An electrical engineering enterprise owns a code base that was developed over the years typically in C++ and Fortran. eKNOWS lets you generate technical documentation largely automatically. This ensures synchronization between program code and technical documentation and thus their consistency. Complete program documentation can be generated automatically, whereby up to 70% of printable documentation is generated without additional changes in code and the rest can be covered by enhancements in the program code.

Many PL/SQL scripts are used to generate statistics and reports. Here the challenge is that over the years the scripts often needed to be adapted to a changing IT infrastructure. On a change of the database system, the scripts were sometimes migrated automatically; thus meanwhile it is difficult to determine from which data sources the results came and on what basis they were computed. The complexity of the overall PL/SQL scripts and their dependencies, along with documentation that is no longer up-to-date, impede consistent traceability of computations. This also seriously impedes any maintenance of the software. On the basis of PL/SQL source code, eKNOWS lets you resolve the dependencies, and simplifies and documents the interrelationships.
**Impact and effects**

First-generation software experts will soon be retiring and taking the expertise that resides in the software that they developed with them. “Depending on the application domain, this can involve computations, formulas and/or state diagrams,” explains Dr. Josef Pichler of SCCH.

Usually the software is written in old programming languages (Fortran, COBOL, PL/I) and lacks comprehensive documentation. eKNOWS provides the expertise in comprehensible form as mathematical formulas, decision tables and/or data flows. The interactive display options in eKNOWS improve understanding; this lets you display program paths with certain parameter values. “The tool can deliver documentation, an interactive representation of the software, or newly generated code in another language,” says Pichler.

**Contact and information**

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<tr>
<th>Organisation</th>
<th>Country</th>
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<tr>
<td>ENGEL AUSTRIA GmbH</td>
<td>Austria</td>
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<td>Siemens Aktiengesellschaft Österreich (Linz, Weiz)</td>
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