**IEEE *P1939.1* Working Group**

***The 1st Teleconference***

**Meeting Minutes**

***May 30, 2019***

***09:00 AM to 11:30 AM BEIJING***

Xiaohan Liao, IGSNRR, Working Group Chair

Recorded by *Ziyang Liu*, Working Group Secretary

1. Call to Order
   * Introduction and Declarations of Affiliations
   * Introduction to member entities

Vice-Chair *Wei Hong*  called the meeting to order at 09:00 a.m.

* + Goal of this meeting

Vice-Chair *Wei Hong* presented the goal of the Meeting:

1) Review/Approval of the meeting minutes of last meeting   
2) Review/Approval the Standard Draft and WG Drafting plan   
3) Task Assignment Discussion

1. Approval of the Agenda

Vice-Chair *Wei Hong* presented the agenda document of P1939.1 agenda.

Motion #1: Move to approve the Agenda, *P679 WG May-2019-1st Telecom-Agenda-unapproved-0529.docx*

* + Moved by: *Xiandong Dong*, *Xiaomi*
  + Seconded by: *Chenchen Xu, IGSNRR*

Motion passed unanimously.

1. Review/Approval of the meeting minutes of last meeting

Vice-Chair *Wei Hong* presented the meeting minutes of last meeting of P1939.1.

Motion #2: Move to approve the *P1939-1 LAAUAV WG March-11-2019-FM Minutes\_unapproved\_v12\_20190323.docx to P1939-1 LAAUAV WG March-11-2019-FM Minutes\_approved.docx.*

* + Moved by: Yu Su, *China Mobile Chengdu Institute of Research and Development*
  + Seconded by: *Xiandong Dong, Xiaomi*

Motion passed unanimously.

1. IEEE Patent Policy

Vice-Chair *Wei Hong* presented [the Patents](https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf) slide to the WG and made a call for patents at 09:10 am.

No potentially essential patent claims were declared, and no holders of potentially essential patents were identified.

1. Discussion/Review P1939.1 standard draft

Vice-Chair *Wei Hong* presented the P1939.1 Standard Draft, P1939-1 WG Standards Outline\_English\_v1.4.doc Each Chair of the subgroup introduced their subgroup standard outline.

*-*P1939.1.1 Gridding subgroup standard draft

*Fuhu Ren* from *Collaborative Innovation Center For Geospatial Big Data, Peking University* introduced the standard outline for gridding subgroup.

Question 1: *David Chen* from *FAA* asked that how the size of the gridding system was defined.

*Fuhu Ren* answered: The grid is divided into 32 levels from 500,000 kilometers above the earth surface to the ground. Each sub-level divide previous level into 8 divisions, the grid can be divide into centimeter level. Different levels can be selected according to the needs of management and data analysis.

-P1939.1.2 Remote sensing subgroup standard draft

*Chenchen Xu* from *IGSNRR* introduced the standard outline for remote sensing subgroup.

-P1939.1.3 Communication & Networking subgroup standard draft

*Yu Su* from *China Mobile Chengdu Institute of Research and Development* introduced the standard outline for Communication & Networking subgroup.

Question 2: *David Chen* from *FAA* asked that does the cellular network only consider communication with drone, does it consider communication with payloads?

*Yu Su* answered: We only considered using the cellular communication signal for the flight control of the aircraft, we did not consider the communication with payloads, but we are very interested to discuss this issue with everyone.

-P1939.1.4 Identification & Authentication subgroup standard draft

*Haiying Lu from* *CESI* introduced the standard outline for Identification & Authentication subgroup.

-P1939.1.5 Path planning subgroup standard draft

*Chenchen Xu* from *IGSNRR* introduced the standard outline for remote sensing subgroup.

Question 3: *David Chen* from *FAA asked the function of the fourth level of Air Routes--terminal route.*

Chenchen Xu answered: Air Routes were classified to four levels, which effecting in different region. The terminal route was designed to take responsible for the traffic of last mile.

Question 4: *David Chen* form *FAA* asked that if the ground geographical data, such as terrain, had been acquired by LiDAR.

Chenchen Xu answered: LiDAR is the best way to obtain geographic data and the other geographical data is also important to construct air routes for UAVs, such as population, buildings and climatology, which could be obtained from geographical information database.

-P1939.1.6 Operation & Management subgroup standard draft

*Jianping Zhang* from *the second Institute of CAAC* introduced the standard outline for Operation & Management subgroup.

1. Review/Approval of the standard drafting plan

Motion #3: Move to approve the standard drafting plan *P679 WG Working Plan\_0428-v3.docx.*

* + Moved by: Yu Su, *China Mobile Chengdu Institute of Research and Development*
  + Seconded by: *Fuhu Ren, Peking University*

Motion passed unanimously.

