

Opening Remark

Big Challenge for ICT Energy

Ehsan B. Haghighi, PhD

Team Lead Thermal Management Northvolt

Ex-Officio and Thermal Management Chair INTELEC

On behalf of

KEIICHI HIROSE, Ph.D.

INTELEC President (IEEE PELS TC7 Chair)

The Seminar, Thermal Management of Electronic Systems

ÅF, Grafiska vägen 2, 401 51 Göteborg

November 27, 2018

About IEEE

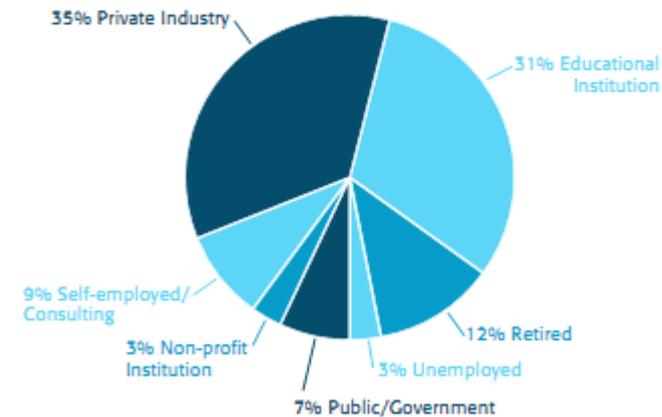


- Institute of Electrical and Electronics Engineers
- IEEE is the world's largest association of technical professionals with more than 420,000 members in over 160 countries around the world.
- IEEE is the trusted “voice” for engineering, computing, and technology information around the globe.

IEEE SOCIAL MEDIA IN 2016



MEMBER WORKFORCE



Source: IEEE 2016 ANNUAL REPORT

What is the INTELEC[®], TC7?

INTELEC[®] is the IEEE trademark of the

International (Tele) Communications Energy Conference

It is a world-wide annual congress which began in 1978.

INTELEC has been sponsored by PELS since 1991.



