

Diagnostic CAN 통신 입문

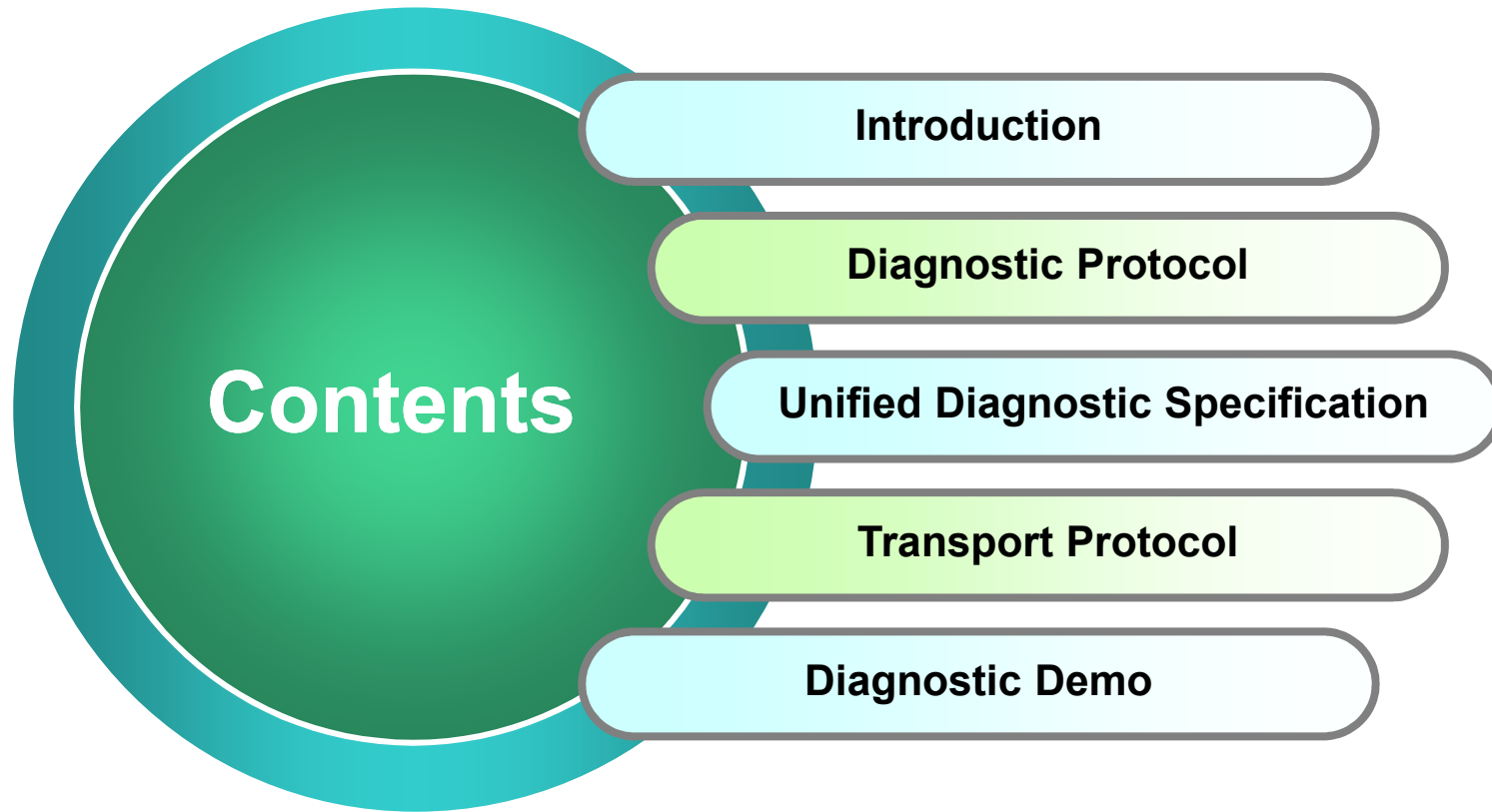
Overview

□ 대상

- 차량 진단 CAN의 특징 및 분석을 원하는 CAN 통신 초심자를 위한 기초 교육

□ 목표

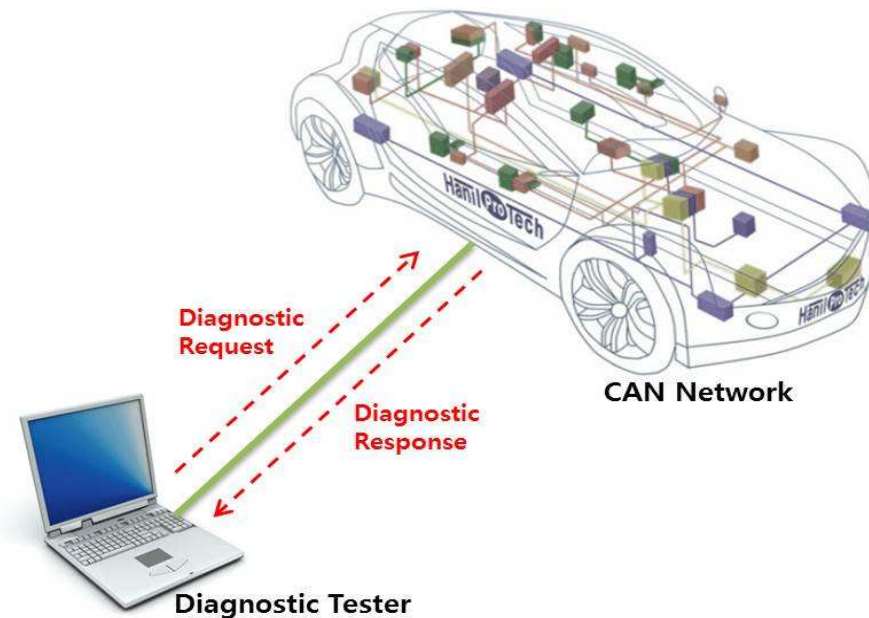
- 진단 CAN 프로토콜의 특징 및 분석 이해
진단 오류 사전 검출
 - 차량 진단 프로토콜 이해
 - 차량 진단 서비스 이해



- Introduction***
- Diagnostic Protocol***
- Unified Diagnostic Specification***
