

Information and Communication Technology (ICT) Working Group

Key Recommendations

1. Resolve Issues Regarding Standards, Intellectual Property and Certification in the Telecommunications Equipment Sector

- Ensure that foreign invested enterprises (FIEs) have equal access to the China Communications Standards Association (CCSA), specifically full and equal membership in all technical committees (TCs).
- Channel Chinese innovation into international standardisation initiatives and bodies, following China's successful contribution to the global harmonisation of International Mobile Telecommunication-Advanced (IMT-Advanced) systems/technologies in the International Telecommunication Union (ITU).
- Provide certification requirements in writing, well in advance of the implementation date, and provide notification under the World Trade Organisation's (WTO) Technical Barriers to Trade (TBT) Agreement for any standard that is applicable to mandatory certification and market access.
- Eliminate WLAN Authentication and Privacy Infrastructure (WAPI) as a mandatory certification.

2. Enhance Access for Foreign Companies to the ICT Services Market

- Remove the restrictions that limit the choice of Chinese telecom operator partners and encourage opportunities for new operators in the market.
- Encourage telecom operators to further open their capital to strategic investment.
- Streamline the Value Added Services (VAS) licence application approval process by allowing for the provision of multiple VAS with one single VAS licence.
- Eliminate ownership restrictions on VAS providers.
- Allow foreign companies to participate in opportunities presented by convergence through equitable treatment of equipment, software and content/interactive service providers and institutional investors.

3. Enhance Cooperation in ICT Research Programs

- China should allow FIEs in China to participate in Chinese government-funded ICT Research and Development (R&D) projects.

Introduction to the Working Group

Created in 2001, the Information & Communication Technology (ICT) Working Group consists of major European telecommunication vendors, service providers, digital content providers, consulting firms and law firms that meet on a regular basis to assess China's reforms in the ICT industry. The group also serves as a platform for information exchange on ICT industry developments, including issues related to media (including digital media) and telecom-media convergence.

European ICT companies are among the largest investors in China today and aid in China's development by transferring technology, creating jobs, contributing know-how, and training a new generation of Chinese engineers

in the ICT field. In addition, a large percentage of these European companies have significant local Research and Development (R&D) units with well-established links to Chinese universities, as well as research institutes that contribute significantly to the development of the ICT sector in China. The Working Group's activities are intended to contribute to the consultation and dialogue process with all government agencies responsible for the ICT sector. Increased dialogue between Chinese decision-makers and the European ICT industry will help create better mutual understanding and inform the policy and regulatory initiatives that are necessary to ensure that the ICT sector in China continues to grow and develop in a way that is sustainable and beneficial for consumers and industry alike.



Recent Developments

The ICT Working Group is pleased to see that, despite international economic woes, the Chinese ICT sector experienced robust growth in 2010, including a 6.4% increase in basic telecom service revenue and a 15.7% increase in mobile value-added services revenue. The wide-scale application of 3G technologies has been smooth, with a total of 47.05 million 3G subscribers by the end of 2010.¹ It is estimated that 30% to 40% of total mobile revenues for all three Chinese telecoms operators are now derived from value-added services (VAS).²

The Working Group welcomes China's increasing participation and contribution to ICT-related international standardisation initiatives in recent years. In particular, the Working Group notes China's valuable contribution to the global harmonisation of International Mobile Telecommunications - Advanced (IMT-Advanced)³ systems/technologies in the International Telecommunication Union (ITU).⁴ The China Communications Standards Association (CCSA) has supported the Third Generation Partnership Project (3GPP)⁵ in the submission of IMT-Advanced technologies. Time Division Long Term Evolution (TD-LTE) and its evolution has been a key element coming from the Chinese angle and is now a fully harmonised component of the IMT-Advanced approved proposal in ITU. The Working group also welcomes China's active involvement in 3GPP LTE security-related work and the submission of the ZUC encryption algorithm for evaluation and standardisation in 3GPP. Finally, the Working Group notes the active contribution of Chinese companies to European standardisation work at the European Telecommunications Standards Institute (ETSI) and encourages further participation going forward.

