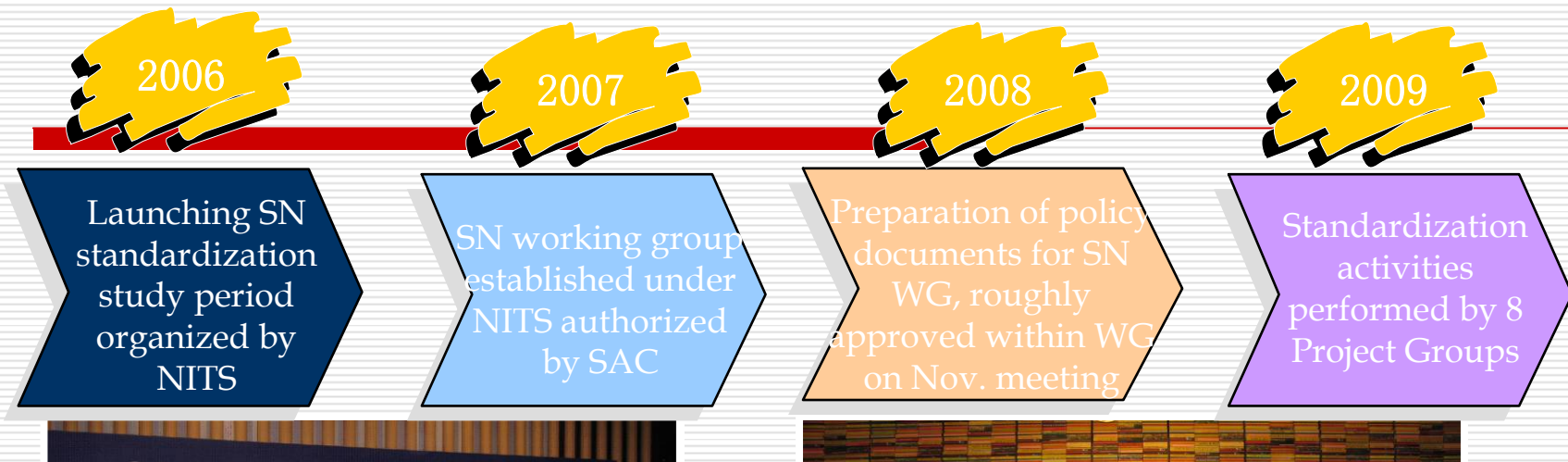


# Working Group of Sensor Network

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Shanghai Institute of Micro-system and  
Information Technology

# Standardization of SN in China



Officially Founded on  
Sept. 11 2009

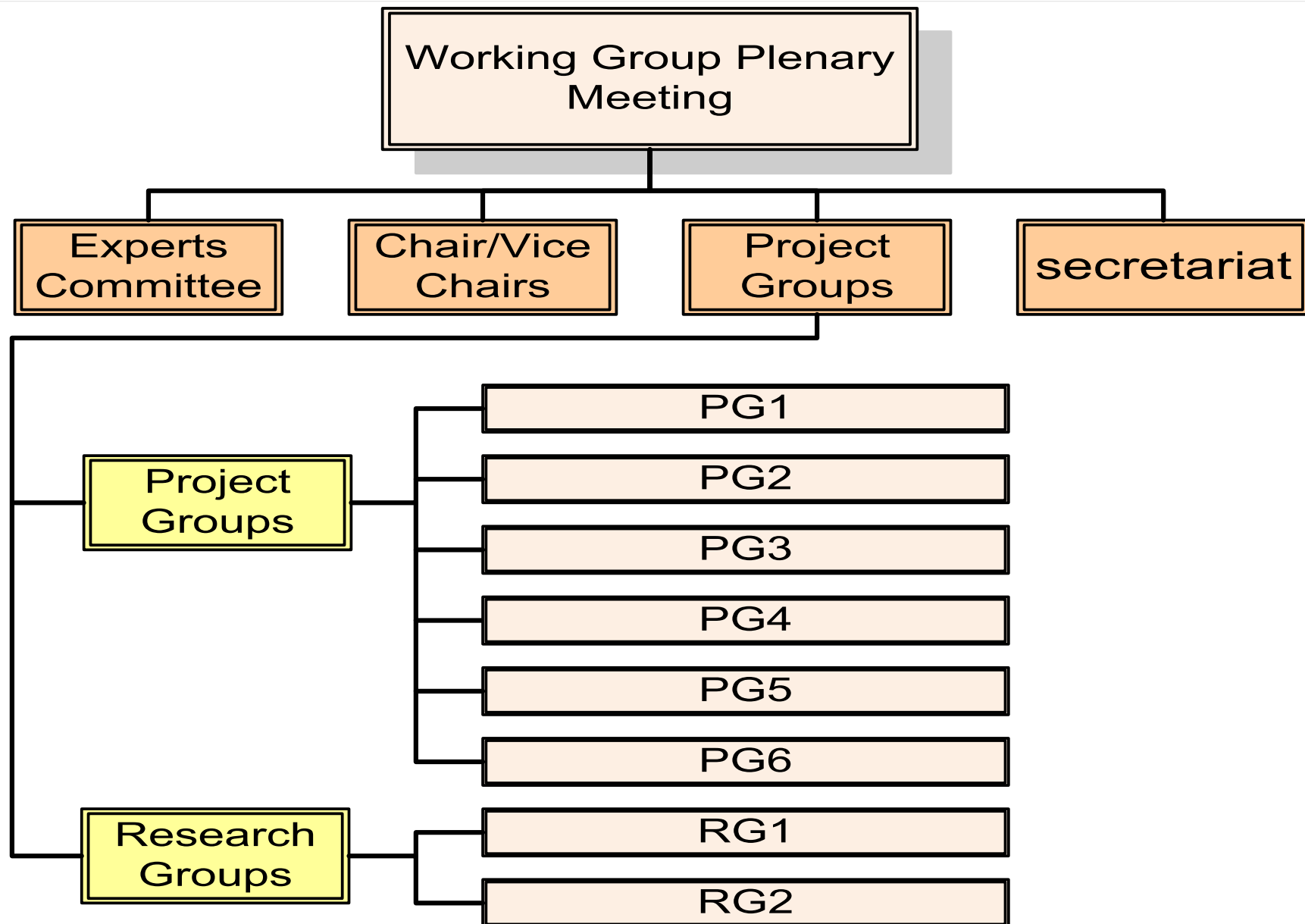
- ❑ China sensor networks working group consists of 80 members, lead by SIMIT. CESI is the secretariat.
- ❑ 8 Project Groups: PG1 (international standardization) 、 PG2 (standard framework and system architecture) 、 PG3 (communication and information exchange) 、 PG4 (collabrative information processing) 、 PG5 (identification) 、 PG6 (security) 、 PG7 (interfaces) and PG8 (industry application survey)

