



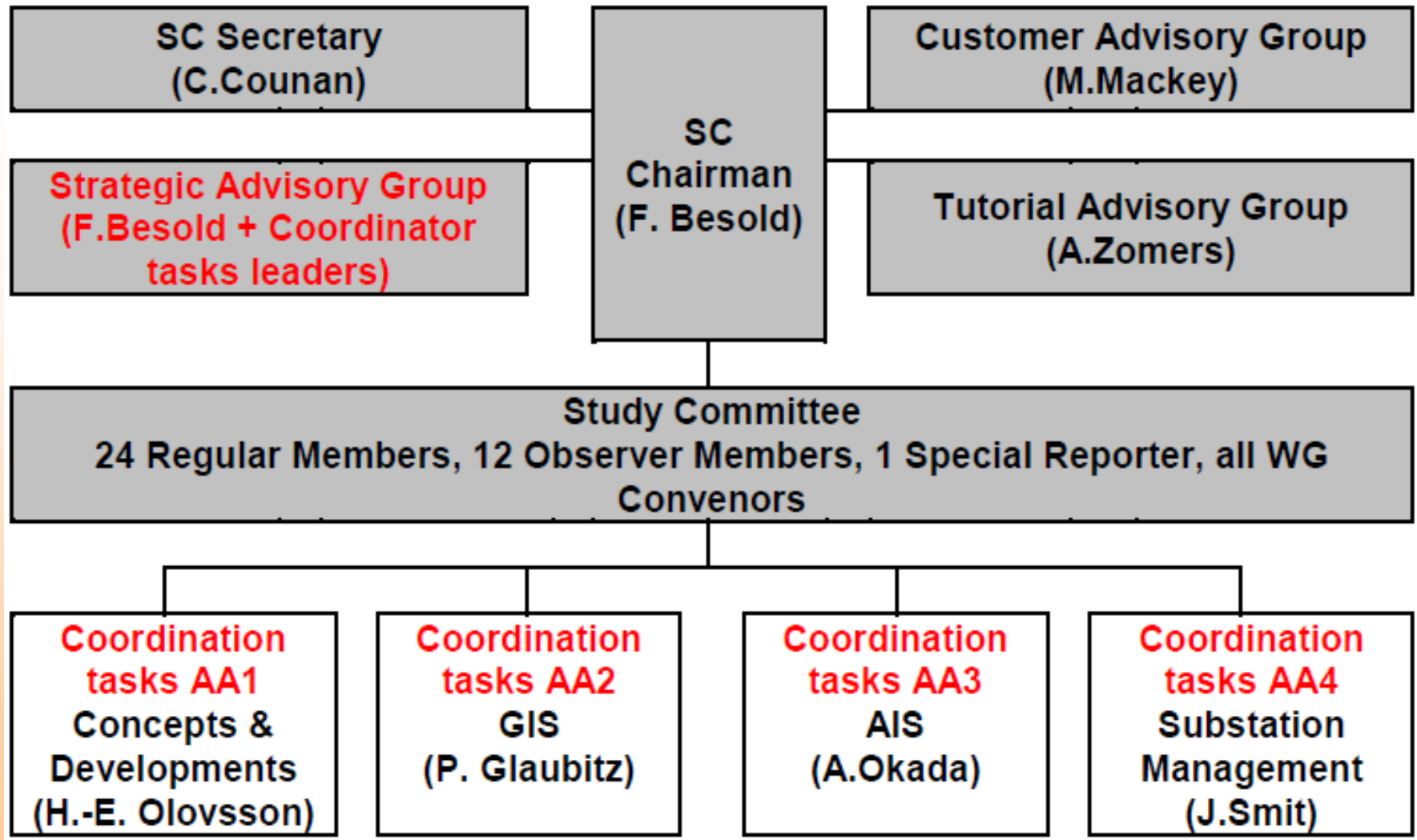
Study Committee B3 “Substations”

Design, construction, maintenance and ongoing management of substations and electrical installations in power stations (excluding generators)

SC B3 recent meetings

- **47th SC B3 meeting on 25th August 2010
in Paris**
- **48th SC B3 meeting on 18th May 2011
in Chicago, together with IEEE/CIGRE
colloquium**

Overview of running AA led by SC B3



Overview of SC B3 running WGs

Coordination task AA1 Concepts & Developments

- **WG B3.13 “Reducing Replacement Time of HV Equipment”** (F. Gallon)
- **WG B3.26 “Guidelines for the Design and Construction of AC Offshore Substations for Windfarms”** (J.Finn) – TB prepared for publishing
- **JWG B3/C1/C2.14 “Circuit Configuration Optimization”** (G. Lingner) – problem with C1 and C2 participation

