

Optically-connected Multilateration System (MLAT)

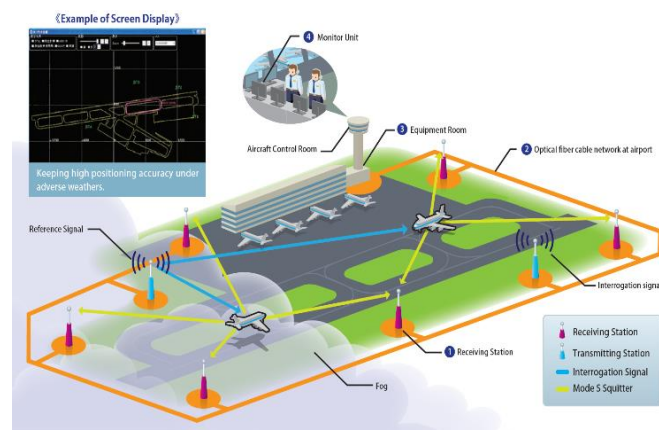
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About JRC

We were founded in 1915 and offer a number of solutions for aviation safety and development including HF Communication system and MLAT as one of the leading companies in the world.

Optically-connected MLAT

JRC has developed an “optically connected MLAT” to detect the positions of aircrafts on the airport surface.



Outline of Optically-connected Multilateration System

In the conventional MLAT, the positioning accuracy of aircraft and vehicles tends to deteriorate due to the influence of buildings in airport premises on the radio signals sent from aircrafts, and this counter-measure has been an issue.

Instead of decoding affected signals at receiving stations, JRC’s MLAT realizes high-precision surveying of aircraft and vehicles by converting radio signals received outdoors into optical and transmitting to signal processing equipment in the Central room.

As a case study in the Phu Quoc International Airport at Phu Quoc Island in Vietnam, it has been confirmed that the positioning accuracy greatly exceeded the international standard (ED-117A).



System configuration in the Phu Quoc

Case of MLAT integration

As airports continue to evolve to increase the safety and efficiency, we are developing “Remote digital tower” with built-in optically-connected MLAT in collaboration with ENRI. Remote digital tower provides air traffic control services resembling the view from an actual control tower conducted from a remote location by combining the information of cameras, MLAT and other sensors in local airport through communication lines. It helps ATC operations at airports with low traffic consolidated allowing more ATC services to be provided with fewer people and helps small airports remain profitable by eliminating the need for control tower.



Overview of ENRI’s development environment

Acknowledgments

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