INTERNATIONAL STANDARD

**ISO 17356-6**

First edition
2006-01-15

# Road vehicles — Open interface for embedded automotive applications —

## Part 6: OSEK/VDX Implementation Language (OIL)

*Véhicules routiers — Interface ouverte pour applications automobiles embarquées —*

*Partie 6: Language d'exécution OSEK/VDX (OIL)*

Reference number
ISO 17356-6:2006(E)

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Published in Switzerland

 

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 17356-6 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

ISO 17356 consists of the following parts, under the general title *Road vehicles — Open interface for embedded electronic equipment*:

— *Part 1: General structure and terms, definitions and abbreviated terms;*

— *Part 2: OSEK/VDX specifications for binding OS,COM and NM;*

— *Part 3: OSEK/VDX Operating System (OS);*

— *Part 4: OSEK/VDX Communication (COM);*

— *Part 5: OSEK/VDX Network Management (NM);*

— *Part 6: OSEK/VDX Implementation Language (OIL).*



 

# 0 Introduction

## 0.1 General remarks

This part of ISO 17356 refers to ISO 17356-2, ISO 17356-3 and ISO 17356-4. For a better understanding of this document, the reader should be familiar with the contents of these other specifications.

## 0.2 Motivation

To reach the goal of portable software, this part of ISO 17356 defines a way to describe the configuration of an application.

This part of ISO 17356 only addresses a single central processing unit (CPU) in an electronic control unit (ECU), not an ECU network.



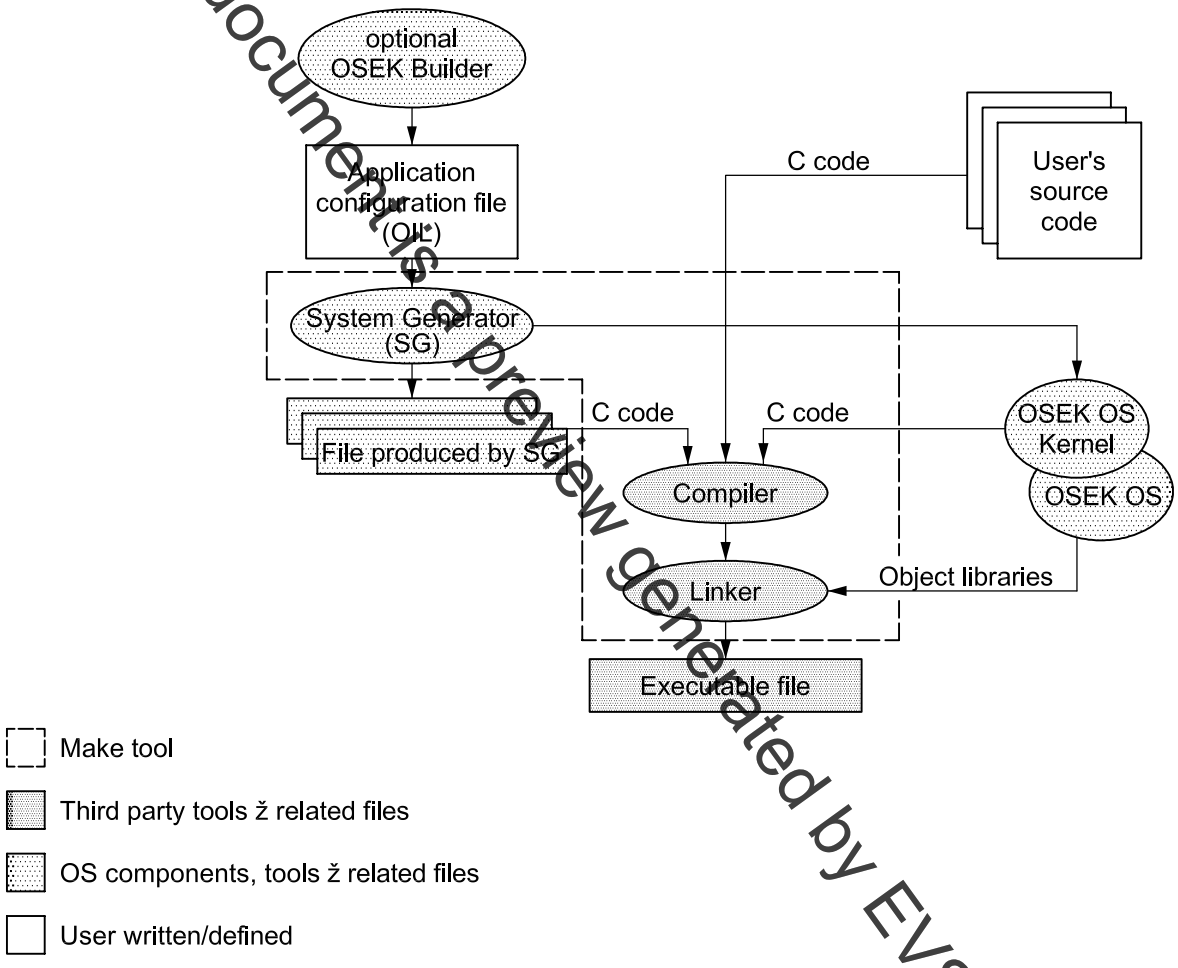


**Figure 1 — Example of development process for applications**

Figure 1 shows an example of a development process for applications.

The ISO 17356-6 description may be handwritten or generated by a system configuration tool. There can be several ISO 17356-6 files, e.g.:

— files which contain CPU-specific configuration items (created by the supplier); and

— files which contain configuration items for the entire network (provided by the OEM).

Sub-systems delivered in source code are compiled together with the application; others delivered as a library are integrated by the linker.

# Road vehicles — Open interface for embedded automotive applications —

# Part 6: OSEK/VDX Implementation Language (OIL)



## 1 Scope

This document describes the OSEK Implementation Language (OIL) concept for the description for ISO 17356 real-time systems, capable of multitasking and communications, which can be used for motor vehicles. It is not a product description that relates to a specific implementation.

General conventions, explanations of terms and abbreviations are compiled in a glossary, which is part of ISO 17356-1.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9899, *Programming languages — C*

ISO 17356-1, *Road vehicles — Open interface for embedded automotive applications — Part 1: General structure and terms, definitions and abbreviated terms*

ISO 17356-2, *Road vehicles — Open interface for embedded automotive applications — Part 2: OSEK/VDX specifications for binding OS, COM and NM*

ISO 17356-3, *Road vehicles — Open interface for embedded automotive applications — Part 3: OSEK/VDX Operating System (OS)*

ISO 17356-4, *Road vehicles — Open interface for embedded automotive applications — Part 4: OSEK/VDX Communication (COM)*

ISO 17356-5, *Road vehicles — Open interface for embedded automotive applications — Part 5: OSEK/VDX Network Management (NM)*

## 3 Language Definition

### 3.1 Preamble

The goal of this part of ISO 17356 is to provide a method to configure an application inside a particular CPU. This means for each CPU there is one ISO 17356-6 description.

All system objects are described using ISO 17356-6 objects.