

SES SIRIUS AB

Growth Opportunities for the Ukrainian Market

- ▶ WHO WE ARE
- ▶ OWNERS
- ▶ CUSTOMERS
- ▶ VISION
- ▶ SATELLITES
- ▶ SERVICES
- ▶ BENEFITS
- ▶ SIRIUS IN EUROPE
- ▶ CORPORATE FILM

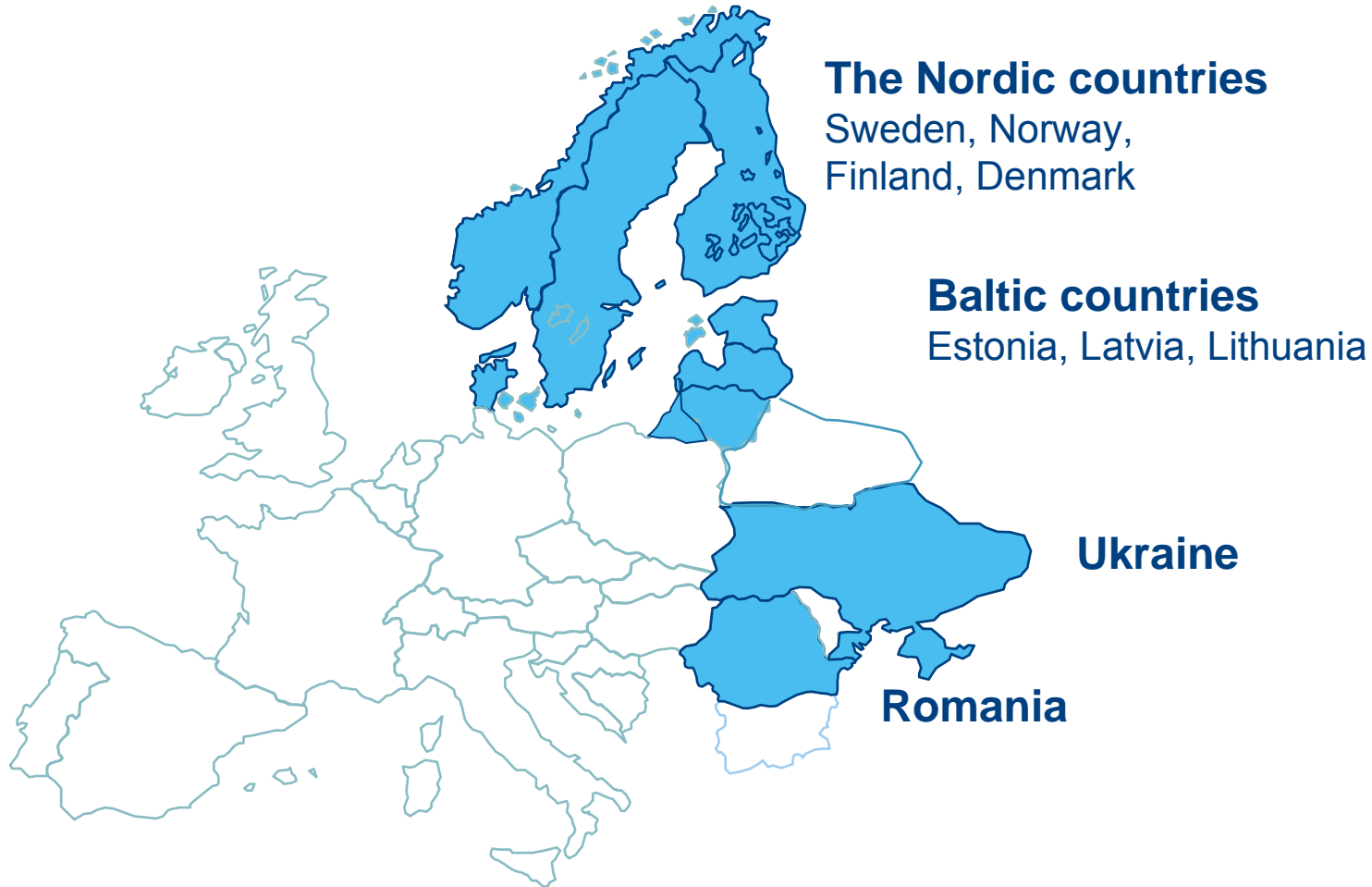


Who We Are

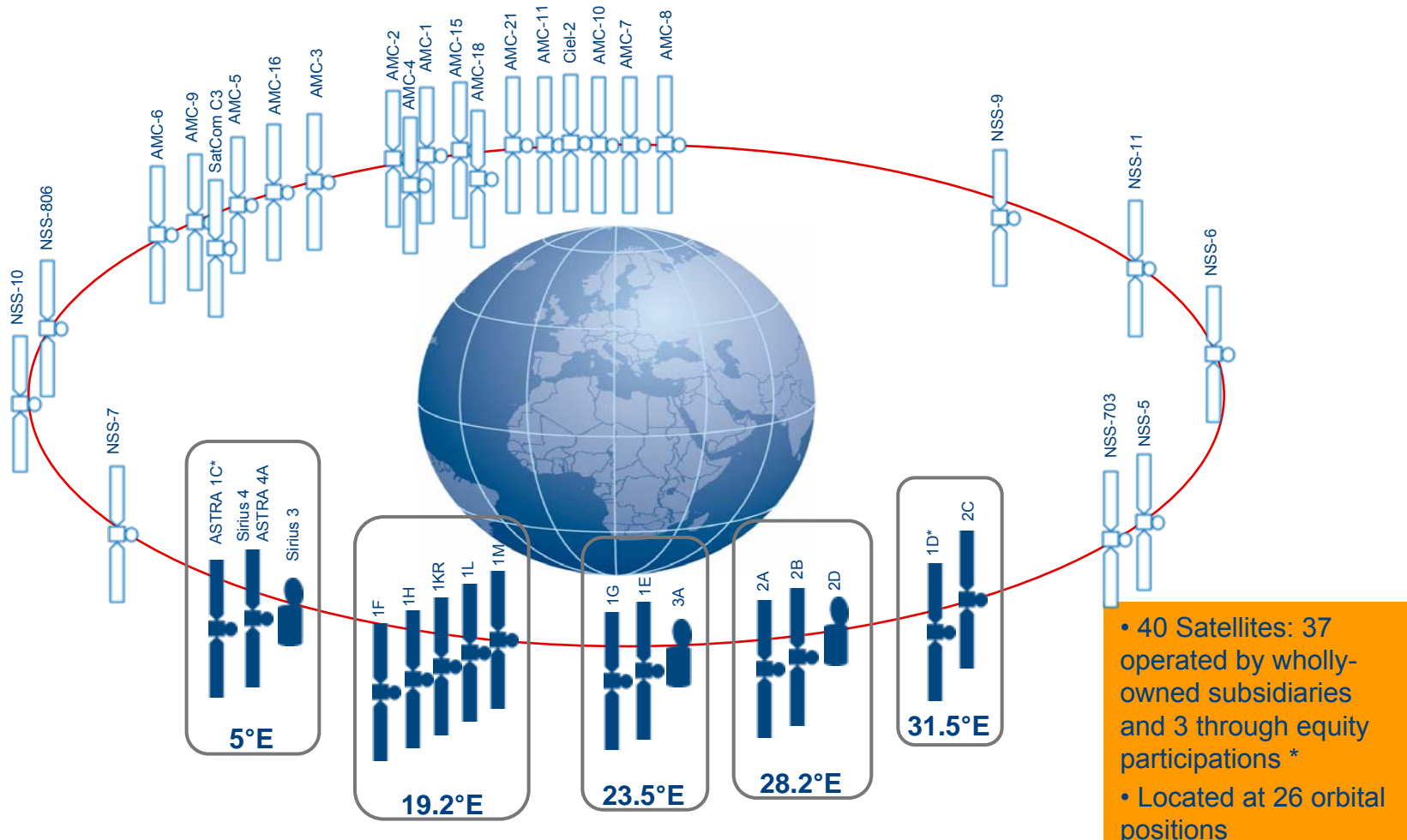
- ▲ Satellite operator established 1983.
- ▲ Own and operate the SIRIUS satellite system.
- ▲ Provide communication solutions via our SIRIUS satellite system across Europe.
- ▲ Our core markets are the Nordic and Eastern European countries.



Core Markets



The SES Satellites



- 40 Satellites: 37 operated by wholly-owned subsidiaries and 3 through equity participations *
- Located at 26 orbital positions

*Satellite in inclined orbit

SIRIUS Satellite Fleet



SIRIUS 3

- ▲ Back-up
- ▲ 1998-2010
- ▲ Broadcast, Broadband services
- ▲ 15 transponders
- ▲ Northern Europe



SIRIUS 4

- ▲ 2007-2022
- ▲ Broadcast, Broadband, Occasional services
- ▲ 54 transponders (incl 2 Ka-band) in five different beams
- ▲ Europe + Africa

