

INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASIA AND PACIFIC OFFICE



**REPORT OF THE
COM CO-ORDINATION MEETING**

(Chengdu, China, 18-19 February 2014)

The views expressed in this Report should be taken as those of the COM Coordination Meeting and not of the Organization. Result of the Meeting will also be submitted to the CNS SG/18 Meeting for review and consideration.

Approved by the Meeting
and published by the ICAO Asia and Pacific Office

1. INTRODUCTION

1.1 A COM Co-ordination Meeting was held in Chengdu, China from 18-19 March 2014. The meeting was hosted by the Air Traffic Management Bureau of CAAC, China (ATMB).

1.2 The objective of the meeting were to review status of implementation of the required AFTN/ATS direct speech circuits and to develop a coordinated action plan for implementation of the required AFS circuits and implementing ATN/AMHS connection between the concerned Administrations to satisfy the established operational requirements.

2. ATTENDANCE

2.1 The meeting was attended by 22 participants representing China, Cambodia, Myanmar, Nepal and Thailand. A list of participants is at **Attachment 1**.

3. OFFICER AND SECRETARIAT

3.1 Mr. Li Peng, Regional Officer Communication, Navigation and Surveillance (CNS) of the ICAO Asia and Pacific Office acted as the moderator and secretary of the meeting.

4. OPENING OF THE MEETING

4.1 On behalf of Mr. Yu Bo, Chief Engineer of ATMB Headquarters, Mr. Bu Enshu, Dy. Director CNS Division ATMB extended welcome to the participants. He highlighted the importance of Aeronautical Fixed Service for safety and regularity of air navigation and expressed pleasure in hosting the meeting in China. Mr. Li Peng highlighted the objective of the meeting and emphasized the need to further progress the action plan agreed in March 2013 and develop harmonized practical solution with updated information provided to the meeting. He also expressed appreciation to ATMB for supporting ICAO regional activities. Mr. Luo Yi, Director of CNS Division, ATMB Southwest Regional administration also welcomed all participants and provided brief introduction of Chengdu.

5. AGENDA

5.1 The agenda adopted by the meeting was as follows:

Agenda Item 1: Review of AFS communication requirements in the Sub-regions

Agenda Item 2: Review the current implementation and operational status of AFS communications between States including follow-up actions by Administrations to the Action Plan adopted in March 2013

Agenda Item 3: Update the Action Plan of AFS circuits between States

Agenda Item 4: ATN/AMHS and AIDC implementation plan including agreed the target operational date

Agenda Item 5: Letter of Agreement for technical trail and operational use

Agenda Item 6: Any other business

6. ORGANIZATION, WORKING ARRANGEMENTS AND LANGUAGE

6.1 The meeting was held as a single body throughout the meeting. The working language was English inclusive of all documentation and this report. Chinese was also used with interpretation. A list of Working Papers and Information Papers presented at the meeting is at **Attachment 2**.

6.2 During the meeting, the participants also visited Chengdu Air Traffic Management Centre commissioned in August 2013.

Agenda Item 1: Review of AFS communication requirements in the Sub-regions**1. Review of AFS requirements**

1.1 Under this agenda item, the meeting reviewed the requirements of AFS data and ATS direct speech circuits (WP/02, and WP/03) as specified in the regional air navigation plan. The relevant Conclusions in the communication fields adopted by the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) were also reviewed by the meeting.

1.2 The meeting also reviewed the relevant Aeronautical Fixed Service requirements between States.

1.3 The meeting recalled APANPIRG Conclusion 11/14 – Use of digital circuits and Conclusion 11/15 – Alternative arrangements for VSAT adopted by APANPIRG.

Agenda Item 2: Review the current implementation and operational status of AFS communications between States including follow-up actions by Administrations to the Action Plan adopted in March 2013**2. Current operational status**

2.1 Under this agenda item, the meeting reviewed the implementation and current operational status of the concerned AFS data and ATS Direct Speech circuits for the area under the consideration by the meeting.

2.2 The meeting noted that the VSAT link used for ATS direct speech circuit between Yangon and Kunming and the AFTN circuit between Beijing and Yangon has been out of order service due to technical and other problems at Yangon site since July 2008. The reactivation of the ATS direct speech circuit and AFS Data circuit between Beijing and Yangon were also discussed. The alternate arrangement for the voice circuit was via International Direct Dial phone.

