# SPACECOM A Bridge to the Future. Today

# Advanced Satcom Solutions for MNOs

## Spacecom – End-to End Satellite Provider

- Spacecom is a leading global fixed-satellite operator and satellite service provider, offering tailored end-to-end communication solutions since 1996
- Operates the advanced AMOS satellite fleet, providing innovative broadcast and broadband satellite services with European, Pan-African, Middle Eastern and Asian coverage and cross region connectivity.
- Vast experience in designing, operating and managing satellite services.
- Spacecom's in-house team of experts, together with its wide network of partners, allows the company to provide specific or turnkey solutions as well as tailored packages.



SPACESOM

#### Spacecom Multi-Orbital Future

- We believe the future is multi-orbital and we are working towards offering multi-orbit services
- Spacecom has already partnered with a leading LEO constellation
- Successfully concluded live testing campaign LEO demonstration satellites
- Open for partnering with more satcom operators (NGSO and GEO)
- Our vision is to deliver secure orbit agnostic services to Telcos and MNOs

## **AMOS 17 Designed for Africa**

#### **C-BAND HIGH THROUGHPUT (HTS)**

12 High Capacity Service Beams1-2+ Gbps per beam

#### **KU-BAND REGIONAL BEAMS**

18 X 72MHz TXs Best for Data Network and TV

**KA-BAND STEERABLE HIGH THROUGHPUT** 

4 High Performance Steerable Beams 1+ GHz per beam, Commercial and MIL



#### **FLEXIBLE SERVICE AND OPERATION**



CROSS CONNECT BETWEEN ALL BEAMS AND ALL BANDS

Full non-blocking switching between all ports OPTIMAL SOLUTION MULTI ARCHITECTURE FOR ANY SERVICE FREQUENCY AND APPLICATION

Unlike other HTS systems where one must be routed via pre-fixed international hubs Pick and choose for your specific application



## **Typical Use Cases for Capacity and Connectivity Anywhere**

 Guaranteed and resilient services that allow expanding network coverage and costeffectively improving service quality Rural Connectivity - 2G / 3G / 4G / 5G WiFi Hot Spots and IoT



Rural Cellular Private LTE





**Proprietary and Confidential** 



Community and Governmental Telco Services



#### **Satellite as a Service** Provide Satellite Connectivity as Required





Planning & Design



Implementation, Support and Maintenance Cost Effective Solution

Will provide bandwidth as per solution requirement

Not restricted to any provider – will contract for LEO or GEO bandwidth All high and low level network design

Guaranteed of the optimal solution to fit the requirement

Solution to be implemented as per design 24/7 Support and Maintenance KPI managed contract Ensure optimal performance of all connectivity No CAPEX requirement Full OPEX model



#### **Full Turnkey Service** Taking the hassle out of Satellite Connectivity



Planning & Design

- Satellite high and low level network planning and design
- Satellite provider selection according to use case
- Vendor agnostic design
- Detailed feasibility and ROI report per each design
- MNO to approve all designs before Implementation phase is started



Network Implementation Implementation, Optimization and Control

- Full implementation of approved design
- Spacecom PMO office
- Site leasing and permits
- Equipment Procurement
- Equipment warehousing, logistics and transport
- Sub-contractor management
- Installation & commissioning
- Detailed testing of installed solution against design
- Full documentation
- Project reporting as required by MNO

- 24/7 network monitoring
- Engineering staff from Spacecom
- Performance management
- Performance and Fault
  Management and Optimisation tools
- Tools to be integrated to MNO management tools
- On-going network solution optimization
- Dashboards and reports as per MNO requirements

Support and Maintenance

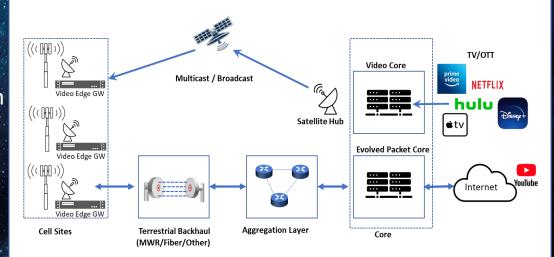
- 24/7 support by Spacecom
- 3rd party equipment, solutions responsibility
- Full integration to the MNO NOC systems and processes
- Maintenance tools and spare parts by Spacecom
- Proactive maintenance to be performed using AI
- Reports to be delivered by Spacecom as per MNO requirements



#### Satellite EDGE Connectivity Reducing Bandwidth Requirements

OTT via satellite benefits

- Fast deployment
- Location independent
- Multicast / Broadcast reducing terrestrial backhaul BW
- Utilizing the AMOS-17 satellite which provides high availability & high throughput over C-band
- Optionally back up for terrestrial backhaul



#### **Spacecom Value Proposition**

- Flexible business models to suit MNO goals CAPEX, OPEX or both
- Best-of-Class Satcom provider –using own satellites or best suited provider
- LEO ready vendor agnostic for bandwidth
- Tiered offering from plain capacity to full SaaS / Full Turnkey
- Purposely built for Rural
- Field proven solution



#### Spacecom Proposal

Put us to the test – Let us pilot a solution for Satellite as a Service or Full TurnKey Let us show you how we can quickly increase your 3G/4G/5G coverage and subscribers in the most cost effective way



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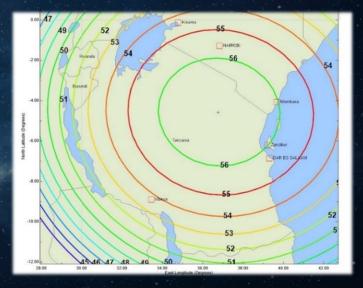
# THANK YOU!

# Additional Info



## **Country Beams – Benefits for MNOS**

- High throughput 3G/4G/5G ready
- Lowest rain fade Highest availability (C-Band!)
- High antenna elevation No LOS blocking
- Small size antennas and BUCs low cost
- Low power consumption terminals ideal for off-grid operation





#### **DIGITAL PAYLOAD** The first African Dedicated Digital Satellite

HIGHER SERVICE AVAILABILITY



EASY CUSTOMER ADAPTATION & EXPANSION INTERFERENCE SUPPRESSION LOWEST TCO UPLINKING

Control at signal level vs transponder level

Gain adjustment and ALC per carrier

Provision carriers w/out interfering with others on same transponder

Power and spectrum control per signal

Digital processing and scanning of signals Duplicate one UL to multiple beams to minimize UL investment



# **Cellular Backhaul Success Stories**



#### **Cellular Backhaul**

- 2<sup>nd</sup> largest operator in Angola
- ピ C-band (C03 beam)
- ⊻ 2G/3G/4G
- 🖄 iDirect



- 2<sup>nd</sup> largest operator in Senegal
- ど C-band (C11 beam)
- ピ 2G/3G/4G
- S Comtech Heights



## Cellular Backhaul, cont.

- Tier 1 operator in Madagascar
- **S** Over 200 remote sites
- 🖄 C-band
- ර 2G/3G and 3G/4G
- Backhaul solution by Spacecom



- S Tier 1 and 2<sup>nd</sup> largest operator in DR of Congo (11M users)
- ピ Ku and C-band
- **S** Rural RAN by NuRAN
- End to End BH solution by Spacecom