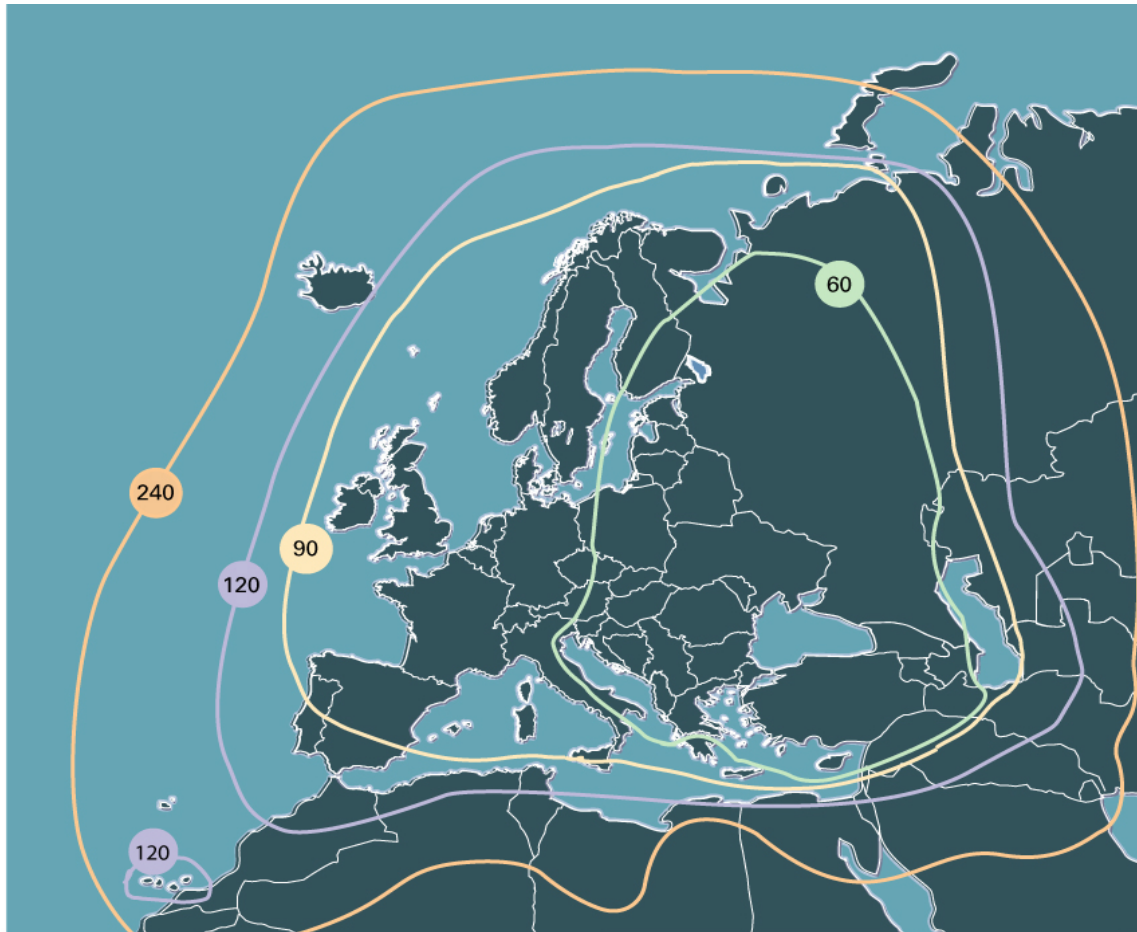


SIRIUS 5

- ▲ 2011-2026
- ▲ Broadcast, Broadband services
- ▲ 36 Ku-band, 24 C-band, 1 Ka-band transponders in five different beams
- ▲ Europe + Africa

SIRIUS 4 pan-European Coverage

Together with ASTRA, our high-power, pan-European footprint reaches 122 million homes in 35 countries



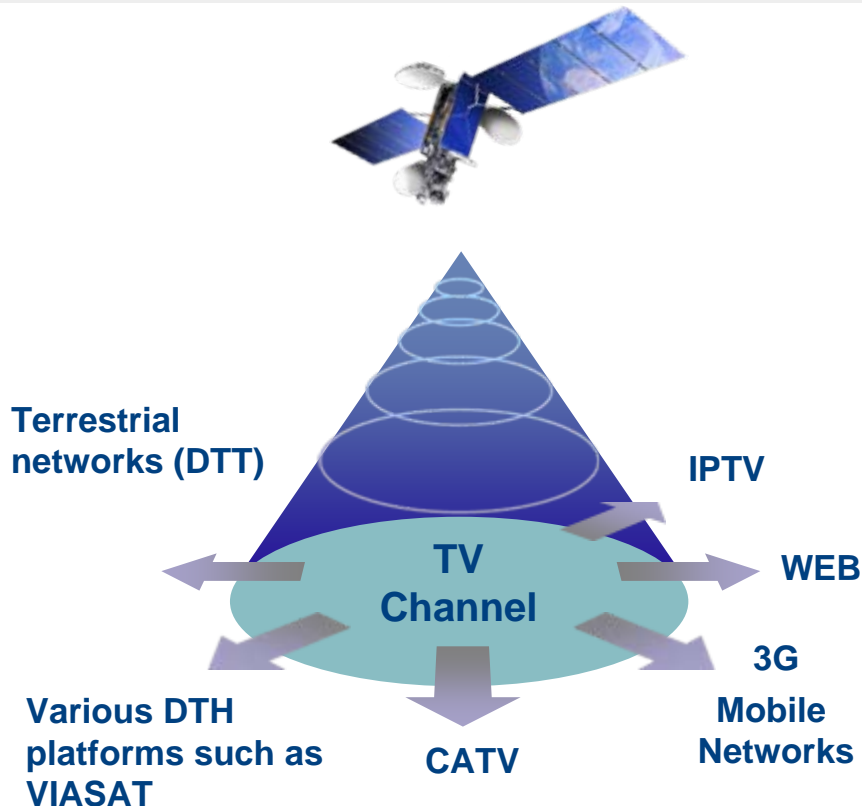
SIRIUS 5 to be launched 2011



SIRIUS 5

- ▲ To be launched 2011
- ▲ 36 Ku-band transponders for Direct-to-home (DTH) services in Northern Europe (offered by SES SIRIUS), and the African markets (offered by SES ASTRA)
- ▲ 24 C-band transponders (offered by SES WORLD SKIES) for global and hemispheric coverage for broadband, point-to-point and VSAT capacities.

