ISO/IEC JTC 1/WG 7
Working Group on Sensor Networks

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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

IEC TC65
LIAISON REPORT
TO JTC1 WG7

London on 10 March 2010

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Bernard DUMORTIER (TC65 Sec. & SC65C Sec.)
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AGENDA

- INDUSTRIAL ENVIRONMENTS
- IEC TC65 CONCERNS
- IEC TC65 REQUESTS
- IEC FIELDBUS STANDARDS

Tony CAPEL (SC65C Chairman)
Bernard DUMORTIER (TC65 Sec. & SC65C Sec.)
Graeme WOOD (SC65C Fieldbus Expert)

INDUSTRIAL ENVIRONMENTS

- Industrial environments identify networks that include actuators as:
  - "Control networks"
  - "Automation networks"
  - "SCADA networks" (*Supervisory Control And Data Acquisition)*
- "Actuator outputs" interact with the real world, and inappropriate outputs can cause harm to equipment, the environment and people.

Tony CAPEL (SC65C Chairman)
Bernard DUMORTIER (TC65 Sec. & SC65C Sec.)
Graeme WOOD (SC65C Fieldbus Expert)

TC65 CONCERNS

Definitions used in WG7 documents specify that:

- a **"Sensor network"** is a network of **"Sensor nodes"** and,
- a **"Sensor node"** may include actuators

1. "**sensor nodes**" and "**sensor networks**" to include an actuator capability is inconsistent with long established industry practice. If a node or a device has both sensing and actuator functions, it is not a "sensor".
2. Networks which include actuators are called "**control networks"** rather than "**sensor networks"**
3. If the term 'Sensor network' is expanded to include actuators, then a new term will be needed to identify 'Sensor only networks'

Tony CAPEL (SC65C Chairman)
Bernard DUMORTIER (TC65 Sec. & SC65C Sec.)
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IEC TC65 REQUESTS

TC65 requests JTC1 WG7 to agree the following actions:

A. To maintain consistency with long established usage and avoid confusion in the industrial marketplace, please define the term “Sensor networks” to mean networks that contain sensors only.

B. Where appropriate, please maintain a clear distinction between “Sensor networks” and other networks such as “Control networks”, “Automation networks”, “Fieldbus networks”, and “SCADA networks”, all of which typically include actuators.’

C. As mentioned above, if a Sensor network wishes to interact with a Control network this can be done through an appropriate high level, interface. IEC TC65 will be interested to contribute to work by WG7 on the services and functions that a Control network should support as part of an external interface to a Sensor network.

IEC 61158 Serie, IEC 61784 and IEC 61918 Standards: 2007 (1)

CPF n	Technology Name	61158 Type	61158 Parts	CP n/m	*Name*	61784 Parts
1	Foundation Fieldbus™	1+9	1, 2, 3-1, 4-1, 5-9, 6-9	CP 1/1	*FF H1*	1, 3-1
		5	1, 5-5, 6-5	CP 1/2	*FF HSE*	1, 3-1
		1+9	1, 2, 3-1, 4-1, 5-9, 6-9	CP 1/3	*FF H2*	1, 3-1
2	CIP™	2	1, 2, 3-2, 4-2, 5-2, 6-2	CP 2/1	*ControlNet™*	1, 5-2, 3-2
		2	1, 4-2, 5-2, 6-2	CP 2/2	*EtherNet/IP™*	1, 2, 5-2, 3-2
		2	1, 4-2, 5-2, 6-2	CP 2/3	*DeviceNet™*	1, 5-2, 3-2
3	PROFIBUS PROFINET	3	1, 2, 3-3, 4-3, 5-3, 6-3	CP 3/1	*PROFIBUS DP*	1, 5-3, 3-3
		3	1, 2, 3-3, 4-3, 5-3, 6-3	CP 3/2	PROFIBUS PA	1, 5-3, 3-3
		10	1, 5-10, 6-10	CP 3/3	*PROFINET CBA*	1, 5-3
		10	1, 5-10, 6-10	CP 3/4	*PROFINET IO CC-A*	2, 5-3, 3-3
		10	1, 5-10, 6-10	CP 3/5	*PROFINET IO CC-B*	2, 5-3, 3-3
		10	1, 5-10, 6-10	CP 3/6	*PROFINET IO CC-C*	2, 5-3, 3-3
4	P-NET®	4	1, 2, 3-4, 4-4, 5-4, 6-4	CP 4/1	*P-NET RS-485*	1
		4	1, 2, 3-4, 4-4, 5-4, 6-4	CP 4/2	*P-NET RS-232*	1
		4	1, 3-4, 4-4, 5-4, 6-4	CP 4/3	*P-NET on IP*	2
5	WorldFIP®	7	1, 2, 3-7, 4-7, 5-7, 6-7	CP 5/1	*WorldFIP*	1
		7	1, 2, 3-7, 4-7, 5-7, 6-7	CP 5/2	*WorldFIP subMMS*	1
		7	1, 2, 3-7, 4-7, 5-7, 6-7	CP 5/3	*WorldFIP min TCP/IP*	1