2.3 Although message traffic between China and Nepal over the Beijing/Kathmandu AFTN Circuit is relatively low (totally were around 170 messages a day (cross checking with presentation by ATNC). However, the traffic would increase to 1000 messages altogether when the AFS data circuit between Kathmandu and Mumbai becomes out of order.

2.4 The ATS direct speech communication between Kathmandu and Lhasa was conducted via VSAT. The circuit had been out of order since the beginning of 2013. Both China and Nepal confirmed that the ATS direct speech circuit between Kathmandu and Lhasa is required as the air traffic had been increased.

2.5 The VSAT ATS direct speech circuit between Kunming and Vientiane was implemented through Aerothai VSAT system. Aerothai had planned to upgrade their system from PES system into LINKWAY system with tentative solution for a TES terminal as transition by 2016 as Laos PDR requires more time to be ready for LINKWAY system solution.

2.6 Review available means to meet requirements for AFS communications

2.6.1 The COM coordination meeting held in March 2013 discussed various potential means to support AFS communication between States including potential alternate arrangements for leasing landline from telecommunication service provider and new generation of VSAT technology – (PTPVSAT). The meeting concluded that VSAT technology is still an appropriate solution to the last mile (local lead between airport and downtown PTT) problem in the area. In the interest of efficiency and economy, States were encouraged to use IP based VSAT technology especially for those integrated data and voice requirements where two separate data/voice circuits have been implemented or planned.

2.7 Reviews action plans adopted at previous meeting

2.7.1 The meeting reviewed the status of the action plan agreed at the previous COM coordination meeting held in March 2013 including WP/4, WP/5 presented by the Secretariat and WP/6, WP/7 presented by China. The meeting noted follow-up actions had been taken by Administrations concerned however; the action plan based on the agreement made in March 2013 was required to be updated.

Agenda Item 3: Update the Action Plan of AFS circuits between States

3.1 The definition of time frame indicated in the action plan was as follows:

IMMEDIATE:

Action to be taken immediately after the conclusion of the meeting

MID TERM:

Action to be taken within six months

LONG TERM:

Action to be taken within one year

3.1.1 ACTION AGREED NO. 1 - MID TERM, CHINA, MYANMAR

That, considering that the aging C-band VSAT – TES terminal at Yangon site system was very costly to be reactivated, China and Myanmar agreed to establish a new IP based VSAT circuit by July 2014. The detailed plan for implementation of the new VSAT system were discussed and agreed that DCA. Myanmar will purchase and install the required equipment according to recommended list of parts provided in **Appendix A** to this Report. The satellite going to be used would be CHINASAT No.10. The VSAT will support both AFS Data circuit requirement between Beijing and Yangon and voice channel between Kunming and Yangon.

(Remark: China will further provide the cost for bandwidth required for the two channels within two weeks from conclusion of the meeting. China will also provide free of charge service for the network management service and commissioning support).

3.1.2 **ACTION AGREED NO. 2 – NEAR TERM , CHINA AND MYANMAR**

That, China and Myanmar expedite implementation of the AFS data circuit between Beijing and Yangon with target date of June 2014 using leased 2 M-byte (E1) circuit between Yangon and Beijing to support both AFS data circuit (including AMHS connection) and ATS voice communication requirement. Both sides agreed to use HUAWEI multiplexer and associated modem equipment for the circuit. China will provide model and type of the equipment by 28 February 2014 for consideration by DCA. Myanmar would purchase the equipment locally in Myanmar. The model/type of the Huawei terminal equipment will also be attached to the report of this meeting as **Appendix 2**.

(Remark: the dedicated leased line was initiated by both China and Myanmar in November 2013. The lease line has already reached the border through China Unicom and Myanmar Telecom. The service providers of both sides were finalizing the connection. The splitter should be installed in Beijing for further connecting to Kunming through domestic civil aviation network of CAAC).

