Episode #2: IoT-based automotive emergency response system

# Conformance test system

## for IoT-based automotive emergency detection device

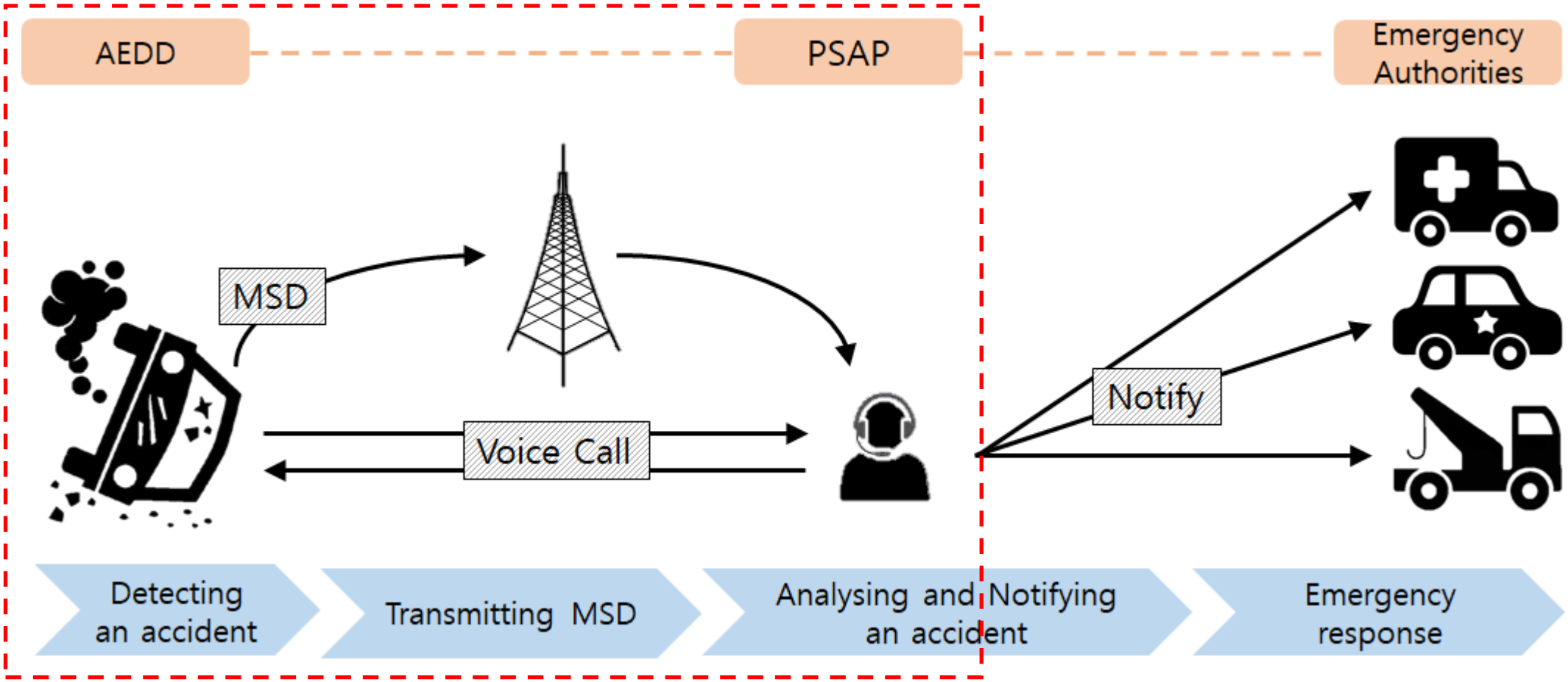
Jaemin Jang
Senior Researcher
Telecommunications Technology Association

