

INTELSAT|One



All you need is ONE.

Intelsat Update

Rhys Morgan

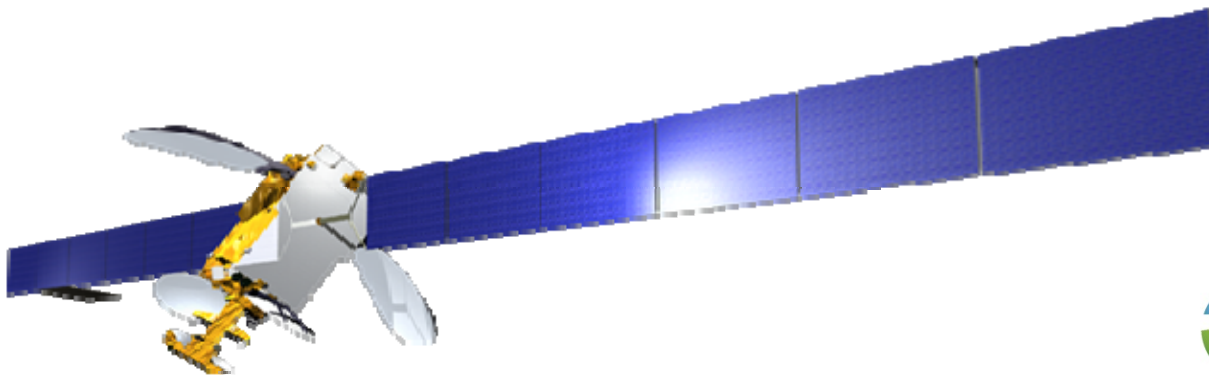
Managing Sales Director, EME Region

WBU-ISOG Geneva

November, 2012

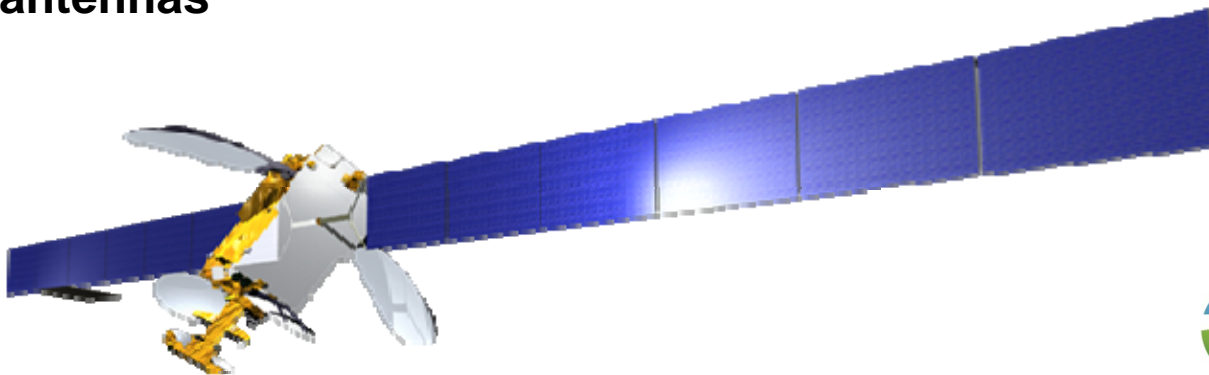
Agenda

- **Bandwidth Optimization**
 - on Satellite
 - on Fiber
 - in our Teleports
 - on new satellite platforms
- **Hurricane Sandy**
 - Lessons Learned



Bandwidth Optimisation on Satellite

- **DVB-S2:**
 - Default modulation for new service launches
 - Throughput improvement of 30+% over DVB-S
- **High order modulation:**
 - Newtec's CCT and Novelsat's NS-3 both tested and supported
 - First product offering leveraging high order modulation developed for Europe – Africa programming backhaul, pricing is competitive vs. managed fiber services offering comparable reliability
 - Generally works better for larger bandwidths and between larger antennas



Bandwidth Optimisation on Fiber

- **IntelsatOne IP-MPLS network launched in 2010**
 - **Connects to IntelsatOne Teleports and city PoPs in the US and Europe**
 - **IP-MPLS enables multiple applications to share the same bandwidth – Intelsat’s full portfolio of services available via a single edge-node**
- **Fiber alliances implemented with BT and PCCW IP-MPLS networks to extend reach to Asia & Africa and to additional cities in the US and Europe**