Whilst the Working Group notes improved access to Chinese ICT standardisation technical committees (TCs) for foreign-invested enterprises (FIEs) in recent years, full participation of wholly foreign owned enterprises (WFOE)

is still not possible. Furthermore, network and information security related standardisation work in China remains closed to any type of foreign participation. In relation to this, the Working Group has growing concerns over the amalgamation of China's national security interests with commercial security interests and forcing the use of domestic technologies for commercial information security solutions through initiatives such as the Multi-Level Protection Scheme (MLPS). Such measures do not necessarily guarantee the optimum level of security for commercial businesses in China. See the Information Security section of this paper where this issue is covered in more detail.

In terms of the mandatory certification/type-approval schemes for ICT equipment in China, the past year has also seen several improvements. Firstly, the Working Group welcomes a notable improvement in notification periods provided to the ICT industry for compliance to China-specific mandatory requirements. The Working Group also welcomes the decision of the National Development and Reform Commission (NDRC) to reduce Network Access Licence (NAL) and China Compulsory Certification (CCC) fees by 25% for mobile phones as of June 2011.⁶

Despite this, China's mandatory certification requirements still substantially deviate from international norms and remain a key concern for industry as they increase costs and time to market of products, which ultimately result in restricted choice for consumers in China as well as higher prices.

Despite market strength and some receptiveness from regulators, the market remains highly regulated and closed to foreign companies in several parts of ICT. The already closed telecom services market has seen further tightening of restrictions and opaque regulations of value-added services. Furthermore, as a result of the complexities of telecom-media convergence, parallel government agencies beyond the Ministry of Industry and Information Technology (MIIT), such as the State Administration of Radio, Film, and Television (SARFT), continue to play an active role in regulating the sector, therefore making the market even more difficult for foreign companies to enter. The Chinese government in May 2011 announced the establishment of the State Internet Information Office to

1 MIIT Annual Report :<http://www.miit.gov.cn/n11293472/n11293832/n11294132/n12858447/13578942.html>, last accessed May 2011

2 Member company research data June 2011, European Chamber

3 'IMT-Advanced' is a concept from the ITU for mobile communication systems with capabilities which go further than that of IMT-2000. Such systems provide access to a wide range of telecommunication services including advanced mobile services, supported by mobile and fixed networks, which are increasingly packet-based. For further details on IMT-Advanced refer to website <http://www.itu.int/ITU-R/index.asp?category=information&link=imt-advanced&lang=en>

4 ITU is the United Nations specialised agency for information and communication technologies. It works to coordinate the efforts of government and industry and private sector in the development of a global broadband multimedia international mobile telecommunication system, known as IMT. For further details on ITU refer to website <http://www.itu.int/en>

5 For further details on 3GPP refer to <http://www.3gpp.org/>

6 NDRC website: http://www.ndrc.gov.cn/zcfb/zcfbtz/2011tz/20110510_411009.htm, last accessed 11th May 2011



coordinate and supervise online content management in China.⁷ The Working Group hopes that this will contribute to better clarity over regulations in this field and result in opportunities for European companies.

Key Recommendations

1. Resolve Issues Regarding Standards, Intellectual Property, and Certification in the Telecommunications Equipment Sector

Concern

There are several distinct concerns in the area of standards, intellectual property, and certification, including:

- Lack of access to, and equal membership in certain Chinese standardisation bodies in the telecommunication sector, such as Technical Committee 8 (TC8) of the CCSA.
- China's deviation from international standards in the ICT sector fragments the global market, which adds costs for Chinese consumers and industry.
- Inclusion of voluntary standards within mandatory certification schemes, creating a difficult and opaque regulatory environment and risking circumvention of the World Trade Organisation's (WTO) Technical Barriers to Trade (TBT) notification requirements.

