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Response to IEEE Liaison Statement 6N13939

Chinese National Body, 5/6/2009

This document is a response of China National Body on document 6N13939 which is entitled “Liaison statement from IEEE 802 LMSC to JTC 1/SC 6/WG 1 on the response to liaison request to review documents 6N13774, 6N13775, and 6N13776”. We request SC6 secretariat distribute this document to all SC6 National Bodies, and all SC6 and IEEE officers listed in the IEEE document so that they will know what China’s positions on the issues raised in the IEEE document.

China’s main positions are:

(1) IEEE’s objection to WAPI IS option is based on reasons which have been raised before. After been thoroughly discussed in Xi’an meeting (July 2008) and Montreux meeting (Nov. 2009), the consensus is that they are not legitimate reasons to argue against the IS option. That is why the IS option was listed as a valid option. We agreed to send the two options to SC6 National Bodies for comments and review because we want to hear whether other national bodies would have any concerns or comments. Looking from the results of comment period, we do not see any significant objection to the IS option from SC6 national bodies. We remain firmly believed that the IS option is a valid option.

(2) Since those concerns contained in 6N13939 have been dismissed in previous meetings, it is annoying to see that IEEE raises them again repeatedly without considering what have been discussed in SC6 meetings. We believe that the views and discussions in SC6 meetings are either not forwarded to IEEE, or they have been transmitted to IEEE but are totally ignored by IEEE. We urge IEEE to be aware of the ISO/IEC Directives which requires members to pay attention to what have been presented and discussed in previous meetings.

(3) China does not agree with the views and positions presented in 6N13939 by IEEE. In the following, we analyze IEEE’s position one by one. In order to compare the positions, we will do paragraph by paragraph analysis. We will quote IEEE’s original sentences and then provide our response.

IEEE: *After review, we have concluded that document 6N13776 arguing in favour of an NP to create a WAPI IS contains numerous factually incorrect statements and logical inconsistencies. At this point a detailed enumeration of all of the problems would not be productive. Instead, we reiterate our position as expressed in 6N13725.*

China response:

IEEE reiteration of previous express positions which have already been refuted is not in accordance with ISO/IEC directives.

IEEE: *For over five years, the IEEE 802.11 Working Group has consistently offered to work with China’s NB and with ISO/IEC JTC1/SC6 WG1 to integrate WAPI technology into both the IEEE 802.11 and ISO/IEC 8802-11 standards. Unfortunately,*

the position statement in 6N13776 rejects a cooperative approach for WAPI integration and fails to address the interests of all stakeholders.

China response:

IEEE above statement contains several factual errors and logical inconsistencies. Over the past five years, China has worked closely with ISO/IEC members including SC6 national bodies and IEEE in WAPI and 8802-11 developments. IEEE should not blame China for not cooperating. IEEE's interpretation of "cooperation" is not shared by China and other national bodies. SC6 has clearly indicated that WAPI does not need to be sent to IEEE for standardization and WAPI can stay as a SC6 project. Furthermore, WAPI IS option is a stand-alone standard. It does not need IEEE's approval. Please see 6N13719 for information.

IEEE:

A brief review of the sample IS in 6N13774 confirms our belief that there are significant copyright issues that need to be addressed.

China response:

This statement was presented before the SC6 Montreux meeting. However, during the meeting, IEEE representatives told SC6 that IEEE has determined that copyright was not an issue. From our communications with other national bodies and international standardization experts, none has claimed that the document 6N13774 would have serious copyright issues.

This is an ISO/IEC project. Unless we have an official notice from ISO/IEC legal or administrative authorities about copyright warning, we believe that the copyright issue should not prevent the WAPI project from moving forward.

IEEE:

The organizational memory needed to adequately integrate any new technology into the existing IEEE 802.11 standard only exists within the IEEE 802.11 Working Group. Transfer of such knowledge through liaison agreements or documents is unworkable. Of course, the integration of WAPI technology would also require the participation of WAPI experts from China.

China response:

The WAPI IS option described in 6N13774 is an ISO/IEC standardization project. Whatever IEEE has about its organizational memory is irrelevant on this issue. If IEEE wants to provide assistance to ISO/IEC projects, liaison system is a good means for it. If IEEE does not want to offer assistance to ISO/IEC projects, we would like to remind IEEE to pay attention to ISO/IEC rules about liaison member responsibilities.

