WBU-ISOG – Zagreb, Croatia

SES Global Occasional Use

October 2011 - Samantha McCloskey

Stronger together

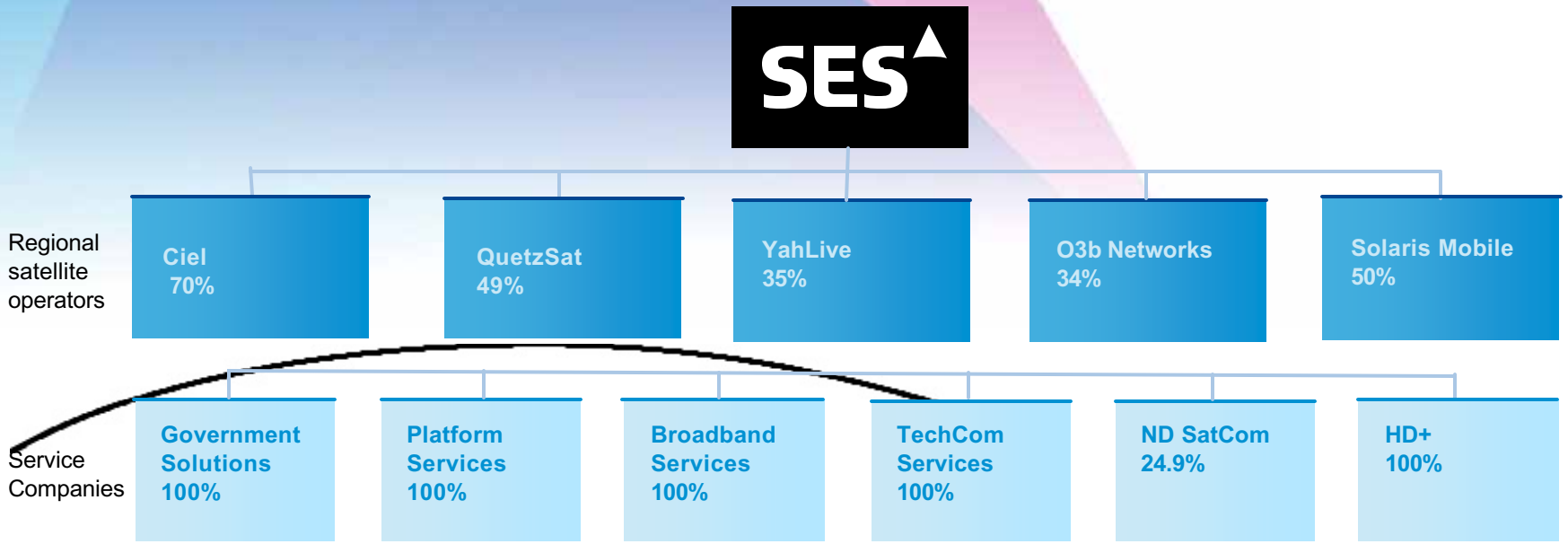
The new SES, led by one single management, operates worldwide, providing:

- Single customer interface
- Innovative solutions development
- Additional resources for emerging markets

This powerful combination creates a flexible and responsive satellite operator that can meet your needs

Our organisational structure

SES
your satellite company



Global OU Who, What & Where
Space Segment Inventory
Major Events
Trends

SES Occasional Use

History

The SES Global Occasional Use Group, managed from The Hague, has been formed by combining staff, inventory and resources from all of the SES owned satellite operators.

2005: New Skies and Americom merged to form World Skies

2010: Astra and Sirius merged into Astra

2011: Astra and World Skies merge to form today's SES

Global Team Introduction

Name	Location	Previously
Samantha McCloskey	NL	New Skies / World Skies
Richard Lamb	NL	New Skies / World Skies
Heidi Hogan	NL	New Skies / World Skies
Karen Best	NL	World Skies
Annette McCrary	UK	New Skies / World Skies
Birgit Salz	Lu	Astra
Patrick Rourke	USA	Americom / World Skies
Faith Knuckles	USA	Americom / World Skies
Janice Braun	USA	Americom / World Skies
Sales Engineering Team	Global	

Who do we serve?

Media and broadcasters

Enterprise and telcos

Governments and institutions

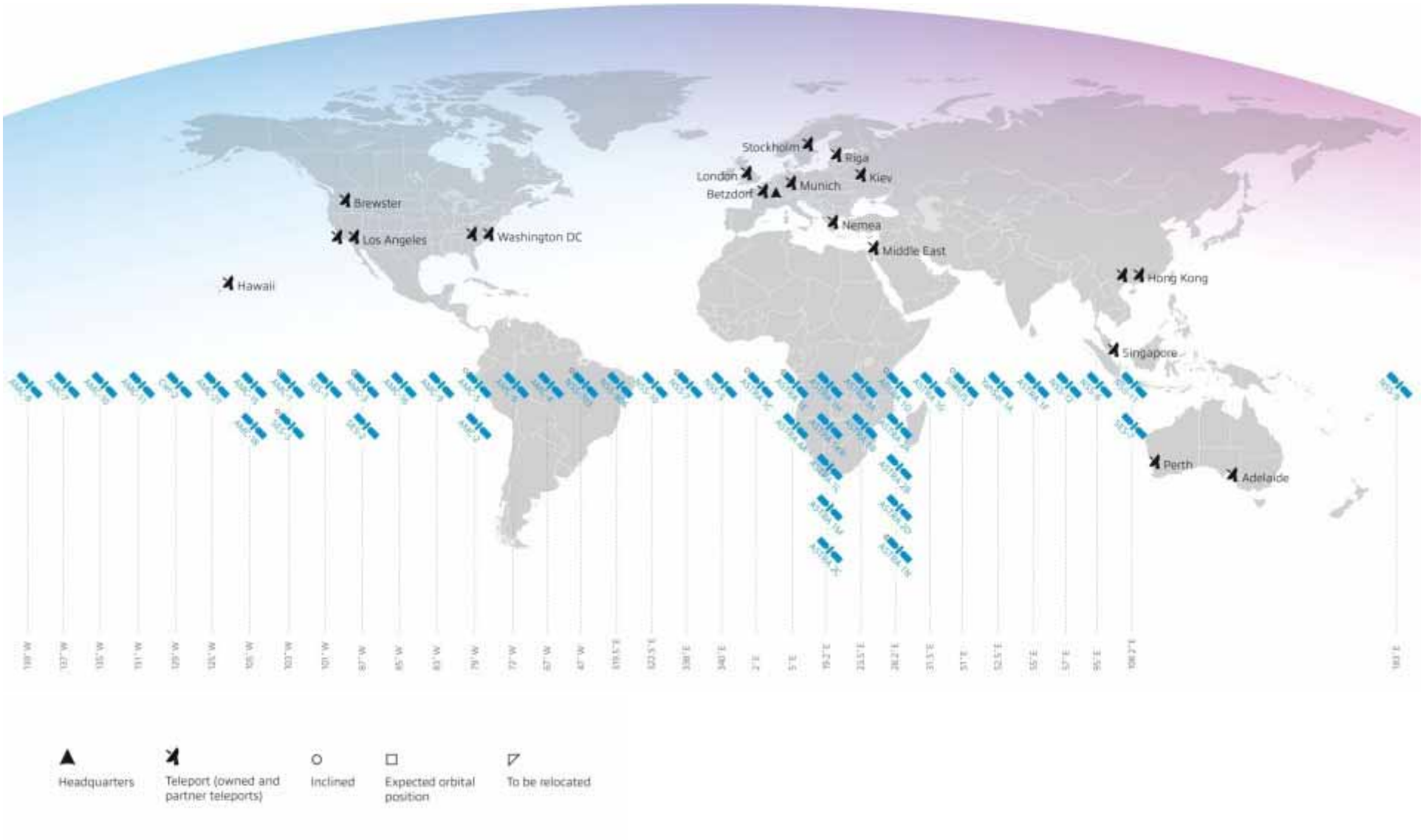
Space Segment Inventory

- Occasional Use Space across the current global fleet, more on the way.
- Access to all NSS, AMC, SES and Astra satellites.
- C-band, Ku and Ka available.
- Bandwidth available from 4.5MHz to full transponders.
- Minimum booking 15 minutes. Maximum booking 3 months.
- Special events: Ship to shore, data services, IP connectivity & other non-standard services also catered for.
- Billed in the currency of the resource. Astra satellites will be billed in Euros and the International fleet (World Skies) in US$.

