

Symposium Papers

S34-89 Bournemouth (United Kingdom) - June 1989

Digital Technology in Power Systems - Needs, Opportunities, Impact

Session 1B: Digital technology in communication and power system control

- **1B-01** IMPROVED CONTROL OF ELECTRIC ENERGY SYSTEMS WITH DISTRIBUTED AND PARALLEL [COMPUTER](#) ARCHITECTURES: A Viegas de Vasconcelos, *Federal Republic of Germany*.
- **1B-02** INTEGRATED DATA COMMUNICATIONS : RECENT PROGRESS IN THE USA: F M Cleveland, G J Crask, [United States](#).
- **1B-03** LA STRATEGIE d'EDF EN MATIERE DE NORMALISATION DES SYSTEMES NUMERIQUES DE CONTROL COMMANDE: D Stevonin, P Le Corre, T Lefebvre, *France*.
- **1B-05** PLANNING OF POWER UTILITY DIGITAL TELECOMMUNICATIONS NETWORKS: E Salo, Report by WG35.02
- **1B-06** DYNAMIC DIGITAL [TRANSMISSION](#) NETWORK: E Salo, *Finland*.
- **1B-08** AN INTERNATIONAL SURVEY OF THE PRESENT STATUS AND PERSPECTIVE OF EXPERT SYSTEMS ON POWER [SYSTEM ANALYSIS](#) AND TECHNIQUES: Y Tamura, Report by TF38.02/07
- **1B-09** REMOTE INTERROGATION AND ANALYSIS OF DIGITAL FAULT RECORDS : THE CEGB EXPERIENCE: J L H Goody, *United Kingdom*.
- **1B-10** THE ENEL TELECOMMUNICATION NETWORK TOWARDS THE DIGITALIZATION: E Pace, R Schiavoni, A Soregaroli, *Italy*.
- **1B-11** DECENTRALIZED CONTROL IN THE AUSTRIAN [TRANSMISSION](#) NETWORK: S Hofer, *Austria*.
- **1B-12** DIGITAL TECHNOLOGY IN CONTROL, PROTECTION AND COMMUNICATIONS SYSTEMS - THE DRIVING FORCES AND IMPLEMENTATION PHILOSOPHY: A C Spicer, I A Arnott, A Klebanowski, *Australia*.
- **1B-13** THE AVAILABILITY OF TELECONTROL SYSTEMS: E G Davidson, Report by WG 35.01.
- **1B-14** [TRANSMISSION](#) LINE PROTECTION SYSTEM USING TELECOMMUNICATION: F Andersson, S Lindahl, *Sweden*.
- **1B-15** NEW TRENDS TO IMPROVE OPERATIONAL EFFICIENCY IN POWER SYSTEM CONTROL - INTEGRATED BUT DECENTRALIZED CONCEPTS: T Cegrell, *Sweden*.
- **1B-16** ADAPTIVE CENTRALIZED EMERGENCY CONTROL SYSTEM FOR A LARGE POWER POOL: I A Bogomolova, P Ya Kats, L A Koshcheev, Yu D Sadovsky, *USSR*.

Session 2A: Implementation of equipment and systems using digital technology

- **2A-04** [TRANSMISSION](#) LINE MONITORING SYSTEM: K Watanabe, T Inoue, G Konishi, Y Mukaiyama, Y Shibama, K Simoi, *Japan*.
- **2A-07** AN INTEGRATED TELECONTROL AND LOCAL AUTOMATION SYSTEM: J Hamalainen, S Virtanen, *Finland*
- **2A-08** APPLICATION OF THE PACKET-SWITCHING TECHNIQUES FOR THE

POWER SYSTEMS: J Komulainen, *Finland*.

