

The main objective of this study is to define the product assurance requirements to support the acquisition, evaluation, integration and maintenance of Pre-developed software (PDS) to be reused in a new development for a space system.

The subject has been covered from both technical and organisational points of view. Contractual or legal aspects have been excluded. Development for reuse of software packages has been excluded as well.

In the frame of this study, the term “*Pre-developed software*” refers to any software component that was developed in another context. The software may be proposed for use without changes or may need adaptations (reuse with modifications).

In operational terms, the above objective can be stated in the following way:

The main contribution of the study is to identify and suggest specific reuse-related product assurance requirements and guidelines to a baseline consisting of the ECSS standards related to software (ECSS-E-40B and ECSS-Q-80B), the SPEC method and its associated quality model, and the results of WO6 (SPiCE for SPACE) and WO12 (SW RAMS requirements and techniques) of the PASCON contract (Product Assurance Support CONtract). The specific product assurance areas in which the results of this activity are expected to contribute are:

1. Software life cycle processes and standards.
2. Software quality modelling and evaluation methods and metrics.
3. Certification.
4. Risk management.
5. RAMS requirements and evaluation techniques.
6. Process assessment.

The suggested PA requirements and guidelines have been then validated by applying them to two pilot projects in which reuse of two pre-developed products (SCOS-2000 and OBOSS-II, respectively) was simulated. Results and conclusions extracted from these pilots are also presented.

Furthermore, for the commercial evaluation of this material it has been explored how the software reuse potential of the European space industry can be put into useful practice.

Material produced during this study will be presented in two different formats:

- **Management and technical tutorials** (to be held on Monday, 17th November, the whole day), with a detailed presentation of the main requirements and guidelines developed in the course of the activity.
- **Final presentation** itself, which will take place on Tuesday, 18th November, in the morning.