

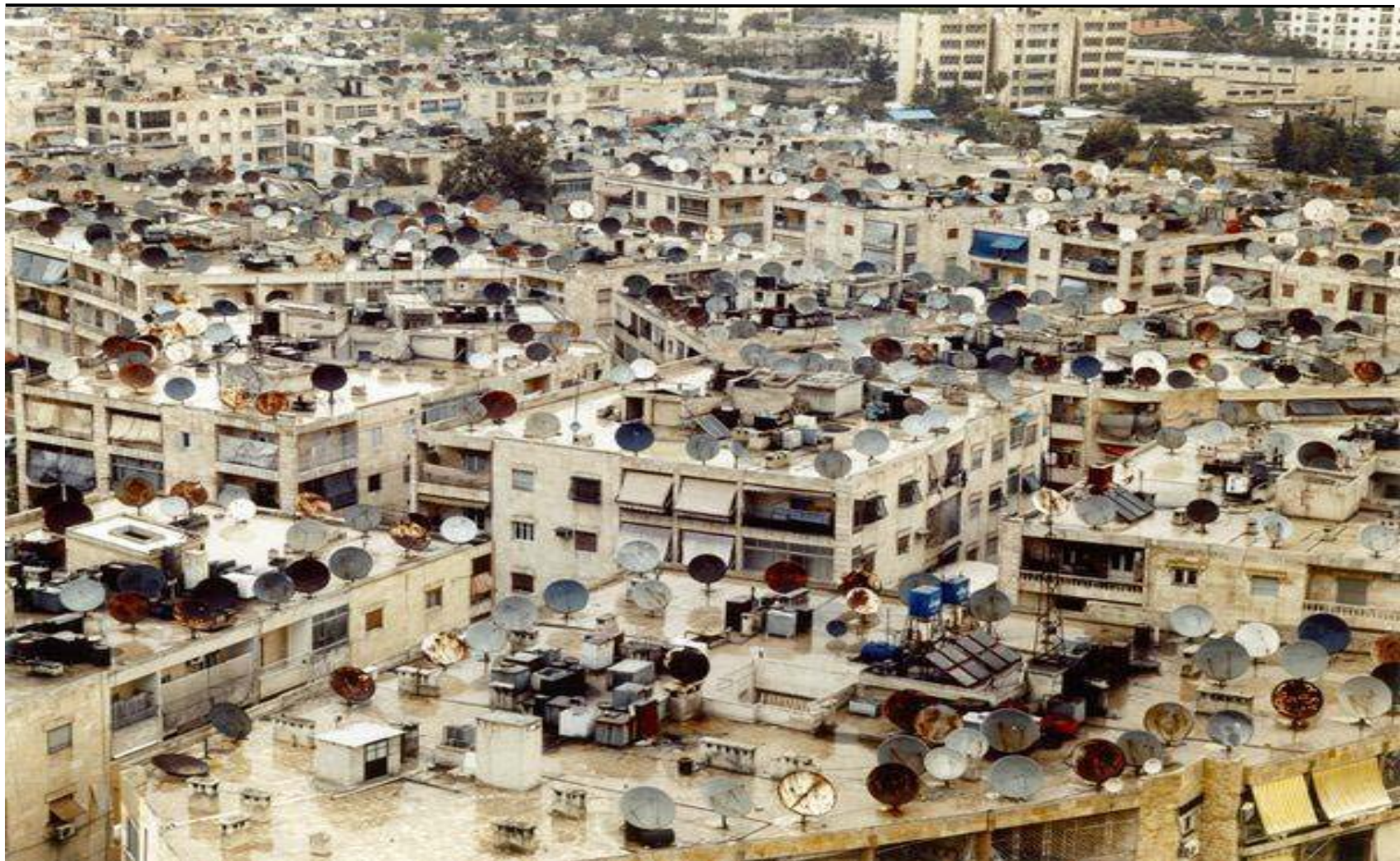
Carrier id

A Satellite Operator's Perspective

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Roland Smith, SES, General Manager, Customer Service Operations

