Abstract: - The publication of the standard ISO 10.006 relating to the projects management opens a new path towards the introduction of more formal techniques in projects management. Nevertheless, at the present time, there isn’t any organization that has implanted a full system based on ISO 10.006. This work presents the development and the implantation of a global system of project management for the Computing Department of a Public Administration with and specially for the following the recommendations of the standards, completed with different aspects extracted from the IPMA (International Project Management Association) y PMI (Project Management Institute). This implantation presents the normal problems derived of the firmness of the public administration and the standardization of several methodologies in the project development, which has required an important effort in the adaptation. Although is usual to use methodologies for the technical development of the project, it has always been ignored the need to follow. This pioneer experience at this moment in the process of implantation has the support of the organisation and presents very positive and motivating results that can be used as an example to generalize this process of implantation.

Key-Words: - Project Management, Software Engineering, normalization, ISO 10006

1 Introduction
The techniques of quality management have spread in the last few years up to reach any kind of company in the field of the production and services. The ISO 9000 certifications are very common in the present days in all the fields; from the distribution of electrical components to the production of sweets. These systems constitute a way of organization rather than an improvement of the final product quality. The companies that adopt these systems are forced to change their mentality, formalizing a change in all their actions fields. However, few things have been made referring to the applications of these working techniques in projects management. The edition of the standard ISO 10.006 “Guidelines to quality in project management” has not been able to imposed itself, maybe because of the lack of an associated certification or its poor definition. On the other hand, the implantation of this systems in the public administrations is very rare. Despite the Quality Plan of the Public Administrations in Spain, is not very common to have quality certifications. However, the administration considered as the most important of the national organizations, with an obvious customer, the citizen, oriented vocation, is the most interested in achieving the excellence in its proceedings. The detection of this needs and the continuous search of improvements in the service have encouraged the Software Engineering Department of the Principality of Asturias in collaboration with the Project Engineering Department of the University of Oviedo to implant a global projects management system covering the whole of the organization and guarantees the better control and utility of the results in the benefit of the citizens. This implantation is a challenge that can be the beginning of a new way in public projects management.

1. Projects management in the Public Administrations
The execution of the projects in the public administrations is strongly conditioned by its specifics characteristics:
- Workers with very specific functions.
- Difficult in giving rewards or
punishments.
• Execution of a lot of external projects involving different companies.
• Predominance of social projects with no measurable profits and difficult the analysis of profitability.
• Strict contracts mechanisms, with difficult to adapt to particular cases.
These problems are increased in the computing projects where the technical advances are not seconded by the slow bureaucracy of the administration. The needs of training are very expensive; the lack of professionals and, in many times, the deficient organization structure means an added problem.

2. Implantation of Projects Management Systems
At the time of making a functional change, it was considered the possibility if making a complete projects management under a Task Force structure. However, this change is nowadays non viable because a possible collision with the existing structure, making the change incompatible. The model adopted was an intermediate system, maintaining the personnel models existing at present and implementing a more formal and strict model of projects management, for both the internal and the external projects, having special attention to the quality. The main reference was the ISO 10.006, but with several changes to make it more functional.

3. ISO 10006
The standard ISO 10.006, “Guidelines to quality in project management”, is presented as a guide for practices, concepts and elements of quality that are important to achieve the quality in the projects management. The ISO 10.006 covers all the basics aspects of the full projects management: scope, time, cost, quality, risk, personnel, stakeholders, etc. in the same way as the Body of Knowledge of the Project Management Institute, that was used as a guide during its development. However, a deeper study towards the implantation of a full management system, finds serious difficult derived of the lack of concision.
Some of the problems to make a follow-up of the standard are:
• The standard remarks that it is not a “guide for the projects management itself”
• The difficult to identify the existing processes in the phases of the project and the vital cycle of the project, which is very important in computing projects.
• The lack of proceedings, just the ones mentioned in the points 5.11.4 and 5.6.2 as a suggestion.
• It does not include a process of quality management, which moves away from the scope of the project. This looks quite strange in the development of a quality methodology.
Other problems like the lack of an execution process result less important in this case because the intention is to follow the standard methodology (Metrica3) in this phase.
Added to all this points, there is also the complete inexistence of documented experiences of use and implementation. This reveal that the system proposed constitutes a novelty that will be used as a base for future developments.

