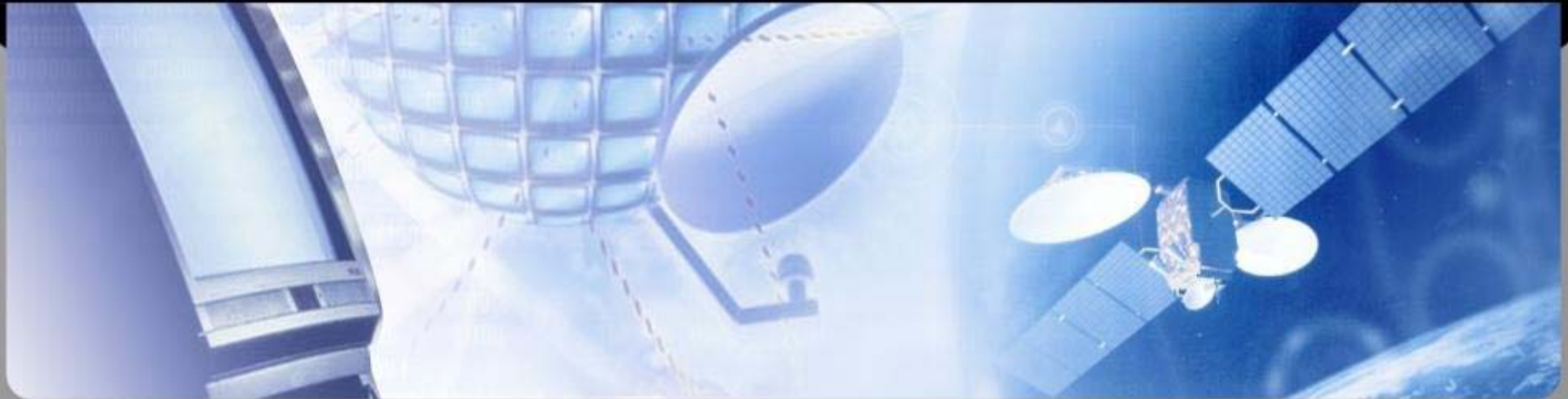




WBU-ISOG 2009

1st December 2009, Geneva
Sven-Olof Koopmann



Asia Broadcast Satellite's latest Developments



- **ABS was founded in 2006**
 - Started with operations of ABS-1 @ 75°E
- **since June 2009 ABS announced**
 - the procurement of a new satellite ABS-2
 - the take over of two existing satellites
 - a strategic cooperation with Eutelsat
 - the take over of a TT&C facility



Asia Broadcast Satellite's latest Developments



Orbital Location 75°East

Colocation of 3 satellites

- **ABS-1**

- C-Band Global Beam
(28 Xponder covering Johannesburg, Munich, Tokyo and Melbourne)
- Ku-Band North & South Beam
(16 Xponder covering all of Russia, South East Asia, Europe & Middle East)
- Cable and DTH Platform for Russia

- ABS-1A

- ABS-1B / W75

- ABS-2



Asia Broadcast Satellite's latest Developments



Orbital Location 75°East

Colocation of 3 satellites

- ABS-1
- **ABS-1A**
 - KU-Band Spot Beam for Afghanistan and Pakistan (12 Xponder FSS and 3 Xponder BSS)
 - To serve the growing demand for data in Afghanistan and broadcasting in Pakistan

- ABS-1B / W75
- ABS-2



Asia Broadcast Satellite's latest Developments



Orbital Location 75°East

Colocation of 3 satellites

- ABS-1
- ABS-1A
- **ABS-1B / W75**
 - Cooperation between ABS and Eutelsat
 - Joint marketing of former Eurobird 4 @ 75°E
 - KU Band Beam for CIS, Middle East
Central Asia



