Do you want to:
- administrate, control and monitor your time system of a whole country, region or specific line out of the central Operation Control Center (OCC)?
- integrate your time system in the superior management system of your railway and metro infrastructure?
- provide a reliable time reference for computer controlled systems such as CCTV, Ticketing, Access Control, Passenger Information System, etc.?
- service your railway and metro clocks upon incidence in order to reduce related maintenance costs?
- reduce your power consumption of the clocks with a LED illumination?
- protect your slave clocks from vandalism and save repair costs?
- boost your corporate identity with slave clocks in line with your corporate design?

MOBATIME-Solutions:
- Fully integrated time systems with master clocks at OCC, sub-master clocks at substations, analog and digital slave clocks on platforms, in waiting areas, offices, etc.
- Master clocks and time servers are equipped with world-wide established communication technologies such as SNMP and are fully redundant with superior management systems.
- Time reference for computer controlled systems (CCTV, Ticketing, Access Control, Passenger Information System, etc.) with accuracy in the range of micro seconds.
- LED illumination for all clock types to reduce energy and maintenance costs.
- Standard and costumized slave clocks for indoor and outdoor applications in a reliable construction and design.

Main References:
- Swiss Railways (SBB)
- German Railways (DB)
- Italian Railways (RFI)
- Portuguese Railways (REFER)
- Mexico-Monterrey Railway
- Singapore
- Russian State Railways
- Spanish Railway RENFE
- Taiwan High Speed Rail

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Customer Feedbacks and Best Practice

Taiwan High Speed Railway (THSR)

«Taiwan High Speed Rail strives for efficient and safe transportation at high speed level — our MOBATIME time systems contribute greatly to these requirements!»

Gavin Tsou – Assistant Vice President, Signaling & Communication Department

MOBATIME-Solution for THSR

Synchronization of the Taiwan High Speed Rail over the entire length for 345 km by two RS422 lines over fiber optics. The whole system is redundantly synchronized by two MOBATIME MTCs which distribute the time to 17 MTC equipped railway stations. Analog and digital clocks are installed on Station Concourses, Platforms and in Offices.

Swiss Railways (SBB)

«Our long standing collaboration with MOBATIME is of great advantage for us. Swiss Railways benefits from MOBATIME’s sophisticated products, reliable technology and high service quality.»

Johann Zahno – Technical Director, Low Current Installations

MOBATIME-Solution for SBB

For many years MOBATIME has been in charge of the time systems and clocks of the Swiss Railways. Besides the complete master clock system the special designed Swiss Railway clock is the masterpiece of this cooperation. Since 2010 also available as 9m diameter facade clock at the main station in Aarau (Switzerland).

Time Systems and Clocks for Railways and Metros – State of the art

Railway and metro clocks are an essential part of passenger information systems on stations as well as an integrative medium to communicate corporate identity of railways and metros to their customers. In addition to that, time systems become more and more important with regard to precise time synchronization of various IT equipment. With our Distributed Time System in the field of NTP, MOBATIME offers you modern and sophisticated technology. Join MOBATIME and dozens of satisfied railway and metro customers all over the world!

LAN

Modern time systems for railways and metro are mainly realized over the LAN. Master and slave clocks as well as sub systems (CCTV, ticketing, PIS, etc.) are connected to a LAN and are synchronized by NTP. Therefore the devices can be located where needed, respectively the master clock system can be ‘distributed’ at will.

Main Master Clock

At the OCC, two redundant DTS 4135 timeservers provide reliable and accurate time to sub-master clocks, sub-systems and slave clocks.

Key features:

- Synchronization by GPS, DCF77, IRIGB, NTP.
- Accuracy: GPS-input to NTP-server typ. < +/- 0.1ms, GPS-input to DCF77-output typ. < +/- 0.07ms. Outputs: NTP (unicast/Multicast), IRIG/AFNOR, two serial RS 232/RS 485 interfaces, DCF or high accurate pulse/frequency outputs.

MOBA-NMS

MOBATIME time systems are managed by MOBA Network management software (MOBA-NMS). With this application you have full control over all MOBATIME devices – sub-master clocks and slave clocks in your network!

Key features:

- handles more than 1000 devices at the same time, device auto detection possibility for multicast and unicast communication, initial configuration and central alarm management, Java-based (Eclipse RCP) and operating system independent (Windows/Linux); includes a plug-in for easy expansion with new devices and features, intuitive GUI design with well known features (like Drag and Drop etc.), available for download with integrated online self update feature.

Active Alarm Management

Alarms from slave and sub-master clocks are signalized from the substations to the OCC by SHWP alarm traps, SHWP alive messages and e-mail. This allows a fully centralized management of the time system from the OCC and an incident motivated maintenance activity.

Slave Clocks

On the platforms, in waiting rooms, in public areas, etc., analog and digital clocks display the time for convenient passenger information: analog outdoor (diameter 60 to 80 cm) and analog indoor clocks (30 to 40 cm), digital indoor and outdoor clocks (character size: 55 to 320 mm), facade clocks up to 9 meters diameter. Key features: NTP-synchronization (unicast / multicast) or other time codes (MOBA/time, IRIGB, AFNOR, Impulse), active alarm- and alive-traps sending to MOBA-NMS, world time zone function, LED-illumination, etc.