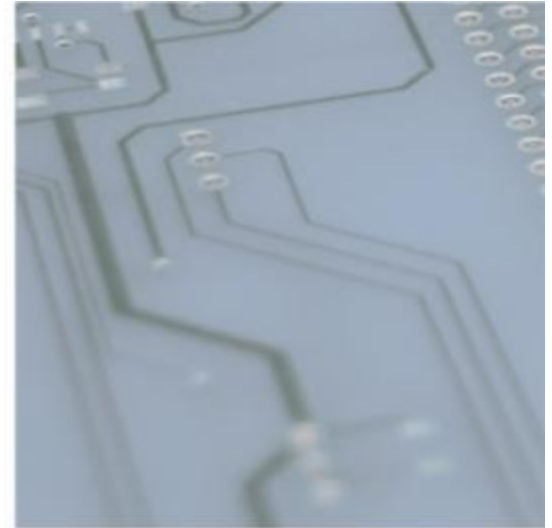


Diagnosis

UDS Diagnosis

Integration in
CanEasy



Frank Nikolai

- UDS
 - CanEasy integration
- BSKD7
 - Basics
 - How to start

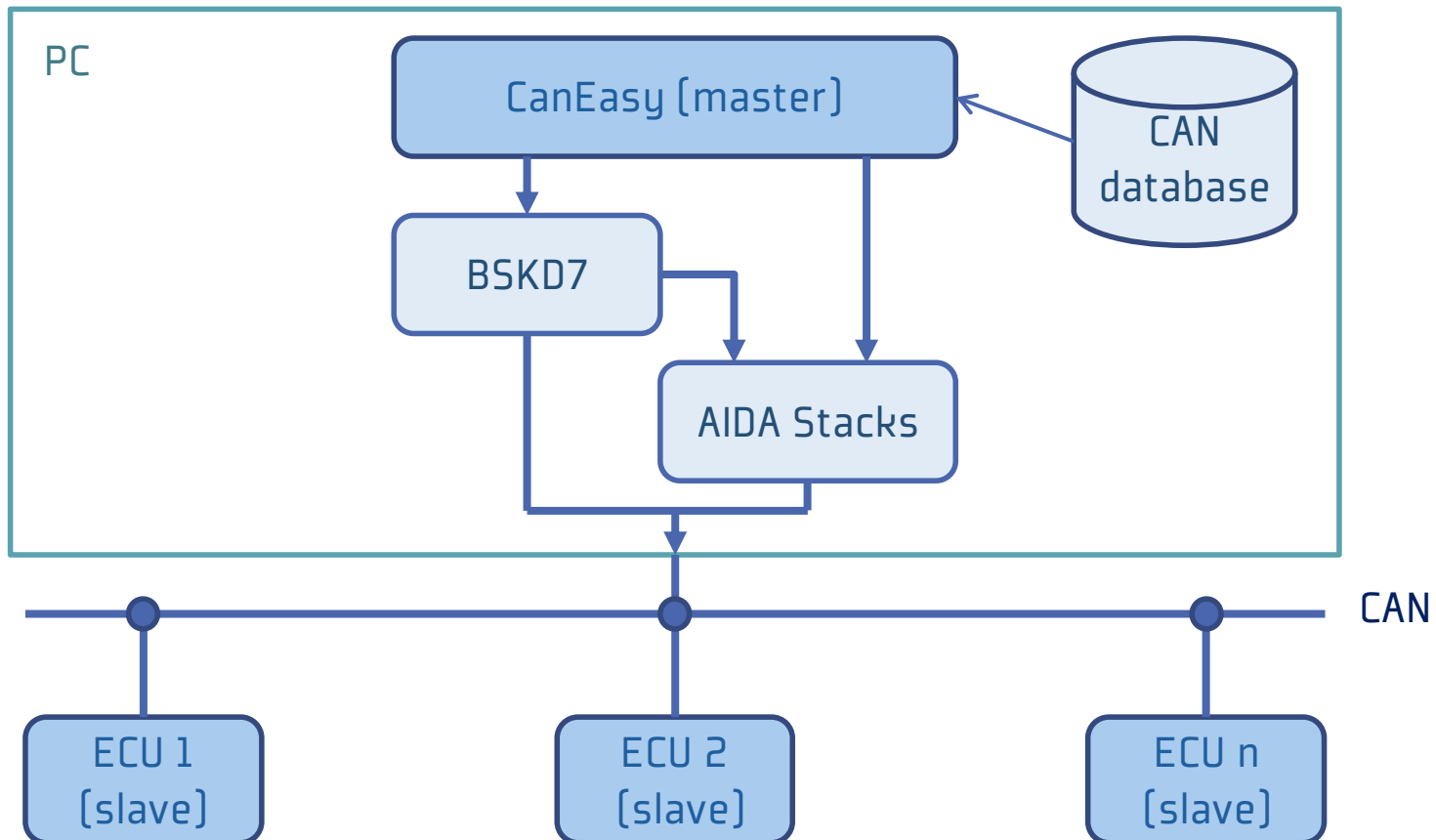
- AIDA-Stacks
 - Basics
 - Components
 - Integration in BSKD