Assessment

a) Provide Equal Access and Membership Rights to Foreign Companies in Both National and Industrial Standardisation Organisations

The Working Group welcomes the statements of China's senior leaders ensuring foreign companies that they will be treated the same as domestic companies in China. In line with this, the Standardisation Administration of China (SAC) issued a new policy whereby representatives of entities legally registered within China may participate as voting "P" members in Chinese national TCs (at the discretion of the TC Chair⁸). In practice, however, this policy has not been implemented in any TC nor in most Working Groups in the ICT sector.

The CCSA does not admit as full members WFOEs legally registered in China. WFOEs are admitted only as observers that have no voting rights. Furthermore, TC8:

Network and Information Security Technical Committee prohibits any kind of participation from FIEs. This coincides with growing concerns over the increasingly inhospitable regulatory environment faced by foreign-invested information security companies in China. For a more detailed discussion on this issue, please see the Information Security section of this paper.

b) Alignment of Chinese and International Standards

China's "Indigenous Innovation" scheme and related policies have been carried out to support home-grown technologies that depend on domestic standardisation efforts, rather than success in the global marketplace e.g. WLAN Authentication and Privacy Infrastructure (WAPI) and Ultra High Throughput (UHT) in the ICT sector. These measures have brought substantial negative impacts for the development of standardised international solutions. This has also increased costs for both foreign and Chinese companies, in turn increasing what Chinese consumers pay to use the products/services.

Another trend in Chinese standardisation of persistent concern to European industry in the ICT sector relates to the overly-detailed standardisation of mobile communication devices. Mobile phones, for example, are affected by detailed standards on battery size, Universal Data Exchange (UDX) data exchange format, and some multi Subscriber-Identity Module (SIM) standards. Such implementation-specific standards create unnecessary burdens for all ICT vendors, including domestic Chinese manufacturers, by requiring them to develop two sets of products: one for the China market and one for the international market.

Despite this, the Working Group acknowledges China's increased contribution to the ICT international standardisation bodies in recent years, as described in the 'Recent Developments' section, and encourages China's further participation in the international standardisation landscape.

Please also see the Standards & Conformity Assessment and Information Security sections of this paper where these issues are also discussed.

c) Certification

When it joined the WTO, China made the commitment to create and implement internationally aligned certification

⁷ See http://www.gov.cn/rsrm/2011-05/04/content_1857301.htm, last accessed 4th May 2011

⁸ "The Management Rule of the National Technical Committee," the Standardisation Administration of China, last accessed 30th May 2009 at <http://www.sac.gov.cn/upload/090202/0902020954577410.doc>



