

# Satellite Services and Interference-The current Situation

ITU-Geneva (10<sup>th</sup> June-2013)



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Yasir Hassan

Director, Transmission Operations

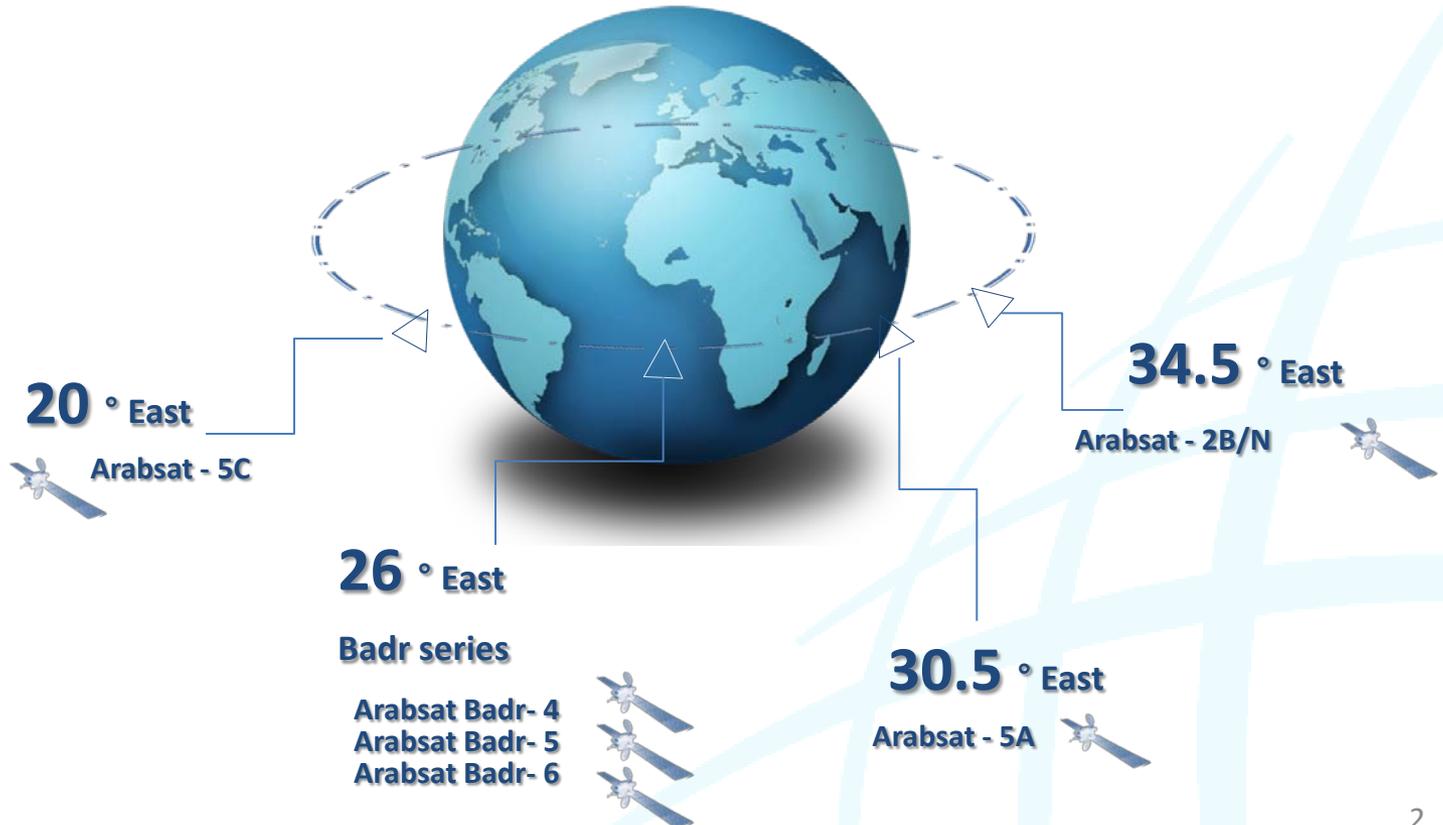
## Arabsat in a glance

an IGO established in 1976

21 shareholders

1 HQ, 2 stations, 4 regional offices

4 orbital locations, 6 in-orbit satellites



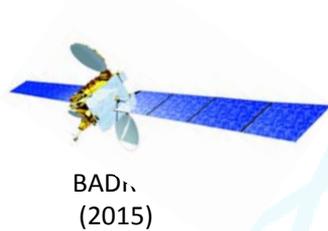
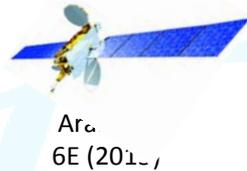
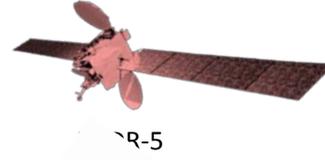
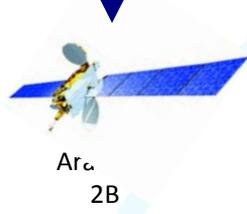
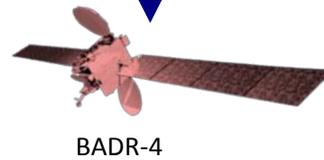
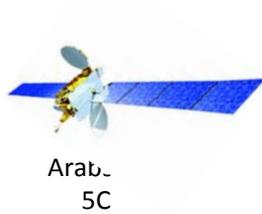
# RF Interference Targets DTH

20°E

26°E  
BADR  
بدر

30.5°E

34.5°E



Today, ARABSAT operates 6 satellites, at its 4 orbital positions.

