PRNNS - Patterns Restoration using Neural Networks Simulation

Application Description   Â   PRNNS application is a set of tools implementing functions of restoring lost fragments of digitized patterns using trained neural networks simulation. The main goal of the application is to reconstruct as real as possible the full pattern having some information about lost fragments. Main features   Â·Â Â Â Â Â Â Â Â Digital patterns processing and restore. Â·Â Â Â Â Â Â Â Â Neuron networks simulation and training. Â·Â Â Â Â Â Â Â Â Educational tool for te students how to use grid. Â   Results obtained Â   Application is in process of single grid node testing, deployment and benchmarking. The results will be announced by the end of February 2008. Expected scientific impact: Â   Using computing capacity of GRID it is possible to process big damaged images, the damaged space pictures and etc. Â The application could be used for medical, scientific, education and other purposes Expected social impact: Â   Digital pictures and other patterns lost for scientific circles and society can be restored. Â Â User communityÂ   Â   Main users of the application are computer science specialists, images recognition and restoration researchers, medical and weather specialists, teachers, students. Â   CollaborationÂ   Â   The closer collaboration with other projects and VOs will be established after finishing application deployment. Â   Publications   Â   Mardare I. The   intellectual processor on basis of 2-nd order objects in restoration of   images. Proceedings   of International Symposium an SPIE   Event "Defense and Security", 17-21 April, 2006,   Orlando, Florida, USA, p. 96.Mardare I. Restoration of images of objects of   1-st order by means of associative memory. Asian Journal of Physics, Volume 15, number 3, 2006, India, pp.59-69.Mardare I. Intellectual system of restoration   of images on the basis of associative memory. Asian Journal of Physics, Volume 15, number 3, 2006, India,   pp.70-79.Bogatencov P., Sidorenco V.,   Mardare I., Andronic S., Altuhov A., Pocotilenco V., Bleih S., Savciuc I.   Building of National Grid Infrastructure in Republic of Moldova. Proceedings of 6th RoEduNet International Conference. Craiova,   Romania,   23-24 November, 2007. SITECH Craiova-   Romania,   2007. ISBN 978-973-746-581-8. Pp. 54-57.