 - AIDA-Stacker
 - Basics
 - How to start
 - Create a stack
 - Configure a stack
 - Test a stack

 - Outlook UDS
-

UDS: CanEasy integration

- UDS in CanEasy
 - works as XCP master



- Steps to do

BSKD7 (BSK Diagnosis v7)

- Add a diagnosis project for BSKD7
- Start BSKD7
 - Use command console for single service execution
 - Use macros for test automation

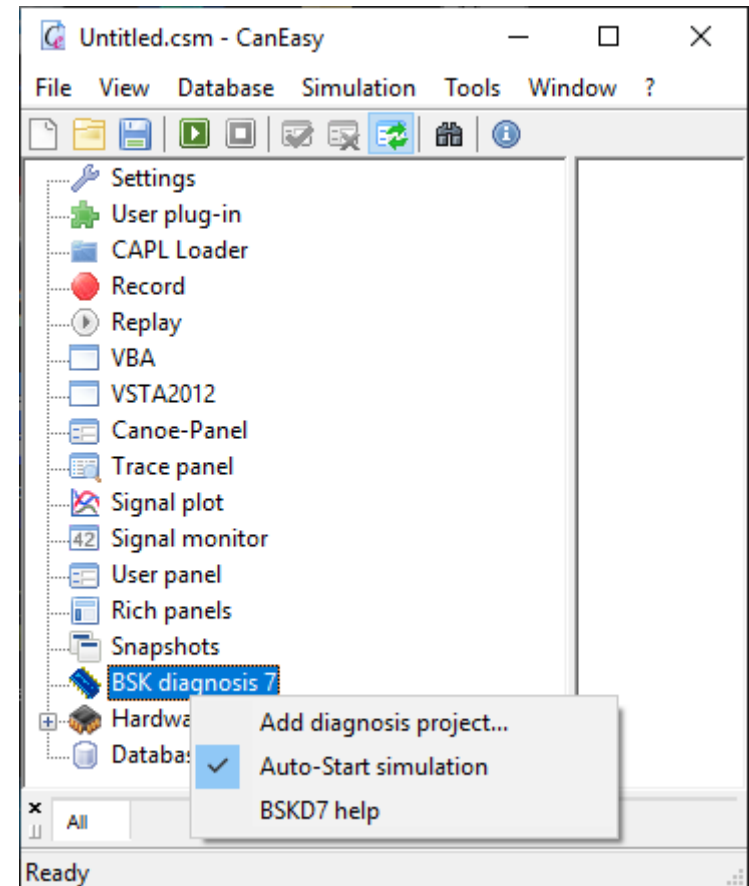
AIDA Stacks

- Configure a communication stack
 - Use communication stack in C++, VSTA or VBA
-

- What is BSKD7
 - Text based command console for diagnosis commands
 - Provides
 - Wide range of configuration
 - Macro language for automatic service execution and visualization
 - Can use preconfigured communication stacks (AIDA Stacks)

