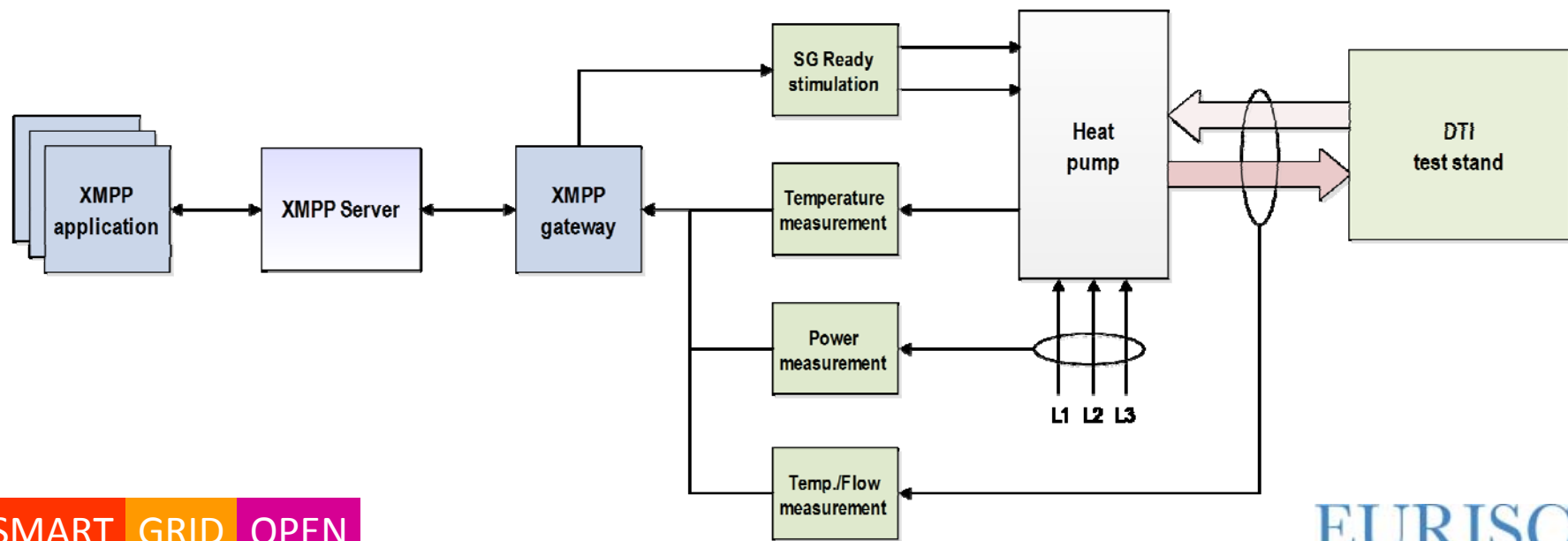
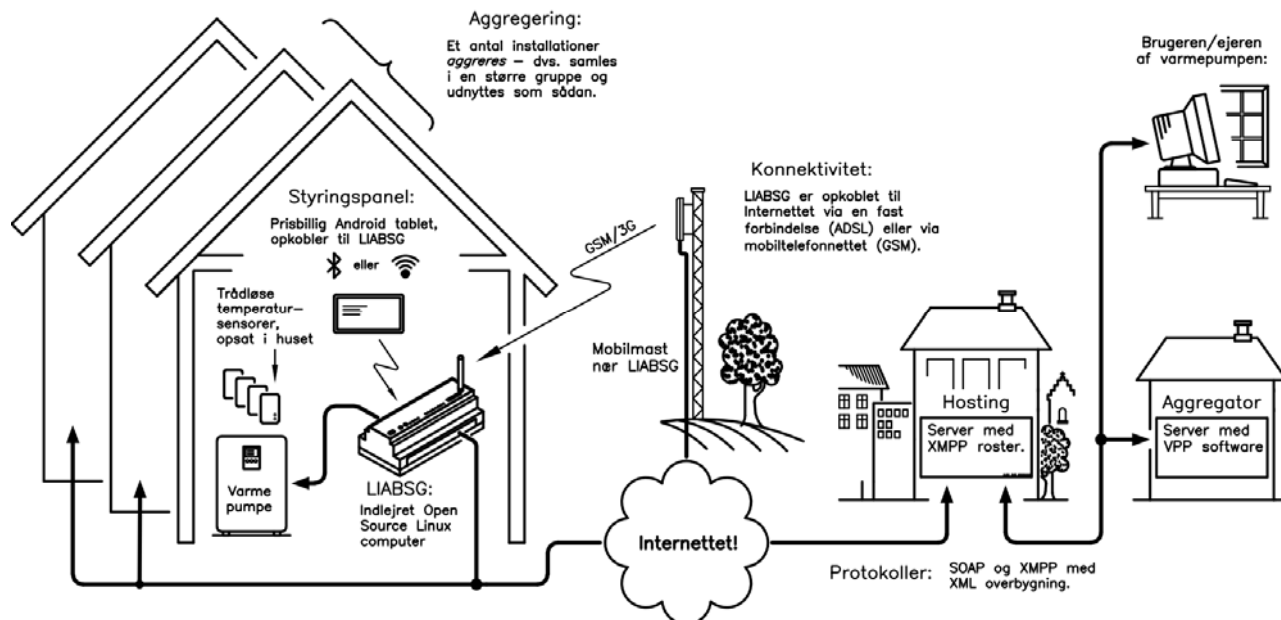


