

# SPACECOM

A Bridge to the Future. **Today**



# FACTS & FIGURES

**1993**  
Established

**1996**  
First Satellite Launch

**4**  
Active Satellites

**1000s**  
VSAT terminals

**Active**  
In 4 Continents

**Enabling Millions**  
To enjoy TV

**100s**  
TV channels

**End-to-End**  
Communication  
Solutions

# AMOS 3



# AMOS 3 (4 WEST)

## COVERAGE

Europe

Middle  
East

US East  
Coast

## BEAMS

Ku  
Fixed & Steerable

Ka  
Fixed & Steerable

## SERVICES

DTH

Video  
Contribution

VSAT

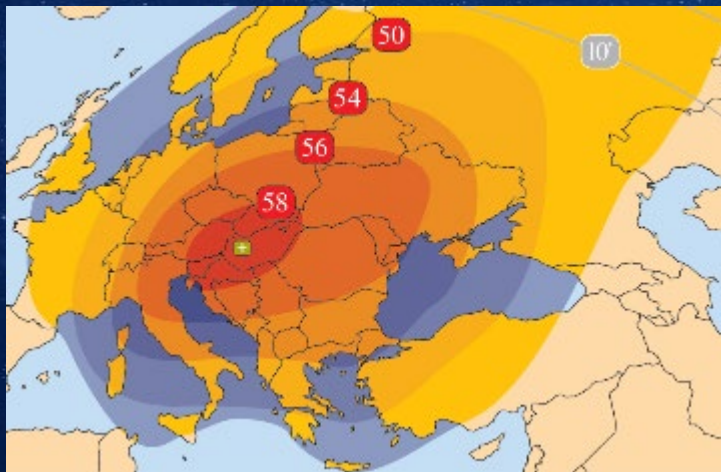
Broadband



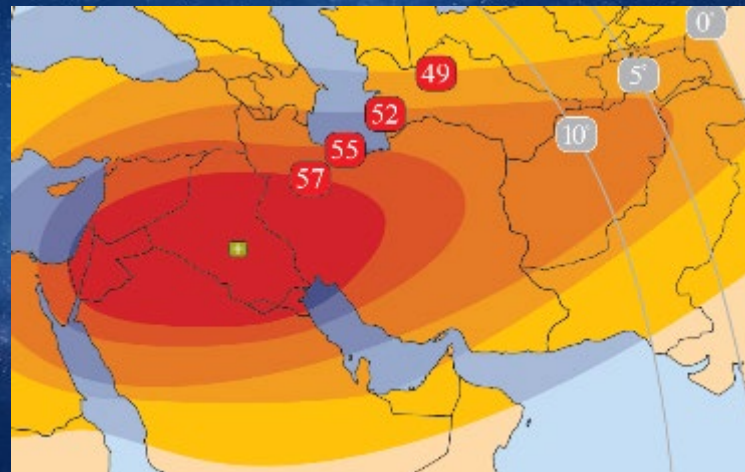
# AMOS 3 COVERAGE

72 MHz Transponder  
Standard KU-band

CEE Ku beam



ME Ku beam





# AMOS 4 (65 EAST)



# AMOS 4 UNTIL 2028

## COVERAGE

Asia

Middle  
East

Africa

## STEERABLE BEAMS

Ku-1

Ku-2

Ka

## SERVICES

DTH

Video  
Contribution

VSAT

Broadband



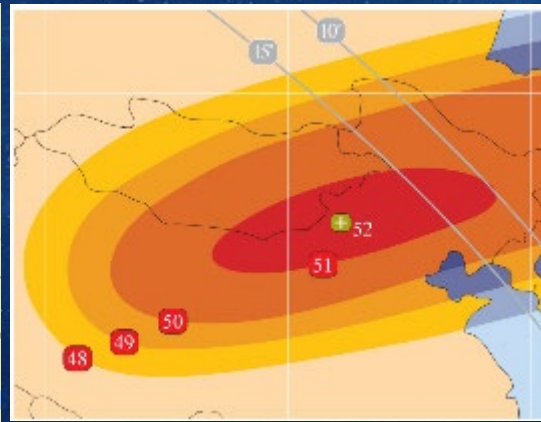
# AMOS 4 Coverage

108 MHz Transponder  
Plan (30B) / Ext. KU-band

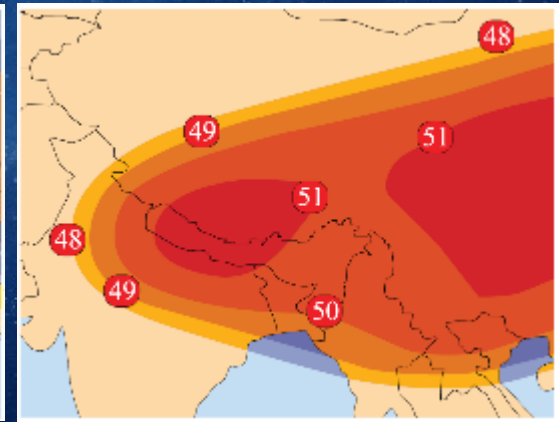
Ku-1 beam  
(Currently over Ukraine)



Steerable Ka beam



Asia Ku beam





# AMOS 7 (4 WEST)



2016

1996

2003

2008

2011

2013



yes.

