EXAM Version Control

Model-based versioning of test cases

» **Archiving release versions of test projects**
» **Decoupling of development version and productive version**
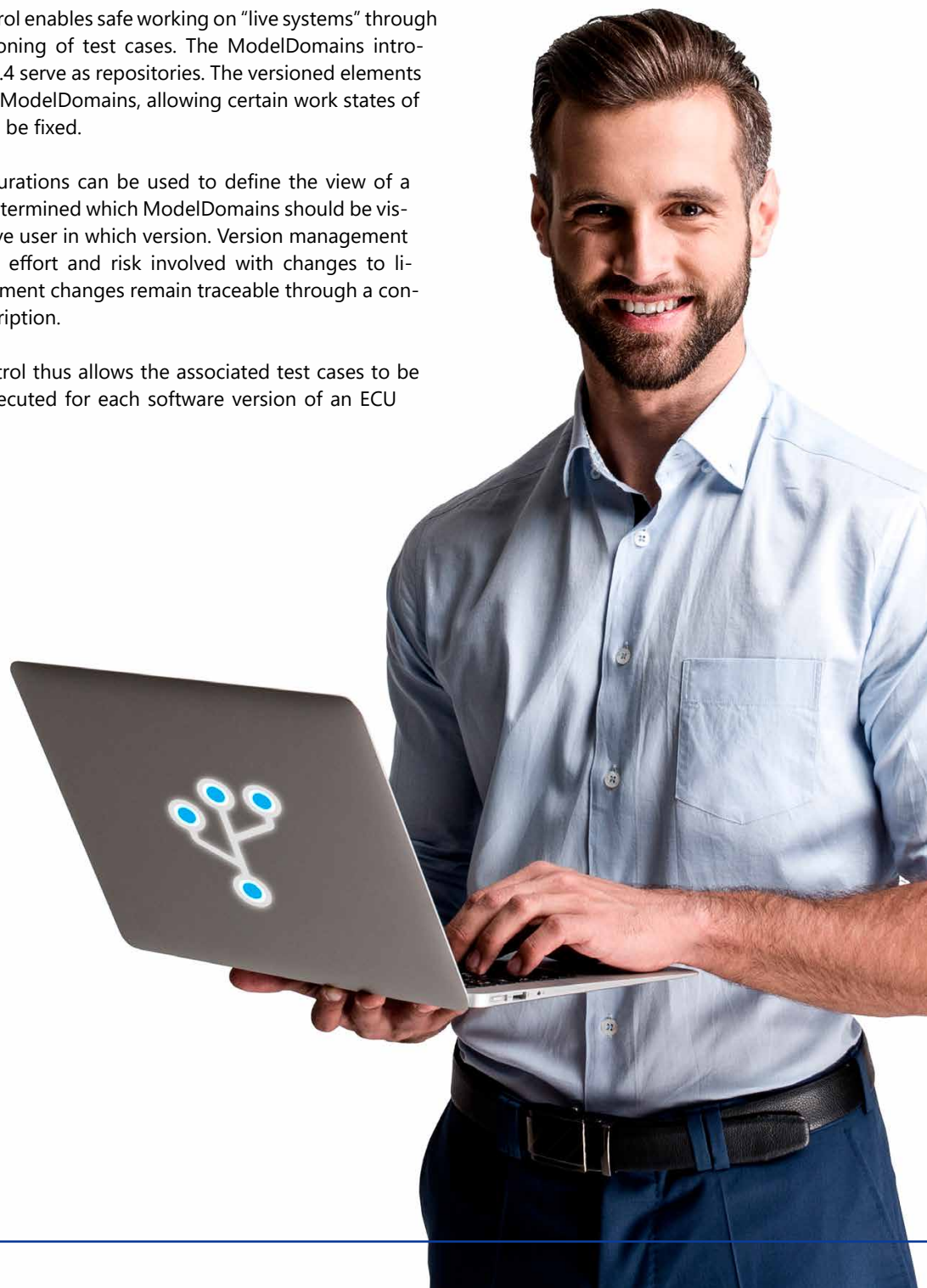» **Parallel development and execution of several development branches**

EXAM Version Control

Reliable validation of electronic control units encompasses not only technical but also numerous regulatory requirements such as ISO 26262 or Automotive SPICE. Furthermore, coordinating parallel development work on libraries and test cases presents a challenge.

EXAM Version Control enables safe working on "live systems" through model-based versioning of test cases. The ModelDomains introduced with EXAM 4.4 serve as repositories. The versioned elements reside within these ModelDomains, allowing certain work states of related elements to be fixed.

In Addition, configurations can be used to define the view of a model. Thus, it is determined which ModelDomains should be visible to the respective user in which version. Version management also minimizes the effort and risk involved with changes to libraries, since all element changes remain traceable through a consistent history description.

EXAM Version Control thus allows the associated test cases to be restored and re-executed for each software version of an ECU or test object.

Benefits of EXAM Version Control

Protection during test case development

EXAM Version Control allows to freeze work states of related elements and thus save changes to a test case or a group of test cases. This not only applies to the version after the last change, but also to any intermediate status. This means that you can always revert to a stable version if there are problems with the current one.

Archiving test projects

Related element versions of a test project can be defined and permanently tagged using baselines.

Parallel use of several development branches

EXAM Version Control provides the option to access versioned model states. If changes or further developments are necessary for such builds, a separate development branch can be created and edited on this basis.

Accelerating and stabilizing the development process

Developing tests and libraries in parallel improves workflows. The possibility of separating work states and released test cases stabilizes test execution.

Early evaluation of functions

The simple reproduction of specific test states allows the experimental further development of older versions and thus an early check on new functions - with no risk to productive operation.

How it works

» The ModelDomains introduced with EXAM 4.4 serve as repositories for the model-based version management of test cases. Versioned elements reside within these ModelDomains. This allows to freeze work states of related elements as baselines.

» In addition, the view of a model can be defined via so-called ModelConfigurations. This determines the version in which the required ModelDomains are visible to the user. They also form the basis for test execution and further development.

» The version history for model elements including corresponding comments can be traced in the History View. Different versions of an element can also be opened directly for comparison. Old versions can be restored.

» Branches enable the further development of test cases using baselines.

Feature	EXAM	EXAM incl. Version Control
Modeling of test cases	✓	✓
Executing TestSuites	✓	✓
Evaluation of test reports	✓	✓
Creation of model configurations	✓	✓
Versioning of model elements	✗	✓
Creating Baselines	✗	✓
Creating Branches	✗	✓
Restore model elements	✗	✓

Licensing model

Versioning can be activated for each model. EXAM Version Control is available under a floating license. Every EXAM client wishing to connect to a versioned model requires a license. However, licenses are not tied to specific EXAM models or users.

Both rental and purchase licenses are available in different license packages with graduated pricing. For an individual offer please contact sales-testing@micronova.de.