Open5G
– 5G Open Source Community
Significance of Open5G Community

Collaboration & Innovation
Open5G is an important platform integrating all forces for 5G collaboration and innovation

Global Development
Open5G is an important route for China & strategic partners to lead the global 5G innovative development

Ecological Environment
Open5G is an important part to establish 5G ecological environment

Perfect Timing
The core concepts, international standards, key technologies, and industrial chain are under development in a short period.
Objectives of Open5G

1. Promoting innovation and finding new growth pole for ICT
2. Contributions from volunteer partners, especially from universities
3. Exploring a new open-source path
4. Providing paradigms for innovation of industrial organizations
5. Enhancing the integration between 5G and Vertical Industry (Vehicles, IoT, etc.)
6. Setting up the impartial third party innovation development platform
7. Reducing invalid competition and input
8. Integrating resources rapidly
9. Establishing orderly ecology
Driven by major S&T program and 5G R&D program under 863 Plan, China has innovated on 5G key technologies and gained a series of results.

As the third party, with its international influence FuTURE FORUM is a proper operator for the OS community.

China Mobile, China Telecom, FuTURE FORUM, PKU, SEU, THU, UESTC, Xidian Univ., ZTE, Spreadtrum, WiCO, WIT CLUB.

It is the golden and right opportunity for constructing 5G OS community.
Initiate of Open5G

Open5G Open Source Community Initiator Agreement

In order to support the development of relative national R&D plans, set up a platform for 5G and future evolution system innovation, gather 5G innovative force, lead the global 5G innovative development, and construct 5G ecological environment, the initiators are willing to originate Open5G open source community (Abbreviated as Open 5G) based on FuTURE FORUM, following the principles of openness, fairness, and impartiality. All the cooperators sign the following agreement in terms of relative laws and regulations as the rules to be observed.

RULE I Tenet
As a new effective and advanced collaborative method, open source will be used to set up the third party platform so as to reduce invalid competition and input, integrate resource rapidly, establish orderly ecology, improve the organism and innovation of industrial organizations, and explore a new open-source path for 5G standardization and industrial innovation of universities, research institutes, and enterprises.

RULE II Common Target
1) Following the tenet of open source, serving the research on networks, terminals, testing, and simulation, focusing on and developing innovation-oriented software and hardware platform.
2) Relying on the community resource and public to innovate on technologies, trades, and services.
3) With a mission to promote industrial revolution, development, support the docking between community and industry, incubate key programs, and foster new communication industrial chain.
4) Contributing program content, tools and environment based on one’s own accumulations.

RULE III Initiator Obligations
1) Initiate Open5G Community together
2) Voluntarily following the regulations and rules of Open5G Community, and taking active part in various community activities.
3) Providing necessary support to community activities including finance, venue, device, human resources, and technologies based on actual situations.

RULE IV Initiators shall abide by the national laws and regulations, relative policies and common practices, while the participators shall abide by the rules such as permission set by the community.

RULE V The outstanding issues of this agreement shall be negotiated and solved by all initiators.

RULE VI This agreement take effect from the date of signing and is valid for five years.

RULE VII This agreement is made in ________ counterparts, each initiator holds one copy and each copy has the same effect.

STAMP:
* Till Dec. 2016, we have more community members, such as China Unicom, BUPT, BUAA, BIT, CQUPT, HFUT, SJTU, SYSU, ICT, TCL, SUNNADA, COMBA etc, and more applications ongoing ...
Organizational Structure

Administration Committee

- Developer
- Maintainer
Progress of Open5G - First Step

Appeal in MOST 863 5G Program

- Cooperation Among up to 17 Projects
- Sharing Knowledge and Platforms
- Several Tens of Contribution Project to Open5G

5G System Framework
- 5G Vision, Requirements, Spectrum & Enabling Techniques
- 5G Wireless Network
  - High dense networking
  - High capacity
  - Hyper-cellular network
- 5G Wireless Transmission
  - Massive collaboration
  - High efficient wireless transmission
- 5G General Technology
  - General technologies for 5G mobile communications
- 5G Testing Technology
  - 5G testing and validation technologies

Key Techniques
- Research and development of 5G soft base station and testbed with high throughput
- Research and validation of Millimeter wave indoor wireless access technology with super capacity
- Research and validation of 5G wireless network virtualization technology
- Future radio access technologies, e.g., physical layer and system’s security
- Research and development of new modulation and coding technology

Step from the first objective, move to the second, ...
Second Step

Incubation & Education for slicing developer

- **Dual open**
  - Open source is just about *organization* and *competition*
  - Open architecture will enable fundamental shift of ICT industry

- **Open5G**
  - open5G platform > SDR
  - open5G community > github
    - make IoT developer happy
    - Make slicing developer enjoy

- Facebook OCP, TIP, openCellular
For our common wireless future!