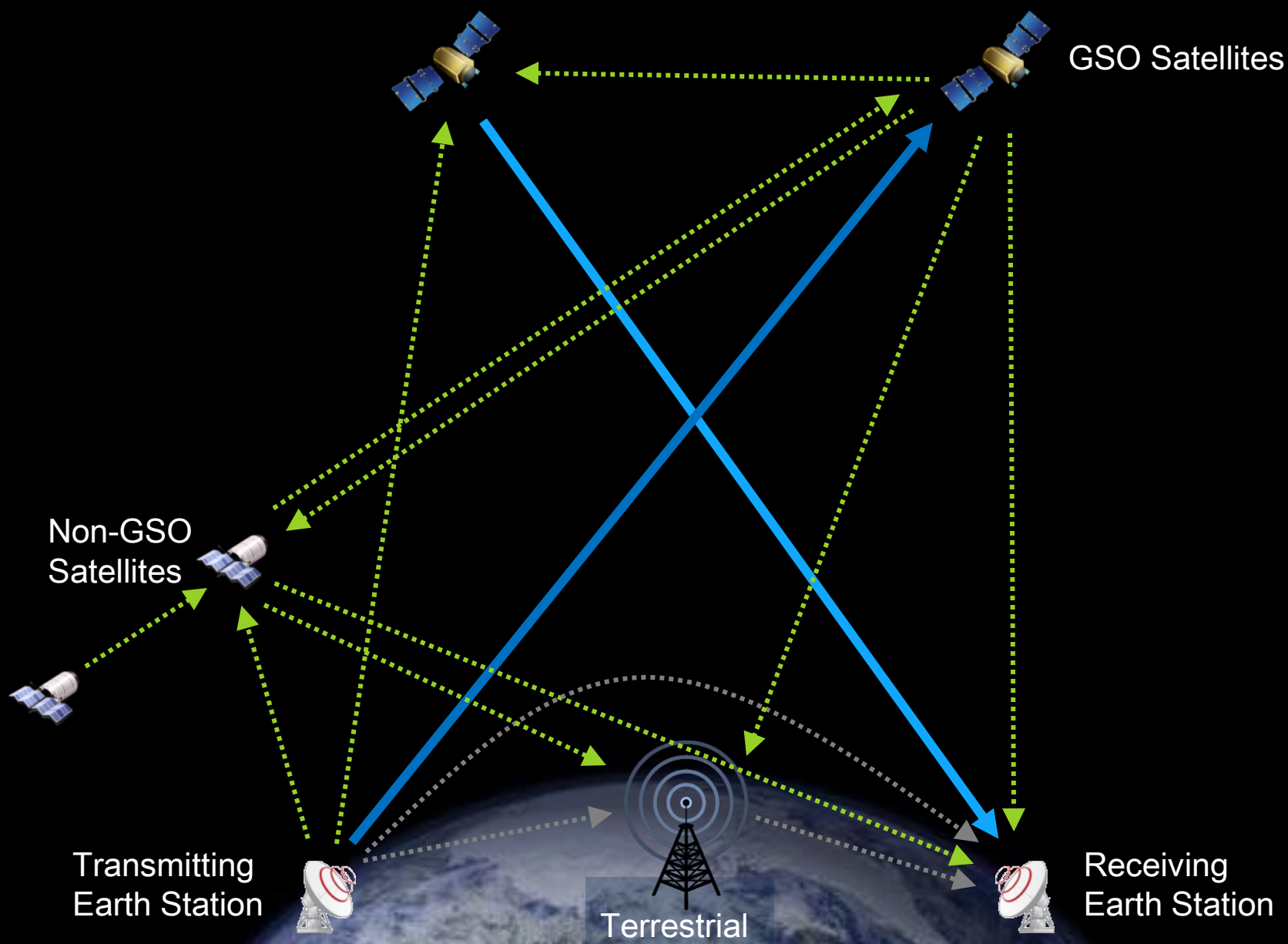
9.12
9.21/B

9.11
9.14
9.21/C



Terrestrial





Non-planned Procedures (Articles 9 & 11)

C

Coordination

Non-planned Procedures (Articles 9 & 11)

NOTIFICATION

- Sections I and II of Article 11
- Within API date of receipt + 7 years (No.11.44.1)
- Purpose: To record frequency assignments in MIFR for international recognition rights (No. 8.3)
- Rights: To be taken into account by other administrations to avoid harmful interference

