



**EUROPEAN COMMISSION**  
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## **Frequency issues and preparation of WRC2011 from the perspectives of the Galileo program**

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Presentation to the Radio Spectrum Policy Group – 4 June 2008



# **Frequency issues and preparation of WRC2011 from the perspectives of the Galileo program**

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# Content

- 1. Status on the European GNSS programmes**
- 2. Main challenges on frequency issues**
- 3. Objectives for the WRC 2011**





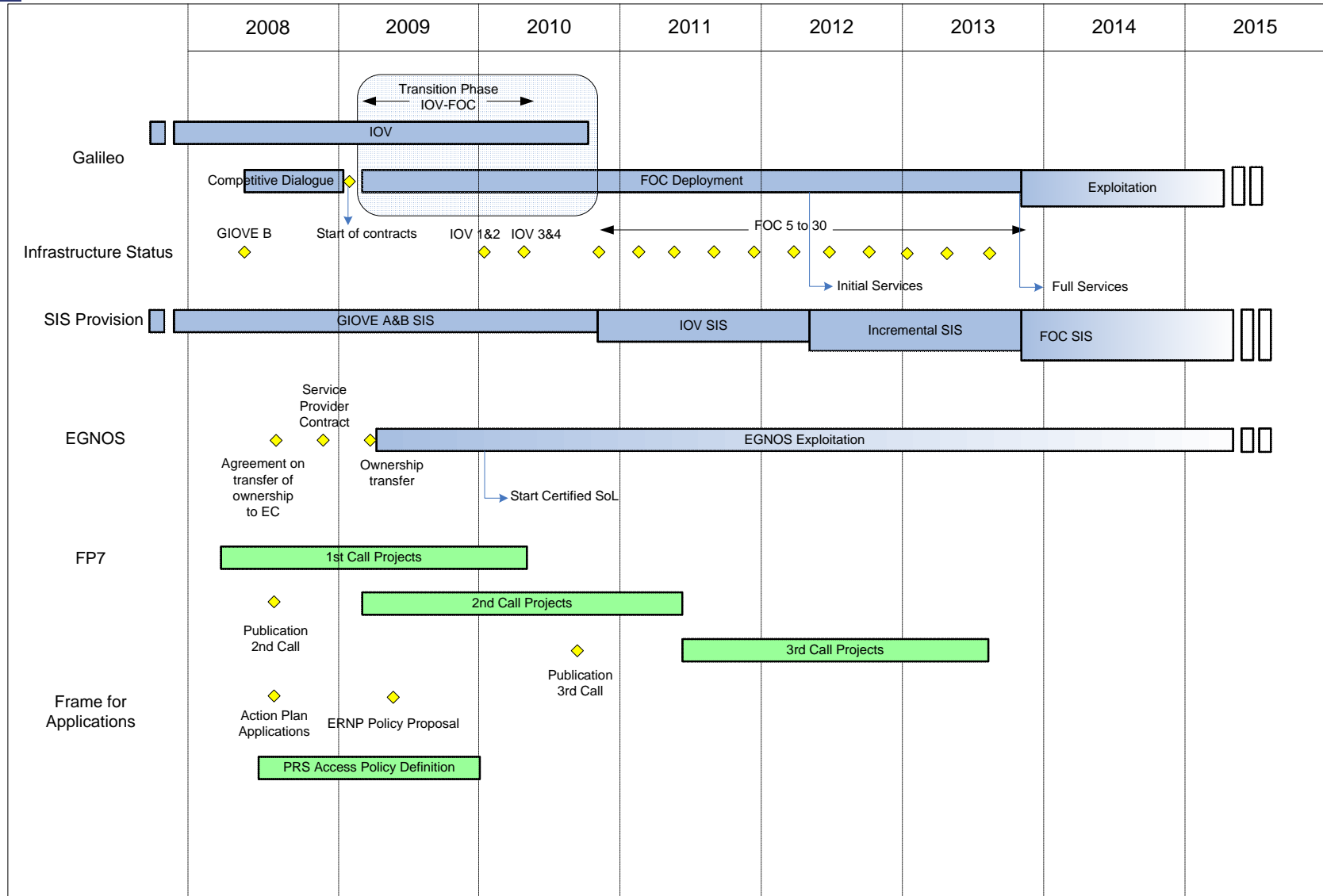
# European GNSS programmes

- **2007** : the year of major restructuring of the European GNSS programmes
  - **Re-profiling of the Galileo programme proposed by COM**
    - Galileo infrastructure to be fully taken over by public sector
    - Galileo to be operational in 2013, preceded by EGNOS in 2009
    - Integrated decision on the European GNSS programmes
  
- **2008** : the programmes start on the new basis:
  - **Full financing from public sector, single financing path**
  - **Clear separation of roles spelled out in a GNSS Regulation**
    - **Council and EP: Supervision**
    - **EC: Program Manager (“Maître d’ouvrage”) assisted by a European GNSS Committee**
    - **ESA: Procurement agent and prime contractor**
  - **Deployment contracts will soon be launched**





# European GNSS schedule





# Main challenges on frequency issues

- **Regulatory issues:**
  - **Maintain appropriate regulatory framework to protect RNSS frequencies (CEPT, ITU, WRC)**
  - **Prepare the ground for future system evolutions:**
    - **two WRC cycles required for new allocations**
    - **even longer to plan/evolve global satellite systems**
- **National issues /EU:**
  - **Keep good cooperation with national frequency administrations**
  - **Ensure proper filings resource management and renewals**
  - **Detect / mitigate interference**
- **Other RNSS operators/bilateral – multilateral coordination**
  - **Four planned GNSS and several regional systems**
  - **Limited spectrum available (26 filed systems in E5/L5)**





# The Frequency Regulatory Issues

- **WRC-11**
  - **Agenda items 1.4 and 1.18 (next slide)**
- **Resolutions 609 and 610 (WRC-03)**
  - **Verify that RNSS emissions in 1164-1215MHz protect ARNS**
  - **Establish bilateral coordination for system compatibility**
- **ITU**
  - **Developing RNSS Recommendations**
  - **Radar and RNSS compatibility in 1215-1300MHz**
- **CEPT**
  - **GNSS repeaters / pseudolites**
  - **CGC out of band emissions (above/below L1)**
- **Plus TT&C coordination, filings management, ETSI ENs, liaison with RAS, RSPG - public use of spectrum.....**





## WRC-2011

### Main objectives:

- **AI 1.4 – concerns the potential AM(R)S C-band allocations**
  - **5000 – 5010 and 5010 - 5030 MHz**
    - **Threatens existing critical Galileo uplinks**
    - **Bands key for future enhanced Galileo services**
    - **NO AM(R)S ALLOCATION unless proved compatible**
  
- **AI 1.18 – global RDSS allocation at 2.5GHz**
  - **Co-frequency with MSS 2483.7 – 2500MHz**
  - **Proposed by COM at WRC-07 and well supported**
  - **Make the existing regional RDSS allocations global**
  - **Useful mobile/RNSS synergies to improve performance**
  - **MSS system Globalstar is supportive**





## Summary

- **Galileo now has a secure financial base**
  - **Program managed by EC and European GNSS Committee**
  - **ESA prime contractor and procurement agent**
  - **Council and European Parliament supervision**
- **EGNOS operation in 2009**
- **Galileo full operation in 2013**
- **The are many regulatory challenges ahead**
- **Galileo needs continued support from European regulators to achieve beneficial WRC objectives**