# Scope

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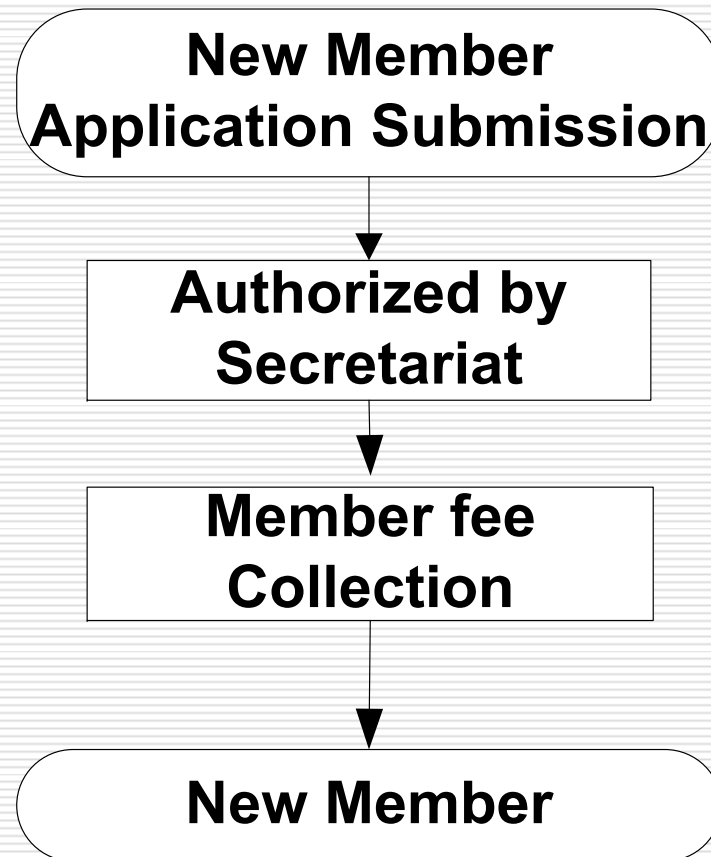
- ☐ Making Chinese standards of sensor networks.
  - ☐ Harmonizing and Collaboration with other related standard organizations
-