Satellite Fleet Update

- Increased to 48 Satellites
- 26 Prime orbital locations
- 99.9% world population covered
- 2010 saw the start of a new phase with the launch of SES-1 bearing the SES name
- 2011 6 launches including SES-2, 3 & 4

Satellite fleet today



Fleet development until 2014

Largest commercial fleet investment programme in the industry:

13

Satellites under construction between 2011 and 2014

23%

Total capacity increase by 2014 compared to year-end 2010

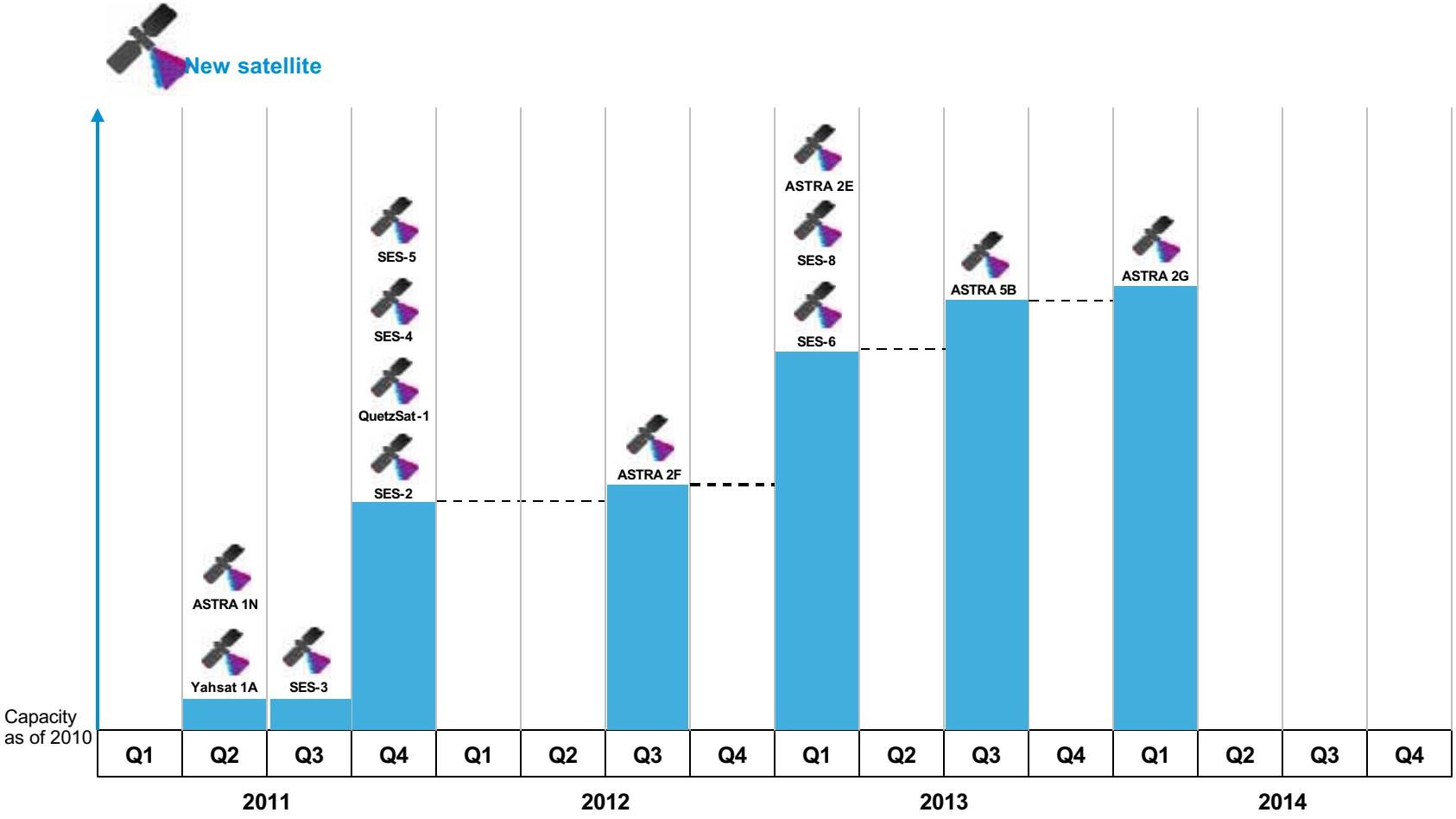
Satellite fleet today

Summary of the new SES Satellites

Satellite	Orbital Position	Region	Bands	Date
SES-1	101° W (AMC-2/4)	Canada, Mexico, USA(50) Caribbean	C & Ku	2010
SES-2	87° W (AMC-3)	USA, Caribbean, Gulf of Mexico	C & Ku	2011
SES-3	103° W (AMC-1)	Canada, Mexico, USA Caribbean	C & Ku	2011
SES-4	338° E (NSS-7)	Europe, Africa, N, C & S America	C & Ku	2011
SES-5	5° E (Astra 5A,/Sirius5)	Europe, Africa & Brazil	C & Ku	2012
SES-6	319.5° E (NSS-806)	North & South America	C & Ku	2013
SES-7	108.2° E (Indostar-II)	S, NE & SE Asia	Ku	2009
SES-8	95° E (NSS-6)	South Asia & Indo-China	Ku	2013