Internationale standarder til styring af varmepumper

Green Tech Center Vejle
3. Februar 2015

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Konference om Styling af Varmepumper i relation til elmarkedet - standarder



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IEC TC57

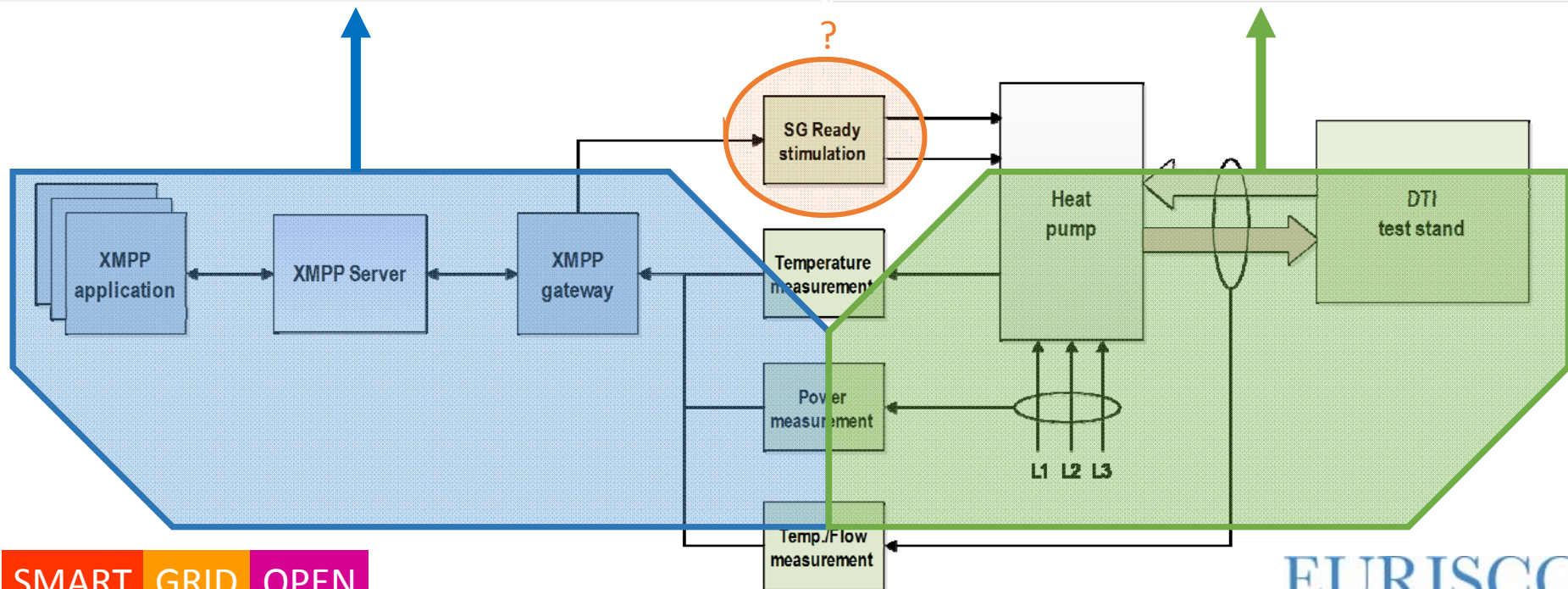
Power systems management and associated information exchange

TC 57 Subcommittee(s) and/or Working Group(s)	
Label	Title
Working Groups	
WG 3	Telecontrol protocols
WG 9	Distribution automation using distribution line carrier systems
WG 10	Power system IED communication and associated data models
WG 13	Energy management system application program interface (EMS - API)
WG 14	System interfaces for distribution management (SIDM)
WG 15	Data and communication security
WG 16	Deregulated energy market communications
WG 17	Communications Systems for Distributed Energy Resources (DER)
WG 18	Hydroelectric power plants - Communication for monitoring and control
WG 19	Interoperability within TC 57 in the long term
WG 20	Planning of (single-sideband) power line carrier systems (IEC 60495) Planning of (single-sideband) power line carrier systems (IEC 60663)
WG 21	Interfaces and protocol profiles relevant to systems connected to the electrical grid