- ABS-2

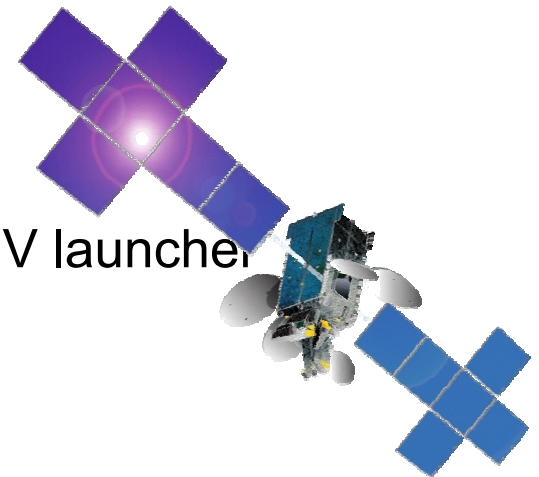
Asia Broadcast Satellite's latest Developments



Orbital Location 75°East

Colocation of 3 satellites

- ABS-1
- ABS-1A
- ABS-1B / W75
- **ABS-2**
 - Satellite to be launched in 2012
 - Space System Loral satellite on Ariane V launcher
 - C-Band
 - 20 Xponders on 2 Beams
 - KU-Band
 - 54 Xponders on 5 Beams
 - KA-Band
 - 4 Xponders on 1 Beam



Asia Broadcast Satellite's latest Developments



Acquisition of Mabuhay (Philippines)



Agila 2 @ 146°East

- C-Band Beam
(30 Xponders serving Eastern China and South East Asia and interconnecting to the USA via a Hawaii SpotBeam)
- KU-Band Beam
(24 Xponders serving Coastal China and the Philippines)
- DTH Platform (DREAM) with 4 Mio. Dishes

Subic Space Center (Philippines)

- NOC 24/7
- TT&C
- Monitoring
- Video Playout



Asia Broadcast Satellite's interconnection with fiber networks



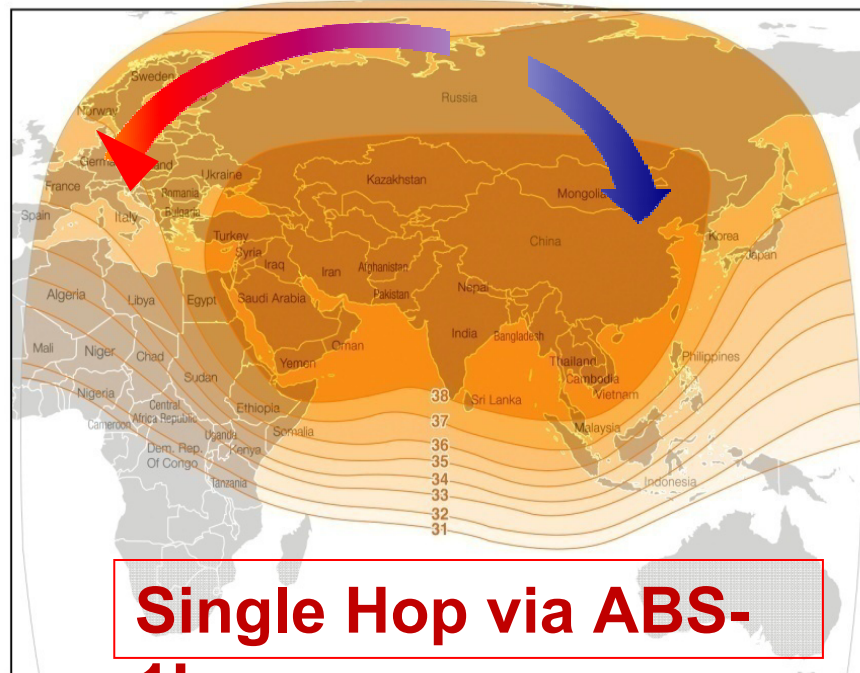
ABS expands interconnection with fiber network operators

e.g. to Genesis Networks, Cogent, PCCW, Emperion

- via the MTI Fiber Teleport in Munich and our other Ground Facilities
- Connecting the Pan Asian C-Band coverage of ABS-1 with the global fiber network of e.g. Genesis with more than 200 PoPs
- Offering back up services
- Offering “last mile connection
- Offering “last mile fiber extensions where there is no satellite access



Asian - European MCPC Platform



Single Hop via ABS-

1!

