



Open Communication Interface for Road Traffic Control Systems

Offene Schnittstellen für die Straßenverkehrstechnik

OCIT-Outstations Configuration document

OCIT-O_CD_V3.1

OCIT Developer Group (ODG) & Partner

OCIT® ist eine registrierte Marke der Firmen AVT Stoye, Stührenberg, Swarco Traffic Systems und Yunex Traffic

OCIT-Outstations

Configuration document

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Document history

| Version Status | Date | Comment |
|----------------|------------|--------------------------------|
| V1.0 A07 | 2013-11-09 | Basic document for version 3.0 |
| V3.0 A01 | 2018-03-03 | Revision for OCIT V3.0 |
| V3.1 A01 | 2026-02-28 | Revision for OCIT V3.1 |

1. Categorization

OCIT Outstations specifications are named according to the schema indicated in the document "OCIT-O introduction to the system". This configuration document contains an overview of the current and associated version of the specifications on OCIT Outstations for traffic signal controllers as well as references to the associated OCIT-C specifications. Moreover, the document contains an overview of all the OCIT documents published by the ODG with a brief description of contents as well as an overview of the changes made concerning the relevant revision status.

2. OCIT documents

All the OCIT documents published by the ODG are listed here.

| Short name | Title | Contents |
|--|--|---|
| OCIT-O documents for traffic signal systems | | |
| OCIT-O KD | Configuration document | Overview of the current and associated version of the OCIT-O specifications. |
| OCIT-O Function mirror | Function mirror | Condensed description of the functions that specifications-compliant traffic signal controllers, transmission procedures and control centers can carry out in accordance with the specifications. |
| OCIT-O system | Introduction to the System | Stipulations for the specification and documentation of OCIT-O interfaces. |
| OCIT-O Protocol | Rules and protocols | Stipulations for the realisation of the OCIT Outstations protocols. |
| OCIT-O Basis | Basic definitions for traffic signal controllers | Stipulations of the basic interfaces and device functions for devices with OCIT-O interface. |
| OCIT-O TSC | Traffic signal controllers | Stipulations of the special interfaces and device functions for traffic signal controllers. |
| OCIT-O Profile 1 | Profile 1 - Transmission profile for point-to-point connections on permanently switched transmission paths | Definitions on sending and receiving data with full-duplex modems via through-connected copper two-wire lines. |
| OCIT-O Profile 3 | Profile 3 - Transmission profile for Ethernet with DHCP | Definitions for connecting OCIT-O field devices to networks via Ethernet. |
| OCIT-O Profil 4 | Profile 4 - Transmission profile VPN | Define the minimum required interfaces and formats necessary to set up VPNs in an OCIT system. |

| Short name | Title | Contents |
|---|--|--|
| Demonstration of functioning at control centers | Proof of functioning with central equipment | This document for tests of traffic signal controllers with OCIT Outstation interface for version 3.0 traffic signal controllers on central equipment. |
| OCIT-O V3.X TSC User Agreement | OCIT-O V3.X for Traffic Signal Controllers, User Agreement | User agreement for the use of the specifications of the interface functions for traffic signal controllers version 3.X. |
| ODG-V2-Tracer | Manual ODG-V2 Tracer _ODG | The ODG-V2-Tracer is a product of the ODG. The ODG V2-Tracer is used to detect and log PTPLL communication between traffic signal controllers and the control center. |
| ODG-V2-Tracer_User_Agreement_PW | ODG-V2-Tracer User Agreement | User agreement for the use of the tracer. |
| OCIT-O V2.0 Test Suite MAT | Manual | |
| OCIT-O V2.0 Test Suite MAT User Agreement | OCIT-O V2.0 Test Suite MAT User Agreement | User agreement for the use of the test suite MAT. |
| OCIT-C documents | | |
| OCIT-C Release Notes | OCIT-C Release Notes | Overview of the current and associated version of the OCIT-C specifications (English) |
| OCIT-C User Agreement | OCIT-C User Agreement | User agreement for the use of the OCIT-C specifications. |
| OCIT-O Protocol | OCIT-C Transport protocol | Guidelines for implementing the OCIT-C protocol. |
| OCIT-C data | OCIT-C data | Description of the OCIT-C data contents. |
| OCIT-O Car documents | | |
| OCIT-O Car | OCIT-O Car Roadside Unit | Guidelines for the OCIT-C Car interface between functions relevant to a control center and an RSU. Describes the possibility of using Car2X data from a roadside unit (RSU) for traffic detection. |
| Miscellaneous | | |
| OCIT Rights of Use | OCIT Rights of Use | List of assigned rights of use. |
| ODB Member Number | ODG Member Number | List of assigned member numbers. |
| OCIT Nominal Fees | OCIT Nominal Fees | List of protection fees and usage agreements for OCIT specifications. |