2021-09-14

# Overview of Conformance Test system

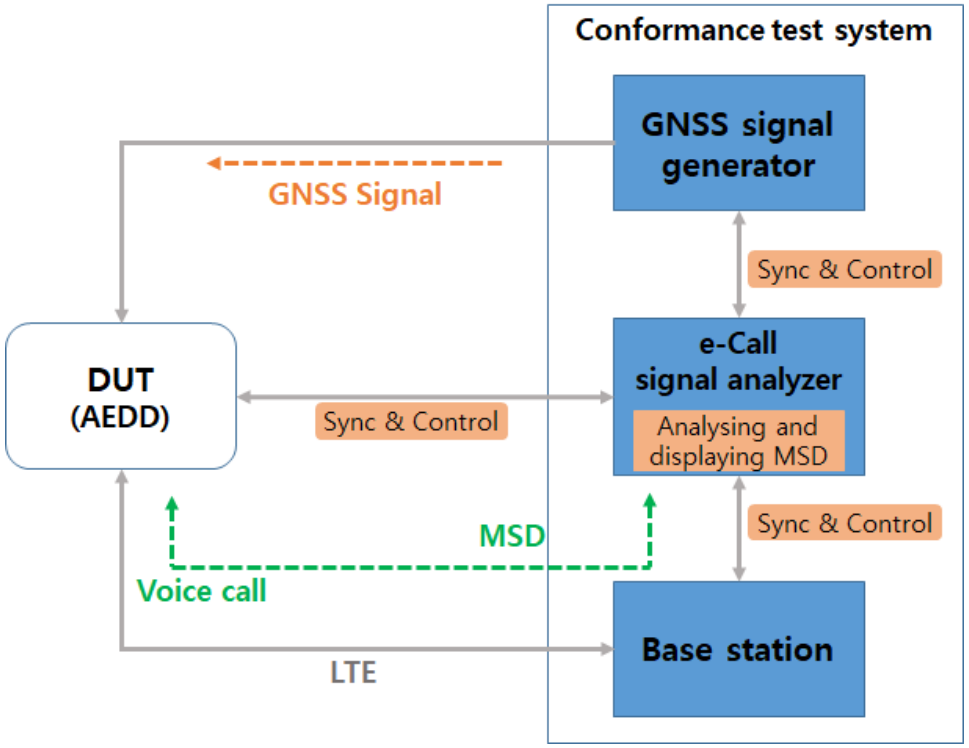
for IoT-based automotive emergency detection device

