

## Broadband Connectivity via Satellite

### About ESOA

The European Satellite Operators' Association was formed in March 2002 to represent the interests of the industry in discussions with the European Commission, Parliament, Council and the European Space Agency as well as other international organisations, national governments and regulators. ESOA's goals include ensuring that satellites benefit from the appropriate political, industrial and regulatory environment to fulfil their vital role in the delivery of communications. ESOA is governed by a Board of Directors made up of the CEOs of its Member Companies.

The activities and other details about the ESOA can be found at [www.esoa.net](http://www.esoa.net). Members of ESOA are: Astrium Services, Eurasiasat, Eutelsat, HellasSat, Hispasat, Inmarsat, SES, SES Sirius, Telenor and Telespazio. Arianespace, Avanti Communications, Astrium Satellites, International Space Brokers and Mansat are Supporting Members of ESOA.

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## Broadband Connectivity via Satellite



Millions of people in Europe are still unconnected today, at a time when most Europeans take communications such as internet connectivity and telephones for granted. Members of the European Satellite Operators' Association (ESOA) bring reliable communications to people no matter where they are - from towns and villages to the world's most remote areas.





# Broadband Connectivity via Satellite



Broadband has brought to life one of the most important innovations in society, the internet. Broadband enables new applications and services leading to new business activities and improved productivity. The speed of Broadband turns the internet into an extremely powerful and fast communications tool for both consumers and businesses, as well as a source of educational and research material. Governments throughout the world recognise the importance of Broadband in their economies and to the everyday life of citizens.

Broadband underpins Europe's goal, as laid out in Lisbon, to become the most competitive and dynamic knowledge-based economy in the world, but it can only help those who have access to it. Satellites enable access to broadband, especially in rural and remote, low user density areas that fail to attract DSL and cable due to high deployment costs. In these areas, there is a market failure.



Citizens and businesses in rural and remote areas should benefit equally from access to broadband as those in urban areas. They need the same high quality services as urban residents. Telemedicine and eHealth applications via Broadband improve the delivery of healthcare in rural and remote areas. eGovernment applications via Broadband allow better access to and interaction with government, and e-learning applications substantially improve the quality of education in more remote regions. Satellites enable all these applications without discrimination between users. The European Commission considers wide broadband coverage in Europe as crucial for fostering growth and jobs in Europe. Lack of access to a high-quality communications tool in rural European economies will remain a barrier to true integration of all in the wider economy.

Thus, one of the greatest challenges today is how to abolish this 'digital divide' which separates the world into communications “haves” and “have nots”.

## Just How Big is the Problem?

This problem has been considered at local, national and European levels but experts never come to precisely the same answer. They do however all agree that the problem is a significant one. The figure is always around 10% to 15% of European households still being unconnected by 2009/2010 which represents about 15 million households in Europe. Analysts also agree that broadband take-up will likely plateau around 60% to 70%, which implies that 10 million households who want broadband will still not be able to receive it.

The problem varies around Europe and its neighbouring countries. Some Member States have almost 100% coverage. Other countries such as Greece, Poland, the Czech Republic, Romania and Turkey are forecast not to exceed 50% to 70% coverage.

But the digital divide isn't just about who can be connected. It's also about the quality and speed of service they receive and at what price. Consumer prices in the more established Broadband areas are reasonably attractive. However, those areas where the telecoms infrastructure is less developed, and therefore with more people lacking access to Broadband, tend to be the areas with weaker economies. Affordability is a key issue.

The digital divide is not just a European problem. Development of the world's poorest countries is empowered through access to communications technology. Many under-developed regions of the world have not fully benefited from the remarkable communications revolution that has taken place over the past forty years. This has resulted in the one true Digital Divide.

The digital divide is well documented, and the figures are stark. According to the International Telecommunications Union (ITU), in 2004 Africa accounted for 13% of the world's population, but for only 3.7% of all fixed and mobile subscribers worldwide. Africa has an average of 3 fixed lines per 100 people, compared to an average of 40 in Europe. The entire continent has fewer Internet users than in France alone.