IEC 61158 Serie, IEC 61784 and IEC 61918 Standards: 2007 (2)

CPF n	Technology Name	61158 Type	61158 Parts	CP n/m	Name	61784 Parts
6	INTERBUS®	8	1, 2, 3-8, 4-8, 5-8, 6-8	CP 6/1	*INTERBUS*	1, 5-6, 3-6
		8	1, 2, 3-8, 4-8, 5-8, 6-8	CP 6/2	*INTERBUS TCP/IP*	1, 5-6, 3-6
		8	1, 2, 3-8, 4-8, 5-8, 6-8	CP 6/3	*INTERBUS subset CP 6/1*	1, 5-6, 3-6
		8+10	1, 3-8, 4-8, 5-8, 6-8 5-10, 6-10	CP 6/4		2, 5-6, 3-6
		8+10	1, 3-8, 4-8, 5-8, 6-8 5-10, 6-10	CP 6/5		2, 5-6, 3-6
		8+10	1, 3-8, 4-8, 5-8, 6-8 5-10, 6-10	CP 6/6		2, 5-6, 3-6
8	CC-Link	18	1, 2, 3-18, 4-18, 5-18, 6-18	CP 8/1	*CC-Link/V1*	1
		18	1, 2, 3-18, 4-18, 5-18, 6-18	CP 8/2	*CC-Link/V2*	1
		18	1, 2, 3-18, 4-18, 5-18, 6-18	CP 8/3	*CC-Link/LT*	1
9	HART	20	1, 5-20, 6-20	CP 9/1	*HART*	1
10	Vnet/IP	17	1, 2, 3-17, 4-17, 5-17, 6-17	CP 10/1	*Vnet/IP*	2, 5-10
11	TCnet	11	1, 2, 3-11, 4-11, 5-11, 6-11	CP 11/1	*TCnet*	2, 5-11
		11	1, 2, 3-11, 4-11, 5-11, 6-11	CP 11/2	*TCnet-Loop*	2

IEC 61158 Serie, IEC 61784 and IEC 61918 Standards: 2007 (3)

CPF n	Technology Name	61158 Type	61158 Parts	CP n/m	*Name*	61784 Parts
12	EtherCAT	12	1, 2, 3-12, 4-12 5-12, 6-12	CP 12/1		2
		12	1, 2, 3-12, 4-12 5-12, 6-12	CP 12/2		2
13	Ethernet Powerlink	13	1, 3-13, 4-13, 5-13, 6-13	CP 13/1	*EPL*	2
14	EPA	14	1, 3-14, 4-14, 5-14, 6-14	CP 14/1		2
		14	1, 3-14, 4-14, 5-14, 6-14	CP 14/2		2
15	MODBUS® - RTPS	15	1, 5-15, 6-15	CP 15/1	*MODBUS TCP*	2
		15	1, 5-15, 6-15	CP 15/2	*RTPS*	2
16	SERCOS	16	1, 2, 3-16, 4-16 5-16, 6-16	CP 16/1	*SERCOS I*	1
		16	1, 2, 3-16, 4-16 5-16, 6-16	CP 16/2	*SERCOS II*	1
		19	1, 3-19, 4-19, 5-19, 6-19	CP 16/3	*SERCOS III*	2

