



ANSI – ESO Conference
Transatlantic Standardization
Partnerships on E-Mobility/Electric
Vehicles, Energy, and Security

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STANDARDS

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on E-Mobility/Electric Vehicles, Energy, and Security

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ISO/IEC JTC 1/SC 31

- ❑ 18000-7
 - 433 MHz, active tag, 256Kbytes, 300' range
- ❑ 18000-63
 - 915 MHz, passive tag, 96 bits, 10' range
- ❑ 24730-2
 - 2.45 GHz, RTLS tag
- ❑ 29167
 - RFID Security and File Management
- ❑ 15961/15962
 - Application interface/data encoding and logical memory
- ❑ 15963
 - Identification of tag manufacturer

IEEE

- 802.15.4e
 - MAC layer
- 802.15.4f
 - PHY Layer
- 802.15.4x
 - Under discussion

ISO TC 104 Freight Containers

- ❑ ISO 10374 (withdrawn)
 - Container ID, License plate tag,
- ❑ ISO TS 10891
 - Container ID, License plate tag (18000-63)
- ❑ ISO 18185
 - eSeal, tag operates at both 433 and 2450 MHz (ISO/IEC 18000-7 and ISO/IEC 24730-2)
- ❑ ISO 18186
 - Data flows only, no technology specified

TC 122 Packaging

Supply Chain Applications of RFID

- ❑ ISO 17363
 - Freight Container: 18000-7, adding 802.15.4 (sensors)
- ❑ ISO 17364
 - Returnable Transport Units: 18000-7 and 18000-63
- ❑ ISO 17365
 - Transport Units: 18000-63 and 18000-3
- ❑ ISO 17366
 - Item Packaging: 18000-63 and 18000-3
- ❑ ISO 17367
 - Item Level: 18000-63 and 18000-3

Joint Working Group

- ❑ Joint effort of TC 104 and TC 122
- ❑ Initial scope
 - Single tag – three functions
- ❑ Approved scope
 - Three tags – three functions
- ❑ Disbanded
- ❑ Published separate conflicting standards

RFID Security and File Management

- ❑ Developed by
 - ISO/IEC JTC 1/SC 31/WG 7 and GS1 EPCglobal
- ❑ Single chip architecture
 - Mutual authentication
 - Manage file access
 - Encryption
- ❑ Supports consumer choice/data confidentiality
- ❑ Commands and protocols in air interface
- ❑ Multiple stand alone cryptographic suites