

Green-IT - Opportunities and Challenges

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Green-IT has recently gained a lot of attention and visibility. It was the general theme of CeBIT 2008, CeBIT 2009 hosted a dedicated "Green-IT Village", it was a main theme at the German National IT Summit 2008, is heavily discussed at the OECD level and at the ITU. This momentum is not surprising because IT has a mayor impact on the climate and its protection. On the one hand there are huge opportunities to support climate protection through new applications of ICT. On the other hand ICT itself is a large contributor to Green House Gas (GHG) production.

This talk addresses both aspects by elaborating on ICT applications to increase the share of renewable energy in the power grid, to substitute current physical services and products by virtual ones, or to increase the energy efficiency of products and services. However, energy consumed by ICT equipment already today causes more GHG than the entire air traffic and at a much larger growth rate than total GHG production and far beyond the limits agreed upon in the Kyoto Protocol.

The talk analyses the reasons behind this development, forecasts the development for different scenarios and proposes some actions to take advantage of the opportunities without jeopardizing this positive effect by an excessive increase of GHG by ICT devices and services. The time is right for both aspects of "Green-IT" because the climate protection can not afford to be further postponed, the economy needs innovation and new products and services, technological solutions are getting available, and the return on investment is almost immediate in terms of reduced energy bills for ICT equipment.