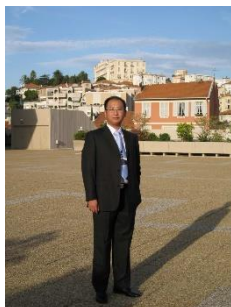


# 创新 + — 中国电子学会团体标准实践

## Innovation + — Practice on association standard of Chinese Institute of Electronics



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中国电子学会标准认证中心负责人。发表多篇 IEEE 期刊和会议论文，出版专著：《物联网与传感网工程实践》。作为第一起草人参与完成《数据中心 资源利用 电能能效要求和测量方法》等多项国家标准的制定。获得国家科学技术进步奖二等奖等多项奖励。

担任 ISO/IEC JTC 1 SGDCMP 召集人/秘书,ISO/IEC JTC 1 DPI 召集人,SAC TC 28 SC 39 副秘书长等。他还是中欧 RFID 互操作测试中方首席技术顾问。

He is the principal of Chinese Institute of Electronics Standard Authentication Center. He has published the book of Internet of Things and Sensor Network Project Practice, several IEEE periodicals and conference papers. As the first drafter, he developed the GB of Data Center Resource Utilization Electrical Energy Requirement and Measurement Method and many other national standards. He was honored the second prize of National Science and Technology Progress Award, etc.

He is ISO/IEC JTC 1 SGDCMP Convener/Secretary, ISO/IEC JTC 1 DPI Convener, SAC TC 28 SC 39 Deputy Secretary General, etc. He is also the China's Chief Technical Adviser of Sino-Europe RFID Interoperability Testing , etc.

# 创新 +

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# Innovation +

Practice on association standard of Chinese  
Institute of Electronics

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## CIE的创新基因



中国电子学会成立于1962年。历经55年的发展，学会现拥有10万多名个人会员。

## Innovation gene of CIE



CIE was founded in 1962, and it has more than 100000 personal members with its 55-year development.

## CIE的创新基因

覆盖了半导体、计算机、通信、雷达、导航、微波、广播电视、电子测量、信号处理、电磁兼容、电子元件、电子材料等电子信息科学技术的所有领域。



中国电子学会的47个专业分会，8个专家委员会

2017年成立的专家委员会有：

- 量子通信
- 区块链

## Innovation gene of CIE

Cover all fields for science and technology of electronic information such as semiconductor, computer, communications, radar, navigation, microwave, radio and television, electronic measurement, signal processing, electromagnetic compatibility, electronic components and electronic materials.



47 professional chapters and 8 expert committees of Chinese Institute of Electronics

Expert committees established in 2017 include :

- Quantum communication
- Block chain



## CIE的创新基因

中国电子学会以学术交流为中心，促进学科发展、技术进步和人才成长。  
五十五年来锐意进取，始终提供创新的土壤，鼓励支持创新。

2015年为了更好的服务于创新，充分利用标准化工作的特点，助力**创新成果的转化**，实现学术、技术与产业的有机结合，在**国家标准化管理委员会**的指导下，作为**团体标准化试点单位**，尝试开展**团体标准化工作**。

**开始了学会新的实践模式！**

## Innovation gene of CIE

Centralizing academic exchange, CIE promotes academic development, technological progress and talent growth. CIE forges ahead with determination, always provide innovative soil, encourage and support innovation for 55 years.

In order to make a better service for innovation, make full use of the characteristics of standardization, help the **transfer of innovation achievements** and realize the organic combination of academic, technology and industry in 2015, CIE developed **association standards** as a **pilot unit of association standardization** under the guidance of SAC .

**It opens a new practice mode of CIE!**

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## 团体标准化工作总体思路

### 发展理念

发挥学会的组织优势，凝聚企业和专家力量，挖掘标准需求，面向技术产业的创新发展趋势，开展团体标准研究制定工作，**适时并快速**满足市场需求



## General thought of association standardization

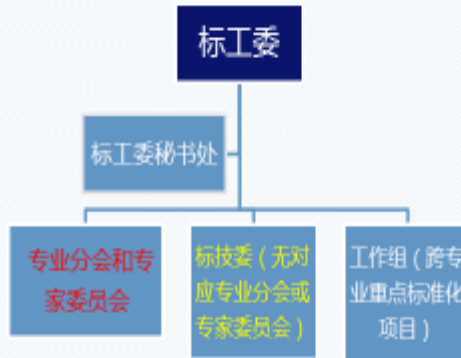
### Idea of development

Play the organizational advantages of the Institute; unite the power of enterprises and experts; excavate the standard needs; face the innovation and development trend of the technology industry; carry out formulation and research of association standards and satisfy the market demand **in time and quickly**



