



International Civil Aviation Organization

**MIDANPIRG Communication Navigation and Surveillance
Sub-Group (CNS SG)**

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Agenda Item 5: Performance Framework for CNS Implementation in the MID Region

IMPROVING TEHRAN FIR VOICE COMMUNICATION

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SUMMARY

This paper proposes the explanation about the IMPROVING TEHRAN FIR radio coverage situation in respect of existent gaps or frequency noises in entry points in the South of IRAN and also the activities which have been done to improve radio coverage.

1. INTRODUCTION

1.1 TEHRAN FIR has been divided into fixed seven sectors and gates which two sectors and gates have been recently added to them that are used in traffic times. These sectors received their required information from the RCAG (Remote Communication Air Ground) network.

1.2 The frequencies of the above mentioned sectors are as below:

Sector 1:	119.3MHZ,
Sector 1/1:	132.5MHZ
Sector 2:	125.7MHZ
Sector 3:	126.9MHZ
Sector 4:	133.4MHZ
Sector 4/1:	128.1 MHZ
Sector 5:	120.3MHZ
Sector 6:	123.9MHZ
Sector 7:	120.7MHZ

1.3 At the moment, 25 fixed radio stations are active in the RCAG network. One of them is used as the back-up station and the other 24 stations are operational.

1.4 The communication infrastructure which is used to support the radio coverage of voice communications in TEHRAN FIR Air Traffic Control is a leased line with high safety and security.

2. DISCUSSION

2.1 The existent radio frequency gaps in TEHRAN FIR are as follows:

2.1.1 Through the route between BAHRAIN FIR and TEHRAN FIR, there is a 10 minutes weak quality radio communication before the ALSER check point, at low flight level height (MEA).

2.1.2 Through the route between BAHRAIN FIR and TEHRAN FIR, there is a 10 minutes weak quality radio communication before the MIDSI check point, at low flight level height (MEA). And BACK GROUND NOISE in MIDSI.

2.1.3 Through the route between EMIRATES FIR and TEHRAN FIR, there is a 10 minutes weak quality radio communication before the DARAX check point, at low flight level height (MEA).

2.2 As a primary contingency plan, in some selected RCAG stations, the VSAT terminals are being established as the back-up of the leased lines.

3. CONCLUSION

3.1 The first step to improve the weak quality radio and BACK GROUND NOISE was taken in sectors 4 and 4/1 which located in the south east of TEHRAN FIR (BAHRAIN neighborhood) with the frequency 133.4 MHZ, meanwhile ,the frequency 128.1 MHZ in ALSER & MIDSI check point has been recently added.

3.1.1 The back-up radio station which located in the LAR site in LARESTAN City, has been operational.

3.1.2 The radio station which located in the KISH site in south of IRAN was equipped to a high power transmitter and HSR (High Sensitivity Receiver) receiver in order to increase radio coverage.

3.2 The second step to improve the weak quality radio was taken in sectors 4 and 4/1 which located in the south of TEHRAN FIR (UAE neighborhood) with the frequency 133.4 MHZ in DARAX check point.

3.2.1 By the installation of new generation radios in network frequency of 133.4 MHZ, Offset Frequency was corrected.

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