# AMOS 7

## COVERAGE

Europe

Middle  
East

Africa

## BEAMS

Ku  
4 Fixed &  
Steerable

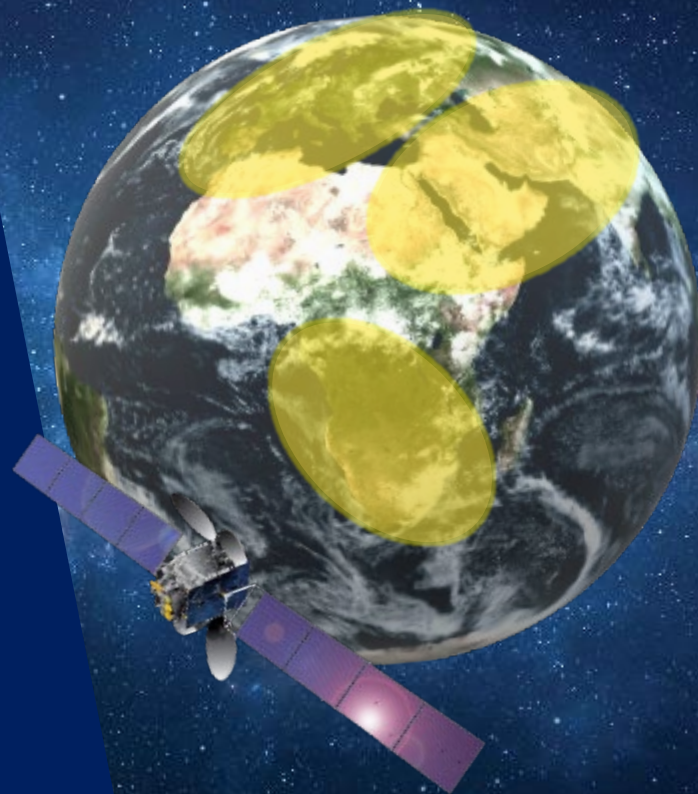
## SERVICES

DTH

Video  
Contribution

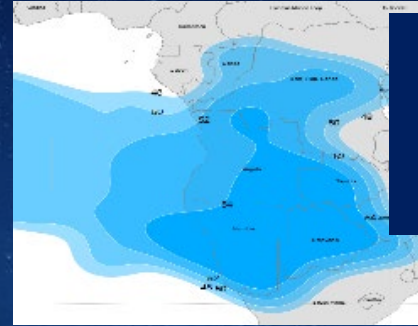
VSAT

Broadband



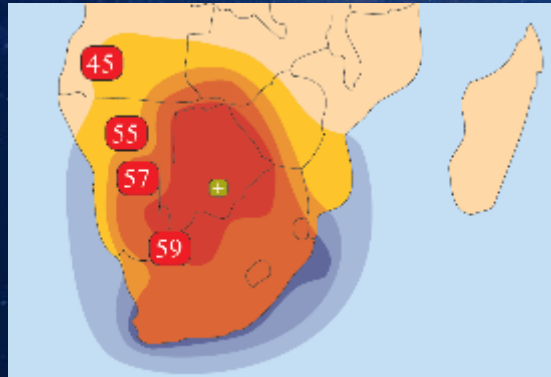
# AMOS 7 COVERAGE

54 MHz Transponder  
FSS / Ext. Ku-band

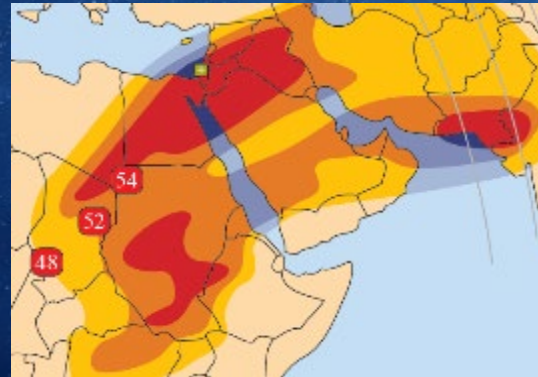


KU-4 beam  
(currently over Angola)

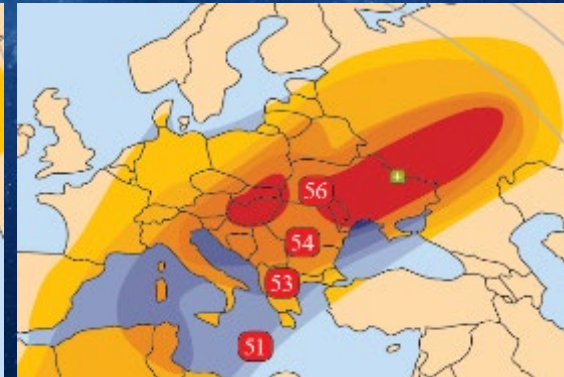
S. African beam



ME beam



CEE beam





# AMOS 17



# AMOS 17 MANUFACTURED BY BOEING

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Leader in GOV  
and commercial  
satellites