3.1.3 **ACTION AGREED NO. 3 – IMMEDIATE NEPAL AND CHINA**

That, China and Nepal implement ATN/AMHS connection in accordance with draft TMC discussed and agreed at the previous COM coordination meeting. Both sides agreed that the service provider at Chinese side for the dedicated lease E1 circuit (2-Mbytes) was preferred to be China Telecom while at Nepal side will be Nepal Telecom.

It was further agreed that the leased line will be via Hong Kong China and the voice channel between Lhasa and Kathmandu will be over the E1 circuit through a router/multiplexer at Beijing where further connecting to Lhasa ATC through the domestic civil aviation network of CAAC.

(Remark: The type/model of multiplexers/router to be used at both sides is provided in **Appendix 2**. The Administrations were urged to sign the TMC as soon as possible, in any case no later than 21 April 2014).

3.1.4 **ACTION AGREED NO. 4 – MID TO LONG TERM NEPAL AND CHINA**

That, China and Nepal consider the following option as alternate routing for meeting the AFS requirements between two States:

Replacing the existing VSAT (TES) system (300 Baud used) with an IP based VSAT system as the second priority. The technical specification and a list of the recommended parts is provided in the Appendix 1 to this report. The satellite used would be CHINASAT No. 10. The cost of operating cost for the circuit was further discussed. The channel cost of the bandwidth required will be provided to Nepal within two weeks from conclusion of the meeting. Timeline for the implementation of the new VSAT system was also discussed. Nepal will inform China about their choice of the proposed three scenarios by China.

ACTION AGREED NO. 5 – MID TERM, LAOS PDR, CHINA AND THAILAND

That,

The ATS Direct Speech Circuit over the PES VSAT circuit between Kunming and Vientiane will be changed to TES VSAT system. China will be ready for such change by 21 April 2014. The TES system will be tentatively used till 2016 subject to readiness of Laos PDR for upgrading their VSAT system into Linkway;

China will consider upgrading its TES system to new system at due time.

ACTION AGREED NO.6 – MID TERM, CAMBODIA AND THAILAND

That, Thailand facilitate Cambodia for the possibility of using VoIP based on VSAT channel used connecting with Ho Chi Minh and Vientiane to support ATS Voice Direct speech circuits requirements.

ACTION AGREED NO.7 – MID TERM, ALTERNATE ROUTING FOR AMHS

That, Cambodia prepare a proposal for consideration by ACSICG/1 meeting regarding AMHS alternate connection between Phnom Penh and Vientiane or between Phnom Penh and Ho Chi Minh.

Agenda Item 5: ATN/AMHS and AIDC implementation plan including agreed the target operational date

5.1 Under this agenda item, Cambodia, China and Thailand made a presentation on the current status of ATN/AMHS implementation in their countries (IP/02, IP04 and WP/08). The States at the meeting were urged to coordinate with each other developing target date for testing and implementation. China proposed to implement AIDC between Kunming and Yangon when the leased E1 line becomes available.

Agenda Item 6: Letter of agreement for technical/operational trial and implementation

5.1 The meeting noted that the sample TMC adopted by APANPIRG/23 meeting and the TCM revised by China and Nepal for commissioning the ATN/AMHS circuit between two administrations could be used as a reference for other Administrations.

Agenda Item 7: Any Other Business

7.1 The meeting appreciated a presentation made by Thailand (IP/03) on the concept of Common Regional VPN and activities of CRV Task Force. States were encouraged to consider participation in activities of the Task Force and to consider the VPN solution at due course.

7.2 The meeting was informed about one of the Tasks for ADS-B Study and Implementation Task and Force and for action by China and Myanmar adopted by APANPIRG. China and Myanmar were urged to examine existing air-ground communication and surveillance capability in the border area between China and Myanmar and identify the need and possibility for sharing ADS-B data from potential ADS-B ground station near Lashio. Sharing of the ADS-B data would be achieved through the newly established E1 data circuit.

7.3 On behalf of participants from Cambodia, Myanmar and Nepal, the representative from Thailand thanked Air Traffic Management Bureau in particular to the ATMB South West Regional Administration for their warm hospitality and the excellent arrangements made for the meeting including the technical visit to the new Area Control Centre. The participants were impressive of the modern system being commissioned and expressed congratulations to ATMB for this recent achievement.

