



European Satellite Operators Association

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## *Satellite Communications In Africa*

ESA IRC  
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Aarti Holla-Maini  
ESOA Secretary General

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[www.esoa.net](http://www.esoa.net)  
[sg@esoa.net](mailto:sg@esoa.net)

- The 10 Full Members of ESOA are:



- The 8 supporting members of ESOA are:





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## Purpose & Governance

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- Since 2002, works with key organisations/ policy-makers/ other stakeholders to ensure the *most favourable political, industrial & regulatory environment needed to provide satellite services* all over the globe
- Promotes the role of commercial satellite technology & services in *delivering policy & commercial objectives* for the benefit of citizens & governments alike

### **GOVERNANCE**

- Board of Directors: CEOs of 10 Full Member companies
- Present Chairman: Giuliano Berretta (Eutelsat)
- Permanent Secretary General
- Two Working Groups with member representatives
- Finance: Annual Subscriptions of full & supporting members



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## Activities

### *Market Access, Regulatory, Frequency WG, includes:*

- Trade & Market Access (e.g. WTO)
- Right to access & use spectrum (e.g. C-band)
- European Regulatory Framework on Electronic Communications (under review)
- European Regulation on Audiovisual Services (e.g. 'TV Without Frontiers' Directive)
- Competition/ State-Aid Matters (e.g. TV digital switchover)

### *Space Policy WG, includes:*

- European Space Policy
- Satellites for Africa/ broadband/ digital divide
- Space & Security
- Standards for Space
- Satellites for Aid & Emergency
- Satellites & Energy



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## Cooperation with Third Parties

- UNOSAT - MoU: Plan to work together to identify the appropriate satellite resources to optimise the deployment and use of satellite solutions for international development and emergency response
- ESA - MoU: Collaborate on Integrated Applications Promotion Programme (IAP) projects in order to demonstrate and develop the use of satellite communications technology for new, user-driven applications
- Eurisy: to ensure users know about essential services delivered from space to society
- ITU: ESOA Chairman is a Member of the ITU High-Level for Emergency Communications
- Also cooperation with SIA, APSCC, ECC/CEPT, GVF, SAP REG

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END OF ESOA PRESENTATION



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## Satellite Communications In Africa

- Huge potential market for satellite operators
- 20 commercial satellites in planning for the next 5 years just to cover Africa
- Applications address basic MDG's as well as delivering business opportunities
- Constraints include:
  - (i) Regulatory barriers - in Africa & due to EU spectrum policy developments
  - (ii) Lack of (local African & EU) awareness
    - (i) Of available solutions
    - (ii) Of their benefits
  - (iii) Lack of institutional support
  - (iv) Lack of *lasting* financial support

Still:

Numerous case studies exist to show what SatComs can do in Africa

## Case Study: NIGER

- Famine in Dakoro region of Niger in 2005 due to drought & locusts
- NGO Telecom Sans Frontier intervened
- Early-warning system connecting 12 vulnerable/ isolated regions was set up to relay real-time info on key indicators:
  - Variations in stock of subsistence crops
  - Changes in peoples' diets
  - Variations in natural resources
- In addition possibility to watch - via satellite - locust movements/ meteorological developments & communicate info to local authorities
- What did it involve:
  - 12 days training of 26 employees from agriculture/ livestock depts of Niger state in areas with zero connectivity & no GSM coverage
  - Installation of telecoms centres
  - Handing over running of system to local Niger authorities in 2006

## Case Study: NIGER, *cont.*

Costs were kept to a minimum:

- Portable broadband satellite terminal which charged by 'volume of data' transmitted
  - TSF, with Universite de Pau, developed software to compress the data sent from 330kB to 3kB
  - Use shows the whole system clocks up about US\$100 per month
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- Sustainable solution which Niger government can afford
  - This situation is not uncommon, project could easily be extended to other countries

## Case Study: Opportunity International

- OI is an NGO & leader in micro-finance
- Micro-finance builds on the foundation that many of the world's poorest people are a good credit risk. Their lifetime of struggling just for food & shelter fosters the kind of single-minded drive that it takes to start or build a small business
- OI provides such persons with access to small loans & business training to enable them to start their own businesses
- By helping a poor family to increase its income, micro-enterprise development has an immediate & lasting impact on quality of life - the ability to afford food, shelter, education & healthcare
- Then as business income increases, the business is able to expand, & the effect spreads beyond the family into the local community, through employment & contribution to the local economy: true sustainable development. This Case Study describes OI's activities in Malawi.