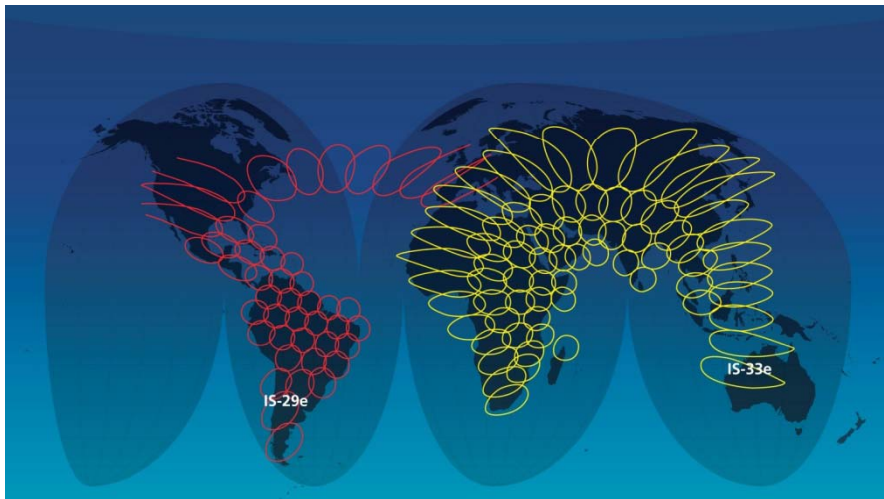


Bandwidth Optimisation at Teleports



- **IntelsatOne Fiber Network optimized to facilitate access to IntelsatOne Teleports**
- **IntelsatOne Teleports developing as media hubs to facilitate connectivity between satellites and terrestrial networks**
- **Customers on the IntelsatOne Fiber Network can easily access any IntelsatOne Teleport**
- **“Bandwidth Optimization” by sharing teleport infrastructure and platforms between multiple customers**

Coming Soon: Intelsat Epic^{NG}



Illustrative Design

- **Combines wide and spot beams and C/Ku/Ka bands on a single satellite**
- **Uplink in any beam and downlink in any beam**
- **Compatibility with legacy ground infrastructure**
- **Support for high throughput applications**
- **Optimized for IP - Integrated with IntelsatOne terrestrial network**

Hurricane Sandy Lessons Learned

- **Storms are getting bigger**
 - **Having a DR plan is a MUST!**
 - **Location of DR facility needs to be further away from HQ**
 - **Need to plan for multiple spontaneous outages**
 - **Need for hybrid satellite/fiber DR**
- **In a natural disaster situation, Satellite is King!**
 - **Most TV networks stayed on air because of satellite**
 - **Satellite used to back-up failed fiber networks and minimize outage time**

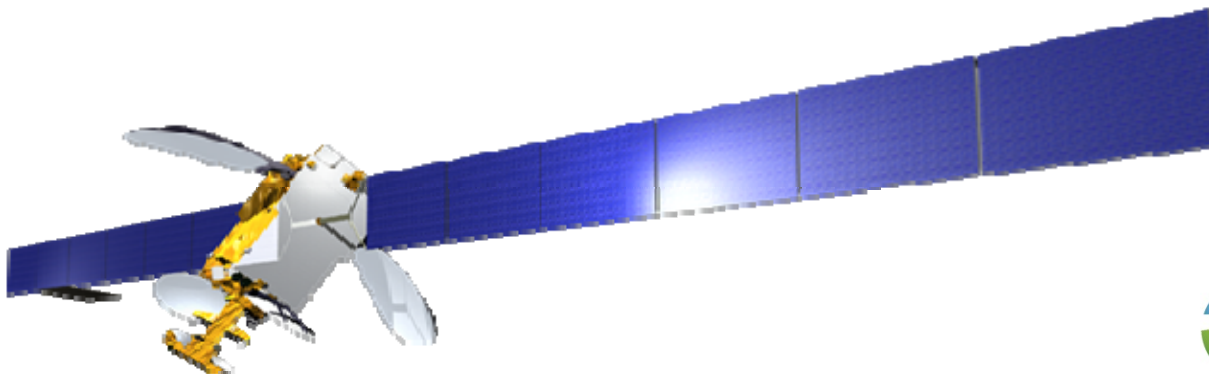


More than just bandwidth optimization- The Intelsat Network during Hurricane Sandy

- **Intelsat GSC and VOC supported more than 400 occasional-use feeds to allow TV stations to transmit coverage of the storm**
- **Zero outages on our media fiber network even when three transatlantic paths failed simultaneously and two fiber PoPs in New York lost commercial power**
- **Pre-planned and emergency DR solutions implemented for multiple media customers leveraging IntelsatOne fiber connectivity to redirect traffic to our teleports in Atlanta, Napa and Riverside that were outside of the storm's coverage**
- **Restored a DTH service on Galaxy-19 after the customer's third-party fiber connectivity in New York failed utilizing satellite to implement a back-up backhaul solution – down time for the DTH service was minutes instead of hours**

Conclusion

- **Bandwidth Optimisation**
 - Its important to our customers – and us!
 - It needs to be across the board or savings are lost.
 - All frequency bands can benefit from this.



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THANKS FOR YOUR TIME

Rhys Morgan

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