Type approval of radio terminals

Procedures and regulations

Version 4, 16.10.2015

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1. Purpose of terminal type approval

All radio terminals used in the Norwegian Public Safety Network (Nødnett) shall be type approved. The type approval includes the terminal hardware and software version, as well as the system/network version. This is important for a stable and predictable use of Nødnett and its services. The Directorate for Emergency Communication (DNK) is in charge of approved radio terminals and software versions for use in Nødnett. The list of approved terminals and versions is available on DNK's Internet pages here: www.dinkom.no. The purposes of terminal type approval is the following:

• Ensure that the terminal fulfils the minimum technical requirements

• Reduce user risk

• Ensure proper terminal behaviour and that it does not affect other systems and terminals

• Testing of important security features of the terminal

DNK seek to have a wide selection of terminals and services available for Nødnett users. This will enable the users to find and choose a terminal type that will be most appropriate for its use.

2. Other terminal requirements

DNK's type approval and testing covers the basic features of a radio terminal in order for the terminal to be acceptable for use in the network. Other and more functional requirements for radio terminals such as physical size, user functionality, battery output and voice quality must be communicated and from the terminal purchaser to the supplier, and is not covered in this document, nor DNK's responsibility.

DNK and the agency support organizations have security requirements terminal vendors and suppliers. This concerns mainly the procedures of terminal deliveries and repairs, and handling of the encryption keys. These requirements are described in other documents.

3. Type approval test execution

3.1. Safety requirements

DNK have security requirements to the terminal programming tools and related equipment. There are also security requirements to the vendor and supplier handling of encryption keys, software and terminals. DNK have also technical minimum requirements for all radio terminals in use in the Norwegian Public Safety Network. (Nødnett)

These requirements are common for all types of radio terminals, and concern both important features to be able to use the network, as well as important safety features. A separate document describe these requirements.

3.2. Terminal and software testing

Major terminal software releases and new hardware versions shall be tested before any approval. All testing is done in accordance with the current test procedure version, and these procedures will be disclosed by DNK by an agreement of type approval. All test procedures will be reviewed and agreed upon before any testing commences. Some test procedures may not apply to the terminal in question.

3.3. Time and place for testing

Primarily, the type approval is done by testing in the Nødnett test reference system in Oslo. The normal time needed for test execution is 3 to 5 days. Please be prepared for a lead-time for an available test time window. A type approval application should include any testing date preferences.

3.4. Supplier's responsibilities during testing

The supplier or applicant is responsible for conducting the test execution, as well as the test result logging. It is highly recommended to have all relevant and competent personnel attending the test. These are the requirements for the supplier or applicant:

- Personnel with sufficient knowledge of terminal and its programming tools
- A test procedure and result list printout
- Responsible for all test result logging
- Test execution management
- All tools, cables, chargers, software and other in order to conduct the test. The test procedure document describe the reference system facilities

3.5. DNK's responsibilities during testing

DNK is responsible of test activity coordination between vendor/applicant, Motorola (the operator of Nødnett) and DNK. DNK will arrange for a test time window booking, as well as the proper equipment and staff in the test reference system.

DNK and Motorola have an agreement of secure access to the reference system environment as well as confidentiality of test progress and results. Among other things, there is an agreed requirement that there will be

an organizational separation of the test bed staff; this ensures boundaries between Motorola as the reference system operator and Motorola as terminal vendor and supplier.

3.6. Test report

The applicant shall present a test report to DNK within 15 workdays after testing. The test report shall contain the test result list, as well as all relevant attachments. Any certificates and/or other information shall also be part of the test report.

The test report normally contains trade secrets, and has to be delivered to DNK in a secure manner. This can be a CD-ROM or a memory stick. Normal email with attachments is not considered secure.

3.7. Approval decision

DNK shall inform the applicant of an approval decision within 15 working days after receiving a test report.

DNK's evaluation of test reports include inspection of the test result list and any appendixes. The evaluation will include a severity assessment of any failed tests. Minor defects of low severity can be accepted, often based on the vendor's or applicant's obligation to rectify them. Other faults may be mentioned as part of the issued certificate of type approval. Other and more severe faults will prohibit the issuing of any certificate, and thus all use of the terminal in Nødnett.

An approved test result will result in the issuing of a certificate, as well as an updated list of the approved terminals on DNK's web pages. The certificate contains detailed information of the hard- and software version of the terminal in question, as well as the Dimetra infrastructure version. The certificate may also contain any important limitations or notes to the users of the terminal.

3.8. Simplified approval without test

In the event of approval of a minor software or hardware release of the terminal software version, often called patches, it may be possible for a simplified approval process. The approval can then be done without or with a reduced test scope. Such a simplified approval has the following documentation requirements:

- Relevant IOP-certificates
- Few or small changes from previous approved version
- Any changes are insignificant for Nødnett users or network
- Any changes does not affect important safety features in the terminal
- Any corrected faults or anomalies in the terminal or software version

The supplied documentation must be more specific than normal release notes or similar, and must contain information of any impact on Nødnett terminals or network functions. The documentation can be accompanied by, or refer to, standard release notes.

4. Certificate and Type Approved Logo

The type approval certificate is issued in two copies, one to the applicant/vendor and one for DNK records. Unless otherwise agreed, DNK will inform of the approved terminal in the web page list of all type approved terminals. The applicant have the right to use the Nødnett type approval logo on identical radio terminals, as well as allowed to use the logo on merchandise or marketing material for the terminal in question.

If DNK detect any misuse of the type approved logo, the applicant or vendor shall immediately stop using the logo. The term misuse means misleading marketing or using the logo or term «type approved» on any terminal type that is not covered in the certificate. Misuse is not the case if the marketing material contains clear and near references to which differences that may exist between the terminal in question and other type approved equipment.

DNK can demand to remove all use of the logo or term «type approved» in all circumstances where this has been used, including marketing material and/or terminal equipment. It is possible to apply for a preliminary permit for the use of the logo or term "type approved". If DNK have given such permission, DNK can only prohibit any future use of the logo or term. The logo is downloadable from the DNK web pages.

5. Type approval fee

At this time, DNK have no type approval fee. DNK reserves the right to introduce such a fee in the future; this will be announced in advance.

6. Approval withdrawal and complaints

DNK can invalidate an existing type approval if any severe faults are found in the hardware or software that can affect the safety of the network or its users. This also applies to the event of any network upgrading, most often by the introduction of a new Dimetra infrastructure version. DNK will if possible, inform users and vendor/applicant of such invalidation of a type approval in ample time before doing so.

All type DNK approval decisions can be appealed within 10 working days, and will be finally decided by the DNK Director General.

7. Contact details

Please contact DNK regarding terminal type approval and/or technical requirements. Use email, phone or mail. We expect any approval applications to contain the following information:

• Applicant contact information
• Type of equipment or software in question
• Testing date preferences
• Other relevant information that needs preparation

Mail address: Direktoratet for nødkommunikasjon, Postboks 7, Nydalen PIB, 0410 Oslo

Email: typegodkjenning@dinkom.no

DNK contact person: Tore Bergvill, telefon +47 982 15 245