39 Societies
(The PELS was
founded in 1988.)

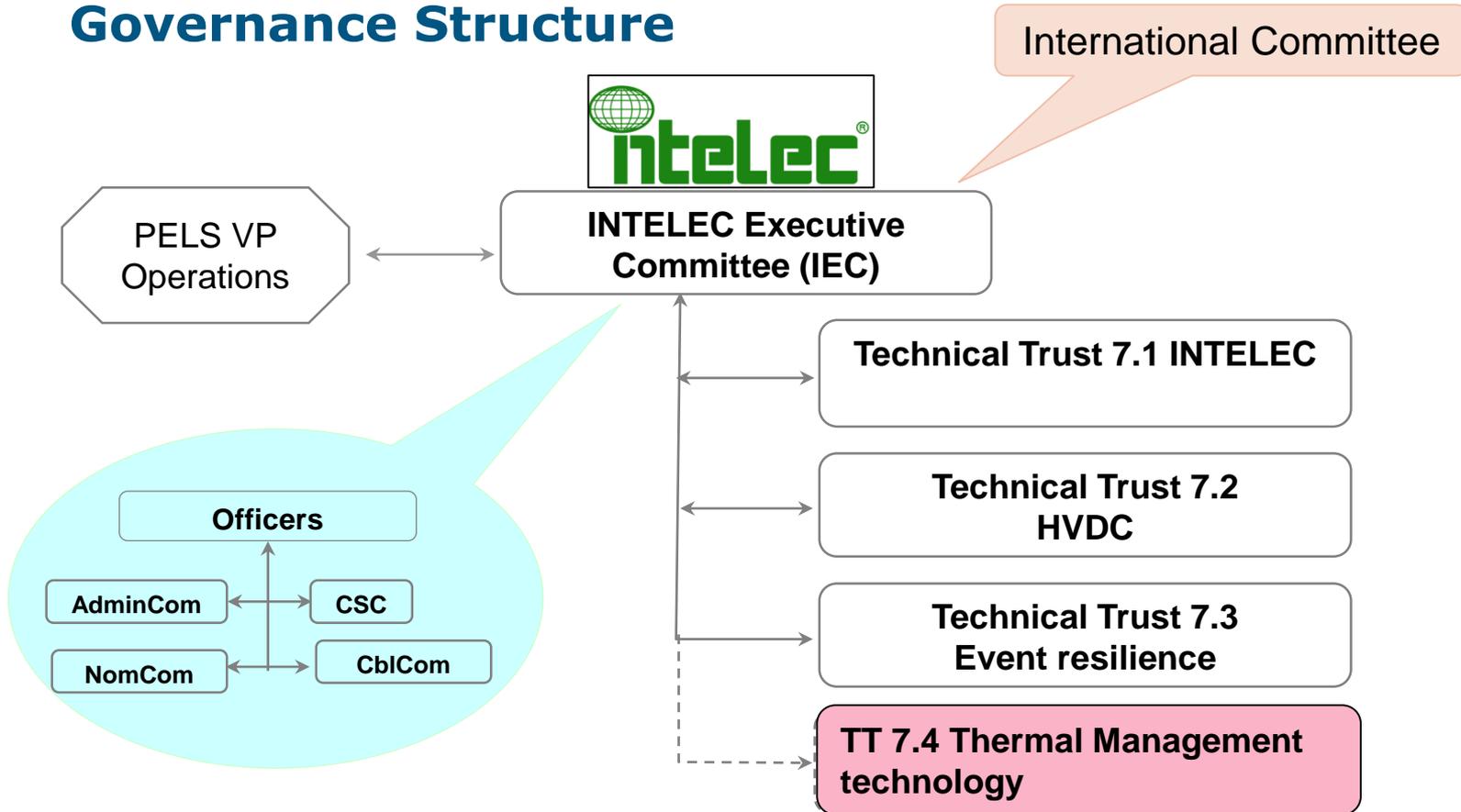


- IEEE Power Electronics Society, Technical Committees
- TC 1: Power & Control Core Technologies
 - TC 2: Power Conversion Systems And Components
 - TC 3: Motor Drives and Actuators
 - TC 4: Vehicle and Transportation Systems
 - TC 5: Sustainable Energy Systems
 - TC 6: High Performance and Emerging Technologies
 - **TC 7: Communication Energy Systems (INTELEC)**



