Green Communication

It is being reported that communications technologies are responsible for about 2-4% of all of carbon footprint generated by human activity. This highlights the need to focus on managing these numbers, and Green communications is doing just that. The trend is tackling first mobile networks because of their high energy use. Base stations and switching centers could count for between 60% and 85% of the energy used by an entire communication system. Environmentally friendly batteries, renewable energy sources, and intelligent management of the power systems are some of the proposed solutions. Besides this mobile network focus, there is a 2015 and beyond trend to manage total energy usage, compute-to-consumption ratios and performance KPIs for best in class green operations.

The communication networking which are energy productive with respect to environmental issues are generally termed as **green networking.** Research field focus at maximizing performance of communication systems. Pattern is now rapidly shifting towards how to produce sufficient performance with low energy expense.

Green Telecommunication Networks

In telecommunication networks, greening would refer to minimizing utilization of energy through use of energy efficient technology, using renewable energy resources and environmental friendly consumables.

Green Wireless Communication

The term Green Wireless Communication can be defined as the technology which uses convergence of energy efficient methodologies at different stages to minimize the adverse effects of technology on environment. Growing telecommunication infrastructure requires increasing amount of electricity to power it. India currently has more than 310000 cell phone towers, which consume about 2 billion liters of diesel per year. The move from diesel to solar and other alternate sources of energy will result in a reduction of 5 million tons of CO2 emissions as well as a savings of $1.4 billion in operating expenses for telecommunication tower companies. Move to renewable energy sources can generate millions of carbon credits that could offset the opex on their towers. In addition saving in the energy bill would further reduce the operating expense. Green wireless communication has many facets. It can be classified broadly in terms of greening of telecommunication networks, green telecommunication equipment manufacture, and safe telecommunication waste disposal.

Energy Efficient Deployment Architecture

In the next generation of mobile communication systems, the net transmit power needed per systems, the net transmit power needed per transmitted bit is anticipated to be lowering fair amount. Both the 3G LTE and IEEE 802.16 m standards consolidate a different property and techniques that increases spectral productivity and energy efficiency and extend the communication range.

Renewable Energy Resources

Renewable energy resources play an important role in reducing CO2 gas emissions. Solar power & wind energy can usefully accompany and reduce the net electrical power consumption from the grid.

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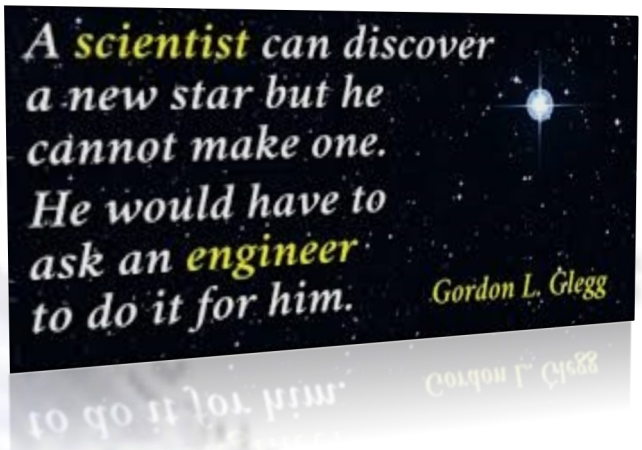
Also, these resources can help power remote The BS sites are the area where the electricity grid is mostly not available. This will help in reducing CO2 emissions.



Advantages Of Green Communication

1. No harmful emissions emitted in air.
2. Certain areas can be benefited economically.
3. Less amount of money is spent because of less maintenance.
4. It is renewable as it never runs out.
5. Reduces global warming as it reduces carbon dioxide emissions.

Disadvantages To Adopting Green Communication

1. Implementation costs are high.
2. Lack of information.
3. No known alternative chemical or raw material inputs.
4. No known alternative process technology.
5. Uncertainty about performance impacts.
6. Lack of human resources and skills.

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