BSKD7: How to start

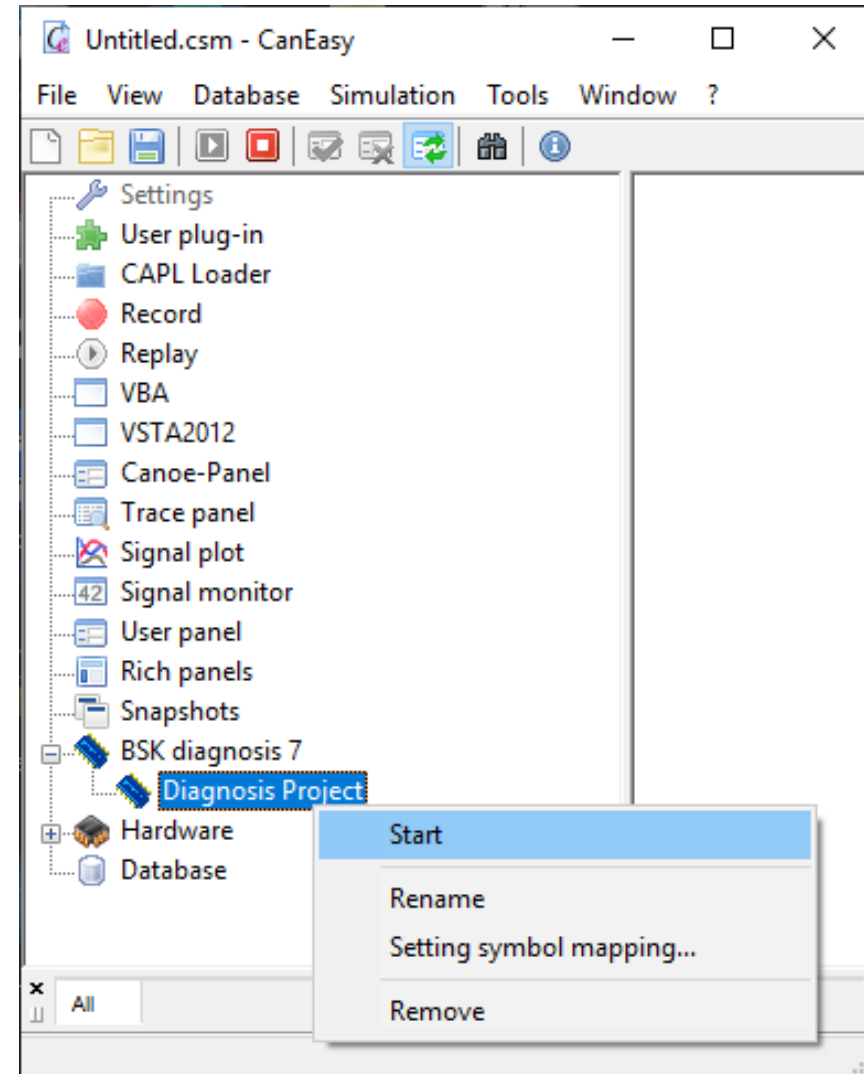
- Add Diagnosis Project
- Select batch file which at least calls BSKD executable:



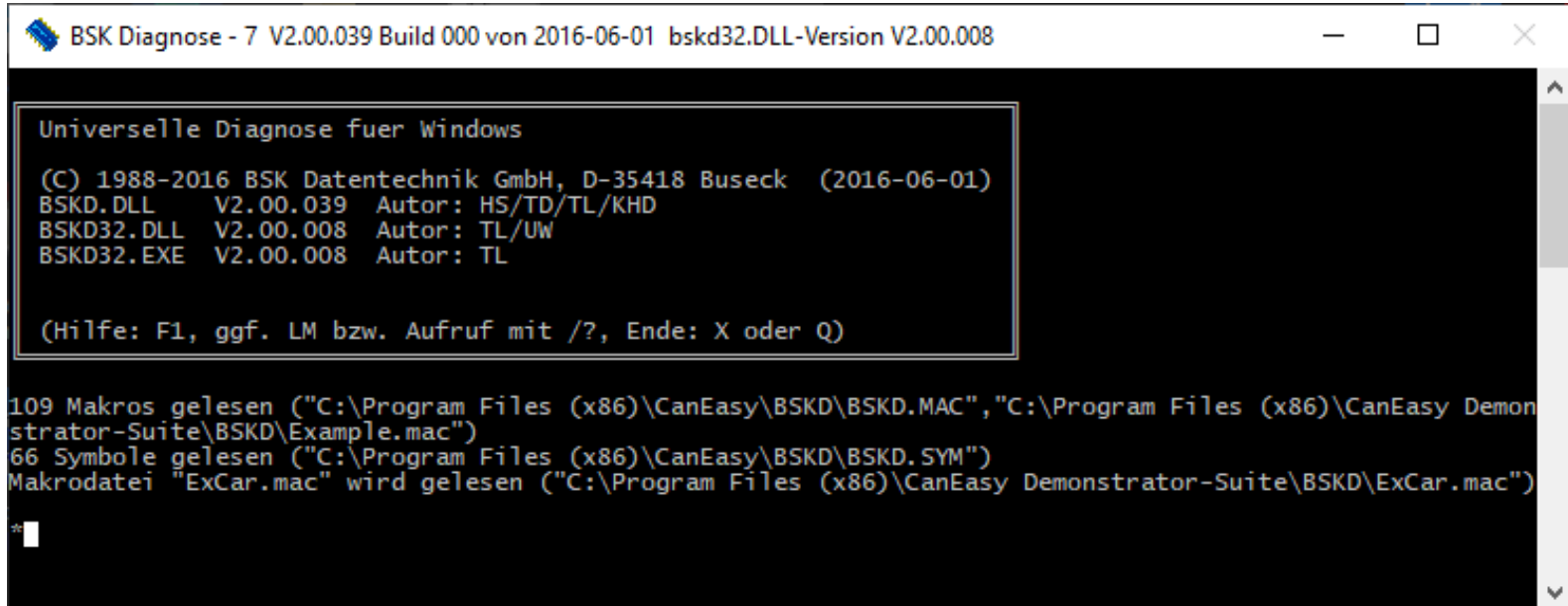
C:\Program Files (x86)\CanEasyDemonstrator-Suite\BSKD