The lack of a reliable communications infrastructure presents a real obstacle to economic development and connecting under-developed regions is one of the biggest challenges facing the global communications industry.

## Is there a Solution?

The roll-out of DSL and cable broadband is accelerating in urban areas. But for those in rural and remote regions, the deployment of these technologies is at best not commercially attractive, and at worst, substantially more expensive than alternatives. In a recent speech on Bridging the Digital Divide, European Commissioner for Information Society and Media, Viviane Reding said “Satellite services offer wide coverage and are therefore an interesting solution in isolated areas and in regions characterised by difficult topographies. They can also provide a medium-term solution when terrestrial roll-out is uncertain.” ESOA strongly agrees with this view. Satellites can be a natural complement to existing technologies, extending their reach to ensure that Broadband is available to all.

Satellite broadband is available now from any location in Europe. For the more remote areas in particular, a satellite-based solution may not only be the cheapest to implement, but sometimes the only available solution. Satellites flying in orbit today can be used to provide Broadband services to unconnected people anywhere in Europe. So why is this not happening?

It is often said that satellite broadband is expensive and indeed, a cursory look at the market will tell you that it does cost more than DSL. This price simply reflects the fact that delivering services to a small number of people in remote areas costs more per head than delivering to large numbers of people in urban areas. This is part of the digital divide that we need to address.

## How Can Satellite Solutions be Implemented?

Satellite-based Broadband represents a real solution to Digital Divide issues in rural and remote areas. Satellite capacity is available and sufficient to start a significant roll-out of services. With an uptake of services, more capacity will follow.

But the digital divide is also about price and affordability and this is where action is required. Unlike a new DSL or cable initiative that would require very substantial



infrastructure investment, satellite operators have already invested in infrastructure and clearly they need to see a return on that investment. In addition, service providers and local support infrastructure is needed as well as the user terminals and their installation. These types of costs are common irrespective of the bandwidth provision.

Whereas it is relatively easy to see how Structural funds could be used to support the building of a new infrastructure, in the more remote regions it is not a new terrestrial infrastructure that is required, but an existing satellite one. Important questions remain whether structural funds can be used to support the return on the investment already made by satellite operators. Can structural funds be used to fund end-user equipment and terminals in order to achieve comparable prices to those available in urban areas? Can new structural funds be used to build more capacity in the network in the future?

Satellite operators have been investing in new and innovative solutions to lower the cost of the end-user terminals and reach a price per month equivalent to some prices for ADSL connections in Europe. An expert group made up of industry members working with the European Commission on the issue of the Digital Divide came to the conclusion that satellite was best in areas with 20 households per square kilometre. Other technologies are too expensive to deploy in such areas given the higher cost associated with delivering services to a small number of people in rural and remote areas when compared to their urban counterparts.

## Policy-Making

All over the globe, satellite providers are speaking on industry panels, participating in government-industry working groups and conducting media interviews to inform authorities on the options and the use of satellite systems and solutions. In today's Information Society there is no room for a Digital Divide and satellites provide an immediate, reliable solution to connect TODAY those who will otherwise remain unconnected for years.

ESOA wishes to ensure that adequate visibility and priority be given to satellites in policy-making and it welcomes the joint broadband initiative of European Commissioners Viviane Reding, Mariann Fischer Boel, Danuta Hübner, and Neelie Kroes and their recommendation that the EC should use all possible instruments to bridge the digital divide. ESOA Member Companies will continue to support all efforts requiring satellite capacity and services, which clearly have a role to play in the solution. Nevertheless public support and awareness - both on European, national and local level - is crucial to their ability to do this. We look forward to working with the EC to bridge the digital divide and hope that member-states will be encouraged to invest in the most cost-efficient technology to meet their requirements including the satellite broadband services.