K-DCP Authoring is a development environment for diagnostic applications based on ASAM/ISO standards. Design, maintain and test state-of-the-art diagnostic applications. K-DCP Authoring helps reduce inherent complexity, promote reusability, improve quality and reduce application development/maintenance cost. The easy to use authoring environment helps domain experts to deliver high quality sequences in less time.

The integrated publication mechanism provides an automated delivery of the created content into the K-DCP Framework.

**Product Development V-Cycle**

Integrated development environment for creating diagnostic application using domain specific language.

- **Process Definition** (Authoring Guidelines)
- **System Specification**
- **OEM**
  - **Tier-1 Supplier**
  - **ECU Specification**
- **Implementation**
  - **ECU Simulation & Testing**
  - **ECU Specific testing**
  - **ECU Validation**
  - **Vehicle testing & Validation**
  - **After Sales**

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**K-DCP**

- **Database Designer NG**
- **K-DCP Framework**
- **K-DCP Authoring**
- **K-DCP Communicator**
- **K-DCP ECU-Editor**

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**Use Cases**

- Stand-alone / Cloud based Diagnostics Application Design
- Data management, workflow and use-case oriented editing and approval approach
- Guided Diagnostics and Fault Finding editor including Symptom handling
- Development and debugging of diagnostic sequences
- Automated ECU diagnostic testing

**Key Features**

- Single sourcing – distribution of the same sequences and HMI on a stand-alone machine, as well as on a cloud server
- Drag and drop objects directly into visual test sequences.
- OTX as a programming language including code formatting, correction and auto complete
- Simple access to diagnostic content (Diagnostic Wizard / Diagnostic Module View)
- HMI Editor to author customer specific screens and visualize various use-cases
- Guided diagnostics approach based on test steps and sequences for fault codes and symptoms
- Integrated version control mechanism
- Workflow control and release management system
- Code generation into Java programming language
- Integrated debugger and runtime environment
- Support for simulation of vehicle diagnostics communication
- Design time validation of all standard checker rules and ability to add custom rules as per OTX authoring guidelines

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**Drag and Drop Objects**

- Allows user to create test sequences just by dragging and dropping required elements
- A detailed view shows additional input fields for realization of OTX elements
- Simple creation of required variables and drag & drop support for usage
- Advanced Editor to fill list and map datatypes
- Only basic programming knowledge is required
- Every Element has detailed help description as reference

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**OTX as programming language**

- Textual editor to program OTX including  
  - Code formatting  
  - Auto complete  
  - Help and Correction functions

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**Access to Diagnostic Content**

- Loads native ODX data and provides multi ECU access
- Diagnostic Wizard for simple configuration of diagnostic requests and selection of the required response parameter
- Diagnostic Module view allows drag and drop of diagnostic services and diagnostic content (i.e. ODX ShortNames)
HMI Editor
- Drag and drop based screen editor
- Binding between OTX procedures and screen elements in detail view
- Data creation in standardized format for reuse

Guided Diagnostics
- Built-in perspective to author guided diagnostic sequences with predefined user interfaces
- Editor to manage sequences in regards of fault codes, fault code hierarchies and symptoms
- Ability to author test-steps which can be re-used in multiple test-sequences
- Auto-generated code including detailed logging for feedback and optimization
- Ability to embed HTML pages for additional content (i.e. wiring diagrams)

Integrated Version Control management
- Allows SVN based version control management directly from the tool (commit, update, revert, tag/branch...)
- Management of OTX sequences and required resources

Workflow and Release Management
- Built-in work-flow to ensure development, testing and approval/release processes
- Based on user license and user rights management tool provided by KPIT (LIMAS)
- Integrated Meta Information View with additional information on the procedure level
- Capability to create procedure based PDF reports for documentation perspective (like JavaDoc)
Publication mechanism
- Publication based on reusable configurations
- Support of Test Publications to ensure quick test coverage possibilities (i.e. language / model specific)

OTX to Java
- Converts test sequences from OTX format to Java byte code.
- Helps the user to execute test sequences without having a dependency on the OTX runtime
- Optimized execution time and resource consumption

Debugging Features
- Debugging capabilities based on every OTX element including variable view
- Search functionalities for references of procedures
- Analyze of execution stack in regards of number of calls and time consumption
- Including Simulation channel to debug sequences without a real ECU

Integrated Checker
- OTX ISO-Standard rule checks
- Customizable rules to include OEM specific checks based on OTX authoring guidelines

Validation Framework for OTX Procedures
- Test environment for the execution with pre-defined parameters (i.e. input, context, ...)
- Automated report generation of test results

About KPIT
KPIT Technologies (BSE: 532400; NSE: KPIT) is a fast growing Product Engineering and IT consulting partner to Automotive, Manufacturing and Energy & Utilities companies. A leader in technology solutions and services, KPIT partners with 200+ global corporations enabling them to become more efficient, integrated and innovative enterprises.