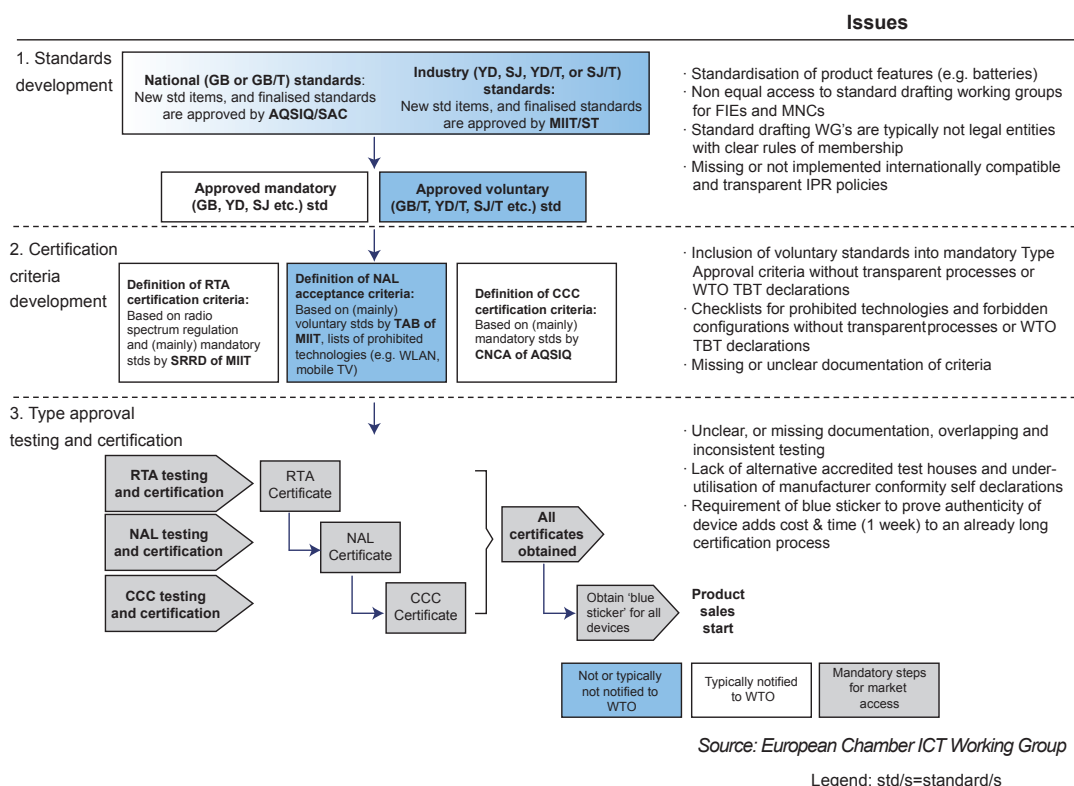
procedures, including the creation of identical certification schemes for domestically and foreign-manufactured products. However, current certification procedures for many mobile communications devices include three independent mandatory certifications: Radio Type Approval (RTA), Network Access Licence (NAL), and China Compulsory Certification (CCC) that measure compatibility and compliance to a selected portfolio of standards developed by standards development organisations (SDOs). This very costly process is a significant drain on company resources and has negative consequences for consumers by delaying time to market and limiting product choice. The Working Group acknowledges the decision of NDRC to reduce NAL and CCC fees by 25% for mobile phones as of June 2011, and encourages further price reductions and streamlining of the certification process going forward.

The selection of standards for inclusion in testing is not transparent: finished certification requirements for these three certificates are not provided with sufficient detail in

writing. Of the utmost concern to industry is the practice of (1) including voluntary, non WTO TBT notified standards in mandatory certification requirements, (2) checking for blacklisted technologies and configurations without a transparent process, and (3) failing to file WTO TBT notifications on changes in the certification criteria (see Figure 1). Examples of these include the industry standard that attempts to create a unified charger interface for telecom terminals (YD/T 1591-2006) and restrictions on the use of WiFi or mobile TV hardware.

Providing clear, written requirements well in advance of the implementation date and notifying WTO TBT on the changes of the certification criteria would ensure that the industry has enough time to comply with the new specifications and regulations so as to ensure that no technical barriers to trade would be established. Please also see the Standards & Conformity Assessment section of this paper where this issue is discussed.

Figure 1: Issues with Mobile Phone Standardisation and Certification in China





Case Study: Using Certification to Arbitrarily Block Certain Technologies from the Chinese Market

Case 1: WLAN Authentication and Privacy Infrastructure (WAPI)

Without any notification to the WTO TBT, W-LAN capable phones have been denied type approval and, hence, legal market access in China for years. On 15th April 2009, MIIT announced that it would start allowing type approval for WiFi-enabled phones, provided they are equipped with the WAPI encryption standard. This is a clear case of certification criteria being used to selectively control the products and technologies entering the Chinese market.

Case 2: 'Commercial Encryption Testing Certificate' and China Compulsory Certification for Information Technology Security Products (CC-IS) Certification

Since 1st May 2010, the testing and certification of 13 types of information security products has been included under the CCC scheme (CC-IS) as a mandatory pre-condition for government procurement. Of the 13 products, the standards used for certification in all but one case deviate from international standards. Furthermore, 6 of the 13 products require the 'Commercial Encryption Testing Certificate' from the Office of the State Commercial Cypher Administration (OSCCA) as a precondition for CC-IS certification. As such, it may be impossible for FIEs to obtain CC-IS certification for these 6 products because OSCCA does not publish the requirements to obtain the Commercial Encryption Testing Certificate and so far has not certified any product from any FIE in these product groups. In the unlikely case that FIEs can go forward with the certification process, OSCCA also requires that the encryption-relevant parts of the source code be disclosed to OSCCA.

