

Orbital Slots and Spectrum Use in an Era of Interference

Brussels-Belgium (9th October-2014)

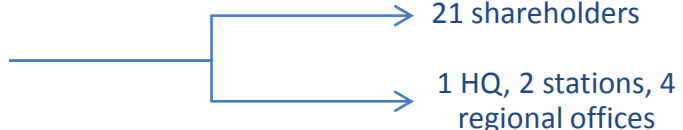



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Yasir Hassan
Director, Transmission Operations

Arabsat in glance

- an IGO established in 1976 
- 6 orbital locations, 6 in-orbit satellites
- 2 TV Hotspots - 500+ FTA TV Channels - 85+ HDTV Channels - 2 PAY-TV Platforms 
- full spectrum of bands & satellite services

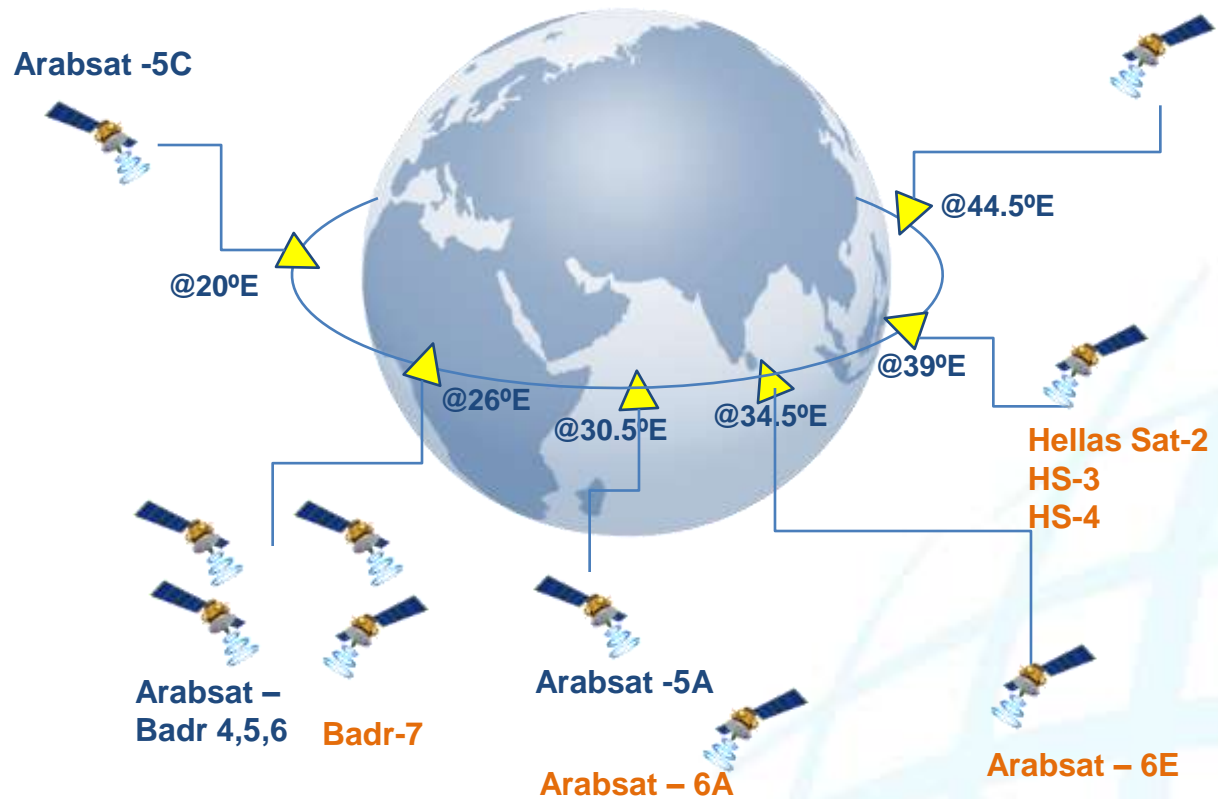


- 6th Among global satellite operators



New satellites & Resources

- Badr-7 satellite @26° contract was signed to be launched in Q3 2015.



Overview/ Satellite Interference

- **Satellite Radio Frequency Interference threatens space Sustainability**
- **There are two types of Radio Frequency Interference; i.e. Intentional and unintentional.**
- **unintentional interferences are caused by Human Error, bad Installation, lack of training..etc. Which represent high percentage of the total interference incidents recorded on ARABSAT Satellites.**
- **Unintentional interference can be mitigated through Certifications and other Industry initiatives such as CID (Carrier ID), GVF (Global VSAT Forum and SDA (Space Data Association).**
- **Intentional Interference (Deliberate Jamming) highly dependant upon the satellite operator and their individual Service Region**
- **Although the Intentional Interference does not represent high percentage of the total interference incidents but it causes significant impacts on the business**



