

Federal State Unitary Enterprise
“The All-Russian Research Institute of the Metrological Service”
(FGUP «VNIIMS»)

APPROVED BY

Director of FGUP “VNIIMS”

_____ **S.A. Kononogov**

«__» _____ **2008**

VOLUNTARY CERTIFICATION SYSTEM
OF SOFTWARE FOR MEASURING INSTRUMENTS AND
INFORMATION-MEASURING SYSTEMS

RULES OF OPERATION

(Second Edition)

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Voluntary certification system of software for measuring instruments and information-measuring systems	Rules of Operation
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Registration No _____

Date « ___ » _____ 200__.

INTRODUCTION

The present Rules of Operation of the Voluntary certification system of software (SW) (software products (SWP) for measuring instruments (MI) and information-measuring systems (IMS) (hereinafter referred to as the System) established by the “All-Russian Research Institute of the metrological service” (FGUP “VNIIMS”) (119361, Moscow, G-361, Ozernaya Str., 46) determine: a list of objects subject to voluntary certification; certification requirements; organization structure of the System and functions of its participants; working rules for voluntary certification. The rules are applicable to legal bodies, sole proprietors, federal testing centers of measuring instruments, testing centers and laboratories, and to any other subjects of Russian and international civil legislation that develop, use or test software (software products) of measuring instruments, information-measuring systems, devices with measuring functions and control systems, and who wish to confirm their conformity with the requirements of:

GOST R ISO/MEC 17025-2000 “General requirements for the competence of testing and calibration laboratories”;

GOST R 8. 596-2002 “GSI. Metrological assurance for measuring systems. General principles”;

Regulations on licensing of activities involving production and sale of special gaming equipment intended for gambling business (approved by the decree of the Government of the Russian Federation, October 06, 2006, No. 603);

Metrology Regulations PR 50.2.023 – 2000 “GSI. Regulations for type approval testing of gaming machines with monetary winnings and for inspecting them for conformance to the approved type”;

Recommendations MI 2891-2004 “GSI. General requirements for software of measuring instruments”.

In addition to that, the above software (software products) may be tested for conformity with the following requirements:

GOST R ISO/MEC 12199-2000 “Information Technology. Software packages. Quality requirements and testing”;

Current GOST standards of the “Uniform system of software documentation”;

GOST R 34.11-94 “Information Technology. Cryptographic protection of information. Hashing function”;

GOST R 34.10-2001. “Information Technology. Cryptographic protection of information. Processes of generation and verification of electronic digital signatures”;

and other regulations of Russian and international law, conformity with which is necessary for the proper use of software (software products) .

Software regulations are hereinafter referred to as SR.

1. GENERAL PRINCIPLES

1.1. The System has been developed to establish conditions that ensure software conformity with the requirements for software of measuring instruments, information-measuring systems, devices with measuring functions, and control systems, as regulated by SR.

1.2. The requirements for software for measuring instruments and information-measuring systems (hereinafter referred to as MI&IMS software), established by

SR, conform to the requirements found in the documents of international metrology and standardization organizations: WELMEC Guide 7.2. Software Guide (Measuring Instruments Directive 2004/22/EC), KOOMET Recommendation R/LM/10:2004 “Software of measuring instruments. General technical requirements”, OIML Recommendation D-SW 0.11 “General requirements for software of measuring instruments.”

1.3. Terms, concepts, and definitions used in the present document conform to the Federal law "On technical regulation", the law of the Russian Federation "On measurement assurance", GOST R 8.596-2002, and Recommendations MI 2891-2004.

1.4. The certification procedure makes confidentiality provisions for commercial classified information.

1.5. Conformance evaluation methods used during the certification procedure are based on international rules and regulations, which allow to determine the conformance of MI&IMS software to the requirements of SR with sufficient reliability.

2. LIST OF OBJECTS SUBJECT TO VOLUNTARY CERTIFICATION AND THEIR CHARACTERISTICS

2.1. Objects subject to voluntary certification are:

- software of measuring instruments, both standalone and built-in;
- software of measuring and information-measuring systems;
- software of controllers and computing units not included into information-measuring systems;
- software of automated control systems which use measuring equipment or elements of measuring systems;
- software of training simulators and other simulation systems;
- software used for modeling of technological processes, mathematical modeling, and other kinds of modeling;

- software for transmitting, storing, updating, protecting, accessing and using measuring, computational and other information;
- software for devices with measuring functions, such as gaming machines (including park amusement facilities and gambling machines with monetary winnings), totalizers, virtual games, pay terminals, etc.