# Organization

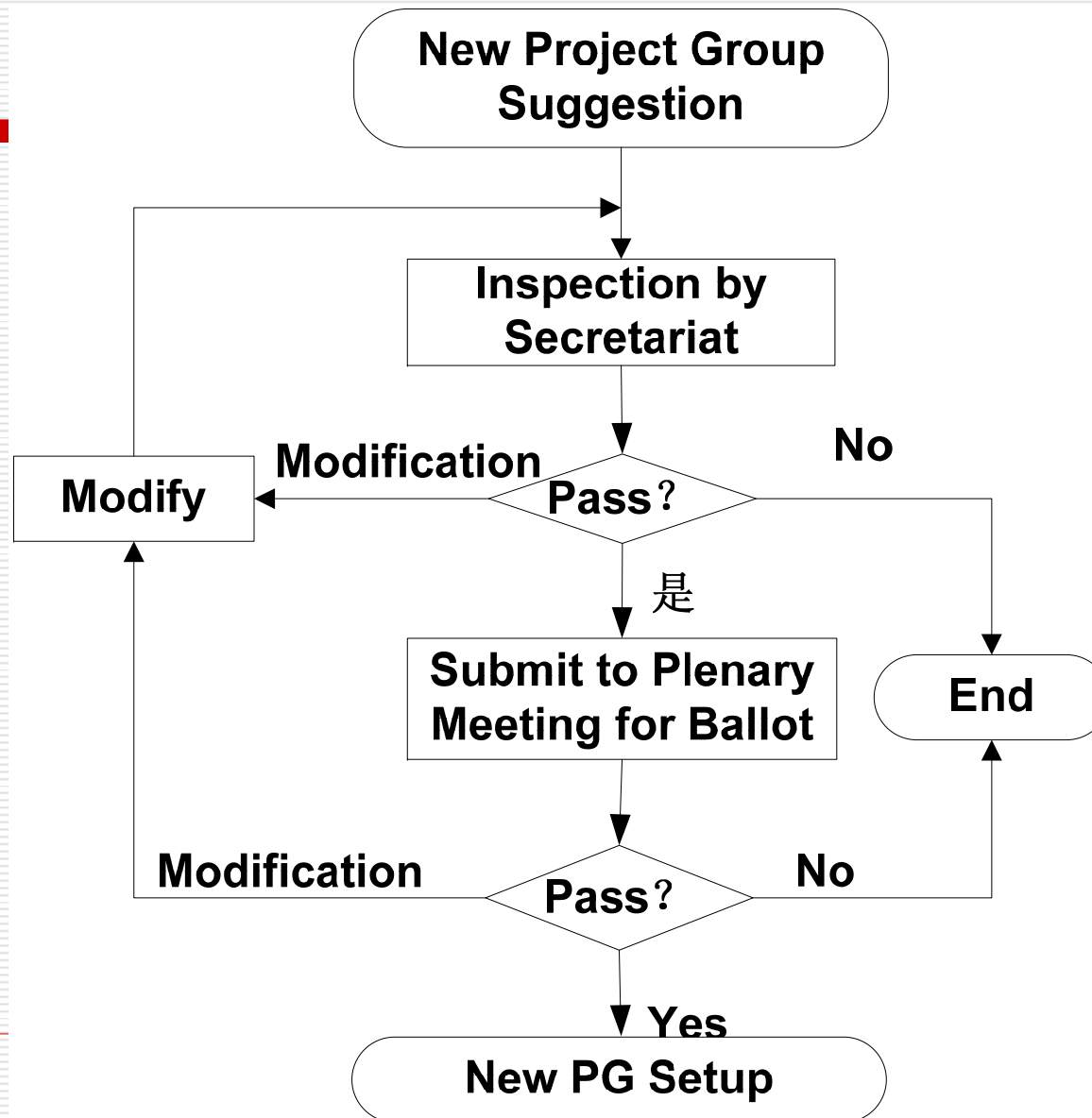


# Apply to join