Asia to Europe/ME

- Direct access to European teleports and DTH platforms
- Expand Asian coverage & transport to Europe in One Solution
- More cost-effective than fiber

OR

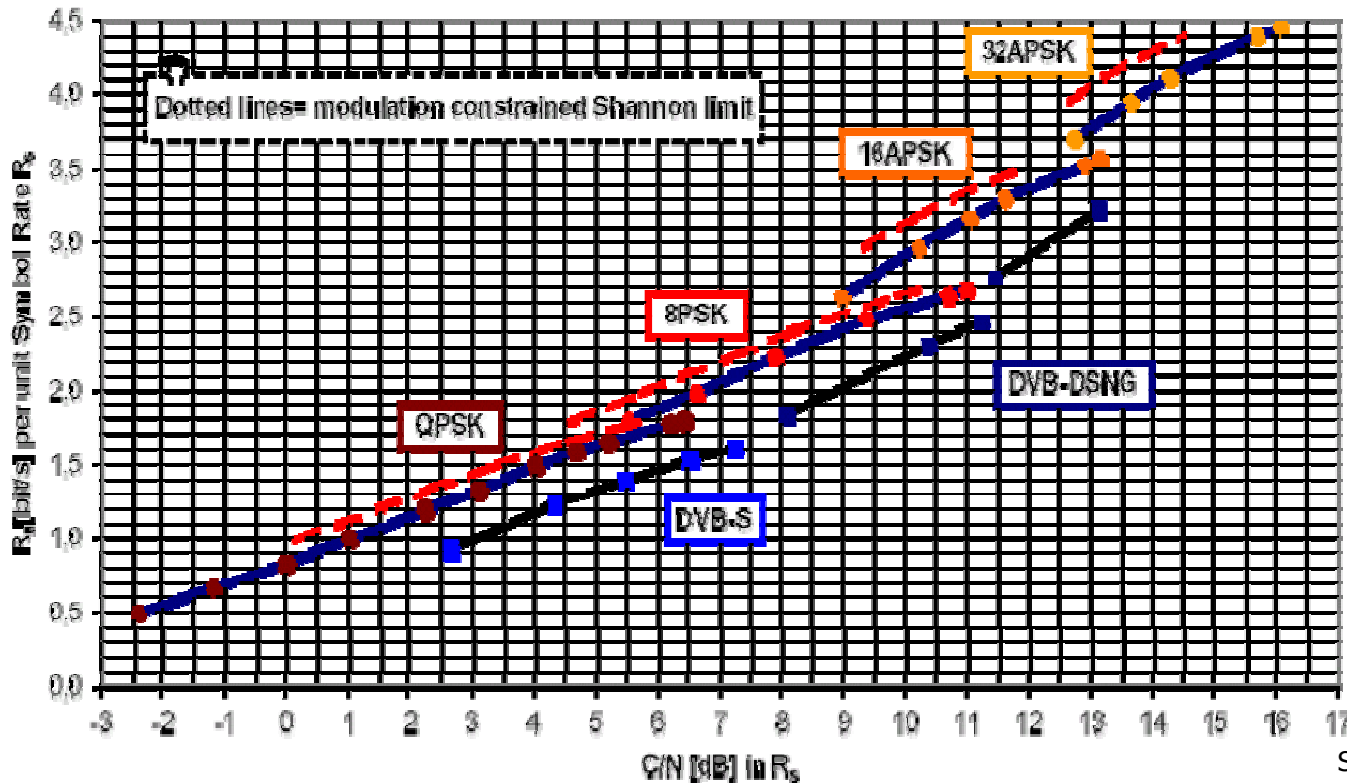
Europe/ME to Asia!

