AUTONOMOUS RWY INCURSION PREVENTION

ArS

AUTONOMOUS RWY SAFEGUARD

A-CDU

AUTONOMOUS CROSSING DETECTION UNIT

MC® SOLUTIONS

YOUR HIGH TECH PARTNER
IN REMOTE CONTROL & MONITORING

WELCOME TO OUR COMPANY

Italian **HARDWARE & SOFTWARE ENGINEERING** company

Mastery in **DATA TRANSMISSION**

Used to **SEVERE ENVIRONMENT**

combined **EXPERIENCE** of over 100 years in aviation

offers **cutting edge safety**

MIA System to perform the utmost efficient

ALCMS | A-SMGCS | RWY INCURSION PREVENTION

VISION & MISSION

FAA
L-890
certif.

ICAO
VAWG

01. Vision

Endowing industrial electronics with very high technology.
This commitment requires continuous updates and new projects that contribute to make MC Solutions' products and plants at the state of-the art in their respective fields.

The sharing value.
Any innovation has to be shared with the beneficiaries of the project.
We believe in sharing the features with the end users and the beneficiaries of the project:
THIS IS WHAT DESERVES TO BE CALLED INNOVATING

02. Mission

Passion for aviation, in-depth operational knowledge and safety mantra:
ALL TAILORED TO CUSTOMER REQUIREMENTS

scenario 1

ANY AERODROME

scenario 2

DESERVES SAFETY DESPITE FUNDS AND SIZE

monitoring just recommended - funds applicability

GM - Autonomous solution - US Mitigation - GAPRI

infrastructure intervention complexity

AFFORDABLE INNOVATION

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AUTONOMOUS RWY SAFEGUARD

THE PROJECT
scenario 1

scenario 1

regional airports **up to CAT I**
1 runway
frequent inspections
uneven traffic
no ground radar

non-staffed / Remote Towers
frequent inspections
mix of private / airlines
military fly over

procedure | standard
recovery action / fly around
avionics changes

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AUTONOMOUS RWY SAFEGUARD

scenario 1

THE PROJECT

the logic

SCREENING LOGIC

position
altitude
descend
climb
ID

ALERTING LOGIC

rwy busy for take off
rwy busy for landing

ALERTED BY SIDE LIGHTS

aircraft
vehicle
inspection fleet

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AUTONOMOUS RWY SAFEGUARD

scenario 1

THE PROJECT
the technique

AUTOMATIC DETECTION AND ALERT RECEIVING ADS-B OUT SIGNAL

- automatic 2 side-elevated-uni-dir lights
- automatic switch on | off | flashing
- alarm at Ground ATC if staffed
- alert to Cap + 1st officer

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AUTONOMOUS RWY SAFEGUARD

scenario 1

THE PROJECT
how it works

screening logic
refresh rate 500ms
test button

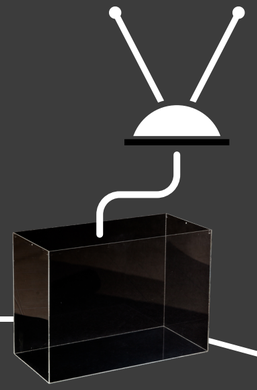
no stop bar required
no civil works required

automatic light alarm
integration with electronic strips
black box

staffed TWR

remote TWR

optical fiber connection to TWR
if staffed
Remote Tower connection
Intervention by ATC
always allowed



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AUTONOMOUS CROSSING DETECTION UNIT

scenario 2

THE PROJECT
scenario 2

regional airports /hubs **CAT II** and **CAT III**
1 runway or more
ALCMS complexity
uneven traffic

ATC + Tower frenetic operations
huge traffic to manage and frequency
com management
high commercial and passenger traffic volume

complex aerodrome - esp. in LVP
procedures | standard
recovery action / no fly around
avionics changes

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scenario 2

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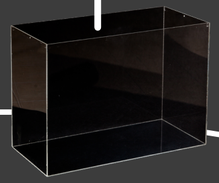
AUTONOMOUS CROSSING DETECTION UNIT

THE PROJECT

how it works



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independent
stop bar | SMGCS
existing stop bar lights

Stop bar management
loop detection | no microwaves
integration with electronic strips

optical fiber connection to TWR
ground radar interface
Intervention by ATC always allowed
no interference current ALCMS

THE SHARING VALUE

MONITORING RECOMMENDED
RWY Incursion Prevention MANDATORY
AFFORDABLE INNOVATION

EASA
FAA

OPERATION RELIEF
VISUAL CONTROL SUPPORT
RELIEF FROM FREQUENCY COMM
ALWAYS ABLE TO INTERVENE

ANACNA
IFATCA

SCALABLE PACKAGE
LIMITED CAPEX
EASIER TENDER PROCEDURE
SEAMLESS INTEGRATION

ACI EUROPE
USA

CURRENT STANDARD
PROCEDURE
PREVENTION | NOT RECOVERY
NO ADDITIONAL AVIONICS

IFALPA

MCACG

US REPRESENTATIVE AGENT
MARCOS COSTILLA
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THANK YOU

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