CEN/TC 113

Heat pumps and air conditioning units

CEN/TC 113 Subcommittees and Working Groups	
Working group	Title
CEN/TC 113/WG 1	Heat pumps for heating sanitary water
CEN/TC 113/WG 10	Heat pumps for domestic hot water production and revision of EN 16147
CEN/TC 113/WG 11	Direct expansion-to-water units
CEN/TC 113/WG 14	Revision of EN 1397
CEN/TC 113/WG 2	Measurement of sound power level
CEN/TC 113/WG 3	Requirements
CEN/TC 113/WG 4	Air conditioning units
CEN/TC 113/WG 6	Refrigerant compressors - Presentation of performance data
CEN/TC 113/WG 7	Heat Pumps, air conditioners and chilling liquid packages - testing and rating at part load conditions
CEN/TC 113/WG 8	Rating and testing for performance
CEN/TC 113/WG 9	Sound rating of heat pumps, air conditioners and liquid chilling packages

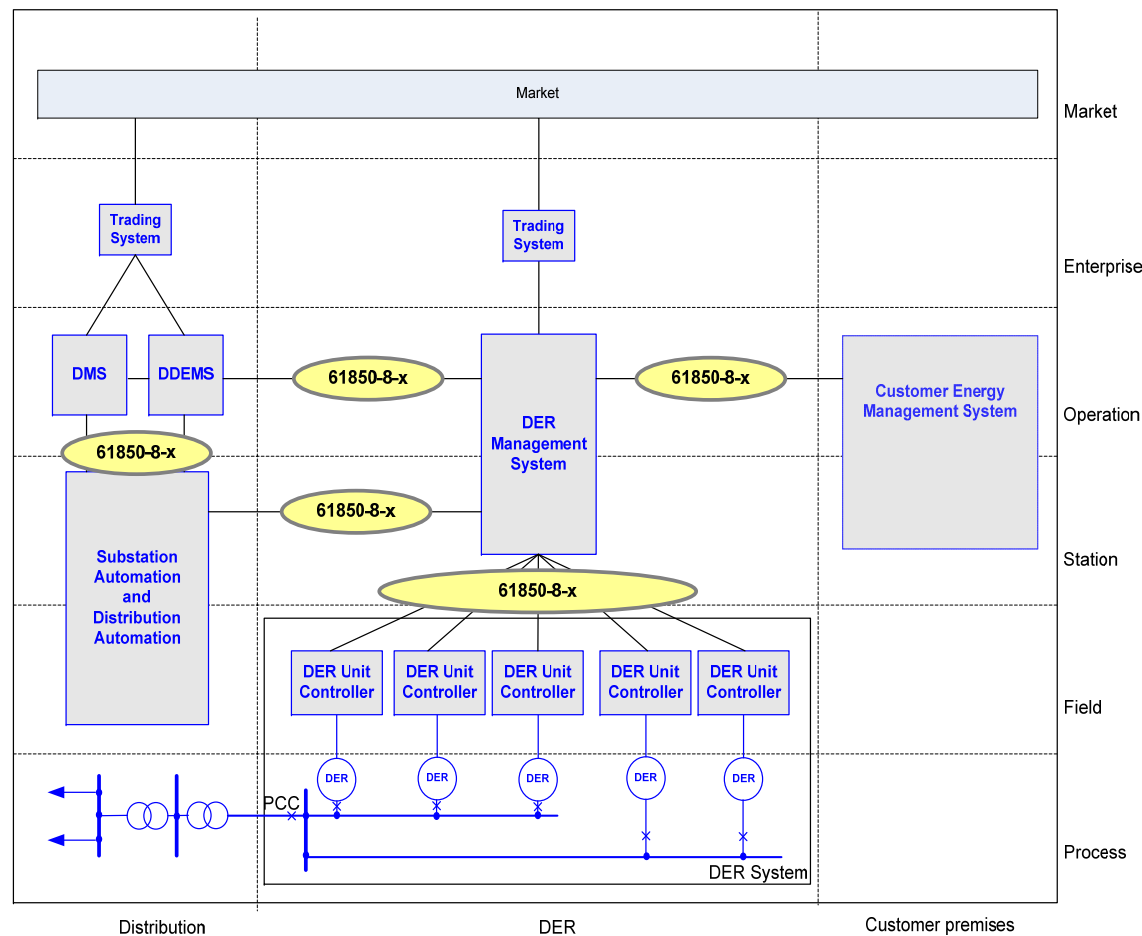


SMART GRID OPEN

Konference om Styring af Varmepumper i relation til elmarkedet - standarder

SDVPv2 har været et af de første projekter som har udført og dokumenteret en praktisk anvendelse af XMPP inden for Smart Grid og styring af distribuerede energi ressourcer (DER).

