

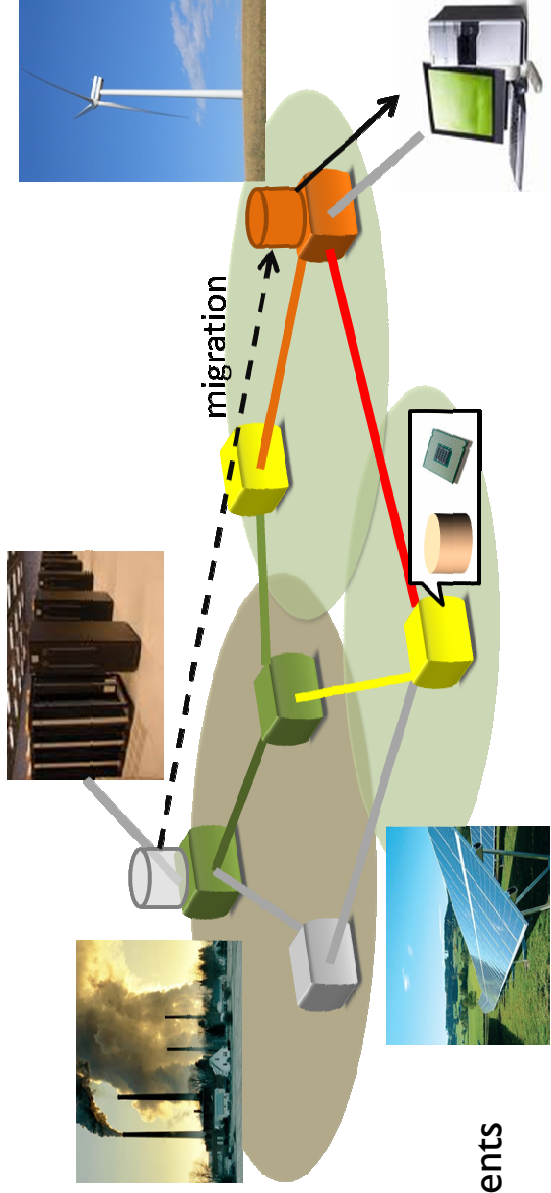
Energy Smart Grid applied to ICT

Prof. Raffaele Bolla – CNIT (National Inter-University Consortium for Telecommunications) – raffaele.bolla@unige.it

1) What use case and scenario ?

ICT energy consumption optimization by dynamically managing of the computational, storage and networking resources being aware of the green energy production:

1. Localize and bind computational, storage and networking resources and (green) energy sources.
2. Migrate functionalities, tasks and contents to optimize energy efficiency.
3. Adapt the energy profiles of devices (smart standby and power modulation) according to the network and computational load allocation.



2), 3) and 4) What innovative technologies and what kind of experimentation environment ? 5) How do you see the potential role of your organisation?

1. Integration of network, computational and storage capabilities in the Internet nodes.
 2. Smart energy consumption reduction technologies (smart standby and power modulation techniques) in all Internet devices.
 3. Software based nodes (routers).
 4. Virtualization
- CNIT collect more than 35 Universities, UdR of Genoa, Torino and Catania have a strong experience in
1. Smart energy consumption reduction technologies in Networks
 2. Scalable Software Routers

Future Internet Usage Areas Workshop
June 21st and 22nd, 2010