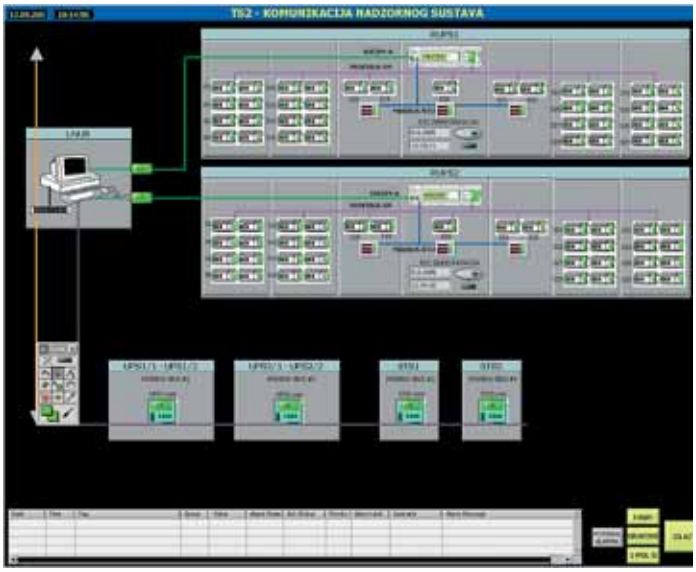
Always Up and Running: Radio and TV in Croatia

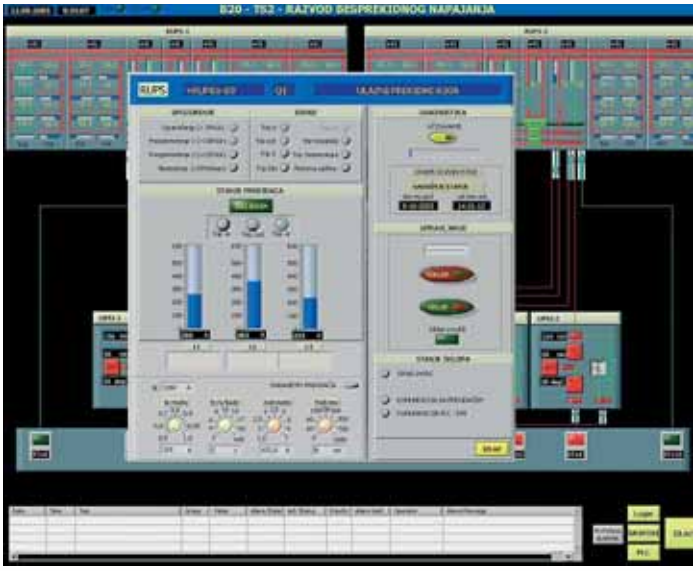
HRT, the Croatian Radio and Television Institute, is a public corporation that offers programme content of public interest from the latest news broadcasts to film documentaries, sports and entertainment programmes for all age groups. For the past twenty years HRT has trusted in Moeller's reliable switchgear and automation via the Zagreb distributor unikomerc-elektro to ensure continuous broadcasting operation.

THE COMPANY

HRT, the Croatian Radio and Television institute, is a public corporation with headquarters in Zagreb. It produces and broadcasts radio, television and music programmes, as well as broadcasting two terrestrial programmes, which can also be viewed by satellite. Forty hours of broadcasting are offered every day. The two satellite programmes are called HRT PLUS and Images of Croatia. The Croatian Radio broadcasts some 215 hours of programme each day via three national and eight regional stations. For Croats abroad it broadcasts the daily show "Voice of Croatia".



System overview as fieldbus topology



System overview and switch details

The latest solution for HRT is part of a UPS system. In the event of a general blackout, the power supply for the most important parts of the broadcasting infrastructure has to be maintained by switching immediately to battery power followed by generated power. The reliable power supply is ensured as soon as the generators are running and synchronized.

To ensure the most efficient use of the stored energy, the demand needs to be closely monitored individually on all incomers and outgoers by means of a central SCADA system. For rated currents from 50A to 1600A, NZM2, NZM3 and NZM4 circuit-breakers offer built-in measurement of all phases, thus allowing additional space and cost savings.

Access to all device and process data

All the status and load data for each circuit-breaker is displayed on the front panel with the NZM-XDMI612 Data Management Interface. Six relay outputs are provided for tasks such as signalling load warnings or causes of tripping. The modular concept enables information to be forwarded to a PLC via Profibus DP, CANopen or DeviceNet.

For HRT, the NZM-XDMI-DPV1 Profibus module was exactly the right choice. Now all device and process data such as status and load information is available immediately. NZM circuit-breakers provide all data in accordance with the low-voltage switchgear profile specified by the PNO (Profibus user organisation). This simplifies implementation since data format and structure are vendor independent, allowing a powerful overview over the whole system at a glance.

Communicative and intelligent

The DPV1 standard allows the full scope of NZM functionality to be accessed easily. This ranges from ID data, parameter data, statistical counters and the last 10 event logs inside the NZM. Already in the installation phase our clients at HRT were impressed by the intelligent and communicative circuit-breakers and the external system integrator. NZMs fully support all the required features for monitoring, alarm signalling, diagnostics and control of the UPS concept in equal measure. Full access to over 100 NZM circuit-breakers was implemented using Moeller PS4-341 as PLC and LabView as a SCADA system.

CONCLUSION

NZM circuit-breakers come with intelligent functions already built-in. By equipping the circuit-breakers with electronic release units, they are able to provide higher-level units with information on currents, voltages, phase position, power and fault states, including a fault history and fault causes. NZM features a wide range of options that make it easy to handle. They are ideal for applications that combine power distribution and automation.

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