



**The path to the perfect power system,
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This paper describes preliminary results from the Galvin Electricity Project – intended to define the path to a perfect electric energy service system. The researchers literally took a “clean sheet of paper” and designed the system which would absolutely meet the criteria of perfection. This design started with the notion that increasingly consumers demand perfection, and increasingly independence, efficiency, environmentally friendly systems and cost control.

> **REPORT - WG A2.26**
Mechanical condition assessment of transformer windings using Frequency Response Analysis (FRA)

The Working Group A2.26 on the mechanical condition assessment of transformer windings using Frequency Response Analysis (FRA), started in 2003, is divided in three task forces: Introduction to FRA, Measurement techniques and Interpretation. This interim report presents the progress of WG A2.26 on the comparison of measurement techniques, the description of typical FRA responses and the modelling to support interpretation. A brief description of the final report content is presented in conclusion.

> **REPORT - WG B3.11**
A Working Group on “Combining Innovation and Standardisation”: Why and how?

Driven by many external forces including environmental objectives, market forces and consumer expectations, electrical power utilities and solution providers often opt for “standardisation” or “innovation”. This short article explains how the WG is attempting to reconcile these two apparently conflicting philosophies, as finding a way to integrate innovation without disruption is essential for progression.

> **REPORT - JWG D2/B3/C2.01**
Some Guidelines for developing a framework for managing cyber security for an electric power utility

This fourth paper on “Security for Information Systems and Intranets in Electric Power Systems” provides guidance when a framework for managing cyber security for a utility is to be developed, regarding: existing standards, “best practices”, and guidelines from other areas, and relying on the domain modeling concept. It is stressed that information security must be a natural part of daily operation.

> **REPORT - WG D1.17**
Fundamental aspects of data quality for HV asset condition assessment

The asset management decisions involve large amount of information aspects. A considered maintenance program is based on the asset types and their present insulation status and involves condition assessment by suitable diagnostics. This report contributes to the discussion on utility maintenance processes and necessary data structure to describe the condition records of HV assets.

RÉSUMÉ - BT N°304 (Partie I) et 305 (Partie II) - GT A3.11

> **Guide d'Application des Normes CEI 62271-100 et CEI 60694**

Le Guide d'Application des normes CEI 62271-100 et CEI 62271-1 présente des informations de base sur les exigences de ces normes concernant les disjoncteurs HT, ainsi que des normes et des rapports techniques qui leur sont liés. Le Guide traite également d'autres sujets importants évoqués fréquemment en liaison avec les utilisations de disjoncteurs mais non couverts par les normes. L'objectif est de satisfaire les besoins des sociétés d'électricité, des consultants et des industriels et, pour faciliter son utilisation et son maniement, le Guide est édité sous forme de deux BT ; la première traite des sujets généraux et la deuxième traite des essais de fermeture et de coupure.

SUMMARY - TB No 304 (Part I) and 305 (Part II) - WG A3.11

Guide for application of IEC 62271-100 and IEC 60694. Part I and II

> The Guide for Application of IEC 62271-100 and IEC 62271-1 provides background information on the requirements in the noted standards for high-voltage circuit-breakers as well as related standards and technical reports. The Guide also addresses other major subjects frequently raised in connection with circuit-breaker application but not covered by the standards. It is intended to meet the needs of utility, consultant and industrial engineers and, to facilitate its use and handling, it is published in two brochures, the first dealing with general subjects and the second with making and breaking tests.

> **RESUME – BT N° 306 – GT B2.03**
Guide d'évaluation des anciens isolateurs des lignes de transport (à capot et tige et à long fût), en porcelaine ou en verre : que vérifier et quand les remplacer ?

Sur la base des résultats d'une série d'essais standards de la CEI menés sur des isolateurs en service pendant 11 à 45 ans, une procédure d'essai a été mise au point afin de déterminer l'état des anciens isolateurs et de prendre une décision en toute sécurité de leur date de remplacement .

> **SUMMARY – TB No 306 – WG B2.03**
Guide for the assessment of old Cap & Pin and Long-Rod transmission line insulators made of porcelain or glass: what to check and when to replace.

Based on the results of a series of standard IEC tests carried out on insulators that were in service for periods from 11 to 45 years, a test procedure has been established to determine the state of old insulators and to decide on the safe time for their replacement.

> **RESUME – BT N° 307 – GT B5.09**
Télégestion en ligne des protections et automates

Le rapport traite de l'application des technologies de l'information pour la télégestion en ligne des protections et automates des postes. Pour souligner l'intérêt de ces outils performants on présente des exemples de technologie d'information typique qui pourrait être appliquée. Le Comité d'Etudes B5 pense que la télégestion en ligne est appelée à jouer un rôle fondamental en permettant aux compagnies d'électricité d'intégrer leurs moyens dans une action maîtrisable.

> **SUMMARY – TB No 307 – WG B5.09**
Remote on-line management for protection and automation

The report handles the application of Information Technology (IT) for the remote, on-line management of substation protection and automation systems. Examples of core Information Technology that might be applied are presented to highlight the operational advantages of such enabling technologies. It is the belief of SC B5 that remote, on-line management will play a fundamental role in helping utilities to integrate capabilities within a scalable enterprise.