Power generation from waste heat

Development of practically usable ceramics thermoelectric modules

New thermoelectric (TE) modules made of ceramic materials free from toxic substance or precious rare elements which work at 800°C in the air without degeneration of output power have been developed. The new TE modules can generate electricity with high power density from waste heat of incinerators, industrial furnaces and automobiles. The new modules also can be used as a mobile emergency electric power source in disaster sites where only heat sources are available.

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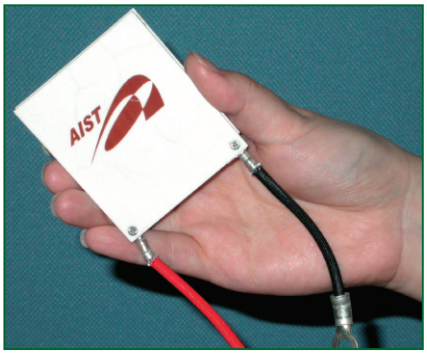
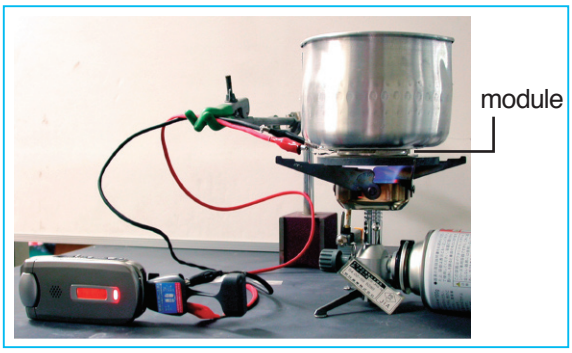


Figuer 1: Ceramic module composed of 15 pair devices.



Figuer 2: Charging of a mobile phone by thermoelectric generation.

Network Traffic Burstiness Smoothing Software PSPacer

Linux Open Sourece which Improves Communication Efficency

PSPacer achieves accurate bandwidth control and smoothing under the Linux operating system on a personal computer (PC) without any additional hardware. PSPacer improves the efficiency of long-distance wide-bandwidth communications, and contributes to improving the quality of streaming delivery by surpressing bursty traffic. PSPacer is released as open source, and available at http://www.gridmpi.org/.

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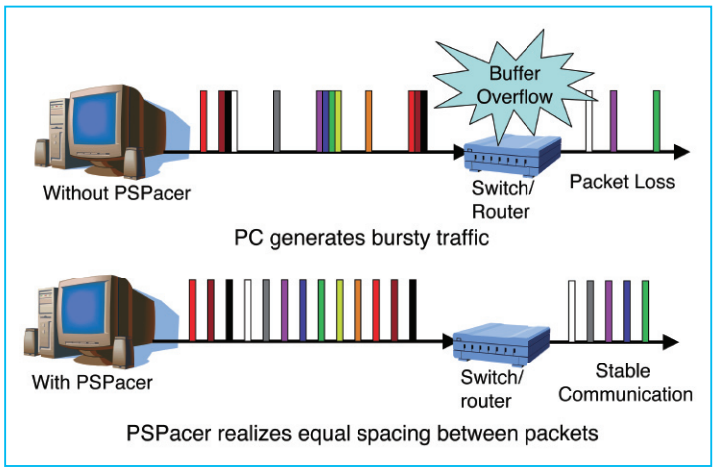

Figuer: Effect of PSPacer