

Annex № 6 to the tender documentation

Submits for approval

METHOD OF UPGRADING PRODUCTS 65s30 switching center by introducing operation of the product 83t099

Contents

Introduction

This technique determines the order of conversion switching centers Message (SCC) of existing products in 65s30 upgraded switching centers Message (CCS-M) through the introduction of product operation, 83t099 (UIAV.468363.009) and includes:

General provisions (principles of modernization);
list of major works;
commissioning;
application of the tests.

The technique provides for the modernization with minimum damage
To validate the existing product 65s30 during these work.

This technique should be guided by all the organizations and the DoD industry - members of the modernization of the date of the contracts before I upgraded facilities in operation.

1. General Provisions

1.1. Modernization of existing products 65s820, 65s834, 65s965 (communications switching centers - CFB) is performed separately for each TTSKS and for each module GTSKS products with 65s30 enable organizations using CFB-M of paths data transfer, a certain "technical requirements for adjustment existing design documentation for the product 65s834, 65s820 and 65s965 65s30 products and adjustment (output) design documentation for the control point 65s30 products, switching center and control point products 83t7.

1.2. Upgraded products assigned an "CFB-Mhh" where xx - center number, passed in the current product 65s30, for example, GTSKS-M № 1, TTSKS-M № 3 and etc.

1.3. Modernization of existing CFB 65s30 products include:

- Replacement of the switching equipment of existing centers for product 83t099 (UIAV.468363.009);
- The exclusion of certain types of equipment of existing centers;
- Installation of new or additional equipment on the transmission channels certain areas of communication (signal conversion devices, equipment ZAS, converters joints, etc.);
- Production (deployment), CFB-M on customer sites;
- Stand-alone test equipment and commissioning of CFB-M in the current product 65s30.

Functional diagram of hardware connections 83t099 products when upgrading CFB 65s30 products contained in the annex number 1.

1.4. The equipment from the existing centers, which can be used

965 - ch (1)
83a - ch (1)
820 - ch (old)

for modernization are:

equipment transmission channels, including security equipment (ZAS), signal conversion unit (UPS), telegraph plant (TSU), linear filters;
cables;
equipment supply;
technological communication apparatus;
accessories;
operational documents to the techniques employed;
elements of the ISP, instrumentation and tools.

Newly introduced equipment modernized complex is assumed placed as close as possible to keep production.

The equipment of existing centers, to be replaced in the product include 83t099 system 65s180 (TYu1.700.008Sp) system 65s126-B (TYu1.600.059Sp), a set of RM-122 (TYu4.079.295Sp) Set KTPU (TYu4.079.444Sp), complex DoD products 65s834, 65s820 (TYU1.700.016) KSPO products 65s965 (TYU.10021-01).

Be deleted scoreboard shared TO-150 (TYu2.426.179Sp) and TO-153 (TYu2.426.181Sp) from the product 65s013, equipment, uniform time set AKMV (TYU4.079.487) and cables that are either not included in the products used in upgrade, or substitute in the process of modernization.

Replacement and exclude equipment can be used to replenish ISP facilities remaining in service or disposed of. Decision on using the excluded equipment made by the Customer as a result engineering survey of existing CFB.

1.5. In order to provide connectivity to the product of technical 83t099 of the junction of C3-Tg (RTA, T-206) in the CFB-M introduced a block TSA-TG (NIYAT.468351.034) provides a transition joint C3-Tg joint C2-tlg.

Equipment U-115, T 208 and T-230-06 can be connected to the product without the use 83t099 unit STU-TG.

Composition of the CFB-M is a model for products 65s834, 65s820, 65s965, and determined design documentation (CD) on them, adjusted in accordance

"Technical requirements on the adjustment of the current design product documentation, 65s834, 65s820 and 65s965 65s30 items and adjustments (release) design documentation to the control product 65s30, the switching center and control point products 83t7 "approved 19.11.2003g. Deputy commander of military unit 52686.

1.6. Deploying CCS-M at customer sites is done by installing the product 83t099 and connections to the saved or new equipment to be installed transmission channels. Under the new equipment tract data means the installation on site with the product 83t099 new kits ZAS and UPS (if available at the Customer at the time of upgrading).

For the manufacture and deployment of CCS-M at customer sites for each object should be developed set of design and design documentation (CD and PKD).

1.7. Depending on the placement of the modernized CFB two possible version of equipment installation and fabrication CFB-M at customer sites.

Option number 1 provides:

- "Parallel" installation products 83t099 in close proximity to existing

CFB. Upgraded CCS continues to operate in the acting

65s30 products at the time of erection and commissioning works;

- Disconnect from the current CFB product 65s30 preparedness products 83t099 to work;

- Switch ZAS and other equipment tract data on the product 83t099;

- Auditing the functioning of CFB-M in an isolated fragment of the product

65s30;

- Adoption of inspections decisions about how to connect CFB-M to the current

65s30 product.

