



## System Design for Data Processing in the Very Long Term

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The Data Processing of huge amount of data requires a huge amount of disk space. This space is aimed at storing the input data coming from the Satellite Ground Segment, the auxiliary data and, obviously, the Output data. In total, we are talking of Terabytes. In addition, the space is dynamically increasing as new satellite data arrives to the Archiving facility.

When designing a system that can cope with such a vast amount of information the designers take into consideration issues such as disk space and read/write speed for the current computations and current storage. But, what about the future?

Scientists perform processing and reprocessing campaigns, and the reprocessing can be done in several years. Technology progresses in a very fast manner and in a few years equipment is obsolete. So, scientists have the guarantee that the data is stored, but do scientists have the guarantee that they shall be able to access the data for reprocessing? Seems a trivial question, but it is not.

The key fact is that the information might be stored, but must also be accessible for future reprocessing campaigns. If the reprocessing is to be done in 2 or three years, the issue is straightforward. But if we are talking about 10 years, then it is not so clear.

This paper covers the approach that has been followed in the design of the Fire\_CCI project and the technologies to be used, as well as how the time issue has been addressed so that future scientists (currently students) shall be able to access and process the data currently available in the system.

Keywords: System Requirements, System Architectures, Long Term Archiving, Future Reprocessing