

TECHNICAL SPECIFICATION FOR THE MESSIR-VISION SOFTWARE UPGRADE

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1. GENERAL PART

This document shall define the technical requirements for the purchased aeronautical meteorological MESSIR system software upgrade packages with an upgrade service and manufacturer's support, in order to ensure the high-quality provision of meteorological information to the aeronautical meteorological service recipients, thereby ensuring flight safety. The software upgrade is planned to take place at the Lithuanian Hydrometeorological Service under the Ministry of Environment, Vilnius.

1.1 Terms

1.1.1. In this specification, the Lithuanian Hydrometeorological Service under the Ministry of Environment (hereinafter referred to as the "Service") shall be referred to as the "Contracting Authority/Buyer", and the provider of the upgrade services shall be referred to as the "Supplier".

1.1.2. All requirements arising from the use of the word "must" shall be mandatory.

1.1.3. The words "must be available" shall be used to describe the mandatory technical requirements for the features or functions of the procured services, where the method of use shall be chosen by the Contracting Authority, or the use of which shall be envisaged by the Contracting Authority in the future, i.e. after providing the software upgrade services.

1.2 General Requirements

1.2.1. The Supplier shall provide packages for upgrading the MESSIR system software to the latest version, and shall upgrade the MESSIR system software available to the Buyer from Corobor Systems, which shall be installed in a virtual environment and on 3 computerised weather stations.

1.2.2. In the virtual environment, the Supplier must upgrade the following components of the system software to the latest versions:

Name	Amount
MESSIR-COMM	1 pc.
MESSIR-NET	1 pc.
MESSIR-VISION with Pilot Met briefing	1 pc.

1.2.3. On the computerised weather stations, the Supplier must upgrade the available MESSIR-VISION software with the Flight Folder module to the latest versions:

Name	Amount
MESSIR-VISION with Flight Folder	3 pcs.

1.2.4. The software versions of the MESSIR system to be upgraded by the Supplier must not impair the functionality of the existing system. The software must be the same, or better than, the one that is currently available.

1.2.5. The upgraded system must be technologically functional, according to the principle of "24 hours per day, 7 days per week, 365 days per year".

1.2.6. The upgraded software licences for the MESSIR system must not limit the ability for the software to be modified in the future.

1.2.7. The upgraded MESSIR system software licences must be issued for an indefinite period of time and must have the other necessary permissions to use the software, regardless of whether or not a maintenance service has been purchased from the software Supplier.

1.2.8. The upgraded MESSIR system must be designed and implemented in such a way that will make it flexible for future modifications – changes in the functionalities of one or more functional areas must not be a reason for redesigning the entire MESSIR system.

1.2.9. The Supplier must provide the Buyer with a Windows server 2019 Standard Edition operating system licence or an equivalent operating system licence.

1.2.10. The Supplier must provide the user with manuals and technical documentation for the latest version of the upgraded system in English.

1.2.11. The upgraded MESSIR system must comply with the following ICAO, WMO and EU documents: World Meteorological Organisation (WMO) No. 386 (Manual on the Global Telecommunication System); World Meteorological Organisation (WMO) No. 306 (Manual on Codes); International Civil Aviation Organisation (ICAO) Annex 3 (Meteorological Services for International Air Navigation) and its latest amendments; EUMETSAT TD15; SADIS (Secure Aviation Data Information System) User Manual; Worldwide Area Forecast System (WAFS) Internet File Server (WIFS) User Guide; ICAO Guidelines for the Implementation of OPMET Data Exchange using IWXXM Format in the European Region (EUR Doc 033), Commission Implementing Regulation (EU) No. 2017/373.

1.2.12. The Supplier undertakes to provide the MESSIR system software upgrade packages, and to provide all services related to the system upgrade no later than 120 calendar days after the entry into force of the contract, including a maximum of 20 calendar days required for the system testing.

1.2.13. The Supplier undertakes to provide declaration of conformity use of an EATMN Constituent of the upgraded MESSIR system software according Regulation (EU) 2018/1139 of the European Parliament and of the Council Annex VIII (8).