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Pioneer of  
digital payloads  
since the 90's

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Using the most  
advanced digital  
channelizer

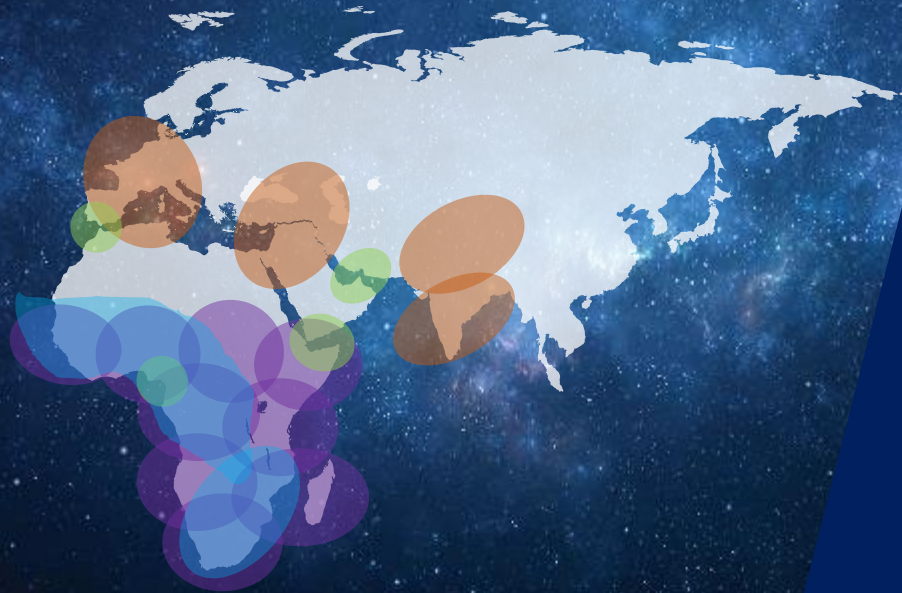
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Built on the  
successful  
702 platform

**Successfully launched on august 6, 2019, by a spacex falcon 9 rocket**

# AMOS 17 (17 EAST)

## AT A GLANCE



- **C-band high throughput (hts)**

- 12 High-Capacity Service Beams
  - 1-2+ Gbps per beam
  - 2 HUBs beams in EU and ME

- **Ku-band regional beams**

- 2 Service 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

# AMOS 17 C-BAND HTS BEAMS

Up to 300 MHz of C-band HTS Capacity in user beams and 600 MHz in HUB beams

Over 56 dBW EIRP and over 10 dB/k G/T

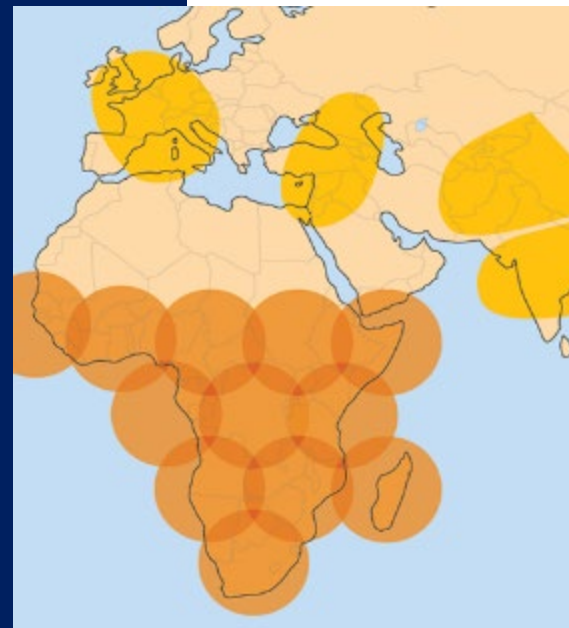
Up to 1 Gbps in VSAT service

DL/UL also from Europe and ME

Flexible allocation of TXs between beams

Over 1 Gbps in Domestic trunking (CnC)

One UL signal to all beam (C-band, Ku-band, Ka-band)