### Case Study: Opportunity International, *cont.*

- OI decided to run a pilot project using VSATs with the Bank of Malawi, which provides such microfinance services & which needs reliable, robust & cost-effective access to the Internet in order to:
  - Allow safe & efficient remote management & monitoring of their local area networks
  - Remotely execute database backups to remote servers for disaster recovery
  - Engage in effective general communications with remote support & other OI Partners
- Malawi faced excessive difficulties in reliably accessing Internet
- Before using VSATs, uninterrupted Internet access was impossible or when connection was successful: throughput was so slow that remote management/ database backups were unacceptably slow/ impossible
- The local ISP constantly oversold their circuits & was therefore totally saturated so that they were virtually unusable

### Case Study: Opportunity International, *cont.*

- The VSAT installation is still in the pilot phase of the project
  - OI's goal is to have a successful VSAT installation at the Opportunity International Bank of Malawi in order to demonstrate that VSATs are viable options that could be used in other locations where other communications are not easily available, & often where even no GSM coverage exists
  - VSAT technology will further enable OI to continue its outreach to serve the poorest of the poor
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- ➔ A reliable communications infrastructure is key to enabling such microfinance systems to work
  - ➔ Microfinance is recognised as a key to sustainable development & socially responsible investment (cf. 2006 Nobel Peace Prize for micro-finance initiatives)
  - ➔ Microfinance hits the core of helping the poor develop - MDG1

### Case Study: DELIFLOR

- A Dutch flower grower wanted to outsource its flower growing to another better suited environment
- Identified an Ethiopian partner just outside Addis Ababa with an ideal site
- Partner met all requirements except communications capabilities which were relied on to share data across an international data network
- Needed a connection to Deliflor's HQ in The Netherlands
- No Internet access at the site's remote location
  - ➔ Satellite communications allowed the partnership to work
  - ➔ *200 people employed*
  - ➔ *€350 per satellite terminal*
  - ➔ *Relies on INTERNATIONAL COMMUNICATIONS*



### Case Study: NEPAD Schools Initiative

- Two schools in South Africa using satellite communications to access teaching resources
- Enables access to the Internet
- Allows pupils of the two African schools to exchange emails and instant messaging with UK schools
- Gives teachers access to central server in Cape Town for following national curriculum



- ➔ Satellite communications allowed the initiative to work
- ➔ Extended to 12 schools, then went nationwide
- ➔ Uses *INTERNATIONAL COMMUNICATIONS*

### Case Study: Save the Children

- Feb 2007: torrential rains in Mozambique: major rivers, threatening lives & livelihoods of thousands of families
- According to government authorities around 59,000 people were displaced by floodwaters in the Zambezi River basin. The situation was expected to worsen & was particularly dangerous for children, whose basic needs are of critical concern immediately but whose long-term wellbeing must also be secured as food runs out, health risks increase and the environment for children becomes more risky
- Save the Children is the NGO that provided the families affected with household kits comprised of blankets, cooking & eating utensils, water purifiers, soap, buckets & plastic sheeting

### Case Study: Save the Children, *cont.*

- Save the Children teams rely on critical, timely communications in the field, which is provided via satellite, as no other reliable Internet connectivity is available or accessible
- Connectivity delivers Internet access to Save the Children's main country office in Maputo, as well as three sub-offices
- Allows mission critical communications used to:
  - Coordinate actions on the ground
  - Allow timely communication with headquarters in order to enhance fund raising activities
- Satellite communications enabling coordination for life-saving supplies to reach those in need & allowing STC to run day-to-day activities effectively
- Coordination through communication is required to deliver not only live-saving supplies to people in need because of flooding as in this case but even more generally in delivering food, water, medication and all sorts of supplies to regions all over Africa.

## Disaster Management: Example: Connecting Points around Lake CHAD



Since 1966 Lake Chad has reduced from 25,000 km to less than 1,500 km  
Satellite communications are foreseen to support water management activities