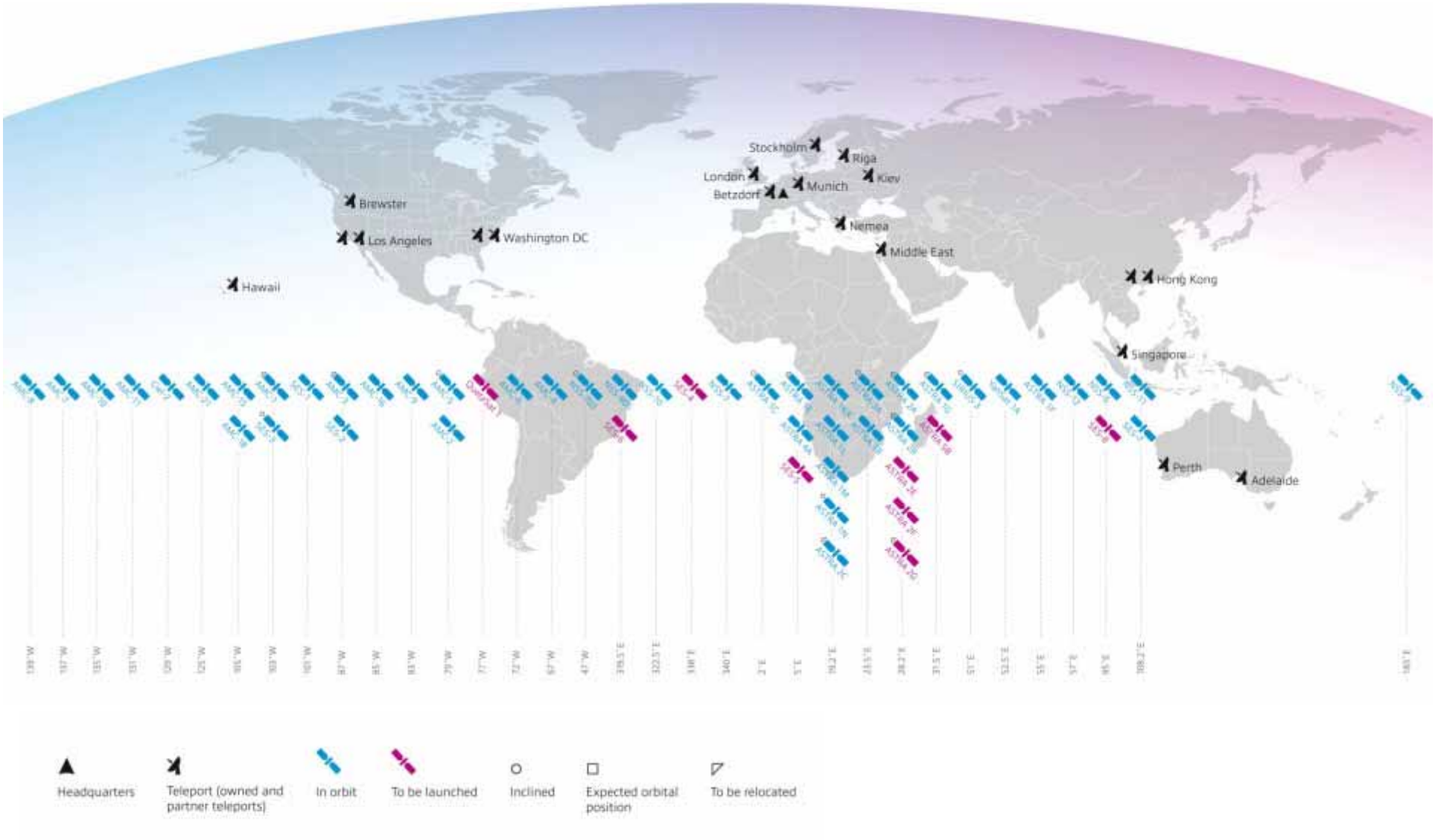
Fleet launches till 2014

13 satellites under construction between 2011 and 2014



Fleet configuration is based on current planning and is subject to change

Satellite fleet of 2014

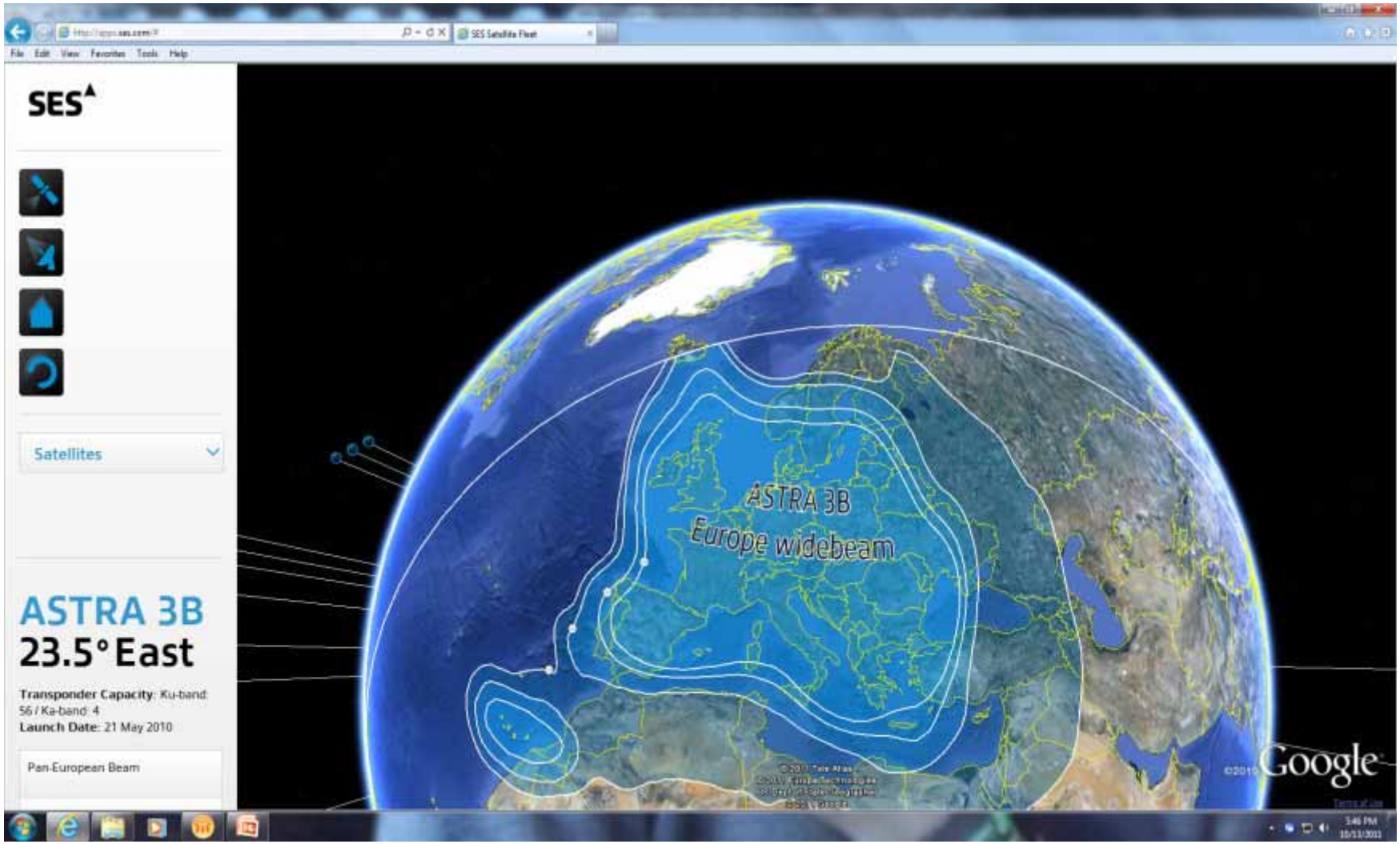


Google Earth Fleet Tool - Released

Advantages -

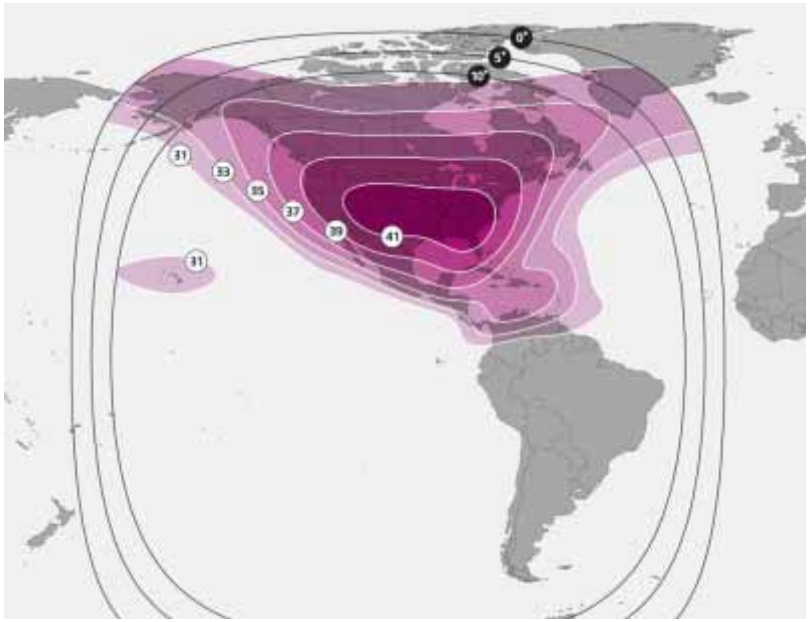
- **Compare and view multiple coverage maps simultaneously**
- **Overlay footprints and see how future satellites can extend or enhance current coverage**
- **Zoom in to find cities and places inside and outside the beam coverage zones**
- **See EIRP values from beam center to beam edge**
- **Locate SES own and partner teleports and regional representation offices and explore our satellites in space and view their coverage area on the ground!**
  Link to Google Earth

