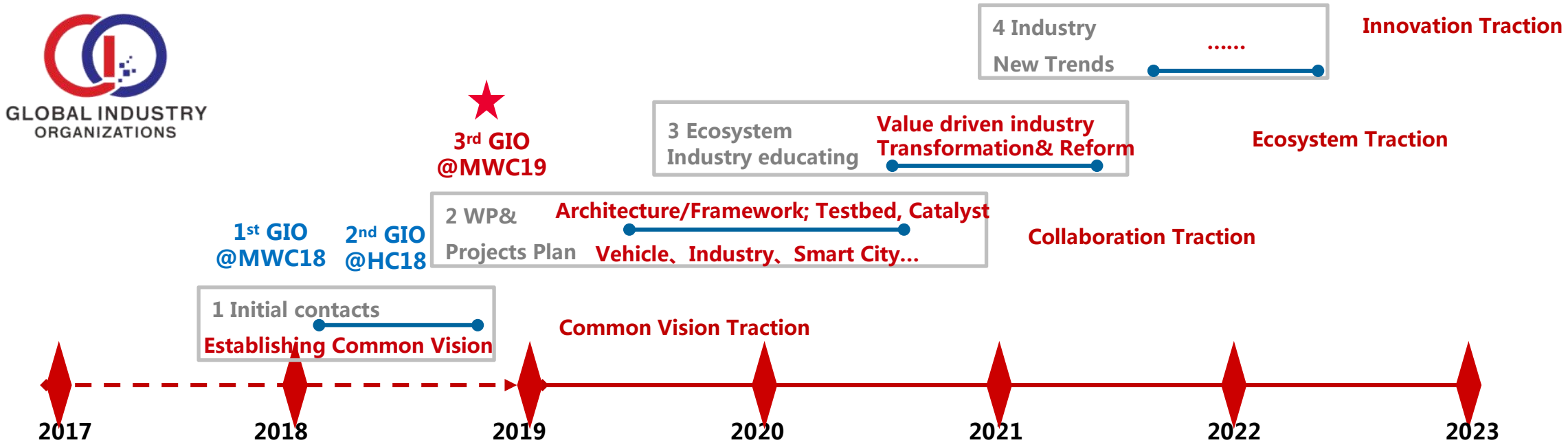
HUAWEI | GLOBAL INDUSTRY ORGANIZATIONS

The 3rd GIO Roundtable Summary

MWC19
BARCELONA 25-28 FEBRUARY

Building
a Fully Connected,
Intelligent World

The 3rd GIO meeting be held on the sideline of MWC2019, 20 industry organizations participated, creating an industrial multilateral cooperation environment



The quantity of industry organizations participating in GIO this year have grown from the 13 to 20. At the same time, 2 seminars has been added before Roundtable.

3rd GIO Roundtable attendees includes: 3GPP、5GAA、5G-ACIA、5GSA、CCSA、China Info 100、ECC、ERTICO-ITS Europe（new）、ETSI、GSMA（new）、IETF（new）、IIC、ITS、JTC 1/SC42（new）、Linux Foundation、OPRC、Networld 2020（new）、TM Forum、The Open Group、SAC/TC124（new）。

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GIO Substantive Outcomes of Industry Digital Architecture White Paper & Collaboration Project Plans

- Theme & Target :

Global industry digital architecture Promotion and practices through the industry cooperation

- Activities：Roundtable\ Architecture Workshop\ Think Tank.....
- Outcomes：WP of Digital Architecture\ 3+ Projects Plans\ Sub-Forum of GIO (Digital Architecture)

WP： GIO gathered the digital architectures of various industry organizations and promoting adoption in the industry. In these architectures, there are problems such as “language barrier”, “incomprehensible cross-domain terminology”, “business KPI and structure interlacing”, “dynamic evolution of architecture and insufficient cross-domain interaction”.

GIO focuses： 1) organizing efficient cross-domain communication; 2) introducing new organizations as needed; 3) elaborating organizations to use deliverables guidelines, piloting industry innovations, The PoC test, testbed, and catalyst projects.