BSKD7: How to start

- Start the Diagnosis Project
(or double click on the
Diagnosis Project)



BSKD7: How to start



```
BSK Diagnose - 7 V2.00.039 Build 000 von 2016-06-01 bskd32.DLL-Version V2.00.008

Universelle Diagnose fuer Windows

(C) 1988-2016 BSK Datentechnik GmbH, D-35418 Buseck (2016-06-01)
BSKD.DLL      V2.00.039  Autor: HS/TD/TL/KHD
BSKD32.DLL    V2.00.008  Autor: TL/UW
BSKD32.EXE    V2.00.008  Autor: TL

(Hilfe: F1, ggf. LM bzw. Aufruf mit /?, Ende: X oder Q)

109 Makros gelesen ("C:\Program Files (x86)\CanEasy\BSKD\BSKD.MAC","C:\Program Files (x86)\CanEasy Demon
strator-Suite\BSKD\Example.mac")
66 Symbole gelesen ("C:\Program Files (x86)\CanEasy\BSKD\BSKD.SYM")
Makrodatei "ExCar.mac" wird gelesen ("C:\Program Files (x86)\CanEasy Demonstrator-Suite\BSKD\ExCar.mac")
```

- Command console window appears
- Diagnosis services can be executed:
ft 22,10 -> SID: 0x22 SubCmd: 0x10
- Response
Daten: 00 -> SID: 0x62 Data: 0x00

- What are AIDA–Stacks
 - Modular communication stacks [based on OSI model]
 - Can be assembled by AIDA Stacker
 - Consist of two types of components:
 - Protocol components
 - Hardware drivers
 - Stacks are built
from top level component down to hardware driver
 - Most components have parameters to configure the
behavior of that component

AIDA – Automotive and Industrial Diagnostic Assistance

OSI – Open System Interconnection

Available stack components:

- BDiag [proprietary diagnosis protocol]
 - Checksum [adding or checking checksums]
 - CAN [CAN driver]
 - COM [driver for serial COM port]
 - Filter [message filter]
 - IEEE488 [IEEE bus component]
 - KWP2000 [Keyword 2000 protocol interpreter]
 - NETClient [Network client component]
 - TP1_6 [TP 1.6 – Transport Protocol]
 - TP2_0 [TP 2.0 – Transport Protocol]
 - USDT [Unacknowledged Segmented Data Transfer]
-