2.2. Every item in the list of software submitted by the applicant for voluntary certification should include the following information:

- description of software design and functions, including data processing sequence;
- description of software functions and parameters, which are subject to metrological control (in accordance with Recommendation MI 2891-2004);
- description of computing algorithms used in the software and their program flowcharts;
- description of software modules;
- list of interfaces and commands for every interface, including a declaration of their completeness;
- list, values, and functions of all commands received from the keyboard, mouse, and other input devices;
- description of the employed methods for software identification;
- description of the employed methods for software and data protection;
- description of user interfaces, all menus and dialogs;
- description of stored or transmitted data sets;
- user's manual;
- required system and hardware characteristics, if this information is not included in the user's manual;

2.3. The list of documents accompanying software can be adjusted by agreement between the executive and the client of software certification.

2.4. Graphic and text information in the documentation should be designed to provide complete and unambiguous understanding.

2.5. Characteristics of MI&IMS software, subject to the procedure of voluntary assurance of conformance, are characteristics, quantitatively or qualitatively representing software requirements established by SR, viz.:

- a) structure requirements, i.e. for the isolation of parts subject to metrological control/inspection, and for the presence and correct functioning of protected interfaces;
- b) identification requirements;
- c) protection requirements for measuring information and other stored and transmitted information;
- d) conformance requirements of characteristics to those established and assigned to software during the type approval testing of MI and other devices;
- e) requirements for the extent of influence of measuring instruments, information-measuring systems, devices with measuring functions, and automated control systems on metrological and information characteristics;
- f) requirements for accessibility, integrity and privacy of transmitted and processed information.

2.6. To guarantee software conformance to the requirements established by the System at any time of the applicant's activity, the organization should set up a documented Quality Control System of MI&IMS software.

3. STRUCTURE OF THE VOLUNTARY CERTIFICATION SYSTEM OF SOFTWARE FOR MEASURING INSTRUMENTS AND INFORMATION-MEASURING SYSTEMS AND FUNCTIONS OF ITS PARTICIPANTS

3.1. Diagram of the System's organization structure is supplied in Appendix 1.

3.2. The organization that has established the System is FGUP “VNIIMS”, which developed GOST R 8.596-2002 “GSI. Metrological assurance for measuring system. General principles”, Metrology Regulations PR 50.2.023 – 2000 “GSI. Regulations for type approval testing of gaming machines with monetary winnings and for inspecting them for conformance to the approved type”, and

Recommendations MI 2891-2004 “GSI. General requirements for software of measuring instruments”, MI 2955-2005. “GSI. Standard certification methodology for software of measuring instruments and its procedure” and MI 3017 – 2006 “GSI. Gaming machines with monetary winnings. Methods and the examination procedure of gaming software to detect hidden software capabilities.”

3.3. The Certification Body is the Autonomous Noncommercial Organization "Interregional Testing Centre" (ANO “ITC”), which is a legal entity having its seal, stamp, and bank account.

Bank details of the Certification Body are listed in Appendix 2.

3.4. The organization that established the System performs the following functions:

- develops and approves the System's Rules of operation, the conformity mark and its use, and other documents of the System;
- considers controversial questions that may arise during the System's activities and makes decisions on them;
- prepares experts of the System.

3.5. In accordance with article 21 of the Federal law “On technical regulation”, the Certification Body:

- confirms the conformity of the voluntary certification objects. If necessary, it establishes or contracts testing laboratories, where it organizes software testing according to the methods agreed with the client;
- issues Certificates of conformity for objects which have passed voluntary certification;
- confers the right on the applicant to use the conformity mark;
- suspends or cancels the validity of its Certificates of conformity;

3.6. Testing laboratories perform the following functions:

- carrying out software testing in accordance with the methods agreed with the client;
- preparing test results using appropriate reports, based on which the Certification Body makes a decision on issuing, or refusing to issue, its Certificate of conformity;

4. WORKING RULES SET BY THE VOLUNTARY CERTIFICATION SYSTEM OF SOFTWARE FOR MEASURING INSTRUMENTS AND INFORMATION-MEASURING SYSTEMS