Der arbejdes i IEC TC57 på at gøre XMPP til en del af standarden for DER (WG17) og 'Home and Building Automation' (WG21).

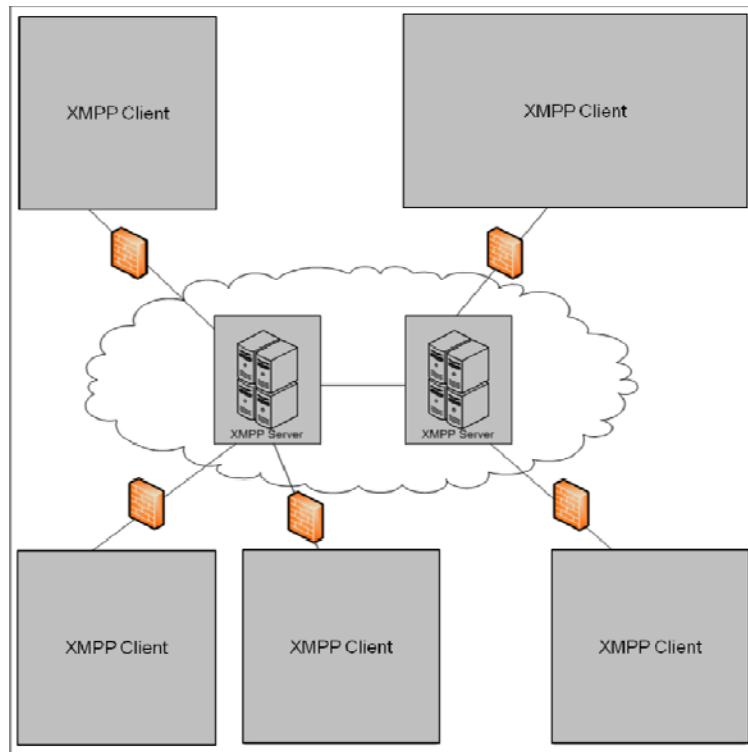


**IEC 61850 Part 8-2: Specific
Communication Service Mapping (SCSM)
—
Mappings to Extensible Messaging
Presence Protocol (XMPP)**

Hvad er XMPP?

XMPP er en kommunikations protokol som muliggør at to aktører (XMPP klienter) kan udveksle data. XMPP klienterne er ikke koblet direkte, men gennem en XMPP server.

En række RFC'er (Request for Comments) beskriver XMPP formater/metoder og der arbejdes på at gøre dem til internationale standarder i IEC TC57 WG17 og WG21.



XMPP architecture overview from TR61850-80-3

En XMPP klient starter kommunikationen ud af en firewall, hvilket simplificere firewall opsætningen.

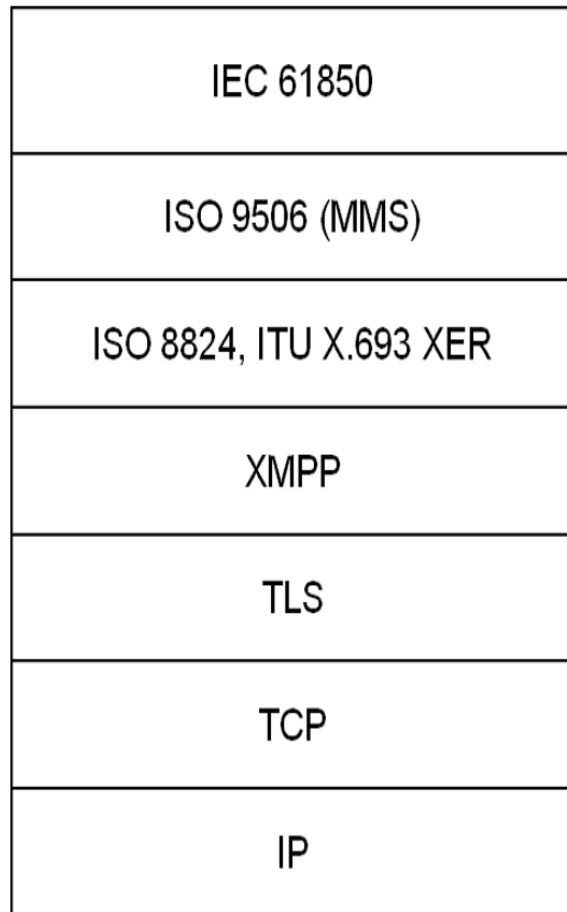
'End-to-end authentication, integrity and confidentiality' kan understøttes gennem standarden IEC 62351-4 ed.2 MMS (secure session concept)