Google Earth - Fleet Tool Screenshot

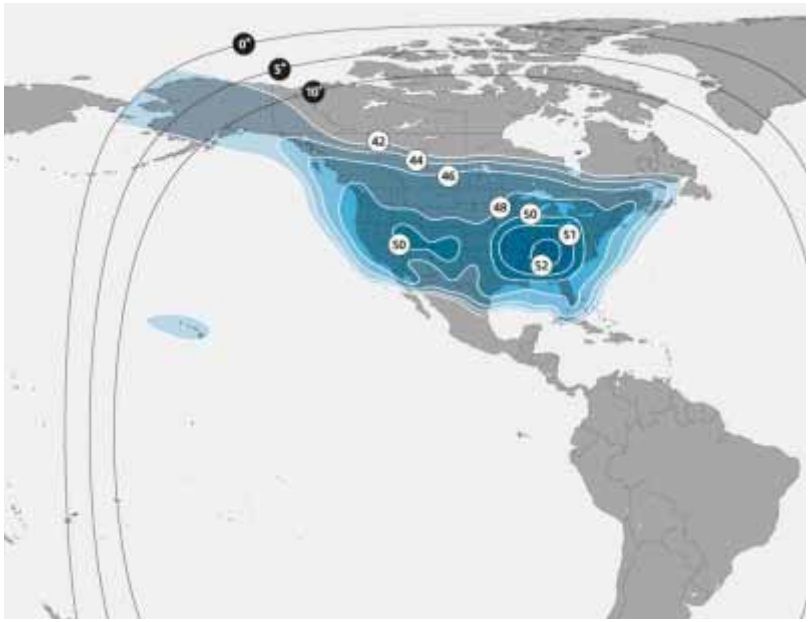


SES-1
101°W

Centre of the North American arc



SES-1 North America C-band beam

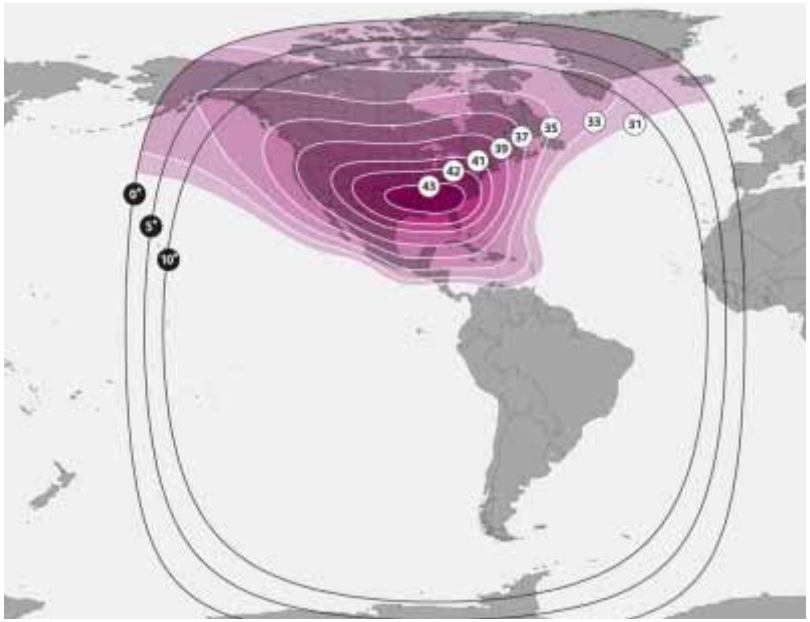


SES-1 North America Ku-band beam

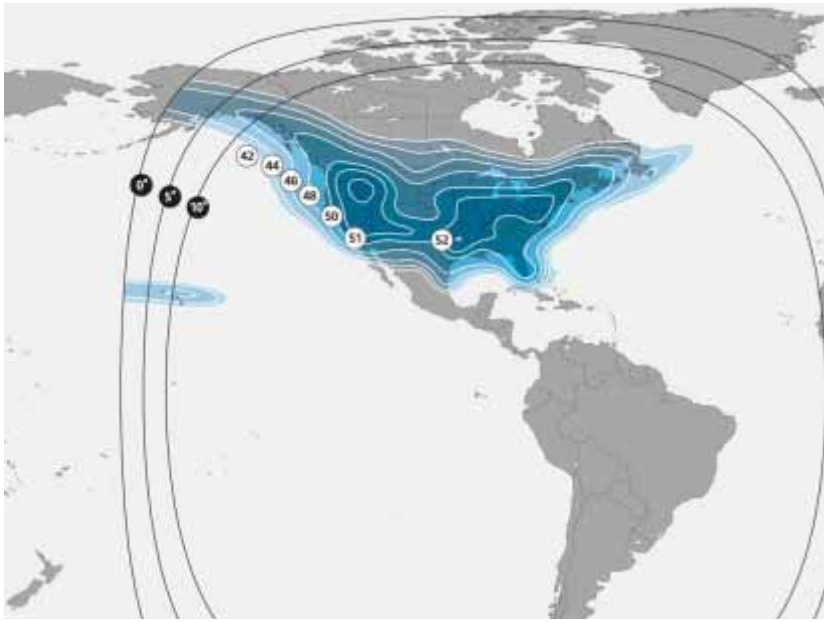
Launch Date:	April 2010
Payload (36 MHz equiv):	C-band: 24 transponders, Ku-band: 24 transponders
Coverage	US 50 States
Services:	Cable distribution, enterprise VSAT networks, government services