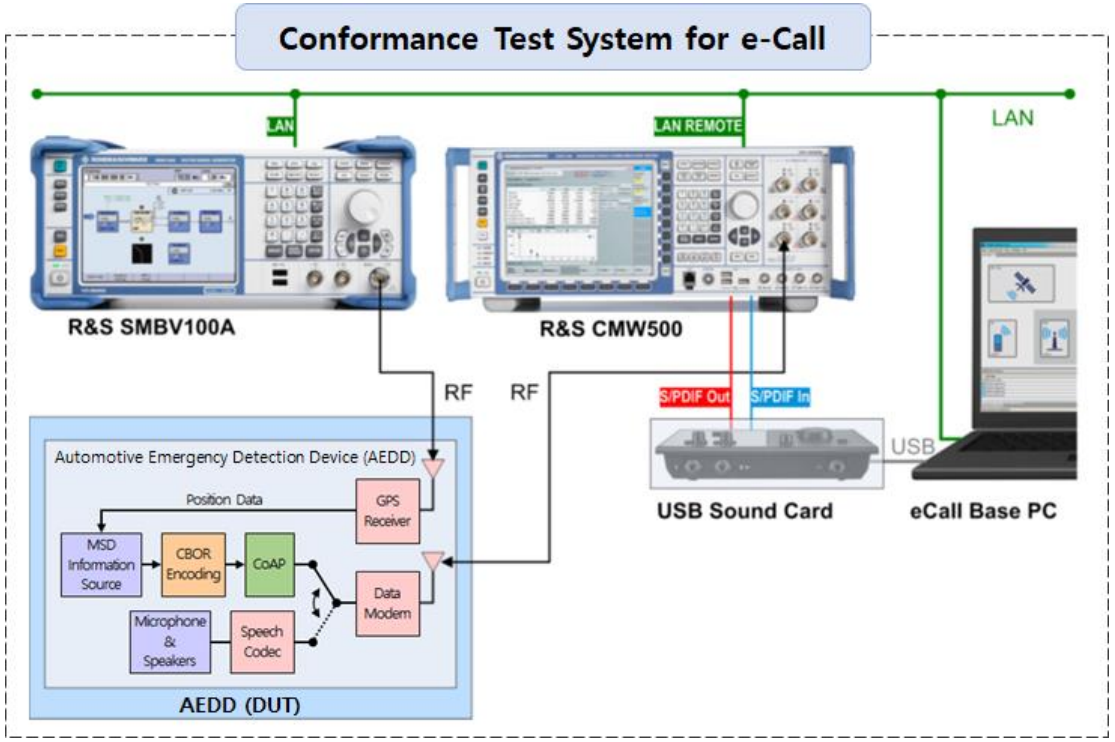
# Overview of e-Call



# Test System Configuration

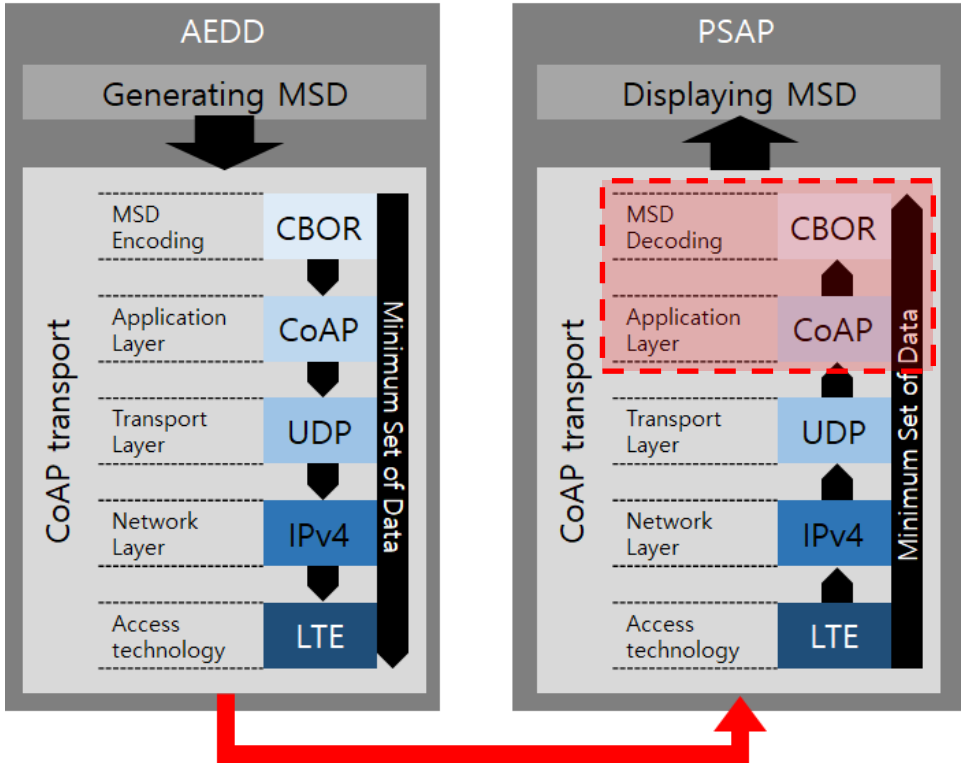
- e-Call conformance test system has developed based on existing commercial equipment.



# Developed part of Test System

- Each protocol has developed in compliance with each international or domestic standards.




MSD structure (ITSK-00106-4:2018-Cor1)

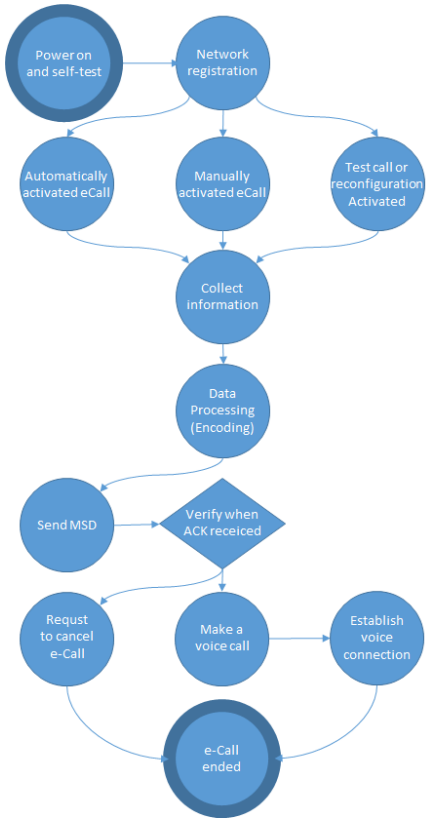
CBOR (IETF RFC 7049)

CoAP (IETF RFC 7252)
CoAP for e-Call (TTAK.KO-10.0985/R1)

※ There are some differences between the two standards, such as not using some fields in the CoAP packet header.