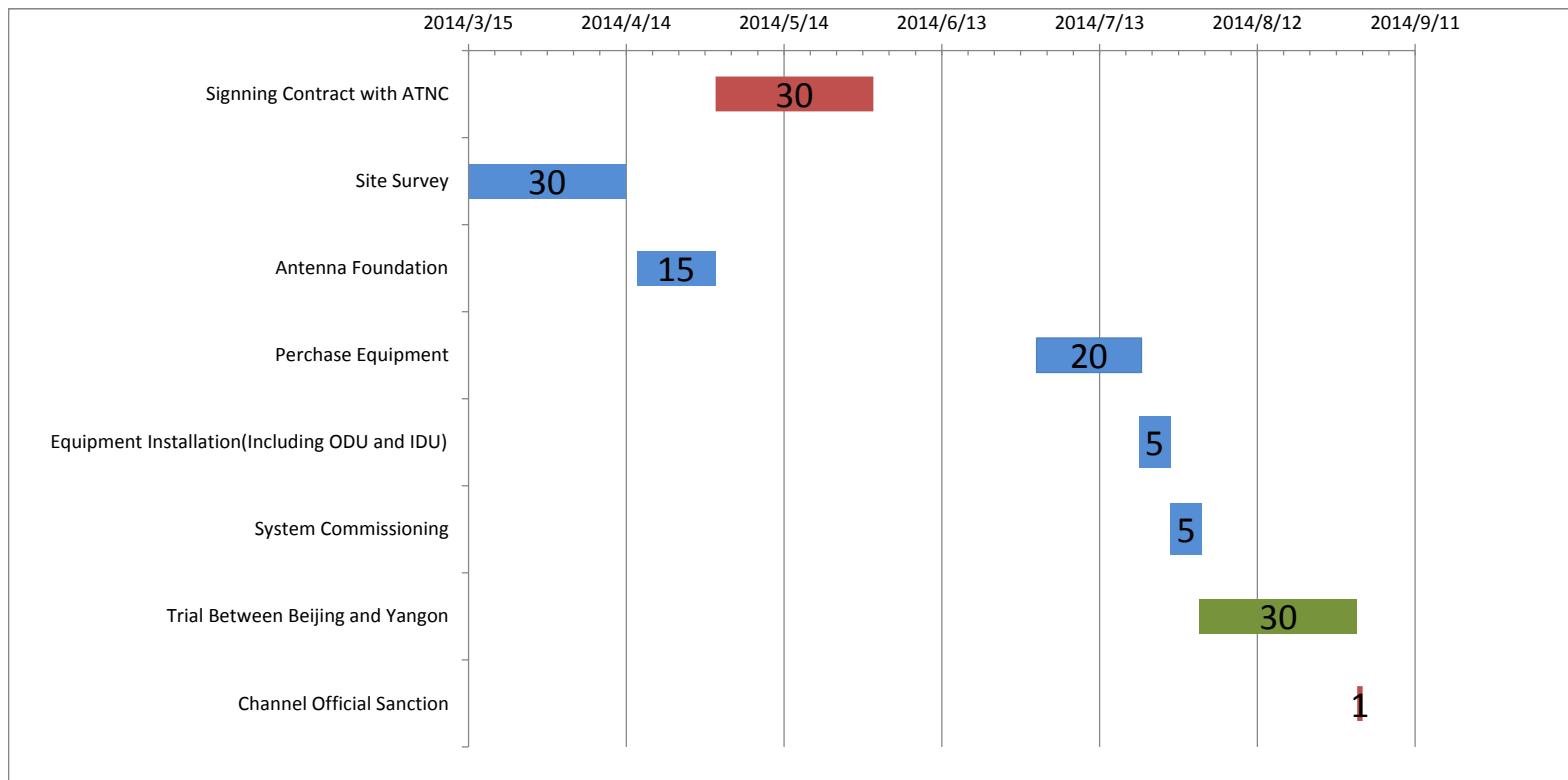
7.4 The moderator also thanked the participants for their active discussion and valuable inputs and urged Administrations to implement the action plan agreed by the meeting in a timely manner with the spirit of cooperation demonstrated at the meeting.