Pilot Projects：

(1) TM Forum + The Open Group + OPRC establish the Digital Architecture Forum as a GIO sub-forum;

(2) IIC+ TM Forum to carry out test bed project cooperation;

(3) China Info100 initiative to launch "digital ecology Research Center "International Cooperation with Networld2020 vertical industry (robot) smart application project.

Key Consensus

1. The core value of GIO: GIO Roundtable is a communication and cooperation platform shared by global industrial organizations. It is built around the common vision of promoting the development of digital industry in the industry and building a smart world in the future. Everyone is carrying out industry synergy and advancement in an unprecedented mode. It will promote the digitalization of the whole society .

2. GIO‘s specific goals: To collaborate across organizational and cross-industry issues；To address key issues in the digital transformation of society, such as cybersecurity.

- In the context of the digital transformation of society as a whole, individual organizations cannot solve all problems and need to work together to form a win-win/win-win situation. Sharing work results between organizations, avoiding duplication of work, avoiding standard splits and market splits.
- To promote success results that are repeatable and keep up on open standards. All GIO work begins with the formation of standards. SDO must operate in a faster way to support digitalization.
- Effectively use the power of open source to accelerate the speed of digital transformation, but to avoid too many branches, the results of the open source branch must be fed back to the upstream. The IPR policy differences of different organizations need to be considered.

Key Consensus（2）

3. GIO‘s key deliverables

- Must target on a clear customer base.
- The outputs can‘t be just best practices. The guidance to industries (such as white papers) are needed , and also implementable solutions for end-to-end issues.
- The architecture outputs need to be able to evolve iteratively.
- Provide an effective digital transformation tool.
- AI Ethic and societal concern must be introduced at the first of the work, taking into account issues of public concern.
- Security issues are to be compliant and must involve regulators/policy setters. No unacceptable risk is the most critical indicator for addressing security issues.

4. The follow-up plan for the GIO

- Digital Architecture White Paper is scheduled to be officially released on April 19.
- The themes of the next GIO meeting will most likely to be:
  - ✓ GIO operational mechanism : to build a neutral platform, co-host in turn, knowledge sharing mechanism, joint research project mechanism, and a monthly reporting mechanism.
  - ✓ Too many projects is a key challenge and GIO should have a screening.
  - ✓ The projects implement need to be completed by the members of each organization, and organizations need to provide the necessary external collaboration processes and promote their members to participate in cross-organizational, cross-industry collaborative projects.

Key Consensus（2）

- ✓ High-priority themes: Smart Manufacturing (IIC), Smart Rural (China Info100, Advanced ICT Technology to Reduce Poverty in Rural Areas), Public Test Beds for Different Projects (ERTICO), Network Security, Promoting Digital Inclusion (5GSA).
- IIC is committed to hosting the next GIO conference.

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GIO Events Retrospect

3GPP

The 3GPP generally recognizes the value of GIO as an industry collaboration platform. Industry digitalization is also one of the key priorities of the 3GPP.

Comments & Advice：

1. GIO's operation mechanism can refer to the GSC model, mainly to share information, discuss key issues and best practices in the industries digital transformation. Strengthen communication and coordination of industry organizations. As we did a good job last time at Shanghai GIO@HC.

2. For the contribution of the GIO white paper, due to internal approval issues, the content of 3GPP and many other industry organizations are mainly published before, so the synergy value of GIO itself in the white paper may not be well used. The GIO may discuss how to solve this problem in future.

3. Regarding the issue of setting up projects in GIO, the 3GPP has reservations, because any substantive input to the project needs to be approved by member companies, which is a real problem. Like many other industry organizations, 3GPP serves member companies. The decision-making mechanism and workflow of projects also need further developing.

5GAA

Overall the event was good in stimulating open dialogue and actions across all participants in an informal workshop setting that supported all involved to share their perspectives and experiences from their industry and standardization, and therefore how related processes may well be improved moving forward. Several possible options were discussed in terms of how to deliver improvements, and what corresponding changes to interaction could look like if required.