Benefits with Satellite



Feed of digital signals to different platforms

- ▲ Large coverage area
- ▲ Cost-effective distribution
- ▲ Independence of existing infrastructure and borders
- ▲ Opportunity to reach an unlimited number of end-users
- ▲ Satellites have large transmission capacity utilising the very latest technology for TV distribution.
 - DVB-S2 modulation techniques makes efficient use of the capacity
 - Any compression format (MPEG2, MPEG4, JPEG 2000...)
- ▲ SIRIUS satellites can handle format; from (analogue) – digital – HDTV – 3D!

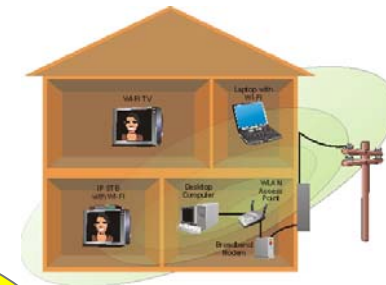
Digital TV Distribution platforms



Web-TV



Satellite-TV



IPTV



Digital TV



Cable TV



Mobile-TV



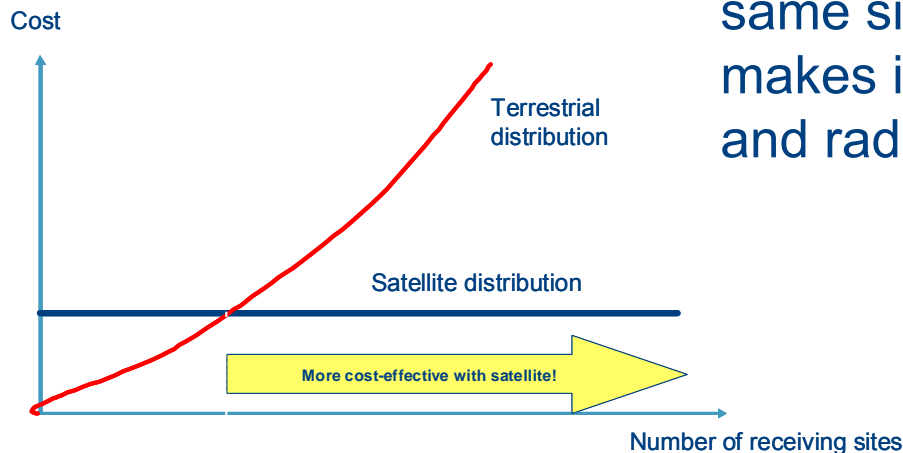
Terrestrial TV (DTT)

Satellite to supplement DTT



▲ Providing 100% population coverage by DTT networks is very costly

- In several cases, the cost for covering the last 10% of a population could be equal as of the first 90%!
- Satellite's unique ability to transmit the same signal to all points within an area makes it ideal for broadcasting television and radio signals



Satellites supporting DTT

▲ SIRIUS can provide

- Direct-to-Home digital TV& Radio channels to household totally uncovered
- Feed DTT network stations (transmitters), which locally can provide the DTT service
- Back-up service in case of failure of the DTT repeater system

▲ The TV transmission signal can be provided in different technical forms to fit the needs of the DTT network provider (modulation, bandwidth, FEC, etc)