Complemented by 2 additional satellites, in 2014 and 2015.

This will provide in-Orbit Back-up & major Growth Capacity for our Voice & Data customers



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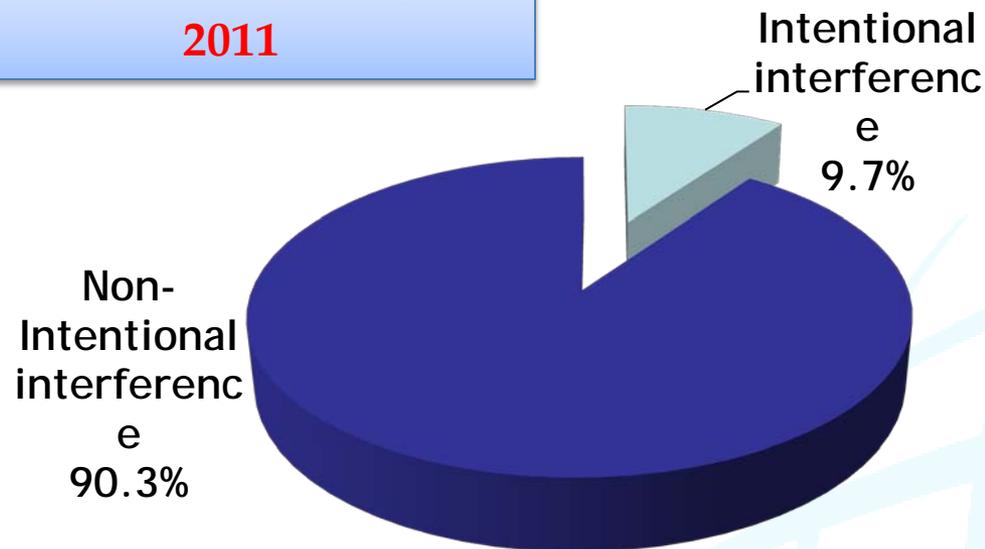
## What is Harmful Interference?

- **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. News channels are most targeted by such interference**
- **Jammers, usually uses different types of Interfering carriers , the most common is the CW Carrier.**

## Why Harmful Interference incidents increased?

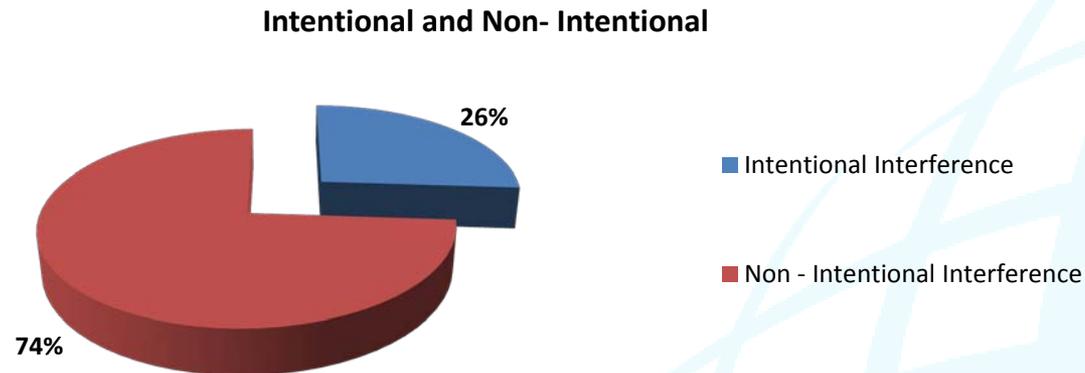
- Harmful Interference incidents had increased in 2011 In conjunction with the Arab Spring and political situation in the MENA Region.