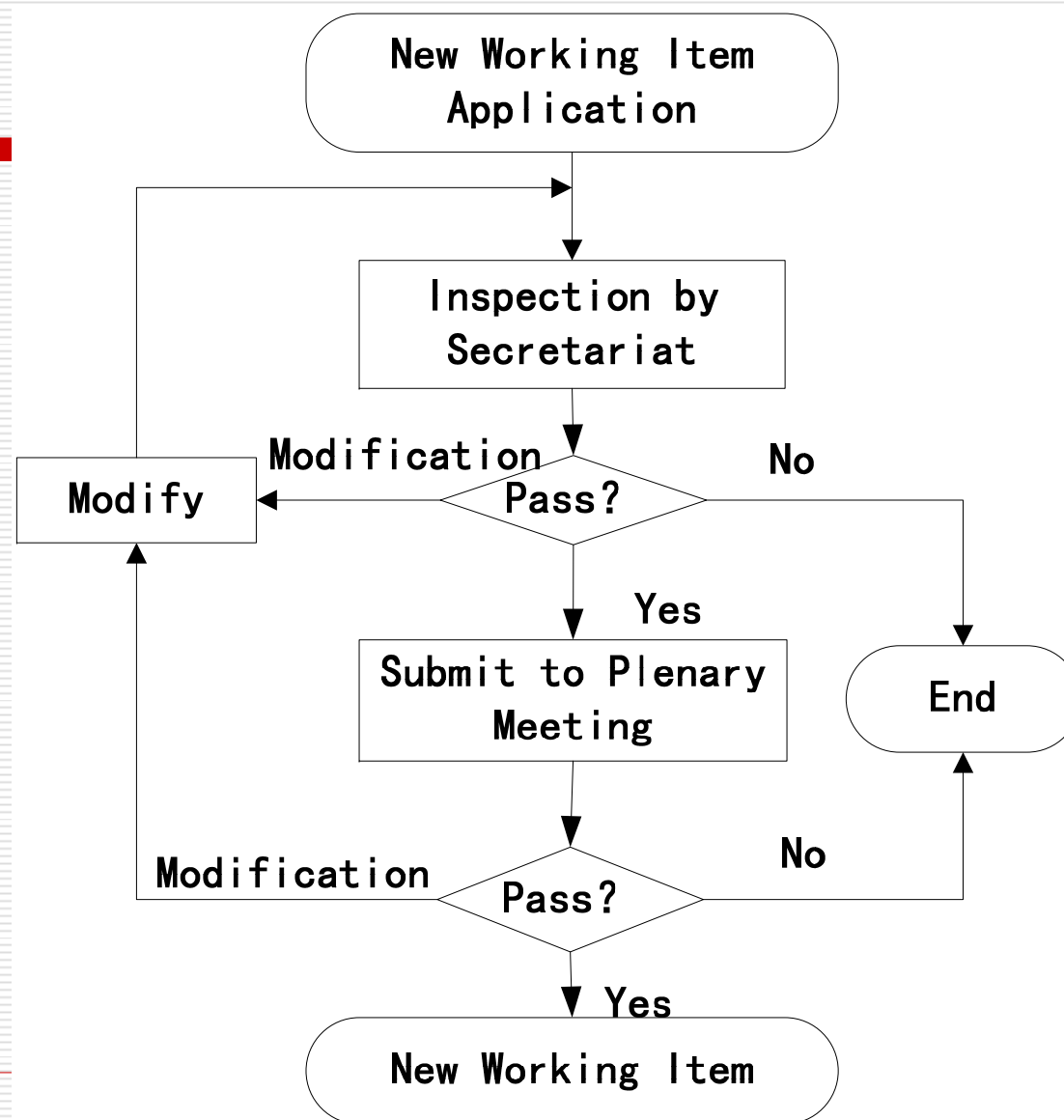
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# New Project Group

