NOKIA

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Nokia Research Center

Nokia Research Center (NRC) is chartered with exploring new frontiers for mobility, solving scientific challenges to transform the converging Internet and communications industries. Founded in 1986, NRC is Nokia's corporate research unit and as part of Corporate Development, drives Nokia's position as a technology thought leader.

NRC consists of a global research network with some 500 people operating from 11 locations world wide: Berkeley, Cambridge, Hollywood, and Palo Alto, USA; Cambridge, UK; Lausanne, Switzerland; Helsinki and Tampere, Finland; Nairobi, Kenya; Bangalore, India and Beijing, China.

NRC collaborates on research projects with leading universities, research institutes and other technology companies around the world in the mode of open innovation. This network of over 130 partners includes Framework Research Agreements with leading universities such as the Massachusetts Institute of Technology (MIT), Stanford University, the University of California, Berkeley and the University Southern California (USC) in the USA; Cambridge University in the UK; Ecole Polytechnique Federale de Lausanne (EPFL) and Eidgenössische Technische Hochschule Zürich (ETHZ) in Switzerland; Helsinki University of Technology (TKK), Tampere University of Technology and University of Tampere in Finland; Tsinghua Univeristy and the Beijing University of Post and Telecommunication (BUPT) in China.

To deliver new insights and drive future success for Nokia, NRC's research portfolio focuses on the following four areas:

- Rich Context Modeling - Interactions between people and their surroundings, location, and social environment provide the basis for new classes of services in areas such as traffic, health and entertainment, enabling new business models to emerge.
- New User Interface - Future user interfaces will utilize intelligence and context-awareness to enhance user experiences, integrating the personalized and adaptive aspects of devices with data-sharing capabilities.
- High Performance Mobile Platforms - Research focuses on improving the performance-to-power ratio, delivering new sensing capabilities as well as extending platform architecture to enable interoperability and facilitate application development.
- Cognitive Radio - Research in this area examines ways to utilize wireless spectrum dynamically to improve connectivity and capacity and enable large-scale sensing.

Each of the NRC research laboratories concentrates on one or more of these research focus areas.

A key role for Nokia Research Center is also to create IPR (Intellectual Property Rights) for Nokia. Currently about half of Nokia's essential patents originate from NRC.

Examples of recent NRC projects include:

Morph

- Morph is a concept that demonstrates the ultimate functionality that nano-technology might be capable of delivering: fully flexible materials, a revolutionary self cleaning shell and transparent electronics – developed through a scientific partnership between the Cambridge Nanoscience Centre and NRC Cambridge, UK for the Museum of Modern Art in New York. Every element of the Morph concept represents individual areas already being researched by NRC, together with the Cambridge Nanoscience Centre. In addition to receiving more than 2 million views in two weeks on YouTube, Morph was awarded the red dot: design concept 2008 – an internationally recognized prize for highest quality design.

Community-Enhanced Traffic (formerly known as "Traffic Works")

- NRC Palo Alto and the University of California, Berkeley's California Center for Innovative Transportation are combining research efforts to study how best to collect real-time traffic flow data from GPS-enabled mobile phones while protecting phone users' privacy. Building on the Nokia Maps service available today, this provides a glimpse into the future with the mobile device as personal travel assistant.

About NRC

Further information on Nokia Research Center, its research focus areas and its geographical locations can be found at: http://research.nokia.com.

For more information on Nokia Research Center engagement with external collaborators and an update on its Open Innovation initiative, please check the Nokia Research Center newsletter, Open Threads: http://research.nokia.com/openinnovation