2. TECHNICAL REQUIREMENTS

2.1. The components of the Supplier's upgraded MESSIR system software: MESSIR-COMM, MESSIR-NET and MESSIR-VISION with the Pilot Met briefing module, must run in the Buyer's VMware virtual environment with a 64-bit Windows operating system.

2.2. The MESSIR-VISION software with the Flight Folder module being upgraded by the Supplier for 3 weather stations must work with the 64-bit computer workstations and Windows 10 operating systems available to the Buyer.

2.3. The upgraded MESSIR system must maintain the existing server-client architecture.

2.4. The visualisation of the upgraded MESSIR system software must not differ from the existing system.

2.5. The upgraded MESSIR system's meteorological data editing, visualisation and product development functions must not differ from the current system.

2.6. The upgraded MESSIR system must work with the data of the external meteorological information sources in the existing system listed in Table 1, and must process that data, display it and provide the user with the possibility to edit the MESSIR-VISION weather stations.

Table 1. MESSIR system data sources

No.	Abbreviated data	Nature of the data
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	Source name	
1.	ECMWF	Digital weather forecasts and other products
2.	HARMONIE	Digital weather forecasts and other products
3.	EUMETSAT	Satellite data
4.	SADIS	Aviation meteorological data
5.	DWDSAT	Meteorological data
6.	RETIM	Aviation meteorological and meteorological data
7.	MET radars	Meteorological radar data
8.	LTS2005	Lightning discharge data
9.	EUROCONTROL	Flight plans received via AFTN/AMHS

2.7. The upgraded MESSIR systems, in the MESSIR-COMM software section, must have the existing system communication interfaces (circuits).

2.8. The upgraded MESSIR system must have a mechanism that will enable the performance of configurations, database backups and restores.

2.9. The upgraded MESSIR system must have the means to allow its administrator to restore the system configuration to the original (factory) settings, save the current configuration and restore that configuration.

2.10. The upgraded MESSIR system must have a mechanism that will provide for the possibility to automatically clean (delete) data from the database, in order to avoid a disk space overflow. This mechanism must be configured according to the types of data that are stored.

2.11. The upgraded MESSIR system must have a function for archiving ready-made products for a pre-determined time of at least one month.

2.12. Individual accounts and passwords must be used to access the upgraded MESSIR system.

2.13. The database of the structures containing the global aerodrome indices, FIR, WMO meteorological station data, etc., must be upgraded on the basis of the latest ICAO and WMO documents in force at the time of the upgrade.

2.14. The upgraded system must have user settings for the current system, as well as product settings, colour scale settings, map templates, etc.

2.15. The upgraded MESSIR system must not use outdated and unsupported technologies (e.g. Adobe Flash Player) to perform any functions, present data and display data.

2.16. In the upgraded MESSIR system, it must be possible to install additional MESSIR system modules and to install additional system functions, if necessary.

3. REMOTE SERVICES

3.1 Upgrade Work

3.1.1. The MESSIR system software upgrade work must be performed remotely by the Supplier, using a special remote access tool created by the Buyer.

3.1.2. The remote work of upgrading the MESSIR system software must be performed under the virtual supervision of the administrator of the existing system.

3.2 Technical Documents

3.2.1. All upgraded MESSIR system technical documents must be submitted in the English language.

3.3 Testing and Acceptance

3.3.1. The Supplier must draw up and agree with the Buyer on a Testing Program. Tests must be performed after a complete upgrade of the MESSIR system, in the presence of the Buyer and in accordance with the requirements of the Testing Program.

3.3.2. All the test results must be submitted and signed by the Supplier and the Buyer.

3.3.3. Only after the MESSIR system software packages have been completely updated, and all the necessary tests have been performed, shall the Deed of Transfer and Acceptance be signed.

3.4 Warranty

3.4.1. The Supplier shall provide the Buyer with an 18 months warranty for the upgraded MESSIR system from the date of its acceptance.

3.5 Software Support

3.5.1. The Supplier must undertake to provide the Buyer with support and upgrades for the upgraded MESSIR system software free of charge during the warranty period, in the case of changes in the ICAO or WMO standards and recommendations, as well as for bug fixes related to the upgraded system.

3.5.2. The Supplier must provide technical support by a remote connection and e-mail within the term specified in Clause 3.5.1. The response time to such technical issues must not exceed 24 hours (during business days).