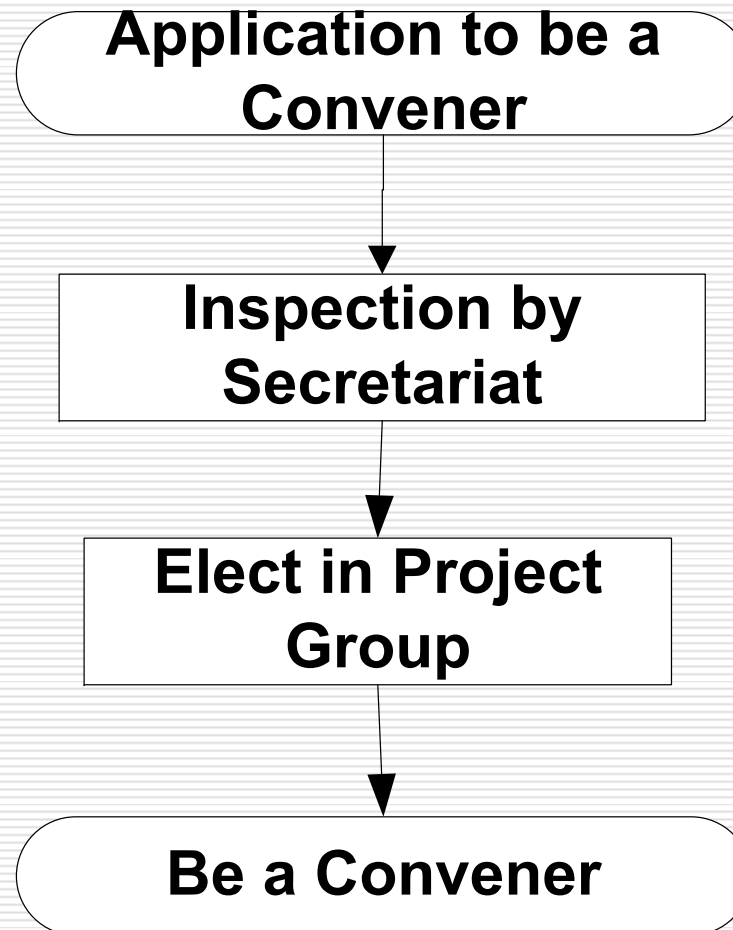


# New Working Item



# Convener

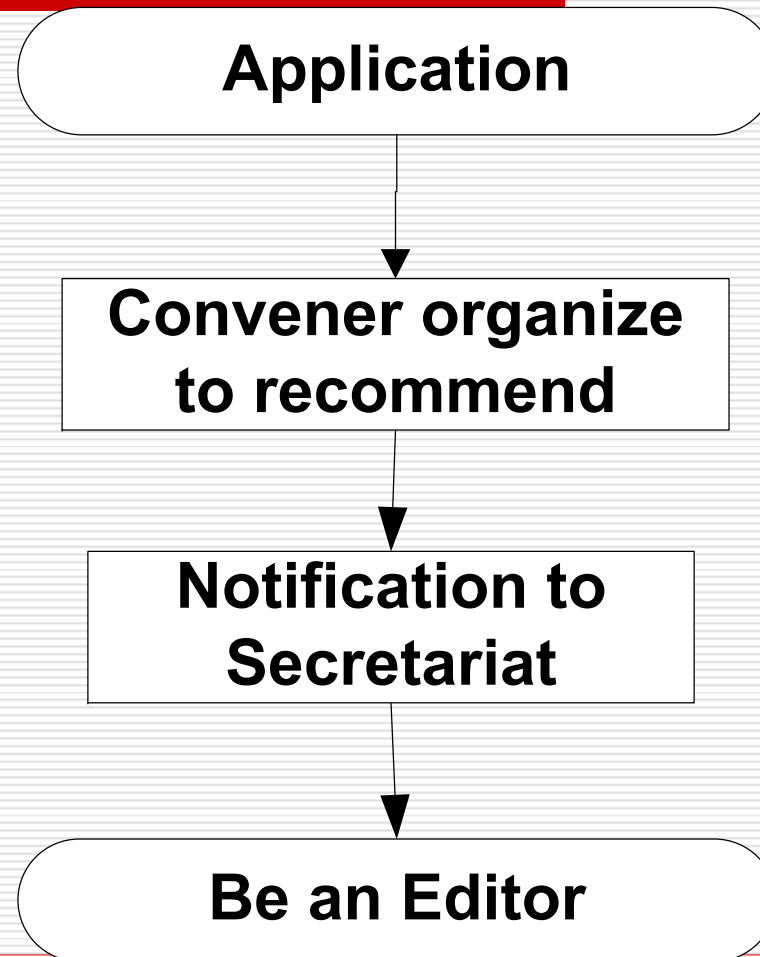
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# Editors

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# Other Issues

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- ☐ Plenary Meetings: 4 times/year
  - ☐ Ballot
    - Right to vote: Formal Member, attendance 2 meetings in recent 1 year
    - 2/3 attendees with more than 50% members in meeting
-

## 8 Project Groups

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- ☐ PG1 (international standardization)
  - ☐ PG2 (standard framework and system architecture)
  - ☐ PG3 (communication and information exchange)
  - ☐ PG4 (collaborative information processing)
  - ☐ PG5 (identification)
  - ☐ PG6 (security)
  - ☐ PG7 (interfaces)
  - ☐ PG8 (industry application survey)
-

## PG1 (international standardization)

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- Convener: Nan Guo
  - Collaboration with other STD Org.:  
ISO/IEC JTC1/WG7, SC6, SC31, IEEE,  
ISA100,etc
-

# ISO/IEC JTC1 SGSN

- The 1st ISO/IEC JTC1 Study Group on Sensor Networks (SGSN) meeting was held in China (June 2008)
  - 120 representatives from China, Korea, Germany, Japan, Norway, UK, US and ISO, IEC, IEEE etc
  - “SN Standardization Framework”, “SN System Architecture” and “Collaborative Informatic Processing for SN” submitted by China and recognized by experts
- The 2nd SGSN meeting was held in Germany in September 2008
  - Discuss the contributions from National Bodies and part of them were adopted in SGSN’s Technical Document
  - Prepare report and recommendations to JTC1
- The 3rd SGSN meeting was held in Australia in January 2009
  - Discuss long term role for SGSN
  - Call for contributions from other SDOs and SCs
- The 4th SGSN meeting was held in Norway in July 2009
  - Experts from China, Germany, Norway, UK and US thought it would be necessary for JTC1 to consider establishing a new Working Group on SN
  - The recommendation will be submitted to JTC1 plenary meeting

# Resolution of ISO/IEC JTC1 WG7

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- ❑ Sensor networks are being widely used across a whole sphere of applications; it is important for JTC 1 to undertake standardization in the area of generic solutions for sensor networks and application - oriented sensor networks within the overall scope of JTC 1.
- ❑ To this end, JTC 1 establishes JTC 1 Working Group 7 on Sensor Networks with the following terms of reference:
- ❑ 1) In the area of generic solutions for sensor networks, undertake standardization activities that support and apply to the technical work of all relevant JTC 1 entities and to other standards organizations. This would include activities in sensor networks such as the following:
  - a) Standardization of terminology.
  - b) Development of a taxonomy.
  - c) Standardization of reference architectures.
  - d) Development of guidelines for interoperability.