# C-BAND USER BEAMS:

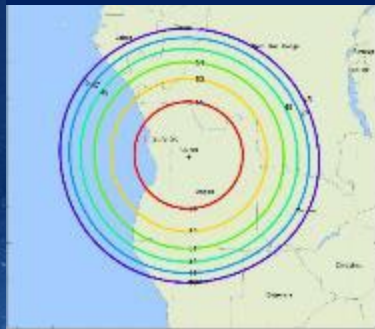
C01 – S. Africa



C02– Mozambique



C03– Angola



C04– DRC



C05– Kenya



C06– Ethiopia



C07– S. Sudan



C08– Chad





# C-BAND USER BEAMS:

C09 – Nigeria



C10 – Ivory Coast



C11 – Senegal



C12 – Madagascar

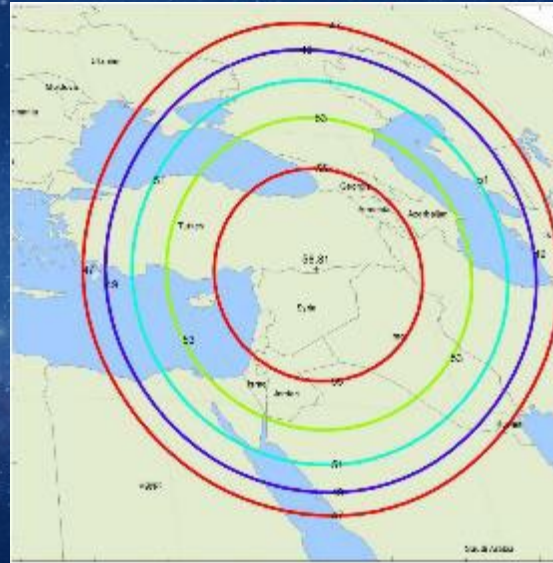


# C-BAND HUB BEAMS:

C13 – Europe



C14 – Middle East



# AMOS 17

## KU-BAND BEAMS

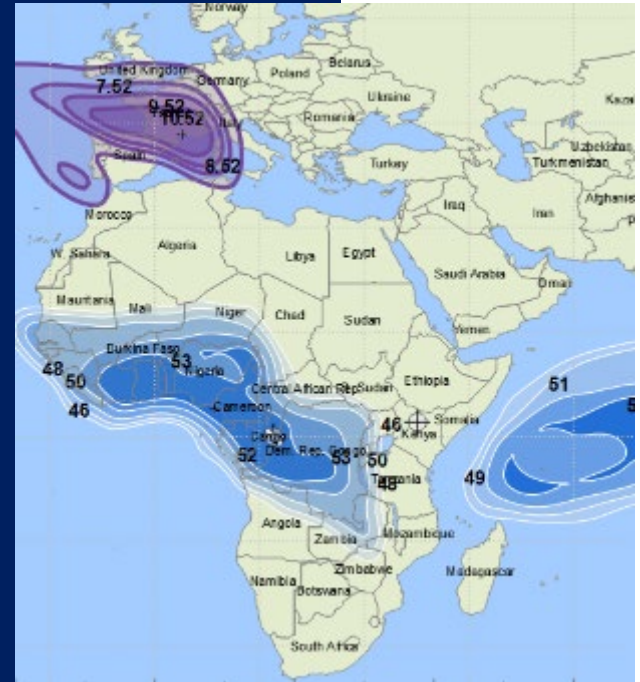
Total 18 X  
72MHz TXs

Flexible allocation of  
TXs between beams

UL also from  
Europe and ME

One UL signal to  
both beams

FSS and BSS UL



# KU-BAND USER BEAMS COVERAGE

Up to 14 X 72MHz TXs  
(FSS and BSS) per beam

Over 52 dBW EIRP and  
over 6 dB/k G/T on KU1

Over 56 dBW EIRP and  
over 10 dB/k G/T on KU2

Flexible allocation of  
TXs between beams

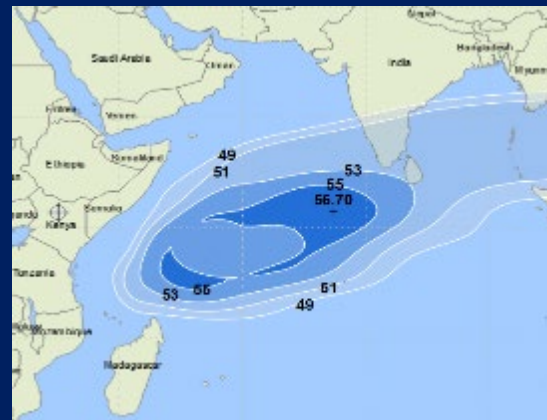
UL also from  
Europe and ME

One UL signal to all beam  
(C-band, Ku-band, Ka-band)

KU1 – West Africa



KU2 – Indian Ocean Region



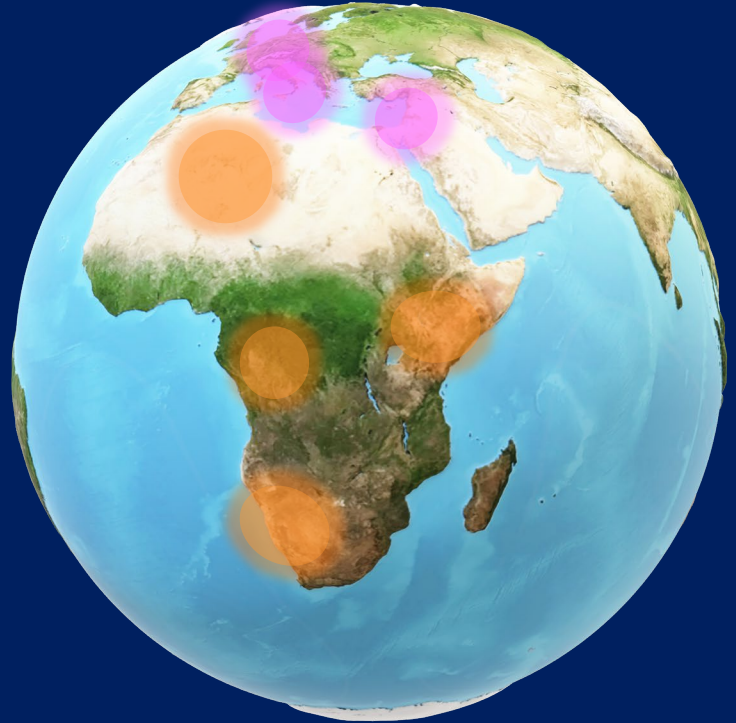
# KA-BAND: HIGH CAPACITY STEERABLE AND FIXED BEAMS

