asco	**Process Instruction**	**Master**		
		API MD …		
		DATE **22.09.2009**	ISSUE	**A**
		SHEET **1** of **4**		

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APPROVAL OF CAD VERIFICATION SOFTWARE COMPAREVIDIA

Issue	Date	Modifications - see │ in margin
A	22.09.2009	New Instruction

1. **Scope;**

2. **Definitions and abbreviations;**

3. **References;**

4. **Process Flow**

5. **Process Description**

6. **Indicators**

ATTACHMENTS:

Attachment A: **CAD verification Software Validation sheet example;**

1. Scope

CompareVidia is software used to compare two CAD models with each other (authority model and converted model). This software is registered as PAS software in the CMS inventory/PAS overview and each release is validated. This instruction describes the validation process
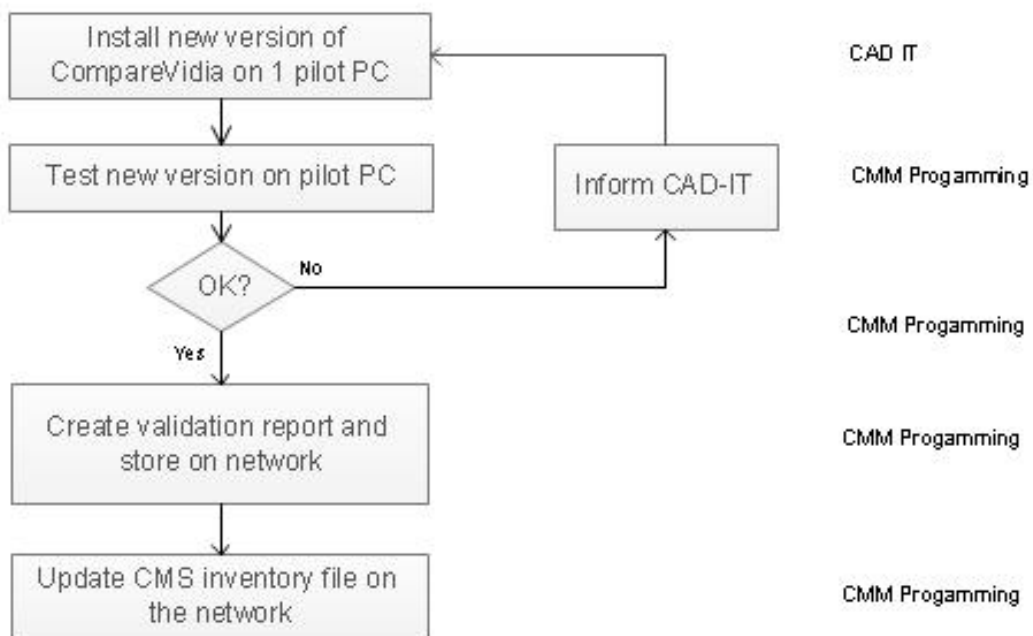
2. Definitions and abbreviations

CATIA	Computer Aided Three-dimensional Interactive Application
CATPart	CATIA file associated to a part (3D representation)
FTA or FT&A	Functional Tolerancing and Annotation
MDB	Model Based definition
PAS	Product Acceptance Software

3. References

AQI 3C.16.02	Creation and approval of measurement programs for (portable) coordinate measurement systems

4. Process Flow

5. Process Description

To validate this software some known errors are introduced in the CAD model of the artifact OUT 10-0623 (used for PAS validation). Both models, the original CAD-model and the one with the errors are compared/analyzed in CompareVidia. All the errors introduced should be detected.

Errors introduced:

Diameter:
+ 0.0002mm
- 0.0002mm
+ 0.001mm
- 0.001mm
+ 0.01mm
+ 0.1mm

Plane:
- 0.0003mm
+ 0.001mm
- 0.1mm

Radius:
+ 0.01mm

Surface:
- 0.001mm
+ 0.01mm
+ 0.1mm

Parallel planes:
0.001mm
0.01mm

Hole position changed:
+ 0.0002mm
+ 0.001mm
+ 0.01mm

Angled plane:
+ 0.1mm

Hole removed

Hole added

If all the introduced errors are detected, the software is validated by the CMM programming department. The test results are recorded in a validation report. This report is stored on the network drive P: (example in attachment A) and the CMS Inventory file is updated. Each new version of the software is installed first on 1 pilot PC and tested. If this test is OK, the software is installed on all other PC's. If the test fails, the CMM programming department informs CAD-IT. CAD-IT will investigate and eventually contact the software vendor. Obsolete software versions are removed by CAD-IT from user access. Current version master copies are securely stored by CAD-IT and a maintenance contract with the software supplier guarantees the support for the products in use. Software problems are logged into the tracking-software-problems.xls file by CAD-IT (see AQI 1.09.07).

6. Indicator

N/A

Attachment A - Example of a CAD Verification Software Validation Report:

**Product Acceptance Software
Validation Report**   **asco**