En XMPP klient skal som minimum kunne svare på en XMPP PING stanzas som defineret i XEP 0199 – 'presence' funktionalitet (RFC 2779)

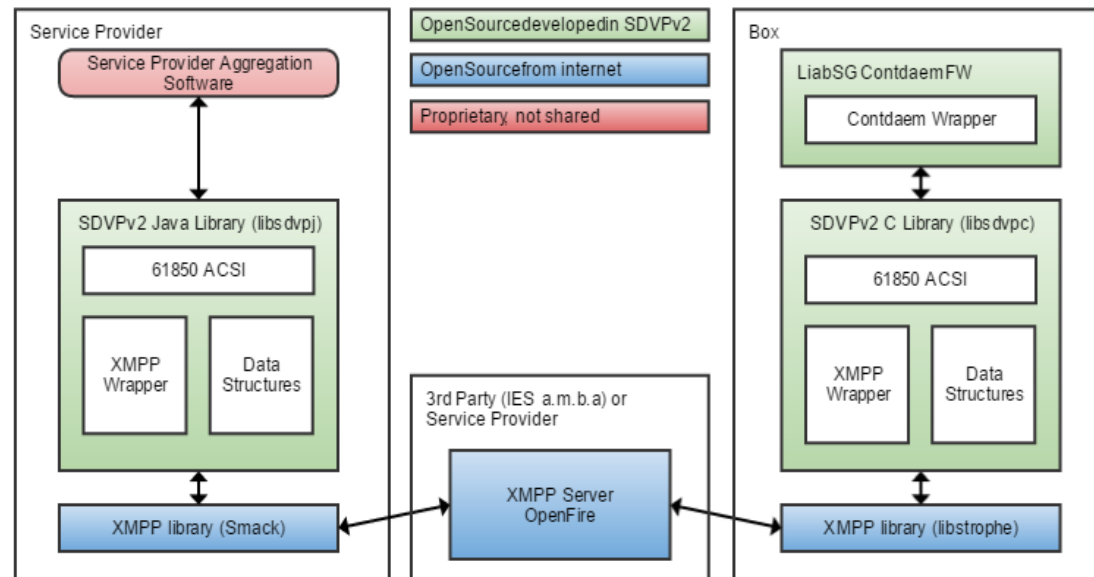
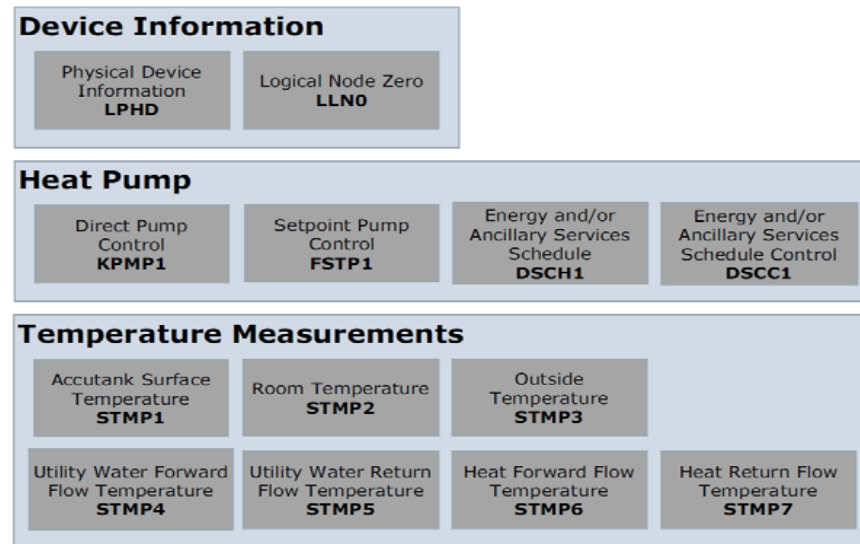
Ingen royalty og rettighederne er ikke forbeholdt en enkelt leverandør

Konference om Styring af Varmepumper i relation til elmarkedet - standarder

Systemoverblik over de komponenter, der er udviklet i projektet



SCSM 61850-8-2 stack



Spørgsmål?

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