4

Independent  
Steerable beams

3

Fixed  
beams



# KA-BAND: HIGH CAPACITY STEERABLE AND FIXED BEAMS

4

Independent  
Steerable beams

3

Fixed  
beams



# KA-BAND: HIGH CAPACITY STEERABLE AND FIXED BEAMS

4

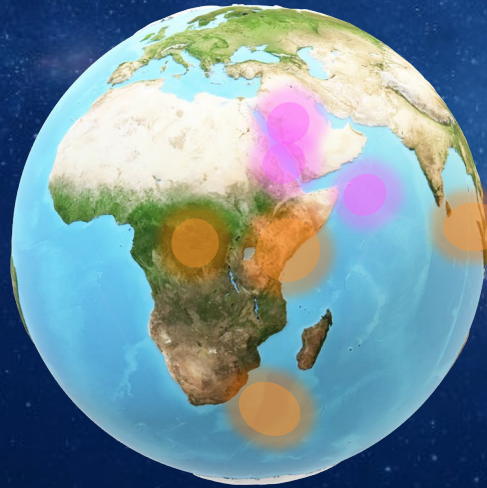
Independent  
Steerable beams

3

Fixed  
beams



# KA-BAND: HIGH CAPACITY STEERABLE AND FIXED BEAMS



4

Independent  
Steerable beams

3

Fixed  
beams

## Flexible Configuration

- Beams can operate on their own
- One beam can serve as hub for one or all beams
- Cross Connect with C and Ku Beams

## Flexible task allocation

- In orbit mission selection
- Spectrum and power allocation

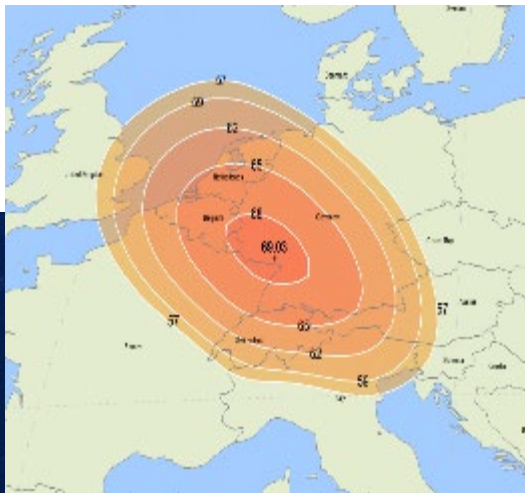
## Gov & Commercial Ka-Band

- 1GHz per beam, GOV and COM
- Fixed HTS beams over Europe and ME

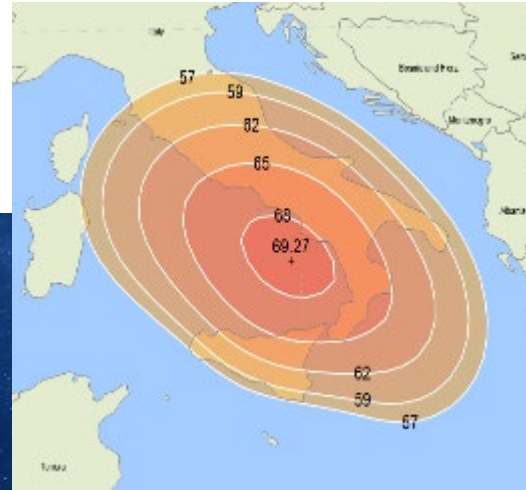


# KA-BAND FIXED BEAMS:

KA GW beam Germany



KA GW beam Italy



KA-1F Fix beam Israel



# DIGITAL PAYLOAD

## THE FIRST AFRICAN DEDICATED DIGITAL SATELLITE



### Higher service availability

Control at signal level vs transponder level

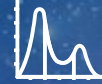
Gain adjustment and ALC per carrier



### Easy customer adaptation & expansion

Provision carriers w/out interfering with others on same transponder

Power and spectrum control per signal



### Interference suppression

Digital processing and scanning of signals



### Lowest tco uplinking

Duplicate one UL to multiple beams to minimize UL investment

# FLEXIBLE SERVICE AND OPERATION



## Cross Connect Between All Beams And All Bands

Full non-blocking  
switching  
between all ports



## Optimal Solution Architecture For Any Service And Application

Unlike other HTS systems  
where one must be routed via  
pre-fixed international hubs



