C & U CREATIVE & UNIQUE

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Communication characteristic evaluation of wireless IP transmission (VOD server) and client terminal equipment

◇ The reproducibility of a test result is ensured by preventing the surrounding noise interference, simulating the communication characteristic evaluation and also fixing the measurement environment.

＊Application＊

In the function evaluation test at the time of development and shipment of mobile wireless communication devices such as smart phones, it is very effective to evaluate communication characteristics in accordance with the change of the transmitting and receiving level by the space attenuation using an electrical attenuator. Our high-speed programmable attenuator MAT series doesn't occur any spike noise when switching the attenuation. Therefore, the simulation can be performed without missing any communication in the state in which the mobile terminal is moving actually.
→ ex). 100m move → 5dB attenuation, 200m move → 10dB attenuation

External GPIB control is also possible by using the MAT-series. Especially, this is useful when the endurance test is performed by uninhabited for a long time. Moreover, when installing the wireless device in anechoic box, the reproducibility of test results is improved by using the fixtures and by fixing the distance between transmission antenna and receiving device.

＊Solution＊

The transmission signal from the VOD server is supplied to the transmission antenna in the anechoic box through the high-speed programmable attenuator. In addition, the antenna and mobile wireless terminal in the anechoic box are fixed with fixtures matching these shapes. The digital signal transmitted from the antenna is received by the mobile wireless terminal, and then the analog signal converted by D / A converter is supplied to the video monitor for checking. The freezing and the missed frames of the video data, which result in the reduction of a receiving signal level occured by low transmission level and by the influence of the distance and obstacles, will be confirmed by the decoded video.

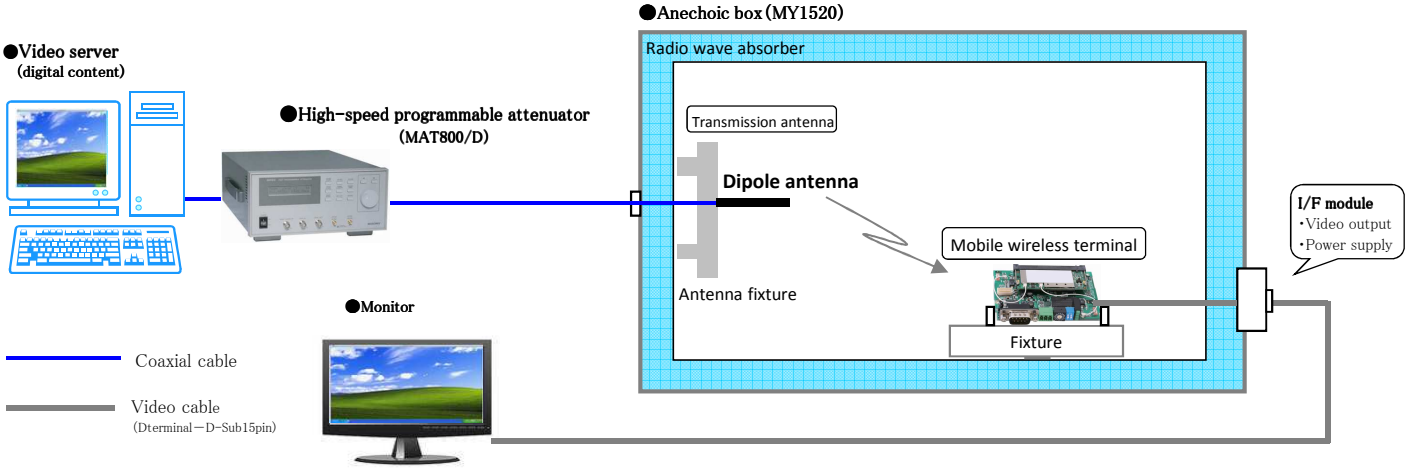
[Dynamic simulation of the transmission and receiving levels in bidirectional communication]

→ The connectivity evaluation is performed by controlling high-speed programmable attenuator MAT800 externally and by generating continuous program pattern based on distance.

[Ensuring reproducibility of test results]

→ The reproducibility of test results is improved by fixing a transmission antenna and a receiving device using the fixtures in the anechoic box.

Connection example)



＊System configuration＊

Anechoic box	MY1520	1
I/F module	I F M1 ※ D-Sub9pin→changed to 15pin	1
Dipole antenna	M304	1
Antenna fixture and mobile terminal fixture		each1
Coaxial cable	MC201 SMA(P)/SMA(P) 0.5m	1
Coaxial cable	MC204 SMA(P)/SMA(P) 1.5m	2
Adapter	MA306 N(P)/SMA(J) 50Ω/50Ω	1
High-speed programmable attenuator	MAT800/D	1
Video cable	(D termanal—D-Sub15pin 1.8m)	2

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