

No 2

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VPH NoE

newsletter

VIRTUAL PHYSIOLOGICAL HUMAN NETWORK OF EXCELLENCE

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forum facilitating exchange on S&P are also favoured.

- (b) Industrial market actors see the practice of holistic S&P policies, which include all users/stakeholders to the use of a system in research or treatment, as a key requirement. S&P- enhanced systems are favoured and viewed as enablers of business development. A coordinated approach to regulation and the exchange of best practice through e.g. a VPH S&P user forum are supported.
- (c) Key requirements of governance organisations are the protection of

personal data and fundamental rights. Secure flow of information and interoperability are seen as crucial to the realisation of public welfare. This includes improved illness prediction and treatment, and efficiency gains.

- (d) Professional associations also see the conduct of holistic S&P approaches as important. Other requirements include the launch of a S&P user forum facilitating best practice dissemination and localisation, fur-

ther RTD in data use and consent monitoring, anonymisation/ pseudonymisation, data and model validation techniques.

Radical will organize a panel workshop in the HealthGrid2009 conference in Berlin, on Monday 29th of June. The theme of this public workshop will be “security and privacy challenges in personalised healthcare in the 21st Century”, where our research will be presented and invited speakers will discuss best practice. ■

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“Wiki” science and GPUGRID featured in EMBO reports

➔ By Toni Giorgino, Research Fellow, and the GPUGRID team, Barcelona Biomedical Research Park

New generations of Internet-based collaborative tools are revolutionizing the way in which we create and exchange information: the digital network creates opportunities for both specialists and the general public to join their efforts, and knowledge can be created and shared with very low “barriers of entry”. Not everyone, however, knows that the “wiki spirit” is spreading even in the academic circles. For example, right now a few pioneering projects are gathering the computer time, otherwise unused, donated by volunteers worldwide, and using it to solve problems of unprecedented magnitudes. Other groups are even collecting... idle grey matter, by asking people to competitively solve puzzle games that contribute to solve protein-folding problems.

Andrea Rinaldi, in a column for the “Science & Society” section in EMBO reports (published by the Nature Publishing Group for the European Molecular Biology Organization) has reviewed several exciting trends that are shaping

the public involvement with research through the Internet. A range of key considerations arises: firstly, before volunteers donate computer power, it is likely that they will be eager to learn about the project objectives, rationale, and ethics – and this communication needs to take place in the layman's language, not that of specialist journals. Other than this, sophisticated technical measures are necessary to “disassemble” the huge computations required by scientists into small bits which can be assigned to an innumerable number of computers dispersed across the world, and each of them must not hold the overall project from progressing, should they at any time disappear with their “paperwork”. Among the projects, the paper features an interview with Prof.

Gianni De Fabritiis, who is harnessing the processing power of Graphical Processing Units (GPUs) as one of VPH NoE's technologies. De Fabritiis explained how simulating proteins at the rate of microseconds per day is already a reality, thanks to the efforts of thousands of volunteers that “tune in” their GPUs to contribute to the knowledge of bio-molecules and their inner workings.

VPH NoE is involved in this process through GPUGRID.net, an high-end distributed computing project that enables volunteers to contribute their GPUs to molecular simulations. GPUGRID allows members of the VPH to run simulations of unprecedented scales, by leveraging a network of thousands of computers (and users!) that provide microseconds of simulation time per day. ■

➔ For more information please see Andrea Rinaldi. Science wikinomics. Mass networking through the web creates new forms of scientific collaboration. EMBO reports 10, 5, 439–443 [2009] doi:10.1038/embor.2009.79 or visit the nature article <http://www.nature.com/embor/journal/v10/n5/full/embor200979.html>