4.1. Certification of software (software products) under the System includes:

- submitting an application for certification;
- making a decision on the application for certification, including the appointment of experts (from among experts of the Certification Body) to carry out main certification activities;
- drawing up a contract for certification activities;
- conducting certification inspection of software, including, if needed, testing of software according to methods agreed with the client;
- making a decision on the issuance of the Certificate of conformity and authorization to use the conformity mark or on the refusal to issue the Certificate of conformity;
- issuing the Certificate of conformity and conferring the right to use the conformity mark;
- registering the applicant/manufacturer of the software product and the list of the certified software in the System's Register;
- conducting supervisory inspections of software;

4.2. When developing methods of certification tests for MI&IMS software, the following software regulations can be used:

GOST R 8. 596-2002 “GSI. Metrological assurance for measuring system. General principles”;

GOST 28195-99 “Software quality evaluation. General principles”;

GOST R ISO/MEC 12199-2000 “Information Technology. Software packages. Quality requirements and testing”;

and recommendations:

R 50.2.004-2000 “GSI. Determination of the characteristics of mathematical models of relations between physical quantities when solving measurement problems. General Principles”,
MI 2955-2005. “GSI. Standard certification methodology for software of measuring instruments and its procedure”,
MI 3017 – 2006 “GSI. Gaming machines with monetary winnings. Methods and examination procedure of gaming software to detect hidden software capabilities”;
MI 2174-91. “GSI. Certification of data processing algorithms and programs during measurements. General Principles”,
MI 2517-99. “GSI. Metrological certification of software of measuring instruments used to measure parameters of physical objects and fields, using computer programs that generate digital test signals”,
MI 2518-99. “GSI. Metrological certification of algorithms and programs that generate digital test signals”, etc.

4.3. Applicants/software manufacturers, who develop, implement and/or use MI&IMS software and wish to confirm its compliance with the relevant requirements of software regulations, submit an application to the Certification Body according to the form, supplied in Appendix 3.

4.3.1. A list of documents submitted for certification should be made in accordance with the requirements listed in p.2.2. of the present Rules.

4.3.2. The standards that regulate an organization’s internal control procedures for MI&IMS software should include, as the minimum:

- a concrete description of conducted control procedures of MI&IMS software, their frequency, executive and responsible officers;
- methods employed to determine the characteristics of MI&IMS software;
- documentation procedure of MI&IMS software control results;
- measures that will be taken if violations of MI&IMS software requirements are found.

4.4. An application for certification is registered in the applications log. After that, the chief expert examines documents submitted with the application and a decision on certification, or its refusal, is made.

Refusal is possible if the presented documents reveal the applicants' lack of preparation for confirming the compliance of software (SWP) developed (used) by them with the requirements of SR.

4.5. If the decision is positive, a contract for certification work is concluded and the experts committee is appointed. The number of experts in the committee should not exceed three.

4.5.1. Committee experts examine the compliance of software submitted for certification with the requirements of SR. If necessary, the experts participate in software (SWP) testing as part of the testing laboratories organized by the Certification Body, in accordance with the testing methods agreed with the client.

4.5.2. According to the decision of the Certification Body head, the certification committee can consist of both experts of the Certification Body and experts of third party organizations.

4.6. The certification inspection can be carried out either at the applicant's site or in any other organization, according to the terms of the contract between the Certification Body and the applicant.

4.6.1. During the inspection the committee:

- examines the reliability of information presented in the appendices of the certification application;
- examines the contents of control logs of MI&IMS software submitted for certification;
- examines measures taken by the applicant if MI&IMS software requirements are violated;
- checks MI&IMS software compliance with the SR requirements;
- if the software (SWP) has been tested, the committee examines testing laboratories' reports made according to test results.

4.6.2. According to the inspection results, the committee makes an inspection report which serves as the foundation for the decision on whether the Certificate of Conformity should be issued or not.

The negative inspection report should contain exhaustive, well-grounded explanations proving the failure of MI&IMS software to conform to the SR requirements.

The positive inspection report, which results in issuing the Certificate of Conformity for MI&IMS software submitted for certification, can contain remarks and identified faults and recommendations for their elimination.

4.6.3. The inspection report signed by all members of the expert committee is handed over to the Certification Body:

in case of the positive decision, the Certificate of Conformity is issued;

in case of the negative decision, the official well-grounded refusal to issue the Certificate of Conformity is made.

4.7. The Certificate of Conformity should be issued within the period of no more than 10 days since the time the inspection report has been handed over to the Certification Body. The list of MI&IMS software characteristics, made in accordance with p.2.5 of the present document and corrected according to the results of the certification inspection, is an integral part of the Certificate of Conformity.