SES-2
87°W

Continued commitment to North America



SES-2 North America C-band beam

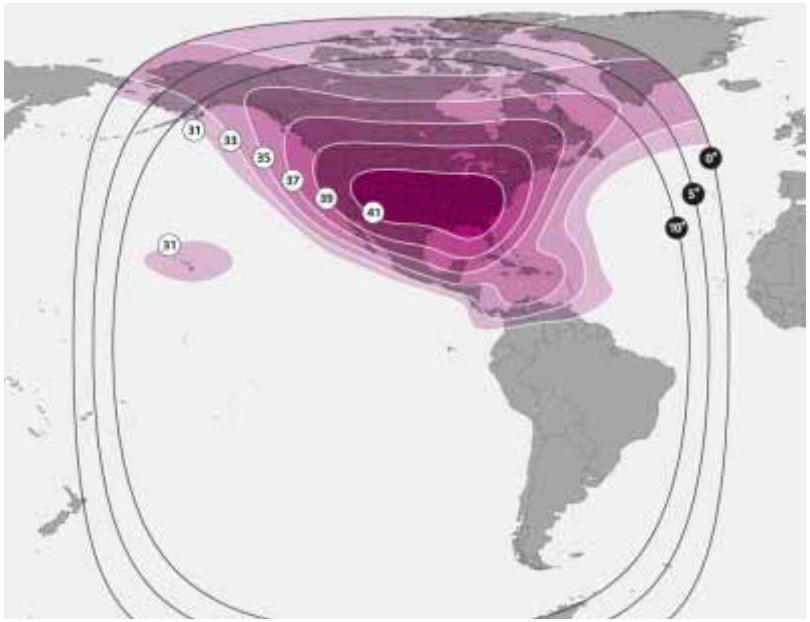


SES-2 North America Ku-band beam

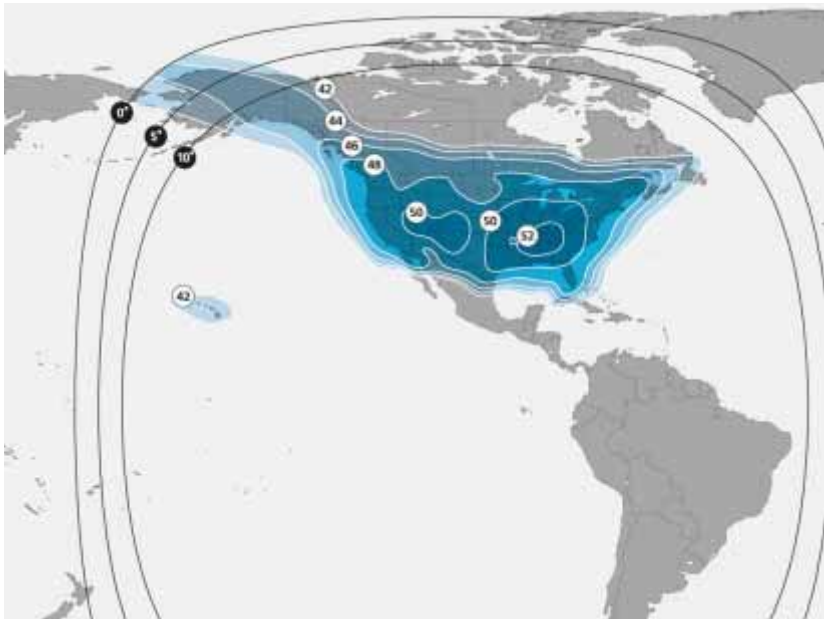
Launch Date:	21 September 2011
Payload (36 MHz equiv):	C-band: 24 transponders, Ku-band: 24 transponders
Coverage	US 48 States
Services:	Serves media and cable, enterprise customers (especially oil and gas, and maritime)

SES-3
103°W

New capacity at prime North American slot



SES-3 North America C-band beam

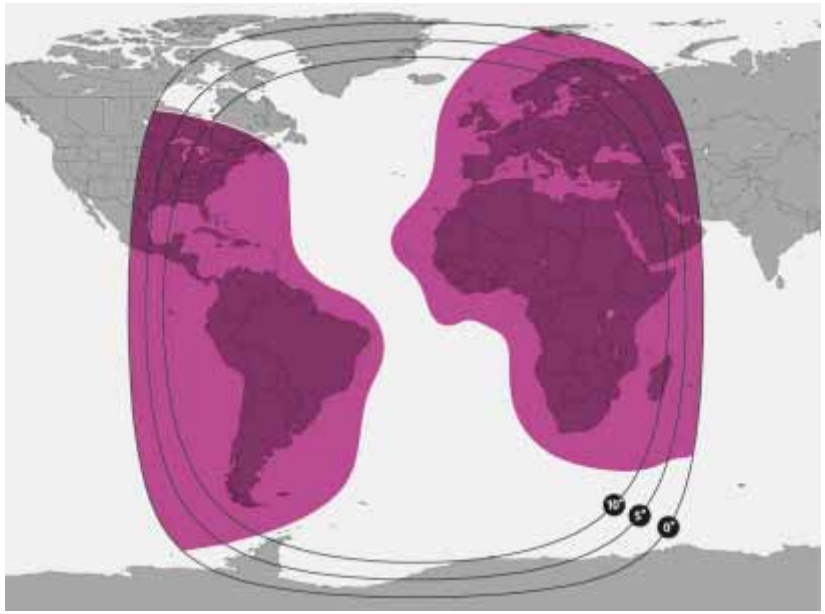


SES-3 North America Ku-band beam

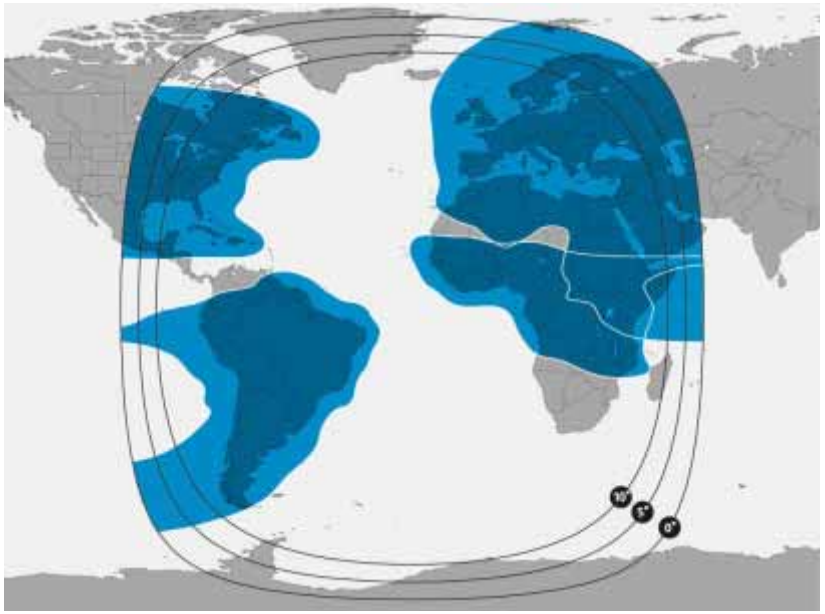
Launch Date:	July 2011
Payload (36 MHz equiv):	C-band: 24 transponders, Ku-band: 24 transponders
Coverage	US 50 States
Services:	Supports cable distribution, enterprise and government services