# Resolution of ISO/IEC JTC1 WG7

- 2) In the area of application - oriented sensor networks, identify gaps and commonalities as they may impact standardization activities within the scope of JTC 1. Further, share this information with relevant entities within and outside of JTC 1. Unless better pursued within another JTC 1 entity, the following standardization activities may be pursued as projects by this Working Group:
  - a) Addressing the technology gaps within the scope of JTC 1 entities.
  - b) Exploiting technology opportunities where it is desirable to provide common approaches to the use of sensor networks across application domains.
- 3) In order to foster communication and sharing of information between groups working in the field of sensor networks:
  - a) Seek liaison relationships with all relevant JTC 1 SCs/WGs.
  - b) Seek liaison relationships with other organizations outside JTC 1 including but not limited to:  
relevant ISO TCs, IEC TCs and ITU - T SGs, IEEE 1451, IEEE 1588, IEEE P2030, IEEE 802.15, Open Geospatial Consortium, ZigBee Alliance, IETF 6LoWPAN, IETF ROLL WG, ETSI, IPSO Alliance, EPCglobal, ISA 100, LONMARK, KNX Association, Zwave Alliance.
  - c) Consider the possibility of conducting joint projects with relevant ITU - T SG.
  - d) Seek input from relevant research projects and consortia.

# PG2 (standard framework and system architecture)

## Standard Framework of Sensor Networks

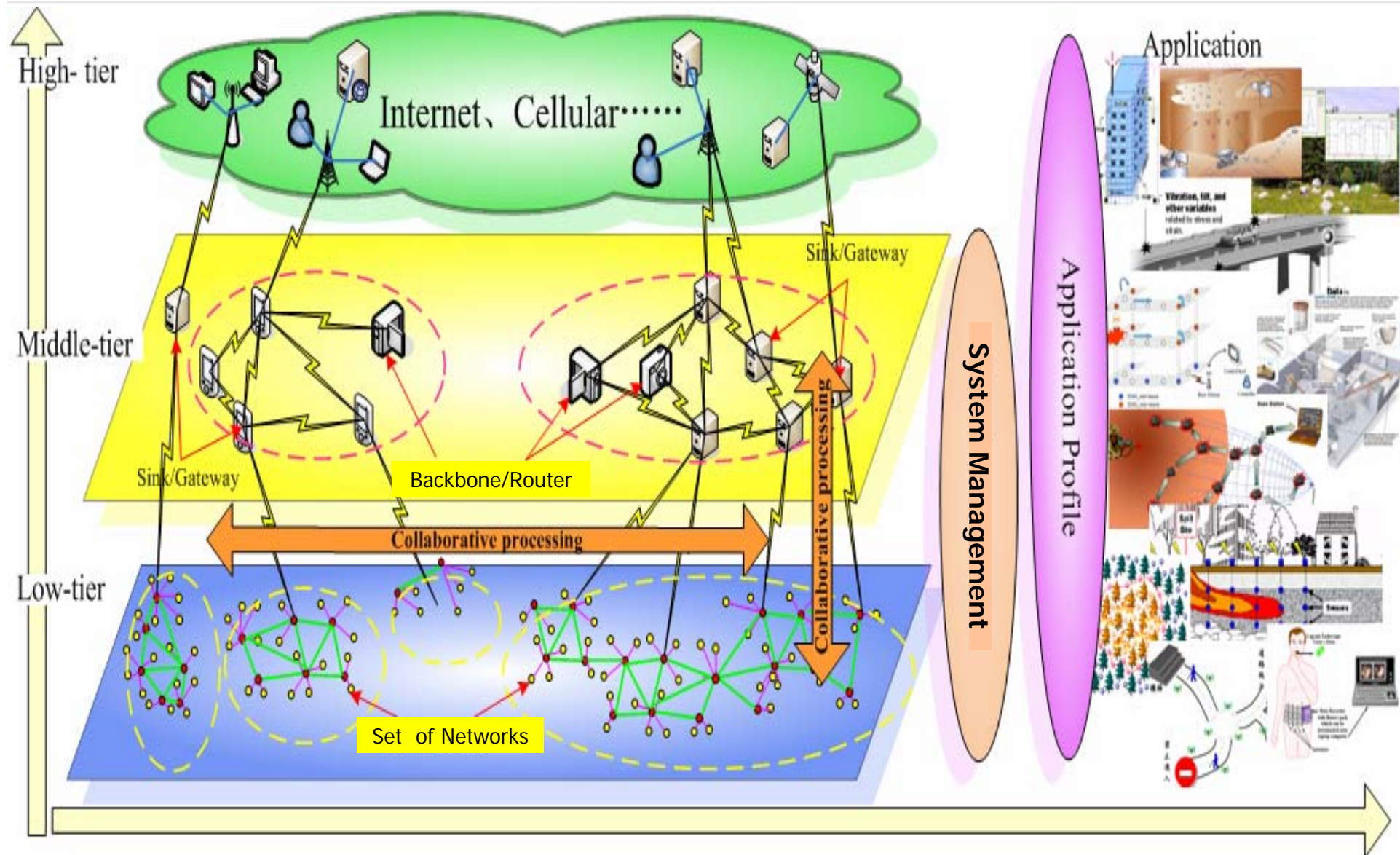
Public Safety	Environment Protection	Healthcare	Industry	Military
Agriculture	Intelligent Transportation	Intelligent Building	Space Exploration	water conservancy Safety
Application Profiles				