- Transport Protocol***
- Diagnostic Demo***

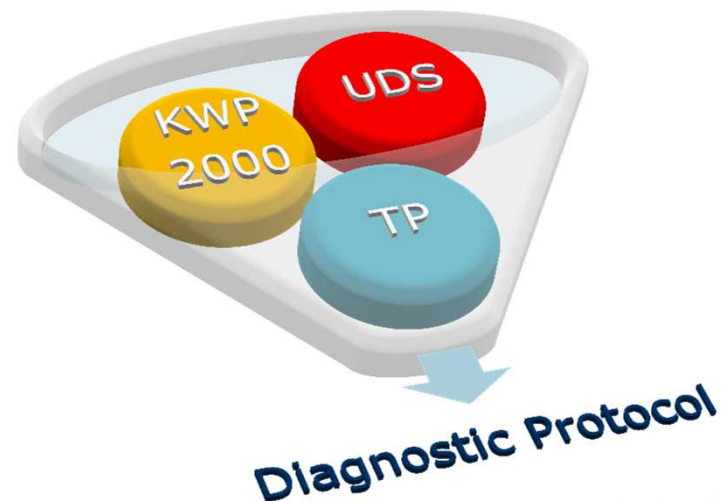
Introduction

- What is diagnostic in the vehicle ?
- Diagnostic of ISO/OSI Model
- Components in the ECU
- Process of diagnostic communication in the vehicle
- Difference between Offboard&Onboard Diagnostics
- Physical Connection