## Multi Frequency

Pick and choose  
for your specific  
application

# FLEXIBLE SERVICE AND OPERATION



One hub serving all services and applications in all bands  
Serving any country in Sub-Saharan Africa from Africa, Europe, Middle-East

# USE EXISTING C-BAND TERMINALS WITH HTS EFFICIENCY



**No need to upgrade  
your equipment**

Generate more  
throughput with your  
existing equipment



**Most effective  
terminals**

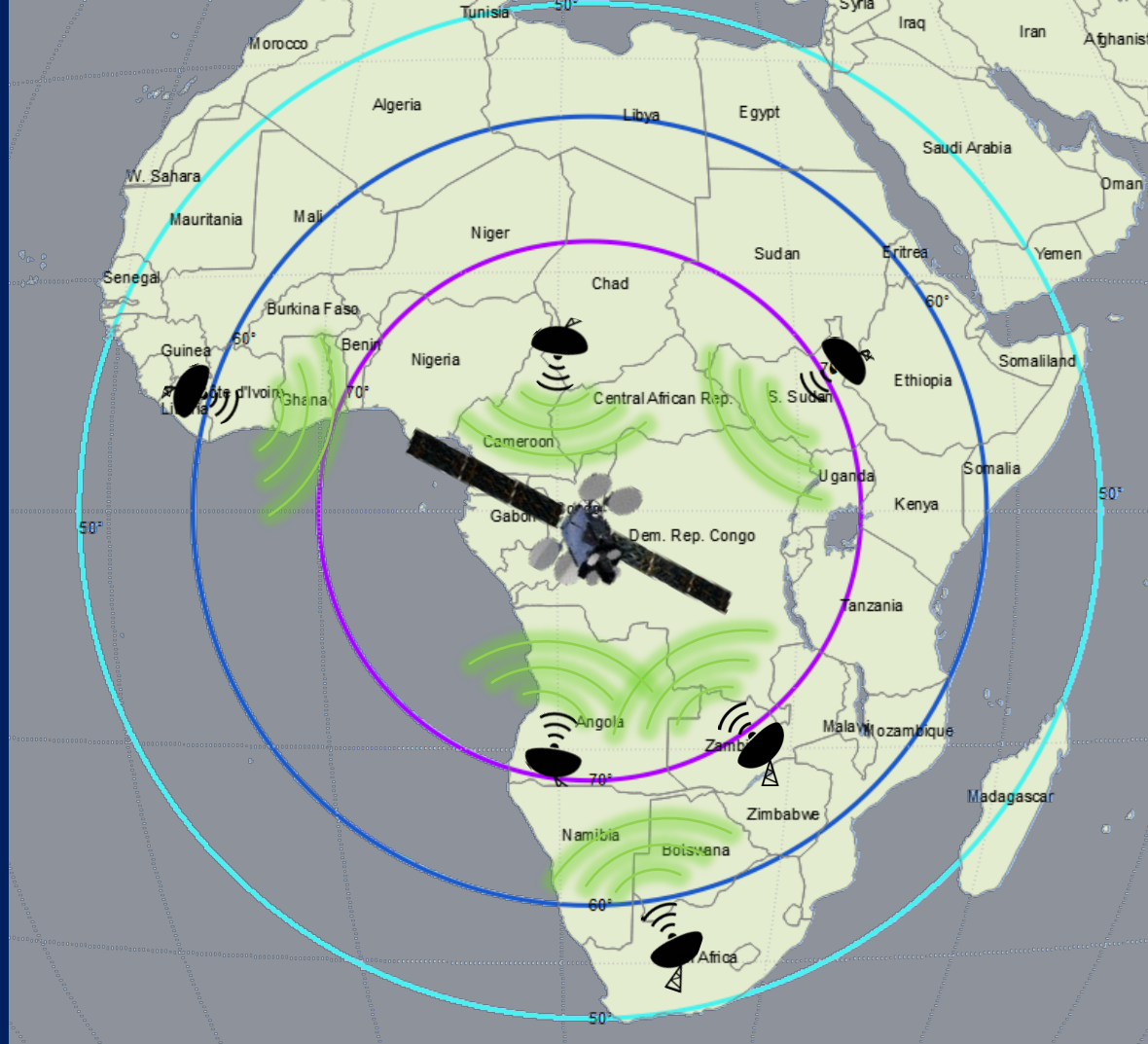
Compact site  
Low BUC size  
Low power consumption  
Smaller footprint



**Lower cost  
power solution**

Efficient solution due  
to AMOS-17 requiring  
less power on the  
terminal side

# AMOS 17 SUPERB ELEVATION ANGLES OVER AFRICA





# AMOS 17

## MORE THAN JUST ANOTHER SATELLITE

Very High Capacity

Flexible Configuration  
and Operation

Suitable for Country  
based applications

Best Total Cost of  
Ownership

A satellite view of Earth at night, showing the curvature of the planet and the glowing lights of cities and continents. The text is centered over the image.

