Overview of GreenTouch Standardization Activities

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CHALLENGE AND BREAKTHROUGHS

- Identify the macro traffic trends, network characteristics and traffic details and assist the GreenTouch projects and working groups when designing their network models.
- Provide an appropriate platform to understand and influence standards central to realizing the GreenTouch innovations and architectures.
- Provide un-biased, pre-competitive information and guidance to further the GreenTouch mission in the policy arenas.
- Establish a channel for operators and service providers to clearly communicate the importance of energy efficiency improvements for future networks.

Providing Input on Trends and Connecting GreenTouch Results with External Entities
Network-Wide Traffic Projections

KEY ACCOMPLISHMENT AND RESULTS

- Analysis relies on historical global Internet traffic data
- GreenTouch developed interpolation and regression analysis of traffic volumes and annual growth rates
- Traffic projections form the basis for other GreenTouch projects to evaluate energy efficiency gains
- Traffic projections included in GeSI SMARTer 2020 report

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<th>Traffic Growth Factor from 2010 to 2020</th>
<th>Mobile Access</th>
<th>Fixed Access</th>
<th>Core Networks</th>
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<td>89x</td>
<td>7.5x</td>
<td>10x</td>
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Current Traffic Projections Exhibit Slower Saturation Rate but Larger Future Traffic Volumes Than Previously Predicted
KEY ACCOMPLISHMENT AND RESULTS

• A methodology to estimate energy consumption of Internet services
• Based on modelling of required allocation of network resources (e.g. bandwidth, physical resource blocks)
• Applicable to:
  • Multiple ICT services
  • Wireline and wireless networks
• The accuracy of the energy assessment models has been validated using real network datasets from commercial and research & education networks

New ITU Recommendation for “Assessment of Energy Consumption of ICT Services”