A lack of clarity in the wording of the "Notice on the Implementation of Government Procurement of Information Security Products (MOF 2010/#48)", released by the Ministry of Finance in May 2010, also raises concern regarding the ambiguity in the scope of implementation of CC-IS for government procurement e.g. whether state owned enterprises (SOEs) can "voluntarily" require a CC-IS certificate from its suppliers, de facto excluding foreign-invested Chinese companies from participating in SOE-funded projects.

Please also see the Information Security section of this paper where these issues are also discussed in more detail.

Recommendation

- Ensure that FIEs have equal access to CCSA, specifically full and equal membership in all TCs.
- Channel Chinese innovation into international standardisationW initiatives and bodies, following China's successful contribution to the global harmonisation of IMT-Advanced systems/technologies in ITU.
- Provide certification requirements in writing, well in advance of the implementation date, and provide notification under the WTO TBT Agreement for any standard that is applicable to mandatory certification and market access.
- Eliminate WAPI as a mandatory certification.

2. Enhance Access for Foreign Companies to the ICT Services Market

Concern

European companies have a long history in China's ICT market, yet European access to participate in China's ICT services market lags dramatically behind participation in China's ICT infrastructure and devices market.

Assessment

The Chinese government's policy of 'Informatisation' has transformed communications in China, benefiting Chinese consumers and ICT suppliers alike. While European companies have played an important role in supplying ICT infrastructure and devices to China, creating a significant source of employment in design and R&D, they have been by and large excluded from the opportunity in ICT services.

As China's market continues to develop, ICT revenues will increasingly be derived from the supply of services, applications and content. The convergence of telecoms, consumer electronics and media industries is transforming the ICT industry and driving a shift in value away from basic connectivity towards more rich forms of services, content and entertainment. These are areas where European companies are well positioned to offer value to China as it seeks, as stated in the 12th Five Year Plan, to transform culture into a 'pillar industry' by 2016.⁹

a) Basic Services

While offshore structures do exist to facilitate investments in the share capital of holding companies for China's state-run telecom operators, as we approach the 10th anniversary of China's accession to the WTO, significant

9 2011 China's 12th Five Year Plan



hurdles remain for any European companies seeking an active role in the management or share capital of onshore service providers.