Option number 2 provides for the "serial" assembling products 83t099:

- Disconnect from the current CFB product 65s30;

- Dismantling of the excluded equipment modernized CFB;

- Carrying out installation of the product 83t099 in place of the dismantled equipment;

- Connect the ZAS and other equipment tract data to the product 83t099;

- Auditing the functioning of CFB-M in an isolated fragment of the product

65s30;

- Adoption of inspections decisions about how to connect CFB-M to the current

65s30 product.

To maintain efficiency products 65s1 for the period of modernization

appropriate to provide, if possible, adjust its binding

Object-subscribers modernized CFB and CFB allocated to the fragment

(Switching subscribers free access to the existing SCC). Options

CFB upgrade listed in the table number 1.

1.8. Enter CFB-M product 65s30 carried out in two stages. In the first stage

by commissioning of the upgraded SCC of the isolated products from

65s30 fragment and testing of its functioning in the composition of the fragment. When

positive results of the first stage input

upgraded CFB-M product and functional test 65s30 65s30 products in

whole. Monitoring of the product 65s30 generally performed with PU

Product 65s30.

1.9. The option of upgrading is carried out after coordination with the Customer

stakeholders.

1.10. Upon completion of testing of the system are made relevant

documents on how to enter CFB-M system and the formulation of a permanent operation.

Unplugged the old CFB equipment to be dismantled.

1.11. To ensure continuity of product management 65s30 modernization GTSKS number 1,

technical tools which are used in the polyurethane product 65s30, should

be possible razvertvaniya izdeliya 83t0119. 83t0119 product is new in

composition products 65s30. His deployment and commissioning of the product is carried out in 65s30

According to this technique.

1.12. Work at the facilities are carried out in accordance with the approved "Plan works

upgrading the basic system of data exchange ASU Forces. "

Table № 1

№

n / n

Upgrade option

X and p and a m e p and t and a

1

A parallel version with a snippet

(Installation products 83t099 near CFB, CFB output from the system, assembly and debugging of CFB-M, the input CFB-M in the system through the piece, the dismantling of the excluded equipment CFB)

Conditions:

presence next to the current CFB space for installing the product, 83t099;

necessary to organize a fragment of the network.

Dignity compared to option number 2 - less on time in upset conditions (less damage to the operating system).

The rest - the same as in option number 2.

2

Serial version with a snippet

(Withdrawal from the CFB system, the dismantling of SCC, assembly and debugging of CFB-M, the input CFB-M system a fragment)

Conditions:

does not require additional space,

necessary to organize a fragment of the network.

To reduce the number displayed in a fragment of CCS and objects of subscribers (for reduce the damage the current system) is appropriate involvement of the

Fragment stand GK Research Institute AA.

Strengths:

technological simplicity,

information security,

more simple procedure of training of operational teams (in the works in fragment).

Drawback - the highest uptime in upset conditions (maximum damage to the existing system)

2. Major work on the modernization of Switching Centers product 65s30

2.1. Adjustment (output) design documentation

2.1.1. Adjustment of the existing design documentation for the product 65s834, 65s820, 65s965 and release of design documentation to the control product 65s30 (PU-B)

carried out in accordance with "Technical requirements for adjustment existing design documentation for the product 65s834, 65s820 and 65s965 65s30 products and adjustment (output) design documentation for the control point

65s30 products, switching center and control point products 83t7 "approved 19.11.2003g. deputy commander of military unit 52686.

2.2. Surveying articles 65s820, 65s834 and 65s965 on objects

2.2.1. The survey objects are the project organization with the participation of Federal State Unitary Enterprise NIIAO, fitter and service operation.

2.2.2. Admission to the facility by the customer.

2.2.3. The survey used the provisions of this technique, typical scheme of dividing the CFB-M (Appendix № 2) and the layout of the product 83t099 (Annex № 3).

2.2.4. Survey items 65s820, 65s834 and 65s965 on objects includes the following steps:

determine the possible location of the product 83t099 in the CFB-M, including

Power supply and jumper equipment;
inventory of technical equipment, spare parts, instrumentation, and operational documents,
their assessment and formation of proposals for further use;
description of the number and types of communication channels (junctions) connected to the CFB;
definition of network capabilities of the primary power supply and the formation of
proposals for the inclusion of newly introduced points of hardware;
assessment of the cable plant on the possibility of future use
(Or replace);

Finally, the possible and feasible options for upgrading CFB;
Finally, the possible and feasible options for using the equipment
performance of technological communication and power devices;
determining the need for installation work on the ventilation system after
dismantling of the excluded equipment.

2.2.5. According to a survey by the Commission appears to act with lighting
these issues with the application of information about technical condition
CFB stored equipment (including spare parts and instrumentation), the dismantled equipment,
proposals for their use (see Appendix № 4).

