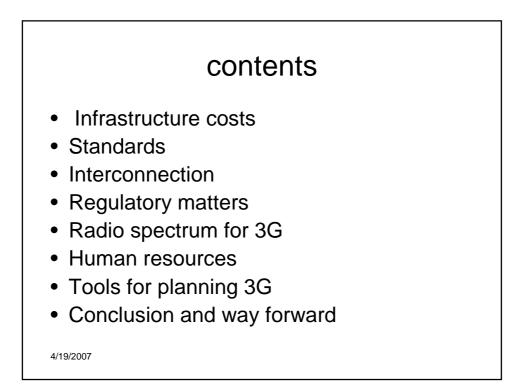
## Challenges facing operators in developing counties in their efforts to migrate from 2g to 3G and beyond.

Presenter: Jared Baraza, Lecturer Telecoms & IT, Kenyatta University, School of Pure and Applied Sciences, Physics Department. Email: jared.baraza@gmail.com,

Tel: 254 725 536 699,

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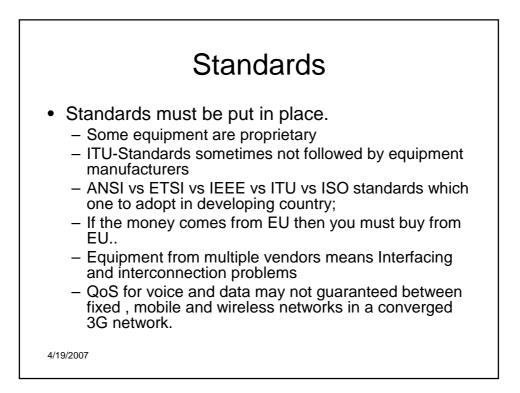


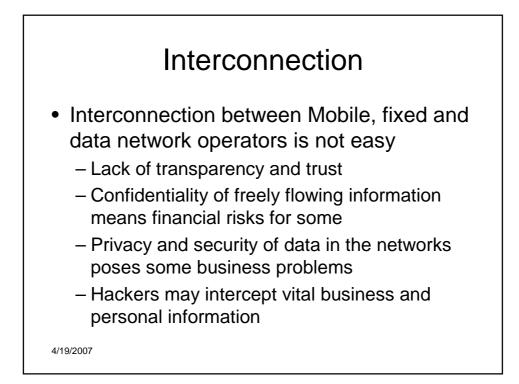


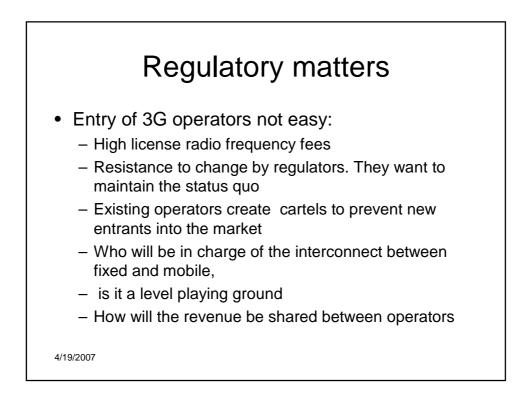
 3G networks need new infrastructure to operate at high costs. Developing countries can barely afford this:

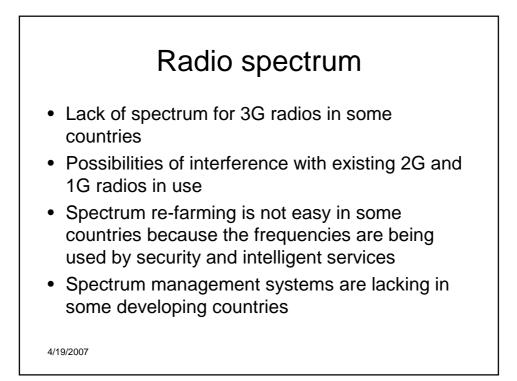
- Soft switching platforms
- Software and license fees
- Optical transport networks
- Media gateways
- Interfacing equipment
- Terminal equipment
- Billing reconciliation software..