4. Methodology Developed
Taking as a starting point all the elements described in the standard ISO 10.006, the Body of Knowledge for the Projects Management of PMI, the guide of fundamentals of AEIPRO and the methodology not totally documented of the “Área de Desarrollo del Principado de Asturias”, it was decided to divide the information of the methodology in three documents or guides:
• Methodological guide for the development of computing projects of the Principality of Asturias
• Guide of auxiliary techniques for the development of computing projects in the Principality of Asturias

With all this three guides, is possible to cover all the aspects that a precise quality methodology needs, but limiting the information in a way that it is assumed by the future users, easy to understand and to maintain.

5.1 Methodological guide

According to the computing terminology, each one of this stages in which the project is divided, are known as Process, necessary for its execution, dividing the development of each process in tasks or activities. Due to the extensive implantation and general knowledge of the metric methodologies, and specifically Metrica 3, these spanish technical software development methodology; this phases, ruled by this model, are not included.

According with the previous point, the following processes can be noticed:

In each one of these processes are represented the goals, participants, information diagram, activities and associated documents.

There are also included in this guide, some annexes in where it is introduced a table of theoretic correspondence between the progress and the state of the tasks, to help in the control of execution of the tasks and the templates of the documents more important, including the meetings minutes, changes control, specifications changes, partial deliveries, final acceptation, meetings call, etc.

5.2 Techniques Guide

In order to make a real implantation of the system, is necessary to give the users a documentation that could be used as a reference to the follow-up of the methodology in a way that could be used as a consult guide.

To achieve this, all the techniques that will be applied have been defined and documented.

The techniques (see graphic) can be grouped in three groups:

• General techniques of projects management. Those ones that are use to manage a project like PERT and GANTT in planning; Brainstorming for the generation of solutions, Net Present Value for the calculus of the profitability, etc.

• Specific techniques for computing projects, that include the estimation of costs and time (function points, COCOMO, etc)

• Computer treatment techniques. In this ones, are commented the possibilities and is provided an introduction of the tools to be introduced, like COSMOS, Project Central or SharedPoint
5.3 Audit of the system
In order to guarantee the execution of the methodology and also to detect the possible deviations, mistakes or improvements, it has been developed a guide for its use by the managers of the system, establishing methods of control and measure of the realization, and correctives actions.

5. Implantation
The methodology develop by a mixed team Principado-Universidad, has been tested in its different versions until reaching in this days the publishable version.
There were found training needs for its implantation, but also for the realization of a complete case that can be used as an application guide with all its documents. Nowadays the process is in this stage, applying the methodology to an internal project developed in the Principality Government to reach the learnt lessons. After this project, in November, it will begin the generalized application of the system, informing all the contractors of its establishment.

6. Use of computing techniques
The introduction of management systems more complex can not be unaware of the use of computing tools that allow the obtaining and ulterior treatment of the data. From this point of view, three needs were found:

- A tool for projects management for multi projects ad multi users. After an exhaustive search, and based on other experiences of the University of Oviedo, the tool assign for this was he Microsoft Project Server.
- A tool for the support in the cost estimation, COSMOS, based on empirics and statistical models, but with the possibility to be personalized to the own models
- A simple documentation management system, without the risk of meaning a loss of productivity. System was based in the tool chosen is Microsoft SharedPoint, a tool capable to integrate the Workgroup capabilities with portal features and project tools easily.

The collection of tools, functional, simple and accessible, not only for the administration but for the contractors guarantee the extension of its use.

7. Conclusions
The development an implantation of a quality system in the projects management that combines the recommendations of the ISO 10.006 with other standards of international organizations is possible in the public administration and the computing projects. The system presented here means an innovation and a bet for the importance of the control systems in the projects from a modern and global perspective. Although is soon to evaluate the results, the fact of its implantation means a new step toward a new way of understanding the public administrations and the service to the citizens.

References:
[3] AEIPRO. Fundamentos de la Dirección de Proyectos