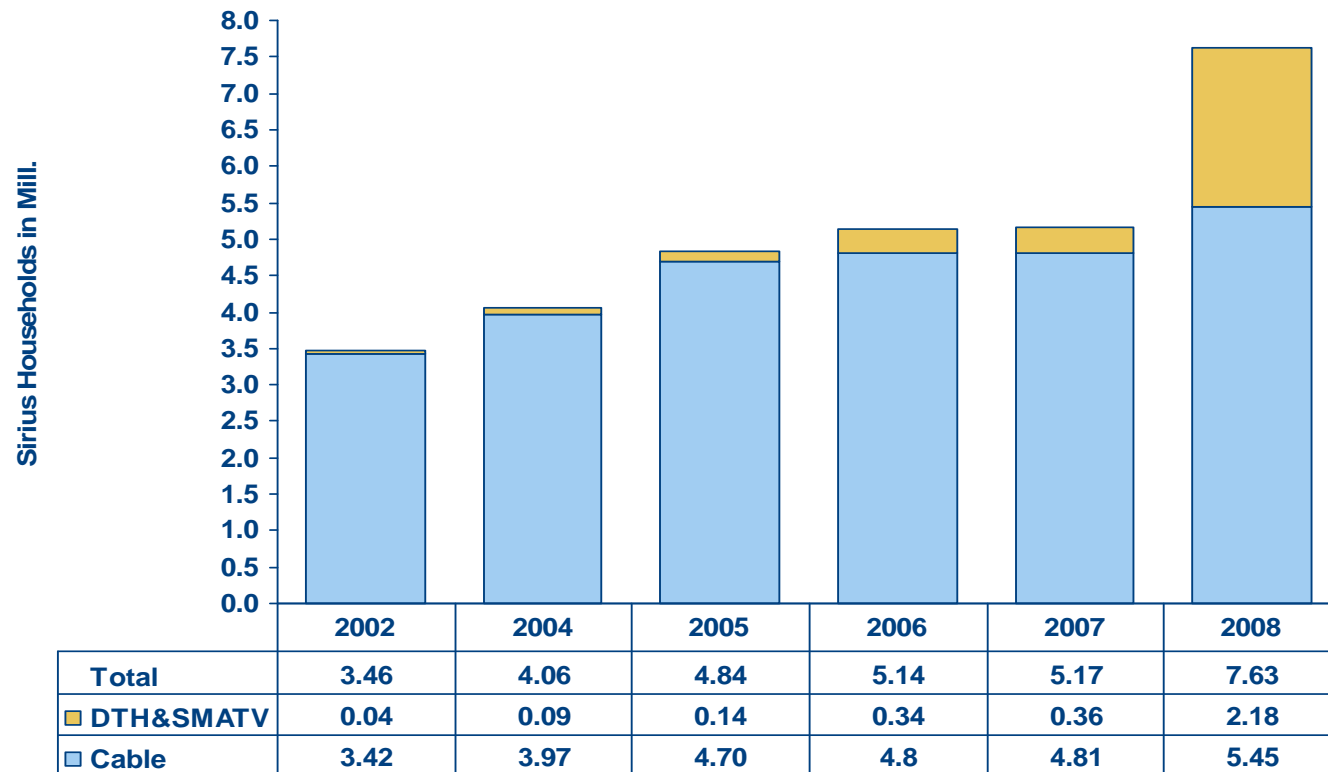
Ukraine TV market

- ▲ Total TV homes: 17.79 Million
- ▲ Cable homes account for 30.6%
- ▲ Satellite reaches 2.35 Million (13.2%) YE2008, an increase from 730,000 YE2007
- ▲ Terrestrial mode of reception, reaching 9.97 Million or 56% (decrease from 67.5%)
- ▲ SIRIUS reaches 2.18 Million satellite households (YE2008) an increase of 500% since YE2007
- ▲ SIRIUS total penetration 7.63 Million satellite and cable households (YE2008). An increase of 40% since YE2007.

SIRIUS Penetration - Ukraine

BALTIC NORDIC ROMANIA **UKRAINE**

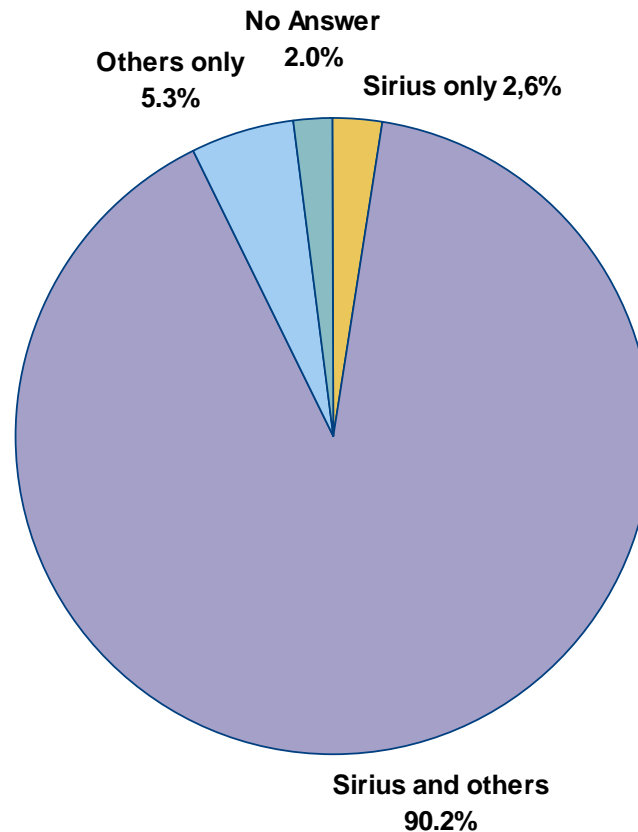
Penetration Market Share



DTH Market Share - Ukraine

BALTIC NORDIC ROMANIA **UKRAINE**

Penetration *Market Share*



**Total DTH
market share
92.8%, an
increase of 88%
since YE2007**

Pay-TV Viasat Ukraine

FREE-TO-AIR **PAY-TV**

Channel logos



Ukrainian Channels

FREE-TO-AIR PAY-TV

Encrypted

- ▲ TRK Ukraine
- ▲ TET
- ▲ Novy Kanal
- ▲ Pershiy Nacionalniy
- ▲ 1+1 International
- ▲ TRK Futbol