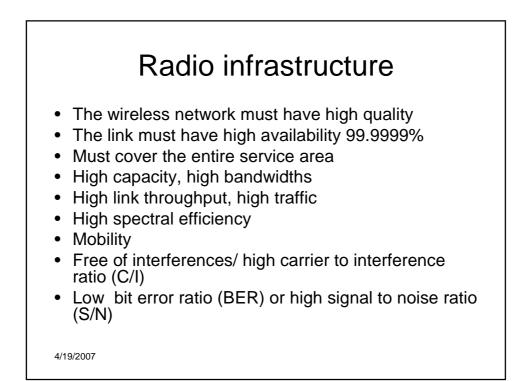
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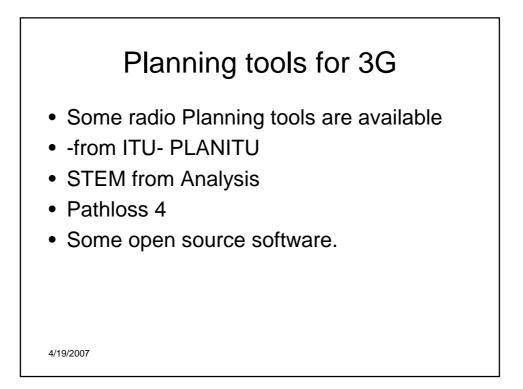












## Feasibility study

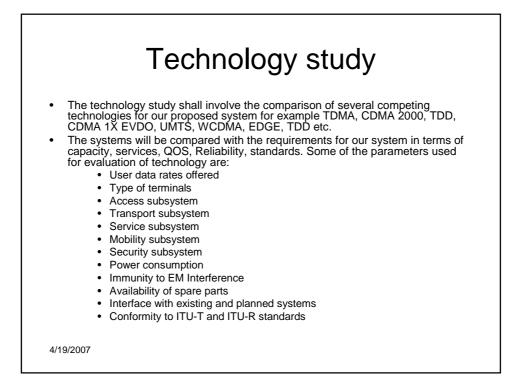
## 3.1 Feasibility study:-

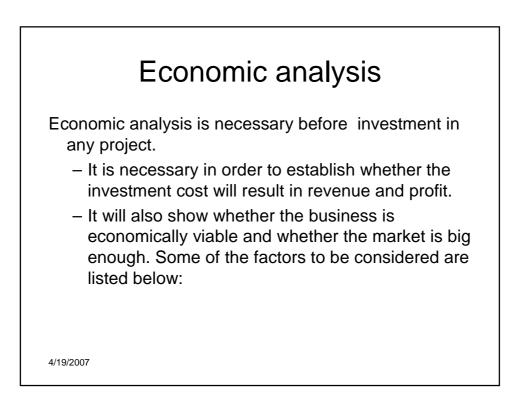
The feasibility study is necessary before a network plan is prepared. The purpose of the feasibility study is to determine the economic viability and sustainability of the project. The study focuses mainly on the following:

- Population and population density
- · Existing service if any
- Available infrastructure e.g.. electric power, roads, buildings, towers
- · Physical features including hills, valleys, forests
- · Demand for services
- Competitors and their market shares
- Collection of traffic data

4/19/2007

Traffic analysis
<ul> <li>The traffic collected from the proposed service area together with the demographic figures must be analyzed in order to determine economic viability before any investment can be undertaken. Some of the parameters used in traffic analysis are listed below:</li> <li>Demand</li> <li>Traffic offered</li> <li>Traffic carried</li> <li>Calling rate and call probability</li> <li>Call completion rate</li> <li>Busy hour call attempts</li> <li>Blocking probability</li> <li>Grade of service expected</li> <li>The Erlang formula is useful in the calculation of traffic. After carrying out traffic calculations we will know the capacity of the system a, the number of circuits required, calling patterns, QOS and many other factors required for the dimensioning of our system.</li> </ul>
4/19/2007





## Marketing. determine subscriber base at present and projections for the proposed service area determine market trends in terms of tariffs and airtime charges • customer penetration analysis . Growth in revenues estimation • Costs of transition to new technology Costs of marketing, advertising, acquisition, retention, licensing, • operation, real estate, content and application development • equipment costs (Capex) • Interconnection costs • Estimation of Opex costs Development of a revenue structure • Computation of net present value (NPV) • 4/19/2007