- Full Asian Coverage
- Turn-around from all major European Satellites
- DVB-S2 MCPC Platform
- Irdeto Conditional Access (Optional)

Satellite efficiency improves constantly

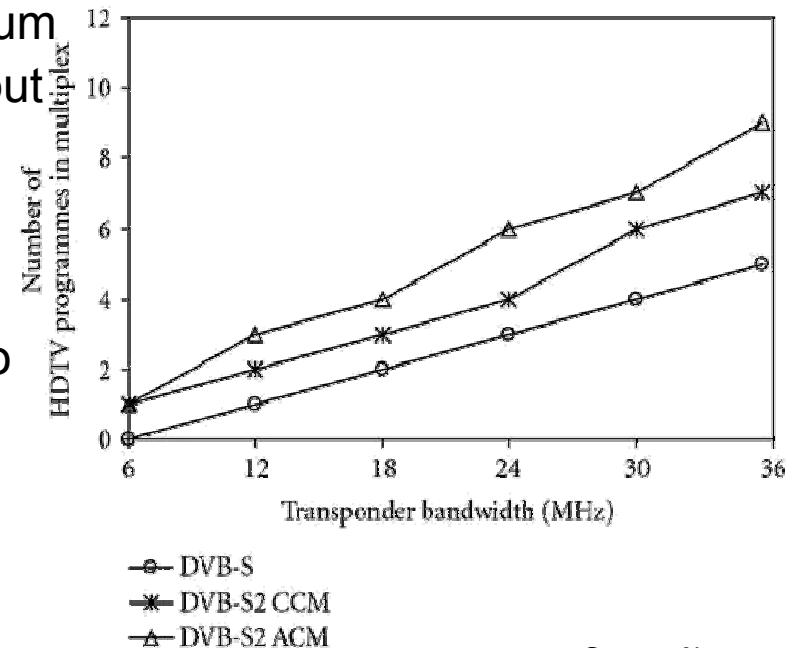
- DVB-S2 is state of the art
 - DVB-S2 is close to the Shannon Limit (less than 1dB from theoretical maximum capacity of a channel, improved throughput by 30-40% vs. DVB-S)

Spectrum efficiency versus required CN on AWGN channel



Satellite efficiency improves constantly

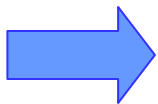
- New ACM (Adaptive Coding and Modulation) equipment improves capacity further
 - Constantly adapting transmission parameters dependent on conditions (e.g. weather)
 - ❖ Dynamically changing modulation (up to 32APSK)
 - ❖ Adaptive level of error protection
 - Reduces margin to a minimum
 - Increases average throughput by another 40-50%
 - The relevance for video transmission is limited due to guaranteed needed throughput to maintain video quality



Capacity Price Developments

Satellite Capacity will remain in demand

- + HD is driving capacity demand for distribution (DVB-S2, MPEG4)
- + HD is driving capacity demand for contribution (still often MPEG2, DVB-S2)
 - HD drives fiber build out and connection to regular event locations (Sport Arenas, Race Tracks etc.)
 - New technologies (DVB-S2, ACM, MPEG4) reduce needed capacity
- + Lower required bandwidth results in lower costs. Lower costs reduce the entry barrier for new satellite users
- + Growing market of DTH platforms in Eastern Europe and in Asia
 - News contribution are increasingly transmitted via wireless local networks (WIMAX)
- + Satellites remain the only choice in disaster areas
- + Mass end consumers start using Sky DSL
- + The available spectrum is limited



The prices for capacity will remain stable with a tendency to go up in the coming years following the expansion of HD services

Thank You

sven@absatellite.net