Comments & Advice：

1. 5GAA will contribute on valuable use cases, scenarios, technical requirement to input to SDOs(3GPP, ETSI, etc.), coordinate with other verticals such as 5G-ACIA to define common technology requirement for 5G and future technologies.

2. It’s good approach to involve ERTICO into GIO, 5GAA would like to engage more ITS stakeholders from the globe, then business value can be further discussed.

5G-ACIA

GIO would be a useful platform for exchange between each organization leaders for information and best practice sharing among organizations – e.g. 5G-ACIA could learn from IIC on testbed.

Comments & Advice:

1. GIO should not have any projects or deliverables, as these would need approval from members of the organization (e.g. 5G-ACIA), and the process is not simple to get the approval.

5GSA

GIO can play a significant role in coordinating an ecosystem that is getting more and more complex with the arrival of new significant players.
5GSA are glad to share experiences through White papers, workshop and common projects.
The architectural framework should be open to be dynamically changed. AI will play a significant role in the architectural evolution and in the SLA with Customers.
5GSA supports the importance of producing a GIO White Paper and to improve the collaboration and Openness among Organizations.

Comments & Advice:

1. In case we have difficulties in finding one collaboration project for all, GIO can also identify for exemple 3 key projects where Organizations can choose to attend and contribute. Smart Country also supported by China Info100 was proposed for its value for the Countries economical developments, the well being and the social inclusion.
2. 5GSA is planning to organize a Workshop in June at MWC Shanghai to diffuse real experiences in PoCs and Trials on 5G Slicing, the workshop is also an opportunity for strategic dialogue among all the players. Many Industry sectors will be present, demonstrations of real use cases in Multimedia, gaming, health, Bank, Electricity and Robotics are forecasted with the presence of Verticals and Technology Players.
3. 5GSA is glad to contribute to Projects and proposed the Smart Country Program as an interesting area to collect contributions thanks to its ethical and political value (support of Digital Inclusion) and business value, enlarging the business opportunities to Small Enterprises. not localized in large cities (artisans, wine makers, healthy food...), to promote products in a worldwide marketplace. Italy and China can be great trials opportunities.

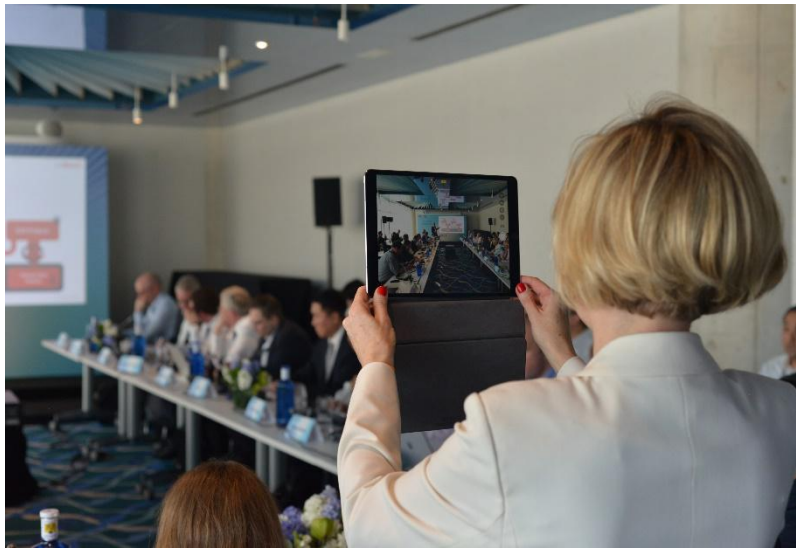
CCSA

The white papers of various industry organizations, current architectures, are mainly to verify the architecture of the trial or test bed, not a truly large-scale commercial architecture. The architecture of GIO's is not only for their own use, but for each vertical industry to implement according to this structure. Such requirements is high. A lot of the vertical industries that must really use this architecture, and really get involved (collect them comments).

