Motivations and Impact

Structure: Introduction. For each of the points below we can have a section and/or subsections where one elaborates on the concepts.

Keywords:

1. World-wide distributed and shared public storage infrastructure highly needed by the communities targeted by this project. Why ?
    a. HEP small communities working on refinement of results of the physics analysis performed at bigger centres. This will allow for contributions of a wider set of communities of researchers located at universities and institutes with modest resources.
    b. The definition of a common master course for medical imaging is under way at European level and this would highly profit from access to a common pool of medical imaging and teaching material in general.
    c. BioInformatics ???
2. This will also promote contributions from developing countries.
3. Avoid duplication of efforts inside the scientific communities which presently need to address the same issues of creating and accessing data repositories.
4. The creation of new storage control standards and the development compliant with the current protocol definitions for data access provides a solid ground for industrial solutions.
5. The security layer provides for a high protection and even encryption of sensitive data which allows medical research communities to even share and perform statistical studies on particular patients' cases.
6. Since the provided middleware it is easy to install and maintain because it is based on standard protocols and available storage products, new interested providers can easily join the digital library public infrastructure boosting its development and allowing new collaborators to efficiently access new data.
7. This project will be a pioneer for a stable public distributed storage infrastructure made available by institutes that are already contributing to major scientific distributed storage infrastructures. New providers can be dynamically added.
8. Facilitates the progress of a scientific community on a given issue making it easy to use the same standard analysis tools with the provided infrastructure. The added storage capability widens the availability of data and therefore enhances the potentials of the user's applications.
9. Encourages collaborative exchanges between communities of researchers addressing similar issues. The possibility to access and exchange samples of strategic data pushes users to share ideas, experience and even analysis tools.
10. Since the interface will be promoted as a real standard and very similar to that offered by a standard file system, the process of integrating the user application with the storage infrastructure is made simpler and more familiar for the end user.