### Interference Events in 2011



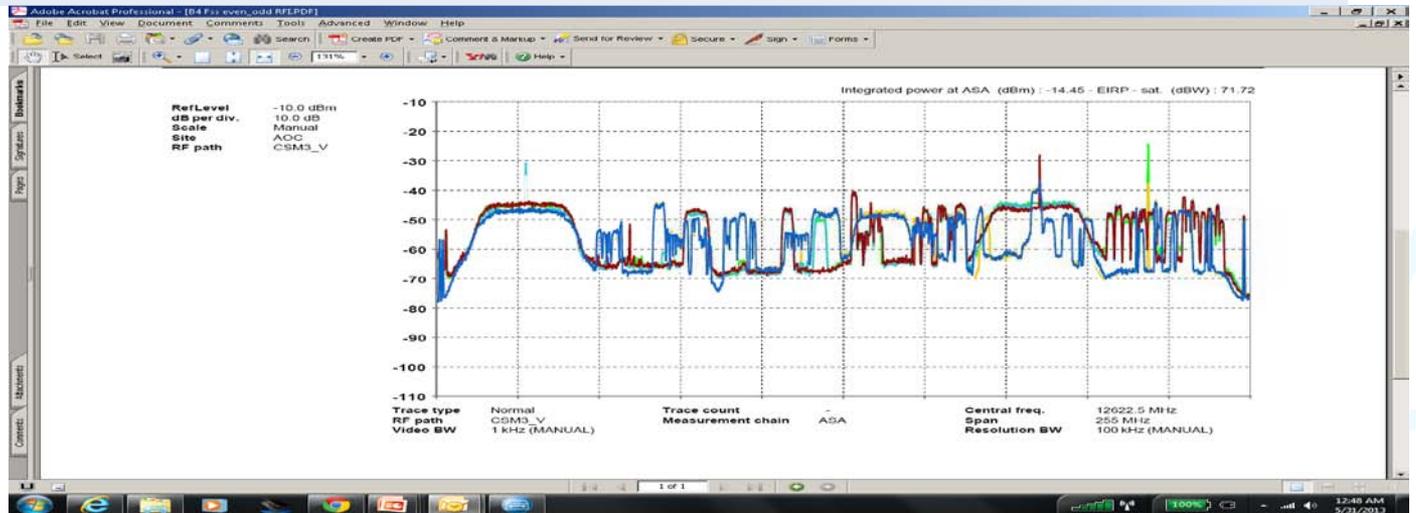
## Harmful Interference on ARABSAT Fleet

- Deliberate jamming incidents have dramatically increased in 2012 which indeed put a threat on services over Satellites, ARABSAT Operations Center/AOC had recorded 290 Incidents in 2012
- ARABSAT has faced several jamming incidents from geographical places in countries, as ascertained by the geo-location of Libya, Syria, Ethiopia and Eretria during 2011-2012

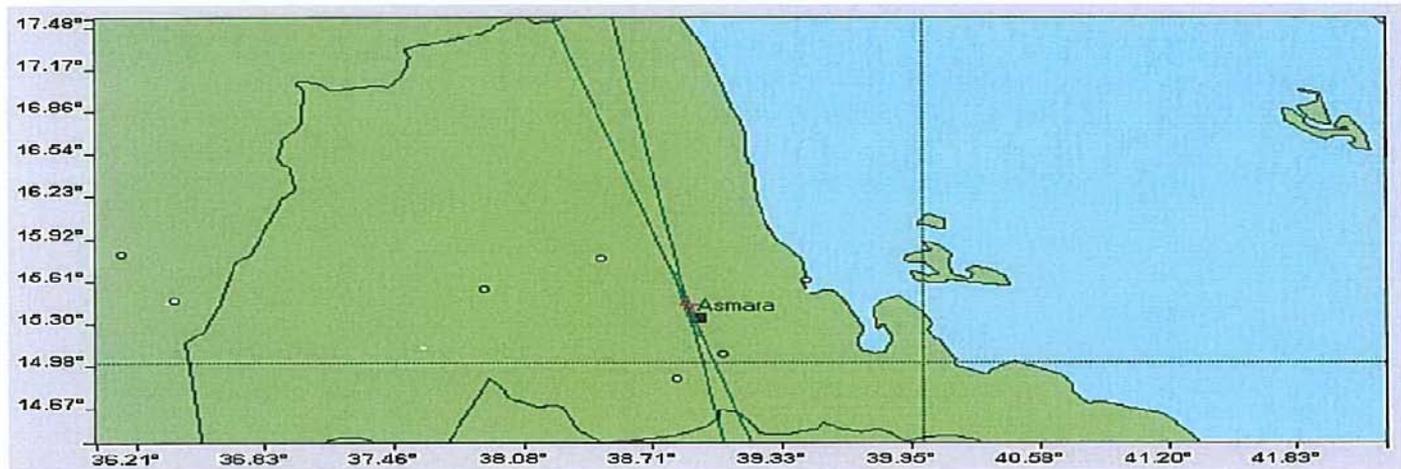


## Examples of Interferences

### Analyzing, Detection of the Harmful Interference and then Geo-localization using state of the ART Ground Systems



#### LOCATION MAP DISPLAY :



## Escalation By Satellite Operators

- Based on the Technical Report of the Geo-localization System, ARABSAT informs the affected party and the concerned entity where the RF Interference is emitted.
- Then, the case will be escalated to the Regulatory , ARABSAT notifies Saudi Regulatory who will in -turn informs the ITU.
- Escalation to ITU and accordingly existing actions by ITU do not help in stopping Harmful 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, there must be a solid actions by ITU such as, but not limited, to suspension of filing of the country if it is proved that the Harmful interference is emitted from its territories without taking actions to stop the interference in certain duration.**
- **ITU shall have its own Geo-localization facility to confirm the Report received from Satellite operators concerning International jamming.**
- **Confirming the Geo-localization Report by ITU will strengthen its position in conveying the message to the concerned county with the Harmful Interference. This will be the baseline for any escalation to be taken by ITU.**



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**Thank You**