- **2A-09** PROTECTION SCHEME DATA COMMUNICATIONS USING EXISTING PILOT CIRCUITS: M A Redfern, V Roberts, J Turner, W Kwong, E P Walker, [United States](#).
- **2A-11** EXPERIENCE WITH IMPLEMENTATION OF MICROPROCESSOR BASED CONTROL, PROTECTION AND MONITORING EQUIPMENT FOR HVDC SYSTEMS: H Bjorklund, M Lagerkvist, *Sweden*.
- **2A-12** DEMONSTRATION OF DIGITAL PROTECTION, CONTROL AND MONITORING COMMUNICATION SYSTEMS FOR [TRANSMISSION](#) SUBSTATIONS: L L Mankoff, G Rockefeller, [United States](#).
- **2A-16** OVERVIEW AND STATE OF APPLICATION OF FIBRE OPTICS IN POWER SYSTEM COMMUNICATIONS: U Hanselmann, Report by WG 35.04.
- **2A-18** MICRO-PROCESSOR ENHANCED TELECONTROL REMOTE OUTSTATION (METRO): M R Gale, *United Kingdom*.
- **2A-19** A [SINGLE](#) CHANNEL DIGITAL RADIO SYSTEM FOR POWER COMPANIES APPLICATIONS: E Pace, E Mascetti, G Vulpetti, *Italy*.
- **2A-21** TELESUPERVISION SYSTEM OF CHESF'S TELECOMMUNICATIONS INTEGRATED SYSTEM: M Jde Moraes Falcao, R A Suassuna de Medeiros, *Brazil*.
- **2A-22** FIELD TEST OF A PROTOTYPE INTEGRATED SUBSTATION PROTECTION AND CONTROL SYSTEM USING FIBRE-OPTIC LOCAL AREA NETWORK: I Mitani, K Matsuzawa, M Suzuki, Y Sano, T Yoshida, *Japan*.

Session 2B: Technical and organisational impact of digital systems

- **2B-01** MICRO-[COMPUTER](#) BASED CONTROL SYSTEMS IN SUBSTATIONS; APPLICATION ASPECTS AND PRACTICAL EXPERIENCE: A N Zomers, J J E [Van](#) Aalst, M A M M [Van](#) der Meijden, J C Kattemolle, NETHERLANDS; B Magnusson, *Sweden*.
- **2B-02** IMPACT OF DIGITAL TECHNOLOGY UPON TEACHING POWER SYSTEM PROTECTION AND CONTROL: A Wiszniewski, *Poland*.
- **2B-04** MAINTENANCE OF THE POWER SYSTEM CONTROL IN THE FINNISH NATIONAL GRID: E Turu, V P Rahikainen, R Ryytty, *Finland*.
- **2B-05** PROTECTION, CONTROL AND SUPERVISORY DIGITAL SYSTEM FOR HYDROELECTRIC POWER PLANTS AND SUBSTATIONS: M Moszkowicz, R B Sollero, S L G de Miranda, A J S R Silva, H G Andrade, J Saad, *Brazil*
- **2B-06** POWER NETWORK CONTROL CENTRES : A MICRO-[COMPUTER](#) BASED APPROACH: D Mukhedkar, B Valiquette, R Malhame, Y Gervais, *Canada*.
- **2B-07** ORGANIZATIONAL IMPACT OF INTEGRATED DIGITAL CONTROL AND PROTECTION SYSTEMS: S Nilsson, J Chadwick, [United States](#).
- **2B-09** INTEGRATION FOR A SYSTEM-WIDE PROTECTIVE RELAYING SCHEME IN A DISTRIBUTED PROCESSING ENERGY MANAGEMENT SYSTEM DESIGN: M Kezunovic, [United States](#).
- **2B-10** THE TECHNICAL AND ORGANIZATIONAL EXPERIENCE OBTAINED FROM THE INSTALLATION AND OPERATION OF A PILOT-PROJECT DIGITAL SYSTEM INSTALLED IN AN EHV [TRANSMISSION](#) SUBSTATION: G P Wilson, C Caporali, N S Costa, C E de Souza, J F Almeida, A T Franca, *Brazil*.
- **2B-14** INTEGRATION OF NEW TECHNOLOGY CONTROL DEVICES INTO POWER

SYSTEM CONTROL (a contribution of SC39 as seen from operation side): J P Waha, BELGIUM; L Marzio, *Italy*.

- **2B-16** REVIEW OF DIGITAL SYSTEMS IN [TRANSMISSION](#) SUBSTATIONS: R A Lilley, *United Kingdom*.
- **2B-17** INTEGRATED MICROCOMPUTER BASED SYSTEM IMEL/VUW FOR CONTROL, MONITORING, AUTOMATION AND PROTECTION IN SUBSTATIONS: B Buchholz, H Mahnert, *German Democratic Republic*.
- **2B-18** A SUPPLY AUTHORITY VIEW OF DIGITAL TECHNOLOGY IN POWER SYSTEMS: R F B MacLaren, R G Brown, *United Kingdom*.
- **2B-20** EXPERIENCE IN DEVELOPMENT AND OPERATION OF DIGITAL MONITORING SYSTEMS FOR HVDC CONVERTER TERMINALS: Yu A Asanbaev, S N Glezerov, V G Fayans, F G Filatov, *USSR*.