Free-to-air

- ▲ Inter +
- ▲ Glas
- ▲ Rada
- ▲ 5 Kanal
- ▲ Enter Film
- ▲ Enter Music TV
- ▲ Star TV
- ▲ KRT
- ▲ UBC
- ▲ OK
- ▲ Slavonic Channel International
- ▲ Tisa



Unique Selling Points - Ukraine

- ▲ The first DTH platform in Ukraine on SIRIUS
- ▲ Large DTH penetration for the free-to-air market
- ▲ Extensive package of Ukrainian, Russian and International TV channels
- ▲ 100% of cable operators receive signals from SIRIUS
- ▲ Excellent signal quality render possible use of small antennas
- ▲ SIRIUS in centre of 3 LNB solution, giving the highest signal strength with the best picture for the TV viewer
- ▲ High quality DVB platform and uplink station
- ▲ Local office since 2000 with local staff including technical specialists



ASTRA Satellite Position 31.5E

New coverage for eastern and southern Europe

- ▲ Our latest orbital position, 31.5°E, extends our coverage, bringing ASTRA service quality to a wide range of new markets.
- ▲ It's perfect for companies looking for opportunities in direct-to-home broadcasting, cable contribution and DTT feeds in eastern and southern Europe.
- ▲ 31.5°E is the ideal platform to meet the rising demand for HDTV services, and is equally suited for cable contribution, DTT and other terrestrial feeds.

Benefits 31.5 E degrees

- ▲ Excellent growth opportunities
- ▲ Brings ASTRA's service quality to new markets
- ▲ High-power DTH footprint means small dish sizes
- ▲ Wide beam allows extended connectivity
- ▲ Scheduled programme of satellite replacement
- ▲ Constant monitoring and customer support