# Implemented Test Case

- The test system provides 11 test cases for conformance test.




TC #01: Send MSD with indicators set to "Automatically Initiated e-Call"

TC #02: Send MSD with indicators set to "Test Call"

TC #03: Send MSD with indicators set to "Manually Initiated e-Call"

TC #04: Verify function of automatic trigger and transmission of the MSD

TC #05: Confirm MSD transmission when main power is block

TC #06: User Interface requirement for status indication function

TC #07: User Interface for e-Call processing information

TC #08: Cancel request by driver or passenger – automatically triggered

TC #09: Cancel request by driver or passenger – manually triggered

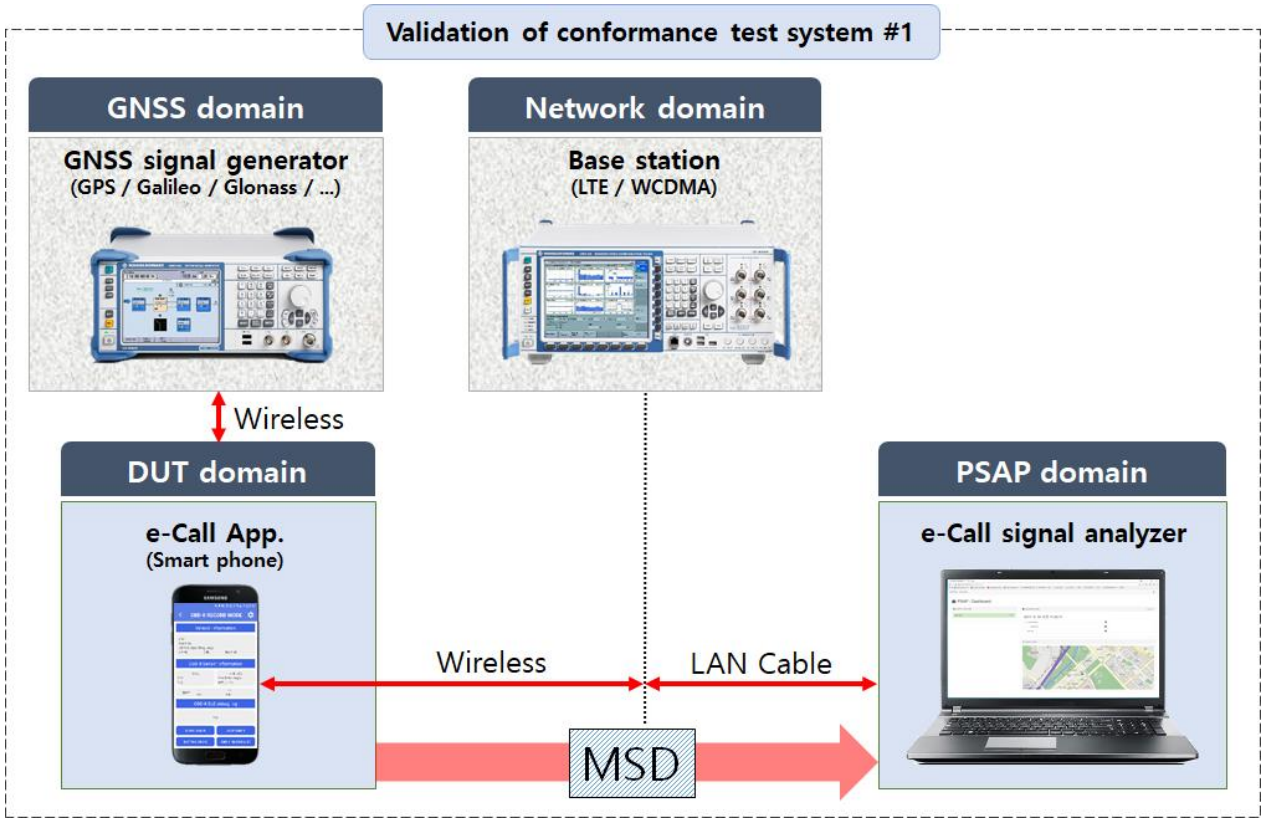
TC #10: Cancel request by the PSAP

TC #11: Voice call connection

# Validation of conformance test system

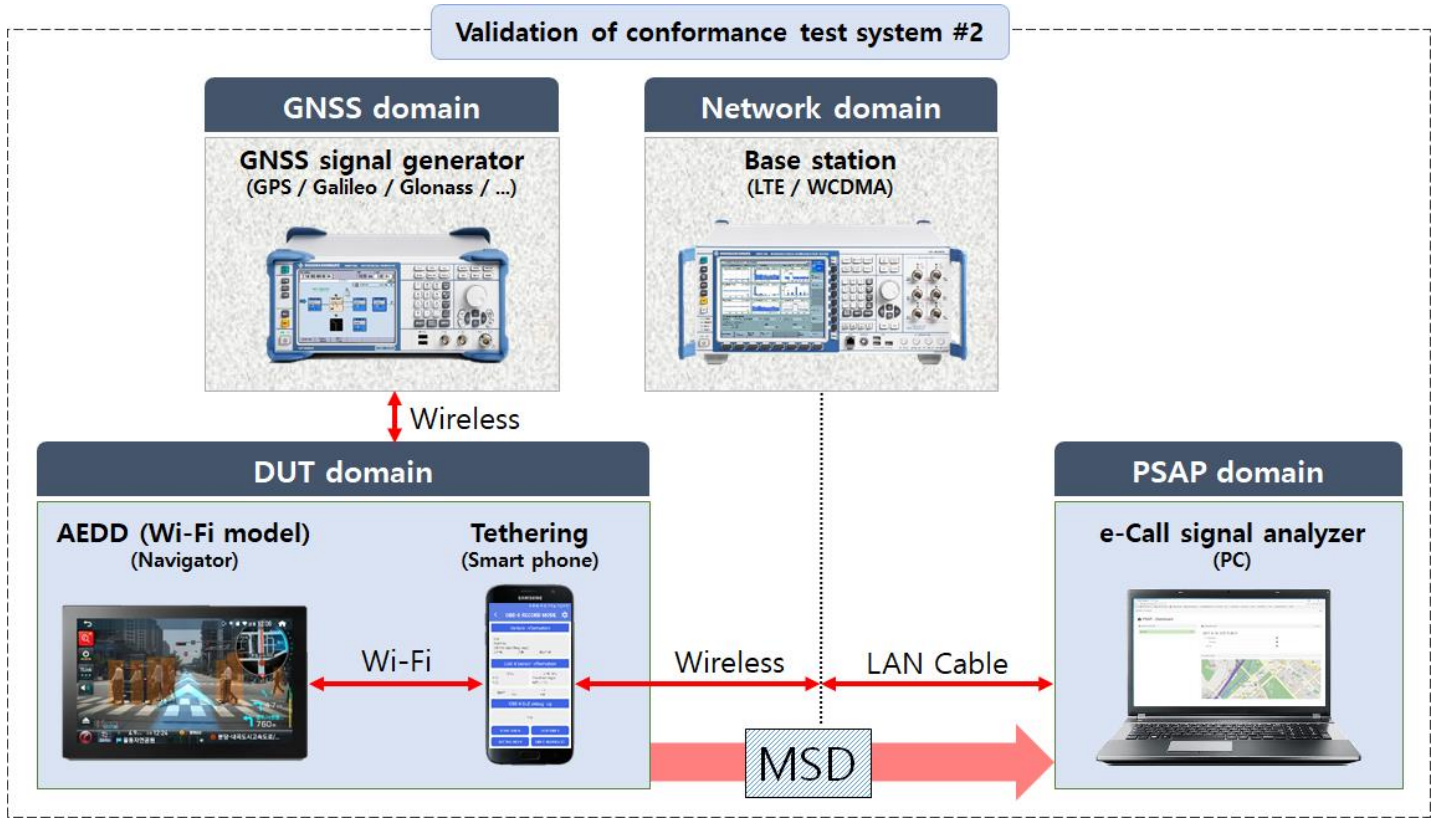
# Test Case #1

- AEDD support LTE and voice call.



# Test Case #2 – Wi-Fi

- AEDD can only use Wi-Fi and does not support voice call.



# Test Case #3 – Bluetooth

- AEDD can only use Bluetooth and does not support voice call.