SES-4
338° E

Enhancing the premier Atlantic neighbourhood



SES-4 C-band coverage

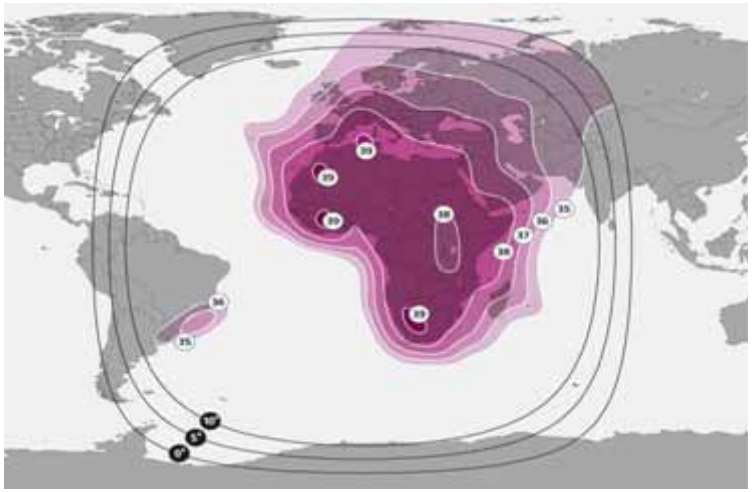


SES-4 Ku-band coverage

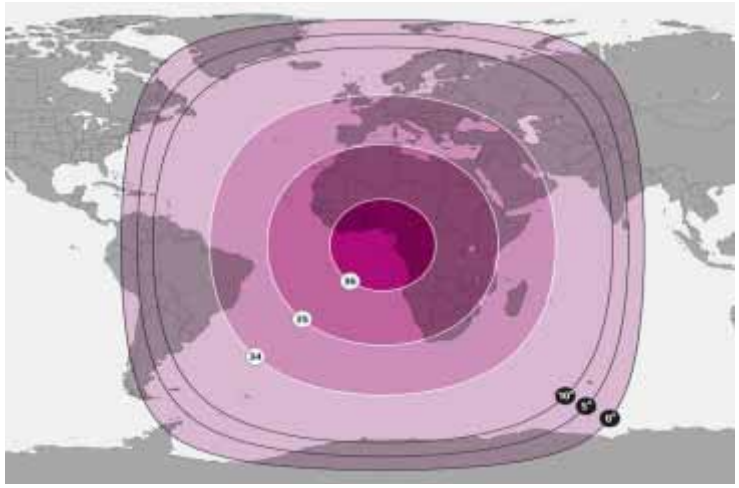
Launch Date:	Mid 2011
Payload (36 MHz equiv):	C-band: 52 transponders, Ku-band: 72 transponders
Coverage	Atlantic Ocean region, the Americas, including Europe, Africa and the Middle East
Services:	VSAT, enterprise, media services

SES-5

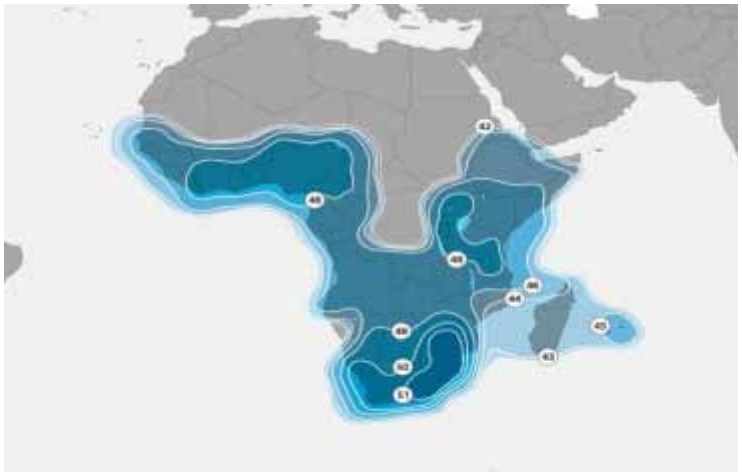
5°E



SES-5 East Hemi C-band beam



SES-5 Global C-band beam



SES-5 Sub-Saharan Africa Ku-band beam

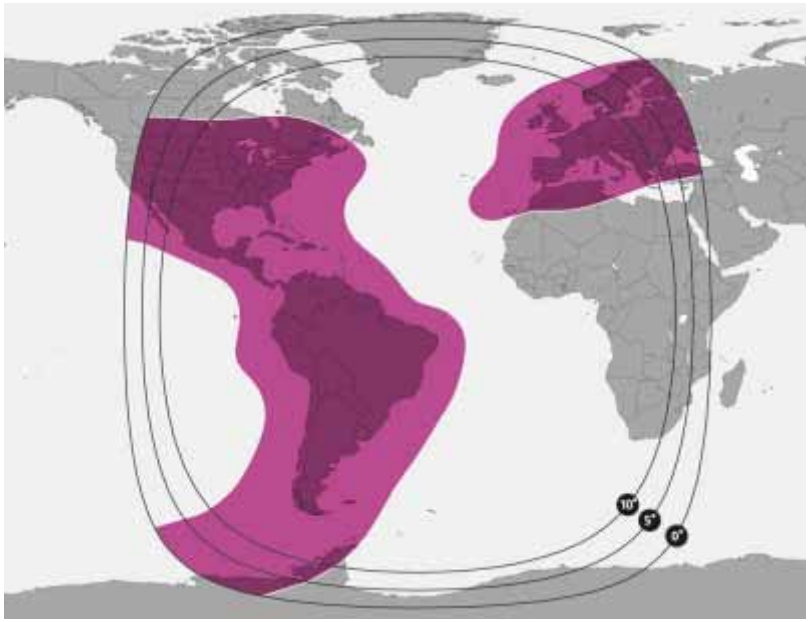
SES-5 Nordic Ku-band beam*

Launch Date: Q1 2012

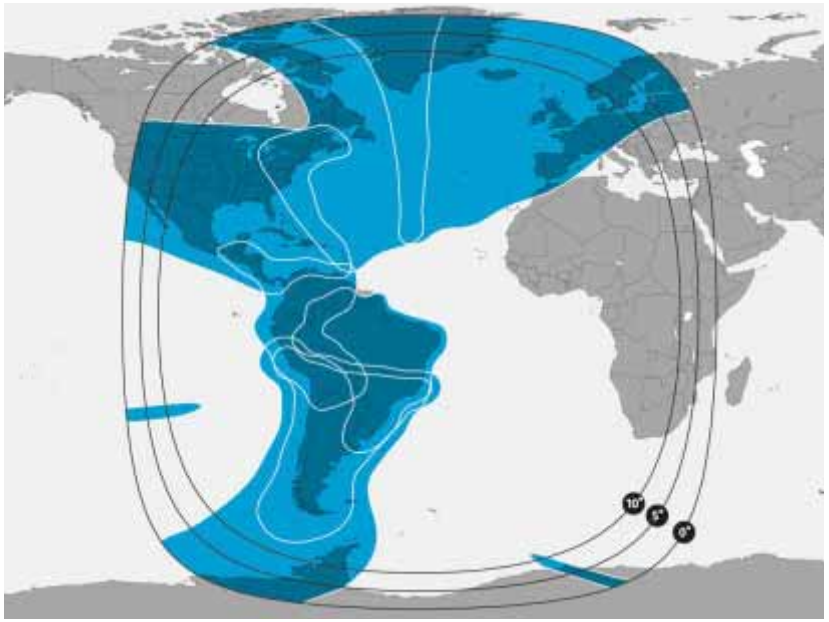
SES-6

319.5°E

Growth capacity for the Americas



SES-6 C-band coverage

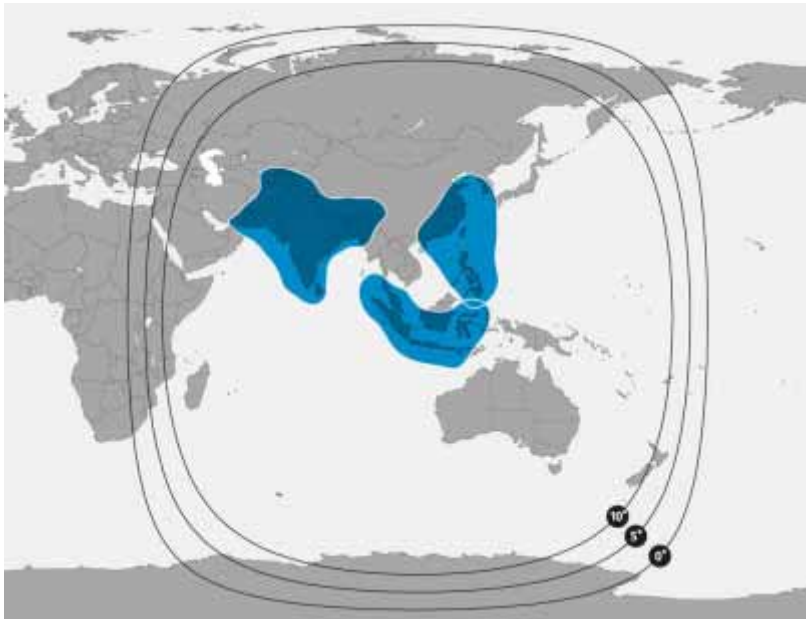


SES-6 Ku-band coverage

Expected Launch Date:	Q1 2013
Payload (36 MHz equiv):	C-band: 43 transponders, Ku-band: 48 transponders
Coverage	North America, Latin America, Europe and Atlantic Ocean region
Services:	Supports DTH services, VSAT services and government digital inclusion programmes