The current issue of the document is published on www.ocit.org downloads area.

3. OCIT Outstations for Traffic Signal Controllers Version 3.0 Issue 1

The specifications of the OCIT Outstations interface version 3.0 for traffic signal controllers, Issue 1, contains functions whose data models are specified in guidelines on central functions. OCIT Outstations Version 3.0 for Traffic Signal Controllers, Issue 1 is compatible with the OCIT-C Version 2.0.

3.1. Function level

The function level provides a condensed description of the functions, specification compliant traffic signal controllers, transmission procedures and control centers which are able to perform in accordance with the Specifications, as well as the optional supplements and the options for project-specific modifications.

| Documents | | Software |
|---------------------------------|--|------------------|
| File_Version | Title | File and version |
| OCIT-O_ Function mirror_V3.1 | Function level OCIT Outstations Version 3.1 for traffic signal control- lers | none |

3.2. Interface functions

The specifications contain guidelines on the functions of the interface as well as on selected features of the controllers and control centers.

| Documents | | Software |
|---------------------------|---|-------------------------------------|
| File_Version | Title | File and version *) |
| OCIT-O_System_V3.0_A01 | Introduction to the System | none |
| OCIT-O_Protokoll_V3.0_A01 | Rules and protocols | OCIT-O_DTD.dtd Version: V2.0.1 |
| OCIT-O_Basis_V3.0_A01 | Basic definitions for traffic signal controllers | OCIT-O_Basis.xml Version: 2.0.19 |
| OCIT-O_Lstg_V3.0_A01 | Traffic signal control- lers | OCIT-O_Lstg.xml Version: 2.0.29 |
| | BTPPL Library | ocit_src_btppl_type_V2.0_A04 |

| Documents | | Software |
|---|--|--------------------------------|
| File_Version | Title | File and version ^{*)} |
| | Type tool | typetool_V2.0_A04 |
| OCIT-O_V3.X_ Nutzungsvereinbarung V3.0_A01 | OCIT-O V3.1 for Traf- fic Signal Controllers, User Agreement | none |
| For appropriate transmission profiles, see section 3.3. | | |

^{*)} The version of the .dtd and .xml files is available as in the file.

3.3. Transmission profiles

The specifications contain guidelines on data transmission. They include device functions and properties of data transfer devices.

| Documents | | Software |
|--------------------------|---|--------------------------------|
| File_Version | Title | File and version ^{*)} |
| OCIT-O_Profil_1_V1.1_A03 | Profile 1 - Transmission pro- file for point-to-point connec- tions on permanently switched transmission paths | none |
| OCIT-O_Profil_3_V1.0_A02 | Profile 3 - Transmission pro- file for Ethernet with DHCP ¹ | none |
| OCIT-O_Profil_4_V1.0_A01 | Profil 4 - Transmission profile VPN | none |

^{*)} The version of the .dtd and .xml files is available as in the file.