1. Future Meetings
   * IEEE P1939.1 2nd face-to-face meeting July 30-31, 2019 Suzhou China
   * IEEE P1939.1 3rd face-to-face meeting November , 2019 Chengdu China
   * IEEE P1939.1 4th face-to-face meeting March, 2020 Guangzhou China
2. Meeting to adjourn

Motion #4: Move to adjourn

* + Moved by: *Fuhu Ren, Peking University*
  + Seconded by: *Ying Mai, IGSNRR*

Motion passed unanimously.

The WG adjourned at 09:55 am.

* **Attachment**

List of participants:

a. IEEE staff present:

Jennifer Santulli, IEEE-SA

Kamesh Namuduri, IEEE-SA

b. Voting Members present:

|  |  |  |
| --- | --- | --- |
| **Participants** | **Affiliations** | **Voting status** |
| Haiying Lu卢海英 | CESI（中国电子技术标准化研究院） | V |
| Xiang Tan谭翔 | IGSNRR（中国科学院地理科学与资源研究所） |  |
| chenchen Xu徐晨晨 | IGSNRR（中国科学院地理科学与资源研究所） |  |
| Ying Mai买莹 | IGSNRR（中国科学院地理科学与资源研究所） | V |
| Pingyuan Liu刘平原 | China Southern Power Grid Co. Ltd(中国南方电网) |  |
| Zhen Song宋珍 | State Grid Corporation of China (SGCC) (国家电网) | V |
| Xiandog Dong董贤东 | Xiaomi, Inc.（小米） | V |
| Wei Hong洪伟 | Xiaomi, Inc.（小米） |  |
| Xianding He 何先定 | Chengdu Aeronautic Polytechnic(CAP) （成都航空职业技术学院） | V |
| Bin Tang唐斌 | Chengdu Aeronautic Polytechnic(CAP) （成都航空职业技术学院） |  |
| Yu Yuan 袁昱(dial in) | Senses Global Corporation | V |
| Honglian Ding丁洪亮 | KEWEITAI 深圳科卫泰 | V |
|  |  |  |
|  |  |  |
|  |  |  |
| Guangcai Xu徐光彩 | GreenValley Inetrnational 北京数字绿土科技有限公司 | V |
|  |  |  |
| Yu Su苏郁 | China Mobile Chengdu Institute of Research and Development （中国移动（成都）产业研究院） | V |
| Jian Zhou 周剑 | China Mobile Chengdu Institute of Research and Development（中国移动（成都）产业研究院） |  |
| Ziyang Liu刘子扬 | China Mobile Chengdu Institute of Research and Development（中国移动（成都）产业研究院） |  |
| Fuhu Ren任伏虎 | Collaborative Innovation Center For Geospatial Big Data, Peking University(北京大学时空大数据协同创新中心) | V |
| Weixin Zhai 翟卫欣 | Collaborative Innovation Center For Geospatial Big Data, Peking University(北京大学时空大数据协同创新中心) |  |
| Shuangli Han韩双立 | Tianjin WOMOW Science and Technology Co., Ltd.（天津市万贸科技有限公司） | V |
| Kun Li李坤 | Tianjin WOMOW Science and Technology Co., Ltd.（天津市万贸科技有限公司） |  |
| Yanli Xue薛艳丽 | China TOPRS Technology Co. Ltd.（中测新图） | V |
| Jie Bai白洁 | China TOPRS Technology Co. Ltd.（中测新图） |  |
| Yingcheng Li李英成 | China TOPRS Technology Co. Ltd.（中测新图） |  |
| Chunhai Hao 郝春海 | Hebei Tianhai surveying and Mapping（河北天海测绘） | V |
| Zhiyun Zhai 翟智云 | CTRS ENTERTAINMENT 中交遥感载荷科技有限公司 | V |

c. Non-Voting Members present (Promise to join IEEE entity membership):

|  |  |  |
| --- | --- | --- |
| **Participants** | **Affiliations** | **Voting status** |
| Bin Ren任斌 | Chengdu UAV Industry Association 成都市无人机产业协会/ Chengdu JOUAV （成都纵横） |  |
| Liangliang Yang杨亮亮 | DJI（大疆） |  |
| Minrui Zhang张敏睿 | DJI（大疆） |  |
|  | TTA （北方天途航空技术发展（北京）有限公司） |  |
|  | Institute of Electronics CAS(中国科学院电子学所) |  |
| Jianping Zhang 张建平 | The Second Research Institute of CAAC（中国民航局第二研究所） |  |
| Pengxin Ding丁鹏欣 | The Second Research Institute of CAAC（中国民航局第二研究所） |  |
| Rui Liao | The Second Research Institute of CAAC（中国民航局第二研究所） |  |

d. Observers:

|  |  |  |
| --- | --- | --- |
| **Participants** | **Affiliations** | **Voting status** |
| Divad Chen | USA FAA |  |
| Xiaohang Wen文小航 | CUIT（成都信息工程大学） |  |
|  |  |  |