2.3. Development of project documentation

2.3.1. Based on survey results and the initial data FSUE NIIAO
planning organization shall develop design documentation (PKD).

2.3.2. The originals of the project documentation is stored in the company - the developer.
Changes in project documents produced in accordance with ESKD by
issue notices to the company - the developer.

2.4. Construction preparation and delivery of premises for installation of equipment
On the basis of PKD conducted (if necessary) construction work.
The results of the executed deed.

2.5. Assembly, installation, dock at the facilities, setting up and commissioning

2.5.1. Condition of readiness for the installation work at the facility are:

presence in the object store all technical means;
availability of design documentation;
certificate of acceptance of premises for installation;
the act of doing work on the installation of protective and technological grounding;
availability of electrical power, lighting and general ventilation.

Installation work is performed by a specialized organization.

2.5.2. Stage I SCC-M-up includes the following activities:

checking the results of installation, the CFB-M;
verification of completeness of CFB-M (including CD);
conduct independent tests CFB-M in accordance with the methodology of autonomous
Test-CFB-M;

design (close) form CFB-M;

special studies to meet customer requirements and special
requirements of the Data Protection (PP-97 PP-96);

functional test of CFB-M in the isolated products from 65s30
fragment, followed by the introduction CFB-M in operation;
transfer of CFB-M service manual.

2.5.3. Commissioning and transfer of CCS-M service manual drawn up by the Act
commissioning CFB-M.

2.6. Training of personnel of the service operation

For training of personnel services operating on the basis of the modernized CFB stand FSUE NIIAO organized refresher courses.

Note. Possible training of personnel services operating in the field of bases.

Refresher training program is developed and approved by the Federal State Unitary Enterprise NIIAO Customer.

The skills practiced virtually personnel services

operation in the deployment and commissioning of CFB-M product under 65s30

management representatives of the Federal State Unitary Enterprise NIIAO.

By decision of the customer may establish a special team of operational

of the CFB-M to participate in the modernization of CFB product 65s30.

3. Key provisions of the organization entering CFB-M system and the audit operation of CFB-M in the product 65s30

3.1. For methodological support of the commission for writing each individual

CFB-M product 65s30 used this technique and a typical test procedure

Product 65s30 after entering into its composition CFB-M. As a standard test method

use the "Test Procedure Product 65s30 regarding verification of information

exchange products 83t11-1C with the objects of the product through the product(65s1) 65s30 after commissioning

product 65s965 new software," developed by Defense Research Institute ~~№ 37~~ in 2001

year. Concretization of the standard method with reference to the checked fragment and CFB-M defined in the annex to the procedure.

3.2. Key provisions of the organization of input and checking the functioning of include the following:

3.2.1. In advance of the fragment products are formed SAT 65s30 and the corresponding arrays KSA Selection products 65s1.

3.2.2. Carried out organizational separation of the fragment existing products 65s30 and 65s1.

3.2.3. It download SAT fragments and related products 65s30 arrays of CSA products 65s1, setting selection.

3.2.4. Checks the correct functioning of the upgraded fragment products 65s30 using "Test Methods Products 65s30 Part verification of information exchange products 83t11-1C with the objects of the product through 65s1 65s30 product after entering the product 65s965 new software version, 27 Central Research Institute developed the MO in 2001 and adapted for the fragment products And 65s1 65s30.

3.2.5. Restores a working SAT and the corresponding arrays CSA products identified in the sample. An adjustment SAT acting 65s30 products for connecting the selection, recovered bond direction, and fragment wound.

3.2.6. Checks the correct functioning of the product at full 65s30 working structures after upgrading one product 65s834 (65s820, 65s965) with using the previously mentioned methods.

3.2.7. When detected at some stage methodology abnormal functioning 65s30 products produced off the modernized CFB-M, and analysis of the situation, determined by the follow-up.

3.3. The results of testing the functioning of each CFB-M in the 65s30 products are made by the Act of tests.

Appendix № 1

Appendix № 2

Appendix № 3

Appendix № 4

APPROVED

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A C T

Survey articles 65s965 (65s820, 65s834) Head number _____, on site _____

Act shall contain the results of engineering survey:

possible locations 83t099 products in the CFB-M, including power and Cross equipment;

number and types of communication channels (junctions) connected to the CFB;

network capabilities of the primary power and proposals for the inclusion of points newly introduced technologies;

state of the cable plant and its possible future use (or replacement);

the inventory of technical equipment, spare parts, instrumentation and operational documents, evaluation of their condition and the formation of proposals for further

Use the appropriate recommendation forms;

additional materials engineering survey by the chairman

Commission.

Commission Chairman _____

Members of the commission _____

Recommended form of survey results for TC and ED products 65s834 (TYU1.610.024

Cn)

Number number n / n

Name of equipment

(Code TC)

Head. №

Quantity (sets)

Lifetime, years

Technical condition

Suggestions of use