IEEE:

The WLAN market relies on the synchronization of the ISO/IEC 8802-11 and IEEE 802.11 standards. The IS option immediately orphans WAPI from all developments in

the IEEE 802.11 standard since 2004, including IEEE 802.11e (QoS), IEEE 802.11n (High Rate), and IEEE 802.11r (Fast Roaming). This means that the IS option is irrelevant to the world WLAN market. The 802.11-based WLAN market consists of more than a billion existing devices, and is growing by over 400 million devices per year. We note that six years after the publication of WAPI as a Chinese national standard, there appears to be only limited market demand for WAPI in China and none whatsoever anywhere else in the world.

China response:

Regarding the Orphaning of WAPI, we would like to warn IEEE to the following facts:

1, WAPI is China National Standard since May 2003. It was also presented to ISO/IEC, been widely distributed and thoroughly studied in IEEE since 2004. It was a standard and ISO/IEC project since 2004, which is earlier than IEEE 802.11e, 802.11n and 802.11r.

2, According to WTO/TBT and ISO/IEC rules and principles, IEEE also have an obligation to avoid contradictions or conflicts with existing standards or ISO/IEC projects.

3, IEEE knows the existence of WAPI and its specifications. It should take measures to avoid contradictions or conflicts. If IEEE follows good practices of international norms of standardization, the orphaning of WAPI can easily be avoided.

4, WAPI can also evolve to accommodate future WLAN technological changes.

5, WAPI is a security enhancement and closely related to the WLAN market. We are pleased to see that IEEE now acknowledges there are demands in China for WAPI technology. We would like to add that, because of its superior technical strength, the demand and application for WAPI is experiencing rapid growth, especially in WLAN operator markets. Companies outside of China are showing very strong interests and are producing more and more WAPI compliant products into the market. WAPI's entrance into the world market is only a matter of time.

IEEE:

Some elements of WAPI are clearly outside the scope of the IEEE 802.11 Working Group and SC6 WG1. We note that SC27 is currently considering the end-to-end three party authentication protocols from WAPI as an amendment to ISO/IEC 9798-3 Part 3. The SC27 work is a good example of WAPI technology being standardized in the appropriate forum. We consider this as significant progress for WAPI, the standardization process, and the WLAN community.

China's response:

We are pleased to see that IEEE has noticed that three party authentication mechanism (TePA) which is a generic method to be used in a variety of network applications, is now an amendment to ISO/IEC 9798-3 Part 3 (SC27/WG2). This progress confirms the technical validity of WAPI and its ability to contribute to

WLAN industry.

On the other hand, SC27/WG2 project is a generic authentication mechanism. SC27's scope excludes "embedded security mechanisms in applications". WAPI uses three party authentication mechanisms in the WLAN application. This is a typical work of "embedded security mechanisms in applications". We have consulted with SC27 leadership and got a clear message that "WAPI is not a SC27 business".

Since SC27 has no objection to WAPI, the scope argument should not be used to prevent WAPI from moving forward in SC6.

IEEE:

Document 6N13776 alleges that IEEE 802.11i contains security flaws without detailing any specifics. We are unaware of any such issues. However, we encourage any individual or group, including SC6 NBs, to send evidence of any security weaknesses to the IEEE 802.11 Working Group at any time. They will be addressed immediately using our normal processes.

China response:

Regarding the security flaws in IEEE 802.11i, China has made many comments in which some with detailed analysis from as early as October 2004. These comments were sent to IEEE. One of the most detailed analysis is provided by China during the ballot period in early 2006 and is more than 300 items long.

The security problems in 11i discussed by China National Body are also recognized by the U.S. government publications. For more information, please refer to NIST 2007 publication about 11i.

Conclusion:

China National Body firmly believes that:

1, IEEE 802.11i contains serious security flaws.

2, WAPI is an adequate solution to overcome those flaws.

3, WAPI is a superior security enhancement and has a bright future.

4, the four objections raised by IEEE do not merit further consideration.

5, the Stand-alone option is a legitimate option.

6, making WAPI a stand-alone standard to be used as an alternative security solution for WLAN would simplify the situation and would allow WAPI to serve the international community.