4.8. The Certificate of Conformity confers the right to place the Conformity Mark (mark “TIII” (software product)) on documentation which accompanies MI&IMS software and is an appendix to the Certificate of Conformity.

4.9. The validity term of the Certificate of Conformity depends on the certification inspection results, but should be no more than 3 years.

4.10. The Certification Body enters certificates for MI&IMS software as well as information about the software applicant/manufacturer who has developed (or is using) the software, in the System’s Register.

4.11. During the validity period of the Certificate of Conformity, the Certification Body carries out supervisory inspections of the certified software compliance with the established requirements.

4.11.1. The supervisory inspection routine and its time are stipulated in the contract between the Certification Body and the software applicant/manufacturer who has passed the certification procedure.

4.11.2. The subject of the supervisory inspection is identical to the certification inspection carried out in accordance with p.4.6.1 of the present document.

4.11.3. The supervisory inspection report is issued on the basis of supervisory inspection results. This report should contain information about the work made by the committee and its results, as well as either a conclusion about the compliance of the certified product with the established requirements or a suggestion to suspend or cancel the validity of the Certificate for certain kinds of MI&IMS software.

Supervisory inspection report can have expert committee's remarks and suggestions for the elimination of identified faults, as well as recommendations to improve the software applicant/manufacturer's practice to ensure the compliance of the MI&IMS software with the established requirements.

4.11.4. The supervisory inspection report is handed over to the Certification Body. In case of the positive report, the Certification Body documents the fact of the conducted supervisory inspection in the System's Register. In case of the negative report, the Certification Body makes a decision to suspend or cancel the Certificate of Conformity.

The Certification Body notifies the software applicant/manufacturer who underwent the supervisory inspection and makes corresponding changes to the System's Register.

4.11.5. Suspending or cancelling the Certificate of Conformity means prohibition to use the conformity mark (mark "III") on MI&IMS software documentation. Using the conformity mark "III" in this case is considered to be misrepresentation and can result in sanctions imposed under the current legislation.

5. TERMS OF PAYMENT FOR WORK

5.1. Payment for certification is effected under the contracts concluded between the Certification Body and the applicant.

5.2. The cost of certification depends on the amount and scope of certification activities.

6. PREPARATION OF CERTIFICATION RESULTS

6.1. The result of the certification for compliance with the SR requirements is the Certificate of Conformity (Appendix 4). Its integral part is the Appendix to the Certificate of Conformity, which contains the list of MI&IMS software characteristics covered by this Certificate (Appendix 5). It is issued on a special form by the Certification Body.

6.2. The Certification Body hands over (delivers) the Certificate of Conformity together with the Appendix to the Certificate to the software applicant/manufacturer who has passed the compliance confirmation procedure.

6.3. The Certificate of Conformity is in valid on all territory of the Russian Federation.

6.4. The Certification Body keeps a copy of the Certificate of Conformity with the Appendix in the File of the software applicant/manufacturer who has passed the certification procedure of the System.

The following documents are also kept in the File:

- the application submitted by the applicant, with appendices;
- a copy of the contract for certification work and a copy of the acceptance certificate;
- the certification inspection report;
- identification parameters of the certified software for use during supervisory inspection;
- supervisory inspection reports.

6.5. If any details of the SWP applicant/manufacturer holding the Certificate of Conformity are changed, the Certificate of Conformity can be reissued with alterations to the System's Register, based on the contract between the applicant and the Certification Body.

7. USE OF THE CONFORMITY MARK

7.1. The System's mark confirming the compliance with the SR requirements is the mark "III". Its shape and dimensions are supplied in Appendix 6.

7.2. Software manufacturers/applicants holding the Certificate of Conformity have the right to place the conformity mark "III" on the documentation accompanying MI&IMS software.

7.3. According to the Federal law "On technical regulation", objects whose compliance is not confirmed by the System are not permitted to be marked with the System's conformity mark.

7.4. Marking the conformity mark "III" on software which has not passed the Certification is considered to be misrepresentation and can result in sanctions imposed under the current legislation.

8. PROCEDURE FOR MAINTAINING THE REGISTER OF THE VOLUNTARY CERTIFICATION SYSTEM OF SOFTWARE FOR MEASURING INSTRUMENTS AND INFORMATION-MEASURING SYSTEMS

8.1 The Certification Body keeps the System's Register.

8.2 The Register consists of four parts:

8.2.1. Experts of the System

The following details about experts are entered in the Register: their surname, name and patronymic; their position/rank/academic degree; the name of the certified testing laboratory (if the expert is an employee of the laboratory); the number, date of issue and date of expiry of the expert's certificate.