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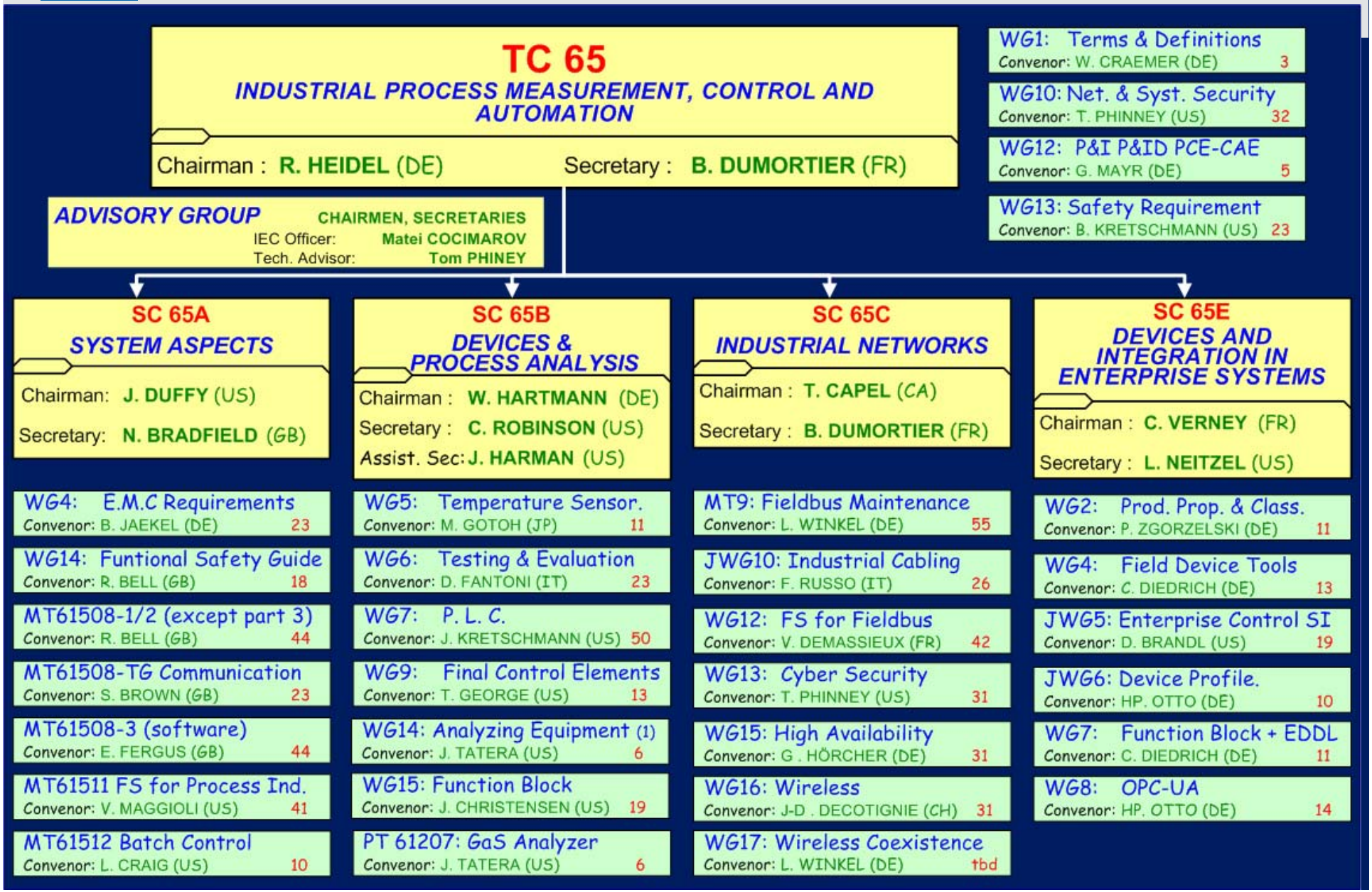
THANK YOU

TC65 CHART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