Satellite Services from 31.5 E

SES SIRIUS
An SES ASTRA Company

WHO WE ARE

OWNERS

CUSTOMERS

VISION

SATELLITES

SERVICES

BENEFITS

SIRIUS IN EUROPE

CORPORATE FILM

HOME

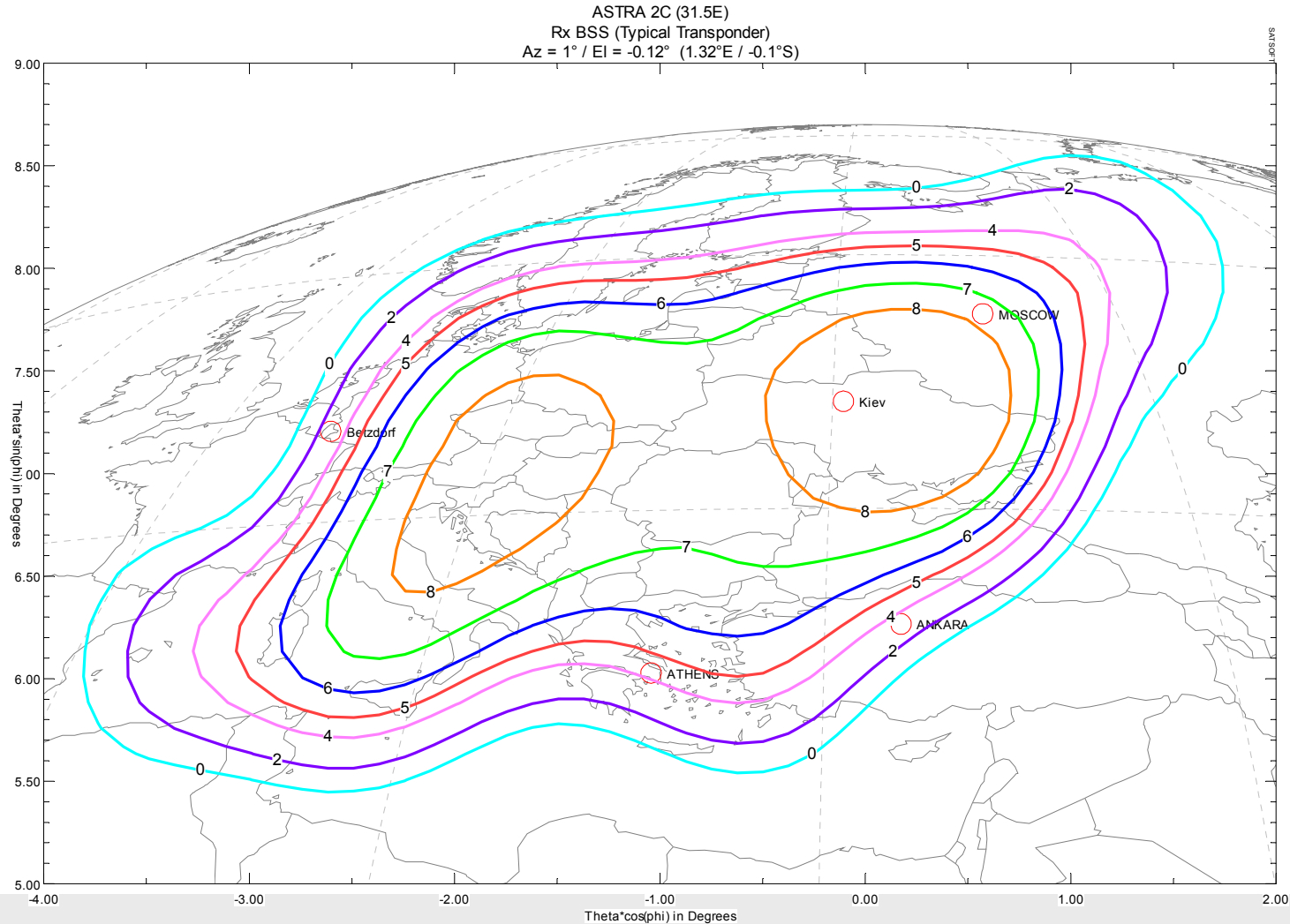


Services

- ▲ Digital TV
 - standard & HDTV
 - MPEG 2 and MPEG 4
- ▲ Radio
- ▲ Interactive TV
- ▲ Cable TV distribution
- ▲ DTT and other terrestrial feeds
- ▲ Data services



ASTRA 2C (31.5E) Uplink Beam (BSS Band)

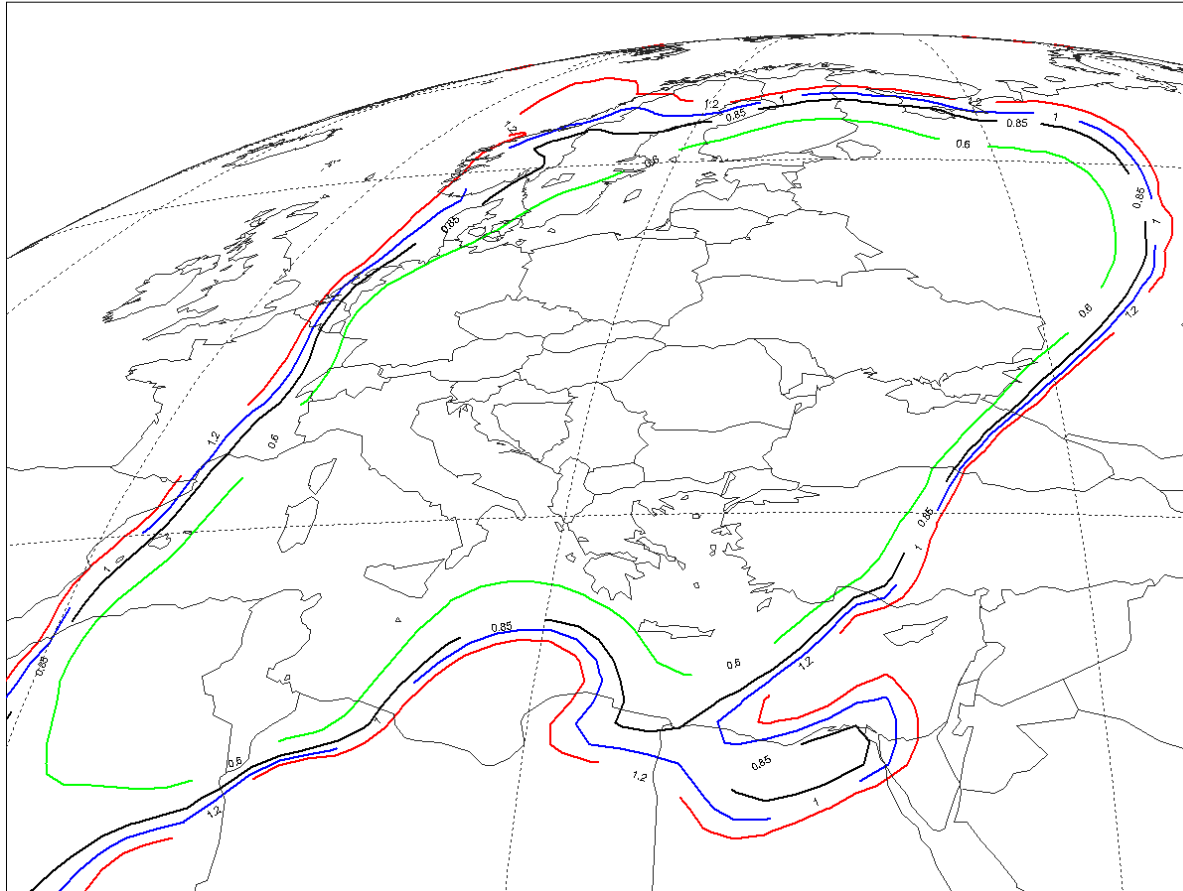


ASTRA 2C (31.5E)

Downlink - BSS West Beam

(DVB-S QPSK $\frac{3}{4}$ 27.5 Msymb/s and 99.9%)

Receive dish diam. [m] for 99.9% overall availability. Main beam: 2C at 31.5 E.
Freq. 11.7 GHz. C/(N+)-threshold 7.9 dB. Dish PE-range [-0.30 0.00 0.30]deg. LNB-NF 1 dB.