7.5 The meeting also expressed its appreciation for the support and information provided to the meeting by the Sichuan Jiuzhou Electric Group Co., Ltd. and the ATM Company of the Second Research Institute of Civil Aviation Administration of China.

COM Coordination Meeting
Appendix A to the Report

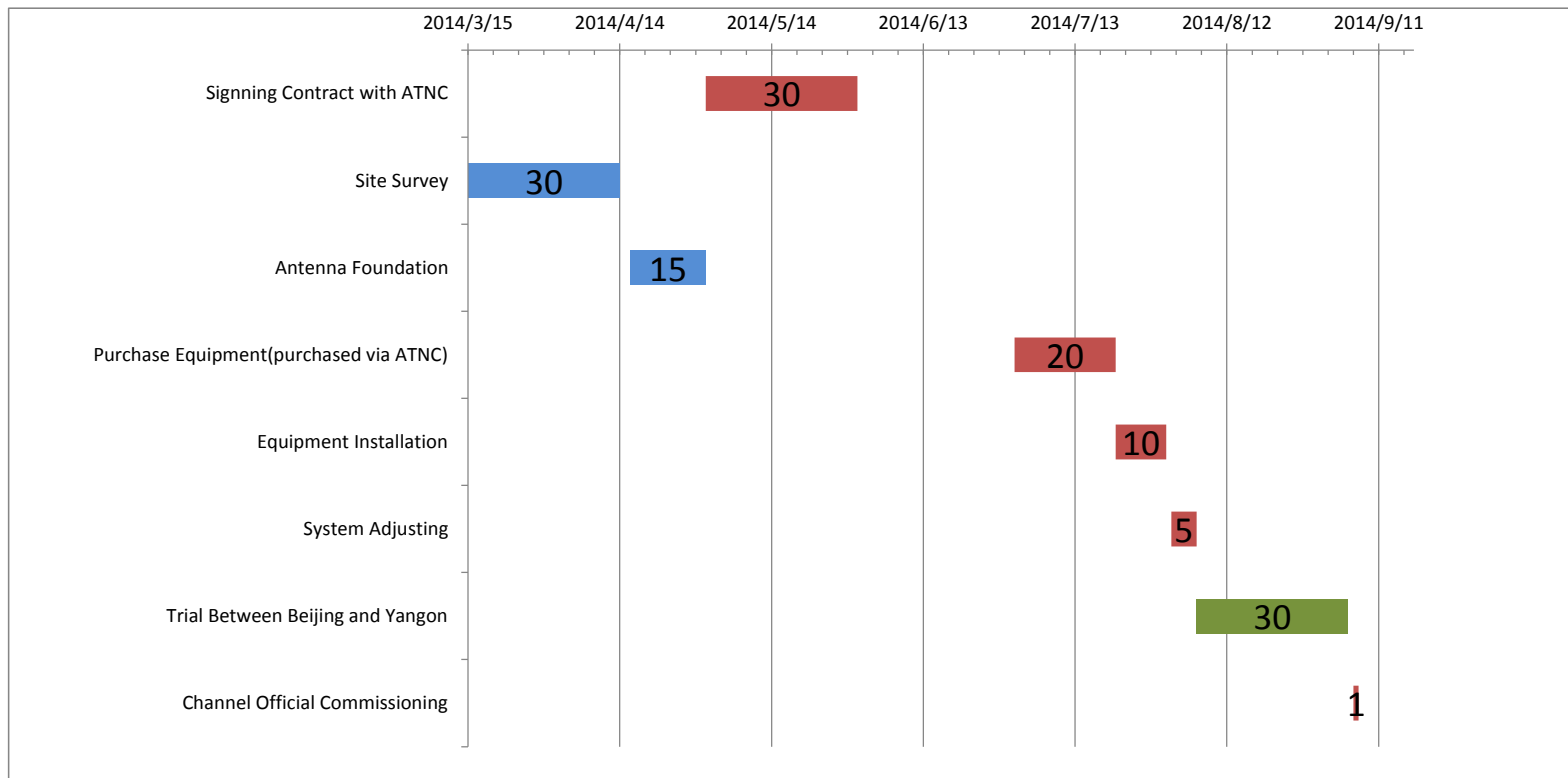
Annex 1 – Self Construction

Item	Starting Time	Execution Time(Days)	Finish Time
Signing Contract with ATNC	2014/5/1	30	5/30/2014
Site Survey	2014/3/15	30	4/15/2014
Antenna Foundation	2014/4/16	15	4/30/2014
Perchase Equipment	2014/7/1	20	7/20/2014
Equipment Installation(Including ODU and IDU)	2014/7/21	5	7/26/2014
System Commissioning	2014/7/27	5	7/31/2014
Trial Between Beijing and Yangon	2014/8/1	30	8/30/2014
Channel Official Sanction	2014/8/31	1	9/1/2014