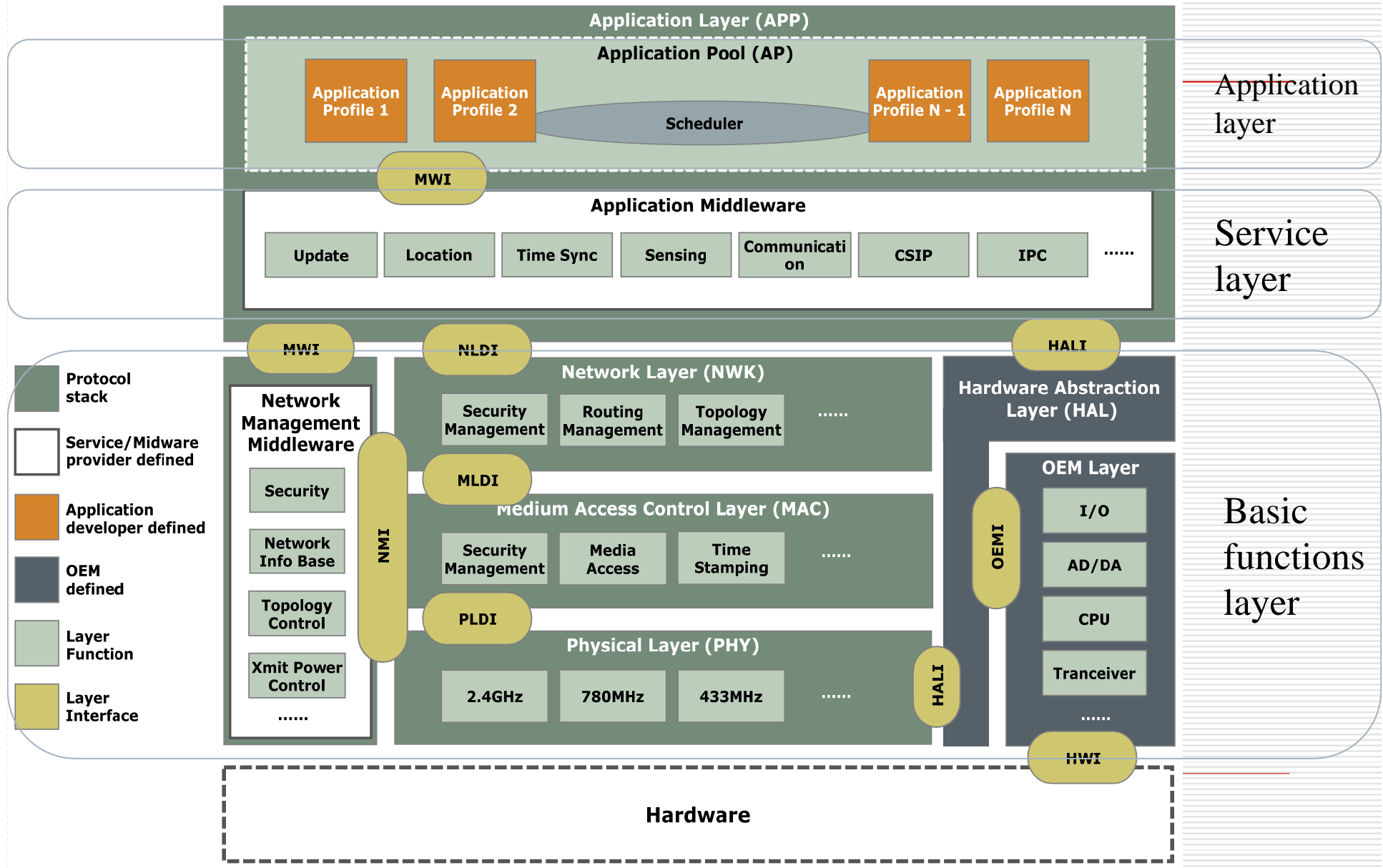
Generic Technical Standard							
TermInology	Reference Architecture	Interface	Communication and Networking	Collaborative Information Processing	Information Service Supporting	Security	Testing
		Sensor Interface	Physical	Capability Declaration	Information Description	Security Technology	Compliance Testing
		Data Type and Data Interface	MAC	Collaborative Strategy Planning	Information Storage	Security Management	Interoperability Testing
			Network	Communication Requirement Specification	Identification	Security Evaluation	System Testing
			Inter-working with Access and Backbone Network		Directory Service		