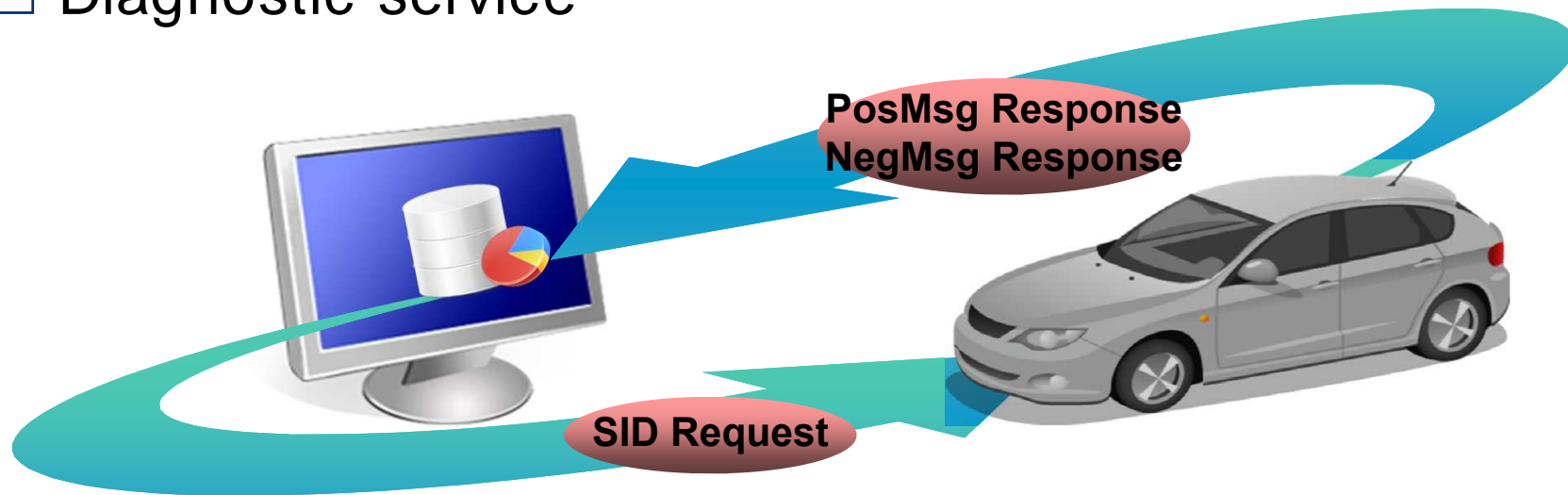
Diagnostic Protocol

- Diagnostic Protocol
- Standards for the diagnostics
- KWP2000 Protocol
- KWP2000 Protocol on CAN
- Unified Diagnostic Services on CAN
- UDS vs KWP2000 in ISO
- Difference between KWP2000 and UDS
- Overview of relevant diagnostic protocols
- History



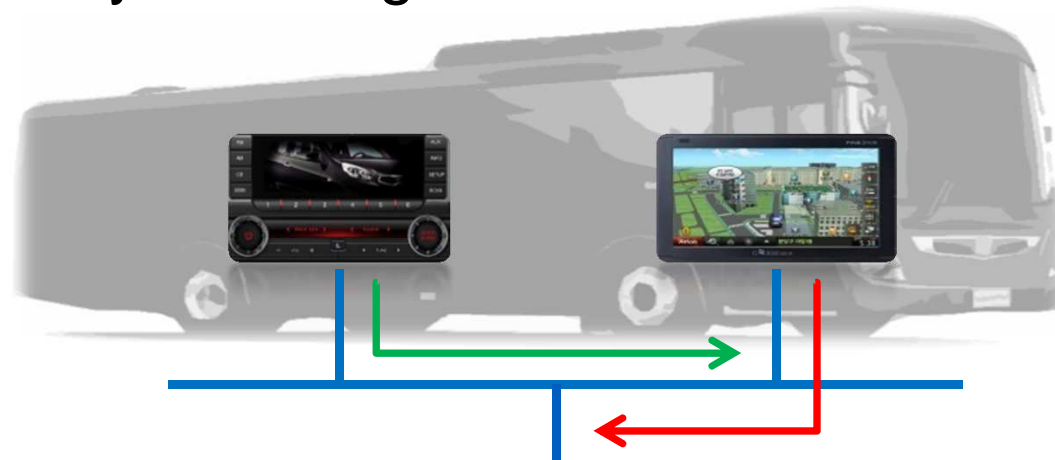
Unified Diagnostic Specification(UDS)

- UDS Outline
- Classification of protocol service
- Diagnostic service list
- Service description conventions
- Diagnostic mechanism
- Request/Response behavior
- Sequence of a diagnostic request/response
- Diagnostic service



Transport Protocol

- Transport Protocol Outline
- Transport Protocol Types
- Addressing format
- CAN Identifier
- Example of segmented transfer
- Message types
- TPCI
- Placement of Network Layer Timing Parameter
- Network Layer Timing Parameter



□ Diagnostic Demo Using SmartCAR

Demo Example for realizing a UDS based on ISOTP (ISO 15765)
communication via the CAN bus

Diagnostic Test를 하기 위하여 하드웨어의 기본 파라미터를 기입한다.

Diagnostic Test를 하기 위하여 RequestID와 ResponseID를 기입한 후,
DiagnosticSession과 DiagnosticSID를 기입한 후, 새로고침 버튼을 클릭하여 Response를 확인한다.

Interface Names <input type="text" value="CAN1"/>	ISOTP_Parameters RequestID x 780 ResponseID x 788	DIAG Start <input type="text" value="1001"/>	DIAG Request <input type="text" value="3101"/>
Interface Parameters Baudrate 1000000 [baud] IdMode STANDARD 0		Response Start <input type="text" value="5001"/>	Response Request <input type="text" value="7F31 7F"/>

ECUs:
Server

Off-Board Tester:
Client

FirmwareVersion

교육 일정

시간	예상소요시간 (분)	주제
9:30 ~ 9:50	20	회사소개
9:50 ~ 10:00	10	교육소개
10:00 ~ 10:45	45	Introduction
10:45 ~ 11:00	15	휴식
11:00 ~ 11:40	40	Diagnostic Protocol
11:40 ~ 12:30	50	Unified Diagnostic Specification
12:30 ~ 13:30	60	중식
13:30 ~ 15:30	120	Unified Diagnostic Specification
15:30 ~ 15:40	10	휴식
15:40 ~ 17:10	90	Transport Protocol
17:10 ~ 17:30	20	Diagnostic Demo 소개

고객과 함께 성장하는 한일프로텍이 되겠습니다.

감사합니다.

◆ 문의처

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