# SPACECOM “PLUS” MANAGED SERVICES



# SERVICE DESCRIPTION

Managed VSAT networks based on two VSAT platforms:

- iDirect Evolution
- Gilat SkyEdge-IIc

The service is a across Sub-Sahara Africa using the advanced and powerful AMOS-17 digital satellite as well as the AMOS-7 satellite.

Managed SCPC (Single Channel Per Carrier) - for high bandwidth links.

C-Band and KU-Band

High throughput using the AMOS-17 HTS C-band beams

# SPACECOM PLUS HIGHLIGHTS

C-Band  
HTS beams

Lower TCO –  
use existing  
C-band  
Antenna and  
BUC and get  
higher  
throughput  
(High G/T)

24/7/365  
Network  
operation  
and  
technical  
support

Proactive  
network  
monitoring

Flexibility  
and  
scalability –  
service is  
based on  
our own  
satellites.

# VNO – VIRTUAL NETWORK OPERATOR



Manage and control  
your network

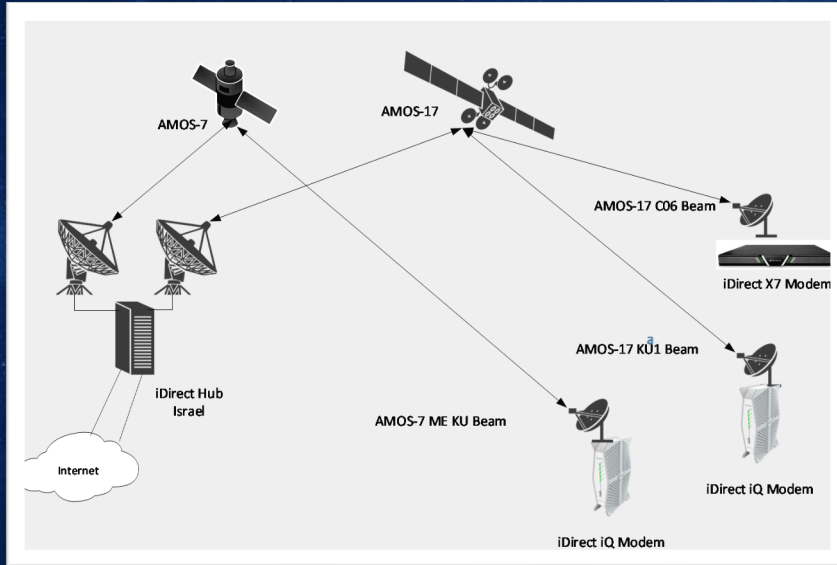


Network  
visibility

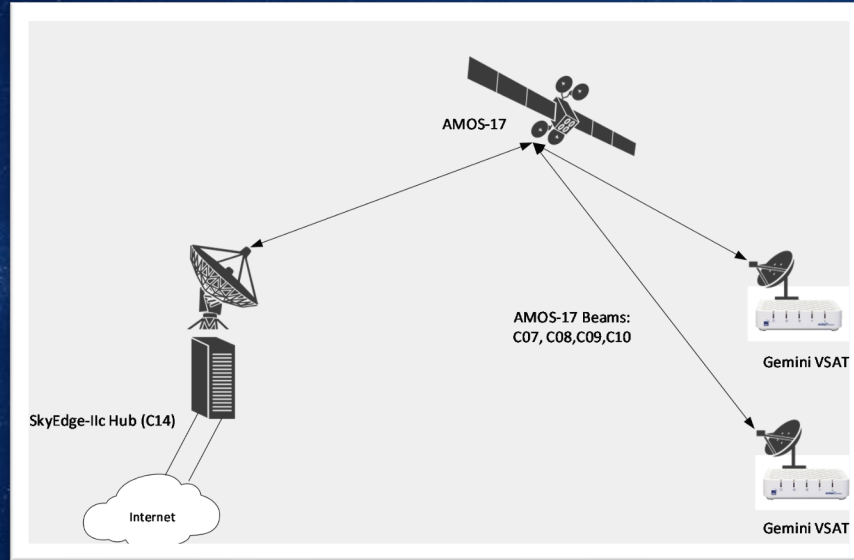


Bandwidth  
management

# IDIRECT EVOLUTION PLATFORM



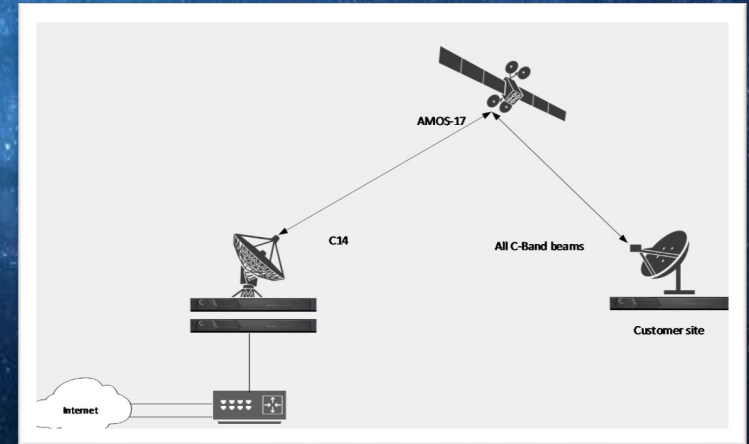
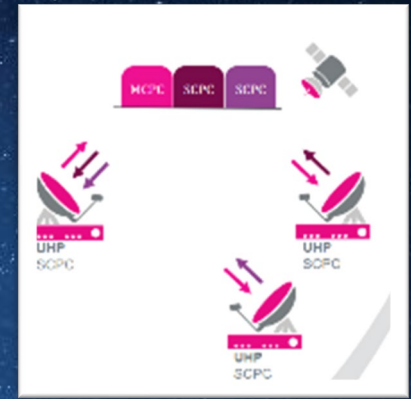
# GILAT SKYEDGE IIC PLATFORM