SES-7
108.2°E

Enhancing Asia's growing DTH neighbourhood



SES-7 Ku-band coverage

Launch Date:	May 2009
Payload (36 MHz equiv):	Ku-band: 19 transponders
Coverage	South Asia and Asia-Pacific region
Services:	DTH and VSAT services

- Co-located with NSS-11 at 108.2º East
- Provides redundancy options for existing DTH bouquets in India and Philippines
- Brand new DTH capacity for South Asia, North East Asia and South East Asia
- Drives growth of VSAT services across South Asia and Asia-Pacific region
- Former ProtoStar-II satellite

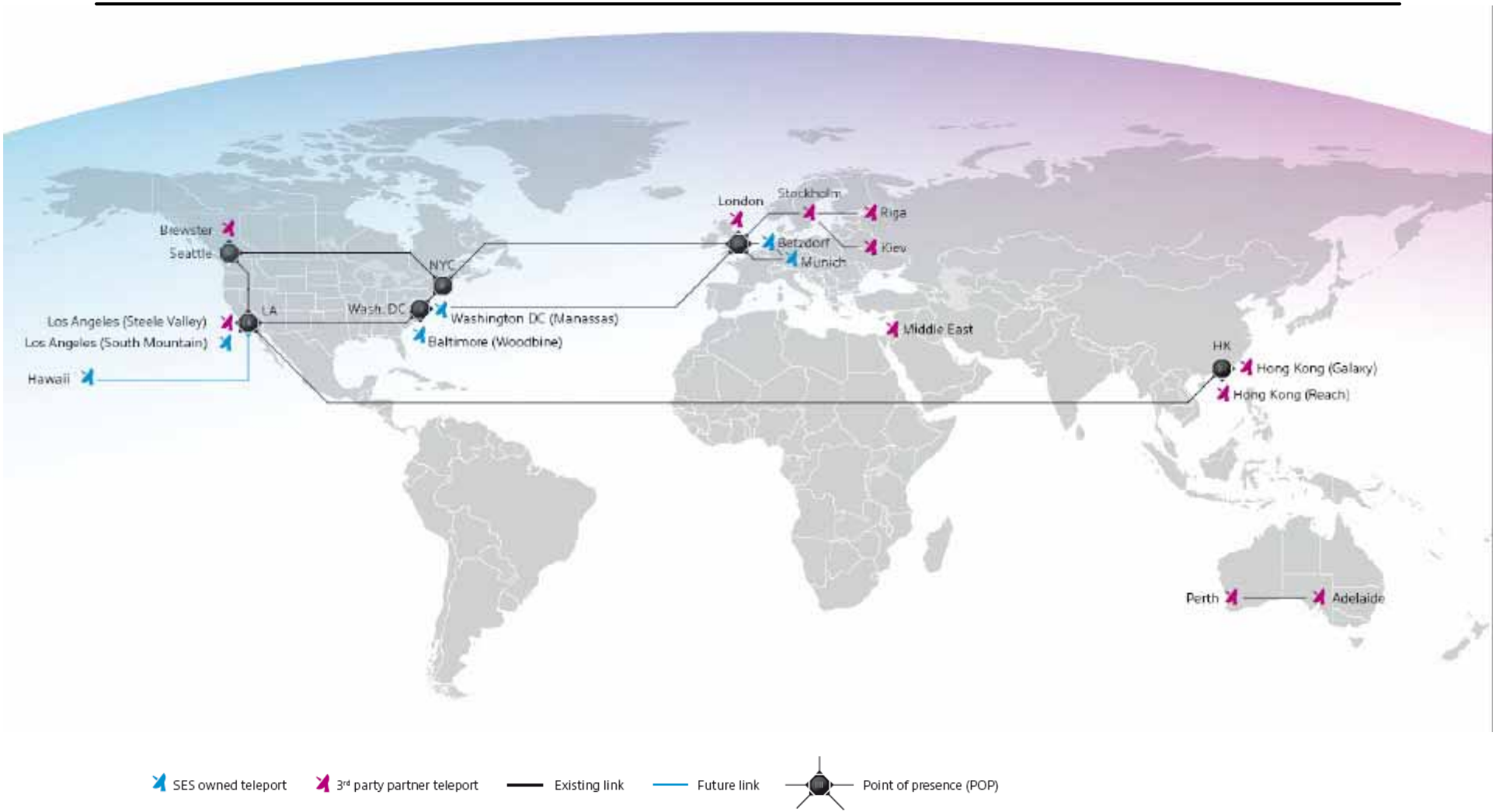
SES-8
95°E

Brand new DTH capacity for India and Indo-China

- High powered tailored beams for DTH applications in South Asia and Indo-China
- Smaller spacecraft supports faster time to market
- Designed to be co-located with NSS-6 at 95°E

Expected Launch Date:	Early 2013
Payload (36 MHz equiv):	Ku-band: Up to 33 transponders
Coverage	South Asia and Indo-China
Services:	DTH services

Teleport map



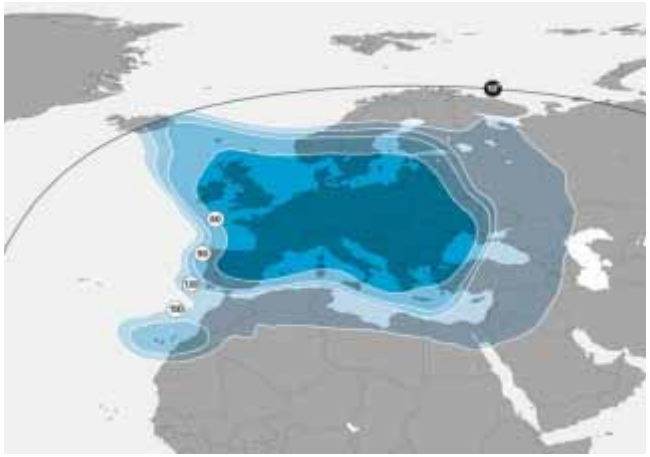
Recent Major Events

- 2011 NASCAR Season
- NCAA Men's and Women's Basketball Tournament
- March Madness
- WWE - Monday Night Raw and Tuesday Night Smackdown
- NBA All Star Weekend - 3D International Distribution
- 2011 Masters Golf - HD and 3D
- 2011 Women's World Cup - Germany
- Royal Wedding
- Japan Earth Quake/Tsunami/Power Plant
- Obama Visit to Europe
- 9/11 Ten Year Anniversary