8.2.2. Certified testing laboratories of the System

The following data is entered in the Register: the name of the testing laboratory; its postal and legal address; tel./fax number; email; surname, name and patronymic of the laboratory head; certification type; laboratory registration number within the System; date of issue and date of expiry of the certificate.

8.2.3. Software products certified in the System

The following data is entered in the Register: serial number in the System; name of the certified software, its identification information; name of the software applicant/manufacture; name of the testing laboratory where the software has been tested; certificate number; date of issue and date of expiry of the certificate.

8.2.4. Applicants/manufacturers of software products certified in the System.

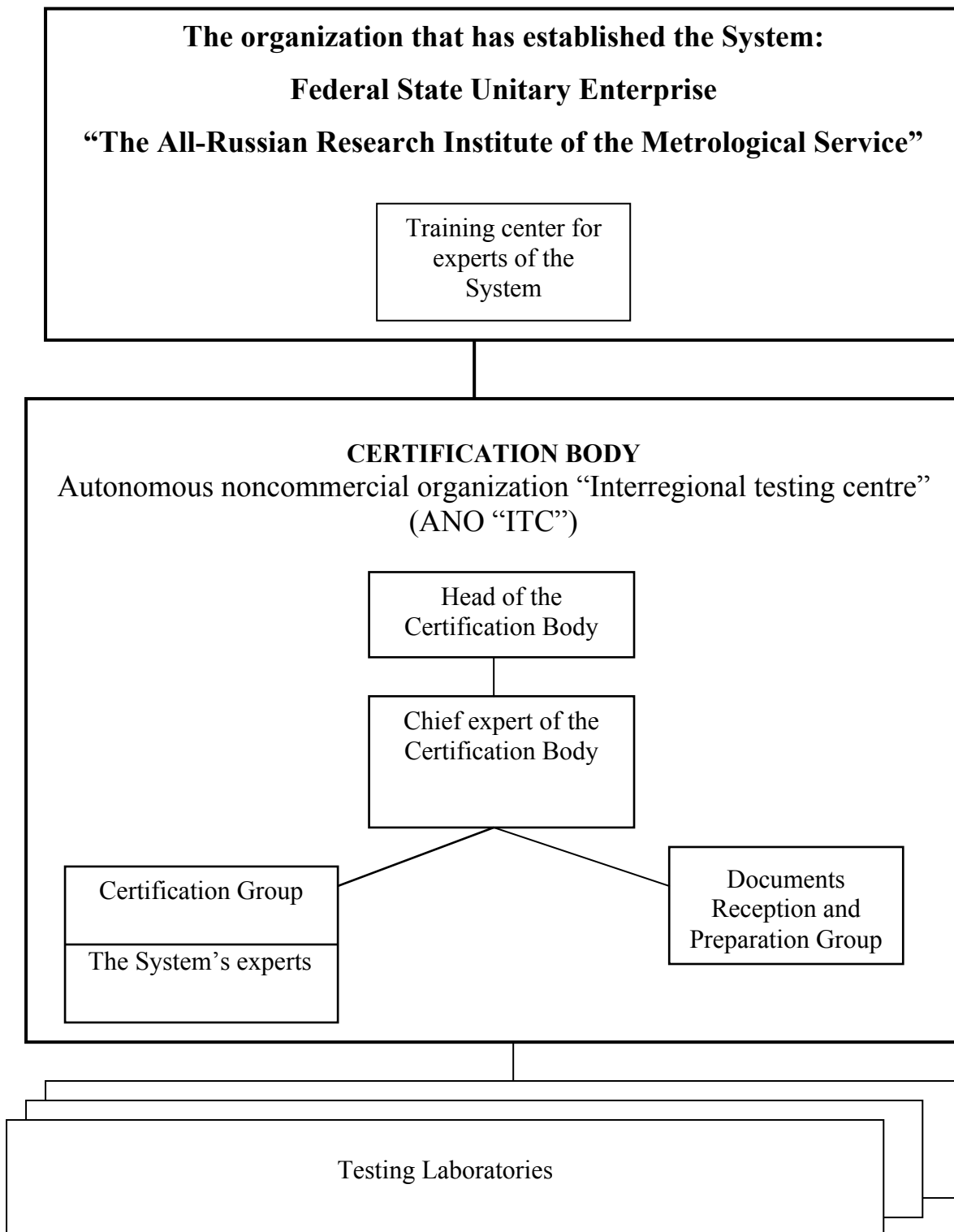
The following data is included in the Register:

name of the SWP applicant/manufacture; their postal and legal address; tel./fax number; email; surname, name and patronymic of the organization's head.

