WE CAN IMPROVE WHAT WE MEASURE

SAIRA ELECTRONICS Energy Management Vision

MEASURE

MANAGE

TEMS

IMPROVE

T-EDAS
Eco Driver Advisory System

T-ESS
Energy Saving System

REM/RFM
Energy / Fuel Meter

UIC ENERGY EFFICIENCY DAYS 2014
SAIRA Solution for Measurement
REM101

TC9X - WG11
Energy Measurement System Onboard of Trains

EN 50463

OUR COMMON ROOT

• COMPACT
• EMF
• DHS
• COM

TRANSUDCERS

• V / I
• AC / DC
• INDOOR
• OUTDOOR

SYSTEM

UIC ENERGY EFFICIENCY DAYS 2014
SAIRA Solution for MANAGEMENT

TEMS BVT

EDAS

OPERATOR ENERGY POLICY

SENSOR MONITORING

ON BOARD ACTIONS:
- Turn off HVAC
- Turn off Diesel Engine
- Enable Regeneration Systems

RaPLC-RIO
SAIRA TEMS FIGURES

- More than 1,000 systems ordered
- More than 850 systems installed
- REM integrated solution always chosen
- Fitted all types of train power supply (AC, DC, Single Voltage, Dual-Voltage, Quadri-Voltage)
- Billing operating for operators in Belgium and Norway

- More than 7 years of experience in Energy Measuring markets
- Leader in U.K. market
- Presence in more than 6 countries in Europe
- More than 12 customers operating
- EDAS trials ongoing with big player in Germany and Belgium
FUTURE = INTEGRATION

Once upon a time …

A phone!
A telex!
A modem!
A fax!
A navigator!

…. and today

22

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Why shouldn’t you think in energy metering and management in the same modern way?! 

Go for the all-integrated REM !!!
Data of real consumption transmitted to EDAS
Comparison between theoretical consumption data (EDAS) and real data
Continuous EDAS algorithm parameter update

Driver guide always optimized
TRAFFIC CONTROL

- Temporary speed restrictions
- Information on presence of obstacles
- Time table modifications
- Maximum allowed speed

ECO DRIVE

- Driver guide always optimized
Transmission of Voltage, Current, cosØ and energy data to VCU
Integration of REM diagnostics into Train diagnostics
GPS and Time Reference data got by REM from TCMS
Energy Measure Information integrated in TCMS
Interoperability & Retrofit

- Open to use already installed transducers and aereal
- Open to interface different TCNs standards (MVB, Ethernet, CAN, …)
- Ready to implement standard train-to-ground communication protocols
- Ready to interface different billing systems
- Configuration via web-based interface tool