

Road mapping technology for enhancing security to protect medical & genetic data

RADICAL coordination action aims at approaching coherently, studying in depth and revealing scientifically, the beyond the state-of-the-art research and policy roadmap for security and privacy enhancement in Virtual Physiological Human, taking into consideration technology advancements, business and societal needs, ethics and challenges that should be addressed and answered.

Objectives of the project

1. Identifying and launching a framework of Security and Privacy minimal requirements in VPH research projects.
2. Identify the societal needs and challenges that should be addressed in order to protect health patient records and their usage.
3. Bring in the stakeholders' thinking the implications of the use of genetic & medical data.
4. Creating a forum where policy makers, IT and technology providers, academia, NGOs, and citizens interact as to create a critical mass of identifying risks in health data usage and measures that should be adopted to comply with the relevant Legislation.
5. Capitalize on existing knowledge by creating a vast pool of R&D approaches in the issue.
6. Develop a Good Practice Guide, presenting the best practices that should be adopted, in order for security and privacy to be enhanced in Medical and Genetic data dispersed over different networks.
7. Develop a Policy Paper Roadmap for the FutureAgenda with recommendations for promoting privacy and security enhancement in health related data processed over distributed networks.
8. Creating a network of stakeholders in the area, for raising awareness and strengthening the European Research area in security and privacy technologies.

The RADICAL vision is based on four different interconnected/interrelated postulates:

- The need for increased security in handling and communicating confidential medical and genetic data,
- The ethical requirements for improved public understanding and consensus regarding the ongoing research in relevant fields in conjunction with the significance of obtaining and processing such data,
- The establishment of a legal framework at a supranational and, if possible, at an international level, capable of regulating efficiently the proper use of sensitive data handling and ensure respect of the fundamental rights and freedoms,
- The creation and support of the technological capabilities to build secure networks of different types and databases for digital data as a means of communication between a great number of institutions and individuals.

Looking at the horizon of the project's completion, the goals and vision will be served and fulfilled through the identification of technological requirements for security and privacy, the identification of societal needs regarding fair and lawful use of medical and genetic information, the demonstration of legal, institutional and social implications of using medical and genetic data to stakeholders, the creation of a Forum where policy makers, technology providers, academics, organisations and citizens can interact in order to express their concerns and ideas, identify risks and discuss/propose the measures necessary to eliminate such risks.

Thus, through the capitalisation on existing knowledge, the European Research Area will have been strengthened in privacy and security technologies. **Overall, improvement of people's lives through safe and improved information services in VPH is the ultimate element of the RADICAL vision.**

A state-of-the-art framework with a potentially accurate and precise diagnostic ability like VPH, which aims to offer a simulation of the human system from the anatomical to the molecular level, is the field of such a service.

Project Description

The RADICAL Project constitutes a crucial complement to the Virtual Physiological Human framework. The aim is to study and reveal the requirements for enhancing security and privacy in the management of medical and genetic data, as well as to articulate the strategy for achieving this goal.

In order to fulfil its role successfully and comprehensively, the RADICAL policy should take into account technological advances and trends, business needs, as well as legal, financial, social, technological, and other significant issues with respect to the personal and sensitive nature of medical and genetic data communicated during the process of realisation of the VPH concept.

Expected Results & Impacts & Preliminary results

Societal impact: Security and Protection of medical and Genetic Data represent a topic of strategic importance in health with major impact in health systems and health care service. As Security and Privacy is in the core of ICT technology advancements, by altering the landscape of health services, change the everyday life of European citizen affecting his/her life and its quality. **RADICAL** project with its focus in defining the Policy roadmap in Security and Privacy in Medical and Genetic Data use, taking into consideration the experts' and the industry's scientific views and fore-thinking, affects in a mature and careful way the societal challenges in health.

RADICAL project will capitalize on international scientific networks in delivering policy guidelines to be adopted by public stakeholders, in order to diffuse the innovation approaches into the society.

Economic impact: Networked companies and stakeholders create a critical mass in security and privacy of medical and genetic data use, boosting competitiveness and effective usage of research resources in medical informatics' and ICT in general industry. In this way, the market could exploit the full potential of available funds in national and international level, returning to society in kind, the public funds invested.



RADICAL

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KEYWORDS

Security, Privacy, VPH, Medical data, Genetic data, Medical informatics, Health