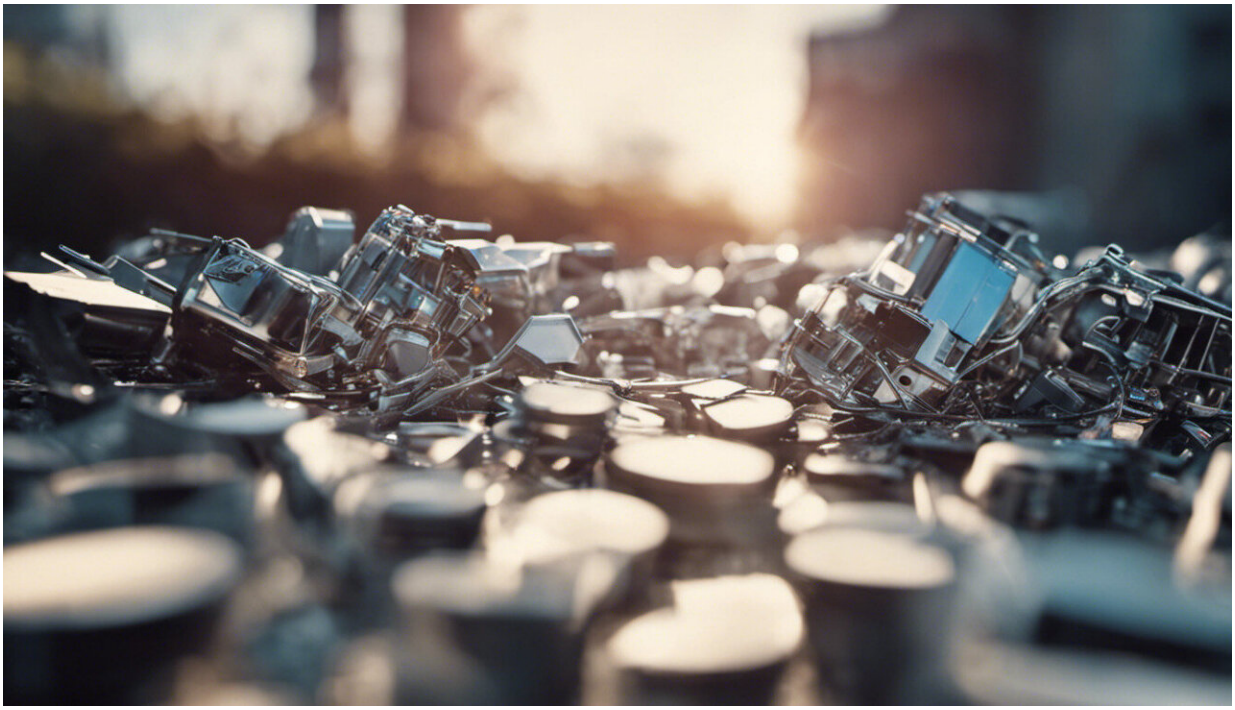
A radical re-invention for the Internet

April 24 2013



Credit: AI-generated image (disclaimer)

Remember the days when downloading one song could take 30 minutes and over 28 hours to download a movie? This, of course, was before the introduction of broadband which revolutionised Internet use. Now, broadband is set to benefit from a radical makeover, thanks to European funding for information and communications technology (ICT).

The pan-European ICT project DISCUS ('Distributed Core for

Unlimited Bandwidth Supply') is led by CVTR, Ireland's telecommunications research centre, which is connected to Trinity College Dublin. CTVR in University College Cork is also involved. The project aims to provide a more economically viable network, which is environmentally sustainable and capable of supporting all current and forthcoming services for the foreseeable future.

DISCUS aims to upgrade the entire network and improve broadband delivered by optical fibre. This will provide advanced ultra-high-speed Internet to networks in both urban and rural areas, as well as a higher quality and wide-spread availability, which today's networks are unable to deliver.

This means that the number of users per network will increase significantly from 32 to 1,000, and increase the coverage between homes and central offices from 10-20km to over 100km. It will also address the growing demand for services like high-definition video streaming and gaming.

Dr Marco Ruffin, who together with David Payne is leading the project at CTVR says the current broadband system was built on top of a network infrastructure originally built to support only low-capacity telephone services. Its upgrade to fibre-optic technology, which carries a much higher capacity, has progressed slowly because of the high initial investment cost and the inefficiency of current network architectures.

The DISCUS project brings together an international team that will redesign and propose new network architectures to build a more cost-effective and simplified broadband network for an ultra-high-speed Internet,' explains Dr Ruffin.

The three-year, EUR 8.1 million EU-funded project (of the EUR 11.7 million total) includes 13 European collaborative partners within the

optical network industry and academia. The remaining investment for the project will come from other partners, including Telecom Italia and Nokia.
Other countries involved include Belgium, Germany, Spain, Italy, the UK, Sweden and France. CTVR will also be working with major European telecom operators and equipment vendors, as well as small and medium-sized enterprises (SMEs) and universities.

Professor Linda Doyle, head of CTVR says, 'This project is very exciting for us as the scale of the project is quite significant. Our aim is to design future optical networks so they are cheaper, durable and able to evolve with longer term needs.'

More information: CVTR - The Telecommunications Research Centre
-www.ctvr.ie/
-www.discus-fp7.eu/

Provided by CORDIS

Citation: A radical re-invention for the Internet (2013, April 24) retrieved 16 April 2024 from https://phys.org/news/2013-04-radical-re-invention-internet.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.