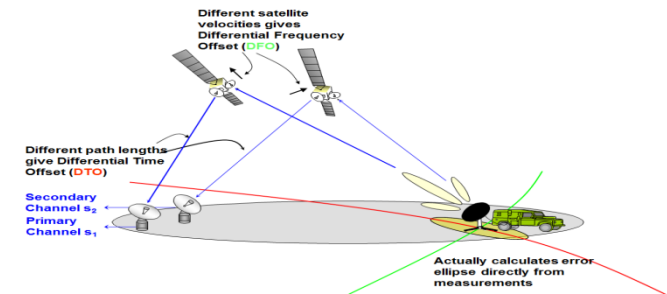
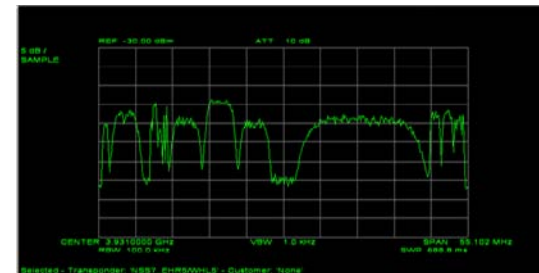
A Shared RF Environment



Managing Interference

▲ Many Tools at our disposal:

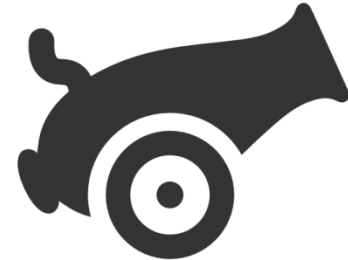
- Experienced Operational staff
- Global Spectrum Monitoring Systems
- Geolocation Systems



Carrier id

▲ One More Tool in the Arsenal

- No complete solution



▲ The target:

- Every carrier uplinked to every satellite in every geographical location carries a unique identifier that can be used to help identify its source, should it be the cause of interference

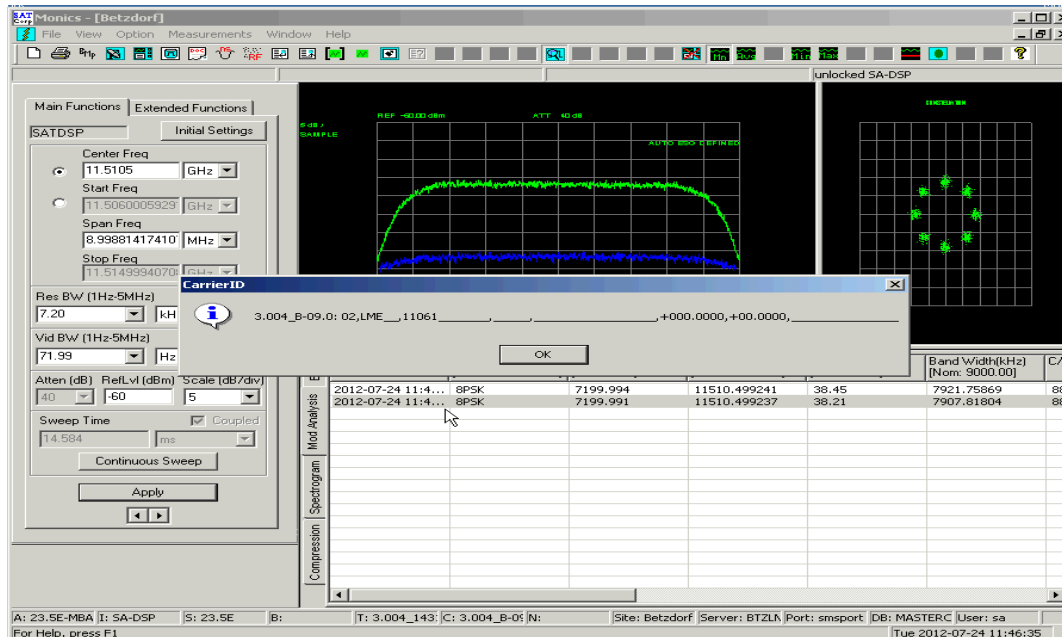




Major Milestone

▲ Proof of concept - London Olympics 2012

- SNGs doing OU uplinks for the Olympics equipped for Cxr_id (NIT solution)
- SNG Operators enabled Cxr_id
- Satellite Operators able to decode Cxr_id using standard monitoring systems
- Satellite Operators kept their own databases of users Cxr_ids



Will it help?

▲ If carrier id helps in 10% of cases, it will be a success

- Rogue SNGs
- ASI
- VSAT Networks



■ Cxr_id no help

■ Cxr_id helps

What needs to be done?

- ▲ **Cxr_id standard feature on all satellite modems**
- ▲ **All operators of modems enable Cxr_id**
- ▲ **Decoding devices incorporated into all standard carrier monitoring systems**
- ▲ **Neutral organisation to host centralised database**
- ▲ **All satellite operators keep their own database of Cxr_ids of uplinks using their satellites**
- ▲ **Commercial model that ensures no barrier to the technology being used by equipment manufactures and operators**



A Team Effort

Thank you!