ERTICO

Comments & Advice

- For certain industry sectors, e.g. transport, security is not something that is developed ‘after the facts’ and guided by ‘best practices’. Security is a rigorous policy and process ranging from specification, standardization to testing and certification.
- The public sector (e.g. city authorities) is a stakeholder and they are developing their own architectures. It is recommended that the public sector is engaged in future GIO activities.
- In EU there are many ‘vertical/silo’ 5G testbeds for specific industries, it would be interesting to explore possibilities for establishing a horizontal testbed including 5G, AI and Cloud for trials across different industries.



ETSI

ETSI fully recognizes GIO as a platform that will continue to support industrial organizations and carry out fair, open, credible and secure industrial cooperation around the common vision of the whole industry.

ETSI is involved in Common Vision of GIO for the future of the smart world, and also continuously contributes of GIO Architecture White Paper.

Comments & Advice:

1. For the GIO's digital architecture consensus, and the distribution and implementation for the participating organizations, the goals and tasks need to be compatible with the organization's charter and operational mechanisms.

2. We must design the works Practically and do things one by one. What can we do from our practical perspective?

IIC (1)

The GIO co-host is very good. GIO will become a neutral platform, more global and gathering more players.
It is very valuable to coordinate the various industry organizations to discuss the digital transformation themes.
IIC will be happy to take the role of co-host of the next GIO activities.
IIC is willing to contribute its “resource hub” as a platform for GIO members to collaborate, pooling the resources of various industry organizations in digital transformation, and complementing cross-industry solutions.
The IIC recognizes Huawei's efforts to promote digital transformation and IIC and GIO, and expects GIO to have a longer-term strategy and vision.
At present, IIC and TMF have very good discuss of cooperation projects and solving cross-industry challenges and problems. IIC only solves the problem of IIoT and needs to cooperate with different standards organizations and industries.

Comments & Advice:

1. For the GIO cooperation project, we must first clear the question of who we are exporting. Different organizations target different objects. The first step is to find the ultimate user engagement, from solving individual user problems to driving the entire industry. The telecommunications industry needs a standard model, and the vertical industry needs to start with the actual problems, find common challenges in the industry, and solve the actual problems of customers.

IIC (2)

2. For security issues, not just best practice, but also guidance and matrix of guide to solve the real problem. Security is not a separate technical issue. It requires a complete set of processes. It is a systems engineering that requires standards, certification, and testing. GIO can share the safety best practices from various organizations.

3. GIO has gathered so many organizations and to drive the enthusiasm of all GIO members. Through actual projects to drive cooperation between organizations, so that all participants can get real benefits.

4. The industry‘s digital architecture requires the effective integration of business processes, operation processes, and machine data through data analysis and AI technology, and ultimately optimizes business and operations to generate industry benefits. Therefore, it is important to build an end-to-end, cross-areas open integration mode. These can be discussed in the follow-up GIO architecture white paper.

5. Digital twin is hot technology of digital transformation in the industry. There is no specific organization to cover detailed research and standard setting, also the technical architecture Perspective. The initial communication has been carried out separately at I4.0/AII/IVI, and the technical white paper of digital twin has been rapidly formed through the joint efforts of 2-3 core technical architects in each of the four organizations. Hoping that the GIO can leverage the digital twin architecture and influence industry standards.

ITS （International Telecommunications Society）

1. There should be some GIO projects, elaborating by various industry organizations. Through the actual operation of these projects, solve the problems in the process of combining ICT and vertical industry, and summarize the experience from these projects. It is not just an initiative to cooperate with various industry organizations. With the advancement of the project one by one, the stakeholders of various industry organizations will naturally cooperate in the industry and across industries.

2. On the GIO platform, the word competition has not yet been heard, but mainly the driving force of the industry. When designing projects and architectures, consider how to leverage competitive relationships to achieve low barriers to entry and high yields. Not only big players, but also small companies can participate, and be friendly to new entrants, GIO could create an environment that promotes competition.