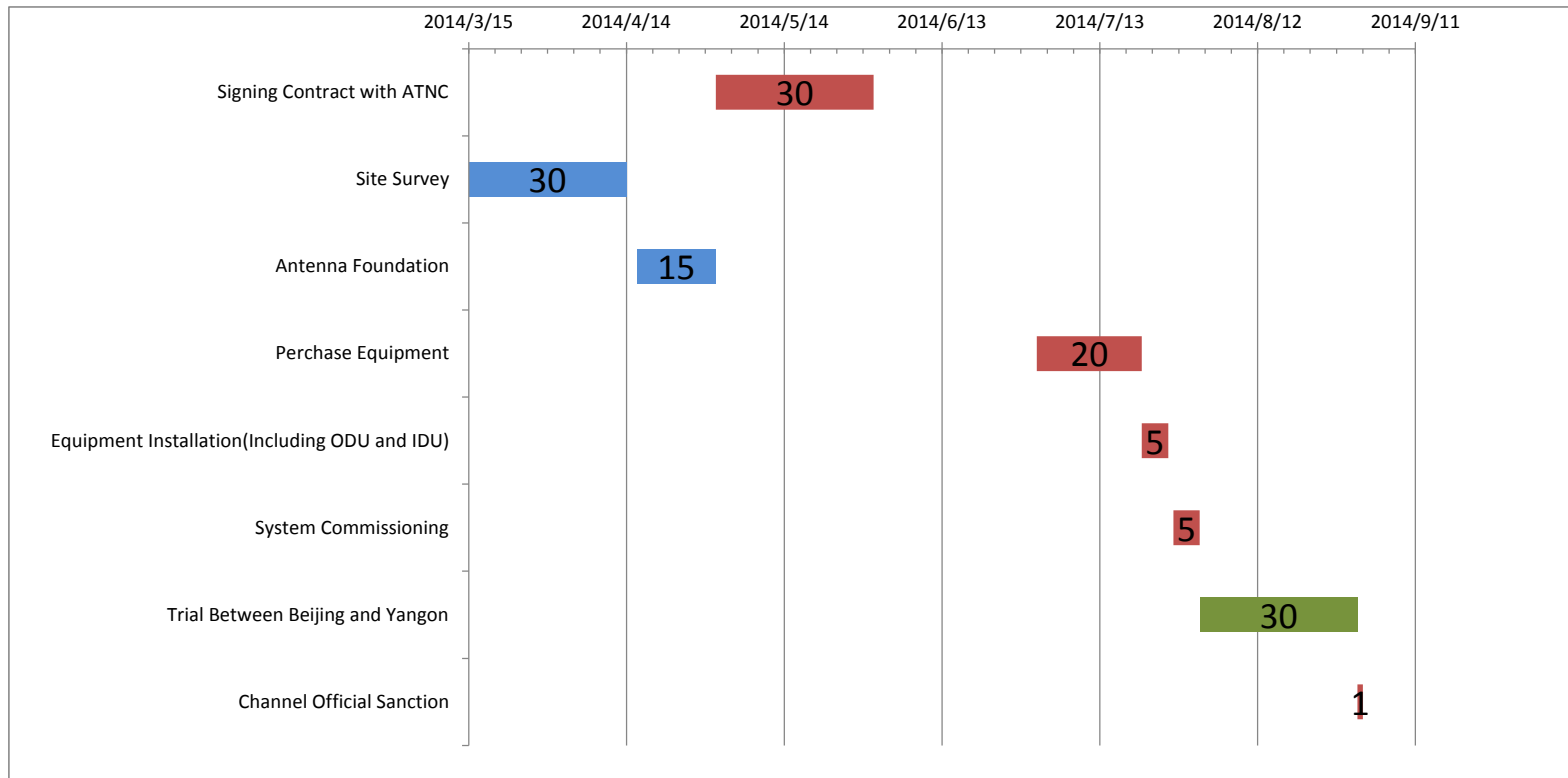
Annex 2 – Schedule on each site

Item	Starting Time	Execution Time(Days)	Finish Time
Signing Contract with ATNC	2014/5/1	30	5/30/2014
Site Survey	2014/3/15	30	4/15/2014
Antenna Foundation	2014/4/16	15	4/30/2014
Purchase Equipment(purchased via ATNC)	2014/7/1	20	7/20/2014
Equipment Installation	2014/7/21	10	7/31/2014
System Adjusting	2014/8/1	5	8/5/2014
Trial Between Beijing and Yangon	2014/8/6	30	9/5/2014
Channel Official Commissioning	2014/9/6	1	9/6/2014



Annex 3 – Schedule turn key

Item	Starting Time	Execution Time(Days)	Finish Time
Signing Contract with ATNC	2014/5/1	30	5/30/2014
Site Survey	2014/3/15	30	4/15/2014
Antenna Foundation	2014/4/16	15	4/30/2014
Perchase Equipment	2014/7/1	20	7/20/2014
Equipment Installation(Including ODU and IDU)	2014/7/21	5	7/26/2014
System Commissioning	2014/7/27	5	7/31/2014
Trial Between Beijing and Yangon	2014/8/1	30	8/30/2014
Channel Official Sanction	2014/8/31	1	9/1/2014



The model/type of the Huawei Terminal Equipment

Recommended List of Terminal Equipment for E1 circuit between Administration		
No	Model	Quantity
1	AR2220,3GE WAN (1GE Combo) Series Enterprise Router	Reference: http://www.huawei.com/en/products/data-communication/ar-routers/ar2200/index.htm
1.1	主机 – Main Board (Frame)	
	AR0M0022BA00	1
1.2	业务板卡 – processing card	
	AR0MSDME1A00	1
	AR0MSDSA2A00	1
	AR0MSVA4B1A0	1
	AR-8SA-W	1