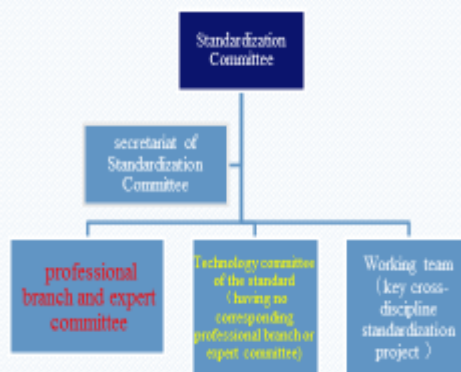
## 机构设置—工作承担机构

- 标准化工作委员会（标工委）为学会常设性组织。
- 学会总部标准认证中心作为标工委秘书处，承担标工委日常工作。
- 承担标工委工作是学会其他工作委员会、专业分会和专家委员会的权利和责任。
- 对于没有对应工作委员会、专业分会和专家委员会的技术领域，而又有实际标准化需求的，标工委可组织成立标准化技术委员会或工作组。
- 标准化技术委员会（或工作组）分工负责本领域的标准化工作。



## Organization structure

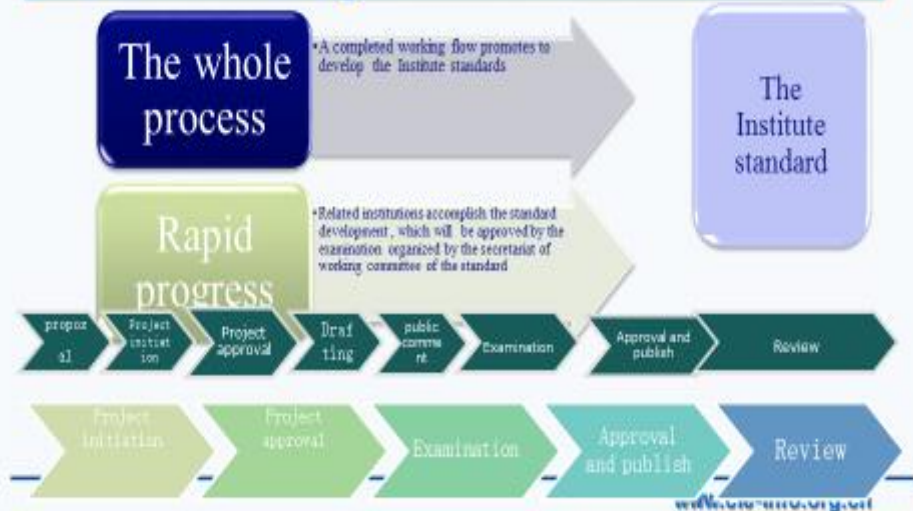
- Standardization Committee is a regular organization of the Institute.
- Accreditation center of new standards at the Institute headquarter is the secretariat of Standardization Committee, which undertakes daily work of Standardization .
- Undertaking the work of technology committee of the standard is the rights and responsibilities of other work committees, professional branches and expert committees.
- the technology field which has no working committee, professional branch or expert committee while has real demand on standardization, working committee of the standard can organize and establish standard technical committee or working group.
- Technical committee of standardization (or working group) will be responsible for the standardization in its working



## 标准制定方式



## Development of standard



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## 学会团体标准总体制定情况



## Numbers of association standards in CIE





## 机器人团体标准工作(案例)



与DIN、ETSI、IEEE SA等组织保持交流；派专家参加IEC等国际标准化组织活动

## association standardization of robot (case study)



Keep communicating with organizations such as DIN、ETSI、IEEE SA；send experts to take part in the international standardization activities such as IEC.



## 机器人团体标准工作(案例)

中国南方遭受了历史罕见的雨雪凝冻灾害,电力设施损毁严重,全网10kV及以上线路7541条停运,35kV及以上变电站859座停运,通信光缆中断106条,10kV及以上线路杆塔损毁126247基等等



## association standardization of robot (case study)

The southern areas of China suffers a disaster of freezing frost which is rare to see in the history of China and the power facilities are seriously damaged. The number of 10kV circuits or more than 10 kV which stop to operate is 7541. 859 equal to and above 35kV transfer substation stopped operating. 106 optical cables are broken off. 126247 equal to and above 10kV overhead line structures are damaged.