3.4. Test tools

3.4.1. ODG-V2-Tracer

The ODG V2-Tracer is used to detect and log PTPLL communication between traffic signal controllers and the control center. The collected data can be filtered for various criteria. It is also possible to export the trace in many output formats. The ODG-V2-Tracer is described in a manual as a product of the ODG.

| File_Version | Title | File_Version |
|--------------|-------|--------------|
| | | |

¹ Whether field devices which support Profile 1 or 2 can be upgraded to Profile 3 depends on the type and scope of the installed operating system and the associated connected hardware.

| | | |
|--|------------------------------|--------------------------------|
| Handbuch ODG-V2-Tracer V2.0.14_ODG | Manual ODG-V2-Tracer | ODG-V2-Tracer2.0.14_Dongle.zip |
| ODG-V2_Tracer_Nutzungsvereinbarung_PW_V1.0_A01 | ODG-V2-Tracer User Agreement | |

The ODG-V2-Tracer Version 2.0.14 is compatible with devices with OCIT Outstations for Traffic Signal Controllers with version 1 and version 2 up to revision A04.

3.4.2. OCIT-O V2.0 Test Suite MAT

| File_Version | Title | File_Version |
|-----------------|----------------|--------------|
| Manual | Manual | |
| OCIT-O V2.0 MAT | User Agreement | |

3.5. Proof of functioning with central equipment

This document for tests of traffic signal controllers with OCIT Outstation interface for version 3.0 traffic signal controllers on central equipment. The interface functions of the traffic signal controllers and their effects in the central device are described. Only functions which were able to be tested with the control and display functions commonly available on central equipment have been listed.

| Documents | | Software |
|--|---|--------------|
| File_Version | Title | File_Version |
| Demonstration of functioning at control centers V3.0 A01 | Proof of functioning with central equipment | - |

4. Change overview

4.1. OCIT-O for Traffic Signal Controllers Version 3 Issue A02

| OCIT-O Lstg V3.0 A02 | | Comment |
|----------------------|--|---------|
| | | |

| OCIT-O Basis V3.0 A02 | | Comment |
|-----------------------|--|------------|
| | | Correction |

| OCIT-O System V3.0 A02 | | Comment |
|------------------------|--|---------|
| | | |

| OCIT-O Protokoll V3.0 A02 | | Comment |
|---------------------------|--|---------|
| | | |

| OCIT-O_Profil_1_V1.1_A03 | | Comment |
|--------------------------|--|---------|
| | | |

| OCIT-O_Profil_2_V1.0_A04 | | Comment |
|--------------------------|--|---------|
| | | |

| OCIT-O_Profil_3_V1.0_A02 | | Comment |
|--------------------------|--|---------|
| | | |

| | |
|--|----------------|
| ODG-V2-Tracer 2.0.14_Dongle.zip | Comment |
| | |

| | |
|----------------------------------|----------------|
| OCIT-O V2.0 Testsuite MAT | Comment |
| | |

4.2. OCIT-O for Traffic Signal Controllers Version 3 Issue A03

As of issue (A03) of the specifications for traffic signal controllers, problems from issue 2 were corrected, improvements made and recommendations given on standardizing the behavior of the traffic signal controllers.

| | |
|-----------------------------|----------------|
| OCIT-O Lstg V3.0 A02 | Comment |
| | |

| | |
|------------------------------|----------------|
| OCIT-O Basis V3.0 A02 | Comment |
| | Correction |

| | |
|-------------------------------|----------------|
| OCIT-O System V3.0 A02 | Comment |
| | |

| | |
|----------------------------------|----------------|
| OCIT-O Protokoll V3.0 A02 | Comment |
| | |

| | |
|---------------------------------|----------------|
| OCIT-O_Profil_1_V1.1_A03 | Comment |
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| | |
|---------------------------------|----------------|
| OCIT-O_Profil_2_V1.0_A04 | Comment |
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| OCIT-O_Profil_3_V1.0_A02 | Comment |
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|--------------------------------------|----------------|
| ODG-V2-Tracer2.0.8_Dongle.zip | Comment |
| | |

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|----------------------------------|----------------|
| OCIT-O V2.0 Testsuite MAT | Comment |
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