**International project NEAT to overhaul data transport over the Internet while providing an easy-to-use API for application developers**

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The international research project NEAT ("A New, Evolutive API and Transport-Layer Architecture for the Internet") has an ambitious plan to develop a new Internet transport system with an easy-to-use API (Application Programming Interface) for application developers. The innovative system will enable a new level of reliability and performance of Internet applications to end-users.

There is no software on the market comparable to the NEAT transport system and key new components will be promoted for standardisation and implemented as open-source software.

Smartphones, laptops and tablets can run an extensive variety of applications, connected via networks such as WiFi and LTE. Each application has its own requirements for how it wishes its data to be carried over the Internet. The communication needs of a sensor application differ from those of a streaming video application. These are different again from the needs of web browsing or remote conferencing applications. This diversity of needs currently requires application developers to choose which network(s) to support and how to tune transport and network parameters for the chosen network(s).

Networks continue to evolve and the diversity of networks is only expected to increase in the future. Designing for anything different from the usual networks makes for a very complex task, and applications often end up needing to be updated each time the network changes.

The NEAT system provides a new approach enabling developers to specify an application's requirements in terms of rate, delay, reliability, cost, etc. and to allow NEAT to choose, or help choose, the best communication service. As new networks continue to evolve, NEAT-enabled applications will immediately be able to take advantage of new functions to reduce web page download times, make teleconferences more responsive or reduce the cost of downloading a software update, getting whatever the application needs.

Simula Research Laboratory, in Norway, is the organisation that coordinates NEAT. The project involves nine research partners including universities, research institutes and commercial companies from Norway, Denmark, France, Germany, Ireland, Sweden and the United Kingdom.

"The project represents an effort between industrial and academic partners for updating a transport architecture that is still very dependent on developments from the 1980's", explained Dr. David Ros, NEAT coordinator. "Modern online applications need a more flexible transport architecture to rest upon, given the substantial changes that the usage of the Internet has undergone on the past decades. The new reality includes mobile users and no longer shows a clear separation between data communication and telecommunication services."

NEAT goes beyond existing network protocol implementations and standards, and will test the system in mobile broadband scenarios, in connecting emerging-market mobile clients to first-class Web Services, in interactive applications and in cloud platforms with distributed storage solutions across a network of datacentres.

The three-year project started in March 2015 and has a total budget of 4 million Euros. NEAT has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 644334.

More information is available in the project website:
https://www.neat-project.org



The NEAT transport system enables the protocol choice that provides, and can continue to provide, the best application performance and experience for the end-user.

End of Press Release

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