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GÉANT at ICT2010

## The GÉANT Green Team

# Exploring "green" networking technologies, tools and applications

Brussels Expo 27-29 September 2010
Wednesday 29th September (Room T009)

Within its Environmental Impact task, the GÉANT project is carrying out research and development into networking technologies, and demonstrating the beneficial synergies of networks and green technologies. This workshop will examine two aspects of green networking: how networks can measure, understand and reduce their carbon footprint, and how networking technology can mitigate carbon emissions in so many sectors.

Although ICT is responsible for only 2% of all carbon emissions, it can help reduce some of the remaining 98%, making this workshop essential for those both operating and using networks. The session will comprise presentations, results from real-life cases, and a video link with a similar research network in Canada.

GÉANT Green Team members are from four European GÉANT project partner networks: HEAnet (Ireland), PSNC (Poland), NIIF (Hungary) and NORDUnet (Denmark, Finland, Iceland, Norway, Sweden).

# Wednesday 29 September

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| 14.00 -14.15 | Welcome and introduction to the GÉANT Green Team<br>Mike Norris –HEAnet |
| 14.15 -14.40 | Measuring and monitoring of the greenhouse gas(GHG)emissions<br>Jørgen Moth (UNI•C, Denmark) |
| 14.40 -14.55 | Video link with the Greenstar network collaborators in Canada<br>John Spence - Communications Research Centre Canada<br>Martin Brooks - National Research Council Canada |
| 14.55 -15.10 | Case study of teleworking in UNI•C, Denmark<br>Jørgen Moth, UNI-C |
| 15.10 -15.30 | A green network management system<br>Robert Pekal (PSNC) |

Audience participation will be actively encouraged to help participants learn from one another's experience

# Biographies

## Mike Norris

Mike Norris has been involved in internetworking for over 25 years, since the early days of wide-area networking between Irish universities. As CTO of HEAnet, he is a member of the company's senior management team and helps oversee the development of the company and its staff. He leads HEAnet's environmental team and the GÉANT project's Environmental Impact task (also known as The GÉANT Green Team).

## Jorgen Moth

Jørgen Moth is senior computer scientist at UNI-C. He was the lead Danish member of the REVVA consortium that during 2003-2009 developed the foundation for an international standard for validation, verification and accreditation of complex computer simulations. Presently he is responsible for UNI•C's participation in the EU GÉANT project.

## John Spence

Formally the Program Manager, Application Technologies, Broadband Networks Technologies Branch, at Communications Research Centre Canada (CRC), Industry Canada Mr. Spence presently holds Researcher Emeritus status with CRC. He has 14 years experience in the design and implementation of broadband technologies to support e-Learning and e-Health applications. Mr. Spence is the lead for the GreenStar Network project (GSN) Associate Partners Working Group.

## Martin Brooks

Formerly a research leader at National Research Council Canada, Dr. Brooks now focuses on coordination of collaborative projects that utilise high-bandwidth Research & Education Networks. Ongoing project include the CANARIE-funded GreenStar Network project and Health Services Virtual Organization project.

## Robert Pekal

He received the M.Sc. degree in electronic and telecommunication science from the Poznan University of Technology. He has 13 years experience in the design and implementation of broadband technologies in Telco and Research & Education Networks. Currently deputy manager of Network Department in Poznan Supercomputing and Networking Center, the Polish NREN. He coordinates some national initiatives funded by Polish Ministry of Science and is involved in a few activities in the EU GÉANT project.

# The GÉANT Green Team

The GÉANT Green Team has been carrying out audits of the greenhouse gas (GHG) emissions of NRENs and of the GÉANT pan-European network. It has adopted the ISO 14064 standard for its carbon audits and a common scheme for their networks, to enable the audits to be carried out in a methodical and consistent manner. This also enables comparisons within and between NRENs, with a view to identifying key areas that need attention. Measuring and monitoring GHG emissions are essential features of a strategy to reduce such emissions. By enabling network operators to understand the relationship between the network and CO2, the measurement process gives insights into where reductions can be made without affecting NREN service levels. The ISO-14064 standard is very useful in this regard, as it also deals with projects to improve the situation. Members of the Green Team are now working on separate and complementary studies into the environmental benefits of NREN services and activities.

# Links and Documents

www.geant.net/Environmental_Impact

DANTE

trio.be

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