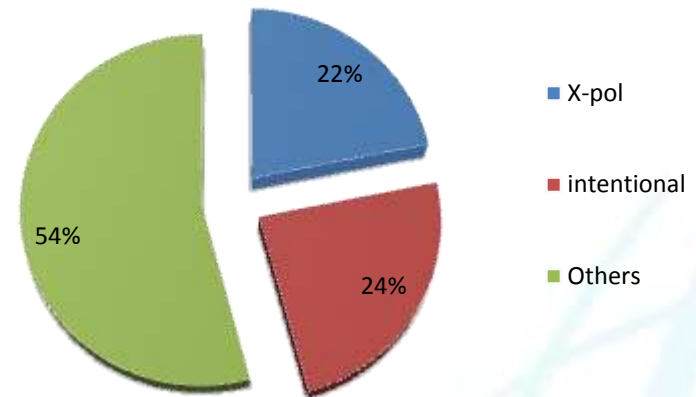
What is Intentional Interference?

- **Technically, emitting interfering signal over authorized Transmission operating on Satellite Space capacity to prevent concerned users receiving services on this Transmission.**
- **Harmful Interference could be due to Political or Economical ,,etc factors.**
- **Most Harmful interferences are targeting Broadcasting sector to prevent certain media or content reaching the viewers.**
- **Deliberate interference in most of the cases targets news and national TV channels.**

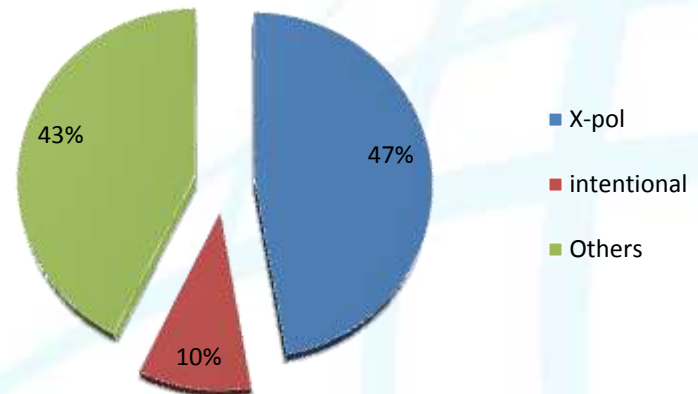
International Interference Statistics

- Harmful Interference incidents reached its peak in 2012 In conjunction with the Arab Spring and political situation in the MENA Region.

Interference Incidents in 2012



Interference Incidents in 2013



Where we are?

- **Recent Industry Meetings with ARABSAT Participation and Contribution**
 - **CABSAT (Dubai) 12th March-2013** Dedicated session to Intentional Interference with participation of ITU, GVF and IRG (Interference Reductions Group).
 - **ITU (Geneva) 10th June 2013** where IRG/GVF helped present a day forum to National Entities on this subject. The workshop had given fair awareness and the Statistics given by Satellite Operators has opened new chapter in interference mitigation at ITU Level.
 - **ASBU/Arab Satellite Broadcasting Union (Tunis) 6th October 2013:** Dedicated event to Satellite Interference sponsored by ARABSAT and ASBU with participation of WBU –ISOG (World Broadcasting Unions- International Satellite Operations Group), ITU, IRG , Satellite Operators and Broadcasters.
 - **MilSatCom (Abu Dhabi) 6th May 2014,** Awareness sessions presented by IRG to reflect the progress made so far on interference Mitigation



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Mitigations/ ASBU Action Plan

- ❖ **The Action Plan is adopted and approved by ITU, WBU, African, American and European Broadcasting Unions. In addition to Broadcasters.**
- ❖ **Operators in this Region and other Regions to establish a public awareness campaign through different Mass Media that intentional interference will not prevent the Media message to be delivered.**
- ❖ **Operators in this region and other regions to establish short and medium training Plans for all broadcasters to ensure the best practice in operation and maintenance of the satellite uplinks systems with the objective of reducing significantly the number of interference incidents.**

Mitigations/ ASBU Action Plan

- ❖ **Operators to request members and all users in the Region to implement carrier ID in line with WBU-ISOG resolutions and to record the progress of this change. All Broadcasting Unions and members to engage with national regulators to make CID a requirement.**
- ❖ **Regulatory and Political Actions, where Broadcasters to build relationships with their regulators/ITU recognized Administrations in relation to raising awareness of the issue of interference.**

Way Forward and Recommendation

- **The practice of deliberate interference with broadcast signals is a violation of rules of the International Telecommunication Union (ITU). Therefore, to enable ITU taking a solid actions. There shall be joint efforts from Satellite Operators, System Manufacturers for standardization of Geo-localization to speed up escalation process and give confidence on the report.**
- **Administrators/Regulators in different countries shall have their own Geo-localization facility to confirm the Report received from Satellite operators concerning Intentional jamming. ITU to take solid actions including but not limited to stopping the filling of the country involved.**



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Thank You