Networld2020

EU invest huge money on 5G test bed. These test bed could be used for vertical market and some scenarios. What have been achieved are good platform for cooperation.
Different organizations have different tools, test bed, etc. We need to collect detail information from each organizations as basement work to move forward.
Vertical project like Robot, not only includes access interface, but AI, cloud, etc. It requires some platform, like GIO, where stakeholders could check how to carry out more close cooperation.

Comments & Advice:

1. NetWorld 2020 is planning to organize a Workshop in May aiming at establishing a collaborative forum for strategic dialogue between vertical and telecom industries, research organizations and other actors
2. Besides the industry sectors covered by other bodies, such as automotive etc, the Workshop will involved Robotics, Cloud Computing and AI sectors where 5G is expected to be profoundly impactful.
3. We are excited that GIO will acts as a cross-continental platform for collaboration and would be delighted to see many attendees from today at the workshop
4. Networld2020 have a very specific stakeholder group, the cooperation, where people from all world can join.
5. NW2020 aims to start a series of events aggregating long term visions of the future of communications (7-10 years) in order to start structuring and identifying the research needed now.
6. GIO can be an excellent framework where different parties of relevance for different technology areas, can be identified, and where from smooth collaboration can be developed, even covering areas outside the scope of activity of NW2020 – but in the future we will need to be increasingly technologically connected.

TM Forum

Architecture is tied to business, e.g. 5G monetization. Layers decoupling and abstraction can simplify cooperation.。
In the development of specific architecture, there are many technologies that can be used. The focus is not only on writing documents, but also in further steps, including coding and PoC, and use cases to verify the architecture, or to validate some of the single points in the architecture helps to determine if some assumptions are correct. TMF has been successfully using Catalyst projects for many years to accelerate the implementation of technology.

Comments & Advice:

1. Suggest we review the feedback together and do a joint retrospective so we can make the next GIO even more effective. All the feedback I heard form this one was extremely positive.
2. We should also regroup to discuss how to create the most effective white paper and ensure it is wildly read. I think we can go beyond simply editing the input.
3. Terminology alignment is very important.
4. Connect、navigate、filter、coordinate
    - GIO unique value is facilitating cross-industry organizations communication, identifying overlap and gap.
    - There are a lot of topics, some of which are particularly meaningful. After narrowing the list of topics, we can draw a limited number of projects that can involve multiple organizations and stakeholders.
    - An important contribution of GIO is coordination. When discussing specific single topic or projects, at least we have a platform to show different jobs between different members and find a cooperation point.

The Open Group

Comments & Advice:

1. SDO needs to be operated faster to support digitalization. Customer's pain points, such as the existing system to be reformed, the problem need to be solved immediately, which is also an economic consideration. To find customer groups and organizations, collaborate with them, and solve fundamental problems.

2. To identify gaps together. For example, what if there is no architecture? Do you need an architecture in an agile way? This is the gap. There are many projects on blockchain and medical care in bodies, maybe turns out that there's nobody care. If we see such gap, we can work with other partners. There are a lot of standards and implementation activities that need to be developed. How to avoid splitting and repetitive work, GIO could do something. Focus on clarity and efficiency.

SAC/TC124

SAC/TC124 as the mirror organization of IEC/TC65/AHG3 in China, contributed the first draft of Executive Summary and Conclusions and recommendations to the GIO architecture white paper, SAC/TC124 agreed with the impact of GIO on the digital transformation of the industry, and will continue contribution.

Regarding the network security issue, we need to consider the following three aspects:

1. From the definition of security itself, no unacceptable risks;
2. To achieve a truly reasonable, cost-effective security architecture, we must first consider the risk factors, where the risks come from, and whether they are acceptable;
3. Security is security, not for the security industry, so no unacceptable risk is the starting point for the ultimate solution.

Thank you.

Collaborating for Digital Economy Growth,

Building a Better Intelligent World

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