Neuroinformatics in the Netherlands

Objectives

The field of Neuroinformatics is in a period of significant growth fuelled by the initiatives taken within the OECD Global Science Forum to work on a world-wide program in Neuroinformatics. Within the OECD-GSF Working Group Neuroinformatics, a proposal has been prepared for the realization of a global facility for the exchange of neuroscience data, analysis and modeling tools, an international neuroinformatics coordinating facility (INCF), and the organization of national nodes. Recently, this proposal has been supported by the OECD Committee for Scientific and Technological Policy at Ministerial Level at their January 29-30, 2004 meeting. The formal documents outlining the Neuroinformatics Initiative, including a business plan, are being discussed at the July 2004 OECD-GSF meeting in Paris.

Neuroinformatics is a new research field devoted to the development of neuroscience data and knowledge bases together with computational models and analytical tools for the sharing, integration and analysis of experimental data and the advancement of theories of nervous system function. Neuroinformatics data refers to scientific information about primary experimental data, ontology, meta data, analytical tools and computational models of the nervous system. The primary data would include experiments and experimental conditions concerning the genomic, molecular, structural, cellular, networks, systems and behavioral level, in all species and preparations in both normal and disordered states.

Neuroinformatics concentrates on three main areas, viz., (A) the development of tools for the management and sharing of neuroscience data, (B) the development of analytical and simulation tools, and (C) the development of computational models of the nervous system and neural processes.

The global Neuroinformatics initiative builds on national nodes in Neuroinformatics to promote and coordinate local neuroinformatics research and training activities at the national and international levels, and to participate in the development and implementation of the INCF work Program.

In order for the Netherlands to keep pace with these developments and participate in this global OECD-GSF Initiative in Neuroinformatics, national activities are now being organized towards a Netherlands Program in Neuroinformatics. These activities implement the main actions as outlined in the Roadmap.