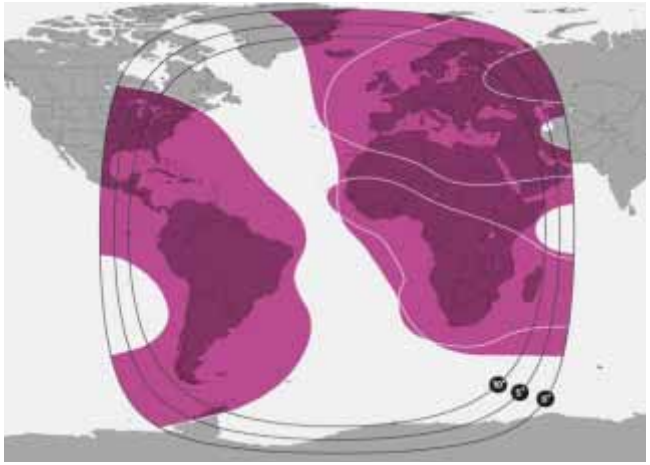
Future Major Events

▲ All season	2011-12	Monday Night Football
▲ All season	2011	Mountain West Conference Football Network
▲ All season	2011-12	Met Opera Season
▲ Oct.	2011	Pan American Games
▲ Jan.	2012	Australian Open
▲ Jan./Feb.	2012	African Cup of Nations
▲ All season	2012	F1 Grand prix's
▲ Mar.	2012	Japan earthquake anniversary
▲ June/July	2012	Euro 2012
▲ July/Aug.	2012	London Olympics *(Targeted to be CID compliant)*
▲ Aug./Sept.	2012	London Paralympics
▲ Nov.	2012	US National Conventions and Presidential Election

Olympics 2012 Footprints



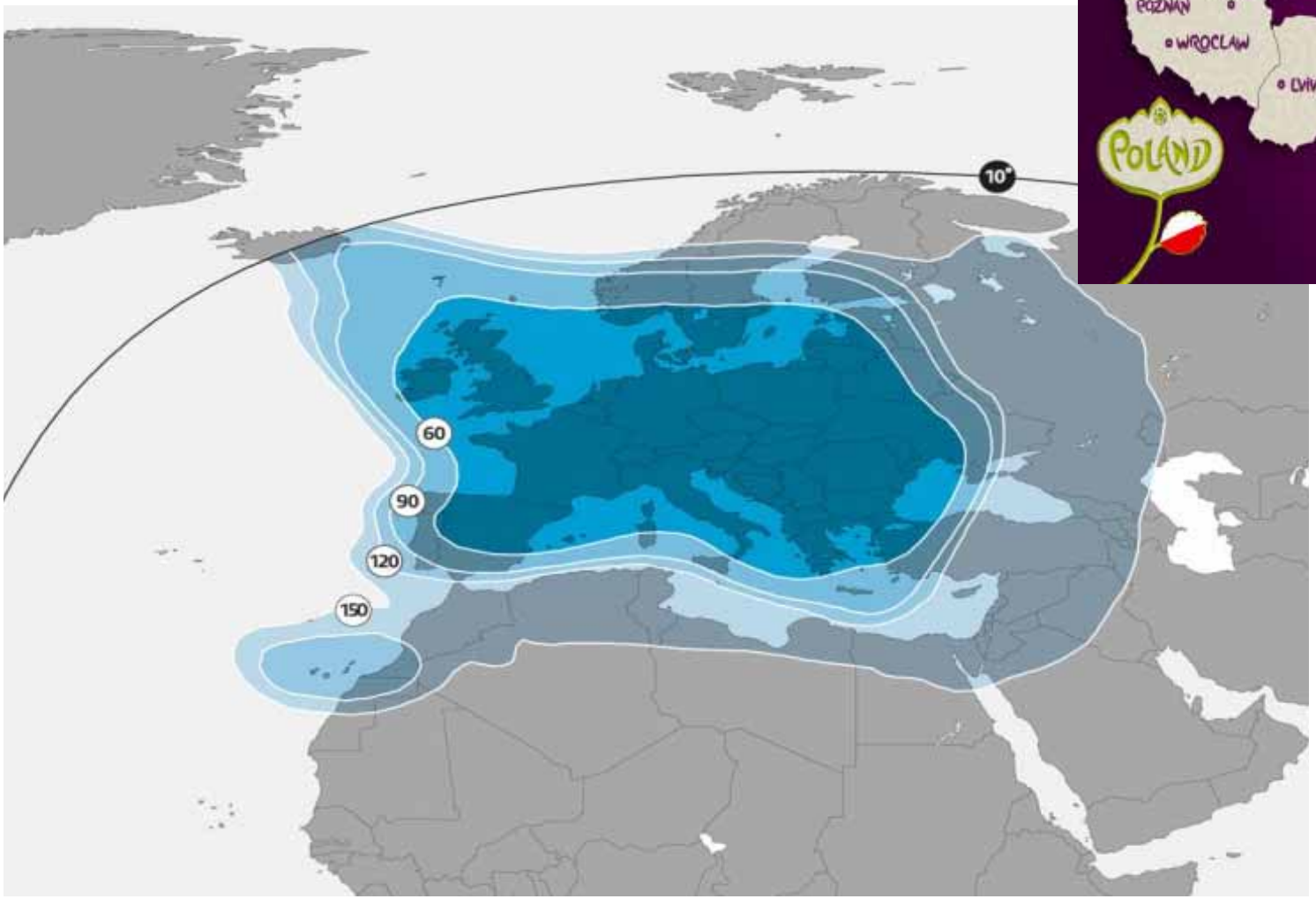
ASTRA 3B Europe Ku-band widebeam



NSS-7 C-band coverage

NSS-7 Ku-band coverage

Euro 2012 Footprint



ASTRA 3B Europe Ku-band widebeam

Three year trends SES

30 % more capacity available in fleet (likely an industry trend in Africa and Latin America at least, still see constraints in Asia/Australia

Evolution of Ka band over Europe for OU:

Satellite	Frequency Bands	Orbital Location	Coverage	Launch Date	Design Life
CURRENT					
Astra 4A	Ku, Ka	5E	S.Africa, Europe & Russia	2007	15 Years
Astra 1L	Ku, Ka	19.2E	Europe	2007	15 Years
Astra 3B	Ku, Ka	23.5E	N.Africa, Europe & Russia	2010	15 Years
FUTURE					
Astra 5B	Ku, Ka	31.5E	Europe, Russia	2013	15 Years
Astra 2E	Ku, Ka	28.2E	N.Africa, S.Africa & Europe	2013	15 Years
Astra 2F	Ku, Ka	28.2E	N.Africa, S.Africa & Europe	2012	15 Years
Astra 2G	Ku, Ka	28.2E	N.Africa, S.Africa & Europe	2014	15 Years

Inclined Satellites as of September 2011

Satellite	Frequency Bands	Orbital Location	Coverage	EOL
CURRENT				
AMC-5	Ku	79W	US	July 2014
NSS-703	Ku, C	47W	Americas, Europe, Africa	August 2014
Astra 1C	Ku	2E	Europe	August 2014
Astra 1E	Ku	5E	Europe	January 2017
Astra 1D	Ku	28.2E	Europe	May 2017
FUTURE				
Astra 3A	Ku	TBD	TBD	TBD
AMC-2	Ku, C	TBD	TBD	TBD

Three year trends industry

- Move to non geo stationary satellites – O3b eg
- News/video increasingly going to lower bit rate IP
- Sports and entertainment going from SD to higher bit rate HD, possibly 3D though not as promising as expected
- New HD standards consume less bandwidth than earlier versions
- Hybrid networks being upgraded, revamped and rationalized to include various satellite options
- Pricing trending downward in Africa due to glut of capacity, expect similar trend in Latin America with new launches
- Pricing will remain high in Asia short term
- Expected further consolidation among operators

SES

Google Earth footprints: apps.ses.com
Online bookings: stars.ses.com
Bookings: intlbookings@ses.com
US bookings: usbookings@ses.com

Thank you!

Supporting & promoting the common industry Carrier ID initiative