

# Portugal Telecom: Single Partner, Global Reach

Duarte Lopes, Head of the International Network at PT Comunicações, Portugal Telecom's fixed network operator talks to InterComms about the company's capabilities



**Duarte Lopes is the Head of the International Network at PT Comunicações, Portugal Telecom's fixed network operator. Having joined CPR Marconi in 1990 in the Network Department, he has spent his entire professional career in the international area of business leading several projects in terms of submarine, satellite, switching and transmission technologies. Since 2003 he is working at the wholesale department of PT Comunicações.**

**Duarte Lopes holds a degree in Telecommunications Engineering from the Instituto Superior Técnico in Lisbon, Portugal.**

**Q: What is the value in having a single partner, such as Portugal Telecom connected to all continents rather than several partners with partial or overlapping coverage?**

**A:** The world is becoming increasingly globalised; in many industries, sustained growth can only be achieved

by continuing international expansion. Thus, many large companies, including telecom operators, have a presence in an increasing number of geographies. In addition, a large part of Internet traffic is international and, in many cases, crosses continents.

Because of this, many operators are looking for a carrier that can respond to their needs across several continents. For example, an ISP in an African country needs to transport a large part of its traffic to Europe and the US. In environments that are highly competitive and where the need for bandwidth is expanding exponentially – as is increasingly the case in Africa – it is very important for operators to control their cost of bandwidth and to ensure they can cope with the increasing need for capacity. A carrier like Portugal Telecom, that connects several continents with its own infrastructure is able to do just that: guarantee sufficient and reliable bandwidth at competitive prices.

**Q: Can you illustrate the value of PT's infrastructure with an example of how this has helped PT overcome a problem that could not otherwise have been solved?**

**A:** The international footprint of Portugal Telecom includes several points of presence mainly in the European main cities and in the USA and includes also several terrestrial links, satellite connections to remote countries and submarine systems.

Regarding submarine assets, is possible today to interconnect directly from Portugal to any continent except Antarctica. This infrastructure needs to be planned a few years in advance and is today of great value in our strategy.

As an example and due to the increase of capacity requirements for broadband services that occurred

in the last recent years, Portugal Telecom is able to meet today the expectations of its Clients in terms of bandwidth for several destinations, providing competitive prices and customised solutions with a fast time-to-market. Our strategic focus in Africa collects today benefits from the accurate planning that was performed a few years ago with the investment made by Portugal Telecom within SAT-3 consortium, investment that was already complemented with a new investment in the WACS system that will be ready for service by the second half of 2011.

As another example, Portugal Telecom is able to provide normal or ad-hoc restoration to submarine systems that became unavailable due to earthquakes or illegal fishing activities, putting large capacity available in order to re-route the affected traffic. This happened, for example, two years ago with our own subsidiary in Macau.

**Q: Infrastructure can't stand still, what are you doing to enhance and update your infrastructure to maintain your competitive advantages?**

**A:** We are constantly re-evaluating the need for future expansion of our network. Mid-term planning is very important for us, given the long lead times for infrastructure upgrades and construction, compared to the almost explosive growth of international bandwidth need. Even if the new cables that you mention will only light up by 2010-2011, we are already thinking about the "what's next". Basically, we are constantly looking for new opportunities to grow capacity, diversify to guarantee redundancy and maintain our competitive edge. To give you some examples, we are currently upgrading the Columbus-III cable between Portugal and Miami – the shortest possible route for traffic from Africa to the NAP

▶ of the Americas – and we are investing in the EIG (Europe-India-Gateway) and the WACS (West African Cable System)

**Q: What competitive advantages come from having your own capacity?**

**A:** Above all, investing in own infrastructure means getting cheaper access to capacity – at least when you reach a certain scale, as is the case of Portugal Telecom. This, in turn, enables us to provide competitive conditions. Regarding submarine cables, this also extends to the onward connectivity – many of our customers today are looking for end-to-end solutions, be it for IPLCs or for international internet access. Additionally, it also allows us to offer more flexibility in terms of client access and traffic routing. Another benefit is at the quality level, where PT is able to achieve a higher level of control and management of the owned infrastructure.

Owning capacity in submarine cables also means that we are able to better correspond to our customers’ capacity needs in the mid-term. With international bandwidth need doubling every 12 to 18 months, some cables will reach saturation of their lit capacity relatively soon, even

with the recent and planned upgrades. Taking an active part in the planning of future upgrades allows us to plan ahead, rather than relying on other carriers’ capacity which may not grow as fast as our customers needs.

**Q: How are you improving Internet access conditions?**

**A:** Internet access improvement depends heavily on several important components, namely continuous backbone investment and effective management of both IP transit and peerings.

Concerning backbone investment, it is clear that Internet access is no longer a cash-cow business – if indeed it ever was - and its quality relies on structuring carefully the IP platform structure, the PoP network development and hardware/software upgrading such as routers, switches, servers, OSs, etc... taking into account the market trends on both traffic growth and QoS constraints. With these measures, it can still be an attractive business in terms of return on capital invested.

**Q: What level of peerings and direct access to main Tier 1 carriers and content providers do you provide?**

**A:** Concerning IP transits, we rely on a careful management of a blend of Tier One and Tier Two providers, balancing proximity to contents and cost matrixes aiming for a highly efficient throughput.

Regarding specific contents, we pay special attention to CDNs, installing CDNs equipment that proxy contents and minimize international bandwidth usage, both benefiting our customers and PT.

In terms of peering relations, with almost 900 BGP sessions now active, we can proudly claim more than 60% of peering to transit ratio, which is a very good index taking into account our dimension worldwide.

**Q: Why is PT well positioned to address the competitive conditions between Africa, Europe and the Americas, in the future also to Asia?**

**A:** First of all, the scale achieved by our international presence – for example, we are shareholders of leading mobile operators Unitel in Angola) and CVMóvel in Cape Verde – enables us to provide attractive conditions, both for international capacity and hubbing.

Secondly, through our Points of Presence in the most important Internet Exchanges in Europe and the Americas and our peering policy, we can transport traffic from and to the most important destinations of many carriers.

Thirdly, we are expanding our network throughout all continents, meaning that we can correspond to future bandwidth growth needs of our customers. Besides participating in the construction of new submarine cables, we also actively seek the opportunity to upgrade the existing ones. For example, as we are participating in the upgrade of the SAT-3 cable, carriers with capacity on some of the new cables along the African coast – such as the WACS or the ACE – can rely on us for restoration.

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