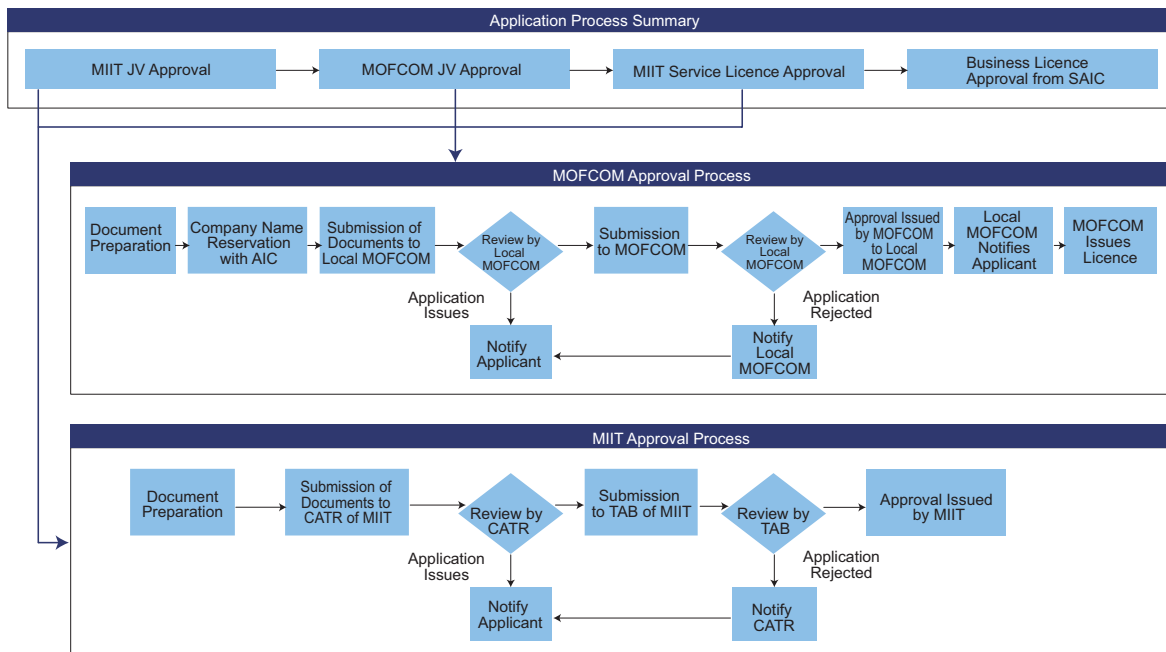
According to current regulations, only existing Chinese licence-holders are able to team up with a foreign operator and enable their proposed Joint Venture (JV) to provide mobile or basic services in China. This limits the potential partners to the three incumbents, and these parties remain reluctant to open up their networks to foreign partners. As long as no new licences are awarded and the restrictions on Chinese partners remain, it is unlikely that any JV in basic telecom services with a foreign partner will be established.

b) Value Added Services (VAS)

Similarly, there has been little or no tangible progress in opening China's telecom value-added services (VAS) market. Applying for a VAS licence is a long and unnecessarily arduous process (see Figure 2) and obtaining licences has been problematic. In addition, the following issues are of key concern to European ICT service providers:

Figure 2: Typical Procedures for VAS JV Application in China

- Approval to establish a VAS JV from MIIT (two months in theory);
- Approval to establish a foreign invested telecom VAS JV by MOFCOM;
- Sectoral service approval from the MIIT (four months in theory);
- Business licence approval from SAIC



Source: APCO Worldwide



- Interpretation of permitted services: Authorities only permit FIEs to provide services listed in the VAS Catalogue that China agreed to within the WTO, rather than on the VAS classification list used by domestic companies. This is an additional cause for concern as it reduces market access options.
- Ownership restrictions: Current ownership restrictions permit only 50% equity participation for foreign investors, and require the use of the equity joint venture (EJV) structure. Additionally, a Chinese ID holder is required to set-up the legal person of a VAS JV. Given the very large number of VAS providers in China, and the extent of domestic private sector participation, the rationale for maintaining these ownership restrictions is not clear. These ownership restrictions are a deterrent to foreign strategic investment in the sector as international firms with global operations would prefer to have full operational control of the businesses they run.

c) Benefits of Improved Collaboration in Services

Easier collaboration in services ventures would benefit both Chinese and international players in three key areas:

Consumer Services Market

China is pursuing an ambitious policy of three-network convergence to integrate its voice, data and cable-TV networks. European service, software and content providers have extensive experience in providing a wide range of consumer offerings ranging from triple-play to quad-play providers to digital terrestrial and satellite broadcasters to a wide range of smaller but fast growing creative firms with experience in delivering attractive content across multiple platforms.

Enabling meaningful forms of partnerships in China for these firms would benefit Chinese consumers and further the international ambitions of China-based content and applications providers.

Corporate Services Market

Multi-national companies (MNCs) including fast-growing China-based companies offer major opportunities for ICT service providers. Increasingly the tenders to serve these MNCs are conducted on a global basis. Enabling further European investment into China's ICT services market through onshore partnerships with Chinese telecom operators will allow for a more seamless offer to MNC

customers as well as facilitate the international expansion of Chinese telecom operators as they develop partnerships with their peers overseas.