## 机器人团体标准工作(案例)

2010年10月赴四川汶川、灾后的光缆网络业

务恢复进行调查。

能否有

“远程自动完成光缆跳接”？

- ◆ 纤芯倒换恢复业务量巨大
- ◆ 站点间距离较远，震后次生灾害不断
- ◆ 抢修人员路上花费的时间长，通信网络恢复的效率确低

## association standardization of robot (case study)

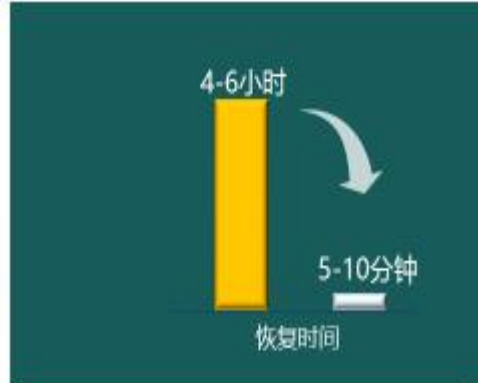
In October 2010, the Institute went to Wenchuan, Sichuan province to make investigation on the business recovery of optical cable after the disaster.

Whether it can “autoamtically accomplish the jumper connection of optical cable in a romote control”？

- ◆ Plenty of business for recovery of rotation of fiber core
- ◆ Long distances among stations and continuous secondary disaster after the earthquake
- ◆ Emergency workers spend long time on the way; and low efficiency of communication network recovery

## 机器人团体标准工作(案例)

通过优势互补的合作模式,我国2010年研制出了24芯光纤芯远程交换设备及系统,并不断改进升级,目前已实现148芯



[www.cie-info.org.cn](http://www.cie-info.org.cn)

## association standardization of robot (case study)

Our country developed remote exchange equipment and system of optical cable with 24 cores in 2010 via cooperation and kept improving it; now our country has **already** realized 148cores



[www.cie-info.org.cn](http://www.cie-info.org.cn)



## 机器人团体标准工作(案例)

为了推动我国在光纤芯交换机器人领域的自主创新成果,促进相关产业的快速形成,增强应用推广程度,服务于国家发展需要,在发挥中国电子学会的专业特点和对专家和产业的广泛结合特点,组织开展光纤芯交换机器人系列标准中三项关键标准的制定,并于2017年世界机器人大会上与空间机器人系列标准一同发布:

- 光纤芯交换机器人设计通则
- 光纤芯交换机器人通信协议格式规范 [加入视频](#)
- 光纤芯交换机器人测试方法

## association standardization of robot (case study)

In order to promote self-dependent innovation achievements in the field of exchange robot of China's fiber core, facilitate rapid formation of related industries, strengthen application and promotion degree, serve the requirement of our country's development, CIE organize and develop three key standards in the filed of exchange robot of fiber, which were simultaneously published with series of standards of space robot at the world robot conference in 2017:

- General design principles for automatic optical fiber switching robot
- Communication protocol format specification for automatic optical fiber switching robot [add video](#)
- Technical requirements and test methods for automatic optical fiber switching robot

通信站數量1125個  
浙江省的應用已覆蓋地市11個  
波電力通信網應用全覆蓋



1125 signal stations.  
Application in Zhejiang  
province has covered 11 cities.  
Full coverage for application  
of Ningbo power  
telecommunication network



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## 不忘初心 面向未来

中国电子学会将继续坚持以创新为驱动、以市场为导向、以专业化为基础的团体标准化工作方向。

积极探索团体标准化工作的新思路、新模式、新方法，并在组织和机制建设方面持续调整完善，使其更好符合标准化工作规律。

我们将继续根据学会自身特点，充分发挥学会开放型、平台型、枢纽性组织的优势，快速响应，不断提升学会团体标准适应市场需求、满足技术进步和贸易发展的能力和水平，更好地为创新驱动服务，为质量提升服务，为国内市场和国际贸易服务。

致力于支撑产业发展，服务于科技创新和产业升级，面向深化改革和持续开放，服务国家和地方，产业和企业，社会和会员，搭建创新性团体标准化平台。



## Stay true to the original mind and face the future

CIE will keep sticking to its direction of association standardization, that is, regarding the innovation as the driving force, market orientation and based on the professionalization.

Actively explore new thought, mode and method of association standardization; keep improving the organization and mechanism and make them meet the rules of standardization work.

We will fully use the advantages of the institute, i.e. open, flatbed and pivotability, based on the characteristics of CIE, make quick response and continuously improve the institute's abilities and levels on adapting the market requirement and meet the requirements of technology progress and trade development as well as make better services for innovation driving, quality improvement, domestic markets and international trades.

Devote ourselves to support the development of industry; serve the technology innovation and industry upgrade; face the deepened reform and continuous openness; make services for our country and regions, industry and enterprise as well as the society and members; build platform for association standardization of innovation.



*Thank You*

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