



T-Mobile
GARMINfone™   **Smartphone, brilliant navigation**
Learn more
Exclusively at T-Mobile®

Home > News > Network Infrastructure > Internet

Universities to research low-power internet

Five-year funding to shrink the carbon footprint of data networks

Written by [Andrew Charlesworth](#)
[Computing](#), 09 Jun 2010



The internet consumes between three and five per cent of the world's electricity output

Leeds and **Cambridge** Universities have been awarded a five-year £5.9m grant by the **Engineering and Physical Sciences Research Council (EPSRC)** to reduce the energy consumption of ICT networks without inhibiting their growth.

While technology companies are fond of trumpeting their achievements in cutting carbon emissions by, for example, replacing physical travel with videoconferencing, analyst group Gartner estimates the IT industry has a carbon footprint similar to that of aviation, accounting for about two per cent of global emissions.

The internet, according to University of Leeds, consumes somewhere between three and five per cent of the world's electricity output.

So the grant will fund the **'INtelligent Energy aware NETWORKs' (INTERNET)** project, which aims to reduce the carbon footprint of ICT networks by at least an **order of magnitude** along with a corresponding reduction in

most read | most commented | popular topics |

- Is it finally time to dump XP?
- Labour's IT legacy may haunt coalition
- Indian IT companies will storm the UK market this year
- It's time for systems thinking
- HMRC system issuing wrong tax codes, says tax body

[> More](#)

a d v e r

analysis and reports



Licensing practices in IT management

This document outlines the most common types of software licenses and what this means for all organisations.



Web content management RFI toolkit

Thinking of buying a content management

non-renewable energy consumption.





“The predicted future growth in the number of connected devices, and of the bandwidth of the internet of an order of magnitude or two, is not practical if it leads to a corresponding growth in energy consumption,” said **Professor Jaafar Elmirghani**, chair in communication networks and systems in the School of Electronic and Electrical Engineering at the University of Leeds.

“Regulations may therefore come soon, particularly if governments worldwide enforce moves towards carbon neutrality,” Professor Elmirghani added.

Professor Elmirghani, also director of the Institute of Integrated Information Systems, is the project's leader. His department's activity focuses on storage area networks, next-generation IP networks, WDM networks, ad-hoc and sensor networks, optical wireless systems (OW) and fibre-wireless systems and networks. Other academic staff from Leeds involved include Dr Li X Zhan, lecturer in communications.

The work at the University of Cambridge will focus on data-communications and RF systems, optical networks and ultrafast photonics, and be led by **Professor Richard Penty** and **Professor Ian White** from the Department of Engineering. They will be joined by Professor Jon Crowcroft, Professor Andy Hopper and Dr Andrew Moore from the Computer Laboratory and Professor David MacKay, from the Department of Physics.

The EPSRC dispenses around £800m a year in research and postgraduate training grants

Have your say  Send to a friend  Print this  Share 

[< Previous article](#) | [Next article >](#)

Tags: [Internet](#)

reader comments

Add your comment

related articles



Ecommerce

Top-level domain growth continues to climb

Total registrations approaching the 200 million mark 09 Jun 2010

Ecommerce

system? Download this free checklist of key considerations to ask the vendor.

a d v e r



■ Mobile shopping sales expected to soar

Analysts predict consumers will double m-commerce spend by 2013 07 Jun 2010

Communications

■ Video to become top traffic driver by end of 2010

Cisco report predicts internet traffic to increase fourfold to 767 exabytes by 2014 02 Jun 2010

Communications

■ European Council backs Digital Agenda for Europe

Representatives from all 27 nations agree on need to drive internet society across the region 01 Jun 2010

Communications

■ Mobile internet touted as the future for telcos

Deutsche Telekom CTO highlights growing importance of on-the-go access 26 May 2010

Communications

■ 'Connected intelligence' next stage in mobile development

Qualcomm president Andrew Gilbert predicts all-pervasive connectivity 26 May 2010

Communications

■ ITU wants half the planet online by 2015

25 per cent not good enough, says director of ITU Telecommunication Development Bureau 25 May 2010

related white papers

■ Case Study: Offering pupils a 21st-century learning environment and cutting datacentre costs

from Dell

■ The case and criteria for combining application acceleration and security

from Blue Coat Systems

■ How to improve business productivity through unified communications

from Vodafone Group plc

today's top stories

Software

■ Is it finally time to dump XP?

