

ICT... THE POWER RAGE, OR HOW DOES BENNET'S LAW SUPPORT THE GROWTH OF ICT

Sylvain Bourdel
TIMA, Grenoble INP

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Résumé

The energy consumption of information and communication technology continuously increases and is expected to reach 20% of the planet's total consumption by 2030. At the same time, efforts to reduce the consumption of communication circuits have led to considerable progress. Paradoxically, these advances are not reflected in the current trend and consumption projections for this sector. In this presentation, we attempt to understand the mechanisms behind this paradox. This analysis will identify certain levers that we will present. The analysis will then focus on the various possible research areas in the field of circuit and system design for communications, with particular attention to the field of wireless communications and RF. The analysis will be conducted using a bottom-up approach, considering avenues at the technological, circuit, system, and application levels