- Example for using AIDA Stacks in BSKD macros:

```
@autoexec
DeleteStack 'AIDA_hStackHandle
ds 'StackComment      = ""                /rn
ds 'StackLevel         /rn

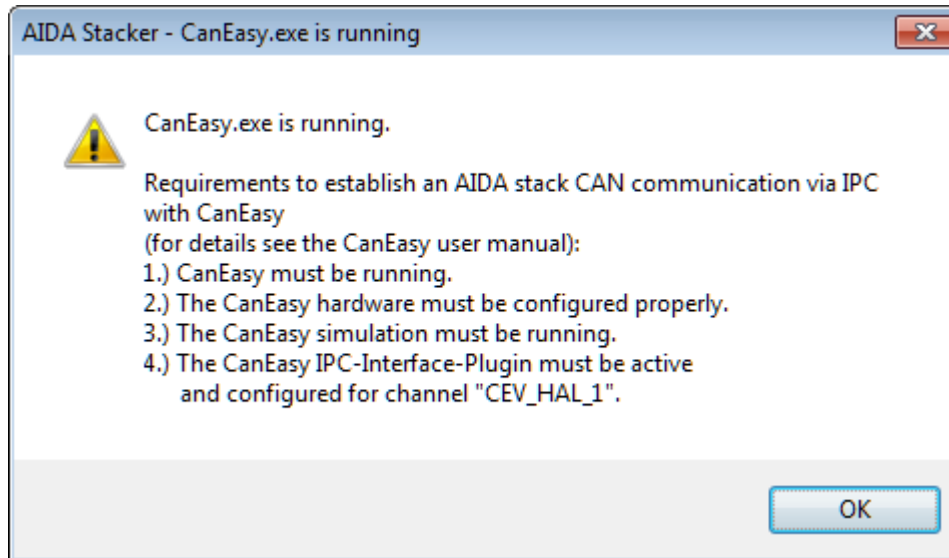
RestoreStack 'AIDA_hStackHandle, "ExCar.aida-cfg", 'StackComment, 'StackLevel
if 'StackLevel=0
    .ErrorLoad Stack "ExCar.aida-cfg"
    halt
endif

cp 128 /n
endmac
```

- What is AIDA-Stacker
 - Tool to create, configure and test AIDA stacks
 - Uses stack components for each stack level
 - Stacks are stored in *.aida-cfg files

AIDA-Stacker: How to start

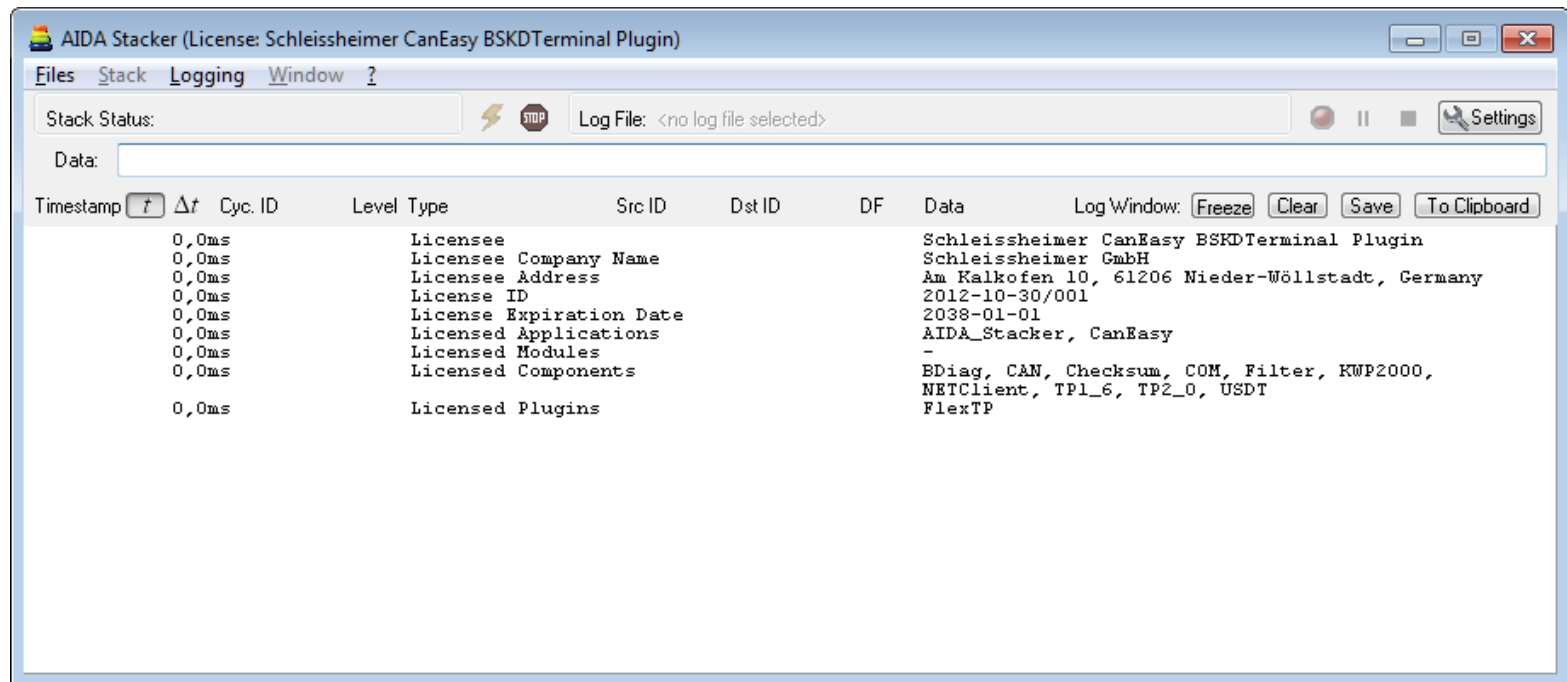
- AIDA_Stacker.exe can be found here [default path]:
C:\Program Files (x86)\CanEasy\BSKD
- Stacker starts with following message window:



- This has to be considered only if the stacker is used to test the stack communication

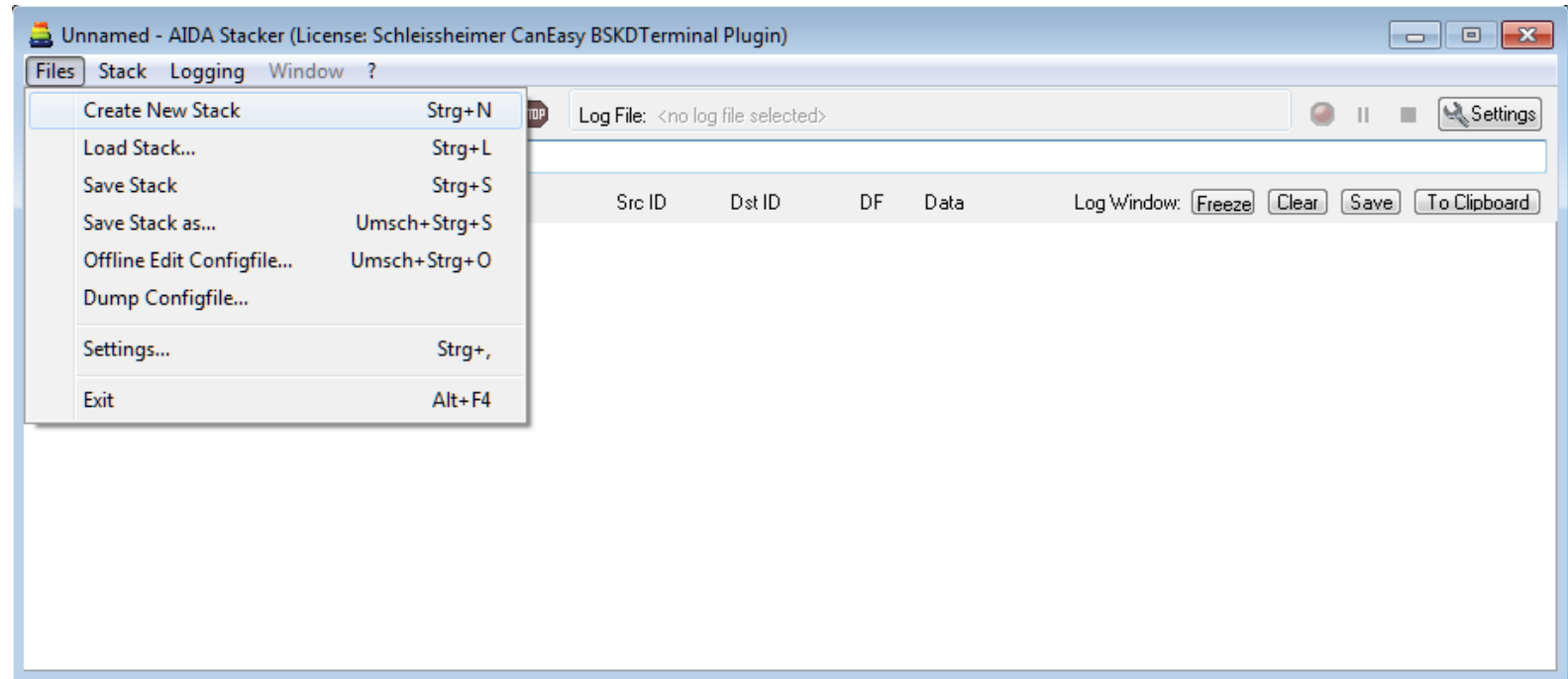
AIDA-Stacker: How to start

- Stacker is ready to use:



