Configuration Management: Infineon relies on LemonTree

Infineon

trusts in

LieberLieber

LieberLieber Software: Infineon relies on LemonTree

At Infineon's Munich location, the company relies on model-driven development with Enterprise Architect. In addition, the advantages of LieberLieber LemonTree were also recognized in order to be able to merge the models created directly in Git into different feature branches.

Thanks to LemonTree, we can now also use the proven processes and workflows from classic software engineering for models. The tool also meets all our requirements in change and configuration management. Therefore, we are now very happy to use the tool and want to further evaluate it with regard to new topics such as BitBucket or Package Management

Srinivas Shenoy, Firmware Engineer at Infineon Technologies

Srinivas Shenoy studied at the Technical University of Kaiserslautern, is a firmware engineer at Infineon Technologies in Munich and knows the advantages of model-based development from his own experience: „The visual representation in the models created with Enterprise Architect facilitates understanding and analysis. This makes communication between all those involved in development more effective". Especially in view of the longer product life cycles at Infineon, the development team can change at any time without much training: „One model is much better and easier to understand than thousands of lines of code!

Dr. Konrad Wieland,
CEO of LieberLieber

LemonTree supports compliance with the required standards such as ISO 26262 with various mechanisms. Models thus get the same life cycle as other artifacts, such as software.

LemonTree offers many advantages
Due to the intensive occupation with model-based development in distributed teams, they also came across LemonTree for comparing and merging models: „Thanks to LemonTree, we can now also use the proven processes and workflows from classic software engineering for models. The tool also meets all our requirements in change and configuration management. Therefore, we are now very happy to use the tool and want to further evaluate it with regard to new topics such as BitBucket or Package Management".
Dr. Konrad Wieland, CEO of LieberLieber: „Especially for internationally oriented companies such as Infineon, the ongoing development of models presents challenges that can be solved very well with LemonTree. For example, the current version 2.5 of LemonTree can be started directly from Enterprise Architect and additionally provides basic Git functions. We are sure that this will further strengthen the use of the tool".

Architectural principles and compliance with standards
For development work at Infineon, it is important to always keep the principles of good software architecture in mind. Enterprise Architect also provides support here: „The metamodels with embedded best practices for software architecture ensure good architectural principles in design", explains the firmware engineer. To this end, model validation can also be performed to check whether the code corresponds to the model and thus to the architecture.
As with many companies, an increasingly important issue is verifiable compliance with standards. For example, the automotive standard for functional safety ISO 26262 prescribes a semi-formal notation for specifying the software architecture. Wieland says: „LemonTree supports compliance with the required standards such as ISO 26262 with various mechanisms. Models thus get the same life cycle as other artifacts, such as software.

Configuration management for models
In a project of medium to high complexity at Infineon, several team members usually work on different tasks and parts of the design. The design is divided into several model files. Configuration management must then help ensure that each task is tracked, debugged and integrated separately. LemonTree is the ideal core product because it helps to perform many tasks better and faster:
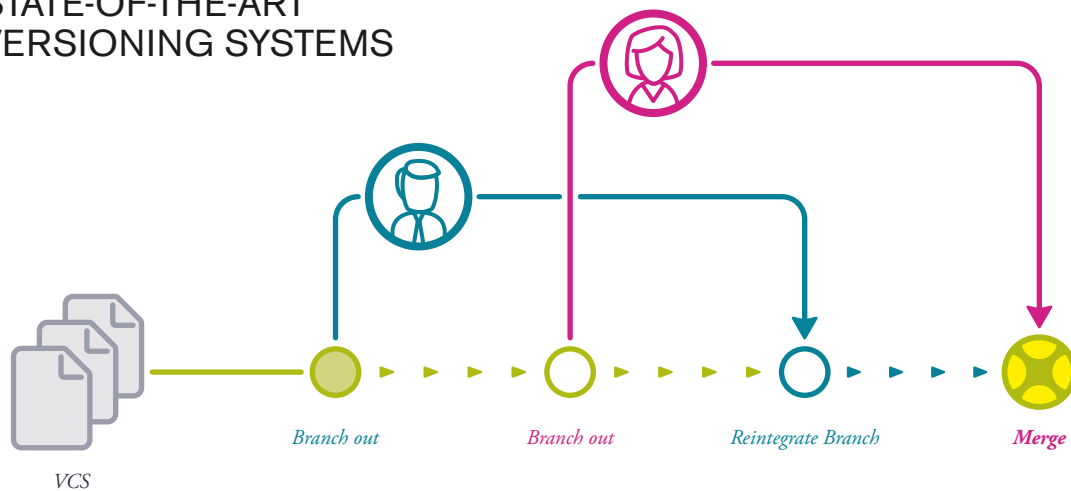- Comparison and merging of Enterprise Architect models
- Versioning of entire EAP files, simple as text files
- Three-way Diff & Merge function
- Direct integration of version control systems like SVN, PTC or Git
- Support for EAP files and DBMS (MS SQL, Oracle etc.)

In addition, LemonTree enables the understanding of changes between individual model versions, which is important for reviews: „Tracking changes in the model and thus the review process becomes easier because all graphical changes can be visualized," confirms Shenoy from his own experience.

Best practices around models from a single source
Ultimately, LieberLieber and its products and services close the circle of industrial best practices by combining model-based development, configuration and change management with LemonTree and agile development. „With the good support of LieberLieber, we are sure that we will be able to keep the increasing complexity in our development projects firmly under control in the future," Shenoy sums up.

VERSION MANAGEMENT
OF MODELS WITH
STATE-OF-THE-ART
VERSIONING SYSTEMS

Branch out   Branch out   Reintegrate Branch   *Merge*

VCS

A model-based development approach allows teams to work efficiently on parallel versions of a model. LieberLieber LemonTree for Enterprise Architect offers detailed model comparison and guarantees the precise versioning of models defined by modelling languages such as UML, SysML, BPMN, etc. (OMG open standards).

The key feature of LemonTree is the ability to compare and merge different model versions, allowing users to easily trace changes to the respective model versions. LemonTree offers you the three most important components of a modern model versioning system.

Special highlights

LemonTree offers decisive advantages for model versioning:

▶ **Revision security according to ISO standards**

▶ **Traceable changes**

▶ **Parallel, independent teamwork**

▶ **Version management of the models using tools such as SVN and Git**

▶ **Model Branching**

▶ **Change history available**

Benefits for users

System engineers and modellers enjoy a high degree of security when using Lemon-Tree to develop complex mechatronic systems. Proven concepts are applied by outsourcing version management to tools such as Git and SVN.

These tools show which user has changed model content, and when. They also allow a team to make parallel changes to models without affecting the work of other team members. Users can reference specific revisions in order to ensure an orderly change and reporting process, also for models.

THE HIGHLIGHTS OF LEMONTREE

- ▶ **LemonTree AddIn for Enterprise Architect**

- ▶ **Basic Git functions integrated**

- ▶ **Improved performance and extended filter options**

- ▶ **ISO 26262 Certification Kit for LemonTree**

- ▶ **Optimized license and service information**

ABOUT LIEBERLIEBER SOFTWARE

We are a software engineering company. The know-how of our employees lies in model-based software and system design based on tools such as Enterprise Architect from Sparx Systems.

Our customers are companies that place particular importance on the quality of their software and systems development. They wish to maintain a constant overview of their complex development scenarios while ensuring that security-relevant requirements are clearly represented in models.

For this task we provide our own special tools, such as LemonTree and Embedded Engineer. In addition, we offer a range of useful tool integration services to help make our customers' development processes more productive.

More information: www.lieberlieber.com