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Quantifying the Worldwide Digital Divide: The Emergence of Africa

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Africa is huge with over 1 billion people, speaking over 1000 languages, with huge rainforests and vast deserts. Yet as we shall show it badly lags behind the rest of the world in its Internet performance. This talk will show how we measure the Internet Performance. These measurements cover countries of the world containing over 99% of the world's Internet connected population. Using these measurements we illustrate the overall Internet performance for the world in particular for: throughput, losses, jitter, Round Trip Times, availability etc. We will demonstrate the performance trends for the last 13 years, in particular illustrating how Africa is not only behind all other regions and one to two decades behind developed regions, but worse is falling further behind. We also compare our results with the International Telecommunications Union's ICT Development Index (IDI) that measures the development for over 150 countries. We then focus on the promising emerging situation in Africa following the dramatic increases in performance due to submarine fibre connectivity that was driven partially by soccer's 2010 World Cup in South Africa. We conclude that despite the many challenges in Africa, there is promising potential for a dramatic improvement in the near future, but there is still a long way to go.