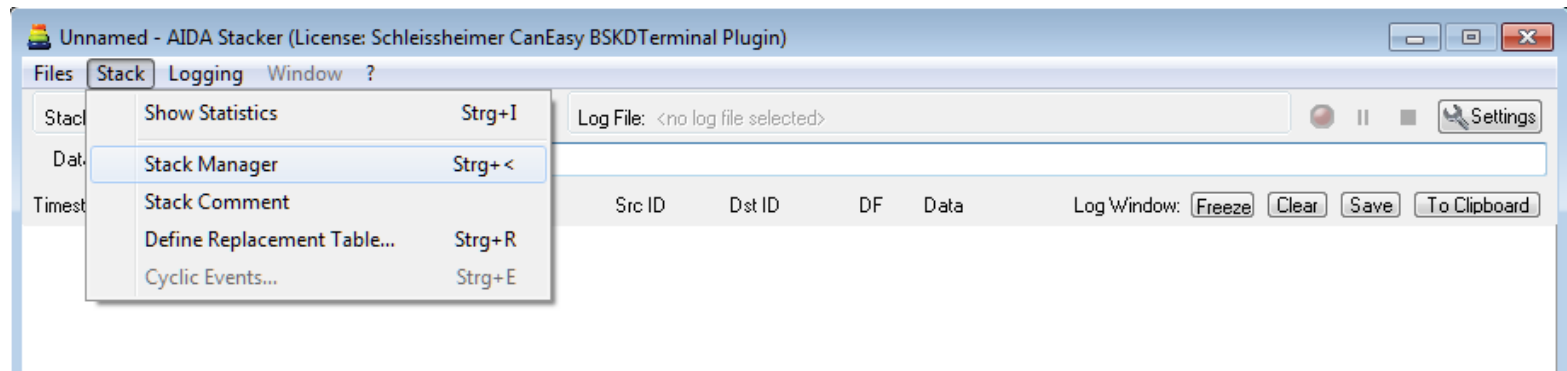
AIDA-Stacker: Create a stack

- Create new stack

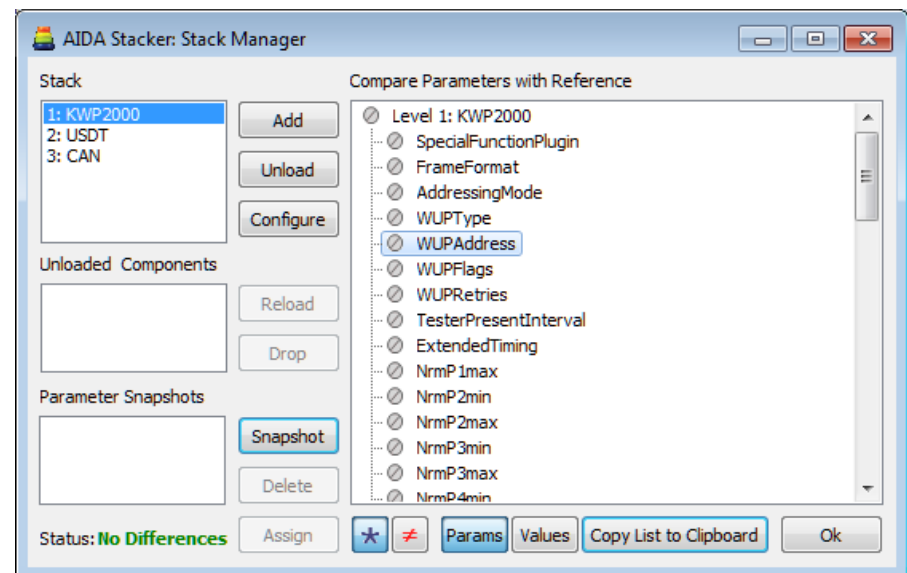


AIDA-Stacker: Configure a stack

- Start Stack Manager

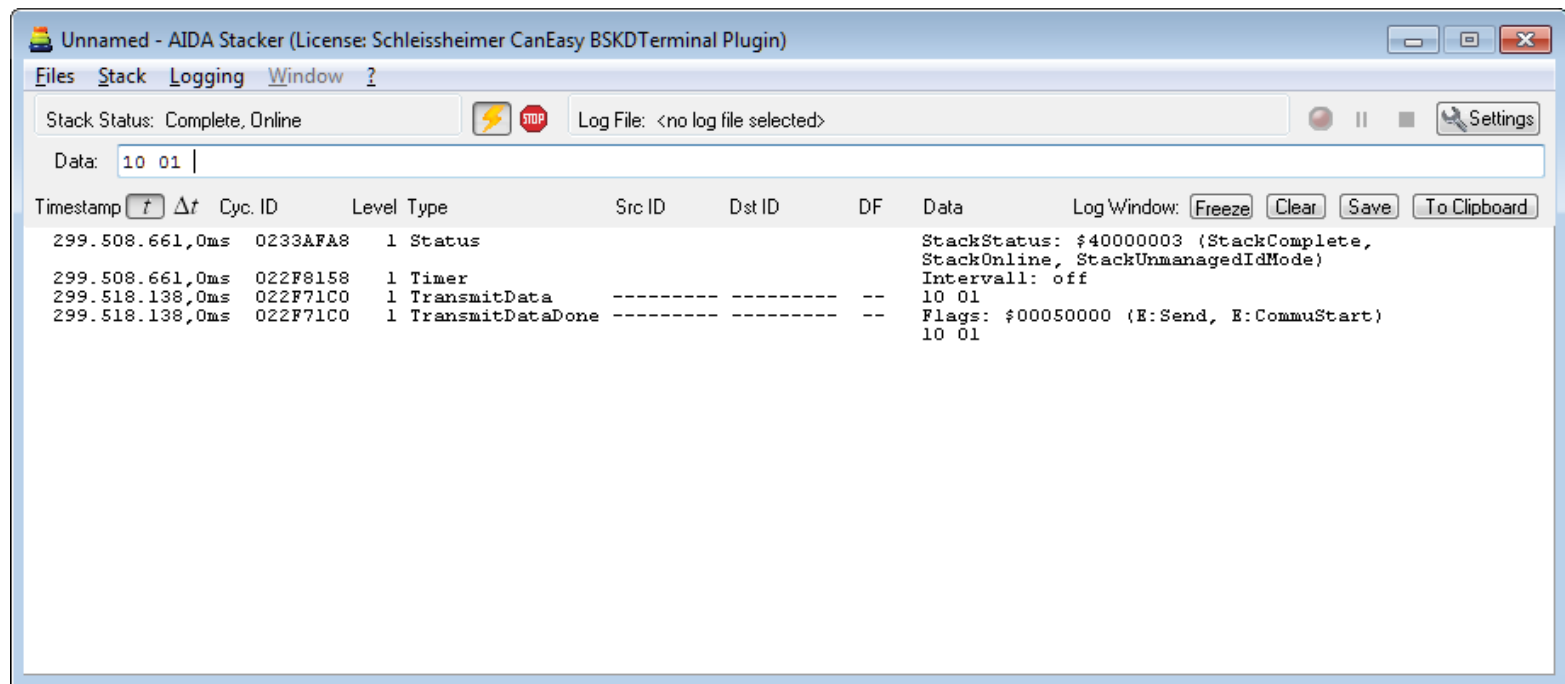


- Add components
- Configure components



AIDA-Stacker: Test a stack

- Use data field for sending messages
- Communication with an ECU can be checked here



Already available:

- Diagnosis communication via BSKD7
- Communication stacks
- Usable in C++ and VBA

Planned:

- Import of ODX files
- Import of CDD files
- Database for diagnosis services and values

Thank you for your attention!