TC 7: Communications Energy Systems

Governance Structure



INTELEC World-wide Venues

1978 Washington, DC, USA

1979 Washington, DC, USA

1981 London, UK

1982 Washington, DC, USA

1983 Tokyo, Japan

1984 New Orleans, USA

1985 Munich, Germany

1986 Toronto, Canada

1987 Stockholm, Sweden



1988 San Diego, USA

1989 Florence, Italy

1990 Orlando, USA

1991 Kyoto, Japan

1992 Washington, DC, USA

1993 Paris, France

1994 Vancouver, Canada

1995 The Hague, Netherlands

1996 Boston, USA

1997 Melbourne, Australia

1998 San Francisco, USA

1999 Copenhagen, Denmark

2000 Phoenix, USA

2001 Edinburgh, UK

2002 Montreal, Canada

2003 Yokohama, Japan

2004 Chicago, Illinois, USA

2005 Berlin, Germany

2006 Providence, RI, USA

2007 Rome, Italy

2008 San Diego, USA

2009 Incheon, South Korea

2010 Orlando, USA

2011 Amsterdam, Netherlands

2012 Scottsdale, USA

2013 Hamburg, Germany

2014 Vancouver, Canada

2015 Osaka, Japan

2016 Austin, USA

2017 Gold coast, Australia

2018 Turin, Italy

2019 Singapore

2020 Malmö, Sweden



NA
20

USA 16
Canada 4

Europe
13

Germany 3
Italy 3
UK 2
Netherlands 2
France 1
Sweden 1
Denmark 1

APAC
7

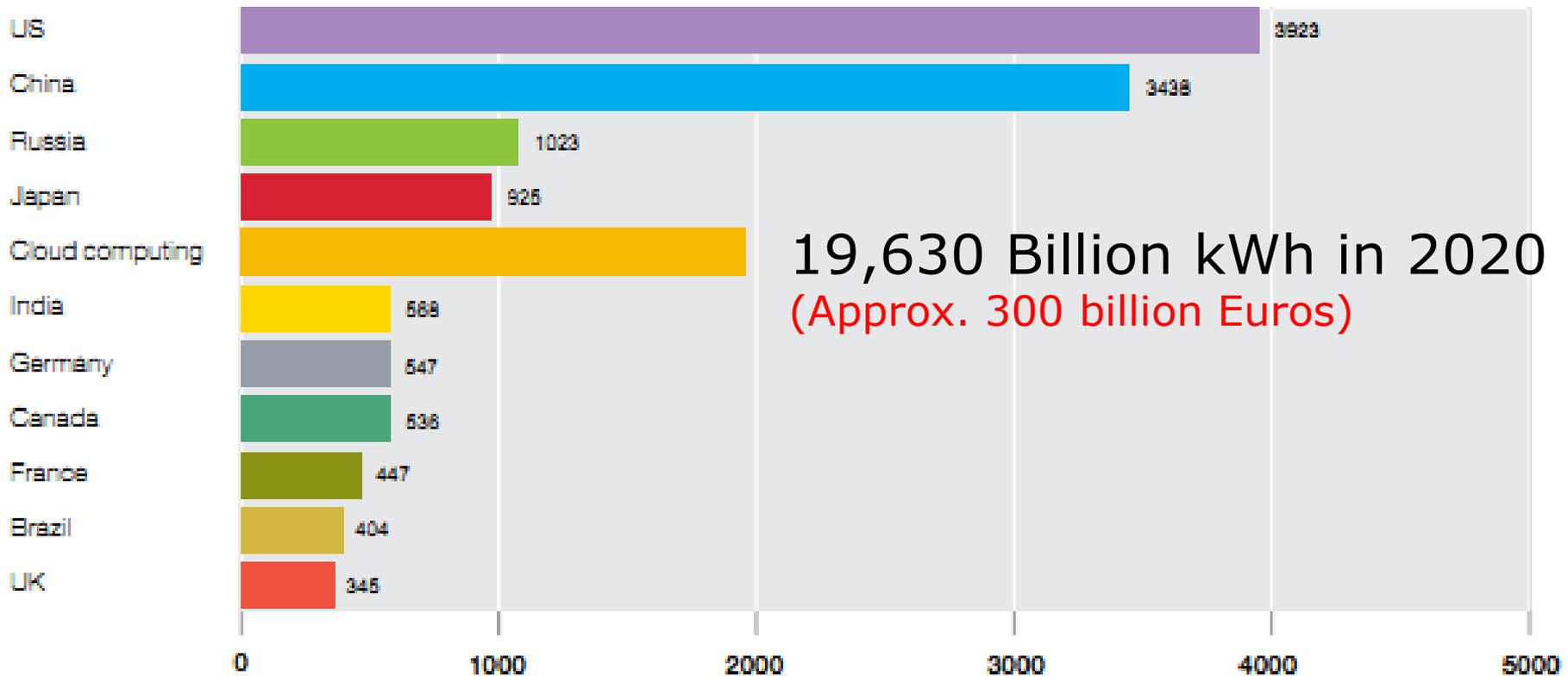
Japan 4
Australia 2
South Korea 1

Electricity Consumption by ICT Services

Motivation 1: Energy saving and cost cut

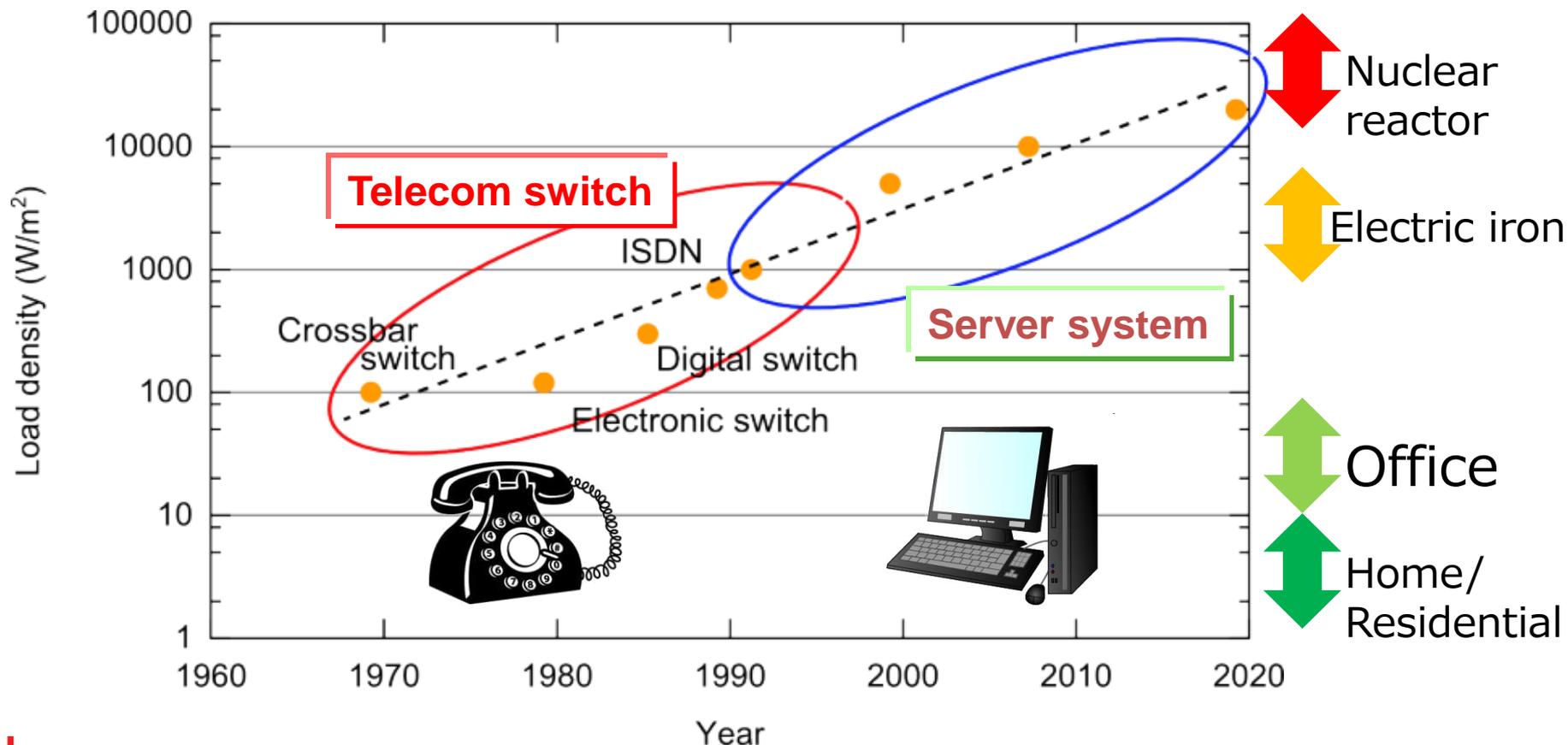
Source: SMART 2020: Enabling the low carbon economy in the information age