	AR0MDD016A00	1
1.3	软件 - Software	
	LAR0VOICEE03	1
1.4	安装材料与外购件 – Additional installation material required	
	T-75-1-D9-3	1
	SS-DL-V24-DTE-3	8
	SS-DL-V24-DCE-3	2
	SS-DL-V35-DCE-3	2
	CAB-CC-BNC-75ohm	2

**COM Co-ordination Meeting
Chengdu, China
18 – 19 February 2014**

Attachment 1 to the Report

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INTERNATIONAL CIVIL AVIATION ORGANIZATION

COM CO-ORDINATION MEETING
 (People's Republic of China, Lao PDR, Nepal,
 Myanmar and Thailand)
 18 – 19 February 2014, Chengdu, China



LIST OF WORKING AND INFORMATION PAPERS

WP/IP No.	Agenda	Subject	Presented by
WORKING PAPERS			
1	-	Provisional Agenda	Secretariat
2	1	Relevant APANPIRG Conclusions	Secretariat
3	1	Review of AFS Requirements	Secretariat
4	3	Review Status of Beijing/Yangon AFS Data Circuit	Secretariat
5	2	Review Follow-up Actions to the Action Plan	Secretariat
6	2	Review Status of Beijing/Yangon and Beijing/Kathmandu Ground Line	China
7	2	Review Status of Beijing/Yangon Satellite Communication Channel	China
8	5	China ATN/AMHS Implementation Status Report	China
INFORMATION PAPERS			
1	-	Meeting Bulletin	Secretariat
2	2	AFS Implementation and Planning	Cambodia
3	7	Common Regional VPN (CRV) Task Force Brief Introduction	Thailand
4	5	Aerothai AMHS Implementation Plan and Status	Thailand
5	7	Introduction to CNS and ATCC Chengdu	China
6	7	Introduction to equipment of new ATCC	China