Procurement of Equipment and Devices

The procurement by telecom operators of ICT infrastructure and devices is increasingly conducted through international tenders. Enabling deeper partnerships between Chinese telecom operators and their international counterparts will allow for greater economies of scale for telecom operators in their procurement activities. In addition, for China-based providers of telecom equipment and devices, the ability to participate in global tenders, which includes China as well as international markets, could serve to lessen anti-dumping activity, which is hindering the further growth of China-based providers in some markets.

Recommendation

- Remove the restrictions limiting the choice of Chinese telecom operator partners and encourage opportunities for new operators in the market.
- Encourage telecom operators to further open their capital to strategic investment.
- Streamline the VAS licence application approval process by allowing for the provision of multiple VAS with one single VAS licence.
- Eliminate ownership restrictions on VAS providers.
- Allow foreign companies to participate in opportunities presented by convergence through equitable treatment of equipment, software and content/interactive service providers and institutional investors.

3. Enhance Cooperation in ICT Research Programs

Concern

The current status of the research cooperation between the European Union (EU) and China is less than optimum and restricts the exploration on great opportunities that would benefit both sides. The Working Group encourages the strengthening of ICT R&D cooperation and more active participation in programs from both sides.

Assessment

The positive outcomes of improved EU-China collaboration in standardisation shows the need to expand this model to ICT research, as the cross-fertilisation of research ideas between the two sides could add significant value to research programs. Chinese companies enjoy opportunities to participate in EU research programs,





benefiting both China and the EU. European companies would welcome similar access to research programs in China.

Additionally, the R&D bases that many European-invested ICT companies have built up in China play a significant part in their global R&D activities. These companies are long-standing industry leaders and innovators that are committed to the local market and have become increasingly active in driving the development of Chinese-initiated activities in global standardisation forums. As such, they are equally dedicated to the growth of R&D initiatives in China as domestic enterprises. Moreover, in recent years, many European companies in China have made a significant contribution to China's Intellectual Property Rights (IPR) development through filing an increasing number of patent applications with the State Intellectual Property Office (SIPO), in the name of local affiliate companies as the patent applicant. Furthermore, patent licensing and cross-licensing schemes are a recognised means of accelerating the development of licensee know-how. The contribution of European companies in IPR, both in terms of licensing and patent filings, supports the government's goal of increasing innovation in China.

Thus, it is the hope of the Working Group that the Chinese government encourages European companies to participate in government-funded ICT R&D projects, so that European companies can contribute more technical expertise to the development of China's innovation.

Recommendation

- China should allow FIEs in China to participate in Chinese government-funded ICT R&D projects.

Abbreviations

3G	3rd Generation of mobile telephone standards and technology
3GPP	Third Generation Partnership Project
CCC	China Compulsory Certification
CC-IS	China Compulsory Certification for Information Technology Security Products
CCSA	China Communications Standards Association
EJV	Equity Joint Venture
ETSI	European Telecommunications Standards Institute
EU	European Union
FIE	Foreign Invested Enterprise
ICT	Information and Communication Technology
IMT-Advanced	International Mobile Telecommunications Advanced
IPR	Intellectual Property Rights
ITU	International Telecommunication Union
MIIT	Ministry of Industry and Information Technology
MLPS	Multi-Level Protection Scheme
MNC	Multinational Company
NAL	Network Access License
NDRC	National Development and Reform Commission
OSCCA	Office of the State Commercial Cypher Administration
R&D	Research and Development
RTA	Radio Type Approval
SAC	Standardisation Administration of China
SARFT	State Administration of Radio, Film, and Television
SDO	Standards Development Organisation
SIM	Subscriber-Identity Module
SIPO	State Intellectual Property Office
SOE	State Owned Enterprise
TBT	Technical Barriers to Trade
TC	Technical Committee
TD-LTE	Time Division Long Term Evolution
UDX	Universal Data Exchange
UHT	Ultra High Throughput
VAS	Value Added Services
WAPI	WLAN Authentication and Privacy Infrastructure
WFOE	Wholly Foreign Owned Enterprise
WTO	World Trade Organisation