2007 electricity consumption. Billion kWh



Increasing Load Power Density for ICT services

Motivation 2: Requirement for High power density loads



Last Year's Seminar TMoES



- ÅF in Stockholm
- Around 140 attendees



2018

2017



Industrial partners
from 7 to 16

TC on Communications Energy Systems

The 41st INTELEC 2019

13-17 October, 2019

Resorts World Sentosa, Singapore





<http://www.intelec2019.org>



RESORTS WORLD SENTOSA | SINGAPORE

13 – 17 OCTOBER

41st International Communications Energy Conference

42nd Intelec, 2020 in Malmö Sweden



INTELEC 2020

Malmömässan, Malmö, Sweden

27th Sep. – 1st Oct.

Organizers and Sponsors:



Supported by:



We Can Do it!

INTELEC is one of the best communities to discuss the whole ICT energy issues world-wide. On other word, our community plays very important role to address these hot issues.

INTELEC would strongly support the thermal management area as a new technical trust (T.T 7.4).

Your contributions are essential for the **PELS** and **INTELEC** as well as ICT industry.

Let's get Experience and Knowledge together!

Coordinating Team



Hans Bjarnehed
Specialized Technical Services, ÅF



Per Lundberg
Regional Sales Manager, ÅF



Ehsan B. Haghighi
Team Lead Thermal Management,
Northvolt



Simon Haque
Team Leader CFD, ÅF



Jan Östh
Group Manager Fluid
Mechanics, ÅF



Stefan Hellqvist
Section Manager, ÅF



Jeanette Lindbom
Event Manager, ÅF