8.3. Any changes to the information entered in the System's Register are documented in the System's Register.

8.4. Any information in the System's Register is publicly available.

Diagram of the organization structure of the Voluntary Certification System of software for measuring instruments and information-measuring Systems



Details of the Certification Body of the Voluntary Certification System of software for measuring instruments and information-measuring systems

Legal address:

124489, Moscow, Zelenograd, building 601-a, 2nd floor

ANO "ITC"

Postal address: 127434, Moscow, Dmitrovskoye shosse, 11.

ANO "ITC"

3. Bank details:

TIN (Tax-payer Identification Number) 7735505963,

KPP 773501001

Account number 40703810338150104825 in OSB 7954 Zelenogradskoye

Sberbank of Russia, Moscow

BIC (Russian Central Bank Identification Code) 044525225

C/A (Correspondent account) 30101810400000000225

4. Head of the Certification Body:

Shestakov Andrey Vitalyevich

Contact tel.: +7 (495) 976-14-28, +7 (495) 976-22-20

Chief expert of the System:

Kudeyarov Yury Alekseyevich

Contact tel./fax: +7 (495) 781-48-98

Application form for the certification of software for measuring instruments and information-measuring systems

« _ » _____ 200 _

To: Head of the Certification Body of
The System of Voluntary Certification
Of Software for MI and IMS

From: _____
name of the applicant organization

APPLICATION

We ask you to certify software _____,
name of software (software product)

developed (used) by our company to confirm its compliance with the SR requirements.

The list of documents presented by us for the certification is made according to the requirements of p.2.2 of the “Rules of Operation of the Voluntary Certification System of software for measuring instruments and information-measuring systems” for the compliance with SR and supplied in Appendix 1.

In _____
name of the applicant organization

has been established a control system of software for measuring instruments, information-measuring systems and automated control systems. Organization standards regulating this activity are listed in Appendix 2.

We know the System’s rules of functioning and undertake to follow them.

We shall pay all the expenses related to the certification procedure regardless of its result.

In case of the positive result we undertake: to use the conformity mark only on the software documentation which is an appendix to the Certificate of Conformity; to pay for the supervisory inspections to confirm the certified software compliance with the established requirements.

- Appendices: 1. Documentation list for the software submitted for certification.
2. Standards to control software for MI and IMS
3. Legal and postal address, bank details, contact tel./fax.

Head of the applicant organization

_____ signature _____ full name

Chief accountant

_____ signature _____ full name

Stamp

The System Certificate of Conformity form

VOLUNTARY CERTIFICATION SYSTEM OF SOFTWARE FOR MEASURING INSTRUMENTS AND INFORMATION-MEASURING SYSTEMS

Registration No _____



CERTIFICATE OF CONFORMITY

No _____

Valid until «__» _____ **200_** г.

Certification Body:

Software (software product) _____

software name

belonging to

name and legal address of the organization

is in compliance with the requirements of software regulations _____

name of regulations

name of the organization

has the right to use the mark “ПН” on the documentation accompanying software, characteristics of which are listed in the appendix which is an integral part of the present Certificate.

The certification is conducted in accordance with the “Rules of Operation of the Voluntary Certification System of software for measuring instruments and information-measuring systems”.

Head of the Certification Body

signature

full name

Stamp

«__» _____ **200_** .

Form of the Appendix to the Certificate of Conformity

APPENDIX
TO THE CERTIFICATE OF CONFORMITY No _____

Software (Software product):

 software name

belonging to

 name and the address of the legal body

1.

 software characteristics

2.

 software characteristics

3.

 software characteristics

4.

 software characteristics

5.

 software characteristics

Head of the Certification Body
 signature _____ full name _____

Expert (s):
 signature _____ full name _____
 signature _____ full name _____

Stamp
 « __ » _____ 20__.

The certification is conducted in accordance with the “Rules of Operation of the Voluntary Certification System of software for measuring instruments and information-measuring systems”.

The certificate of conformity is in force in the whole territory of the Russian Federation

