



INTERNATIONAL CIVIL AVIATION ORGANISATION

WESTERN AND CENTRAL AFRICAN OFFICE

AFI SATELLITE NETWORK MANAGEMENT COMMITTEE MEETING

(22nd MEETING)

Lome, Togo, 15 to 19 December 2014

Agenda item 1: **Follow up of the conclusions and decisions of SNMC/21**
Development of a calibration center for AFISNET Test Equipment

(Presented by ASECNA)

SUMMARY

The purpose of this paper is to report to the meeting on the status of the study related to the implementation of the regional calibration center in WACAF / ICAO, called by SNMC/18, held in Ouagadougou, Burkina Faso, 01-04 June 2010

Reference:

SNMC 18 Decision 18/02

SNMC 19 Decision 19/04

SNMC 20 Decision 20/05

SNMC 21 Decision 21/06

I. BACKGROUND

The need of a common calibration center for AFISNET test equipment, in the WACAF region for the benefit of members States/Organizations was raised by Decision 18/02 of SNMC/18.

Decision 19/04 SNMC tasked ASECNA as Team Leader of the technical Team feasibility studies of this important regional project including conducting a cost-benefit analysis to be validated by the States/Organizations.

The first results of the study presented during the SNMC/20 , in Abuja, 8-12 October, 2012 indicated that the establishment in the WACAF region of a calibration center, based specifically on AFISNET Test Equipment (electromagnetic quantities devices), would certainly allow fairly significant time gains but was not economically viable.

Thus, it was asked to ASECNA to expand the scope of the calibration to the test equipment similar to those used for AFISNET.

So, the 21st SNMC meeting formulated the following decision:

That:

- SNMC member States/Organizations explore possible additional candidates for the calibration of test equipment similar to those used for AFISNET and forward no later than end of January 2014 their exhaustive expanded list of test equipment;
- Based on the additional data received, ASECNA pursue its effort in the development of the study for the implementation of the regional calibration center and to circulate by end of March 2014 a draft document on its feasibility for consideration by the joint Technical Team for AFISNET Evaluation and reengineering and possible inclusion in the external audit exercise;
- ICAO continue its assistance to the planning and implementation process.

The current paper presents the results of the study taking into account the new scope of the calibration.

II. PROGRESS OF THE STUDY

With this extension of calibration to the electrical and meteorological variables, it was inventoried in the WACAF region a total of 6361 measuring devices (1251 measuring equipment and 5100 meteorological sensors).

This equipment park consists of equipment belonging mainly to ASECNA and equipment provided by GCAA (Ghana) and Roberts FIR.

The information from NAMA (Nigeria) is still awaited as well as information from other states/organizations with test equipment similar to those used for AFISNET.

It should be noted that the study was carried out on the basis of the available measuring devices list.

For the assessment purpose, the team in charge of this study has been trained at LNE (Laboratoire National d'Essai et de Métrologie) in France and has carried out visits in similar laboratories.

These training and visits allowed assessing the needs and requirements relating to the establishment of a center of this wingspan which for its operation should comply with ISO 17025 standards.

II-1 NEEDS AND REQUIREMENTS

In accordance of the metrology standards and in particular the ISO 17025, the establishment of the calibration center requires:

- Building of premises in accordance with standards ;
- Personnel trained, qualified, authorized to metrology and enjoying protection against any influence that may call into question the reliability of the measurements ;
- stallion equipment connected to the international system in their domain ;
- proven and validated procedures and methods ;
- Certification and Accreditation.

On this basis, the following various costs were evaluated

II.2 FINANCIAL EVALUATIONS

- The investment cost (CAPEX) is estimated at 1 922 k € (1,259,013 KF CFA) with an amortization period of 10 years in average length ;
- The annual operating cost (OPEX) is estimated at 563 k € (368 900 KF CFA).

II.3 VIABILITY AND SUSTAINABILITY

To ensure the viability and sustainability of the center after its establishment, the following scenario can be envisaged:

- ASECNA finances the implementation of center ;
- The center will operate on its own financial resources from its services on behalf of the partners of the WACAF area.

The average cost to be applied would be 204 000 F CFA (€ 312) per calibration (This represents 30% of external benefit cost) and a 15-day waiting period.

This assessment is based on the estimated amortization of the immobilizations and the annual operating expenses.

Moreover, the average cost of a calibration applied by external service providers is 400 000 F CFA (€ 611) per calibration and a maximum delay waiting more than 60 days and 700 000 F CFA (1069 €) per calibration, if the delay waiting is less than 60 days (See ASECNA Data Base).

Taking into account the waiting delay of calibration operations, then it is clear that each partner will make a 500 000 CFA economy (€ 763) per calibrated equipment.

III. CONCLUSION

This study indicates that with the establishment of this center, there will not be only a reduction of the waiting time of calibration operations, but also a considerable gain in financial terms with a return on investment after eight (08) years.

Action by the meeting

The meeting is invited to:

- Take note of the information provided in this working paper ;
- Request the SNMC partners that have not done so to provide the measuring devices information ;
- Encourage ASECNA and the other SNMC members to pursue and implement the calibration center for the benefit of WACAF region.