DIGITAL RUNWAY INCURSION WARNING SYSTEM DRIWS

With its groundbreaking application of modern technology, DRIWS reduces the risk of Runway Incursions at all types of airports. In addition, DRIWS is a cost effective and flexible system that provides opportunities for further digitalisation of airports – without compromising safety.

DRIWS - Reduces the risk of Runway Incursion
DRIWS consists of vehicle devices and a display unit in the tower.
Position and data are transferred in real time from the vehicle devices to the control tower, with up to 10 updates per second.

DRIWS uses Geofencing to mark out zones where runway incursion alarms are to be positioned (runways, etc.) Since the system is flexible and configurable, area settings can be adjusted by the system operator for adaption to specific experiences or changes to regulation/infrastructure.

When a driver approaches a zone requiring authorization from air traffic control, the vehicle device will alert the driver. If clearance is not received from air traffic control and the vehicle continues into the next alarm zone, DRIWS will register a Runway Incursion and the associated alarm signal will be triggered in the vehicle device. An alarm is also triggered if a vehicle leaves the runway area without informing air traffic control.

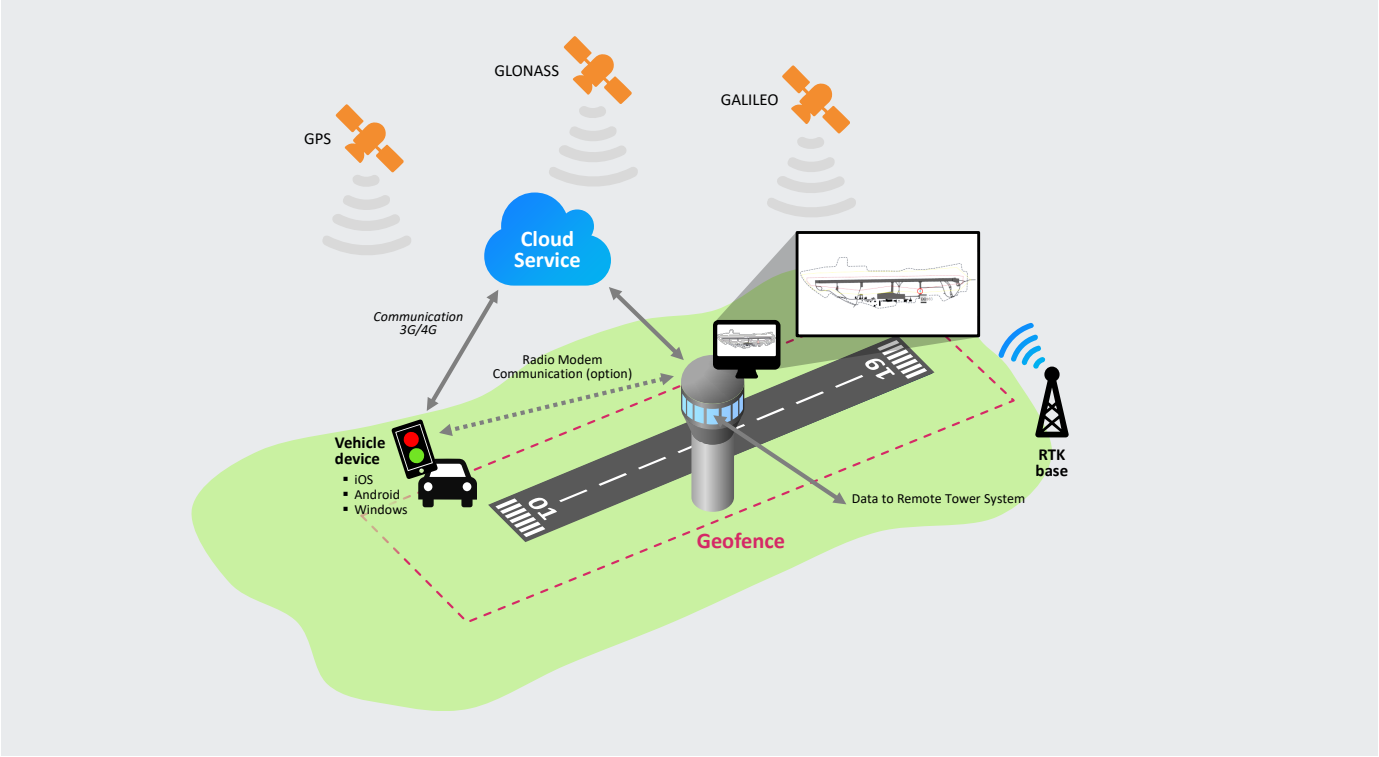
The system logs can be used to underpin flight safety procedures as well as the reporting and investigation of incidents.

DRIWS - More efficient airport operations
DRIWS creates many opportunities for safer and more efficient airport operations.
For example, DRIWS can replace road holding position lights at entrances to runways. The cost of installing traditional traffic signals greatly exceeds the cost of introducing DRIWS, which contains a ”mobile digital road holding position light”.

As the driver approaches a holding position, a red light with the associated signal is indicated by the vehicle device. When air traffic control has authorized the vehicle to enter the runway area a green light will appear.

Another benefit is the ability to automatically transmit braking action reports to air traffic control, where DRIWS with associated interface will receive and transfer data without manual input.

DRIWS - from research to a workable system
The prototype for DRIWS was developed as a research project through a collaboration between RISE Viktoria - part of Research Institutes of Sweden - and Air Navigation Services of Sweden, LFV. Combitech, part of the Saab group, further developed DRIWS into an operational system, ready for use at all types of airports.



DRIWS is based on satellite navigation and wireless communication between the vehicle and air traffic control.

FEATURE HIGHLIGHTS FOR DRIWS

COST EFFECTIVE

- Full logging and reporting of Runway Incursions
- Modifiable geofencing and zones
- Very reliable and scalable system solutions
- User friendly and easy to learn
- Can be integrated into existing airport systems

DEVELOPMENT & QUALITY ASSURANCE

- Software development and quality assurance according to RTCA 278/EUROCAE ED 109, EUROCONTROL ESARR 6, ISO 9001+ TickIT, ISO 14001, ISO 27001

HARDWARE

- Vehicle device (smart phone, tablet or vehicle computer)
- Inbuilt or external GPS for vehicle unit
- Communication via 3G/4G or radio modem
- Reference station for use of RTK positioning
- Server and display for air traffic control

PRECISION POSITIONING

- Depending on positional accuracy requirements DRIWS can be equipped with simple GPS solutions providing accuracy up to a few metres, or RTK solutions, which provides stable centimeter level accuracy.

OPERATING SYSTEM

- Android
- iOS
- Windows

INTERFACES

- DRIWS can be equipped with several types of interface including connections to Surface Friction Tester, Remote Tower System etc.

SUPPORT

- DRIWS has an advanced function for remote support, to enable centralized trouble-shooting, configurations and updating of software.

For more information contact driws@combitech.se or lfv@lfv.se

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