Utility Communications
Distribution Communication
The distribution market is driven by Smart Grids applications, the growing demand for electrical power and the ongoing market liberalization. This leads to an increasing need for communication in distribution networks.

There are many different technical solutions to build up a communication system. ABB can offer the complete product portfolio including Distribution Management Systems, SCADA/DMS and RTUs to provide the customer with an optimized and integrated solution.

Communication for your distribution network

ABB has the know-how and product portfolio covering various communication technologies. ABB designs networks that embrace the best technology and media relative to your present and future requirements, power system topology and existing communications equipment.

There is an overwhelming choice of communication technologies for distribution technologies. Considering the cost differences, technical complexity and the substation environment with intense electromagnetic interference (EMI), the planning and engineering of the communication network is very challenging.

The selection of the solution should be based on various criteria such as:

- Bandwidth needs of the applications
- Topology of the network
- Customer wishes and future plans
- Reliability and security aspects
- Space and location constraints
- Feasibility of solutions
- Availability of transmission media (fibre optic cables, pilot cables)
- Availability of radio frequencies or leased lines
- Coverage area of existing data communication network (GSM)
- Geographical profile (line of sight)
- Communication facilities
- Type of service (RTU data, voice, CCTV, metering, etc.)
- Response time
- Reliability of the network (e.g. during blackout)
- Connectivity of mobile crew for maintenance purpose
- Manageability of the communication equipment

Decision criteria

Based on the decision guide for distribution communication the appropriate solution will be selected.

The application varies from small bandwidth needs for pure SCADA application (e.g. 9600 baud) up to broadband needs for combined SCADA, operational and administrational needs. Depending on the available media different solutions are used:

- SDH, PDH or Ethernet solutions for fibre and copper
- MW PtMP radio, UHF/VHF radio modem, cellular network, satellite or PMR radio for wireless

Therefore the planning and engineering for distribution communication networks requires an experienced and capable partner. ABB is the right choice to elaborate your distribution network.
Strengths of ABB
- ABB offers an harmonized product portfolio for electrical distribution including Distribution Management System and RTUs
- More than 60 years worldwide experience in utility communications
- ABB is the market leader in utility communications and offers state-of-the-art technology
- ABB offers a complete range of services including technical planning, implementation and after sales support
- ABB integrates both ABB and third party products to deliver high performance solutions

Related brochures:
- Network Manager
- Network Manager SCADA/DMS
- Wireless Solutions for Distribution Networks
- SCADA Com Unit
- RWB, Switzerland
- EKZ, Switzerland
- Verkehrsbetriebe Glattal VBG, Switzerland