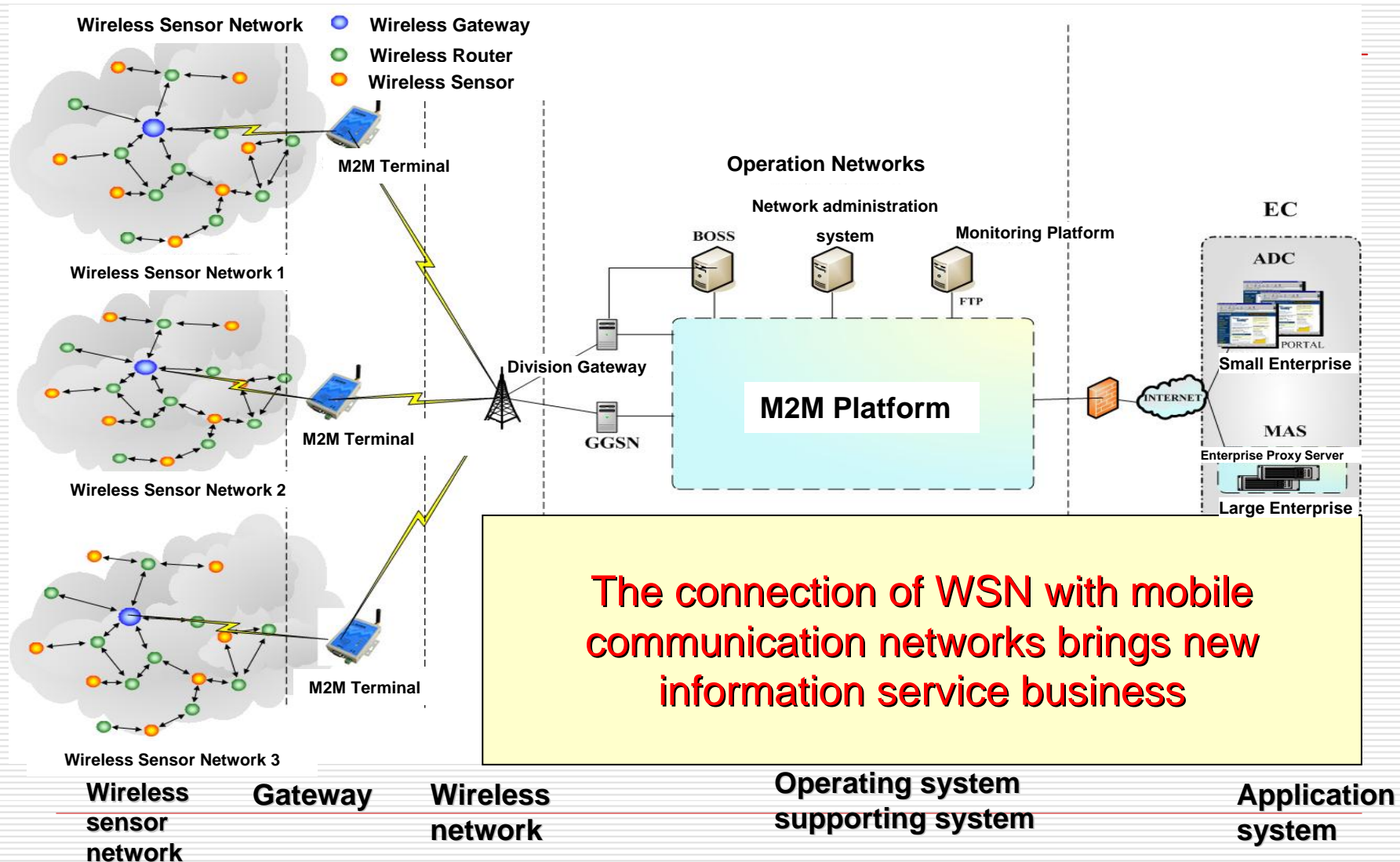
# Network Architecture (China)



# Technical Architecture view



# New Information Services



## PG3 (communication and information exchange)

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- Convener: Pei Liu
  - PHY, MAC, Network
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# Future project groups

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- ☐ Gateway
  - ☐ Testing
  - ☐ Network management
  - ☐ etc.
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谢谢！

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