Just disbanded WG:

WG B3.12 “Obtaining Value from Condition Monitoring” (A.J. Mackrell)

New possible topic : Integration of NCIT into substations systems

Overview of SC B3 running WGs

Coordination task AA2 Gas Insulated Substations

- **WG B3.17 “GIS Residual Life Time”** (K.Pohlink) – will end in 2011, TB prepared for publishing
- **WG B3.25 “SF6 Gas Analysis for AIS, GIS, MTS assessment”** (E.Duggan)
- **New WG B3.29 “Field Test Technology on UHV Substation Construction and Operation”** (Guangfan Li , China)
- **New WG B3.30 “Guide to Minimize the Use of SF6 during Routine Testing of Electrical equipment”** (S.Stangherlin)
- **New JWG B1/B3.33 “Common dry type interfaces for GIS connections above 52 kV for extruded cables”** (P. Mirebeau)

Overview of SC B3 running WGs

Coordination task AA2 Gas Insulated Substations

- **New JWG B3/B1.27 “Economical aspects of GIL and underground cables Cables”** (H. Koch)

New WG under preparation :

“Partial Discharge Monitoring Systems on GIS”; ToR ready (M.Reuter),

*“Single Line Diagram Layout – Gas Compartments : Optimization and reliability”
will start after new updated of 62271-203 in 2011(D. Fuchse)*

*Ideas: GIS Interfaces (e.g. Transformers), Extensions of GIS,
Maintenance concepts, requirements on GIS in future power grids*



Overview of SC B3 running WGs

Coordination task AA3 Air Insulated Substations

- new WG B3.23 “Guideline for Uprating & Upgrading of Substations” (H.Imagawa)
- new WGB3.31 “AIS design for Sever Climate conditions” (M. McVey, US)
- new WGB3.32 “Savings through Optimized Maintenance of Air Insulated Substations” (T. Messinger, Ca)

Just disbanded WG:

WG B3.21 “Turnkey Substations” (T.Kertezs)



Overview of SC B3 running WGs

Coordination task AA4 Substation Management

- **JWG B3.06 “Substation Management” (J. Smit) :**
 - **B3.06.01 “Maintenance and organization”-contracting**
 - **B3.06.04 “Replacement philosophy for substation equipment”, concept TB “Integral process for substation equipment replacement”**
 - **B3.06.05 “Practical Application of AM Information Strategies”**
- **new WG B3.34 “Expected impact of the future grid concept on substation management”**



Overview of SC B3 running WGs

Coordination task AA4 Substation Management

Just disbanded WG:

WG B3.10 Primary /Secondary system interface modeling for total asset performance optimization

Other WG dealing with AM: WG C1.16 TB 422 “Transmission Asset Risk management” (ELECTRA 251, August 2010), WGC1.25 “Risk management and Information Processes for AM in TSO for current and future power systems” (TB 309 updating), C1.27 “Definition of reliability in various devices and services which offer customers and system operators new levels of flexibility”, D1.40 “Failure statistics for AM”, D1.17 „HV asset condition assessment tools“

10/10 to 09/11 publications

AA1

- **WG B3.01: “Obtaining value through optimizing insulation withstand design” Technical report**
ELECTRA 252, October 2010
- **WG B3.12 : “Obtaining Value from On-line Substation Condition Monitoring”, Introduction paper**
in ELECTRA 249, April 2010 & **TB 462** ELECTRA 256 ,
June 2011
- **WG B3.26 : “The Challenges facing AC Offshore Substations for Wind Farms”, Technical report**
ELECTRA 253, December 2010

10/10 to 09/11 publications

AA2

- **WG B3.18 : “SF6 Tightness guide”, TB 430**
ELECTRA 252, October 2010

AA3

- **WG B3.21 : “Turnkey substations” TB 439**
ELECTRA 253, December 2010

AA4

- **WG B3.10 : “Primary/Secondary system interface modeling for total asset performance optimization”**
TB 472 ELECTRA 257, August 2011

SC B3 Paris Session 2012 – Preferential Subjects

- ✓ **PS1 : Substation Solution Enabling Smart Grids** (role of the HV substations in realizing smart grid [SG], substation management enabling SG implementation, substation automation and communication systems)
- ✓ **PS2 : Future substation developments** (UHV, offshore substations, AC/DC substations, substation footprint)

SCB3 future involvements and meetings

- **SC B3/B2/B5 Symposium in Mumbai, India, 19th to 20th January 2012**
- **B3 Session and SC meeting in Paris, France, 27th to 31st August 2012**
- **SC B3/D1 Colloquium (“Managing substation diagnostics and emerging technologies”) and SC meeting in Brisbane, Australia, 7th to 13th September 2013**

Thank you for your attention