

# TEMPO

Eliminating costly data centres



## At a Glance

TEMPO seeks to dramatically reduce the energy consumption required to deliver content and services to the home via Internet-enabled set-top boxes.

The objective of the project is to investigate techniques that minimise energy costs of service delivery platforms while maintaining service level guarantees.



## The NICTA Approach

NICTA's research into distributed service delivery platforms will enable radical reductions in energy usage.

We are investigating schemes that minimise energy costs associated with these platforms based on virtualised set-top boxes connected through a managed P2P network.

Consumers are increasingly becoming concerned about the energy consumption of their electronic goods. Therefore any service delivery platform has to take this concern into consideration.

As a result, we are investigating schemes that power down individual set-top boxes when not in use by their owners, while maintaining a high quality user experience.

NICTA is exploring this for three key services:

- Video-on-demand
- Massively multiplayer online games
- User-generated content.

## The Features

- TEMPO will give service providers a new architecture for delivering content
- Distributed data storage
- Individual set-top boxes can be powered down to save energy.

## The Benefits

- Dramatic reduction in energy consumption
- Reduced cost to service providers
- Data centres become less of a capital investment to service providers.



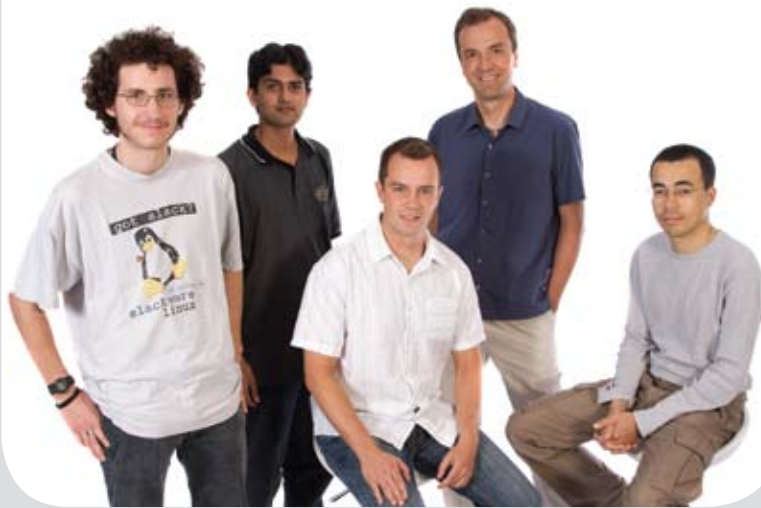
NanoDataCenters



## The Future

- Completion of large scale network and user trials on European, US, and Australian testbeds
- Adoption of TEMPO technology by set-top box manufacturers and service providers.

From imagination to impact



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# NICTA

**NICTA is Australia's Information and Communications Technology (ICT) Research Centre of Excellence and the largest organisation in Australia dedicated to ICT research. NICTA drives innovation through high-quality research, research training and technology transfer.**





Our researchers are located in five laboratories located in four cities around Australia: Melbourne, Sydney, Canberra and Brisbane. Working in specialised teams, they are focused on a series of specific research themes and business areas.

Our work as a world-class research institute and Centre of Excellence in science and innovation brings together many of Australia's and the world's top ICT researchers. NICTA provides them with the facilities and support they require, making our vision a reality.

NICTA's unique approach fosters and develops ICT research. We work closely with both industry and other research institutions to solve problems and make breakthroughs in ICT with real impact.

NICTA's focus on use-inspired research means our projects have direct relevance to the challenges faced by business, government and individuals around the world. The result is breakthrough technologies that provide commercial opportunities and have a positive impact on Australia's export earnings.

**Our Research Themes:**

-  Embedded Systems
-  Networked Systems
-  Making Sense of Data
-  Managing Complexity

**Our Business Areas:**

-  Biomedical and Life Sciences
-  Environmental Management
-  Intelligent Transport Systems
-  Mobile Systems and Services
-  Safety and Security
-  Software Infrastructure

**For more information about TEMPO**

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