# SCPC/MCPC

- Dedicated bandwidth
- MCPC /SCPC – multiple sites on the same beam can share single outbound.
- Based on Comtech UHP modems, the teleport side modem is provided by Spacecom with no charge for contracts of minimum 12 months.
- SCPC links can be implemented using other vendors modems (Comtech, Newtec, Novelsat)

MCPC/SCPC

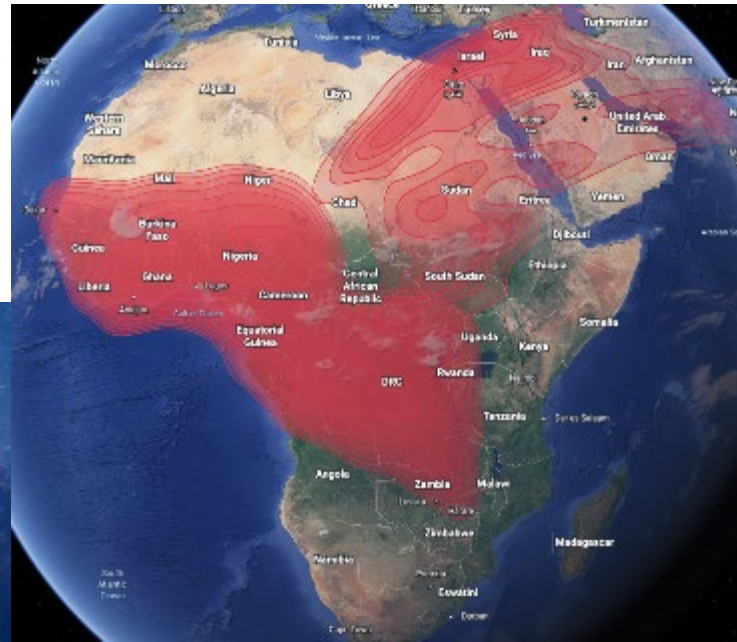


# VSAT SERVICE COVERAGE

(As of: Jul 2022)



C-BAND (HTS)



Ku-BAND

# MINIMUM REQUIREMENTS & EQUIPMENT

## iDirect

- Amos-17 C6 - All Modems including X1,X3,X5,X7
- Amos-17 C7 - All Modems including X1,X3,X5,X7
- Amos-17 KU1 - All Modems including X1,X3,X5,X7
- Amos-7 ME - All Modems including X1,X3,X5,X7

## SkyEdge

- Gemini-e S2X – basic license 10Mbps, up to 5W BUC
- Gemini-4 S2X up to 12W BUC

### **Minimum antenna size:**

C-band: 1.8m

KU-band: 1.2m

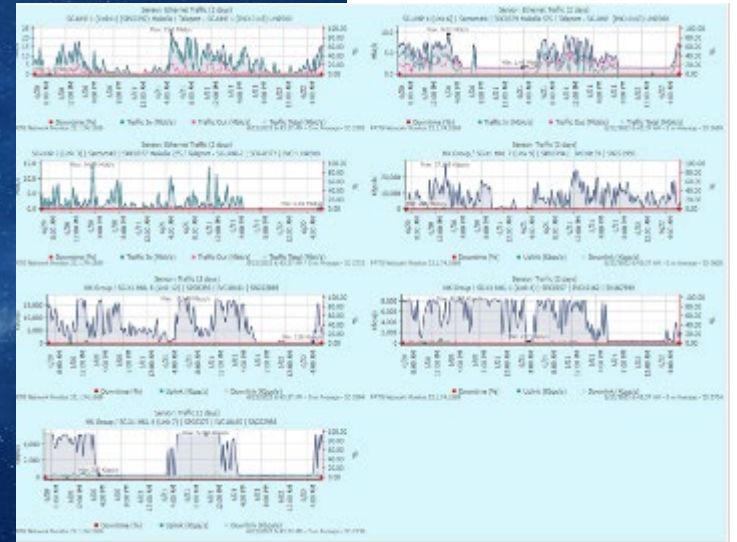


# SERVICE MONITORING - CUSTOMER GRAPHS

Customer's  
site traffic  
graphs

Site status -  
Up/Down, RX  
SNR, latency.

Email  
notifications



**THANK  
YOU!**

**SPACECOM**  
A Bridge to the Future. *Today*

