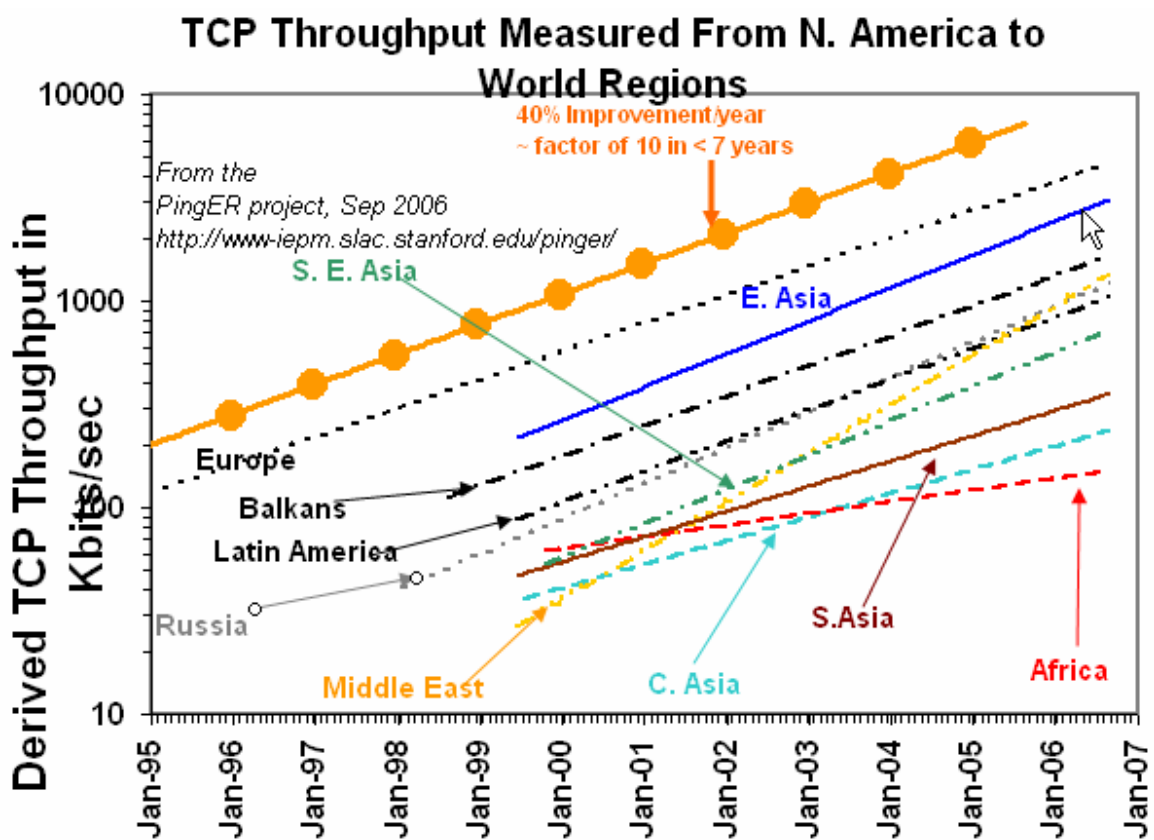


Bringing down the cost and improving the availability of access.

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The chart below provides an indication of the connectivity situation in Africa. It is derived from data from the Stanford University Pinger project¹ which uses ping data to provide an indication of Internet bandwidth from various points in the world. As can be seen Africa is at the bottom of the league and is falling further behind.



The main reason for this is that circuits from Africa to the US or Europe usually cost more than US\$5000 a month/Mbps, while in comparison, cross-Atlantic links between North America and Europe can now be obtained for US\$5-10 Mbps/month and for US\$16-30 Mbps/month on international routes in Asia

DSL charges are at least 10 times higher charges and 10 times lower bandwidth than equivalent services in developed regions.

The main cause of this is the continued presence of monopolies in basic infrastructure across the

¹ www-iepm.slac.stanford.edu/pinger

continent. Although it is dangerous to generalise, this is generally the case if we look at the full range of services from international gateways to the local loop. Where there has been an introduction of competition it is usually only 1 or 2 new fixed line players in a few countries. At the same time mobile operators are making big profits while fixed line operators are becoming increasingly redundant & other new technologies prohibited, such as VOIP, VSAT, WiFi etc. It is not surprising then that so few countries in Africa have international fibre links and even fewer have pervasive national fibre backbones. nevertheless in the last couple of years, there are an increasing number of countries building national backbones and participating in international fibre projects, but these are still relatively few, and pricing and quality of service remains to be seen.

Therefore the main need is to accelerate the introduction of competition in basic telecom services at all levels, this includes dropping license fees to cost related levels.

Other potential actions include:

- Introduction of open access infrastructure, and national cable landing points which are managed by national associations of bandwidth providers
- Use subsidies such as in universal service funds to smooth the variation in costs between urban and rural areas, or over time to encourage demand.
- Two interesting models of this are Kenya and Sri Lanka. In Kenya the government is planning an international fibre link which will be priced at whatever currently competitive rates are present on world markets for equivalent routes. In Sri Lanka, support for connectivity costs in public access centres is being subsidised on a sliding scale with the expectation that subsidies will not be required in five years time when competition in the market will have driven down charges to cost-related levels.
- Adding fibre to alternative infrastructure such as electricity grids, rail lines, and gas pipelines when they are planned can radically reduce the cost of fibre deployments. Therefore international finance guidelines and national government regulations should require all alternative infrastructure to have fibre in their designs.
- Development finance and universal service funds could be used to increase the number of add-drop points along the routes of national backbones so that more villages along the way can be reached by high speed infrastructure.
- Tax breaks and incentives for developing alternative energy sources are needed to improve the availability of power supplies. Due the unreliability of grid power, the need for generators and fuel can be a major cost in maintaining connectivity.
- In order to build demand there is an increased support for local content and applications development, as well as the localisation of applications.
- Provide access to credit for purchasing computers, as has been done in Egypt, can help the public get online.
- Consumer groups have traditionally been relatively inactive in Africa, especially with regard to ICT issues. Increased support for activities in this area is needed to help the push for policy change and build awareness of the issues among the public. Provision of assistance will be important to help accelerate consumer group formation, capacity building, and in mounting special campaigns.
- Measuring progress using an agreed set of indicators can help to encourage progress, especially if naming and shaming of leaders and laggards can take place.