N

Notification

Non-planned Procedures (Articles 9 & 11)

BRINGING INTO USE

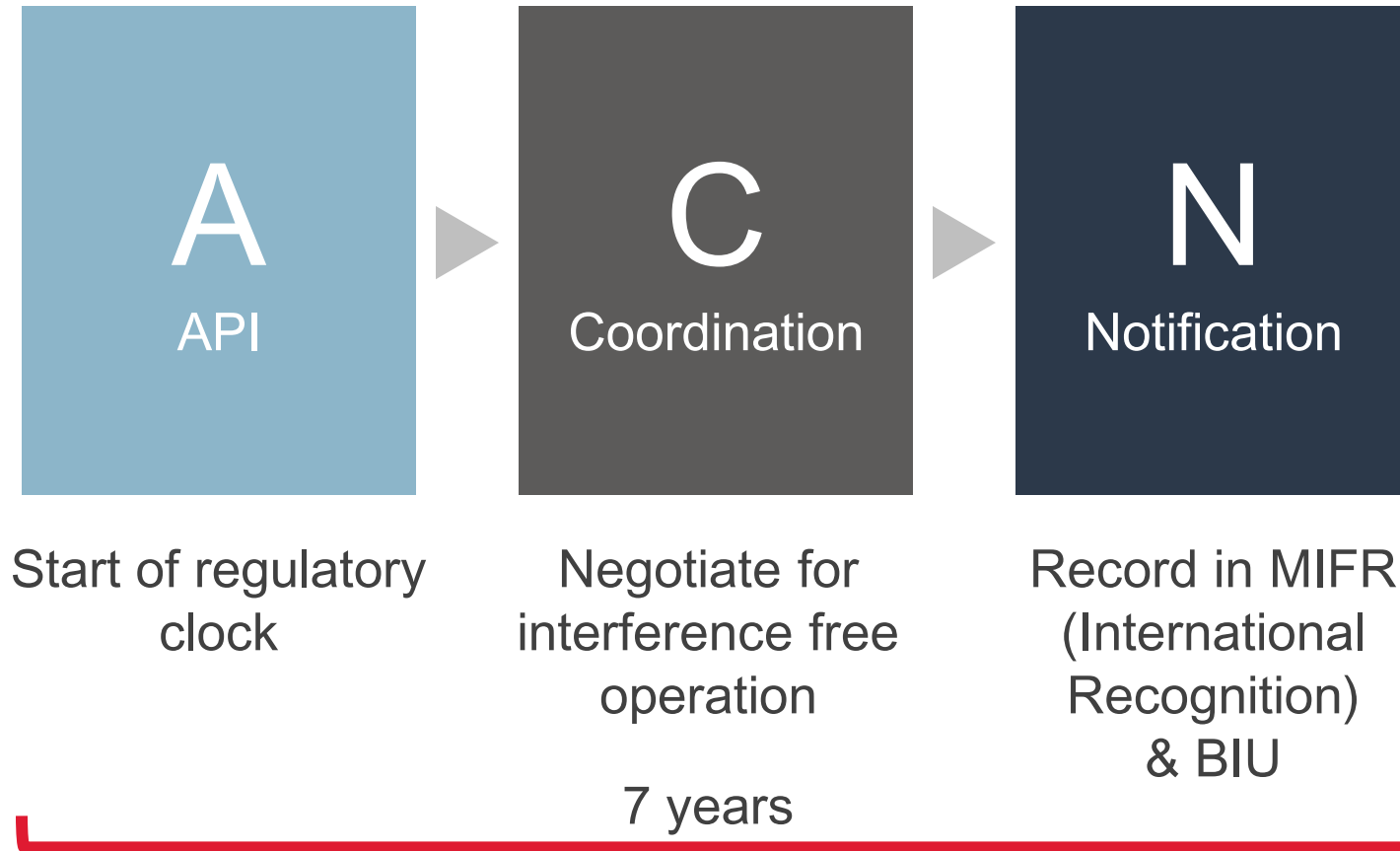
Within API date of receipt + 7 years
(No. 11.44)

For GSO (No. 11.44B)

- Maintained at orbital position continuously for 90 days
- Capability of transmitting/receiving
- Inform BR, 90 to 120 days of BIU



Non-planned Procedures (Articles 9 & 11)



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