Plan your Windows 7 migration now, says analyst Gartner. But what are the risks in sticking with XP for the moment? 09 Jun 2010

Security

■ We must free data and protect it

Opening up access to useful data is just as important as safeguarding sensitive material 09 Jun 2010

Public Sector

■ Confusion reigns over government IT

The coalition's plans to impose stricter controls on technology spending are sowing fear, uncertainty and

white paper library

latest white papers

- The business drivers for your investments in web technology
- Using data integration to drive down costs and increase profits
- Three Tips for Cutting server downtime by 50%
- Top 10 tips for keeping virtualised data centres secure
- Search Engine Optimisation for global web sites

a d v e r

SIMPLICITY
IS
POWER

doubt in the industry 09 Jun 2010

Management

■ Tesco replaces CEO with IT chief

Philip Clarke, head of group IT and markets in Asia and Europe, braced for CEO role 08 Jun 2010

Communications

■ Apple unveils iPhone 4 at WWDC

Handset sports sharper screen and front and back-mounted cameras 07 Jun 2010

[> More news](#)

The power to
virtualise and
minimise complexity.

See how we simplify. 

CITRIX[®]

newsletter signup | existing users |

Sign up for our range of FREE newsletters:

- Essential weekly news
- Technology Insider
- Financial services news
- Public sector news
- Retail & supply chain news

More available - click 'submit' to view

Submit

Related jobs

- ACCOUNT MANAGER - Transmission Network; Basingstoke
- ACCOUNT MANAGER - Transmission Network; Basingstoke
- System Administrator

Job of the week



Systems Designer

Are you a talented and committed individual ready for a new challenge?

> [More IT vacancies](#)

Job alerts

- Latest jobs to your inbox

[Sign up](#)

Find your next job

[Search](#)

IT Salary Checker

- Are you being paid what you are worth?

[Check salary](#)

DEVELOPER ROCK STARS

Jam with reliable apps from desktop to device.

ENGINEER:
Robert Geva



Rock your code:
[Buy now >](#)





Analysis

Is it finally time to dump XP?

Plan your Windows 7 migration now, says analyst Gartner. But what are the risks in sticking with XP for the moment? 09 Jun 2010



Analysis

Q&A: Kelly Davis-Felner, Wi-Fi Alliance senior executive

Energy consumption to be monitored using Wi-Fi 09 Jun 2010

[> More in depth articles](#)

advertisement

free* phones
plus **free shipping**
for Father's Day

Nokia E71x
Sony Ericsson W518a
LG Neon™

[Buy Now](#)

*Two-year contract required. Other restrictions apply.

[Home](#) | [Hardware](#) | [Software](#) | [Communications](#) | [Internet](#) | [Security](#) | [Management](#) | [Public sector](#) |

Mobile |



Â© Incisive Media Investments Limited 2010, Published by Incisive Financial Publishing Limited, Haymarket House, 28-29 Haymarket, London SW1Y 4RX, are companies registered in England and Wales with company registration numbers 04252091 & 04252093

Search

[go](#)

About us:

[About computing.co.uk / Contacts](#) | [About Incisive Media](#) | [Privacy policy](#) | [Terms and conditions](#) | [Accessibility](#) | [Sitemap](#)

Related Incisive Media web sites:

[News and reviews for IT professionals](#) | [News for IT staff and technologists](#) | [Green business news](#) | [News for the IT channel](#)
[Find Chartered Accountants](#)

Jobs:

[Computing Careers](#) | [IT jobs](#) | [Programmer jobs](#) | [Developer jobs](#) | [IT manager jobs](#) | [Project manager jobs](#) | [SAP jobs](#)
[Oracle Jobs](#) | [Java Jobs](#) | [IT recruitment agency directory](#) | [Software engineer jobs](#) | [Inquirer Jobs](#) | [Firmware developer jobs](#)
[Electronics engineer jobs](#)

Article types:

[News](#) | [In-depth](#) | [Reviews](#) | [Audio and video](#) | [Events](#) | [Computing Business](#)

Technology categories:

[Appliances](#) | [Applications](#) | [Bugs and fixes](#) | [Chips and components](#) | [Client](#) | [Communications](#) | [Developer](#) | [Ecommerce](#)

[Employment and skills](#) | [Enterprise security technology](#) | [Finance and Reporting](#) | [Hacking](#) | [IT Management](#)
[IT Services and Outsourcing](#) | [Licensing and piracy](#) | [Mobile](#) | [Network infrastructure](#) | [Open source](#) | [Operating systems](#)
[Peripherals](#) | [Portable](#) | [Privacy and data](#) | [Public sector](#) | [Security](#) | [Server](#) | [Services and outsourcing](#) | [Storage](#) | [Telecoms](#)
[Voice and Data](#) | [Wireless networking](#) |