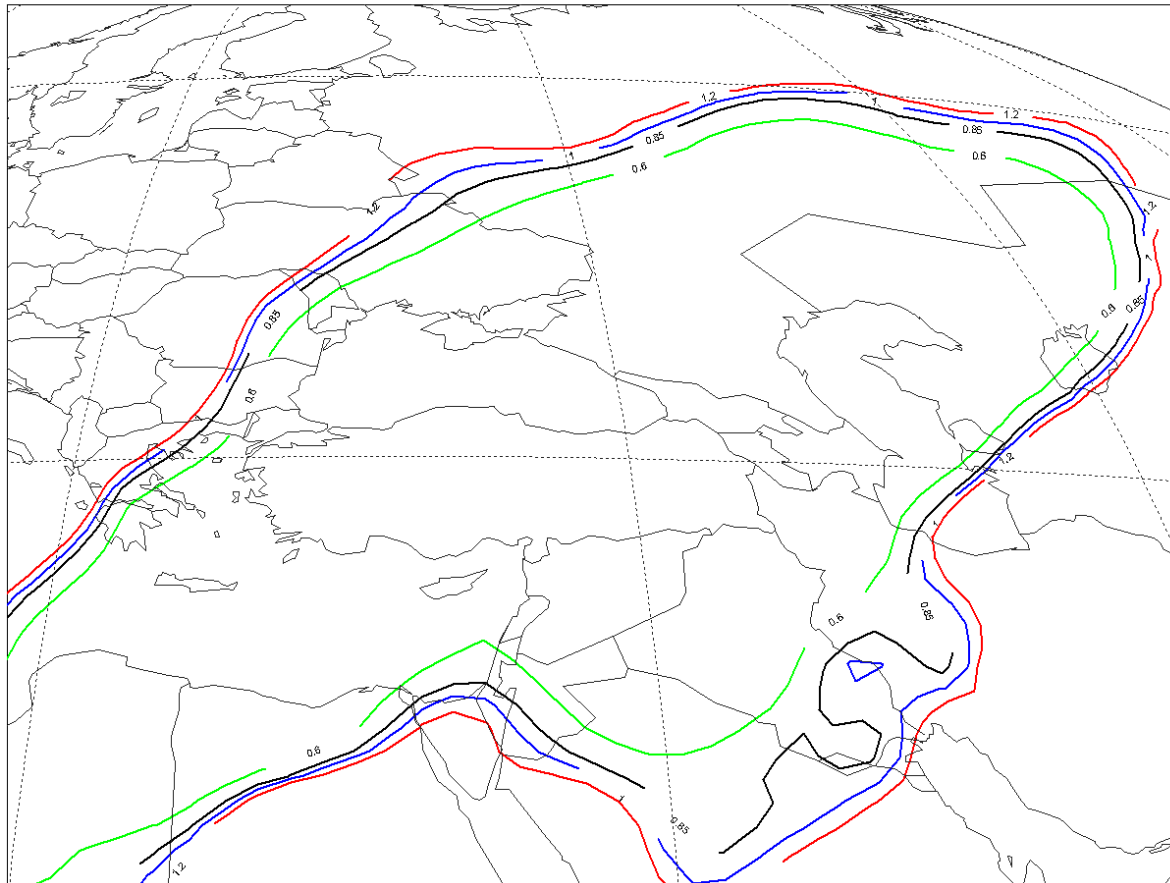


ASTRA 2C (31.5E)

Downlink – BSS East Beam

(DVB-S QPSK $\frac{3}{4}$ 27.5 Msymb/s and 99.9%)

Receive dish diam [m] for 99.9% overall availability. Main beam: 2C at 31.5 E.
Freq 11.7 GHz. C/(N+1)-threshold 7.9 dB. Dish PE-range [-0.30 0.00 0.30]deg. LNB-NF 1 dB.



SIRIUS 5 – our next satellite!

***Operational in
November 2011***

- ▲ Satellite is future proof for broadcast distribution
 - ▲ SIRIUS have 100% coverage of the Ukrainian Cable TV networks
 - ▲ SIRIUS distributes the VIASAT DTH platform
- ▲ Satellite can feed ANY broadcast network to achieve overall lower distribution costs
- ▲ TV viewers are buying larger HD ready TVs and expect better technical quality
 - ▲ HD is the new reference - alternative HD content from many sources
 - ▲ Satellite will remain best infrastructure platform for distributing HDTV



HDTV via satellite



HD channels on SIRIUS



- ▲ Excellent coverage
 - Lowest distribution cost per subscriber
- ▲ Sufficient bandwidth available
 - 55+ Mbit/s per transponder with DVB-S2 modulation. More than 30% better than DVB-S!
 - Highest quality on flat screens TVs
- ▲ Proven and affordable consumer technology

SIRIUS and ASTRA now carries 83 HDTV channels across Europe



Satellite means communications without limits.

It means maximum bandwidth without the restraints on reach.

Whatever your communication needs, satellite will reach more people everywhere.

Thank you for listening!



SES SIRIUS AB
www.ses-sirius.com

